Supply Base Report: Template for Biomass Producers

www.sbp-cert.org
Completed in accordance with the Supply Base Report Template Version 1.3

For further information on the SBP Framework and to view the full set of documentation see www.sbp-cert.org

Document history
Version 1.0: published 26 March 2015
Version 1.1 published 22 February 2016
Version 1.2 published 23 June 2016
Version 1.3 published 14 January 2019

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- 13.2 Effectiveness of previous mitigation measures
- 13.3 New risk ratings and mitigation measures
- 13.4 Actual figures for feedstock over the previous 12 months
- 13.5 Projected figures for feedstock over the next 12 months
1 Overview

On the first page include the following information:

Producer name: The Danish Nature Agency (Naturstyrelsen)
Producer location: Færstballevej 2, 7183 Randbøl, Denmark
Geographic position: 55 42.4496, 9 16.5409
Primary contact: Mogens Krog, mokro@nst.dk
Company website: www.nst.dk
Date report finalised: 3 June 2019
Close of last CB audit: 3 June 2019
Name of CB: DNV GL Business Assurance Finland Oy Ab
Translations from English: Yes
SBP Standard(s) used: Standard 2 version 1.0, Standard 4 version 1.0, Standard 5 version 1.0
Weblink to Standard(s) used: https://sbp-cert.org/documents/standards-documents/standards
SBP Endorsed Regional Risk Assessment: Not applicable
Weblink to SBE on Company website: Not applicable

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations

<table>
<thead>
<tr>
<th>Main (Initial) Evaluation</th>
<th>First Surveillance</th>
<th>Second Surveillance</th>
<th>Third Surveillance</th>
<th>Fourth Surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
2 Description of the Supply Base

2.1 General description

Danish forest area

According to Statistics Denmark (2013) the forest cover in Denmark is 615254 ha which is equal to app. 14% of the total land area and the forest area is increasing. A total of app. 75% of the forest area is under private ownership while 25% is managed by public organizations. There are many small forest owners (less than 20 ha), but the main part (more than 50%) of the forest area is owned by larger forest owner >250 ha.

<table>
<thead>
<tr>
<th>Forest Area</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total forest area</td>
<td>624,600 ha</td>
</tr>
<tr>
<td>Broadleaves</td>
<td>42%</td>
</tr>
<tr>
<td>Conifers</td>
<td>38%</td>
</tr>
<tr>
<td>Mixtures of broadleaves and conifers</td>
<td>10%</td>
</tr>
<tr>
<td>Christmas trees and greenery</td>
<td>5%</td>
</tr>
<tr>
<td>Unstocked</td>
<td>2%</td>
</tr>
<tr>
<td>Temporarily unstocked</td>
<td>3%</td>
</tr>
</tbody>
</table>

Table 1. Forest cover in Denmark (Thomas Nord-Larsen et al. 2017)

<table>
<thead>
<tr>
<th>Ownership</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private forest</td>
<td>57</td>
</tr>
<tr>
<td>Private companies</td>
<td>12</td>
</tr>
<tr>
<td>Foundations</td>
<td>5</td>
</tr>
<tr>
<td>State forest</td>
<td>18</td>
</tr>
<tr>
<td>Other state owned</td>
<td>1</td>
</tr>
<tr>
<td>Other public forest</td>
<td>4</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2. Forest ownership (Thomas Nord-Larsen et al. 2017)

<table>
<thead>
<tr>
<th>Forestry farms sizes</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>All forestry farms</td>
<td>22744</td>
</tr>
<tr>
<td>Farms with 0.5-19.9 hectare forestry</td>
<td>19996</td>
</tr>
<tr>
<td>Farms with 20.0-49.9 hectare forestry</td>
<td>1621</td>
</tr>
<tr>
<td>Farms with 50.0-99.9 hectare forestry</td>
<td>475</td>
</tr>
<tr>
<td>Farms with 100.0-249.9 hectare forestry</td>
<td>363</td>
</tr>
<tr>
<td>Farms with 250.0-499.9 hectare forestry</td>
<td>144</td>
</tr>
<tr>
<td>Farms with 500.0 hectare forestry and over</td>
<td>146</td>
</tr>
</tbody>
</table>

Table 3. Forestry farms sizes in Denmark (Thomas Nord-Larsen et al. 2017)
The standing volume is app. 130 mio m³ which is equal to 209 m³/ha. Broadleaves account for 57% and conifers for 43% of the standing volume. Standing volume has increased for many years due to an increasing forest area, and properly also an increase in standing volume/ha. The annual total increment in standing volume is estimated to 7.7 mio m³/ha and the annual harvest is estimated to 4.8 mio m³/ha. Thus the annual net increment is 2.9 mio m³/year.

The total gross factorial income for forest products is app. 1 billion Danish Kroner (app. 133 mio euro). In 2015 the production of energy wood accounted for 300 mio Danish Kroner.

More than 85% of the Danish forest area is protected under the Danish forest legislation. Certain forest habitats are also protected under Nature 2000 legislation.

The Supply-base: State forest managed by the Danish Nature Agency

The Danish Nature Agency manages forest and nature areas owned by The Ministry of Food and Environment and only supply wood chips from these areas. The areas are managed in a holistic approach, where respect for nature protection, outdoor recreation, cultural history, production, etc. are all rated highly. However there is a special emphasis on nature protection and support of outdoor opportunities.

The total FSC certified area is 203.129 ha, while the PEFC certified and SBP compliant area is 204.316 ha.

The forest management is certified according to PEFC og FSCs standards for responsible forest management. Only a limited area is excluded from the certificates:

<table>
<thead>
<tr>
<th>Certificate</th>
<th>Areas excluded</th>
<th>Area excluded (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEFC</td>
<td>Farmland, camping grounds, golf courts, nurseries, special project areas</td>
<td>4.504</td>
</tr>
<tr>
<td>FSC</td>
<td>Farmland, camping grounds, golf courts, nurseries, special project areas, christmas tree areas</td>
<td>5.690</td>
</tr>
<tr>
<td>SBP</td>
<td>Farmland, camping grounds, golf courts, nurseries, special project areas</td>
<td>4.504</td>
</tr>
</tbody>
</table>

Table 4. List over areas excluded from certificates.

The Danish Nature Agency manages the forest according to principles for Nature Based Management. The means that clear felling in general is not used although exceptions can occur.

<table>
<thead>
<tr>
<th>Beech</th>
<th>Oak</th>
<th>Ash and maple</th>
<th>Other broadleaves</th>
<th>Spruce</th>
<th>Noble firs</th>
<th>Mountain pine</th>
<th>Other conifers</th>
<th>Forest areas</th>
<th>Open nature areas</th>
<th>Other areas e.g. roads</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>21613</td>
<td>16272</td>
<td>2416</td>
<td>5469</td>
<td>30363</td>
<td>6518</td>
<td>6766</td>
<td>17543</td>
<td>106980</td>
<td>81740</td>
<td>15614</td>
<td>204316</td>
</tr>
</tbody>
</table>

Table 5 Land use (ha) state forest.
2.2 Actions taken to promote certification amongst feedstock supplier

The Danish Nature Agency is sourcing the main part of the biomass from own areas. Only in connection with nature projects where neighbor areas are included there may be woodchip from outside The Danish Nature Agency's ownership. Woodchip from outside The Danish Nature Agency's ownership will not be claimed as SBP compliant. Areas managed by The Danish Nature Agency are for the main part certified against PEFC as well as FSC forest management standards. Furthermore The Danish Nature Agency is participating in certification standard setting processes.

2.3 Final harvest sampling programme

Provide a description of the process and results from the sampling programme undertaken to determine the proportion of final fellings which ends up in biomass compared to other end uses. This is only applicable for final fellings (not thinnings) from stands with an expected rotation length of more than 40 years.

The Danish Nature Agency only use clear fellings to a limited extend. A clear felling is a restricted coherent forest areas where all the trees are cut down at the same time. Instead the forest management is based on principles for nature based forest management. Nature Based forest management aims to build stable forests that are rejuvenating naturally, and where forest climate is maintained. Forests will consist of locally adapted and especially native species and the forest will be characterized by high variation in age and species composition. In the management of state forest there is a focus on providing dead wood, natural hydrology, protect and provide key habitats and create recreational values. Furthermore, there is ban on the use of pesticides in the state's forests.

Wood chip production represents around 248,000 tonnes annually. The chips are preferably provided in connection with the initial thinning, and as a byproduct in later fellings.

Thinnings 95,911 m³ (2018 numbers). From the first thinnings where trees are cut down using a feller/buncher. Wood chip are the only product from these operations. Chipping is carried out in the stand and the chips are transported to the power plant or to a storage. Some of the wood chip also come from nature projects (For example clearing of heath).

Treetops: 111,434 m³ (2018 numbers). Treetops from harvesting mid age or older deciduous trees are chipped. Treetops are stacked and chipped at roadside.

Downgraded round wood chipped by NST: 58,062 m³ (2018 numbers). Is produced as a by-product in later fellings of conifers where timber is the main product. The wood chip is low quality wood which cannot be used for high quality products. The products are harvested using a harvester forwarded to road side as round wood. The round wood is transferred to a storage where it is stored and later chipped.

Downgraded round wood – not chipped by NST: 12,346 m³ (2018 numbers). Is produced as a by-product in later fellings of conifers where timber is the main product. The wood chip is low quality wood which cannot be used for high quality products. The products are harvested using a harvester forwarded to road side, from where it is transported directly to the power plant. The wood is sold as roundwood and delivered at the powerplant. Chipping of roundwood is done by the buyer.
2.4 Flow diagram of feedstock inputs showing feedstock type [optional]

N/A.

2.5 Quantification of the Supply Base

Provide metrics for the Supply Base including the following. Where estimates are provided these shall be justified.

Supply Base

a. Total Supply Base area (ha): 204.316 ha
b. Tenure by type (ha): public 204.316 ha
c. Forest by type (ha): temperate 204.316 ha
d. Forest by management type (ha): managed natural
e. Certified forest by scheme (ha): 204.316 ha ha is PEFC certified
   203.129 ha is FSC certified

Feedstock

f. Total volume of Feedstock: between 200.000 to 400.000 m$^3$
g. Volume of primary feedstock: between 200.000 to 400.000 m$^3$
h. List percentage of primary feedstock (g), by the following categories. Subdivide by SBP-approved Forest Management Schemes:
   - PEFC certified 100 %
   - FSC certified 98 %

---

1 Parts of the area is set-aside as protected forest and will not contribute to the Feedstock
2 FSC does not recognize and allow greenery areas as certified. This area covers an area of 1187 ha which is the between the FSC and PEFC certified area.
### Coniferous Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abies Alba</td>
<td>Larix spp</td>
</tr>
<tr>
<td>Abies Grandis</td>
<td>Picea abies</td>
</tr>
<tr>
<td>Abies Normaniana</td>
<td>Picea glauca</td>
</tr>
<tr>
<td>Abies Procera</td>
<td>Picea sitchensis</td>
</tr>
<tr>
<td>Abies spp.</td>
<td>Picea spp</td>
</tr>
<tr>
<td>Pinus contorta</td>
<td>Pinus nigra</td>
</tr>
<tr>
<td>Pinus ponderosa</td>
<td>Pinus strobos</td>
</tr>
<tr>
<td>Pinus sylvestris</td>
<td>Pseudotsuga menziesii</td>
</tr>
<tr>
<td>Thuja plicata</td>
<td>Tsuga heterophylla (Raf.) Sarg</td>
</tr>
</tbody>
</table>

### Broadleaved Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer platanoides</td>
<td>Betula pubescens</td>
</tr>
<tr>
<td>Acer pseudoplatanus</td>
<td>Carpinus betulus L</td>
</tr>
<tr>
<td>Alnus glutinosa</td>
<td>Fagus sylvatica</td>
</tr>
<tr>
<td>Alnus incana</td>
<td>Fraxinus excelsior</td>
</tr>
<tr>
<td>Betula pendula</td>
<td>Populus tremula</td>
</tr>
<tr>
<td>Populus tremuloides</td>
<td>Quercus Rubra</td>
</tr>
<tr>
<td>Populus spp</td>
<td>Quercus Spp</td>
</tr>
<tr>
<td>Prunus avium</td>
<td>Salix spp</td>
</tr>
<tr>
<td>Quercus Petraea</td>
<td>Sorbus Spp</td>
</tr>
</tbody>
</table>

i. List all species in primary feedstock, including scientific name:

<table>
<thead>
<tr>
<th>Coniferous Species</th>
<th>Broadleaved Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abies Alba</td>
<td>Acer platanoides</td>
</tr>
<tr>
<td>Abies Grandis</td>
<td>Acer pseudoplatanus</td>
</tr>
<tr>
<td>Abies Normaniana</td>
<td>Alnus glutinosa</td>
</tr>
<tr>
<td>Abies Procera</td>
<td>Alnus incana</td>
</tr>
<tr>
<td>Abies spp.</td>
<td>Betula pendula</td>
</tr>
<tr>
<td>Pinus contorta</td>
<td>Populus tremuloides</td>
</tr>
<tr>
<td>Pinus nigra</td>
<td>Quercus Rubra</td>
</tr>
<tr>
<td>Pinus ponderosa</td>
<td>Quercus Spp</td>
</tr>
<tr>
<td>Pinus strobos</td>
<td>Prunus avium</td>
</tr>
<tr>
<td>Pinus sylvestris</td>
<td>Quercus Petraea</td>
</tr>
<tr>
<td>Pseudotsuga menziesii</td>
<td>Sorbus Spp</td>
</tr>
</tbody>
</table>

j. Volume of primary feedstock from primary forest 0 ha

k. List percentage of primary feedstock from primary forest (j), by the following categories. Subdivide by SBP-approved Forest Management Schemes: N/A

l. Volume of secondary feedstock: 0%

m. Volume of tertiary feedstock: 0%
3 Requirement for a Supply Base Evaluation

<table>
<thead>
<tr>
<th>SBE completed</th>
<th>SBE not completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

The full forest area of the Danish state forests managed by the Danish Nature Agency, which is the supply base is FSC and/or PEFC certified.
4 Supply Base Evaluation

N/A

4.1 Scope

N/A

4.2 Justification

N/A

4.3 Results of Risk Assessment

N/A

4.4 Results of Supplier Verification Programme

N/A

4.5 Conclusion

N/A
5 Supply Base Evaluation Process

N/A
6 Stakeholder Consultation

N/A

6.1 Response to stakeholder comments

N/A
7 Overview of Initial Assessment of Risk

N/A
8 Supplier Verification Programme

8.1 Description of the Supplier Verification Programme

8.2 Site visits

8.3 Conclusions from the Supplier Verification Programme
9 Mitigation Measures

N/A

9.1 Mitigation measures

N/A

9.2 Monitoring and outcomes

N/A
10 Detailed Findings for Indicators

N/A
Data and information used in this report is for a large part public available. In order to ensure this report further credibility it has been sent to peer review.

11.1 Peer review

*If an external peer review of this report was done prior to finalisation, describe the process that was followed and the competency of the parties involved.*

2016: Peer review has been carried out by forestry professor Palle Madsen at Copenhagen University. Comments and recommendations have been incorporated in the report.

11.2 Public or additional reviews

*If another type of external review was done prior to finalisation of this report (e.g. publication for comments by stakeholders, NGOs, or other independent third parties), describe the process here.*

2017-2019: There are very few changes compared to the SBP reports from the period 2017-2019 therefore the SBR 2019 edition has not been reviewed.
## Approval of Report

### Approval of Supply Base Report by senior management

<table>
<thead>
<tr>
<th>Report Prepared by:</th>
<th>Name</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mogens Krog</td>
<td></td>
<td>Forest Officer</td>
<td>24.05.2019</td>
</tr>
</tbody>
</table>

The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report.

<table>
<thead>
<tr>
<th>Report approved by:</th>
<th>Name</th>
<th>Title</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Mads Jensen</td>
<td></td>
<td>Head og Division</td>
<td>03.06.2019</td>
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</tbody>
</table>

<table>
<thead>
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<th>Title</th>
<th>Date</th>
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<tbody>
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<td>[title]</td>
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<table>
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<tr>
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<th>Name</th>
<th>Title</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>[name]</td>
<td>[title]</td>
<td></td>
<td>[date]</td>
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</table>

<table>
<thead>
<tr>
<th>Report approved by:</th>
<th>Name</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>[name]</td>
<td>[title]</td>
<td></td>
<td>[date]</td>
</tr>
</tbody>
</table>
13 Updates

Note: Updates should be provided in the form of additional pages, either published separately or added to the original public summary report.

13.1 Significant changes in the Supply Base

*Provide a description of any significant changes to the supply base.*

No significant changes to the supply base. The forest area has increased slightly.

13.2 Effectiveness of previous mitigation measures

*For each mitigation measure identified during the evaluation, give a detailed account of whether the measures were shown to be effective or not.*

N/A

13.3 New risk ratings and mitigation measures

*Provide an update of risk ratings for all relevant indicators.*

N/A

13.4 Actual figures for feedstock over the previous 12 months

*SBP-compliant biomass sold in 2018: 180,228,05 m³ (wood chips) + 70,408 m³ (downgraded roundwood) sold as SBP-compliant biomass.*

*Total amount of wood chips sold in 2018: 310,758,45 M³ (of which only 250,636,05 m³ is sold as SBP-compliant biomass).*

13.5 Projected figures for feedstock over the next 12 months

*Budget for 2019: 300,000 total, 250,000 SBP M³ (Total amount, SBP-compliant biomass and non-SBP)*