Sustainable Biomass Partnership

Supply Base Report: Statkraft Markets GmbH

www.sustainablebiomasspartnership.org

Completed in accordance with the Supply Base Report Template Version 1.2

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

Document history

Version 1.0: published 26 March 2015

Version 1.1 published 22 February 2016

Version 1.2 published 23 June 2016

Contents

1 Overview

Producer name: Statkraft GmBH

Producer location: Tofte, Norway

Geographic position: Latitude: 59°32′33″ N Longitude: 10°33′40″ E

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Date report finalised: 26/Jul/2016

Close of last CB audit: 3/Aug/2016

Translations from English: Yes

SBP Standard(s) used: [e.g. Standard 1 version 1.0, Standard 2 version 1.1]

SBP Standard(s) used: Standard 2 V1. Standard 4. V1 Standard 5. V1

Weblink to Standard(s) used: http://www.sustainablebiomasspartnership.org/documents

SBP Endorsed Regional Risk Assessment: Not applicable

Weblink to SBE on company website: http://www.statkraftbiomasstrading.com

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations				
Main (Initial) Evaluation	**First Surveillance**	**Second Surveillance**	**Third Surveillance**	**Fourth Surveillance**
X	☐	☐	☐	☐

2 Description of the Supply Base

2.1 General description

Overview

The supply base primarily consists of small closed-forest family-owned holdings in south-east Norway. A limited proportion (approximately 15% +/- 5%) of forest owners/family members are actively engaged in their forest through felling and/or transport operations and some family holdings carry out their own reforestation and silvicultural work too. The remaining 85% are managed by co-operatives or other external professional companies. The tenure rights of ownership is 80% private and 20% public in Norway[1].

Harvesting rates are low in Norway[2] and Scandinavia are low compared to other EU countries as rated by the Food and Agricultural Organization of the United Nations (FAO) with harvesting being less than 1 t/ha in instances.[3] Forest resources within the supply base are within < 150km to enable sourcing to be economically viable by truck and approximately < 200km via barge.

Historically, the Sodra mill at Tofte provided a market for pulpwood and non-saw or non-joinery-grade wood. This mill has now been closed. The wood now is received at Statkraft's biomass production site in Tofte. The site at Tofte add values to the supply chain as the biomass supplied to Tofte is co-harvested with higher-grade wood and the low-grade wood has a market outlet opposed to being a waste.

Saw or joinery-grade wood is not sourced as a feedstock, and timber from local sawmill markets is not diverted to biomass. Sawlogs or joinery-grade wood harvested under comparatively long rotation does enter the sawmill industry. There are more than 200 industrial-size sawmills in the country making this side of the wood industry far more significant to the economy than biomass.[4] The sawmill industry accounts for 40% of commercial wood removals[5] and commercial biomass approximately 8% (2013)[6] Therefore sourcing and processing of fuel-grade or pulpwood is not deemed to have a negative effect and replaces a market for local suppliers whom formerly supplied such pulpwood or low-economic-value wood to Sodra at Tofte.

Forest Cover, Land Use, Economics and Wood-Based Policy

Approximately 37% of the surface area in Norway is covered by forest. Twenty-five percent of Norwegian land area is productive forest. Latest available figures (2011) state that the growing stock of timber was 878 million cubic metres. The annual increment was almost 25 million cubic metres. In 2011, the forest owners cut 8.5 million cubic metres industrial roundwood for sale, 2.5 million cubic metres for household logs[7]. The total forested area amounts to 12 million hectares, including 7.4 million hectares of productive forest[8]. An

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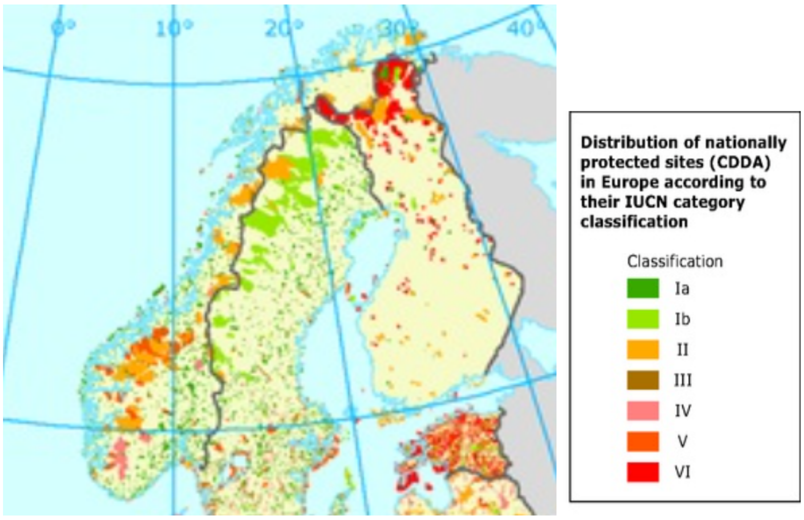
[1] http://www.unece.org/fileadmin/DAM/timber/publications/SP-26.pdf
[2] http://www.ssb.no/en/jord-skog-jakt-og-fiskeri/statistikker/stskog
[3] Internal analysis of FM reports and analyses using the potential available wood supply productive area
[4] http://www.fao.org/forestry/country/57025/en/nor/
[5] https://www.ssb.no/en/jord-skog-jakt-og-fiskeri/statistikker/skogav/aar-endelige
[6] http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:F3_Wood_as_a_source_of_energy,_2013.png
[7] https://www.ssb.no/en/jord-skog-jakt-og-fiskeri/artikler-og-publikasjoner/landbruket-i-norge-2011
[8] http://www.pefc.org/component/pefcnationalmembers/?view=pefcnationalmembers&Itemid=48/16-Norway

estimated 15% of the productive forest area has been designated as non-economic due to difficult terrain and long distance transport, which means that economical forestry may be operated in only 50% of the forested area. The most important species are Norway spruce (47%), Scots pine (33%) and birch (18%). Standing volume of forest is nearly 900 million cubic metres, compared with 300 million when the first national forest survey was carried out in 1919. The tremendous increase is a result of a forest policy with the main objective of restoring the forest resources. Each year the standing forest volume increases by approximately 20 million cubic metres through tree growth. The total annual harvest is less than 50% of this growth, which again means that the forest volume increases every year. The variety of small-scale forestry creates good conditions for environmental biodiversity. Felling areas are 1.4 hectares on average, with long-rotation between harvesting[9].

Nationally in Norway forest resource polices are based on principles of maintaining the long-term stability and resilience of the resource base. The goal of Norwegian forest management policies is to meet social, economic, ecological and cultural needs for present and future generations. Norway has ratified the Rio convention on biological diversity and the climate and signed resolutions on sustainable management of Europe’s forests. The principles expressed in these documents are also incorporated into Norwegian forest policy.

Protected Areas

CITES[10] species are present in Norway but do not include softwood or deciduous (broadleaf species) trees which are threatened. Norway has a high proportion of IUCN Categories. Protected Areas Categories and locations are indicated in the European Environment Agency Map:



Lands protected under The Forestry Act 2005[11]

Areas of special environmental or recreational value – areas in which forest operation is subject to severe restrictions. Applied to approximately 170,000 ha.

Protection forest – forestland that must be treated with special care due to their location or characteristics. Applied to approximately. 20% of Norway’s forestland[12].

[9] Soil Association FSC FM Reports
[10] https://cites.org/eng/cms/index.php/component/cp/country/NO
[11] http://www.lexadin.nl/wlg/legis/nofr/eur/lxwenoo.htm

Statistics on protected areas under Norway's The Nature Conservation Act 1970:[13]
National parks: 29. Total area: 27,756,000 ha.
Landscape protection areas: 174. Total area: 15,093,000 ha.
Nature reserves: 1,790. Total area: 4,193,000 ha.
Nature monuments: 103. Total area: 2,000 ha.
Other protection areas: 118. Total area: 126,000 ha.
Total: 47,170,000 ha ~ 10.5% protected under the Nature Conservation Act.
(as of January 1, 2007. Mainland excl. Svalbard)

Norway has formally adopted a Red List classification of species in accordance with criteria from the International Union for Conservation of Nature (IUCN)[14]. A large proportion of the Red List species found in forests are associated with rich broad-leaved forest, however this makes up only 1% of Norway's productive forest area.[15] Feedstocks are from conifer-dominated habitats, thus the risk of feedstocks affecting Red List species is inherently low and Norway's adoption of protected areas classifications provides further protection.

Reported threats to any Red List species is not from forestry or farming practices. Land Use Change (LUC) provides the greatest threat[16], an example being construction activities.[17] Norway is party to several international agreements that deal with the protection of threatened species and cover forestry and land management practices. The most important of these are the Convention on Biological Diversity, the Bern Convention, the CITES Convention and the Ramsar Convention.

Feedstock

Statkraft has one feedstock product group – stemwood from less than 10 suppliers. All feedstock is 100% PEFC Certified and from naturally regenerated forests in biomass profiling information (clearly visible signs of human activity) and not primary forest as defined by SBP.

2.2 Actions taken to promote certification amongst feedstock supplier

All suppliers are currently PEFC or FSC certified, and many hold dual certification.

2.3 Final harvest sampling programme

None at present.

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12 http://www.pefc.org/component/pefcnationalmembers/?view=pefcnationalmembers&Itemid=48/16-Norway
13 Soil Association FSC FM Reports
14 http://www.biodiversity.no/Pages/135380
15 http://www.biodiversity.no/Pages/135380
16 http://www.environment.no/topics/biodiversity/species-in-norway/threatened-species/
17 http://www.biodiversity.no/Pages/135380

Official statistics note that fuel is 26% or industrial or harvesting of wood (2,527 m3 compared to 9807 m3 of industrial wood) harvested in 2014[18]. Included in this value is wood for domestic use. Wood as a commercial source of energy is approximately 8% (according to 2013 Eurostat values).[19]

The rotation period for spruce in Norway is 70 - 120 years dependent on site quality, for broadleaves this shorter. All biomass received by Statkraft is final fellings.

2.4 Flow diagram of feedstock inputs showing feedstock type [optional]

Insert flow diagram.

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): Predominately conifer closed-forest mainly within Vestfold, Telemark and Buskerud, Aust-Agder, Vest-Agder and Rogland comprising 1,273,269, 5,209,557, 5,527,370 3,560,258, 2,472,794 and 1,383,478 decares of productive forest respectively[20]. The Total Supply Base includes all of Norway and 12 million hecatres.
b. Tenure by type (ha): predominately privately owned small closed-forest family holdings. Public holding is 20% and private holdings are 80%[21]. Therefore 9.6 million hectares private and 2.4 million hectares public.
c. Forest by type (ha): boreal 12 million hectares
d. Forest by management type (ha): managed natural 12 million hectares
e. Certified forest by scheme (ha):
   FSC https://ic.fsc.org/en/facts-figures
   Norway: 52 Chain of Custody certificates. 417,900 (ha) certified

   PEFC https://www.scribd.com/doc/147379606/PEFC-Global-Certificates
   Norway: 64 Chain of Custody certificates. 9,142,702 (ha) certified

Feedstock

f. Total volume of Feedstock: tonnes – Band 1
g. Volume of primary feedstock: tonnes – Band 1

[18] http://ec.europa.eu/eurostat/statisticsexplained/index.php/Forestry_statistics_in_detail#Wood_as_a_source_of_energy
[19] http://ec.europa.eu/eurostat/statisticsexplained/index.php/File:F3_Wood_as_a_source_of_energy,_2013.png
[20] https://www.ssb.no/a/english/kortnavn/stskog_en/arkiv/tab-2007-11-12-02-en.html
[21] http://www.unece.org/fileadmin/DAM/timber/publications/SP-26.pdf

h. List percentage of primary feedstock (g): - Band 5 (100% Certified to an SBP-approved Forest Management Scheme)
i. List all species in primary feedstock, including scientific name: Norwegian spruce and conifer: *Picea abies,* Pine *Pinus sylvestris*. Poplar *Populus spp, Populus tremula*. Birch *Betula spp*, Ash, *Fraxinus excelsior*.
j. Volume of primary feedstock from primary forest: 0 (None)
k. List percentage of primary feedstock from primary forest: None
l. Volume of secondary feedstock: specify origin and type: - Band 1 (None)
m. Volume of tertiary feedstock: specify origin and composition: - Band 1 (None)

Bands for (f) and (g) are:

1. 0 – 200,000 tonnes or m^3
2. 200,000 – 400,000 tonnes or m^3
3. 400,000 – 600,000 tonnes or m^3
4. 600,000 – 800,000 tonnes or m^3
5. 800,000 – 1,000,000 tonnes or m^3
6. >1,000, 000 tonnes or m^3

Bands for (h), (l) and (m) are:

1. 0%-19%
2. 20%-39%
3. 40%-59%
4. 60%-79%
5. 80%-100%

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
☐	**X**

All of the feedstock an SBP-approved Forest Management Scheme feedstock and we concluded this is exempt from a SBE.

4 Supply Base Evaluation

4.1 Scope

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we concluded this is exempt from a SBE.

4.2 Justification

Not applicable.

4.3 Results of Risk Assessment

Not applicable.

4.4 Results of Supplier Verification Programme

Not applicable.

4.5 Conclusion

Not applicable in accordance with 4.1

5 Supply Base Evaluation Process

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we conclude an SBE is exempt.

6 Stakeholder Consultation

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we concluded a stakeholder consultation was not required.

6.1 Response to stakeholder comments

Stakeholders views were not solicited.

7 Overview of Initial Assessment of Risk

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we concluded a risk assessment was not required.

8 Supplier Verification Programme

8.1 Description of the Supplier Verification Programme

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we concluded this is not required.

8.2 Site visits

As 8.1.

8.3 Conclusions from the Supplier Verification Programme

As 8.1.

9 Mitigation Measures

9.1 Mitigation measures

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we concluded this is not required.

9.2 Monitoring and outcomes

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we concluded this is not required.

10 Detailed Findings for Indicators

All of the feedstock is an SBP-approved Forest Management Scheme feedstock and we concluded this is not required.

11 Review of Report

11.1 Peer review

Steinar Asakskogen

Bio

Educated in forestry 1978 at Norwegian University of Life Science, NMBU.
- 1978 - 1980: Trainee State forest
- 1980 - 2013: Employee of Norske Skogindustrier ASA responsible for company forest operations in Norway and Sweden, responsible for wood supply to several of the groups paper mills including all mills in Norway

Previously board member of in several companies as Norske Skog AB, Moelven Skog AB, Wood and Paper, Sapin SA, Skog-Data AS, Norsk Virkesmåling.

Since 1995 involved in major domestic projects on forest environment management and certification.

11.2 Public or additional reviews

A public review has not been undertaken as Statkraft had this SBR peer reviewed as stated above.

12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	***Robin Askey***	***Sustainability Advisor***	***26.7.2016***
	Name	**Title**	**Date**
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.			
Report approved by:	***Chris Moore***	***Head of Biomass***	***2.8.2016***
	Name	**Title**	**Date**
Report approved by:	***Elizabeth Warren***	***Commercial Operations Manager***	***1.8.2016***
	Name	**Title**	**Date**
Report approved by:	***[name]***	***[title]***	***[date]***
	Name	**Title**	**Date**

13 Updates

Not applicable.

13.1 Significant changes in the Supply Base

Not applicable.

13.2 Effectiveness of previous mitigation measures

Not applicable.

13.3 New risk ratings and mitigation measures

Not applicable.

13.4 Actual figures for feedstock over the previous 12 months

Not applicable

13.5 Projected figures for feedstock over the next 12 months

Not applicable