

JOINT WOOD ENERGY ENQUIRY

Data Sheet

[UNECE/FAO Forestry and Timber Section © 2012](#)

Citation: UNECE/FAO Joint Wood Energy Enquiry (JWEE) 2009. United Nations, Geneva.

Country Profile

Austria

Total Population (2009)	8,365,275
Rural Population (% of total)	32%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	18,456	29,044	16,471
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	26,182	36,964	24,471
Total domestic woody biomass supply (including cascaded use) (1000m ³)	42,552	52,245	

Energy Resources

Total primary energy supply, TPES (ktoe)	31,658	33,272	33,951
Share of renewables (RES) in TPES	27.8%	24.1%	21.1%
Total wood energy generation (1000m ³)	19,958	17,853	14,443
Total wood energy generation (ktoe)	4,157	3,718	3,008

Wood Energy Intensity

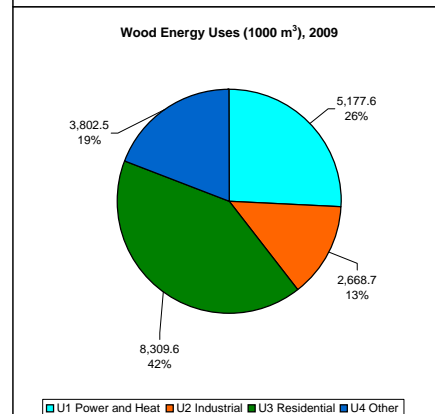
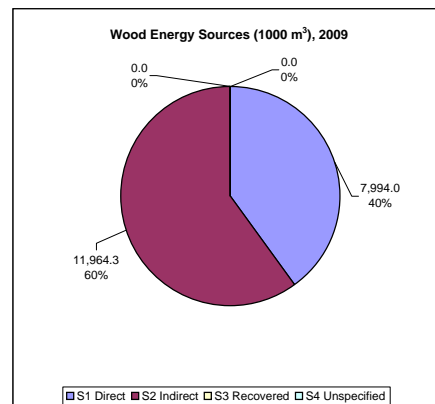
Average wood energy consumption (m ³ /capita)	2.39	2.15	1.76
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	1.87	1.86	1.46
Pellets consumption per inhabitant (kg/capita)	64.24	48.43	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	2.39	1.88	2.07
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	30.5%	17.0%	28.3%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	5.97	5.34	4.32
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	46.9%	34.2%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	13.1%	11.2%	8.9%
Share of woody biomass in RES (%)	47.2%	46.3%	41.9%
Share of wood energy generated from black liquor (%)	8.1%	16.7%	
Imported wood fuel as share of wood energy (%)	11.8%	2.4%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	4.8	0.0	7,001.7	987.5	7,994.0	40.1%
S2 Indirect	5,172.7	2,668.7	1,307.9	2,815.0	11,964.3	59.9%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	5,177.6	2,668.7	8,309.6	3,802.5		
%	25.9%	13.4%	41.6%	19.1%		
					19,958.3	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Belgium

Total Population (2009)	10,796,492
Rural Population (% of total)	3%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	8,670	5,015	4,950
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	10,900	8,340	7,044
Total domestic woody biomass supply (including cascaded use) (1000m ³)	16,374	n/a	

Energy Resources

Total primary energy supply, TPES (ktoe)	57,219	57,025	58,685
Share of renewables (RES) in TPES	3.9%	2.7%	2.0%
Total wood energy generation (1000m ³)	2,942	n/a	n/a
Total wood energy generation (ktoe)	613	n/a	n/a

Wood Energy Intensity

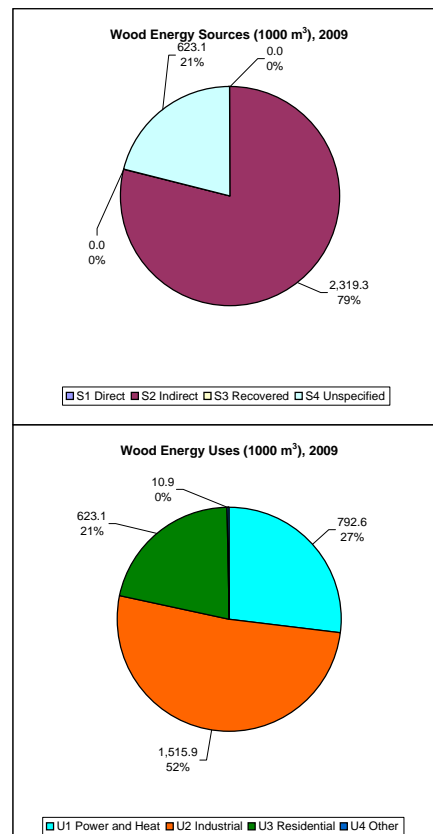
Average wood energy consumption (m ³ /capita)	0.27	n/a	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	6.54	2.85	2.34
Pellets consumption per inhabitant (kg/capita)	20.84	n/a	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	n/a	n/a	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	n/a	n/a	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	4.41	n/a	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	18.0%	n/a	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	1.1%	n/a	n/a
Share of woody biomass in RES (%)	27.4%	n/a	n/a
Share of wood energy generated from black liquor (%)	30.2%	n/a	
Imported wood fuel as share of wood energy (%)	17.0%	n/a	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	0.0	0.0	0.0	0
S2 Indirect	792.6	1,515.9	0.0	10.9	2,319.3	78.8%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	623.1	0.0	623.1	21.2%
Sum (S1,S2,S3,S4)	792.6	1,515.9	623.1	10.9		
%	26.9%	51.5%	21.2%	0.4%		
					2,942.4	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Canada

Total Population (2009)	33,739,859
Rural Population (% of total)	19%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	118,255	198,236	203,121
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	120,191	199,894	203,534
Total domestic woody biomass supply (including cascaded use) (1000m ³)	n/a	598,989	

Energy Resources

Total primary energy supply, TPES (ktoe)	254,120	271,995	272,206
Share of renewables (RES) in TPES	16.9%	16.3%	15.9%
Total wood energy generation (1000m ³)	n/a	62,847	47,810
Total wood energy generation (ktoe)	n/a	13,089	9,958

Wood Energy Intensity

Average wood energy consumption (m ³ /capita)	n/a	1.91	1.48
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.45	0.47	0.42
Pellets consumption per inhabitant (kg/capita)	n/a	7.47	

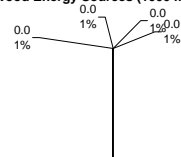
Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	n/a	n/a	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	n/a	n/a	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	n/a	0.20	0.15
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	n/a	10.5%	

Role of Wood Energy in Energy Sector

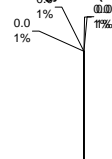
Share of woody biomass in TPES (%)	n/a	4.8%	3.7%
Share of woody biomass in RES (%)	n/a	29.6%	22.9%
Share of wood energy generated from black liquor (%)	n/a	24.1%	
Imported wood fuel as share of wood energy (%)	n/a	0.3%	

Wood Energy Sources (1000 m³), 2009



■ S1 Direct ■ S2 Indirect □ S3 Recovered □ S4 Unspecified

Wood Energy Uses (1000 m³), 2009



■ U1 Power and Heat ■ U2 Industrial ■ U3 Residential ■ U4 Other

Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	0.0	0.0	0.0	0
S2 Indirect	0.0	0.0	0.0	0.0	0.0	0
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	0.0	0.0	0.0	0.0	0.0	0
%	0	0	0	0	0.0	0

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Cyprus

Total Population (2009)	800,011
Rural Population (% of total)	30%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	14	25	10
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	15	26	10
Total domestic woody biomass supply (including cascaded use) (1000m ³)	87	96	

Energy Resources

Total primary energy supply, TPES (ktoe)	2,506	2,437	2,220
Share of renewables (RES) in TPES	3.9%	3.3%	2.6%
Total wood energy generation (1000m ³)	71	75	n/a
Total wood energy generation (ktoe)	15	16	n/a

Wood Energy Intensity

Average wood energy consumption (m ³ /capita)	0.09	0.10	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.02	0.03	0.02
Pellets consumption per inhabitant (kg/capita)	0.04	0.00	

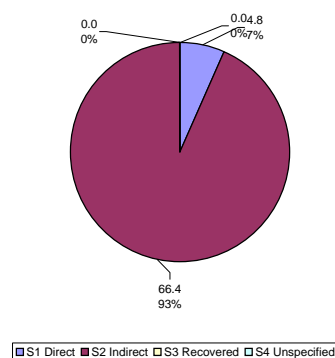
Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.11	0.09	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	32.4%	15.7%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	1.65	1.74	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	81.7%	77.9%	

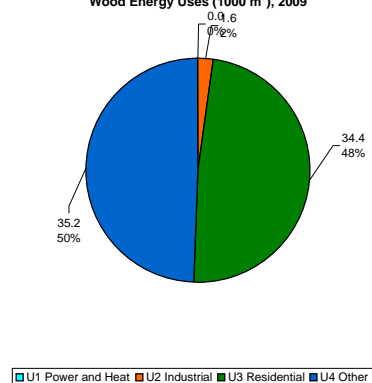
Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	0.6%	0.6%	n/a
Share of woody biomass in RES (%)	15.2%	19.6%	n/a
Share of wood energy generated from black liquor (%)	0.0%	n/a	
Imported wood fuel as share of wood energy (%)	83.5%	72.5%	

Wood Energy Sources (1000 m³), 2009



Wood Energy Uses (1000 m³), 2009



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	4.8	0.0	4.8	6.7%
S2 Indirect	0.0	1.6	29.6	35.2	66.4	93.3%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	0.0	1.6	34.4	35.2		
%	0	2.3%	48.3%	49.4%		
					71.2	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Czech Republic

Total Population (2009)	10,487,178
Rural Population (% of total)	26%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	15,522	18,508	15,510
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	12,819	16,881	13,456
Total domestic woody biomass supply (including cascaded use) (1000m ³)	16,247	n/a	

Energy Resources

Total primary energy supply, TPES (ktoe)	42,788	45,778	44,904
Share of renewables (RES) in TPES	5.7%	4.7%	4.0%
Total wood energy generation (1000m ³)	11,867	n/a	7,939
Total wood energy generation (ktoe)	2,472	n/a	1,653

Wood Energy Intensity

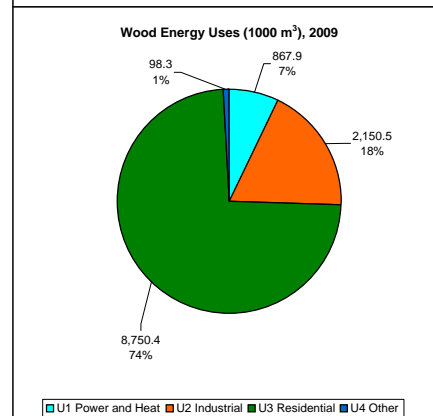
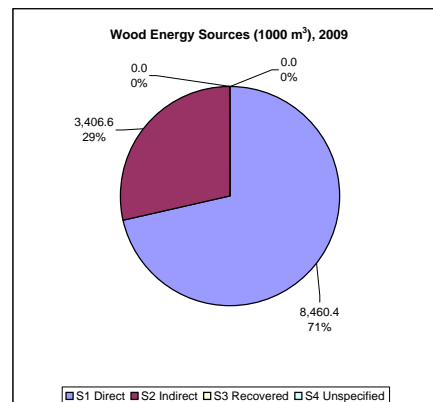
Average wood energy consumption (m ³ /capita)	1.13	n/a	0.78
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.62	0.61	0.36
Pellets consumption per inhabitant (kg/capita)	2.67	n/a	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	3.36	n/a	2.00
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	66.0%	n/a	37.4%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	4.71	n/a	3.15
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	73.0%	n/a	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	5.8%	n/a	3.7%
Share of woody biomass in RES (%)	101.9%	n/a	92.6%
Share of wood energy generated from black liquor (%)	9.2%	n/a	
Imported wood fuel as share of wood energy (%)	1.3%	n/a	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	28.8	8,414.9	16.8	8,460.4	71.3%
S2 Indirect	867.9	2,121.7	335.5	81.5	3,406.6	28.7%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	867.9	2,150.5	8,750.4	98.3		
%	7.3%	18.1%	73.7%	0.8%		
					11,867.1	

Note: The apparent inconsistency in the share of woody biomass among renewable energy sources possibly indicates that the use of wood energy in Czech Republic might be underreported.

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Estonia

Total Population (2009)	1,340,271
Rural Population (% of total)	31%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	5,150	4,500	5,500
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	4,130	4,390	5,460
Total domestic woody biomass supply (including cascaded use) (1000m ³)	8,453	n/a	

Energy Resources

Total primary energy supply, TPES (ktoe)	5,532	5,624	5,164
Share of renewables (RES) in TPES	13.0%	10.7%	11.4%
Total wood energy generation (1000m ³)	4,364	n/a	n/a
Total wood energy generation (ktoe)	909	n/a	n/a

Wood Energy Intensity

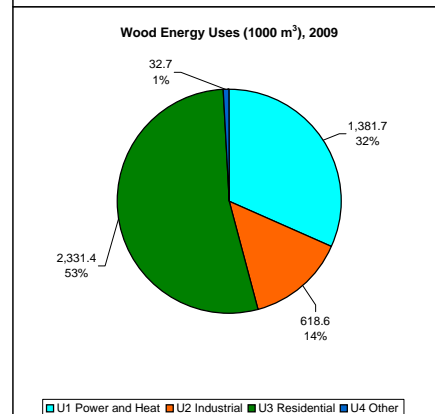
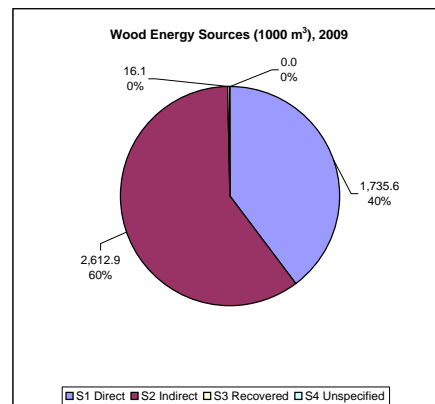
Average wood energy consumption (m ³ /capita)	3.26	n/a	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	2.80	2.34	2.27
Pellets consumption per inhabitant (kg/capita)	33.69	n/a	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.80	n/a	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	42.0%	n/a	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	2.01	n/a	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	51.6%	n/a	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	16.4%	n/a	n/a
Share of woody biomass in RES (%)	126.9%	n/a	n/a
Share of wood energy generated from black liquor (%)	1.9%	n/a	
Imported wood fuel as share of wood energy (%)	3.4%	n/a	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	8.6	48.3	1,653.5	25.2	1,735.6	39.8%
S2 Indirect	1,357.1	570.3	677.9	7.5	2,612.9	59.9%
S3 Recovered	16.1	0.0	0.0	0.0	16.1	0.4%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	1,381.7	618.6	2,331.4	32.7		
%	31.7%	14.2%	53.4%	0.7%		
					4,364.5	

Note: The apparent inconsistency in the share of woody biomass among renewable energy sources possibly indicates that the use of wood energy in Estonia might be underreported.

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Finland

Total Population (2009)	5,338,870
Rural Population (% of total)	15%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	45,509	56,870	52,250
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	49,627	69,311	67,708
Total domestic woody biomass supply (including cascaded use) (1000m ³)	73,222	107,308	

Energy Resources

Total primary energy supply, TPES (ktoe)	33,170	36,775	34,224
Share of renewables (RES) in TPES	23.8%	23.5%	23.6%
Total wood energy generation (1000m ³)	30,111	33,338	32,913
Total wood energy generation (ktoe)	6,271	6,944	6,855

Wood Energy Intensity

Average wood energy consumption (m ³ /capita)	5.64	6.30	6.27
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	12.17	6.79	6.79
Pellets consumption per inhabitant (kg/capita)	39.86	26.59	

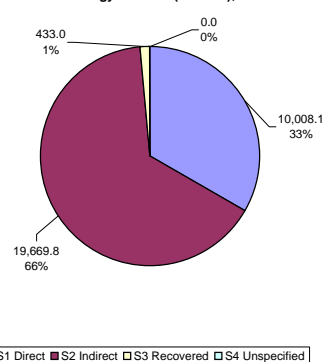
Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.48	0.34	0.33
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	20.2%	10.3%	10.0%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	1.45	1.61	1.59
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	41.1%	31.1%	

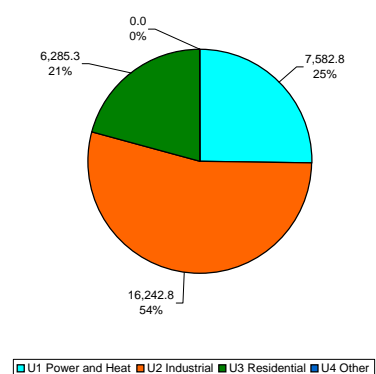
Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	18.9%	18.9%	20.0%
Share of woody biomass in RES (%)	79.5%	80.4%	84.8%
Share of wood energy generated from black liquor (%)	41.9%	42.4%	
Imported wood fuel as share of wood energy (%)	3.4%	0.5%	

Wood Energy Sources (1000 m³), 2009



Wood Energy Uses (1000 m³), 2009



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	3,816.6	653.1	5,538.3	0.0	10,008.1	33.2%
S2 Indirect	3,374.7	15,548.2	747.0	0.0	19,669.8	65.3%
S3 Recovered	391.5	41.5	0.0	0.0	433.0	1.4%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	7,582.8	16,242.8	6,285.3	0.0		
%	25.2%	53.9%	20.9%	0		
					30,110.9	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

France

Total Population (2009)	64,540,518
Rural Population (% of total)	15%

Woody Biomass Supply

	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	54,502	63,191	52,499
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	51,543	62,021	50,567
Total domestic woody biomass supply (including cascaded use) (1000m ³)	89,552	90,374	

Energy Resources

Total primary energy supply, TPES (ktoe)	256,217	264,389	270,628
Share of renewables (RES) in TPES	7.7%	6.6%	5.8%
Total wood energy generation (1000m ³)	48,592	46,457	41,265
Total wood energy generation (ktoe)	10,120	9,676	8,594

Wood Energy Intensity

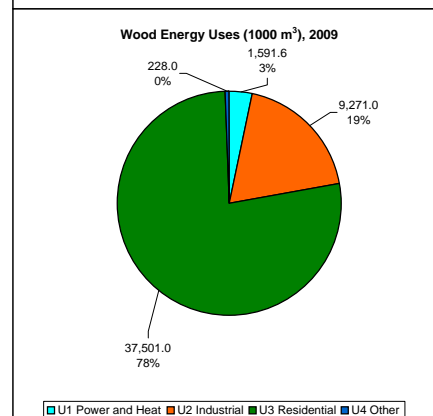
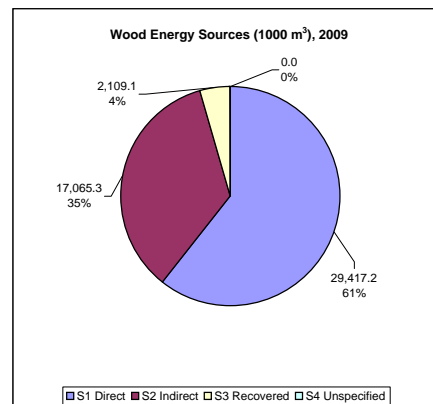
Average wood energy consumption (m ³ /capita)	0.75	0.73	0.66
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	1.94	2.58	2.60
Pellets consumption per inhabitant (kg/capita)	4.42	2.35	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	2.00	2.29	2.36
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	57.1%	54.4%	68.8%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	3.30	3.15	2.80
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	54.3%	51.4%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	3.9%	3.7%	3.2%
Share of woody biomass in RES (%)	51.1%	65.4%	55.2%
Share of wood energy generated from black liquor (%)	7.3%	8.2%	
Imported wood fuel as share of wood energy (%)	0.7%	0.6%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	653.2	1,422.1	27,118.9	223.0	29,417.2	60.5%
S2 Indirect	440.8	7,848.9	8,770.6	5.0	17,065.3	35.1%
S3 Recovered	497.6	0.0	1,611.5	0.0	2,109.1	4.3%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	1,591.6	9,271.0	37,501.0	228.0		
%	3.3%	19.1%	77.2%	0.5%		
					48,591.6	

Note: 2007 and 2009 data are not directly comparable due to a series of factors:

a. Domestic production was recalculated following a review of statistics of consumption of firewood occurred in 2009. This revision results in a substantial diminution of the 2007 harvest figures.

b. The economic crisis affected international trade. Imports of roundwood fell, while exports were boosted by the consequences of windstorm Klaus, 24 January 2009.

c. Improvements in data quality over 2007.

February 2012: data for energy use revised and updated.

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Germany

Total Population (2009)	81,902,306
Rural Population (% of total)	26%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	48,073	81,173	56,946
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	51,067	78,880	53,478
Total domestic woody biomass supply (including cascaded use) (1000m ³)	55,814	109,044	

Energy Resources

Total primary energy supply, TPES (ktoe)	318,529	331,794	338,702
Share of renewables (RES) in TPES	8.7%	7.8%	4.9%
Total wood energy generation (1000m ³)	50,130	53,749	30,271
Total wood energy generation (ktoe)	10,441	11,194	6,305

Wood Energy Intensity

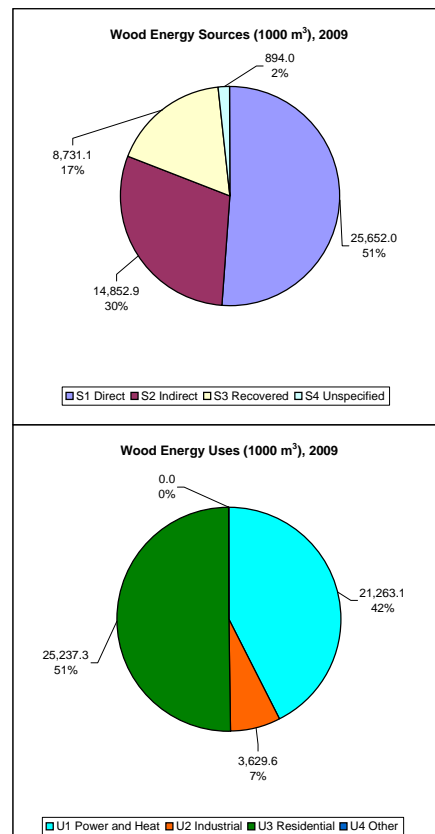
Average wood energy consumption (m ³ /capita)	0.61	0.65	0.37
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.43	0.42	0.30
Pellets consumption per inhabitant (kg/capita)	n/a	15.61	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	2.43	2.35	1.23
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	50.2%	31.5%	24.4%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	4.74	5.09	2.86
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	89.8%	49.3%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	3.3%	3.4%	1.9%
Share of woody biomass in RES (%)	37.7%	43.2%	37.7%
Share of wood energy generated from black liquor (%)	0.0%	3.9%	
Imported wood fuel as share of wood energy (%)	1.8%	2.6%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	5,700.4	0.0	19,951.6	0.0	25,652.0	51.2%
S2 Indirect	7,668.1	3,629.6	3,555.2	0.0	14,852.9	29.6%
S3 Recovered	7,320.1	0.0	1,411.0	0.0	8,731.1	17.4%
S4 Unspecified	574.5	0.0	319.5	0.0	894.0	1.8%
Sum (S1,S2,S3,S4)	21,263.1	3,629.6	25,237.3	0.0		
%	42.4%	7.2%	50.3%	0		
					50,130.0	

Note: Only aggregate data on the sources and uses of wood energy has been provided.

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Ireland

Total Population (2009)	4,458,942
Rural Population (% of total)	38%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	2,405	2,773	2,648
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	2,316	2,829	2,543
Total domestic woody biomass supply (including cascaded use) (1000m ³)	3,837	4,753	

Energy Resources

Total primary energy supply, TPES (ktoe)	14,339	15,039	14,437
Share of renewables (RES) in TPES	4.5%	3.1%	2.5%
Total wood energy generation (1000m ³)	719	471	n/a
Total wood energy generation (ktoe)	150	98	n/a

Wood Energy Intensity

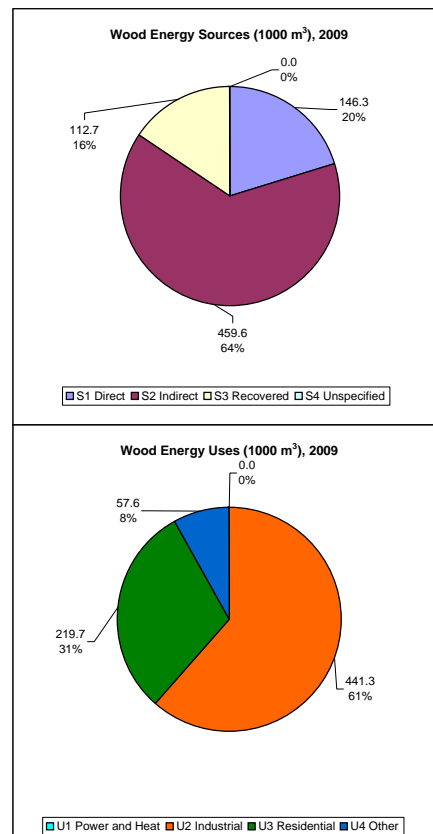
Average wood energy consumption (m ³ /capita)	0.16	0.11	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.08	0.03	0.01
Pellets consumption per inhabitant (kg/capita)	11.21	5.68	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.22	0.09	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	6.3%	2.1%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	1.09	0.72	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	18.7%	9.9%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	1.0%	0.7%	n/a
Share of woody biomass in RES (%)	23.4%	21.2%	n/a
Share of wood energy generated from black liquor (%)	0.0%	0.0%	
Imported wood fuel as share of wood energy (%)	8.6%	15.5%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	88.7	57.6	146.3	20.4%
S2 Indirect	0.0	328.6	131.0	0.0	459.6	64.0%
S3 Recovered	0.0	112.7	0.0	0.0	112.7	15.7%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0%
Sum (S1,S2,S3,S4)	0.0	441.3	219.7	57.6	718.6	
%	0	61.4%	30.6%	8.0%		

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Italy

Total Population (2009)	60,192,698
Rural Population (% of total)	32%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	23,949	8,125	8,691
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	29,625	13,073	14,296
Total domestic woody biomass supply (including cascaded use) (1000m ³)	38,558	n/a	

Energy Resources

Total primary energy supply, TPES (ktoe)	164,630	179,095	183,873
Share of renewables (RES) in TPES	9.7%	6.7%	6.3%
Total wood energy generation (1000m ³)	27,930	n/a	n/a
Total wood energy generation (ktoe)	5,817	n/a	n/a

Wood Energy Intensity

Average wood energy consumption (m ³ /capita)	0.46	n/a	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.95	0.31	0.35
Pellets consumption per inhabitant (kg/capita)	20.29	n/a	

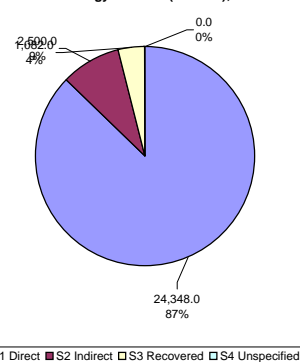
Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	2.91	n/a	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	82.2%	n/a	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	3.34	n/a	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	72.4%	n/a	

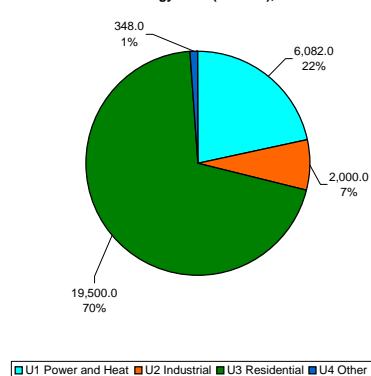
Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	3.5%	n/a	n/a
Share of woody biomass in RES (%)	36.3%	n/a	n/a
Share of wood energy generated from black liquor (%)	0.0%	n/a	
Imported wood fuel as share of wood energy (%)	16.6%	n/a	

Wood Energy Sources (1000 m³), 2009



Wood Energy Uses (1000 m³), 2009



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	5,000.0	1,000.0	18,000.0	348.0	24,348.0	87.2%
S2 Indirect	0.0	1,000.0	1,500.0	0.0	2,500.0	9.0%
S3 Recovered	1,082.0	0.0	0.0	0.0	1,082.0	3.9%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0%
Sum (S1,S2,S3,S4)	6,082.0	2,000.0	19,500.0	348.0		
%	21.8%	7.2%	69.8%	1.2%		
					27,930.0	

Note: Only aggregate data on the sources and uses of wood energy has been provided.

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Latvia

Total Population (2009)	2,254,834
Rural Population (% of total)	32%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	10,442	12,665	12,843
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	7,020	10,405	9,664
Total domestic woody biomass supply (including cascaded use) (1000m ³)	n/a	13,437	

Energy Resources

Total primary energy supply, TPES (ktoe)	4,484	4,670	4,418
Share of renewables (RES) in TPES	34.9%	30.1%	33.4%
Total wood energy generation (1000m ³)	n/a	7,434	n/a
Total wood energy generation (ktoe)	n/a	1,548	n/a

Wood Energy Intensity

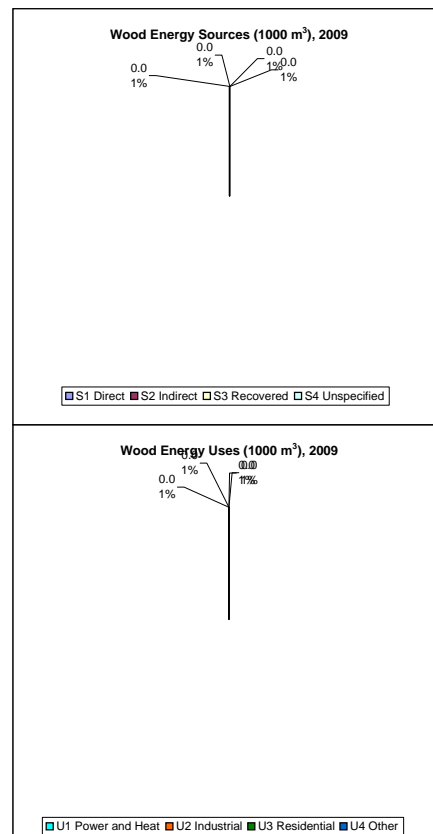
Average wood energy consumption (m ³ /capita)	n/a	3.27	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.96	3.54	0.82
Pellets consumption per inhabitant (kg/capita)	n/a	15.82	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	n/a	1.43	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	n/a	44.0%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	n/a	2.32	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	n/a	55.3%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	n/a	33.2%	n/a
Share of woody biomass in RES (%)	n/a	110.0%	n/a
Share of wood energy generated from black liquor (%)	n/a	0.0%	
Imported wood fuel as share of wood energy (%)	n/a	0.2%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	0.0	0.0	0.0	0
S2 Indirect	0.0	0.0	0.0	0.0	0.0	0
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	0.0	0.0	0.0	0.0	0.0	
%	0	0	0	0	0.0	

Note: The apparent inconsistency in the share of woody biomass among renewable energy sources possibly indicates that the use of wood energy in Latvia might be underreported.

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Liechtenstein

Total Population (2009)	35,911
Rural Population (% of total)	86%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	27	38	22
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	18	30	22
Total domestic woody biomass supply (including cascaded use) (1000m ³)	35	30	

Energy Resources

Total primary energy supply, TPES (ktoe)	116	112	0
Share of renewables (RES) in TPES	7.3%	3.0%	0
Total wood energy generation (1000m ³)	32	14	n/a
Total wood energy generation (ktoe)	7	3	n/a

Wood Energy Intensity

Average wood energy consumption (m ³ /capita)	0.90	0.40	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.45	0.43	0.14
Pellets consumption per inhabitant (kg/capita)	n/a	0.00	

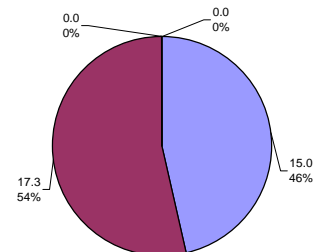
Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	3.75	3.50	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	83.3%	46.7%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	8.08	3.50	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	91.6%	46.5%	

Role of Wood Energy in Energy Sector

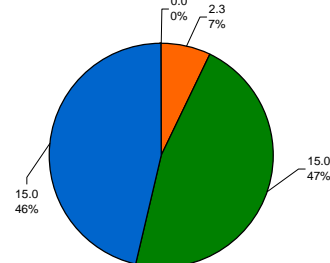
Share of woody biomass in TPES (%)	5.8%	2.6%	n/a
Share of woody biomass in RES (%)	78.7%	85.6%	n/a
Share of wood energy generated from black liquor (%)	0.0%	0.0%	
Imported wood fuel as share of wood energy (%)	0.0%	0.5%	

Wood Energy Sources (1000 m³), 2009



■ S1 Direct ■ S2 Indirect □ S3 Recovered □ S4 Unspecified

Wood Energy Uses (1000 m³), 2009



■ U1 Power and Heat ■ U2 Industrial ■ U3 Residential ■ U4 Other

Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	15.0	0.0	15.0	46.4%
S2 Indirect	0.0	2.3	0.0	15.0	17.3	53.6%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	0.0	2.3	15.0	15.0	32.3	
%	0	7.2%	46.4%	46.4%		

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Lithuania

Total Population (2009)	3,339,456
Rural Population (% of total)	33%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	5,612	6,195	6,045
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	5,042	4,878	5,159
Total domestic woody biomass supply (including cascaded use) (1000m ³)	7,882	7,999	

Energy Resources

Total primary energy supply, TPES (ktoe)	8,388	9,252	8,608
Share of renewables (RES) in TPES	10.4%	8.8%	8.8%
Total wood energy generation (1000m ³)	3,392	3,376	3,209
Total wood energy generation (ktoe)	707	703	668

Wood Energy Intensity

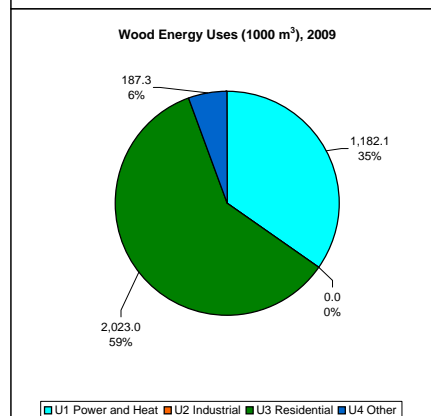
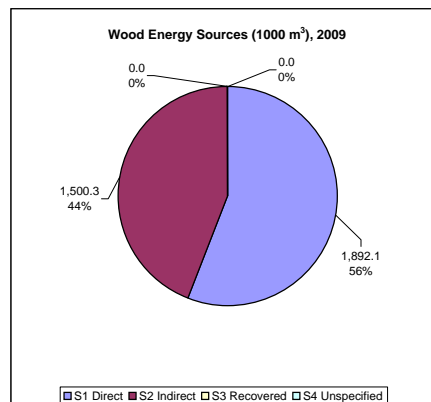
Average wood energy consumption (m ³ /capita)	1.02	1.00	0.94
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	1.56	1.21	0.99
Pellets consumption per inhabitant (kg/capita)	2.67	34.36	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	1.03	0.33	0.81
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	37.5%	12.3%	28.8%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	1.85	1.84	1.75
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	43.0%	42.2%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	8.4%	7.6%	7.8%
Share of woody biomass in RES (%)	80.9%	86.6%	88.2%
Share of wood energy generated from black liquor (%)	0.0%	0.0%	
Imported wood fuel as share of wood energy (%)	9.1%	2.8%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	187.1	0.0	1,661.9	43.2	1,892.1	55.8%
S2 Indirect	995.0	0.0	361.1	144.2	1,500.3	44.2%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0%
Sum (S1,S2,S3,S4)	1,182.1	0.0	2,023.0	187.3		
%	34.8%	0	59.6%	5.5%		
					3,392.4	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Netherlands

Total Population (2009)	16,530,388
Rural Population (% of total)	17%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	1,016	1,222	1,110
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	837	998	939
Total domestic woody biomass supply (including cascaded use) (1000m ³)	n/a	5,562	

Energy Resources

Total primary energy supply, TPES (ktoe)	2,115	79,350	78,824
Share of renewables (RES) in TPES	148.8%	3.0%	2.7%
Total wood energy generation (1000m ³)	n/a	3,224	1,962
Total wood energy generation (ktoe)	n/a	671	409

Wood Energy Intensity

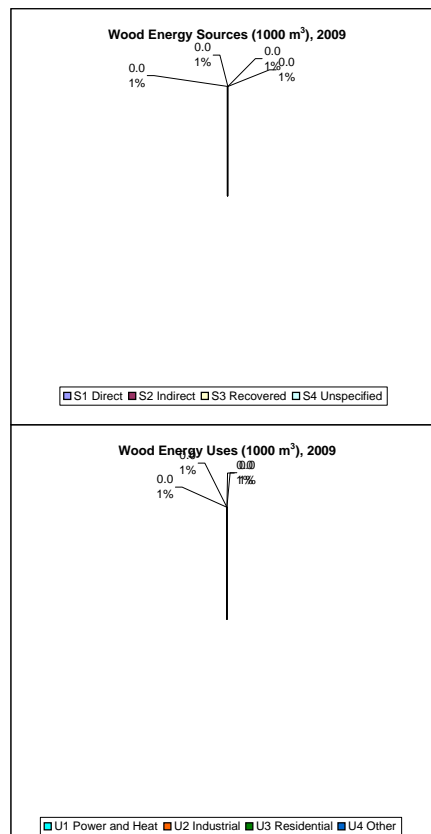
Average wood energy consumption (m ³ /capita)	n/a	0.20	0.12
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.10	0.09	0.09
Pellets consumption per inhabitant (kg/capita)	n/a	40.90	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	n/a	1.86	1.06
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	n/a	54.9%	33.3%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	n/a	10.93	6.65
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	n/a	58.0%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	n/a	0.8%	0.5%
Share of woody biomass in RES (%)	n/a	28.0%	19.0%
Share of wood energy generated from black liquor (%)	n/a	0.0%	
Imported wood fuel as share of wood energy (%)	n/a	50.5%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	0.0	0.0	0.0	0
S2 Indirect	0.0	0.0	0.0	0.0	0.0	0
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	0.0	0.0	0.0	0.0	0.0	
%	0	0	0	0	0.0	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Norway

Total Population (2009)	4,828,726
Rural Population (% of total)	21%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	9,235	10,465	9,667
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	9,433	12,216	12,398
Total domestic woody biomass supply (including cascaded use) (1000m ³)	14,783	n/a	

Energy Resources

Total primary energy supply, TPES (ktoe)	28,245	27,546	26,758
Share of renewables (RES) in TPES	43.3%	46.5%	48.5%
Total wood energy generation (1000m ³)	4,043	n/a	5,773
Total wood energy generation (ktoe)	842	n/a	1,202

Wood Energy Intensity

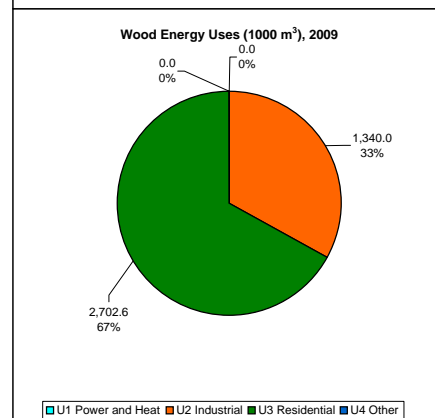
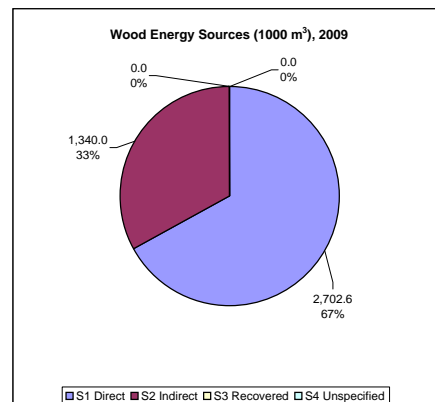
Average wood energy consumption (m ³ /capita)	0.84	n/a	1.25
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	2.70	2.49	1.35
Pellets consumption per inhabitant (kg/capita)	9.53	n/a	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.43	n/a	0.50
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	28.7%	n/a	25.2%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	0.64	n/a	0.92
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	27.3%	n/a	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	3.0%	n/a	4.5%
Share of woody biomass in RES (%)	6.9%	n/a	9.3%
Share of wood energy generated from black liquor (%)	7.4%	n/a	
Imported wood fuel as share of wood energy (%)	8.9%	n/a	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	2,702.6	0.0	2,702.6	66.9%
S2 Indirect	0.0	1,340.0	0.0	0.0	1,340.0	33.1%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	0.0	1,340.0	2,702.6	0.0		
%	0	33.1%	66.9%	0		
					4,042.7	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Russian Federation

Total Population (2009)	141,909,244
Rural Population (% of total)	27%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	151,400	207,000	185,000
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	129,171	158,024	137,430
Total domestic woody biomass supply (including cascaded use) (1000m ³)	155,399	193,057	

Energy Resources

Total primary energy supply, TPES (ktoe)	646,915	672,591	651,712
Share of renewables (RES) in TPES	2.8%	3.3%	3.4%
Total wood energy generation (1000m ³)	77,043	42,800	n/a
Total wood energy generation (ktoe)	16,046	8,914	n/a

Wood Energy Intensity

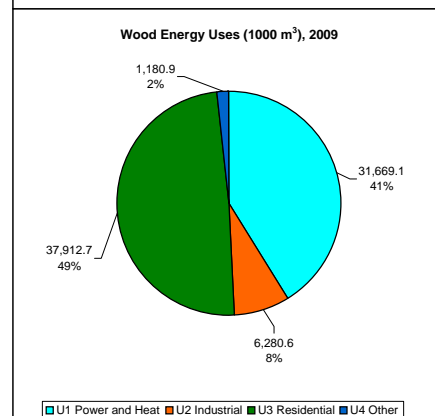
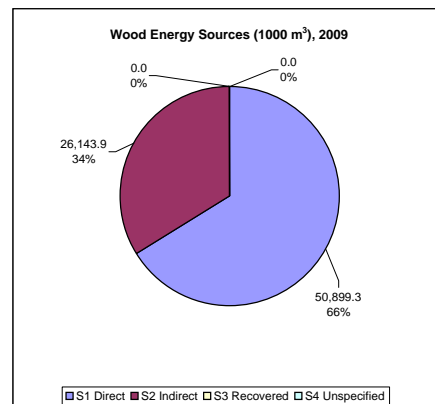
Average wood energy consumption (m ³ /capita)	0.54	0.30	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	1.00	1.17	1.21
Pellets consumption per inhabitant (kg/capita)	0.32	0.00	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.07	0.05	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	39.4%	20.8%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	0.11	0.06	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	49.6%	22.2%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	2.5%	1.3%	n/a
Share of woody biomass in RES (%)	87.8%	39.9%	n/a
Share of wood energy generated from black liquor (%)	8.2%	23.5%	
Imported wood fuel as share of wood energy (%)	0.0%	0.0%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	13,100.7	0.0	37,798.6	0.0	50,899.3	66.1%
S2 Indirect	18,568.3	6,280.6	114.1	1,180.9	26,143.9	33.9%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	31,669.1	6,280.6	37,912.7	1,180.9		
%	41.1%	8.2%	49.2%	1.5%		
					77,043.2	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Serbia

Total Population (2009)	7,320,807
Rural Population (% of total)	44%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	7,051	3,146	3,170
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	7,120	3,159	2,786
Total domestic woody biomass supply (including cascaded use) (1000m ³)	8,040	4,374	

Energy Resources

Total primary energy supply, TPES (ktoe)	14,450	15,807	15,030
Share of renewables (RES) in TPES	8.1%	10.9%	12.2%
Total wood energy generation (1000m ³)	7,620	1,642	n/a
Total wood energy generation (ktoe)	1,587	342	n/a

Wood Energy Intensity

Average wood energy consumption (m ³ /capita)	1.04	0.22	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	1.55	0.48	0.57
Pellets consumption per inhabitant (kg/capita)	0.41	0.14	

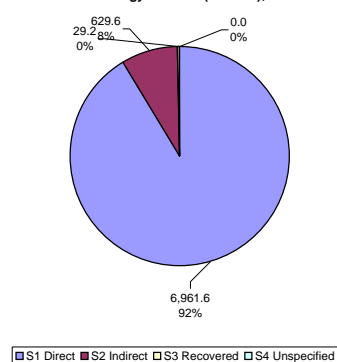
Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	4.54	0.86	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	97.8%	41.7%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	4.97	1.07	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	94.8%	37.5%	

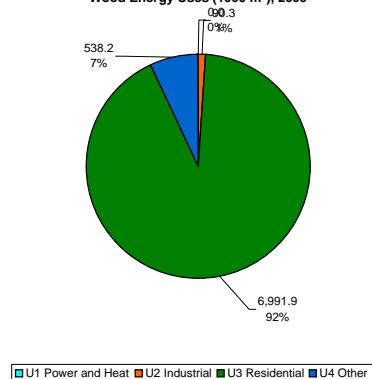
Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	11.0%	2.2%	n/a
Share of woody biomass in RES (%)	135.5%	19.9%	n/a
Share of wood energy generated from black liquor (%)	0.0%	0.0%	
Imported wood fuel as share of wood energy (%)	0.3%	2.4%	

Wood Energy Sources (1000 m³), 2009



Wood Energy Uses (1000 m³), 2009



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	9.6	6,846.5	105.5	6,961.6	91.4%
S2 Indirect	0.0	80.7	116.2	432.7	629.6	8.3%
S3 Recovered	0.0	0.0	29.2	0.0	29.2	0.4%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0%
Sum (S1,S2,S3,S4)	0.0	90.3	6,991.9	538.2	7,620.4	
%	0	1.2%	91.8%	7.1%		

Note: The apparent inconsistency in the share of woody biomass among renewable energy sources possibly indicates that the use of wood energy in Serbia might be underreported.

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Slovak Republic

Total Population (2009)	5,418,590
Rural Population (% of total)	45%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	10,143	8,209	9,302
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	8,022	7,089	7,592
Total domestic woody biomass supply (including cascaded use) (1000m ³)	11,739	12,407	

Energy Resources

Total primary energy supply, TPES (ktoe)	16,723	17,849	18,830
Share of renewables (RES) in TPES	7.3%	5.4%	4.3%
Total wood energy generation (1000m ³)	2,328	2,866	n/a
Total wood energy generation (ktoe)	485	597	n/a

Wood Energy Intensity

Average wood energy consumption (m ³ /capita)	0.43	0.53	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.24	0.14	0.07
Pellets consumption per inhabitant (kg/capita)	13.84	0.74	

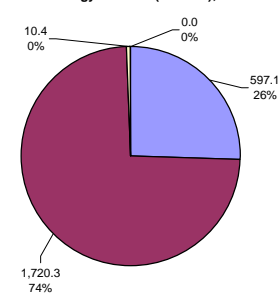
Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.34	0.49	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	7.4%	12.1%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	1.33	1.64	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	19.8%	23.1%	

Role of Wood Energy in Energy Sector

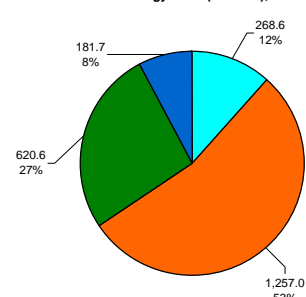
Share of woody biomass in TPES (%)	2.9%	3.3%	n/a
Share of woody biomass in RES (%)	40.0%	61.4%	n/a
Share of wood energy generated from black liquor (%)	29.3%	26.2%	
Imported wood fuel as share of wood energy (%)	1.2%	0.8%	

Wood Energy Sources (1000 m³), 2009



■ S1 Direct ■ S2 Indirect □ S3 Recovered □ S4 Unspecified

Wood Energy Uses (1000 m³), 2009



■ U1 Power and Heat ■ U2 Industrial ■ U3 Residential ■ U4 Other

Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	110.3	0.0	462.8	24.0	597.1	25.7%
S2 Indirect	158.3	1,257.0	157.8	147.3	1,720.3	73.9%
S3 Recovered	0.0	0.0	0.0	10.4	10.4	0.4%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0%
Sum (S1,S2,S3,S4)	268.6	1,257.0	620.6	181.7		
%	11.5%	54.0%	26.7%	7.8%		
					2,327.9	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Slovenia

Total Population (2009)	2,039,669
Rural Population (% of total)	50%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	3,200	3,159	2,733
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	2,695	2,707	2,719
Total domestic woody biomass supply (including cascaded use) (1000m ³)	3,639	3,147	

Energy Resources

Total primary energy supply, TPES (ktoe)	6,969	7,320	7,293
Share of renewables (RES) in TPES	12.7%	10.2%	10.8%
Total wood energy generation (1000m ³)	1,866	2,819	2,214
Total wood energy generation (ktoe)	389	587	461

Wood Energy Intensity

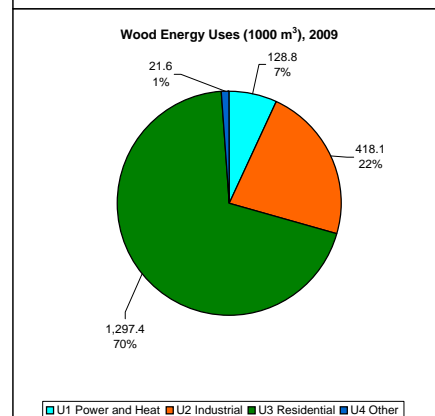
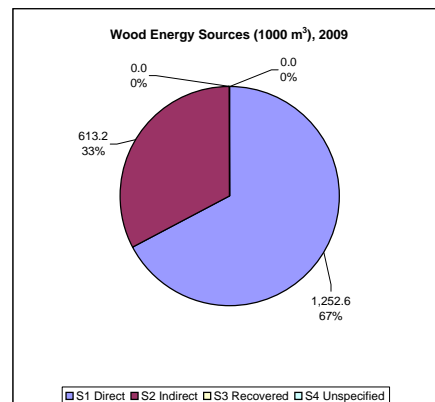
Average wood energy consumption (m ³ /capita)	0.91	1.40	1.11
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.80	0.64	0.83
Pellets consumption per inhabitant (kg/capita)	24.97	24.87	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	1.04	1.75	1.32
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	46.5%	78.2%	58.5%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	1.54	2.33	1.83
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	51.3%	89.6%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	5.6%	8.0%	6.3%
Share of woody biomass in RES (%)	43.8%	78.5%	58.6%
Share of wood energy generated from black liquor (%)	0.0%	0.0%	
Imported wood fuel as share of wood energy (%)	10.8%	2.5%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	1,252.6	0.0	1,252.6	67.1%
S2 Indirect	128.8	418.1	44.8	21.6	613.2	32.9%
S3 Recovered	0.0	0.0	0.0	0.0	0.0	0
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	128.8	418.1	1,297.4	21.6		
%	6.9%	22.4%	69.5%	1.2%	1,865.8	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Sweden

Total Population (2009)	9,298,514
Rural Population (% of total)	15%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	63,500	78,004	98,200
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	66,498	81,587	103,923
Total domestic woody biomass supply (including cascaded use) (1000m ³)	112,040	128,164	

Energy Resources

Total primary energy supply, TPES (ktoe)	45,408	50,060	51,569
Share of renewables (RES) in TPES	34.8%	30.5%	28.7%
Total wood energy generation (1000m ³)	41,265	37,310	39,377
Total wood energy generation (ktoe)	8,594	7,771	8,201

Wood Energy Intensity

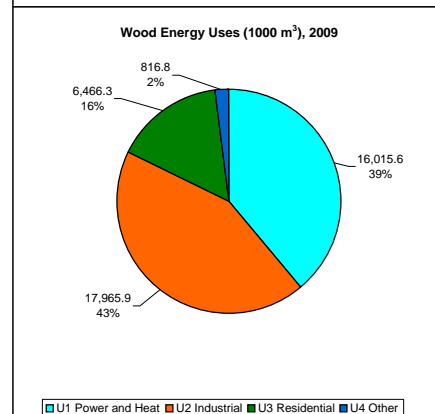
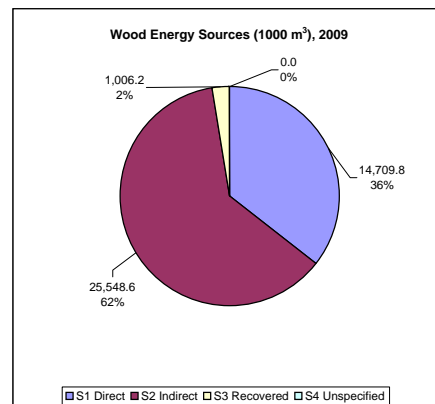
Average wood energy consumption (m ³ /capita)	4.44	4.08	4.36
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	4.14	4.23	4.36
Pellets consumption per inhabitant (kg/capita)	206.27	180.37	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.71	0.54	0.34
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	22.1%	13.7%	6.7%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	2.00	1.81	1.91
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	36.8%	29.1%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	18.9%	15.5%	15.9%
Share of woody biomass in RES (%)	54.3%	60.8%	55.3%
Share of wood energy generated from black liquor (%)	25.8%	30.9%	
Imported wood fuel as share of wood energy (%)	3.1%	2.1%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	9,254.2	0.0	4,968.8	486.8	14,709.8	35.6%
S2 Indirect	5,755.2	17,965.9	1,497.5	330.0	25,548.6	61.9%
S3 Recovered	1,006.2	0.0	0.0	0.0	1,006.2	2.4%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	16,015.6	17,965.9	6,466.3	816.8		
%	38.8%	43.5%	15.7%	2.0%		
					41,264.7	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

Switzerland

Total Population (2009)	7,743,831
Rural Population (% of total)	26%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	6,242	6,491	5,285
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	5,649	5,328	4,043
Total domestic woody biomass supply (including cascaded use) (1000m ³)	8,262	7,922	

Energy Resources

Total primary energy supply, TPES (ktoe)	26,952	25,763	25,916
Share of renewables (RES) in TPES	17.7%	17.7%	15.9%
Total wood energy generation (1000m ³)	4,223	3,715	3,785
Total wood energy generation (ktoe)	880	774	788

Wood Energy Intensity

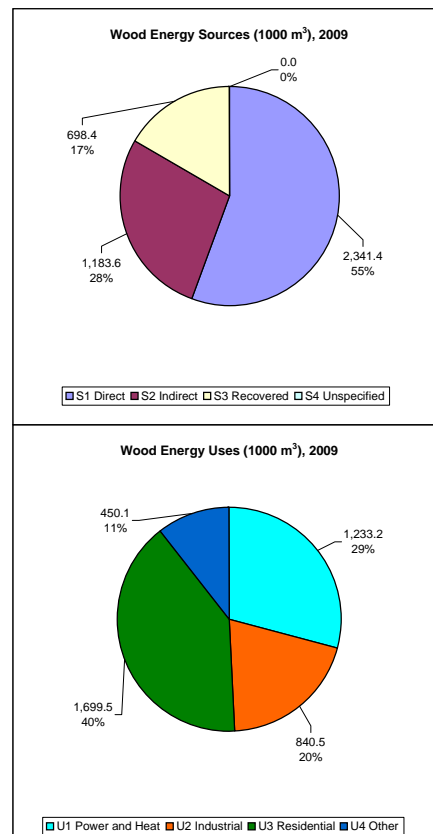
Average wood energy consumption (m ³ /capita)	0.55	0.49	0.51
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.99	0.91	0.62
Pellets consumption per inhabitant (kg/capita)	16.35	16.95	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	1.99	1.25	1.64
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	41.4%	27.7%	47.9%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	3.59	3.15	3.21
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	51.1%	46.9%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	3.3%	3.0%	3.0%
Share of woody biomass in RES (%)	18.4%	16.9%	19.1%
Share of wood energy generated from black liquor (%)	0.0%	0.0%	
Imported wood fuel as share of wood energy (%)	4.3%	6.7%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	523.0	73.1	1,351.0	394.2	2,341.4	55.4%
S2 Indirect	153.0	633.0	348.4	49.1	1,183.6	28.0%
S3 Recovered	557.1	134.4	0.1	6.8	698.4	16.5%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0%
Sum (S1,S2,S3,S4)	1,233.2	840.5	1,699.5	450.1		
%	29.2%	19.9%	40.2%	10.7%		
					4,223.3	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

United Kingdom

Total Population (2009)	61,801,570
Rural Population (% of total)	20%

Woody Biomass Supply

	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	9,128	9,118	8,519
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	9,036	8,659	8,285
Total domestic woody biomass supply (including cascaded use) (1000m ³)	20,788	22,466	

Energy Resources

	2009	2007	2005
Total primary energy supply, TPES (ktoe)	196,762	210,259	222,364
Share of renewables (RES) in TPES	3.2%	2.2%	1.8%
Total wood energy generation (1000m ³)	4,873	2,344	1,562
Total wood energy generation (ktoe)	1,015	488	325

Wood Energy Intensity

	2009	2007	2005
Average wood energy consumption (m ³ /capita)	0.08	0.04	0.03
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.07	0.02	0.01
Pellets consumption per inhabitant (kg/capita)	2.44	4.23	

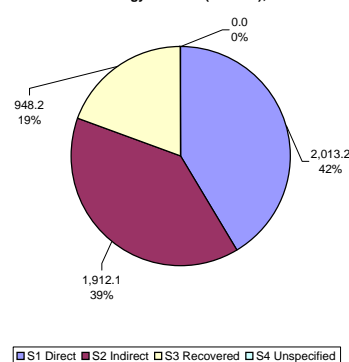
Role of Wood Energy in Forest Sector

	2009	2007	2005
Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.85	0.24	0.24
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	22.3%	6.5%	7.0%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	2.05	0.99	0.66
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	23.4%	10.4%	

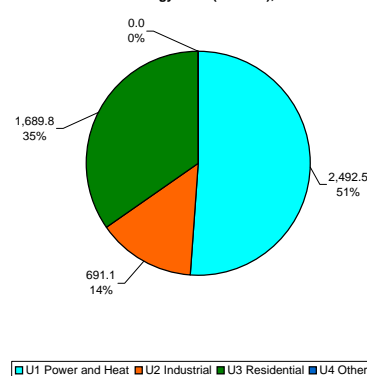
Role of Wood Energy in Energy Sector

	2009	2007	2005
Share of woody biomass in TPES (%)	0.5%	0.2%	0.1%
Share of woody biomass in RES (%)	16.3%	10.5%	8.2%
Share of wood energy generated from black liquor (%)	0.0%	0.0%	
Imported wood fuel as share of wood energy (%)	9.2%	25.9%	

Wood Energy Sources (1000 m³), 2009



Wood Energy Uses (1000 m³), 2009



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	990.2	73.8	949.2	0.0	2,013.2	41.3%
S2 Indirect	1,222.4	321.8	367.8	0.0	1,912.1	39.2%
S3 Recovered	279.9	295.5	372.8	0.0	948.2	19.5%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0%
Sum (S1,S2,S3,S4)	2,492.5	691.1	1,689.8	0.0	4,873.4	
%	51.1%	14.2%	34.7%	0%		

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

United States

Total Population (2009)	307,007,000
Rural Population (% of total)	18%

Woody Biomass Supply

	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	344,047	444,003	467,347
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	335,449	436,301	461,164
Total domestic woody biomass supply (including cascaded use) (1000m ³)	682,971	888,783	

Energy Resources

	2009	2007	2005
Total primary energy supply, TPES (ktoe)	2,162,915	2,337,014	2,318,861
Share of renewables (RES) in TPES	5.4%	4.7%	4.5%
Total wood energy generation (1000m ³)	252,312	286,955	n/a
Total wood energy generation (ktoe)	52,550	59,765	n/a

Wood Energy Intensity

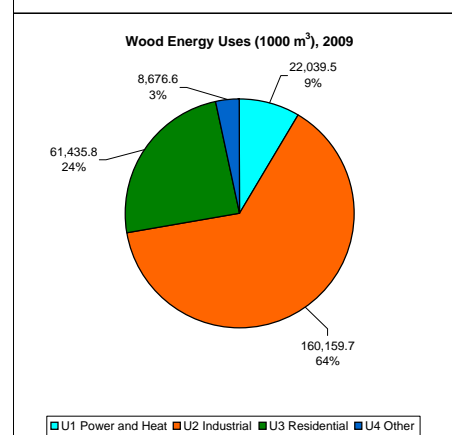
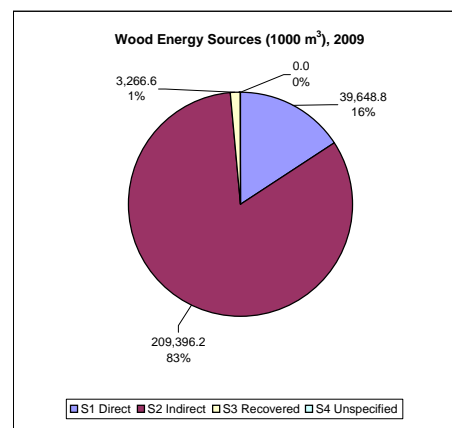
	2009	2007	2005
Average wood energy consumption (m ³ /capita)	0.82	0.95	n/a
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.73	0.95	0.84
Pellets consumption per inhabitant (kg/capita)	5.81	3.17	

Role of Wood Energy in Forest Sector

	2009	2007	2005
Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.12	0.16	n/a
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	11.8%	11.6%	n/a
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	0.79	0.90	n/a
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	36.9%	32.3%	

Role of Wood Energy in Energy Sector

	2009	2007	2005
Share of woody biomass in TPES (%)	2.4%	2.6%	n/a
Share of woody biomass in RES (%)	44.6%	54.8%	n/a
Share of wood energy generated from black liquor (%)	21.7%	21.3%	
Imported wood fuel as share of wood energy (%)	0.1%	0.2%	



Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	0.0	0.0	39,648.8	0.0	39,648.8	15.7%
S2 Indirect	18,773.0	160,159.7	21,786.9	8,676.6	209,396.2	83.0%
S3 Recovered	3,266.6	0.0	0.0	0.0	3,266.6	1.3%
S4 Unspecified	0.0	0.0	0.0	0.0	0.0	0
Sum (S1,S2,S3,S4)	22,039.5	160,159.7	61,435.8	8,676.6		
%	8.7%	63.5%	24.3%	3.4%		
					252,311.6	

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

Country Profile

JWEE Total

Total Population (2009)	798,965,879
Rural Population (% of total)	22%

Woody Biomass Supply	2009	2007	2005
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	831,835	1,210,561	995,703
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	816,356	1,169,088	1,011,844
Total domestic woody biomass supply (including cascaded use) (1000m ³)	1,370,275	2,250,152	

Energy Resources

Total primary energy supply, TPES (ktoe)	4,080,431	4,385,746	3,734,808
Share of renewables (RES) in TPES	6.5%	6.1%	6.4%
Total wood energy generation (1000m ³)	595,510	609,289	232,522
Total wood energy generation (ktoe)	124,029	126,899	48,428

Wood Energy Intensity

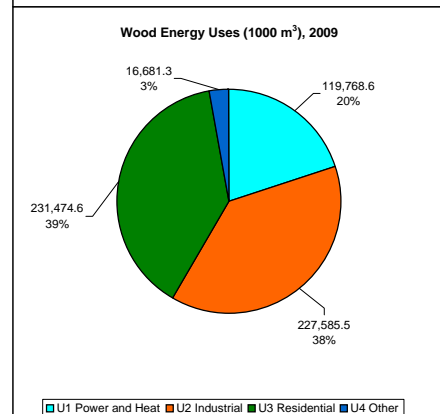
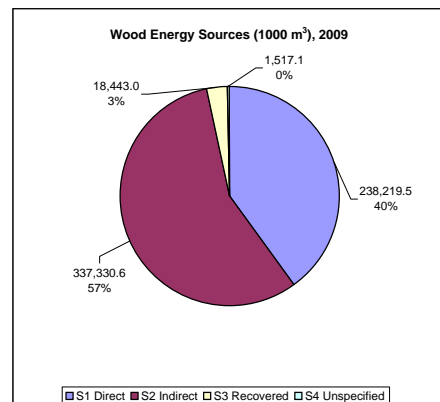
Average wood energy consumption (m ³ /capita)	0.75	0.81	0.39
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	0.92	0.97	0.00
Pellets consumption per inhabitant (kg/capita)	8.53	8.09	

Role of Wood Energy in Forest Sector

Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	0.21	0.13	0.12
Share of Total Roundwood and fuelwood supply directly used for energy purposes (%)	29.2%	15.3%	8.2%
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	0.53	0.43	0.33
Share of Total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	43.5%	27.1%	

Role of Wood Energy in Energy Sector

Share of woody biomass in TPES (%)	3.0%	2.9%	1.3%
Share of woody biomass in RES (%)	46.7%	47.2%	20.4%
Share of wood energy generated from black liquor (%)	15.5%	29.8%	
Imported wood fuel as share of wood energy (%)	2.2%	1.1%	

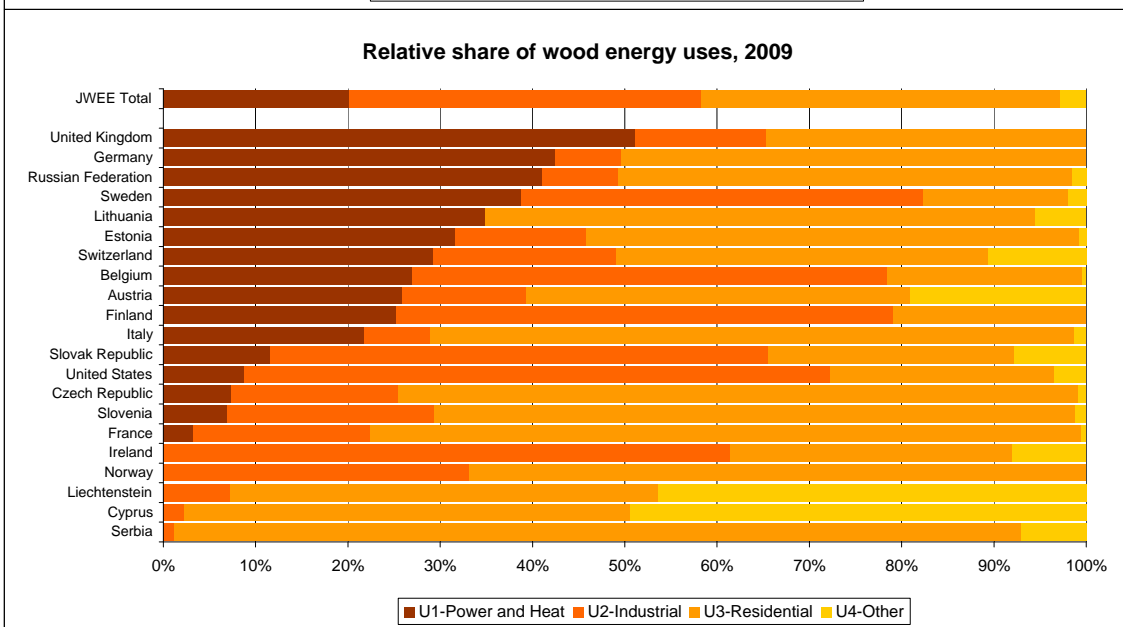
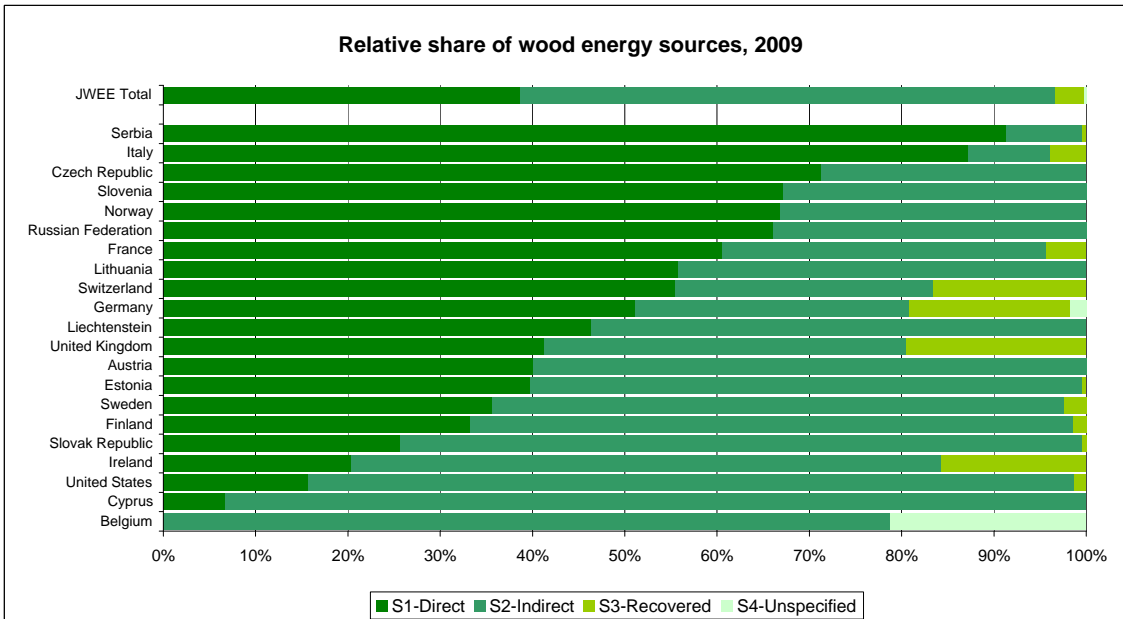


Wood Energy Sources and Uses in 2009 [1000 m ³]	U1 Power and Heat	U2 Industrial	U3 Residential	U4 Other	Sum (U1, U2, U3, U4)	%
S1 Direct	39,349.2	3,308.8	192,849.9	2,711.7	238,219.5	40.0%
S2 Indirect	65,427.9	223,692.7	34,257.5	13,952.4	337,330.6	56.6%
S3 Recovered	14,417.0	584.1	3,424.7	17.2	18,443.0	3.1%
S4 Unspecified	574.5	0.0	942.6	0.0	1,517.1	0.3%
Sum (S1,S2,S3,S4)	119,768.6	227,585.5	231,474.6	16,681.3		
%	20.1%	38.2%	38.9%	2.8%		
					595,510.1	

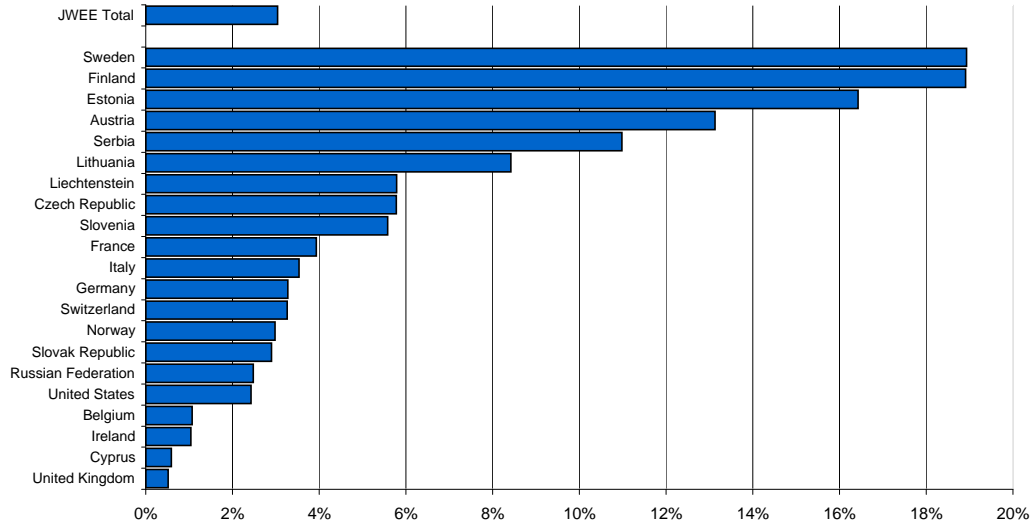
Note: Figures refer to totals for the set of responding countries providing sufficiently detailed data for respective reference year. See also "Responses" sheet (ratings A,B).

Disclaimer: Data comparisons between reference years are only indicative, due to changes in national and international statistical methodologies.

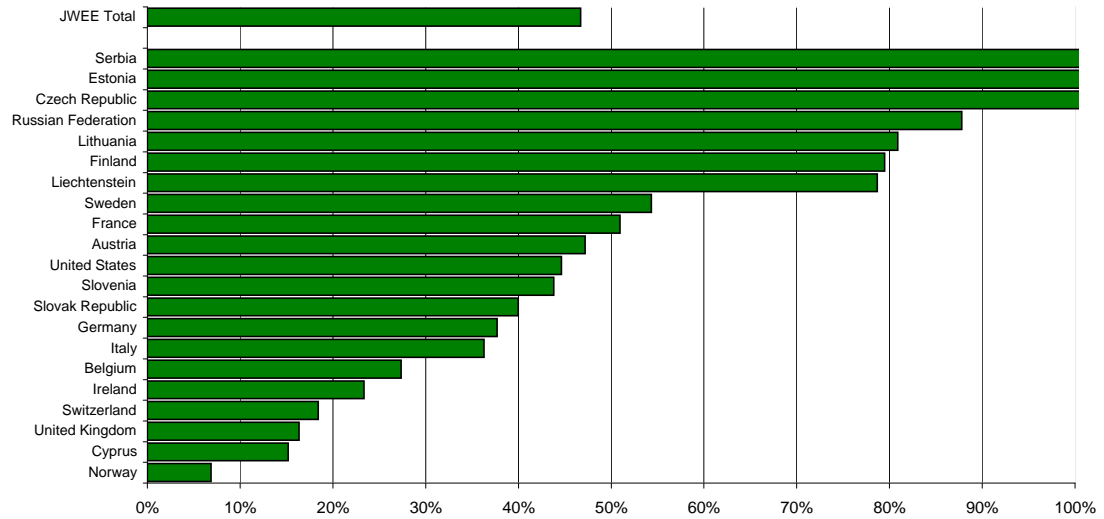
Indicators



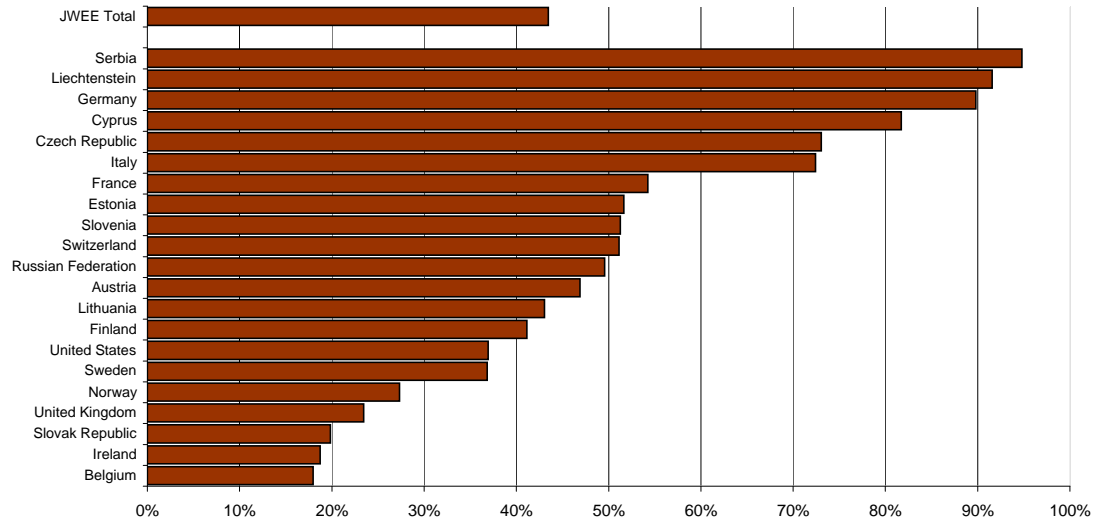
Share of woody biomass in TPES, 2009



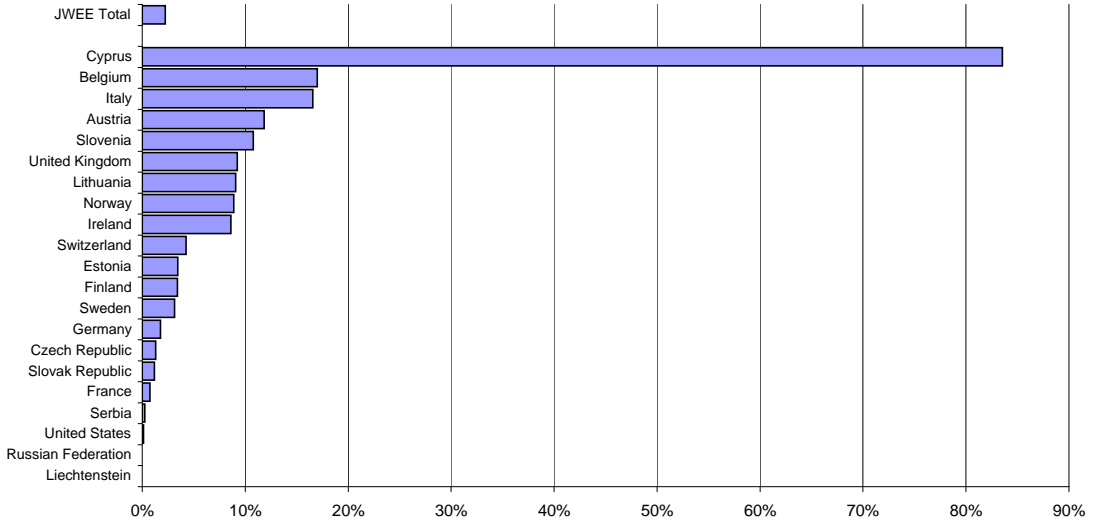
Share of woody biomass in RES, 2009



Share of total wood supply used for energy purposes, 2009



Share of imports in wood fuel supply, 2009



Responses

Country	2005	2007	2009	Correspondent (2009)
Albania	-	-	-	
Armenia	NC	NC	-	
Austria	A	A	A	Mr. Manfred Gollner
Azerbaijan	NC	-	-	
Belarus	-	-	I	Mr. Andrej Chemyshev
Belgium	-	-	A	Ms. Amelie Gillet, Ms. Marie Nowak
Bosnia and Herzegovina	-	-	I	Mr. Boro Kovacevic
Bulgaria	-	-	-	
Canada	A	B	I	Ms. Joanne Frappier
Croatia	-	-	-	
Cyprus	NC	A	A	Mr. Antonio Horattas
Czech Republic	A	-	A	Mr. Václav Stránský
Denmark	-	-	-	
Estonia	-	-	A	Mr. Mati Valgepea
Finland	A	A	A	Ms. Esa Ylitalo
France	A	A	A	Mr. Michel-Paul Morel
Georgia	-	-	-	
Germany	A	A	B	Mr. Holger Weimar
Greece	-	-	-	
Hungary	-	-	-	
Iceland	-	-	NC	Mr. Stefan Sigurdsson
Ireland	-	A	A	Mr. Eoin O'Driscoll
Israel	-	-	NC	Mr. Shimon Arieli
Italy	NC	-	B	Mr. Angelo Mariano
Kazakhstan	NC	NC	-	
Kyrgyzstan	NC	-	-	
Latvia	-	B	-	
Liechtenstein	-	B	A	Mr. Roland Jehle
Lithuania	A	A	A	Mr. Darius Vizlenskis
Luxembourg	-	-	-	
Malta	-	-	-	
Montenegro	-	-	-	
Netherlands	A	A	-	
Norway	A	NC	A	Mr. Trond Amund Steinset
Poland	-	NC	-	
Portugal	-	-	-	
Republic of Moldova	-	-	-	
Romania	-	-	-	
Russian Federation	-	B	A	Mr. Nikolay Burdin
Serbia	-	A	A	Mr. Branko Glavonjic
Slovak Republic	-	A	A	Mr. Milan Oravec
Slovenia	A	A	A	Ms. Katja Snuderl
Spain	-	-	-	
Sweden	A	A	A	Mr. Jan-Olof Loman
Switzerland	A	A	A	Mr. Thomas Bettler, Ms. Tatiana Pasi
Tajikistan	-	-	-	
The former Yugoslav Republic of Macedonia	NC	-	-	
Turkey	-	NC	C	Mr. Ramazan Bali
Turkmenistan	-	-	-	
Ukraine	NC	-	-	
United Kingdom	A	A	A	Ms. Sheila Ward
United States	A	A	A	Mr. Kenneth Skog
Uzbekistan	-	-	-	

Legend:

A: good dataset. Table IV filled in.

B: partial dataset. Table IV was not filled in. Only aggregated data on sources and uses of wood energy (sheet: Table S->U) was provided.

C: limited dataset. Only the total consumption of wood biomass for energy production for each year (sheet: Introduction) was provided.

I: insufficient data.

- : no response.

NC: no capacity

Note:

Andorra, Monaco and San Marino are not included in the JWEE process.

Sources & Definitions

Population	
Total Population	UN Statistical Division Database
Rural Population (% of total)	UN Department of Economic and Social Affairs, Population Division, 2010

Woody Biomass Supply	
Roundwood and Fuelwood removals from forest and outside forest (1000m ³)	Based on JWEE data (Table I). If not available, data from JFSQ.
Roundwood and Fuelwood supply from forest and outside forest including net trade (1000m ³)	Gross domestic supply of roundwood and fuelwood. Based on JWEE data (Table I). If not available, data from JFSQ.
Total domestic woody biomass supply (including cascaded use) (1000m ³)	Total gross domestic supply of all streams of woody biomass. Based on JWEE data (Tables I and II). Not available for 2005.

Energy Resources	
Total primary energy supply, TPES (ktoe)	International Energy Agency (IEA) data, 2009
Share of renewables (RES) in TPES	International Energy Agency (IEA) data, 2009
Total wood energy generation (1000m ³)	Based on JWEE data (Table IV).
Total wood energy generation (ktoe)	Total wood energy generation expressed in ktoe.

Wood Energy Intensity	
Average wood energy consumption (m ³ /capita)	Total wood energy per capita.
Fuelwood consumption per rural inhabitant (m ³ /inhabitant)	Indicator to assess role of "traditional" wood fuel. Based on fuelwood gross domestic supply, JWEE data (Table I). If not available, data from JFSQ.
Pellets consumption per inhabitant (kg/capita)	Indicator to assess role of "modern" wood fuel. Based on wood pellet gross domestic supply, JWEE data (Table II). Not available for 2005.

Role of Wood Energy in Forest Sector	
Direct mobilisation of woody biomass for energy production from forests and outside forests (m ³ /ha)	Indicates how much biomass is used directly (S1) . Based on JWEE data and "State of Europe's Forests 2005" data.
Share of Total Roundwood supply directly used for energy purposes (%)	Indicates how much of the total roundwood and fuelwood supply is mobilised directly (S1) for energy purposes. Based on JWEE data.
Total woody biomass used for energy per ha of Forest and Other Wooded Land (OWL) available for wood supply (m ³ /ha)	Based on JWEE data and "State of Europe's Forests 2005" data.
Share of total domestic woody biomass supply (including cascaded use) used for energy purposes (%)	Indicates share of the total gross domestic supply used for energy purposes compared to other uses. Based on JWEE data.

Role of Wood Energy in Energy Sector	
Share of woody biomass in TPES (%)	Indicates significance of wood energy in the energy sector.
Share of woody biomass in RES (%)	Indicates significance of wood energy compared to other renewable energy sources.
Share of wood energy generated from black liquor (%)	Indicates significance of the pulp & paper sector in the wood energy supply.
Imported wood fuel as share of wood energy (%)	Indicates share of imported solid and liquid processed wood based fuels.

Acronyms	
FAO: Food and Agriculture Organization of the United Nations	
FAWS: Forest available for wood supply	
ha: hectares	
IEA: International Energy Agency	
JFSQ: Joint Forest Sector Questionnaire	
JWEE: Joint Wood Energy Enquiry	
ktoe: kilotonnes of oil equivalent	
m ³ : cubic meters	
OWL: Other wooded land	
RES: Renewable Energy Sources	
TPES: Total Primary Energy Supply	
UNECE: United Nations Economic Commission for Europe	

S1 Direct

Any wood fibre entering energy production without any further treatment or conversion. It comprises removals from forests and outside. This comprises also any wood defined by the FAO as coming from "Other Wooded Land" (OWL) and "Trees Outside Forests", but is wider than these two definitions. It comprises any woody biomass from any land use and covers amongst others infrastructure maintenance (roads, railway, power transmission lines, pipelines, etc.), hedgerows, agricultural residues from fruit tree orchards, wood from gardens and parks, etc. It comprises any form of woody biomass, such as green chips, roundwood or split, stacked or loose from any part of the trees such as roots, stemwood and branches, fruits and shells.

S2 Indirect

Processed and unprocessed co-products (residues) from the wood processing industries are considered as indirect supply. These co-products can be solid (sawdust, chips, slabs, etc.) or liquid from the pulp industry (black liquor or tall oil). Processed wood fuels with improved energy content per bulk volume (compressed), such as wood pellets, briquettes but also wood charcoal are also included under indirect supply.

S3 Recovered

The so-called post consumer recovered wood comprises any waste wood fibre after at least one life cycle. It comprises wood from construction, renovation and demolition, but also packaging as well as old furniture. Countries often apply different classifications to distinguish between different wood waste categories (contaminated with colours, glue, etc.).

S4 Unspecified

Many countries know something about the amount of wood used but not its source. These households' surveys are often conducted by the energy statistics and are hence not interested in detecting the different sources and origin of the wood fibres. This category represents a further step in making the JWEE more compatible with the energy statistics.

U1 Power & Heat

The definition of U1 refers to "Main Activity Plants" (IEA definition), which refers to plants which are designed to produce electricity/combined heat and power (CHP) or Heat only. If one or more units of the plant is a CHP unit (and the inputs and outputs can not be distinguished on a unit basis) then the whole plant is designated as a CHP plant. However a sawmill, for example, which produces heat for itself as well as selling it outside, would fall under the next (U2) category. Main activity supply undertakings generate electricity and/or heat for sale to third parties, as their primary activity. They may be privately or publicly owned. Note that the sale need not take place through the main activity grid.

U2 Industrial

This refers to "auto producer" (IEA definition) undertakings that generate electricity and/or heat, wholly or partly for their own use as an activity which supports their primary activity. They may be privately or publicly owned. It includes mainly the forest based industries, namely the (chemical) pulp producers who sell some of their energy to third parties (real or virtual sales are considered). Ideally the data should also include the process heat that is used for the production of the good at the specific plant.

U3 Residential

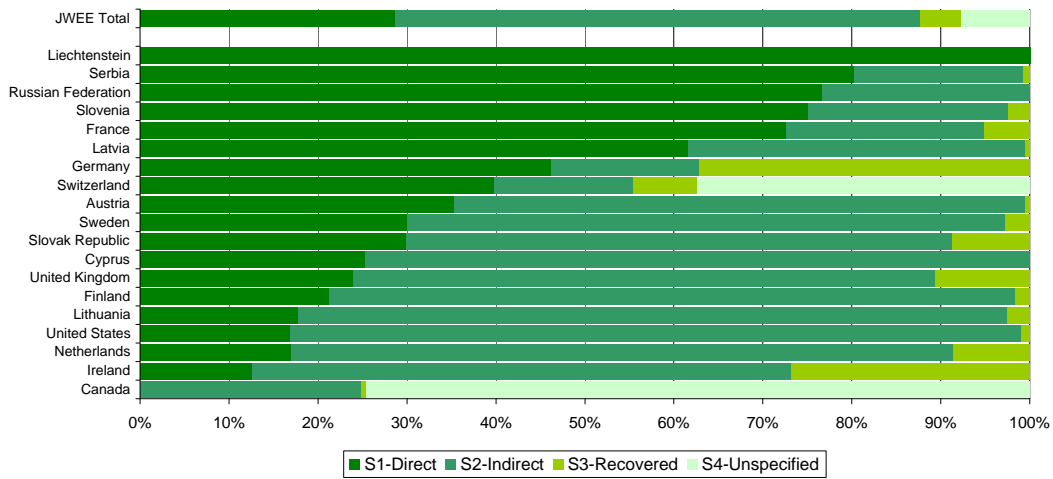
In the first version of the JWEE this user group was referred to as "Private households". For consistency reasons with energy statistics it was renamed to "Residential". It is referred to by the IEA as all consumption by households, excluding fuels used for transport. It includes households with employed persons (ISIC Division 95) which is a small part of total residential consumption.

U4 Other

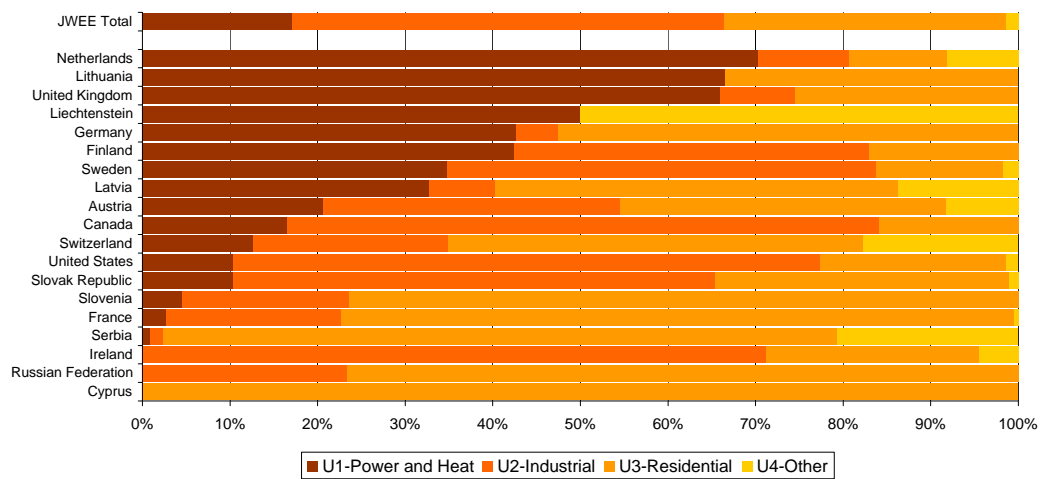
This definition comprises any other economic sector that is not included in the above mentioned (e.g. agriculture, forestry and fishing, commercial and public services and transport).

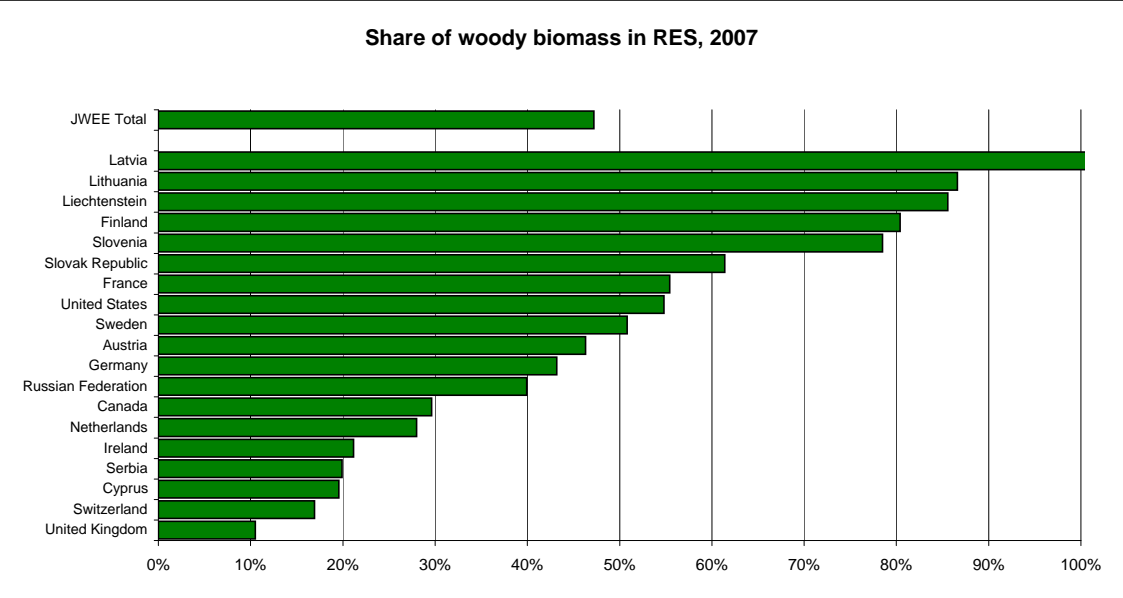
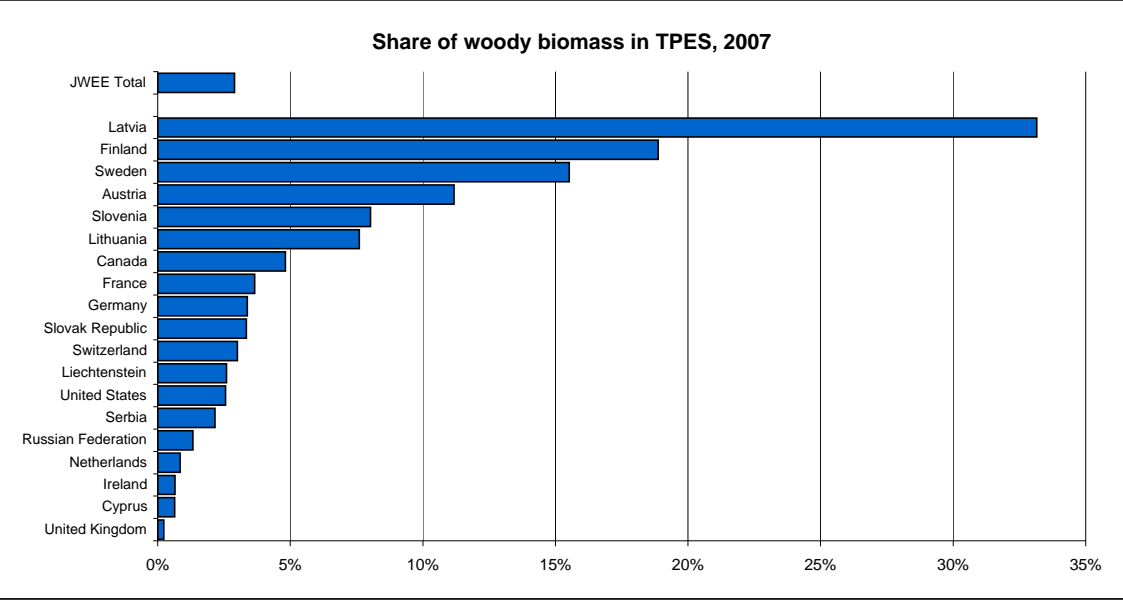
Historical Indicators

Relative share of wood energy sources, 2007

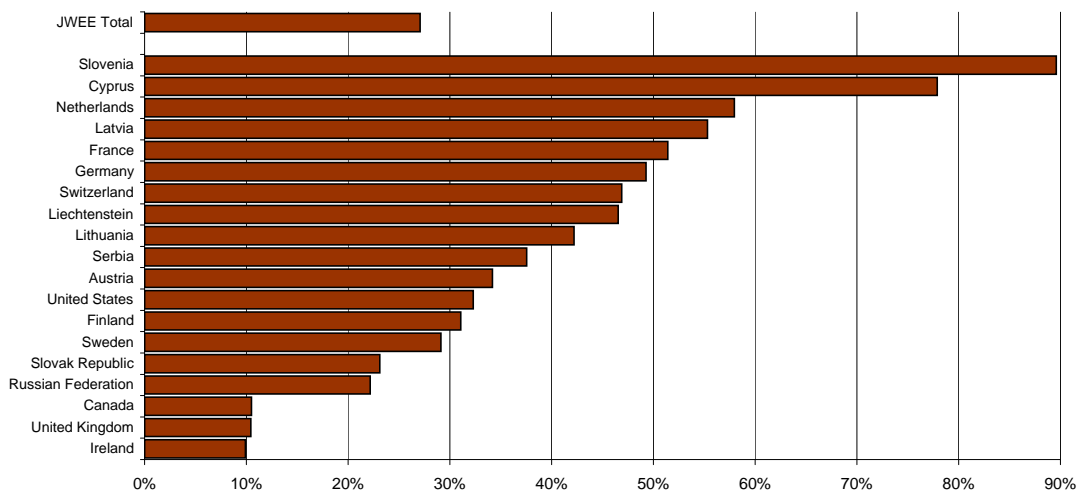


Relative share of wood energy uses, 2007

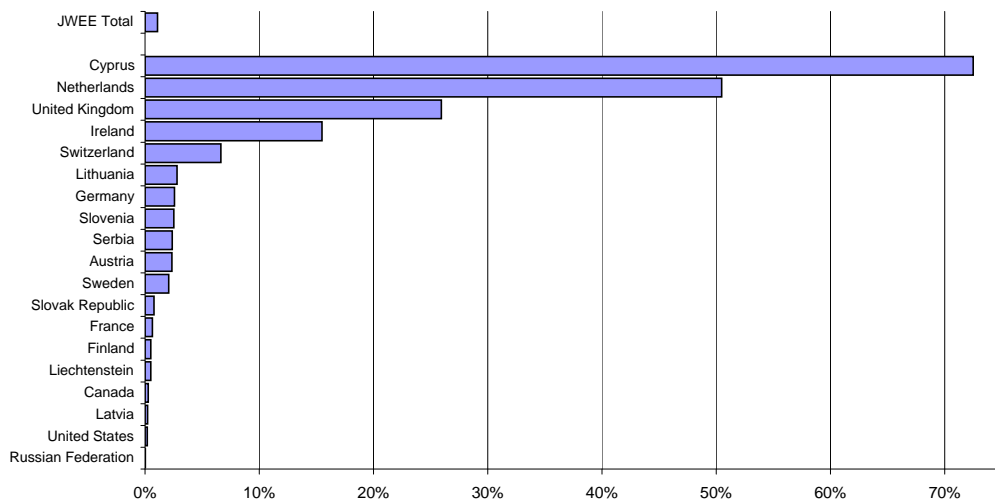




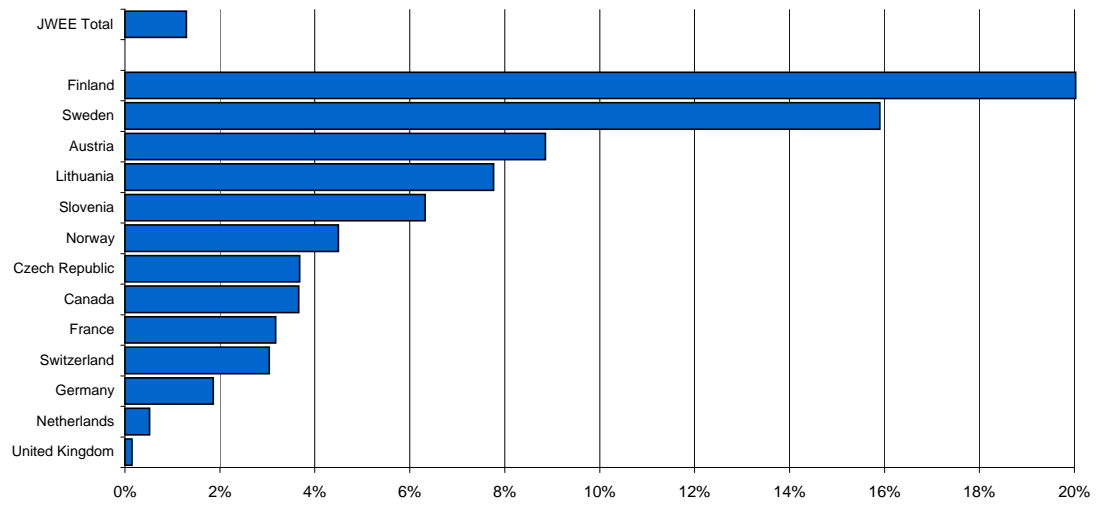
Share of total wood supply used for energy purposes, 2007



Share of imports in wood fuel supply, 2007



Share of woody biomass in TPES, 2005



Share of woody biomass in RES, 2005

