

# Nordic guide to sustainable materials

WP 3: Survey results – Knowledge and demand of EPD

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Reference group: NGBC, SGBC, GBCF and IGBC

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## Contents

Summary.....	2
1. Introduction.....	3
1.2. Adjustment of the initial objectives.....	3
2. Implementation of two web surveys.....	4
2.1. Survey analysis- building owners.....	4
2.2. Survey analysis- producers.....	9
3. Nordic Building Market and EPD.....	15
3.1. What have we learned from the surveys?.....	15
3.2. What can we do to increase the knowlede and use of EPD in the Nordic Building market?.....	15
3.3. Market driven approach.....	15
3.4. The role of GBC´s.....	16
4. List of the most commonly used databases in the Nordic market:.....	17
4.1. Appendix I.....	18
Survey for Building owners, consultants and contractors.....	18
4.1.1. Questionnaire – Building owners /users.....	19
4.2. Appendix II.....	21
Survey for Producers and providers of building material.....	21
4.2.1. Questionnaire – for Producers and providers of building material.....	22
4.3. Appendix III.....	24
4.3.1. List of given answers to Q7 in the survey for Building owners.....	24
4.3.2. List of given answers to Q5 in the survey for producers and providers.....	25

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## Summary

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The main purpose of Work Package III is to increase awareness of Environmental Product Declarations (EPDs) in the Nordic building market and map the knowledge and the use of EPDs in the market. During the project development phase the participants came to the conclusion that before data could be gathered on EPD's it is necessary to increase the knowledge on EPDs, thus enhancing the market for EPD certified building products. One of the main driver for the implementation of EPDs is the use of environmental certification systems for buildings, but other factors such as willingness to gain market advantage for a quality product are important as well.

Until now EPDs have mainly been used between businesses (B2B), where buyers and producers of building materials have been able to get information on the environmental impact of a product. The demand for high quality building materials with low environmental impacts is now growing rapidly and the target group for EPD certified products has become much larger than just few years ago.

This report shows the main results of two surveys which were conducted in Iceland, Norway, Sweden and Finland during the summer of 2015 (June 22 - September 10, 2015). When the two surveys are analyzed it is important to bear in mind that answer rates and participation is different for each country. The two surveys were aimed at different target groups; *1) Building owners, consultants and contractors* and *2) Producers and providers of building products*.

In the survey for **building owners (1)**, there seems to be a rising interest in getting more detailed information on environmental properties of materials and in being able to compare different building materials. However for this group, due to lack of knowledge and/or experience in working with EPDs in the sector, it is somewhat easier to use labelled products than to analyzing the information in an EPD for a given product. Cost is still considered high since this is not yet common practice. It is also considered problematic that the different EPDs are currently not harmonized in all stages which can make the comparison between products more difficult.

In the survey for **producers and providers (2)**, the majority of answers came from Sweden and Norway. Hence, the second survey does not reflect the building market in the Nordic countries very well. The results show that there is a growing demand for environmental data of building products in these countries, and producers are expected to present information in an accessible way that makes it easier for consumers to make informed decisions in selecting building materials. It is also required that information provided in EPDs to be open and accessible since the growth of registered EPDs in the market will only increase their accuracy and value.

This development goes in hand with the increased use of international certification systems in the Nordic building market but also reflects developments in EU and international laws and regulations. One of the main obstacles mentioned in the surveys for the use of EPDs is the lack of market demand. The challenge today is to expand the market for EPD certified products, and make the information both transparent and understandable for both decision makers and those that have influence on the procurement of building products.

Information can be a powerful tool, if the purpose is to make permanent changes!

# 1. Introduction

During the process of this project it has been found out that there is a lack of EPD and other environmental declarations and that there exists a quite large span of existing environmental information of building products in each country. Therefore it would have been very time consuming and almost impossible to carry out the original plan of this work package (WP3) without already existing EPDs or other product declarations to build on<sup>1</sup>. In the original project plan, it was decided that each country should rather collect EPD data from their building industry. But during the project process we have come to the conclusion that in order to gather data on EPD in the Nordic Countries, we first need to increase the knowledge of EPD, thus enhancing the market for EPD labeled building products.

## 1.2. Adjustment of the initial objectives

The objectives in the beginning, as stated above, were to make a database of environmental data from Nordic producers. Now there are already ongoing databases and activities on EPD in the Nordic market and it was thought that there were no use for a separate GBC-database as long as the other databases were open. Therefore instead of making our own database, it was considered more appropriate that this project would instead point out and recommend the use of these existing databases on our websites, in the brochure etc. For this reason this WP has undergone some changes, in order to better achieve the main objectives of the project and to have permanent influence if the Nordic market for sustainable building material.

In this WP there has been a consensus among project participants to focus on the following three activities to raise the amount of EPDs:

- Make a web survey among both producers and users of EPDs in each country to identify obstacles.
- Present information (brochures, and report) to both producers and users of EPDs in each country to remove obstacles, increase general knowledge by that increase the use of EPD and environmental labelling in the Nordic building market.
- To learn from each other and help producers who need more information<sup>2</sup>

Main purpose of Work package III is therefore to increase the awareness of Environmental Product Declaration (EPD) in the Nordic building market and map knowledge and status of the use of EPD in the market. The status of published EPD for building materials varies much in each of the nordic countries. In Norway it is rather well known but not nearly as much in the other contries. This is the current position that we need to address in order to succed.

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<sup>1</sup> In Norway there do exist a rather large number of registered EPD for products, but the situation is not the same in the other contries, especially in Iceland and Finland.

<sup>2</sup> EPD-Norway is for instance willing to invite producers from Finland and Iceland and explain how producers of same type of materials can cooperate and make EPD –calculation tools to produce EPDs in a cheaper way. This could be a kind of extended product of this project based on the established network and know-how of some of the participants.

Until now EPD has mainly been used for business purpose (B2B), where buyers and producers of building material have been able to get information on the environmental product data.

The demand for a high quality building material, with low environmental impact is now growing rapidly and therefore the target group for EPD labeled building products has become much larger than just few years ago.

This report shows the main results of two surveys which were made in Iceland, Norway, Sweden and Finland in the summer of 2015 (from 22th of June- 10. September 2015). The method was not strictly scientific, but does give a picture of the building market in these countries. When both of the surveys are analyzed it is though important to bear in mind that the answer rates or the participation in each country are different.<sup>3</sup>

## 2. Implementation of two web surveys

This survey was designed by IGBC (Icelandic Green Building Council) in collaboration with other participants in the project. Each participant (GBC's) sent the survey out to their mailing list, and it was also published on websites, facebook and other medias for the purpose of reaching not only those that are already committed to environmental values in their projects as most of the members of all GBC's. It is therefore difficult to assume the total sample group and the general response rate of the surveys.

In fact the surveys were two, and aimed at different targeting groups.

### **I) Producers, and providers of building products**

### **II) Building owners, consultants and contractors**

Both surveys were sent out at the same time in each country. It is difficult to calculate the response rates, since they were sent out both to mailing list but also to open media sources like facebook.

Total of responses were as follows:

I) Building owners, consultants and contractors- 245 answers

II) Producers, and providers of building products- 194 answers

Survey analysis will both be presented graphically for each question with further explanation and detailed text analysis where appropriate.

### 2.1. Survey analysis- building owners

In this part of the report it is possible to look at graphic presentation of the answers to the 12 questions asked. The emphasis here is to present the survey and the results as they appear, with the

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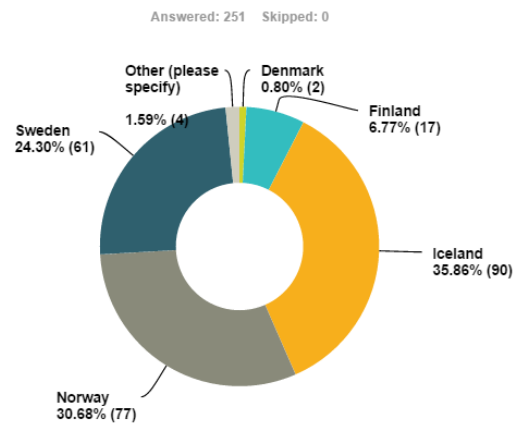
<sup>3</sup> The answers to the surveys have been broken down and each country has got their own results to work with, which gives a much better insight into their marked area. In this report the general picture is presented.

aim to process the data more thoroughly in next chapter, yet some conclusions will be presented in relation to each question.

### QUESTION 1

The answers in this survey which is specially aimed at building owners, consultants and contractors are more evenly divided between the countries than in the other one, apart from the fact that the answers from Finland are rather few, or only 7%. This is important to bear in mind when the results are analyzed.

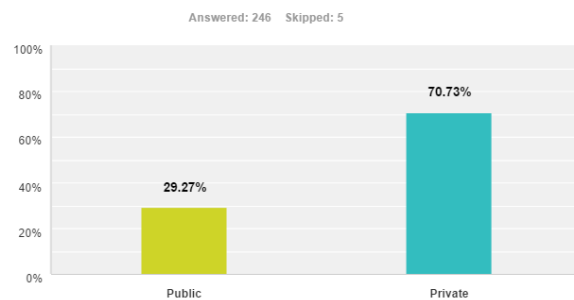
#### In what country do you currently reside?



### QUESTION 2

Around 70% of those answering are representing the private sector, and only 30% the public sector. The situation in the Nordic Countries are though quite different where in Iceland most projects and procurements of sustainable material is made by the public sector where as in Norway the private sector or the real estate sector had been the driving force.

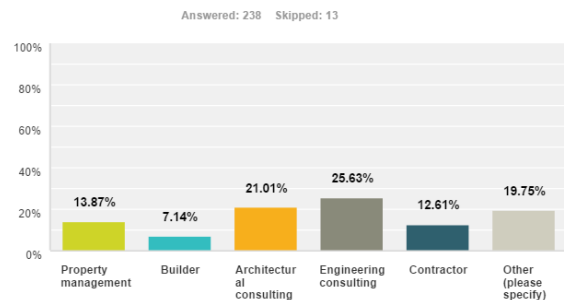
#### Activity domain?



### QUESTION 3

Almost 47% of answers come from consultants – architects or engineers, which does in a way reflect the combination of members in at least the IGBC. Contractors are only 13% and property management 14%. In the column of „other” which is about 19%, are for example officials working in the public sector, education, research, project management, city planning, software, city development, material producer, manufacturing and some working for NGO’s

#### Type of activity

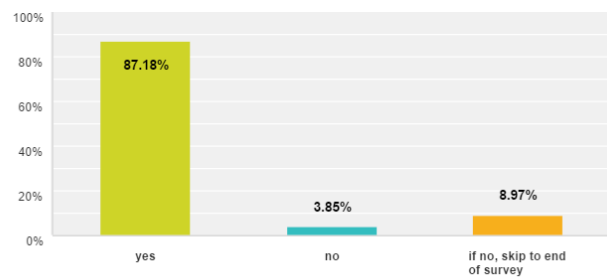


#### QUESTION 4

It is clear that there is a need for more information on environmental impact of building products in the market. This can in fact partly explain the shortage of demand, since to make demand you have to have a rather good knowledge on what you are in fact asking for and it has to be rather easy to make a comparison of products. Hopefully this project can have positive influence on this situation.

#### Do you want information on environmental impact of building products and appliances?

Answered: 234 Skipped: 17



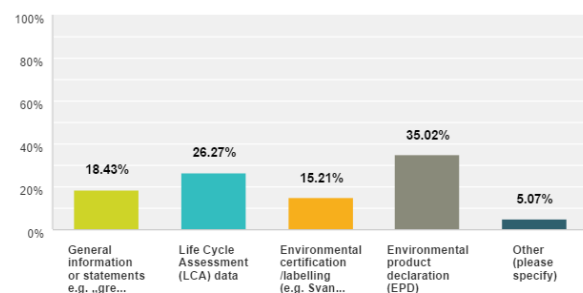
#### QUESTION 5

Here it is rather obvious that formal declaration is needed where only 24% will make do with general information or something else than EPD, LCA and formal certification like the Swan.

It the option *other*, some mentioned that they needed all of this, other liked to be informed of the situation of traditional material versus new standards, and some mentioned harmful substances.

#### When you want information about environmental impact of a building product, what kind of information would be most useful for you?

Answered: 217 Skipped: 34

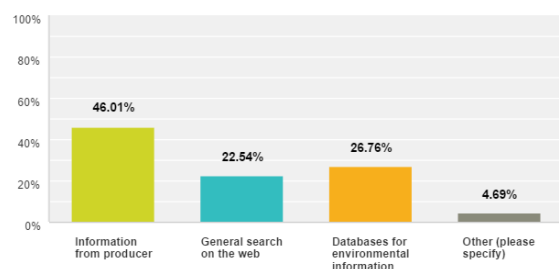


#### QUESTION 6

Information coming from producers are valuable and necessary. It is in their interest and their responsibility to give the information about environmental impact of their product. It is also in their interest to increase the transparency of the production of their product. This is though not a matter of course in all parts of the world. Information from producers are valuable and wanted as well as verified information from databases.

#### Where do you look for information

Answered: 213 Skipped: 38



## QUESTION 7

This question is not presented graphically. The question was: If databases are used to get information of a product/material, specify which database? In all there were 75 different responses. (See list of answers in appendix III). Here are the five most commonly mentioned.

The top five databases or sources that were most often mentioned were:

- ✓ **EPD Norge** (<http://www.epd-norge.no/>)
- ✓ **ProductXChange** (<http://productxchange.co.uk/>)
- ✓ **SundaHus** (<https://www.sundahus.se/>)
- ✓ **Byggvarubedomningen** (<https://www.byggvarubedomningen.se/>)
- ✓ **Ecoinvent** (<http://www.ecoinvent.org/database/database.html>)

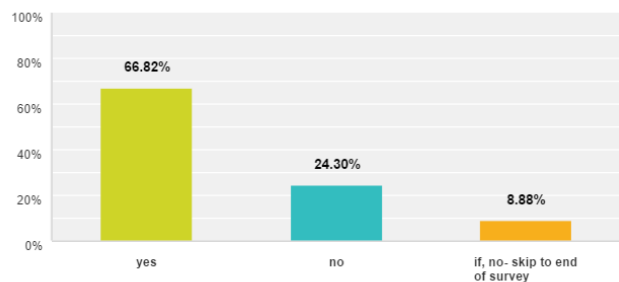
Other sources were only mentioned two times or just once. The most commonly used databases are from Norway, Sweden and U.K. which gives some idea of the status of the Nordic building market. In Iceland and Finland there is a lack of knowledge of EPD, and therefore not a high demand of it. This is however something that will without doubt increase for the next years due to the increase in number of certified buildings for example. In many cases it is possible to use databases in the other Nordic countries. In Finland there is some work under way in establishing an EPD database, but in Iceland there is no such work going on at present.

## QUESTION 8

The waste majority or 66% is familiar with EPD, but almost 33% are not. This is a positive thing. However, to be familiar with something is not enough. There has to be rather good knowledge on the content as well as the ability to be able to compare the information given in different EPD's. More work has to be done on a national basis to analyze the real knowledge on environmental labeling, to be able to evaluate here there is a gap in that knowledge, especially where the main objective is to increase general demand and help people to take informed decisions on procurement of building products.

### Are you familiar with environmental product declaration (EPD)?

Answered: 214 Skipped: 37



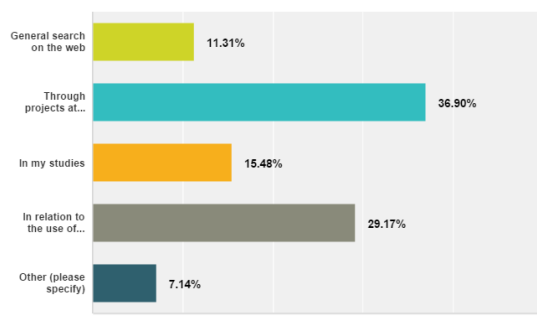
## QUESTION 9

Answer choices:

- General search on the web (11, 3%)
- Through projects at work (37%)

### Where did you first learn about EPD?

Answered: 168 Skipped: 83





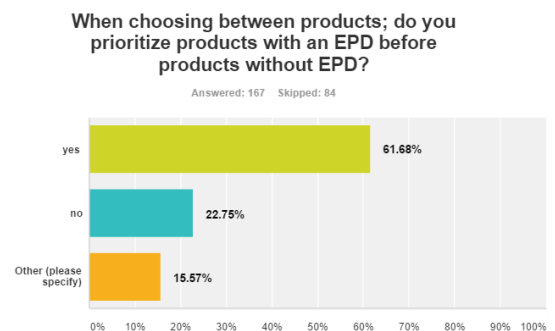
- In my studies (16%)
- In relation to the use of certification system for buildings (29%)
- Other (7 %)

Twelve answered with other options, mentioned were for example; this survey, from seminar, from the industry, from company strategy or specific projects.

This picture shows that the use of certification schemes has had considerable influence in the building market and those working within it.

#### QUESTION 10

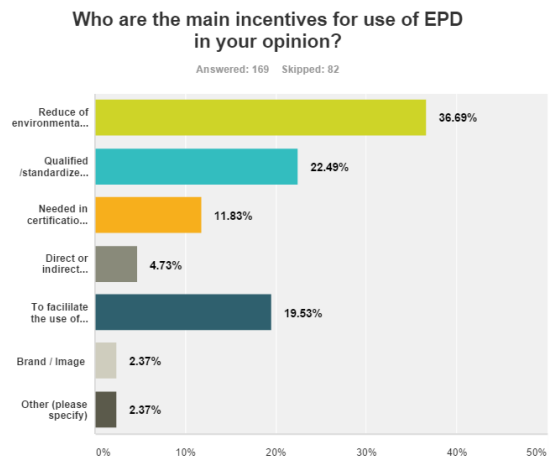
This graph shows that EPD are in 62% chosen rather than material that does not have one. The use of environmental certification systems for buildings, does probably have much effect on this, where there is generally a demand on this, or LCA.



#### QUESTION 11

Answer choices:

- Reduce of environmental impact (37%)
- Qualified/standardized information (22, 5%)
- Needed in certification scheme (12%)
- Direct or indirect regulation (5%)
- To facilitate the use of evaluation/comparison of building products (19, 5%)
- Brand/image (2%)
- Other (2%)



It is interesting to see that the main incentives are general – or to reduce environmental impact. Which is of course the general incentive for the use of certification systems for buildings. Which is on the other hand one of the main driver towards environmental labeling or certification of building material apart from laws and EU regulations. About 22% see the main incentive to be the need to obtain standardized information of building material. This is also very important information which makes buyers or building owners able to compare the quality and different qualities of construction

material. Environmental Product Declarations are also good to facilitate the use and the comparison of building products (19%). Only 2% value it so that brand, image or something else is the main incentive, which is good, whereas about 5 % see it as something that has to be carried out to follow and fulfill standards – laws and regulation.

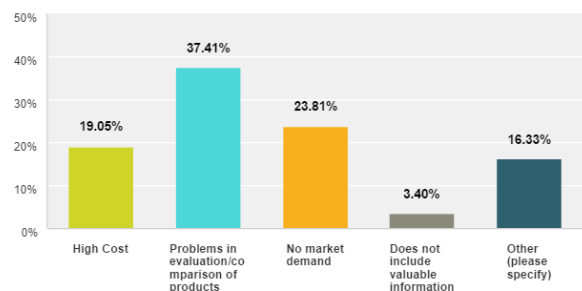
## QUESTION 12

Problems with evaluation and comparison of products seems to be the main obstacles in using EPD, with no market demand coming second. The difficulties must though be related with the fact that the numbers of registered are not very high (apart from Norway). Other problem can be that there is not a sufficient knowledge on the know-how, and that the variables in EPD are not synchronized which must make the general comparison more difficult. High cost is also something that clearly matters. More information

and the attempt to harmonize the variables and how information is represented can possibly make this process easier and less costly. Twenty six (or 16%) of those that answered mentioned other obstacles, such as: not enough knowledge, lack of focus, EPD not widely known or used, they do not specify whether a product is good or bad, quantitative data sometimes valued by unqualified people, need of more information, too few products with EPD, Better to relay on labeling, difficult to value the given information, not compliance with REACH, not part of the current business model and time consuming.

What are the main obstacles for the use of EPD in your opinion?

Answered: 147 Skipped: 88



## 2.2. Survey analysis- producers

Here the results of the survey are presented graphically, or the answers of all 11 questions asked in this survey for Producers and providers of building material. Answers are in all 193, which is fewer than from the other survey of building owners.

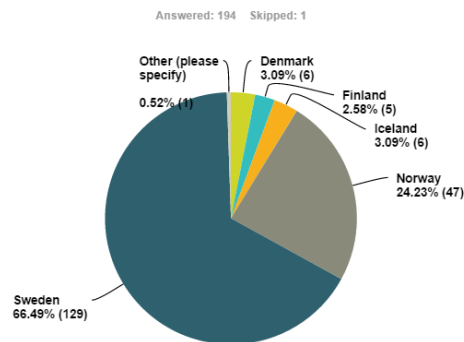
As seen in the graphic for Q1, the majority of the answers are coming from Sweden and Norway, but very few from other countries. Sweden has almost 67% and Norway 25%. The rest, Iceland, Finland and Denmark are less than 6%. In a way this reflects the situation in Iceland where there are very few producers of building material, but such is not the case in the other two countries. This difference is

almost too big to be able to read something valuable from this survey, but at least it will represent the situation in these two countries regarding to EPD and building products.

### QUESTION 1

This survey was sent out in Iceland, Finland, Norway and Sweden, but there are also some answers from Denmark (as much as from Iceland) and one from Belgium. In some cases work does not respect boundaries and in many cases companies are selling product across borders.

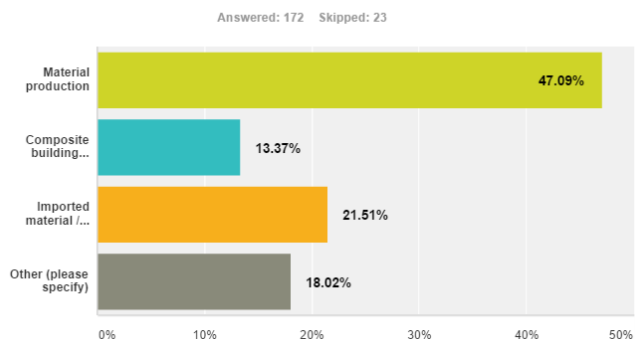
In what country do you currently reside?



### QUESTION 2

Majority of those that answered the survey are in material production. Total of 31(18%) mentioned other type of production, among them: procurement, chemicals, quality management, cleaning chemicals, design of hardware, lighting, distribution, sales of wood, circulation of heating/cooling pumps, ventilation, maintenance, consultation, electrical installations, and paint manufacturing.

Type of production?

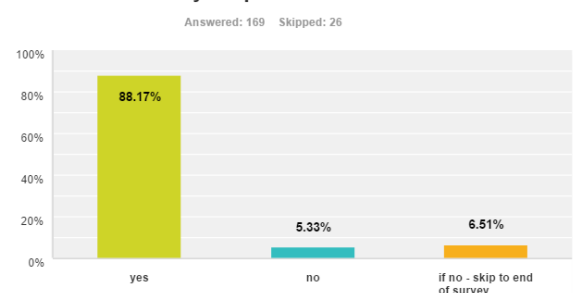


Some of this is more of a clarification on what kind of product or work they do, but it is evident some that did answer this survey should perhaps rather have answered the survey for building owners.

### QUESTION 3

It is very clear that according to this representative group, that there is a growing demand of environmental data of building products. Which is then again not very easy to identify if that is the case apart from SE or NO. This goes in hand with the increased use of international certification systems in

Is there a demand for environmental data of your product?



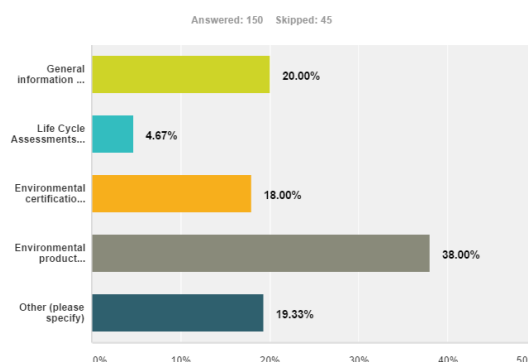
the Nordic Building market for buildings but does also reflect the development of EU and international laws and regulation.

#### QUESTION 4

Given options were:

- General information of statements e.g., „green product” (20%)
- Life Cycle Assessments (LCA) data (5%)
- Environmental certification systems or labelling (Svanen, Ecolabel etc.) (18%)
- Environmental Product Declaration (EPD)(38%)
- Other (19%)

**If you are asked for environmental data on your product, what kind of information does the customer ask for?**

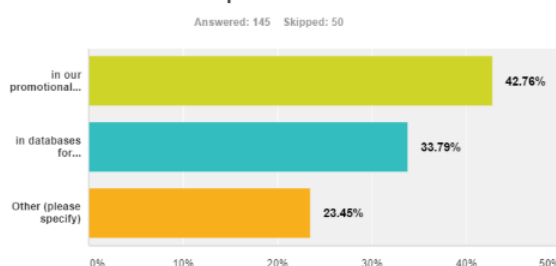


Almost 20% answer with other options given, which does reflect the high availability of options on environmental accreditation. EPD is the most common demand according to this or 38%, but there are still many possibilities of a creditation. Other options mentioned were for example: BMD, Svanen, ISO 14001, Basta, Sunda Hus, Byggvarubedömningen, MSDS of given product, LEED, BREEAM, Safety data sheet, Möbelfacta, Emicode ED-1, M1.

#### QUESTION 5

More producers do put forth the information in their promotional material, brochures and websites, or send the information through direct channels to their customers up on demand. Total of 34% are registered in databases. Keeping in mind that the more EPD are listed in databases, the more

**Where do you provide information about the environmental qualification of your product?**



accurate the information. This will also make all comparison much easier.

Given options were:

- In our promotional material for the product (43%)
- In databases for environmental information (34%)
- Other (23%)

## QUESTION 6

This question is not presented graphically. The question was: If databases are being used, please specify which ones? In all there were 67 different responses. (See list of answers in appendix III). Here are the five most commonly mentioned.

When responses from this question are analyzed it has to be considered that 67% of those who answered this survey are from Sweden, and almost 25% from Norway. Byggvarubedömninge, Sunda Hus and BASTA are clearly the most used databases in Sweden but it is difficult to see if they are widely used in the other nordic countries. These top three are in most cases used together.

-Byggvarubedömningen (<https://www.byggvarubedomningen.se/> )

-Sunda Hus (<https://www.sundahus.se/>)

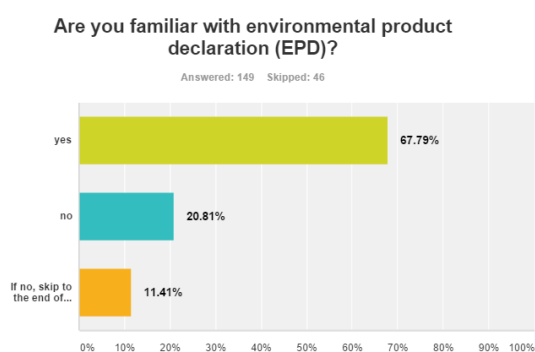
-BASTA (<http://www.bastaonline.se>)

-EPD-Norge (<http://www.epd-norge.no/> )

-Own or internal websites.

## QUESTION 7

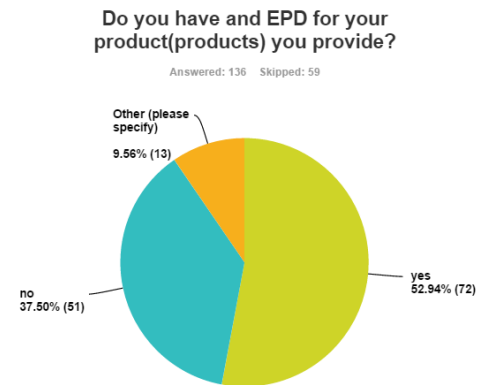
Ower 91 % of those answering this survey are based either in Sweden (67%) or Norway (24%). EDP is rather well known in the Norwegian building market, and in both countries there are existing and open databases where you can either seek information and/or regiser material. In



Iceland and Finland there are not comparable options or national databases, neither on behalf of the public or the private sector, and as mentioned before this can partly be explained by very few producers and as well little public demand of EPD labelling.

### QUESTION 8

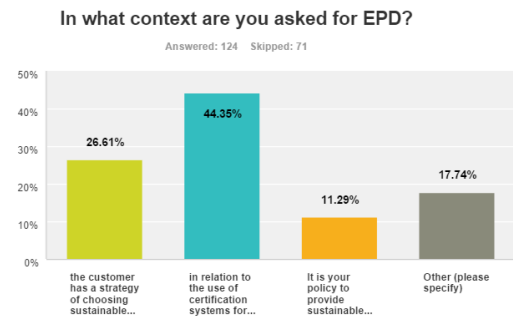
The same applies in this question as in the question above. More than 62% do either have an EPD for their products or service or some other kind of labeling. 37% do not have an EPD. Some mentioned that they will provide it when asked for, or that they have something similar or only have it for some of their products.



### QUESTION 9

Answer choices:

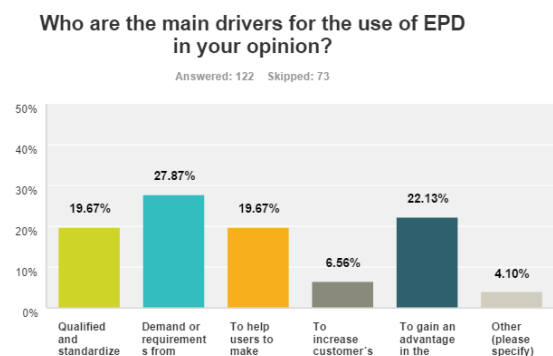
- The customer has a strategy of choosing sustainable materials (27%)
- In relation to the use of certification systems for buildings (43%)
- It is your policy to provide sustainable material which you want to verify (11%)
- Other. (18%)



It is clear that the use of certification systems in the industry does have much effect on those who manage procurement for companies and organizations. This is also the experience in Norway and Sweden where the use of certification systems has increased significantly in recent years. EDP is therefore in most cases made on demand, where only 11% say it is just their policy to have this kind of labeling. In the option other, some elaborate that they have not yet become aware of the increasing demands and do therefore not have an EPD for their product.

### QUESTION 10

Answer choices:



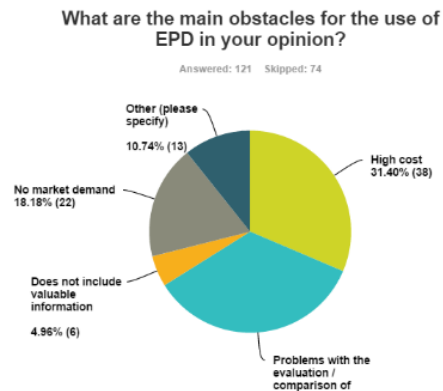
- Qualified and standardized information (17%)
- Demand or requirements from certification systems (28%)
- To help users to make informed decisions about their choice of building material (20%)
- To increase customer's demand (7%)
- To gain an advantage in the market for quality building products (22%)
- Other (4%)

The answer to this question does reflect what can be seen in Q9, or the fact that certification systems do increase the demand for EPD. Therefore if the intention to increase the use of EPD in the Nordic Building market, we have to systematically increase and promote the use of certification systems. It seems that supply and demand go hand in hand in this matter as any other. The main driver is closely connected to the use of certification system and demand made on their behalf, but factors like the willingness to gain advantage in the market for quality products is high as well. Environmental labeling is still not mainstream and will still be connected or considered as a part of the marked for high quality material. The challenge is to reach to suppliers and producers of more commonly used building material.

#### QUESTION 11

Answer choices:

- High cost (31%)
- Problems with the evaluation/comparison of building products (35%)
- Does not include valuable information (5%)
- No market demand (18%)
- Other (11%)



It is very important to be able to distinguish the obstacles for the increased use of EPD in the Nordic market as it is now. Rather high percentage mention high cost, but most have problem with the evaluation and/or comparison of building products. This is related with the shortage of EPD in some areas for example in Iceland, and possibly Finland, where it is both costly and difficult to find certified or labeled building material within a moderate price range. Therefore it can be difficult for designers to recommend the use of it and even if they do, the cheaper product is sometimes chosen in the end. One of the main obstacles mentioned is the lack of market demand. The challenge here is to expand the market for EPD labeled products, and make the information clear and understandable for all those buying building products, even if the construction is not built on sound environmental certification system.

## 3. Nordic Building Market and EPD

### 3.1. What have we learned from the surveys?

The result, after the implementation of both these surveys, is that the situation in the four countries is very different and knowledge of EPD is variable. In the survey for building owners, there was a good distribution of answers from Norway, Sweden and Iceland, but less from Finland. This can possibly reflect the fact that owners and designers are more aware of developments in the building market and sustainable material development. There seems to be a general interest to know more and have more information to be able to compare different options. There is also a demand for reliable information. Due to lack of knowledge and/or experience with working with EPD in general there is in some cases easier to use labelled product instead of having to analyze the information given in EPD for a given product. The survey reflects the fact that majority is familiar with EPD but it does not give very good information on how deep or thorough that knowledge really is. Cost is still considered high since this is not yet the general way of doing things, and therefore it can be difficult to compare different building material- by only looking at the EPD of similar products.

In the survey for producers, we almost only got answers from Sweden and Norway, and in fact this survey does not reflect the building market in the four countries very well as a whole, but more or less in SE and NO. For example the fact that in Iceland there are very few companies producing building material, does of course have an impact on how many answered this survey.

In this report the general results of the two surveys are presented, but the results for each country have been compiled and will be examined further locally. It is important for us to get the local results to be better able to reach out to our own marked areas and analyze the results and realise what direct action we need to take to increase the demand for EPD.

These local results are not part of this report, but have been sent to all GBC's involved.

### 3.2. What can we do to increase the knowledge and use of EPD in the Nordic Building market?

Information can be a powerful tool, if the purpose is to make permanent changes. Therefore it is important to encourage companies to increase transparency of their production and to give out as much information of their products to their customers. It is also important to present information in very accessible way that makes it easier for consumers to make informed decisions in their selection of building materials. It is crucial that information in EPD are open and accessible because the more EPD in the market the more evaluable they will become.

### 3.3. Market driven approach

It is clear that the use of certification systems in the industry does have much effect on the increased supply of EPD's. This is the experience in Norway and Sweden where the use of certification systems has increased significantly in recent years. Therefore if the intention is to increase the use of EPD in the Nordic Building market, we need in parallel to systematically increase and promote the use of certification systems at the same time.



One of the main obstacles mentioned in the surveys for the use of EPD is the lack of market demand. The challenge here is to expand the market for EPD labelled products, and make the information clear and understandable for all those buying building products- not only focus on B2B. This can be done by giving out information on where to look for instructions, service such as databases for EPD, and of course where there is a possibility to have a comparison of different products.<sup>4</sup> In order to achieve real progress we need to analyze the market in each country, since the situation is quite different, and try to manage promotional material according to that situation. Still the focus in this all has to be on both those that are producing and selling building material but as well on building owners, contractors and consultants. The approach is different, although the basic goal is of course to reduce the environmental impact of buildings.

### 3.4. The role of GBC's

In Norway, Sweden and Denmark, the GBC's are themselves running both national certification systems, or adaptive versions of international systems as well as national ones, like MiljöByggnad in Sweden. In Iceland, and Finland the market is mostly working with international versions of systems like Breeam and Leed. It is easier for the GBC where there are locally adaptive systems to promote them, through direct connection to special projects. Therefore the marketing of EPD and the use of certification systems in in Finland and Iceland have to be more general, still.

This is the challenge the GBC's are facing in all their work. There is a need to put more focus on producers, and make them realise the real advantages of investing in their product analyzes (LCA) which will lead to increased number of EPD for building material.

This can be done both with direct contact of the GBC's to those companies producing material, but there is also a need to promote the objectives and the development of European laws and legislation, preferably in close cooperation with the public sector.

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<sup>4</sup> This will be done on a side product of this report-a brochure focusing on both building owners and producers. Each GBC's will make some alternations to the basic text of the brochure according to the situation in each country.

#### 4. List of the most commonly used databases in the Nordic market:<sup>5</sup>

The five most commonly mentioned in the survey for Building owners:

- ✓ EPD Norge (<http://www.epd-norge.no/>)
- ✓ Product X Change (<http://productxchange.co.uk/>)
- ✓ SundaHus (<https://www.sundahus.se/>)
- ✓ Byggvarubedomningen (<https://www.byggvarubedomningen.se/>)
- ✓ Ecoinvent (<http://www.ecoinvent.org/database/database.html>)

The five most commonly mentioned in the survey for Producers and providers:

- ✓ Byggvarubedomningen (<https://www.byggvarubedomningen.se/> )
- ✓ Sunda Hus (<https://www.sundahus.se/>)
- ✓ BASTA (<http://www.bastaonline.se>)
- ✓ EPD-Norge (<http://www.epd-norge.no/> )
- ✓ own or internal websites.

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<sup>5</sup> According to the survey's. Many other databases were mentioned.

## 4.1. Appendix I.

### **Survey for Building owners, consultants and contractors.**

IGBC-WP3/22.06.15

#### **Nordic guide to sustainable materials**

- Project funded by the Nordic Innovation through – Nordic Built.

*The project "Nordic Guide to Sustainable Materials" will provide practical guidelines for building owners who demand the use of sustainable building materials and will be applicable for all types of building and rehabilitation projects. A further aim is that the harmonised material demands will be implemented in building certification systems like BREEAM, LEED and DGNB. They will also be available to building owners who are not aiming for a specific building certification, but who still want to adopt a sustainable approach to design and construction*

#### **Introduction**

Sweden, Finland, Norway and Iceland have joined forces to tackle three important challenges for the transition to more sustainable materials: agreement on a common set of functional criteria for sustainable materials, sufficient Environmental Product Declarations for Nordic products to enable manufacturers to get credit from their development of sustainable products and simplification of the procurement process for sustainable materials. The project will also provide practical guidelines for building owners who require the use of sustainable building materials and will be applicable for all types of building and rehabilitation projects. The Green Building Councils (GBCs) in Finland, Iceland, Sweden and Norway are all partners in the project. The project consists of five work packages.

The Icelandic Green Building Council is leading work package 3. In WP3 the main aim is to increase the demand for Environmental Product Declaration in the Nordic building market, map how actors on the building market search for data on environmental products, and especially to define drivers and obstacles to use of Environmental Products Declarations (EPD). The questionnaire attached is a tool in this mapping process. The results of these two surveys will be presented in a final report, and also to see what should be the main focus in the guide.

#### **This survey is aimed at two groups;**

- a) Producers and providers of building material
- b) Building owners (municipalities/governments, building owners and developers, housing companies, contractors, designers and consultants)

Before you answer the survey, please consider which group you represents.

#### 4.1.1. Questionnaire – Building owners /users

1. Location (country):  
Denmark, Finland, Iceland, Norway, Sweden
2. Activity domain;  
Public, private
3. Type of activity;  
Property management, , builder, architectural consulting, engineering consulting,  
contractor  
Other? \_\_\_\_\_
4. Do you want information on environmental impact of building products and appliances?  
Yes No

If no skip to end...

5. When you want information about environmental impact of the building product, what kind of information would be most useful to you?  
General information or statements e.g. „green product“  
Life cycle assessment (LCA) data  
Environmental certification/labelling (e.g. Svanen, Ecolabel,)  
Environmental product declaration (EPD)  
Other? \_\_\_\_\_
6. Where do you look for information  
Information from producer  
General search on the web  
Using databases for environmental information
7. If databases are used, please specify which one?

8. Are you familiar with Environmental product declarations; EPD ?  
Yes No

If no skip to end of survey

9. Where did you first learn about EPD?

on the web

through projects at work

in school

in relation to the use of certification system for buildings

Professional vocational training

Other:

10. When choosing between products; do you prioritize products with an EPD before products without an EPD?

Yes No

11. What are the main incentives for use of EPD's in your opinion?

Reduce of environmental impact

Qualified/standardized information,

Needed in certification scheme

Direct or indirect regulation (LCA)

To facilitate the use of evaluation/comparison of building products,

Brand/image

other; \_\_\_\_\_

12. What are the main obstacles for the use of EPD's in your opinion?

High Cost,

Problems in evaluation/comparison of products,

No market demand,

Does not include valuable information,

Others; \_\_\_\_\_

## 4.2. Appendix II.

### **Survey for Producers and providers of building material**

IGBC-WP3/22.06.15

#### **Nordic guide to sustainable materials**

- Project funded by the Nordic Innovation through – Nordic Built.

See more about the project on the Nordic Built [website](#).

#### **Introduction**

Sweden, Finland, Norway and Iceland have joined forces to tackle three important challenges for the transition to more sustainable materials: agreement on a common set of functional criteria for sustainable materials, sufficient Environmental Product Declarations (EPD) for Nordic products to enable manufacturers to get credit from their development of sustainable products and simplification of the procurement process for sustainable materials.

An EPD (Environmental Product Declaration) is an independently verified and registered document that communicates transparent and comparable information about the environmental impact of products through the life-cycle. EPD for building products are now being used increasingly in the construction sector worldwide or where ecological certification for buildings have become quite common.

EPD for a product does include information on the environmental impact of raw material energy use, content of materials and chemical substances, emissions to air, soil and water and waste. It can be a very successful tool to evaluate and compare the environmental impact on similar building products.

However having an EPD for a product does not have to imply that the declared product is environmentally superior to other products. It is rather a transparent and formal declaration of the life-cycle environmental impact of the given product based on ISO 14025 standards and quantitative data certified by an independent third party.

By having EPD made for their products manufacturers will have a comprehensive tool to communicate proven and reliable facts on the environmental impacts of their product in a transparent way. EPD also allows consumers to make informed choices using a standardized, comprehensive, validated environmental information put forth in an easy and comprehensible way.

One of the aim of the project is to increase the demand for Environmental Product Declaration in the Nordic building market, map how actors on the building market search for data on environmental products, and especially to define drivers and obstacles to use of Environmental Products Declarations (EPD). The questionnaire attached is a tool in this mapping process.

The project will also provide practical guidelines for building owners who require the use of sustainable building materials and will be applicable for all types of building and rehabilitation projects.

The questionnaire is aimed at two groups:

- a) Producers and providers of building material
- b) Building owners, consultants and contractors.

Before you answer the survey, please consider which group you represents. It should only take you few minutes to answer the survey, and your answer is a welcomed and much valuable input to the project.

#### 4.2.1. Questionnaire – for Producers and providers of building material

1. Location (country):  
Denmark, Finland, Iceland, Norway, Sweden
  
2. Type of Production:  
Material production,  
  
Composite building product/building components  
  
Imported material (providers)
  
3. Is there a demand for environmental data of your product?  
Yes No  
  
If no skip to end...
  
4. If you are asked for environmental data on your product, what kind of information do the costumers ask for?  
General information or statements e.g. „green product“  
Life cycle assessment (LCA) data  
Environmental certification systems or labelling. (e.g. Svanen, Ecolabel,..)  
Environmental product declaration (EPD's)  
Other? \_\_\_\_\_

5. Where do you provide information about the environmental qualification of your product?  
In our promotional material about the product  
In databases for environmental information  
  
If databases used, then which ones?

6. Are you familiar with Environmental product declarations; EPD?  
Yes No

If no, skip to end of survey

7. Do you have an EPD for your product/products you provide?  
Yes No

8. If the answer to question nr. 7, is yes. In what context are you asked for EPDs:
- The customer has a strategy of choosing sustainable materials
  - Through the use of certification systems
  - You have a policy yourself to provide sustainable materials and wants to verify this
  - other

9. Who are the main drivers for the use of EPD's in your opinion?  
Qualified/standardized information, demand or requirements from certification systems, to help users make informed decisions about choosing building products, increased customer's demand, to gain an advantage in the market for quality building products, others; \_\_\_\_\_

10. What are the main obstacles for the use of EPD's in your opinion?  
High cost,  
Problems with evaluation/comparison of products,  
Does not include valuable information,  
No market demand  
Others; \_\_\_\_\_



## 4.3. Appendix III

### 4.3.1. List of given answers to Q7 in the survey for Building owners.

Artsdatabanken.no  
Basta  
Byggtjeneste  
Byggvarubedömningen  
CoBuilder  
DGNB  
Ecoinvent  
Ecoproduct (NOR)  
ELCD  
Enslie  
EPD norge  
EU-blomsten  
GaBi  
Google  
Gronnhverdag.no  
ILCD database  
Internal LCA database  
Klimagasseregnskap.no  
M1  
Marksanerigsinfo.net  
Miljodirektoratet .no  
Miljostatus.no  
ngbc.no  
Norsk Myggevaretjeneste  
Opti360  
ProductXChange  
Sima Pro  
Stoffkartotek  
Sunda Hus  
Svanen  
Ökobau

#### 4.3.2. List of given answers to Q5 in the survey for producers and providers

Apricon C3  
Basta  
Byggvarubedömningen  
Byggvarudeklarationene  
CoBuilder  
Cos  
Databases within international standards reports  
Eco Product  
Ecoinvent  
EPD international  
EPD Norge  
EU-Ecolabel  
Forestia.no  
Gabi 6  
IMDS  
Institute fur Bauen und Umwelt e.v.  
Internal Database  
Kemikalieinspektionen  
NOBB  
Passiv hus  
Product x Change  
Sintef tg  
Sunda Hus  
Svanen  
Svenska kemikalieinspektionen  
Treindustrien