



Solutions for biomass fuel market barriers and raw material availability - IEE/07/777/SI2.499477

Country report of different criteria for sustainability and certification of biomass and solid, liquid and gaseous biofuels – Finland

Work package 4.3

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Jyväskylä, February 2010

Intelligent Energy  **Europe**

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Preface

This publication is part of the EUBIONET III Project (Solutions for biomass fuel market barriers and raw material availability - IEE/07/777/SI2.499477, www.eubionet.net) funded by the European Union's Intelligent Energy Programme. EUBIONETII is coordinated by VTT and other partners are Danish Technological Institute, DTI (Denmark), Energy Centre Bratislava, ECB (Slovakia), Ekodoma (Latvia), Fachagentur Nachwachsende Rohstoffe e.V., FNR (Germany), Swedish University of Agricultural Sciences, SLU (Sweden), Brno University of Technology, UPEI VUT (Czech), Norwegian University of Life Sciences, UMB (Norway), Centre wallon de Recherches agronomiques, CRA-W (Belgium), BLT-HBLuFA Francisco Josephinum, FJ-BLT (Austria), European Biomass Association, AEBIOM (Belgium), Centre for Renewable Energy Sources, CRES (Greece), Utrecht University, UU (Netherlands), University of Florence, UNIFI (Italy), Lithuanian Energy Institute, LEI (Lithuania), Imperial College of Science, Imperial (UK), Centro da Biomassa para a Energia, CBE (Portugal), Energy Restructuring Agency, ApE (Slovenia), Andalusian Energy Agency, AAE (Spain). EUBIONET III project will run 2008 – 2011.

The main objective of the project is to increase the use of biomass based fuels in the EU by finding ways to overcome the market barriers. The purpose is to promote international trade of biomass fuels to help demand and supply meet each other, while at the same time the availability of industrial raw material is to be secured at reasonable price. The EUBIONET III project will in the long run boost sustainable, transparent international biomass fuel trade, secure the most cost efficient and value-adding use of biomass for energy and industry, boost the investments on best practice technologies and new services on biomass heat sector and enhance sustainable and fair international trade of biomass fuels.

This report is summary of Finnish situation. This report is written by Eija Alakangas, VTT and Auvo Kaivola from PEFC Finland has provided information on Finnish Forest Certification System.

More detailed information of Finnish bioenergy situation in 2007 is described in the other report (Heinimö, J. & Alakangas, E. Market of biomass fuels in Finland, Lappeenranta University of Technology, Research Report 3, 2009.)

Eija Alakangas, Jyväskylä, February 2010 (updated from September 2009)

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1 General outline of bioenergy production and use in Finland

1.1 Total bioenergy use in Finland

As a member of the European Union, Finland has committed itself to the Union's climate and energy targets, such as reducing its overall emissions of green house gases to at least 20% below 1990 levels by 2020, and increasing the share of renewable energy in the gross final consumption. The renewable energy target approved for Finland is 38%. The present National Climate and Energy Strategy were introduced in November 2008. The strategy covers climate and energy policy measures up to 2020, and in brief thereafter, up to 2050. In recent years, the actual emissions have exceeded the Kyoto commitment and the trend of emissions is on the increase. In 2007, the share of renewable energy in the gross final energy consumption was approximately 25% (360 PJ). Without new energy policy measures, the final consumption of renewable energy would increase to 380 PJ, which would be approximately only 31% of the final energy consumption. In addition, greenhouse gas emissions would exceed the 1990 levels by 20%. Meeting the targets will need the adoption of more active energy policy measures in coming years (Heinimö & Alakangas 2009).

Imported fossil fuels – oil, coal, and natural gas – have a major role as a primary energy source in the Finnish energy system, accounting for almost 50% of the total primary energy supply. The only significant indigenous energy resources in the country are wood, peat¹, hydropower, and wind energy. In 2007, renewable energy sources accounted for 25% (364 PJ) of all energy consumption (1 470 PJ), which was the third highest proportion in the EU. Final energy consumption was 1 132 PJ in 2007.

¹ In Finland, peat has been defined as a slowly renewing biomass fuel. It is not considered a renewable energy source in official statistics and in greenhouse gas accounting.

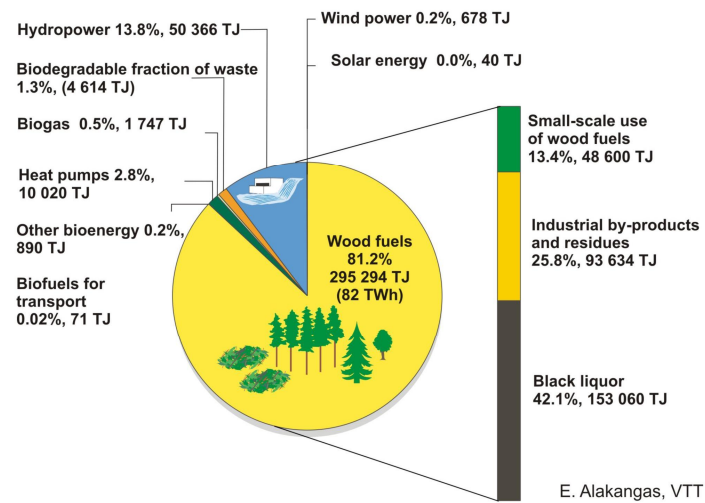


Figure 1. Renewable energy sources in Finland in 2007.

1.2 Main feedstock used for bioenergy production

Wood together with fuel peat is the most important sources of bioenergy in Finland. The use of other biomass fuels, including agrobiomass, biogas, the biodegradable fraction of solid recovered fuels and liquid biomass in the road transportation sector, is negligible compared to wood and peat use (Table 1, Figure).

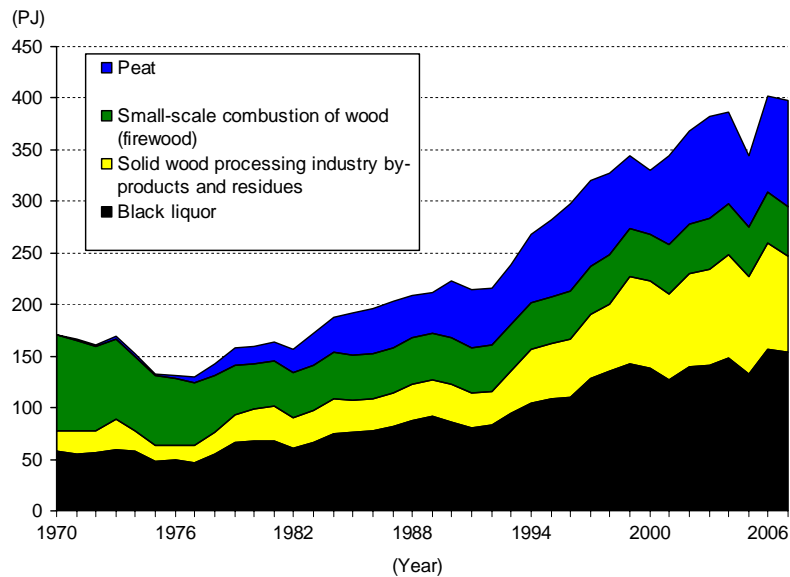


Figure 2. Consumption of wood fuels and peat in Finland in 1970 – 2007. Forest fuels consumed in heating and power plants are included in industrial wood residues and by-products (Heinimö & Alakangas, 2009)

Table 1. The consumption of biomass fuels in Finland in 2007. Statistics Finland (Heinimö & Alakangas, 2009)

Fuel	Use in 2007 (PJ)	
Wood fuels:		
▪ Black liquor ^(a)	153.1	
▪ Solid wood processing industry by-products and residues ^(b)	73.5	
▪ Firewood	44.8	
▪ Forest fuels (forest chips)	21.9	
▪ Wood pellets	2.0	
Wood fuels in total	295.3	
Biogas	1.7	
Solid recovered fuels (biodegradable fraction)	4.6	
Other bioenergy ^(c)	0.9	
Biomass fuels in road transport sector	0.1	
In total	302.6	

^(a) Black liquor is a by-product from the wood pulp making process and contains non-fibrous wood matter and cooking chemicals. Energy production from black liquor is a solid part of the pulp making process.

^(b) Includes bark, sawdust, wood residue chips and all other wood fuels excluded from other rows.

^(c) Includes plant-derived and animal derived products (e.g. agricultural biomass and liquid biofuels).

Wood and peat covers over 95% of the biomass fuels use in Finland. The energy use of wood and peat in different sectors in Finland in the year 2007 is summarised in Table 2. The forest industry represents the largest producer of wood fuels, but the industry is also a major user of wood fuels. Almost two thirds of wood fuels use takes place in the forest industry. Wood is the most important fuel at forest industry mills, accounting for about 75% of their fuel consumption. In many cases, paper, paperboard, pulp and saw mills are located on the same site, forming a forest industry integrate which allows efficient utilisation of raw material and energy.

Table 2. End use of wood and peat by end user groups in 2007, in PJ. (Heinimö & Alakangas 2009)

Fuel / End use sector	Forest industry	District heating	Small-scale use <i>farms and detached houses</i>	Other industry & users	Total
Black liquor	153.1	0	0	0	153.1
Solid wood processing industry by-products and residues (<i>bark, sawdust, industrial chips, briquettes, recovered wood and all other wood fuels excluded from the other columns</i>)	37.6	14.5	0	21.4	73.5
Firewood	0	0	44.8	0	44.8
Forest fuels (excludes firewood)	6.3	8.8	2.8	4.0	21.9
Wood pellets (<i>estimated</i>)		0.5	1.0	0.5	2.0
Total wood	197.0	23.8	48.6	25.9	295.3

The annual total fuel consumption of the road transport sector has increased moderately in past years (Table 3). The consumption of gasoline has remained constant, but instead, the consumption of diesel fuel has increased. The consumption of biofuels has been negligible. In 2002–2004, the consumption of biofuels was based on fixed term pilot projects where bio-ethanol was used in blends with gasoline. In addition, small-scale trials on the production of bio-diesel and biogas for use as a transportation fuel have also been carried out. After these projects, the consumption of biofuels dropped to zero in 2005. In spring 2006, Finland's largest seller of transport fuels, Neste Oil, began selling E98 grade petrol that was blended with 2–5% ethanol in Southern and Central Finland [19]. In 2007, the share of bio-ethanol in biofuels consumption was over 90%. Achieving the 5.75% target share set for biofuels in road transport in 2010 will require approximately a 10 PJ annual use of biofuels.

Table 3. Fuels consumption in road transport in 2000–2004 and the proportion of liquid biofuels. Statistics Finland (Heinimö & Alakangas 2009)

(Year)	Fuels in road transportation, total	Gasoline	Diesel fuel	Liquid biofuels	
	(PJ)	(PJ)	(PJ)	(PJ)	(%)
2000	153	76	77	0	0
2001	156	77	78	0	0
2002	159	79	80	0.033	0.02
2003	161	79	82	0.176	0.1
2004	166	80	86	0.186	0.1
2005	167	80	86	0	0
2006	169	80	89	0.034	0.02
2007	174	80	94	0.076	0.04

Table 4. The current use, production potential and prospective use of the most important biomass fuels in Finland. (Heinimö & Alakangas 2009)

Fuel	Use in 2007 (PJ)	Production potential (PJ/yr)	Estimated use in 2015, (PJ/yr)
Black liquor	153.0	-	111-140
Solid processing industry by-products and residues	73.5	-	61-79
Forest fuels (forest chips)	21.9	80-140	51-71
Firewood	44.8	50	43-47
Wood pellets	2.0	9-27	2-7
Biogas	1.7	8-64	2-8
Agricultural biomass	0.9	54	1-6
Biofuels in road transport sector	0.1	-	16
Fuel peat	102.5	-	72-86
In total	395.0	-	359-460

1.3 Import of solid and liquid biofuels into Finland

The export and import balances of biomass fuels determined for 2004–2006 are presented in Table 5. In Finland, the direct import and export of biomass fuels, being mainly composed of wood pellets and tall oil, have a minor importance compared to the total consumption of biomass fuels. The largest biomass fuels streams are composed of raw wood. The indirect import of wood fuels was on the increase during the period under investigation.

Table 5. Import and export balance of biomass fuels in Finland in 2004–2007, in PJ. (Heinimö & Alakangas 2009)

Stream (PJ) / year	Import				Export			
	2004	2005	2006	2007	2004	2005	2006	2007
Direct trade	5.38	5.48	6.45	7.97	8.15	8.38	8.40	11.10
▪ Wood pellets	0.00	0.00	0.00	0.00	2.65	3.27	3.26	3.14
▪ Energy peat	0.47	0.26	0.11	0.59	0.29	0.60	0.26	0.54
▪ Fuel wood	0.92	0.94	0.90	0.81	0.06	0.04	0.08	0.08
▪ Wood residues	1.21	1.26	1.16	0.69	0.06	0.21	0.02	0.15
▪ Tall oil	2.14	2.03	3.21	3.14	4.45	3.87	4.46	4.91
▪ Ethanol	0.64	0.99	1.06	0.76	0.00	0.00	0.00	0.00
▪ ETBE ^(b)	0.00	0.00	0.00	0.00	0.64	0.39	0.31	0.28
▪ Palm oil	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
▪ Bio-diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
Indirect trade	56.01	57.58	61.16	55.16	2.40	3.02	3.08	3.13
▪ Round wood	50.71	52.08	55.52	49.85	2.00	2.56	2.61	2.37
▪ Chips	5.16	5.25	5.26	4.87	0.39	0.45	0.35	0.37
▪ Sawdust	0.14	0.25	0.37	0.45	0.00	0.00	0.12	0.39
Total	61.39	63.06	67.60	62.47	10.55	11.40	11.48	14.24

2 Development of National Action Plans for RED

2.1 Preparations for National Action Plan

Finland has published first National Action Plan for Renewable Energy sources in 1999. The plan was updated in 2003 and published as Climate and Energy Strategy of Finland.

According to the Government Programme of Matti Vanhanen's second Cabinet, the Government will draw up a long-term climate and energy strategy at the beginning of its current term, to define the principal objectives and means of Finland's climate and energy policy for the forthcoming decades in the context of the European Union and its objectives. It was decided that the Strategy will be submitted to Parliament in the form of a report.

For the preparation of the strategy, a ministerial working group for climate and energy policy started in 2007, including representatives from all Government parties.

Working under the ministerial working group, a contact network, comprising representatives of various ministries, has been responsible for the coordination of work between the sector ministries, and the preparation of issues for the ministerial working group (Table 6).

The long-term climate and energy strategy describes changes in the international operating environment over the last few years, and presents the measures required in Finland, e.g. concerning the objectives for the reduction of greenhouse gases, energy sourcing, renewable energy and energy efficiency, on the basis of the guidelines approved by the European Council in the spring of 2007, and the climate and energy package based on them, presented by the European Commission in January 2008.

The aim of the strategy is to provide a basis for the Government's statements, both in European Union negotiations and other international contexts, and in domestic policy preparation and decision-making.

The main focus of the strategy lies in the guidelines up to 2020, and the measures they require. Furthermore, visions up to 2050 have been presented in order to emphasise the long-term nature of climate and energy policy.

The aim of the strategy at hand is to contribute to ensuring the implementation of the Kyoto Protocol, and meeting its obligations, alongside the rapid and flexible initiation of the implementation of post-Kyoto period obligations in 2013. By that time, the adequacy of post-Kyoto period emission reduction measures should be ensured, and the potential additional measures required should be presented in view of the 2020 obligation, so that obligations related to the schedule and efficiency of implementation measures set by the EU are met. Furthermore, the EU requires that, in 2016, member countries present an in-depth assessment of how they will meet the obligations set for 2020.

The starting points and background analyses of the strategy are described in more detail separately, in the reports and memorandums drawn up by various ministries on their respective administrative sectors.

The Government Programme also included the decision to draw up a foresight report on energy and climate policy. The foresight report, prepared by the Prime Minister's Office, will continue and supplement the guidelines of the Climate and Energy Strategy, with a particular focus on long-term climate and energy policy extending beyond the timeline of this strategy, alongside global development and preparation for the impacts of climate change. The Energy and Climate Change Strategy was approved in Government in 6 November 2008.

The same stakeholder group is also responsible for planning the National Action Plan for the Renewable Energy directive. Finland has not yet published any documents of the National Action plan. Ministry of Employment and Economy (TEM) has only published in November 2009 estimation of energy demand by year 2030 (Energian kysyntä vuoteen 2030, 2009). In this report TEM estimates that electricity consumption will be 91 TWh in 2020, which is lower than in the Climate and Energy Strategy (97 TWh). The consumption of electricity will in 2030 100 TWh. TEM is also estimating the Finland can not reach the RED target of 38% RES in 2020 with current incentives. New incentives to promote the use of RES will be needed. By current incentives the use of RES in 2020 will be about 34% (Table 6). TEM is currently surveying new incentives and the proposals will be published in end of March 2010.

Table 6. Use of renewable energy sources in Finland (primary energy)

Energy source	2007		2008		2020	
	TWh	PJ	TWh	PJ	TWh	PJ
Woody residues depending on industry production	65.1	234	56.7	204	42	151
Forest chips	6.1	22	9.4	34	21	76
Hydropower	14.0	50	16.9	61	14	50
Wind power	0.2	1	0.3	1	6	22
Other RES	18.1	65	17.5	63	28	101
Total	103.5	373	108.0	389	111	400

2.2 Stakeholder involvement

Table 7: Stakeholder groups involvement in the development of the National Action Plan in Finland

Stakeholder groups	List names of stakeholders (if known)
Government Ministerial working group)	<p>The ministerial working group is chaired by Mauri Pekkarinen, Minister of Economic Affairs, and the other members are Sirkka-Liisa Anttila, Minister of Agriculture and Forestry, Tarja Cronberg, Minister of Employment, Jyri Häkämies, Minister of Defence (Ilkka Kanerva, Minister of Foreign Affairs, until 4 April 2008), Jyrki Katainen, Minister of Finance, Paula Lehtomäki, Minister of the Environment (from 28 September 2007 to 11 April 2008, Kimmo Tiilikainen), Jan Vapaavuori, Minister of Housing, and Stefan Wallin, Minister of Culture and Sport.</p> <p>assisted by</p> <p>Mikko Alkio, Ministry of Employment and the Economy valtiosihteeri Stefan Johansson, Ministry of Education Jouni Lind, Ministry of Agriculture and Forestry Velipekka Nummikoski, Ministry of Finance Teija Tiilikainen, Ministry for Foreign Affairs Hanna Ekman, Ministry of the Environment Jouni Hakala, Ministry of Defence Martina Harms-Aalto, Ministry of Education Eeva Kalli, Ministry of Employment and the Economy Kaisa Karttunen, Ministry of Agriculture and Forestry Jari Partanen, Ministry of the Environment Tarja Parviainen, Ministry of Employment and the Economy Tatu Rauhamäki, Ministry of the Environment</p>

Experts in different ministries	<p> Taisto Turunen, Ministry of Employment and the Economy (chair) Pekka Jalkanen, Ministry of the Environment Jukka Pekkarinen, Ministry of Finance Pekka Plathan, Ministry of Transport and Communications Veikko Marttila, Ministry of Agriculture and Forestry Heikki Sourama, Ministry of Finance (until 31.10.2007) Outi Honkatukia, Ministry of Finance Erkki Laitinen, Ministry of the Environment Mikko Ojajärvi, Ministry of Transport and Communications Arto Lepistö, Ministry of Employment and the Economy Sirkka Vilkamo, Ministry of Employment and the Economy Heikki Vesa, Ministry of Employment and the Economy Matti Anttonen, Ministry for Foreign Affairs Markku Niinioja, Ministry for Foreign Affairs Päivi Valkama, Ministry of Finance Outi Berghäll, Ministry of the Environment Erkki Eskola, Ministry of Employment and the Economy Päivi Janka, Ministry of Employment and the Economy Jaakko Ojala, Ministry of the Environment Magnus Cederlöf, Ministry of the Environment Pentti Puhakka, Ministry of Employment and the Economy Mirja Kosonen, Ministry of Employment and the Economy Juha-Pekka Majjala, Ministry of the Environment Pekka Tervo, Ministry of Employment and the Economy Anne Vehviläinen, Ministry of Agriculture and Forestry Juhani Tirkkonen, Ministry of Employment and the Economy Johanna Alatalo, Ministry of Employment and the Economy Oras Tynkkynen, Cabinet of Finland, office </p>
Experts listened	<p> CEO Anne Brunila, Finnish Forest Industries Federation Taamir Fareed, Technical University of Tampere Technology Manager Satu Helynen, VTT Research Director Juha Honkatukia, VATT Consultant Jenni Ilvonen, Pöyry Oy CEO Antti Koskelainen Suomen EIFi Oy Prof Jukka Laine, Metla Senior research scientist Antti Lehtilä, VTT Director Jukka Leskelä, Association of Energy Industries CEO Veli-Pekka Nurmi, Tampereen Sähkölaitos Energy manager Stefan Sundman, Finnish Forest Industries Federation </p>
Secretariat	<p> Petteri Kuuva, Ministry of Employment and the Economy Nina Broadstreet, Ministry of Employment and the Economy Juha Turkki, Ministry of Employment and the Economy Timo Ritonummi, Ministry of Employment and the Economy </p>

Energy and Climate Change network	<p>Taisto Turunen, Ministry of Employment and the Economy (Chair)</p> <p>Members</p> <p>Pekka Jalkanen, Ministry of the Environment</p> <p>Jukka Pekkarinen, Ministry of Finance</p> <p>Veikko Marttila, Ministry of Agriculture and Forestry</p> <p>Heikki Sourama, Ministry of Finance</p> <p>Erkki Laitinen, Ministry of the Environment</p> <p>Mikko Ojajärvi, Ministry of Transport and Communications</p> <p>Jussi Toppila, Ministry of Employment and the Economy</p> <p>uMatti Anttonen, Ministry for Foreign Affairs</p> <p>Hannu Vainonen, Ministry of Education</p> <p>Experts</p> <p>Tiina Jortikka-Laitinen, Ministry for Foreign Affairs</p> <p>hallitusneuvos Satu Nurmi, Ministry of the Environment</p> <p>Arto Lepistö, Ministry of Employment and the Economy</p> <p>Sirkka Vilkamo, Ministry of Employment and the Economy</p> <p>Markku Niinioja, ulkoasiainministeriö</p> <p>Erkki Eskola, Ministry of Employment and the Economy</p> <p>Päivi Janka, Ministry of Employment and the Economy</p> <p>Jaakko Ojala, Ministry of the Environment</p> <p>Leo Parkkonen, Ministry of Finance</p> <p>Riitta Viren, Ministry of Transport and Communications</p> <p>Petri Malinen, Ministry of Finance</p> <p>Timo Ritonummi, Ministry of Employment and the Economy</p> <p>Erja Fagerlund, Ministry of Employment and the Economy</p> <p>Saara Jääskeläinen, Ministry of Transport and Communications</p> <p>Mirja Kosonen, Ministry of Employment and the Economy</p> <p>Jukka Saarinen, Ministry of Employment and the Economy</p> <p>Pekka Tervo, Ministry of Employment and the Economy</p> <p>Anne Vehviläinen, Ministry of Agriculture and Forestry</p> <p>Hanna Perälä, Cabinet of Finland, office</p> <p>Markku Stenborg, Ministry of Finance</p> <p>Juhani Tirkkonen, Ministry of Employment and the Economy</p> <p>Johanna Alatalo, Ministry of Employment and the Economy</p> <p>Pirkko Heikinheimo, Cabinet of Finland</p> <p>Expert listened: Research director Juha Honkatukia, VATT</p> <p>Secretariat:</p> <p>Petteri Kuuva, Ministry of Employment and the Economy</p> <p>Nina Broadstreet, Ministry of Employment and the Economy</p> <p>Juha Turkki, Ministry of Employment and the Economy</p> <p>Timo Ritonummi, Ministry of Employment and the Economy</p>
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Addition to the work in different ministries also 6 workshops was organised in 2007 and 2008 for larger audience for the follow-up and discussion of the planning energy and climate strategy of Finland.

3 Development of a CEN standard on sustainable bioenergy

Table 7: CEN/TC 383 – Sustainably produced biomass for energy application – Finnish participants in different working groups

Working group	Participants
WG1: Terminology, consistency of evaluation methods and other cross-cutting issues	Jari Parviainen (Finnish Forest Research Institute), Jaakko Lehtovaara (Vapo), Jouni Valtanen (Finnish Forest Industries Federation), Heikki Koskinen (Finnish Oil and gas Federation), Karin Bergbom (SFS)
WG 2: GHG emission balance, calculation and for fossil fuel balance and criteria	Riitta Lempiäinen (Nesteoil), Sampo Soimakallio (VTT), Martti Esala, (MTT), Jouni Valtanen (Finnish Forest Industries Federation) Heikki Koskinen (Finnish Oil and gas Federation), Jukka Laine (Finnish Forest Research Institute)
WG 3: Biodiversity and environmental issues	Petri Heinonen (Metsähallitus), Sampsa Kiianmaa (WWF), Jouni Valtanen (Finnish Forest Industries Federation), Heikki Koskinen (Finnish Oil and gas Federation), Riina Antikainen (Finnish Environment institute)
WG 4: Economic and social issues	Ritva Toivonen (Tapio), Risto Savolainen (St1), Jouni Valtanen (Finnish Forest Industries Federation), Heikki Koskinen (Finnish Oil and gas Federation), Paula Horne, Pellervo economic research institute, PTT
WG 5: Verification and auditing	Sami Nikander (Kemianteollisuus), Auvo Kaivola (Metsäsertifiointi ry), J. Jouni Valtanen (Finnish Forest Industries Federation), Heikki Koskinen (Finnish Oil and gas Federation), Timo Soininen, Tapio
WG 6: Indirect effects	Riina Antikainen (Finnish Environment institute), Jouni Valtanen (Finnish Forest Industries Federation), Heikki Koskinen (Finnish Oil and gas Federation)

Addition to these international working groups, a national mirror committee has established. This committee is chaired together with Finnish Forest Industries Federation and Finnish Oil and gas Federation. This national working group consists of about 30 members representing industry, research, authorities, NGO's and energy agencies.

4 Initiatives or systems to guarantee sustainability of biomass feedstock from forest

Table 8: Initiatives or existing systems in Finland that (aim to) have principles (and related criteria and indicators) to guarantee the sustainability of biomass feedstock from forest:

Name of system or initiative*	Implemented (Y/N):	National (N) or international (I)	Number of users (% or in numbers)
Finnish Forest Certification System (FFCS)	Y	N (based on PEFC)	95% of forest area
Forest Stewardship Council (FCS)	N	I	certified about 100 ha

Forestry land covers 87% of the country's land area (30.4 million ha), only 9% (2.8 million ha) is used for agriculture and the remaining 4% consists of housing and urban development and transport routes. 95% of forest area is certified by the Finnish Forestry Certification system (FFCS) which is based on PEFC system. This system has been used in Finland since 1999. The legislation regulating the use of Finnish forests dates back to the beginning of the 18th century. The use and exploitation of forests has gradually developed through hunting and fishing as well as slash-and-burn economy towards the current, multipurpose use of forests.

The long-term sustainable use of forests has been targeted in Finland since the 1940s. State authorities, legislation, national and regional forest programmes as well as the activities and cooperation of private forest owners have all supported sustainable forestry. Due to the long history of forest use, hardly any pristine forests remain in Finland. Pristine forests exist only in some peatlands in Lapland and Eastern Finland. Finnish forests are regenerated with natural, domestic tree species and the development of mixed stands is promoted in forest management operations. Intensively managed one-species tree plantations do not exist in Finland.

Some Finnish wood pellet producers, which are selling to European markets, are also certified by Electrabel or Essent Green Gold Labels.

5 Initiatives or systems to guarantee sustainability of biomass feedstock from agriculture

Total agricultural area in Finland is 2.8 million hectares. Reed canary grass and straw has been used for energy production in Finland. Reed canary grass (*Phalaris arundinacea* L.) is native, rhizomatous perennial grass grown mostly for forage in the northern hemisphere. Chopped, dry reed canary grass is used blended with other fuels like peat, wood chips, bark or sawdust and used in combined heat and power plants in Finland. The highest momentary share of grass in the fuel has been about 15% of the total energy value of the fuel. In Finland, more than 20 plants have experiences of the utilisation of reed canary grass. The current growing covers more

than 20 000 ha. Vapo Oy and its subsidiary Suo Oy is growing reed canary grass on 16 000 ha. Reed canary grass is baled and chopped usually at plant to less than 5 cm pieces for blending. Total use of reed canary was 3 600 GJ and straw 6 tons (90 GJ) in 2007 (EUBIONET III).

The long term goal of the Ministry of Agriculture and Forestry is to increase the reed canary grass area to 100 000 ha including also other use than direct combustion.

Common agricultural policy (CAP) promotes sustainable agriculture. Finnish legislation and farming support system require sustainable farming with cross compliance to be followed. Ministry of Agriculture and Forestry has a special environmental support for this. The aim of this support is to protect water systems and enhance biodiversity. In 2007 – 2013 90% of farmers and 95% of farming land in Finland is covered by this support. There are basic requirements and also farm-based additional requirement. Special environment measures are: establishment of protection area and their maintenance, wetland maintenance, farming in groundwater areas, treatment of drainage water, organic farming, traditional biotope management, enhancing nature and landscape biodiversity, growing native plants, efficient decreasing of nutrient load and using liquid manure in agricultural areas and cultivated peatlands.

In Finland no certified agrofuels. Vapo Oy, which is the biggest grower of energy crops, has certified their solid biofuel production with ISO 9001 and ISO 14001 certificates.

6 Initiatives or systems to guarantee sustainability of bioenergy from heat and power

In Finland also 12 energy producers have been certified according to RECS standards for Renewable Energy Certificate System (www.recs.fi). RECS was created to stimulate international renewable energy development. The system advocates a standard certificate as evidence of the production of a standard renewable energy quantity and provides a methodology which enables renewable energy trade. This enables a market for renewable energy to be created, so promoting the development of new renewable energy capacity in Europe. Within the Association of Issuing Bodies (AIB) and RECS International an international standard for the guarantee of origin has been developed, the so-called European Energy Certificate System (EECS). This includes a standard format for the interface between national registries, facilitating international trade in standardised guarantees of origin without the danger of double counting and double selling. Finland has adopted EECS. A RECS-certificate can be issued for every MWh of renewable energy as long as the trader / producer opens a RECS account at its national issuing body. In Finland the issue body is the national high-voltage grid operator Fingrid Oyj, which is appointed by the government.

In Finland a system for the Guarantee of Origin (GoO) is implemented in the line with the article 5 of the RES-e directive. The GoO is given to the producer of electricity, if the producer has joined the scheme, after the production has taken place. Parallel to this system also RECS system is operational. The producers can choose whether they want to get RECS certificates or Guarantees of Origin. Both is not possible. Certification is carried out by Inspecta Certification or DNV Certification. The Renewable Energy Declaration include also information on fuels, fuel quality and

origin, amounts of fuels, measurements of fuel flows and share of RES and other energy sources.

The government does not regulate the voluntary market. There is no regulation in place that obliges suppliers to redeem GoO (or RECS certificates) when delivering green products to the customer. The voluntary markets are covered by environmental labels. The label is operated by the Finnish Nature Conservation Association: "Green Norppa-label. Electricity under Norppa-label was sold in Finland 3 260 GWh in 2008, which is about 30% of consumer electricity consumption in Finland. Heat produced under Norppa-label was 462 GWh in 2008.

7 Initiatives or systems to guarantee sustainability of biofuels for transportation

There are no national systems for sustainability of biofuels for transportation in Finland. The Ministry of Employment and the Ministry of Agriculture and Forestry and the Economy has launched a project in September 2009, which is looking the implementation of RED directive in Finland.

8 First initiatives in implementing sustainability criteria for biomass and bioenergy

Table 9: Companies that started to prepare for implementing sustainability criteria in their production or trade of biomass and bioenergy.

Name company	Has to fulfill RED criteria (Y/N)?	Preparatory steps taken (as of September 2009)
Neste Oil	Y	Round Table of Sustainable Palm Oil (RSPO), Roundtable on Sustainable Biofuels, Round Table on Responsible Soy Association (RTRS), Dow Jones Sustainability World Index

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Appendix 1 – Initiatives or systems to guarantee sustainability of biomass feedstock from forest

Name: Finnish Forest Certification System (FFCS)

General characteristics:		
Initiator system:	Suomen Metsäsertifiointi ry	
Coordinating party:	Suomen Metsäsertifiointi ry	
Initiation – duration:	as of 1999 – (upgrading every 5 year, upgrading in 2008-2009)	
Grade of integration	95%	
Geographical coverage:	Finland (group certification)	
Scope (feedstock included):	Forest biomass for industrial and energy use	
Value chain	Production in forest	
Mission or objective:		
The scope of the PEFC certification covers all forest-based products – i.e. timber for mechanical and pulping industry, but also wood-based biomass fuels. The requirements for the forest management process are similar regardless of the final product. The recently revised PEFC forest management standard covers – among other topics – also the special questions of energy wood harvesting (Criterion #5 Energy wood is harvested in a sustainable manner). The certification requirements are listed in 29 criteria, which together define the standard for ecologically, socially, culturally and economically sustainable forest management in PEFC certified forests.	Principles included:	Y
	Criteria included:	Y
	Indicators included:	Y
Context (i.e. legal requirement, related policies):		
Criteria and indicators are based on the Finnish legislation which are stated in new standards PEFC FI 1002:2009 and PEFC FI 1003:2009		
Current status of system:		
First implemented in 1999, 13 certificates granted including 310 000 forest owners and almost 21 million hectares. 74 forest companies are certified according to FFCS.		
Planned activities:		
The revised criteria and other system documents will be sent to the international PEFC in October 2009 for evaluation and re-endorsement. The revised standards will be implemented in forest management after the PEFC endorsement and independent certification bodies will assess the conformity to it in the audits of the year 2011.		

Structure of the system or initiative:	
Stakeholder participation:	<p>FINBIO Finnish Bioenergy Association (FINBIO – Suomen Bioenergiayhdistys)</p> <ul style="list-style-type: none"> - Federation of the Printing Industry (Graafinen teollisuus ry) - KTT Finnish printing industry's employers union (Kirjapainoteollisuuden työnantajaliitto ry KTT) - Ecclesiastical Board / Church of Finland (Kirkkohallitus) - Trade Association of Finnish Forestry and Earth Moving Contractors (Koneyrittäjien Liitto ry) - League of Organic Farming (Luomuliitto ry) - L&T Biowatti Oy - Central Union of Agricultural Producers and Forest Owners MTK - METO - Forestry Experts Association (METO - Metsäalan Asiantuntijat ry) - Timber Truck Transport Entrepreneurs (Metsäalan Kuljetusyrittäjät ry) - State Enterprise Metsähallitus - Metsäliitto Group (Metsäliitto Osuuskunta) - Society of Finnish Professional Foresters (Metsänhoitajaliitto ry) - Hunters' Central Organization (Metsästäjien Keskusjärjestö) - Finnish Forest Industries Federation (Metsäteollisuus ry) - Reindeer Herders' Association (Paliskuntain yhdistys) - Finnish Paper Workers' Union (Paperiliitto ry) - Finnish Wood Energy Association (Puuenergia ry) - Wood and Allied Workers Union (Puu- ja erityisalojen Liitto) - Association of Finnish Furniture and Joinery Industries (Puusepännteollisuuden Liitto ry) - Wood Working Entrepreneurs (Puuteollisuusyrittäjät ry) - Finnish Hardware Association, DIY (RASI ry) - Sámi Parliament (Saamelaiskäräjät) - Sawing Entrepreneurs (Sahayrittäjät ry) - Stora Enso Oyj, Forest (Stora Enso Oyj Metsä) - Finnish Consumers' Association (Suomen Kuluttajaliitto ry) - Association of Finnish Local and Regional Authorities (Suomen Kuntaliitto) - Finnish Ski Track (Suomen Latu ry) - Finnish Nature-based Entrepreneurship Association (Suomen luontoyrittäjyys- verkosto ry) - Finnish Hunters' Federation (Suomen Metsästäjiliitto ry) - Finnish Society of Forest Science (Suomen metsätieteellinen seura) - Association of Finnish Forest Estate Owners (Suomen metsätilanomistajien liitto ry) - Finnish Sawmills (Suomen Sahat ry) - Finnish Orienteering Federation (Suomen Suunnistusliitto) - Finnish 4 H Federation (Suomen 4H-liitto) - Central Union of Swedish Speaking Agricultural Producers and Forest Owners SLC - Tornator Oy - UPM-Kymmene Oyj, Forest - Finnish Union of Environmental Professionals FUEP (Ympäristöasiantuntijoiden Keskusliitto YKL ry)
Commitment:	Voluntary
Stakeholder integration:	Multi-stakeholder approach (group certification)

Monitoring performance:	Third party auditing
Chain of custody mechanism:	Track the wood raw material flows from certified and non-certified forests through the transport and production process and on to the final end-use
Verification mechanisms:	According standards
Further information:	
Removal of trade barriers	
Costs:	<p>PEFC certification in Finland is carried out as regional group certification. "Regional" means that the geographical operating area of a Regional Forestry Centre defines a maximum coverage of one PEFC forest management certificate in Finland. On each of the thirteen Forestry Centre areas the "group" means that all forest owners (owners of private family forests, company, municipality and parish owned forests as well as state owned forests have access to the certification group on voluntary basis.</p> <p>Forestry Centres and other forestry organizations have internal data collection systems to demonstrate and verify the quality of forest management activities on an area of a regional group certificate. Costs of this internal data collection are difficult to measure precisely because these activities are carried out in a decentralized manner by several organizations and because in addition to forest certification the data is used also for other monitoring purposes. It can be estimated that the costs of internal data collection are about as big as the costs of external audits.</p> <p>External third-party audit includes (i) inspection of internal data collecting procedures, (ii) visits to offices of organizations and (iii) sample-based site-level inspections in forests that owned by forest owners that are enrolled as members of regional group certification. The cost of external audit is in the range of 30 000 to 60 000 € per one region per year. One regional group certificate covers on an average some 1.5 mill. hectares of forested land. The cost of a surveillance audit is some less because its scope is more limited than in the certification audit.</p>

List of principles included:	
	See criteria

References:	
Website:	www.pefc.fi Contact person: Auvo Kaivola, Secretary General of the PEFC Finland Tel: +358 400 765 437, auvo.kaivola@pefc.fi

List of criteria and indicators:

Criteria	Indicators:	Definitions
<p>1 Requirements enacted by legislation are complied with</p> <p>Forest management activities shall comply with the forest, environmental and labour legislation in force and the related international agreements that Finland has ratified.</p> <p>However, in Åland Province applies the legislation of Åland and orders of respective authority when under the jurisdiction of the autonomy of Åland Province.</p>	<p>Forest organisations¹⁾ are obliged to inform when requested by the certification body (external auditor) the court resolutions and authority decisions²⁾, of the cases where the activity of forest actor or forest organisation has been deemed to breach the forest, environmental or labour legislation during the validity of the certificate.</p>	<p>1) <u>Forest organisations</u> consist of forestry centres, forest management associations, forest industry enterprises, Metsähallitus (state forest manager), and other organisations committed to forest certification.</p> <p>2) <u>Court or competent authority</u> has found in its <u>resolution with a right to appeal</u> that forestry actor or forest organisation has acted contrary to the forest, environmental and labour legislation or to those relevant international agreements that Finland has ratified. The authority decisions contain, e.g.</p> <ul style="list-style-type: none"> - Rural bureau's (maaseutuvirasto) order on establishing a new tree stand enacted by Section 20, subsection 2 of the Forest Act (1093/1996) - Rural bureau's (maaseutuvirasto) resolution on the claim for recovery by Section 15, subsection 3 of the Act on financing of sustainable forestry (1094/1996); - Regional environmental authority's order enacted by Section 57, subsection 1 of the Nature Conservation Act (1096/1996) <p>Order of authority on occupational safety enacted by Section 15 of the Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (44/2006) or prohibition notice enacted by Section 16 of the Act.</p>

<p>2 Forest stand shall be preserved as a healthy carbon sink *)</p> <p>The level of sustainable allowable cut³⁾ shall not be exceeded in the (certified) area during the five-year cycle⁴⁾ preceding the audit.</p> <p>The timber volume cut⁵⁾ during the five-year cycle can, as a consequence of natural damage, exceed the sustainable allowable cut.</p> <p>This criterion shall not be used in certification of one or a group of forest management associations.</p>	<p>The timber volume cut during the five-year cycle shall be compared to the sustainable allowable cut determined by the Finnish Forest Research Institute.</p>	<p>3) <u>Sustainable allowable cut</u> is the valid estimate of the proportioned average of a five-year cycle as estimated by the Finnish Forest Research Institute for the regional forestry target programme (regional forest programme).</p> <p>4) During this period the amount of carbon accumulated in tree stand (stem) is higher than the amount of carbon removed in timber harvests.</p> <p>5) <u>The actual cut</u> includes the annual cut of <u>roundwood</u> i.e. logs, pulpwood and the fuel wood used by small properties. (<i>Finnish Statistical Yearbook of Forestry</i> 2007, p. 175, Table 4.15. Removals by Forestry Centre)</p>
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<p>3 Health of the stand shall be attended</p> <p>The spreading of the infection of root rot (<i>Heterobasidion parviporum</i> attacking spruce and <i>Heterobasidion annosum</i> attacking pine) shall be prevented during the harvest of risk sites⁶⁾. The control of root rot shall be done with user-safe methods⁷⁾.</p> <p>During forest harvest, damages to remaining trees and soil that may deteriorate the growing conditions of the remaining stand, shall be avoided.</p> <p>Measures shall be taken to prevent insect damages in the storage of industrial and energy wood.</p>	<p>The proportion of control measures of root rot in the harvested area of risk sites⁸⁾ shall cover at least 85 %.</p> <p>The average share of damaged trees in industrial and energy wood thinning⁹⁾ shall not exceed 4 % of the number of trees left growing⁹⁾. The share of damaged trees is annually calculated as a five-year period moving average of harvesting trace review results¹⁰⁾. In intermediate thinnings on mineral soils¹¹⁾, the average share of depressed traces⁹⁾ caused by harvesting machines shall not exceed 4% of the length of the extract traces. The share of depressed trails shall be calculated annually as a five-year period moving average of harvesting trace review results¹⁰⁾.</p> <p>Contracting party⁵³⁾ shall have the guidelines of the pre-cut clearing of the undergrowth that might hamper the harvesting.</p> <p>The storage of industrial and energy wood shall comply with the Act on Control of Damages Caused by Insects and Fungi (263/1991). A competent authority has not imposed a conditional fine defined in Section 9 nor has pronounced a sentence defined in Section 12 of the Act related to the neglect of control of insects in the interval storage of industrial and energy wood.</p>	<p>6) <u>Risk sites</u> refer to harvested sites located to the south from the northern borders of the operational areas of the forestry centres of Northern Karelia, Northern Savo, Central Finland and Southern Ostrobothnia, if harvesting is carried out between May 1st and October 31st.</p> <p>7) <u>User-safe methods</u> refer to treating coniferous stumps with liquid <i>Phanerochaete gigantea</i> or urea solution and the removal of coniferous stumps causing the spreading of infection of fungal diseases from regeneration area. Regeneration areas from where stumps have been removed in order to prevent the spread of root rot are included in the area under control measures.</p> <p>8) <u>The share of control measures</u> is calculated as a proportion of treated area to the total logged area in areas at risk. The calculation is based on the information collected from forest organisations active in a forestry centre area.</p> <p>9) <u>Damaged tree, tree left growing and depressed trace</u> and other terms used in measuring damage are defined (what comes to thinning) in the land inspection guidelines of the harvest trace of thinning and energy wood thinning specified by the Development Centre of Forestry Tapio.</p> <p>10) Harvesting trace reviews produce separate estimates for the proportions of damages and trace depressions in pulp- and energy wood thinning. The share of stand damages and trail depressions referred to in the criterion, is calculated based on the weighted average of</p>
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		<p>the total area of annual pulp and energy wood thinnings.</p> <p>All thinning where canopy biomass is collected is considered to be energy wood thinning regardless of the fact that also pulp wood may be harvested on the site.</p> <p>Harvested sites are divided into sites of mineral soil and peatlands. Sites where the peat layer is below 30 cm is classified as a mineral soil areas.</p>
<p>4 Finnish native tree species shall be used in forest regeneration</p> <p>Forest regeneration shall be done with tree species native to Finland¹²⁾ except for special cases¹³⁾.</p>	<p>A summary of the area regenerated with species other than those native to Finland is calculated annually.</p>	<p>12) Siberian larch (<i>Larix sibirica</i>) is considered equal to <u>tree species native to Finland</u>.</p> <p>13) <u>Special cases</u> include the establishment of urban forest stand, growing Christmas trees, production of conifer branches, forest stands and trees planted for landscape purposes and cultivation of hybrid aspen (<i>Populus tremula</i>).</p>

<p>5 Energy wood shall be harvested in a sustainable manner</p> <p>When removing canopy biomass and stumps from harvested sites the applied methods shall take into consideration the wood production capacity of the site, its biodiversity as well as the aspects related to water protection.</p> <p>Harvest of energy wood shall not substantially deteriorate the protection values of protected areas or areas belonging to Natura 2000 network nor endanger the preservation of monuments of antiquity specified in the Act on Ancient Monuments (295/1963).</p> <p>The features of valuable habitats and the known habitats of endangered species shall be safeguarded in harvesting of energy wood.</p> <p>Peatlands in their natural state shall not be transferred to energy wood cultivations</p>	<p>The organisation harvesting energy wood shall have in use guidelines¹⁴⁾ prepared by actors and research bodies operating in the field. The guidelines shall address sustainable harvest of energy wood in final harvesting and thinning sites. The guidelines shall specify, among others:</p> <ul style="list-style-type: none"> - the selection criteria for harvest sites - the minimum target amount of biomass left in the sites of final harvest - the water protection measures needed. <p>The harvest of energy wood in the area has been done according to the criterion when</p> <ul style="list-style-type: none"> I The proportion of sites considered as excellent or good in relation to the above-mentioned evaluation criteria (selection of harvest sites, minimum amount of biomass left in final harvest areas and water protection measures) shall be at least 90 % of the total harvest area based on the results from the monitoring of the quality of nature management; II The protection values of protected areas defined in Criterion 2.9 have been safeguarded in a manner specified in the criterion; III The features of valuable habitats defined in Criterion 2.10 have been preserved in 	<p><u>14) The guideline</u> specified in the criterion can be e.g. Harvest of energy wood –guidebook published by the Forestry Development Centre Tapio in 2006.</p>
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	<p>a manner specified in the criterion;</p> <p>IV The previously known habitats of endangered species specified have been preserved according to Criterion 2.12; and</p> <p>Peatlands that are in their natural state have not been drained for energy wood cultivations.</p>	
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<p>6 Forest management planning shall promote sustainable use and management of forests</p> <p>The coverage of holding-level forest management plans¹⁵⁾ shall be at least 50% of the total forestry land area of forest holdings¹⁶⁾ or estates exceeding 20 hectares in size. In regional forest management planning, holding-level forest management plans are provided also to the holdings remaining under 20 hectares in size, but paying the annual forestry levy. The new forest management plans shall include known valuable natural sites and monuments of antiquity¹⁷⁾ in addition to wood production aspects, and the plans shall consider alternative uses of forests¹⁸⁾ according to the management objectives of the forest owner</p>	<p>The area of valid¹⁹⁾ holding-level forest management plans is compared with the corresponding area of forestry land belonging to the total area of forest holdings exceeding 20 hectares in the area</p>	<p><u>15) Holding-level forest management planning</u> contains the forest resource data of the forest stand specific inventory and of holding specific data drawn from the regional summary data on forest resources. This data is compiled into a holding level forest management plan.</p> <p><u>16) Continuously updated holding-level forest management plans</u>, which have annually been updated according to completed measures and other relevant information, are included in the area of holding-level forest management planning. Web-based forest management plan is also considered as a holding-level forest management plan. Holding-level forest management plan must include, as forest production factors, stand specific data on trees and soil, needs of silvicultural treatments, and allowable cut.</p> <p><u>17) Forest holding</u> is an estate consisting of forest stands owned by a forest owner.</p> <p><u>18) Natural sites and monuments of antiquity</u> included in forest management plans are:</p> <ul style="list-style-type: none"> - Natura 2000 areas, - Valuable habitats of forest nature as defined in Criterion 2.10 and previously known habitats of endangered species as defined in Criterion 2.12, - Nature management and environmental sites funded by the State, and <p>Monuments of antiquity registered in the respective register and which have reliable site specific data on their location. Important areas from the point of view of <u>alternative forest uses</u> contain e.g.:</p> <ul style="list-style-type: none"> - Important game management areas, e.g.
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		<p>capercaillie mating sites, and</p> <ul style="list-style-type: none"> - Trails for outdoor recreation and hiking. <p><u>19) The validity time of the forest management plans</u> which are not under continuous updating, referred to in this criterion, is 15–20 years in Upper Lapland and 10 years in other parts of the country.</p>
<p>7 Seedling stands shall be tended to safeguard wood production</p> <p>Annually at least 60% of the regional annual tending need of seedling stands²⁰⁾ shall be completed.</p>	<p>Finnish Forest Research Institute's statistics on tended areas of seedling stands are compared with the estimated tending needs of a similar area as defined in national forest inventory (NFI).</p>	<p><u>20) The area of seedling stands needing tending</u> is the area defined and proposed in NFI, (areas where tending works are delayed and where they should be implemented in the following 5-year period.) for a forestry centre and valid in the beginning of certification period</p> <p>Estimation of the tending need of seedling stands in forest management association specific certification is based on stand specific tending proposals documented in forest management plans and proportioned to the whole area. The following tasks are included in the tending of seedling stands: cleaning of seedling stand, tending of seedling stand and management of sapling stands and young forest.</p>

<p>8 First commercial thinnings and delivery logging shall be promoted in order to improve the growing conditions of forest stands in private forests *)</p> <p>The action plans²²⁾. to promote first commercial thinning and delivery logging²¹⁾ in the area shall be reviewed during the revision of the regional forest programmes.</p> <p>This criterion shall not be used in certification at the level of a forest management association.</p>	<p>The action plans have been reviewed and approved by the regional forest certification committee as part of the regional forest programme.</p> <p>Regional certification committees follow the implementation of the programme and action plans on a yearly basis.</p>	<p><u>21) Delivery logging</u> made by forest owner is the harvesting carried out by the forest owner, a member of his/her family or by a logger occasionally employed by the forest owner.</p> <p><u>22) Action plan for promoting first commercial thinnings</u> is a list of measures that contribute to favourable preconditions for first thinnings. <u>Action plan for delivery logging</u> is a list of measures that contribute to favourable preconditions for delivery logging made by forest owners.</p>
<p>9 Conservation values of protected areas shall be safeguarded</p> <p>Conservation value of protected areas²³⁾ or areas belonging to Natura 2000 network shall not be deteriorated by forestry measures.</p>	<p>Forest authorities and forest organizations operating in the area are aware of the locations of protected areas and areas belonging to Natura 2000 network. Other actors committed to forest certification have the site information as deemed relevant.</p> <p>Regional environmental authorities have not registered significant deterioration of conservation values of protected areas originating from forestry operations taking place outside protected areas.</p> <p>Regional environmental authorities have not registered significant deterioration originating from forestry operations of conservation values of Natura 2000 areas. Forestry operations in Natura areas are bound by the law under which the Natura area is established. In addition, the use and management plan, or equivalent, prepared by an environmental authority together with land</p>	<p><u>23) Protected areas</u> referred to in the criterion are the nature conservation areas established according to the Nature Conservation Act.</p>

	owner shall be complied with.	
<p>10 Typical features of valuable habitats shall preserved</p> <p>Forest management measures shall be planned and carried out respecting the following requirements:</p> <p>a) The forest-covered natural habitat types defined in Section 29 of the Nature Conservation Act (1096/1996) being in their natural state or equivalent to natural state, of which forest owner has been informed by a environmental authority according to Section 30 of the Nature Conservation Act, shall not be altered in such a way that endangers the preservation of their characteristic features.</p> <p>b) The management measures on sites in natural state or equivalent to natural state and habitats of special importance which can be recognized easily from their surroundings and defined in Section 10 of the Forest Act (1093/1996) shall be carried out in such a way that preserves the typical features of these sites. The measures on sites, for which forest authority has given a permit based on Section 11 of the Forest Act, are allowed.</p> <p>c) In addition, the most important features of the biological diversity in the habitats with high conservation</p>	<p>The preservation of valuable habitats in forestry operations:</p> <p>a) Court decisions on the cases, where the preservation of characteristic features of the sites based on the Nature Conservation Act, Section 29, have been endangered.</p> <p>b) Court decisions on the cases, where the typical features of habitats of special importance based on the Forest Act, Section10, have not been preserved.</p> <p>In points a) and b) the characteristic features are not preserved according to the criterion if operations carried out violate either on purpose or by negligence the Nature Conservation Act or the Forest Act.</p> <p>Habitats of high conservation value specified in point c) have remained unchanged or nearly unchanged based on the results of the monitoring of the quality of nature management. "Nearly unchanged" means that the most important features to be preserved in the habitats listed in point c) have been preserved in more than 90% of the total area of sites.</p> <p>Regarding the forest owners that have over 10 000 hectares of certified forests in the certified region, all forests fulfilling the above mentioned features of old-growth forest are considered as old growth regardless of stand size. Protection of old-growth forests as defined in this criterion does not apply if the share of protected forests exceeds 5per cent</p>	<p><u>24)</u> The criterion covers undrained spruce mires and those ditched spruce mires where no draining effect prevails any more.</p> <p><u>25)</u> Broad-leave dominated hearb rich forests is a forest where the share of broad leaved species exceeds 50% of the stand volume.</p> <p><u>Northern Finland</u> includes Kainuu, North Ostrobothnia and the operational areas of forestry centres in Lapland. <u>Southern Finland</u> includes the operational areas of other forestry centres.</p>

<p>value, listed below, shall be preserved in forest management operations in the majority of the habitat area. Regarding the most typical features the habitats shall be in their natural state and be distinctly observable and recognizable in field. Habitats that are smaller than one hectare and that meet the requirements of the criterion shall be covered in their full extend by operational restrictions. Of the sites that are larger than one hectare, an area of one hectare shall be covered by operational restrictions.</p> <p>If the share of the valuable habitats specified in this criterion, covers over 5 percent of the total area of forest and scrub land that a forest owner has in the area covered by a forest certificate, the operational restriction do not apply on the area exceeding the above mentioned minimum surface areas.</p> <p>The habitats of high conservation value listed in point c), their most important typical features and the measures to be taken for preserving these features are the following:</p> <p><i>1. Kettle holes and treeless or sparsely treed sunny eskers</i></p> <p>The kettle holes referred to in the criterion shall be at least 10 meters in depth and the micro climate in the lower parts shall be distinctly moist</p>	<p>of the area of a forest holding owned or managed by an owner.</p>	
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<p>and cool (cellar microclimate). Vegetation typical to the special micro climate and distinct from the surrounding vegetation is the most important feature to be preserved. Logging shall be limited only to the uppermost part of the edges of the kettle hole.</p> <p>The treeless or sparsely treed sunny eskers referred to in the criterion situate in the South-East, South, South-West and West slopes of eskers. Typical species is the feature to be preserved on these sites. The sites shall not be reforested .</p> <p><i>2. Undrained hardwood-spruce swamp - korvet</i></p> <p>The natural depth of water table shall be maintained as the typical feature in undrained, usually spruce dominated swamp which have at least 20 cubic meters per hectare of decaying and dead wood. The protection measures shall not limit to the swamps protected by the Forest Act, Section 10 on habitats of special importance. Water table level is maintained by restraining from any ditching on these sites. Allowed harvesting methods include thinnings and removal of individual trees.</p> <p><i>3. Undrained eutrophic fens</i></p> <p>In eutrophic fens the typical features to be preserved include alteration of</p>		
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<p>flark and hummock formations as well as the nutrient content of peat. These are maintained by restraining from ditching and forestry activities on eutrophic fens.</p> <p><i>4. Undrained eutrophic fens in the province of Lapland</i></p> <p>High nutrient content in peat, natural water tables and diverse peatland vegetation are the main typical features of treeless or sparsely wooded, undrained fens in calciferous areas and in areas of high water table in the province of Lapland. These fens shall be protected by restraining from ditching in these areas.</p> <p><i>5. Herb-rich Forests</i></p> <p>Diversity of hardwood species ²⁵⁾ is the most important typical feature to protect in the herb-rich forests exceeding the age of a sapling stands. The hardwood dominance shall be maintained through the intermediate harvesting.</p> <p><i>6. Old-growth forests</i></p> <p>An old-growth forest is a forest that has the following characteristics:</p> <p>I The age of the dominant tree stand exceeds by 1.5 the upper age limit recommended for final harvesting;</p> <p>II The tree stand is composed of trees</p>		
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<p>of different size or of several canopy layers and tree species or it is a spruce stand of a late succession stage;</p> <p>III The tree stand has not been treated with selective cutting, intermediate thinning or preparatory felling for the past 60 years. Earlier, selective cutting, intermediate thinning or preparatory felling have not changed the natural stand structure and the number of stumps originating from these felling operations do not exceed 20 stumps per hectare;</p> <p>IV The stand is composed of old board-leaved species and includes also decaying wood, dead wood and ground wood at least 15% of the stand volume in Southern Finland²⁶⁾ and 20% in Northern Finland²⁶⁾;</p> <p>Restraining from forestry operations on these sites preserves the typical features.</p> <p>7. Alluvial forests and flood meadows in their natural state</p> <p>Annual flooding cycle characterize the alluvial forests and flood meadows under the criterion. Natural variation of surface water level caused by flooding of sea, lakes, rivers and streams is the most important typical</p>		
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feature of alluvial forests and flood meadows. This feature is maintained by restraining from ditching on these sites. Wood stand can harvested by thinning and shelter wood harvesting and by removing individual stems while safeguarding the presence of decaying wood.		
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<p>11 Peatland nature shall preserved</p> <p>The survival of peatland types in their natural state²⁷⁾ and rare peatland types²⁸⁾ shall be safeguarded.</p>	<p>First-time draining is not carried out on peatlands in their natural state²⁹⁾.</p> <p>Ditch cleaning and supplementary ditching are implemented only in the areas, where ditching has increased significantly the tree growth³⁰⁾.</p> <p>The rare peatland types and the possibility of their restoration into a natural state are especially taken into consideration in drainage maintenance as well as in other arrangements related to water table levels.</p>	<p><u>27) A peatland type in its natural state</u> is a peat accumulating ecosystem, where there are no human induced changes on the natural water balance or any other significant traces of human activities. The site is peatland if the ground is covered with a peat layer, or if over 75% of the ground vegetation consists of peatland vegetation. Forests, regularly tended by thinnings, and not included in the habitats of special importance as defined in Criterion 2.10, are not considered as natural peatlands as defined in this criterion.</p> <p><u>28) Rare peatland types</u> refer to peatland types that are listed in Annex 3 of the Environmental Guidelines to Practical Forest Management (from year 2004) of Metsähallitus (Annex 1 of the standard).</p> <p><u>29)</u> Ditching of new (first-time ditching) areas does not include opening of isolated main drainage ditch on peatlands in their natural state due to reasons related to drainage techniques. Sections of undrained peatlands can be drained if it is essential for organizing the water level management in the drained area and if it does not hamper significantly the biodiversity of peatlands and forests. The criterion does not restrict the management of water table level if required under Forest Act to ensure good forest regeneration on a peatland site. It does not either restrict the ditching needs identified according to the law on support to land restitution (24/1981).</p> <p>Ditch cleaning and supplementary ditching (drainage maintenance) must be economically efficient and take into consideration the nutrient content, heat sum (number of growing degree days) and the</p>
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		volume of tree stand. Appropriate drainage maintenance sites are the sites that fulfill the valid legal requirements for financing sustainable forestry (Degree 44/2001, Section 7 by the Ministry of Agriculture and Forestry.
<p>12 Known habitats of endangered species shall be safeguarded</p> <p>Forest management procedures shall safeguard, the known habitats of strictly protected species³¹⁾, if they are demarcated and informed to the land owner/ manager by the Regional Environment Centre, the known habitats of other endangered species³¹⁾ by taking them into consideration according to the site specific instructions³²⁾ of regional environmental authority.</p>	<p>The habitats of the strictly protected species that the Regional Environment Centre has demarcated and informed to the landowner and/or manager according to Section 47 of the Nature Conservation Act, and the related management guidelines or recommendations provided to the land owner and /or manager.</p> <p>The site specific guidelines³²⁾ issued by the environmental authority to protect the known habitats of other endangered species have been implemented in harvest and forest management operations</p>	<p><u>31)</u> A list of species under strict protection and other endangered species is specified in Annex 4 of the Council of State decree (913/2005) on changing the nature protection decree.</p> <p><u>32)</u> Site specific guidelines that the regional environmental authority has informed the owner and/or manager of the site.</p>

<p>13 Retention trees and decaying wood shall be left in forest operations</p> <p>Retention trees³³⁾ and decaying wood³⁴⁾ shall be left on site in thinning and regeneration harvesting to safeguarding the biodiversity of forest nature.</p>	<p>The average number of retention and decaying trees left in forest regeneration sites in the certified area 5 -10 trees per hectare.</p> <p>The importance of retention trees and decaying wood for biodiversity protection is communicated to forest owners and forestry professionals.</p>	<p><u>33)</u> Larger trees and trees with special form from previous tree generation as well as broad-leaved woods, nest trees of raptorial birds, large junipers, larger aspen, treelike willows, and trees with fire scars and decaying wood are <u>preferred as retention trees</u>.</p> <p>If trees with the above mentioned qualities are not present on site, retention trees may include trees with biodiversity values that exceed 10 cm in diameter at breast height and have a good potential to develop into old trees. These trees shall be standing, alive at the time of harvesting and belong to the natural species of the country.</p> <p>Retention trees are primarily left in groups, in close vicinity to the habitats of special importance listed in the criterion 2.10 and in the bufferzones of water ecosystems. Soil is not scarified under the groups of retention trees. Retention trees must not be left in close vicinity to important constructions, such as traffic lanes or electric and telephone lines nor on monuments of antiquity. A share of retention trees can be made into man-made snags. Retention trees are not removed from the site in any future harvesting.</p> <p>The trees left on buffer zones defined in the criterion 2.17 are counted to the total number of retention trees. Trees with biodiversity value, e.g., larger trees from previous tree generation, trees with unexpected form, as broad-leaved woods, large alder trees and other broadleaved species.</p> <p>Decaying wood includes snags with a diameter at breast height exceeding 20cm and other dead</p>
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		standing trees, hollow trees and ground wood. The decaying wood under this criterion does not include standing snags that are dried for commercial purposes or dead conifer trees that should be harvested based on the Act on Control of Damages Caused by Insects and Fungi (263/1991).
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<p>14 Genetically modified seed and plant material shall not be used</p> <p>Genetically modified material or other material, which is not approved by the authority³⁵⁾, shall not be used in seeding and planting</p>	<p>Information from the authorities responsible for the enforcement of the Act on Trade of Forest Reproductive Material (241/2002) indicates that gene modified material has not been used in seeding and planting.</p>	<p>The <u>authority</u> responsible for monitoring of trade of forest cultivation material and approval of forest cultivation material in Finland is the Finnish Food Safety Authority (Evira).</p>
<p>15 Forest road plans shall include an environmental impact assessment</p> <p>The plans for new, permanent forest roads³⁶⁾ drafted by forest organisations¹⁾ include a study on environmental values. The forest road network master plan, in which the traffic needs and the environmental impacts have been evaluated, is taken into consideration in construction of new, permanent forest roads.</p>	<p>The environmental impact assessment must include:</p> <p>a) An assessment of the impacts of road construction on the preservation of the characteristic features of the following sites</p> <ul style="list-style-type: none"> - protected areas; - habitats of special importance (Criterion 2.10) - habitats of endangered species (Criterion 2.12) - sites reserved and demarcated on forest owner's decision or in municipal planning for game management, recreation, etc. <p>b) An assessment of the impacts of road construction on water ecosystems in the area of impact and the necessary water protection measures.</p>	<p><u>Forest road</u> is a private road, which is constructed mainly for the purpose of forestry related transportation and to be used throughout the year. Cutting and winter trails are not forest roads as referred to in this criterion</p>

<p>16 Biodiversity of nature shall be promoted through controlled use of fire</p> <p>The habitats of species dependent on forest fires shall be maintained through prescribed rehabilitation burnings.</p> <p>Forest owners shall be informed³⁷⁾ on the opportunities for prescribed burning.</p> <p>This criterion shall not be applied in the Åland Province.</p>	<p>The annual area³⁸⁾ and number³⁹⁾ of prescribed rehabilitation burnings in the certified area reaches at least, the average annual level of the burnings during the past five-year period.</p> <p>In case weather conditions for prescribed burning have been unexceptionally unfavourable, this will be taken into consideration when estimating the conformity to the required level of prescribed burnings.</p> <p>Forestry organizations have informed forest owners about prescribed burning as a measure to safeguard biodiversity in forests and on the opportunity to receive state financial support for prescribed burning</p>	<p><u>37) Information</u> channels are e.g. newspaper articles, bulletins, and contacts with forest owners, who have suitable sites for prescribed burnings.</p> <p><u>38)</u> Prescribed burning of sunny eskers, regeneration and retention tree groups as well as slash and burn, forest fires and rehabilitation burnings on protected areas are included in the <u>area</u> managed with prescribed burning.</p> <p><u>39)</u> The number of areas with prescribed burning includes the above mentioned area based burnings except forest fires. Their number is not included into the number of areas with prescribed burning.</p>
<p>17 All operations taking place close to watercourses and small water bodies shall safeguard water protection</p> <p>A buffer-zone is left along watercourses and small water bodies⁴⁰⁾ for capturing solid and nutrient run-off.</p> <p>Tree harvesting is allowed on buffer-zones, but retention trees as defined in the criterion 2.13, must not be removed. Seedling and sapling stand tending works are allowed on buffer-zones.</p> <p>Soil scarification for regeneration, fertilization, stump removal, clearing of coppice layer⁴¹⁾ or use of pesticides or herbicides⁴²⁾ shall not take place on buffer-zones. Canopy biomass is removed from buffer-zones, if possible</p>	<p>Buffer-zone is considered to be preserved as required by the criterion when the soil is undisturbed on over 90 per cent of a buffer-zone with a minimum width of 5 meters.</p>	<p><u>40) Watercourses</u> include seas, lakes, ponds and rivers. <u>Small water bodies</u> in this criterion are streams, brooks and springs.</p> <p><u>41)</u> The bush layer along water courses may be cleared for esthetic reasons</p> <p><u>42)</u> Pesticides and herbicides are products that contain one or several active agents and that have been developed to (i) protect plants or plant products from damaging agents, (ii) influence in plant metabolism(in other forms than nutrients), (iii) destroy harmful plant species or plant parts or (iv) prevent unintentional, harmful plant growing (Act on plant protecting agents 1259/2006, Section 4).</p>

<p>18 Water protection shall be safeguarded in drainage maintenance sites</p> <p>Forest organisations' plans for drainage maintenance shall include a water protection plan. The planned water protection measures shall be implemented as appropriate.</p>	<p>Guidelines for planning of drainage maintenance require the elaboration of a water protection plan. The water protection plan contains among other:</p> <ul style="list-style-type: none"> - impacts of the measures related to ditch cleaning and supplementary ditching on the water levels of watercourses; - consideration of valuable habitats as defined in the criterion 2.10 and consideration of peatland habitats that are rare and that have become rare as defined in the criterion 2.11; - risks for erosion in ditch cleaning and supplementary ditching; - slope if the terrain and water conduct away from ditch cleaning and supplementary ditching area; and - water protection measures and their extent. <p>Adequate information⁴³⁾ on plans for water protection have, if needed, been delivered to regional environmental authority for its possible statement.</p>	<p><u>43)</u> The delivery of <u>information</u> and its content is agreed upon between forest organisations and environmental authorities in the region.</p>
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<p>19 Quality of groundwater shall be safeguarded in forest operations</p> <p>Chemical pesticides shall not be used⁴⁵⁾ in groundwater areas that are important (Class 1) or suitable (Class 2) sources of water supply⁴⁴⁾.</p> <p>Fertilizers shall not be used in groundwater areas that are important (Class 1) sources of water supply.</p> <p>Stumps shall not be removed in Class I groundwater areas.</p>	<p>The forest organisations¹⁾ use or have access to the information on the locations of the groundwater areas that are important (Class 1) and suitable (Class 2) sources of water supply.</p> <p>The restrictions on the use of pesticides and herbicides as well as fertilizers have been taken into consideration in the working instructions and recommendations of forest organisations.</p> <p>The monitoring of the quality of nature management has not encountered stump removal in Class I groundwater areas.</p>	<p><u>44)</u> <u>Groundwater</u> in Finland is classified as an important source of water supply (Class 1), suitable source of water supply (Class 2) and other ground water area (Class 3) based on their suitability and protection needs.</p> <p><u>45)</u> Treatment of seedlings in nurseries with pesticides against pine weevil is not considered to be the <u>use</u> of pesticides as referred to in this criterion.</p> <p>The same also applies to the use of chemical or biological stump treatment to prevent rootrot infections. Any treatment shall be done according to the instructions given by the Finnish Food Safety Authority (Evira).</p>
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<p>20 Forest management shall be implemented only with biodegradable pesticides and herbicides</p> <p>Only biodegradable⁴⁶⁾ pesticides and herbicides⁴²⁾ shall be used in forest management and wood harvesting.</p> <p>Broad-leaved coppice shall not be treated, in forest regeneration areas or in seedling and sapling stands with chemical foliage sprays, unless it is required to control the fungal diseases infecting young Scots pine stands from aspen coppice.</p> <p>No chemical pesticides or herbicides shall be used in valuable habitats defined in Criterion 2.10.</p> <p>Chemical pesticides or herbicides shall be used only when unavoidable as, for instance, for the control of ground vegetation on forest regeneration areas, for stump treatment of broadleaved trees and for controlling the pine weevil and for treatment of coniferous timber storages in the vicinity of forest areas to prevent spreading of insect damages into the forests.</p> <p>The use of control agents in stump management for prevention the spreading of rootrot is allowed in general but not in the valuable habitats specified in Criterion 2.10. Pesticides and herbicides are used in conformity to the official guidelines.</p>	<p>The guidelines and instructions of forest organizations include the recommended use of chemical pesticides and herbicides in different forestry operations.</p>	<p>Evira (Finnish Food Safety Authority) approves all pesticides and herbicides in the market and it's approval also includes, among other, the assessment of product's biodegradability. In this context the products approved by Evira for a specific defined purpose are considered as biodegradable</p>
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<p>21 Employees' competence to work shall be safeguarded</p> <p>Employees' adequate professional competence shall be ensured.</p>	<p>Employer⁴⁷⁾ shall have a document or another piece of evidence which indicates that employer has been assured on the required and adequate professional competence⁴⁸⁾ of the employee for the task needed, and that the employer has taken care of the capacity building during the employment.</p> <p>Contracting party shall have a procedure to ensure that his employees have an adequate professional competence and ability to work in each designated task.</p> <p>Contractors/employees shall have access to the general guidelines needed in the work.</p> <p>Contractors/employees shall be given site specific, task related guidelines that include quality, environmental and other requirements⁴⁹⁾.</p>	<p><u>47) Employer</u> refers to an employer registered in Trade Register. The information on the registered employers is available in Finnish Business Information System (BIS), (www.ytj.fi).</p> <p><u>48) Adequate professional competence</u> can be achieved by either professional education or work experience.</p> <p>Other requirement includes, among other, removal of canopy biomass from those hiking paths, which are defined in the agreement between land owner and the party maintaining the hiking route.</p>
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<p>22 Work safety, well-being and equal opportunities at work shall be attended</p> <p>Contractors and employees shall be are provided with the means for safe and a high quality work.</p>	<p>Employer⁵⁰⁾ shall make sure that</p> <ul style="list-style-type: none"> - contractor/employee has the general safety guidelines related to the work in use; - contractor/employee is aware of the aspects and field sites possibly endangering the work safety at a work site; - the guidelines related to work are given in the language the worker understands ⁵¹⁾, and - when needed, a worker has an access to a person who speaks a common language and can interpret in work related issues; <p>Employer has documents on the first and check-up examinations as stipulated in the Act on Occupational Health Service (1383/2001) in organisation's occupational health and safety documentation.</p> <p>Activities appropriate to the conditions and aiming at maintaining the ability to work, are arranged in forest organizations employing at least⁵²⁾ 10 employees</p>	<p><u>50)</u> The term <u>employer</u> refers to either an employer or a contracting party listed in the Trade Register, a manager of timber harvesting site or an employer to a subcontractor. Information on the registered employers is available in the Finnish Business Information System (BIS), www.ytj.fi.</p> <p><u>51)</u> When employer is the public employer or contracting party as defined in the Language Act (423/2003) the Act applies and in the Sámi homeland, the Sámi Language Act (1086/2003) applies.</p> <p>Number of employees <u>on duty</u> on December 31st</p>
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<p>23 Statutory obligations of employers are adhered to⁴³⁾</p> <p>Employers and contracting parties shall comply with labor/ employment legislation, collective labor agreements and legislation in force on employment of foreign labour and require also the compliance from their sub-contractors and companies renting workers to work for third parties.</p> <p>Employers and contracting parties shall provide local shop stewards with the information requested in the Act on the Contractor's Obligations and Liability when Work is Contracted Out⁵⁴⁾</p> <p>Employers and contracting parties shall pay taxes, social security fees and employment pension fees and shall expect their sub-contractors to do the same.</p>	<p>Employer is aware of the binding regulations in collective agreements, labor and employment legislation and legislation on the use of foreign labor when relevant. Employer has procedures that ensure the conformity to the legislation in force. The documentation of working hours is organized according regulations of the Working Hours Act (605/1996) for the employees covered by the Act.</p> <p>Employee and employer organizations are requested to give statements on possible regional violations of collective labour agreements⁵⁵⁾ or on the above mentioned legislation⁵⁶⁾.</p> <p>Contracting parties shall have guidelines on service contracting and documents providing evidence that they have annually verified that their sub-contractors belong to the prepayment register. Contractors shall also have documents on paid taxes and employment pension fees of their subcontractors.</p> <p>Employers/contracting parties⁵³⁾ shall make the contract⁵⁷⁾ or work agreements in a written form and file them.</p> <p>Employers/contracting parties⁵³⁾ have a register on those subcontractors they have purchased forestry services⁵⁷⁾. during the previous two years</p> <p>Contracting parties inform their subcontractors on the significant bans in contract work or production decreases they are aware of. The information is given early enough before the initiation of the work.</p>	<p><u>53)</u> The terms <u>employer/contracting party</u> refer to employers registered in the Trade Register. Information on the registered employers is available in the Finnish Business Information System (BIS), www.ytj.fi.</p> <p><u>54)</u> Act on the Contractor's Obligations and Liability when Work is Contracted Out (1233/2006)</p> <p><u>55)</u> <u>Collective labour agreements</u> refer to collective labour agreements effective in Finland.</p> <p><u>56)</u> <u>Legislation</u> refers to Finnish legislation.</p> <p><u>57)</u> <u>Contract</u> agreement refers to an agreement made in one or many pieces and is worth more than 8500 Euros per year.</p>
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<p>24 Forest owners' know-how shall be improved</p> <p>The number of persons participating in supplementary training, personal or group information sessions, intended for the region's forest owners shall be equivalent to at least 20% of the total number of forest owners in the region⁵⁸⁾.</p>	<p>Statistics on training sessions, personal⁵⁹⁾ and group guidance⁶⁰⁾ organized for local forest owners by the regional forestry centre, forest management associations, forest owners' union, forest industry companies as well as forestry colleges.</p> <p>The statistics must include the number of participants in trainings and extensions⁶¹⁾.</p>	<p><u>58)</u> The <u>number of forest owners</u> is equivalent to the number of forest holdings paying the forest management fee in the region applying for a certificate.</p> <p><u>59)</u> <u>Personal guidance</u> includes, among others, site visits with a forestry professional, or a corresponding visit to forest holding, forest management planning and extension in implementation of forestry works with a forestry professional.</p> <p><u>60)</u> <u>Group guidance</u> includes training courses, forest excursions and forest work demonstrations organized for forest owners by the parties listed in the indicator.</p> <p>Forest owners and other persons involved in forestry operations on the holding are counted as <u>participants</u> in the training/extension indicated in this criterion.</p>
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<p>25 Knowledge on forests shall be increased among children and adolescents *)</p> <p>There shall be an up-to-date action programme to promote the forest based knowledge among children and adolescents in the region.</p> <p>The criterion is not applicable in the certification at the level of a forest management association</p>	<p>On the initiative of regional forestry centre the significant forestry organisations⁶²⁾ in the region review together with the forestry sector youth and training organizations the action programme within a year from the issuance of the certificate. Cooperation with other interested and locally operating parties is sought in the implementation of the action programme.</p> <p>The action programme includes a plan</p> <ul style="list-style-type: none"> - to increase the awareness of forest ecosystem, silviculture and forestry among children and adolescents - to arrange practicing and apprenticeship opportunities for adolescents aiming at a forestry profession or already studying in the field. <p>The targets defined in the action programs are monitored annually.</p> <p>The parties committed to forest certification and the other parties involved in the preparation of the action plan compile and submit the information on the sessions they have organized to the regional forestry centre.</p>	<p><u>62) Significant forestry organizations in the region</u></p> <p>referred to in the criterion are among others, regional forestry centre, Metsähallitus, forest management associations, forest owners' union and timber harvesting organizations as well as entrepreneur end employee organizations.</p>
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<p>26 Everyman's rights shall be safeguarded</p> <p>Opportunities for free access to and stay in forests and for picking of forest products according to everyman's rights⁶³⁾ shall be safeguarded.</p>	<p>There is not a significant amount of verified unjustified restrictions on the everyman's rights.</p>	<p><u>63) Everyman's rights</u> include among others</p> <ul style="list-style-type: none"> - e.g. walking, skiing or bicycling - temporary camping on other person's land - gathering of berries, mushrooms and some other nature products - gathering of dried twigs, brushwood, fallen cones and nuts <p>The following activities are not included in everyman's rights:</p> <ul style="list-style-type: none"> - setting fire - damaging trees or bushes - driving in motor vehicles on terrain - gathering of protected plants, lichens and mosses - making feeding places for game - damaging seedling stands and cultivated land - littering the environment <p>Nesting boxes for birds and artificial nests may be placed in forests only with the permission of land owner. Everyman's rights can be limited based on legal grounds.</p> <p>Everyman's rights are not limited on private roads or forest roads.</p> <p>Act on Private Roads (358/1962) enacts on the use rights and restrictions on private roads. Regarding the use of forest roads the decision of the Supreme Court 1991/819 shall be taken into consideration</p>
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<p>27 The preconditions for multipurpose use of forests shall be promoted</p> <p>Accessibility on recreational trails⁶⁴⁾, possibilities for hunting and game management and agreement based collection of organic forest products shall be enhanced in order to safeguard the preconditions for multiple use of forests.</p>	<p>No soil scarification or stump removal shall take place on recreational trails. Canopy biomass shall not be left on the trails. Any permanent constructions on the trails shall be safeguarded in forestry operations. When the monitoring of the quality of nature management indicates that 90 per cent of the trail length is intact (in forestry operations), the accessibility on the trails is taken into consideration as required by the criterion.</p> <p>Forestry organizations inform forest owners on the significance of hunting and game management in protecting seedling and sapling stands from game damages and in safeguarding biodiversity in forests. Forestry and hunting organizations⁶⁵⁾ give additional information on integration of game management into forest management planning and forest use.</p> <p>Information on the use of fertilizers, pesticides and herbicides required in collection of organic products is available for those estates where forest owners or the person he/she has authorized have made an agreement on the compliance with the guidelines for production of organic products.</p>	<p><u>64)</u> Recreational trails established officially or by an agreement with a land owner according to the act on recreation (606/1973)</p> <p><u>65)</u> <u>Hunting organizations</u> include game management districts, associations, clubs and the Union of Hunters in Finland and the Central Union of Hunters</p> <p><u>The information needed</u> includes (i) the location of the fertilized sites for which state financing have been issued based on the Act on the Financing of Sustainable Forestry (1094/1996) and (ii) the location of fertilized sites in the forests managed by Metsähallitus or forest companies. Forest management association or forestry centre provides the information on private family forests and the corresponding information from other forests is given by the owner or manager.</p>
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<p>28 Preconditions for reindeer husbandry shall be safeguarded</p> <p>Forest management activities in the state forests, under the administration of Metsähallitus, and reindeer husbandry shall be integrated in a local level cooperation so that the conditions for reindeer husbandry are safeguarded in forest management activities on a broad and long-term basis in the region designated for reindeer herding.</p>	<p>To reach this target Metsähallitus should cooperate with the representatives of reindeer husbandry when carrying out such activities that might have a significant impact on reindeer herding. The significant activities and need for cooperation shall be determined in cooperation so that the target will be achieved. The cooperation observes the Agreement⁶⁷⁾ signed 27 February 2002 by Metsähallitus and the Reindeer Herders' Association as well as the sections of Metsähallitus natural resources planning addressing the integration of forestry and reindeer husbandry.</p>	<p><u>67)</u> The Agreement from 2002, however, does not apply in the Sámi homelands.</p> <p>The content and scope of the agreement may be changed on the basis of the mutual agreement between Reindeer Herders' Association and Metsähallitus. This criterion refers to the agreement valid at the time.</p>
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<p>29 Preconditions for Sámi culture and for the traditional means of livelihood shall be safeguarded in Sámi homelands in accordance with Sámi definition of sustainable development</p> <p>In the Sámi⁶⁸⁾ homelands the management and use of areas and natural resources administered by the State shall be organized in such a way that they ensure the facilities for Sámi culture and traditional livelihoods.</p>	<p>In the management of state forests the compliance to international laws, article 8j in Biodiversity Convention⁶⁹⁾ and the rights of Sámi as defined in the Constitution as well as the engagement of Sámi Parliament in preparation and decisions on the issue.</p> <p>2) Sámi cultural landscapes and heritage sites are taken into consideration and protected in forestry operation consulting the Sámi Parliament and Skolt Council in the region of skolt people.</p> <p>3) Sámi Parliament and Skolt Council negotiate on the nature resource plans and the level of sustainable allowable cut is negotiated. Local natural conditions and Sámi culture and livelihoods are taken into consideration when defining the level of the allowable cut. Nature resource plans include measures to implement sustainable development, the proposals of Sámi and how these are taken into consideration in the plan. The levels of allowable cut, and harvesting plans are calculated and reviewed at the levels of reindeer herding cooperatives and municipalities.</p> <p>4) The interests of reindeer herding are integrated in forest use according to the consultations with Sámi Parliament, reindeer herding associations and their siidas/ local units of reindeer herding cooperatives. Harvesting operations shall not cause significant harm to reindeer herding. Soil scarification is not applied on dry heath types or barren heath type soils. On other lichen pastures soil scarification is avoided when possible and the lightest measures</p>	<p><u>68)</u> Sámi people referred to in the criterion include the persons that comply with the definitions of the Act on Sámi Parliament (section 3), the municipalities belonging to the Sámi Homeland are listed in the section 4 and in the section 2 to the Act on Skolt</p> <p>Traditional Sámi livelihoods include the livelihoods listed in the section 17, article 3 in the Finnish Constitution</p> <p>Biodiversity Convention 8j: .in conformity to the national legislation respect, protect and maintain such knowledge, inventions, practices of indigenous people and local communities that make part of significant traditional ways of living and that enhance their implementation under the permission and cooperation of the societies referred to as well as encourage the fair distribution of benefits gained from knowledge, inventions and practices.</p>
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	<p>possible complying with the Forest Act are used.</p> <p>The forest management regimes applied are defined in negotiations between Sámi Parliament, Skolt Council and Metsähallitus.</p> <p>5) Manager of state forests makes the forest management plans in Sámi Homeland. The plans include the most important horse hair lichen and lichen pasture lands of reindeer herding cooperatives and their local units as well as relevant trails and constructions.</p> <p>6) The manager of state forests maintains reindeer maps and statistics on lichen lands by herding cooperatives and develop reporting on other areas important for Sámi reindeer herding.</p> <p>7) Environmental impact assessment of forest road construction includes in Sámi Homeland an estimate on the impacts of construction to Sámi culture and traditional livelihoods. Construction of forest roads on Sámi Homeland shall be integrated with the interests of Sámi culture, livelihoods and nature values as consulted with Sámi Parliament, and in skolt region with Skolt Council.</p> <p>8) Manager of state forests shall not prevent reindeer herding in Sámi area by fencing if reindeer herding cooperative has not given its consent on fencing.</p> <p>9) Travel expenses are compensated to the representatives of Sámi Parliament and Skolt Council and to the reindeer herders that participate in the preparation of nature resource plans or plans for reindeer herding cooperatives.</p> <p>10) Sámi Parliament and Skolt Council shall be always consulted in forest certification audits</p>	
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