European Commission

CAP CONTEXT INDICATORS 2014-2020

43. PRODUCTION OF RENEWABLE ENERGY FROM AGRICULTURE AND FORESTRY

2017 update

Agriculture and Rural Development

CONTEXT INDICATOR 43: PRODUCTION OF RENEWABLE ENERGY FROM AGRICULTURE AND FORESTRY

Production of renewable energy from agriculture and forestry increased by 3.9% between 2013 and 2015.

In 2015, European production of renewable energy from agriculture and forestry increased by 3.9% compared to 2013.[1] This increase is mainly due to the positive change in the agricultural sector (+15.2), while the production of renewable energy from forestry grew only by 1.2%. Similarly, the average annual change for the period 2010-2015 is higher in the agricultural sector than in forestry.

Agriculture is still less important than forestry as a source of renewable energy

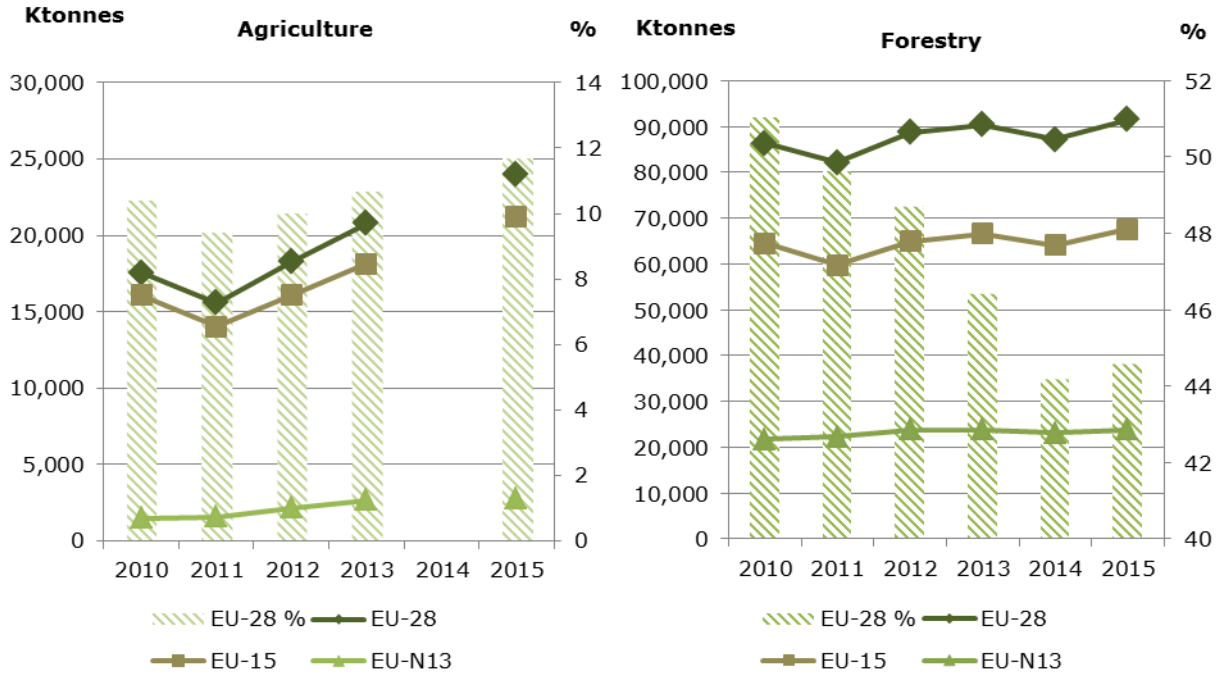
EU agriculture and forestry play an important role in supplying renewable energy, with a much higher contribution from forestry (91 million tonnes of oil equivalent or 44.6% of the total) than from agriculture (25 million tonnes of oil equivalent or 12.3% of the total) in 2013. Whilst the share of forestry in the total production of renewable energy showed a downward trend, the share of agriculture grew by 1.3 percentage points between 2010 and 2015.

The EU-15 account for 87.4% of total renewable energy from agriculture and 76% from forestry

The production of renewable energy differs considerably between the EU-15 and the EU-N13. The EU-15 accounted for 88.3% of renewable energy produced in the agricultural sector of the EU-28, whilst the production in the EU-N13 represented only 11.7%. Similarly, in the forestry sector the production of renewable energy in the EU-15 and in the EU-N13 represented 73.9% and 26.1% respectively, of the total production in the EU-28.

[1] Not enough data is available for 2014 to compare.

Graph 1 - Production of renewable energy from agriculture and forestry and as a share of the total production of renewable energy, 2010-2015



Note: Renewable energy in agriculture in 2014 not calculated due to the lack of data on biogas.

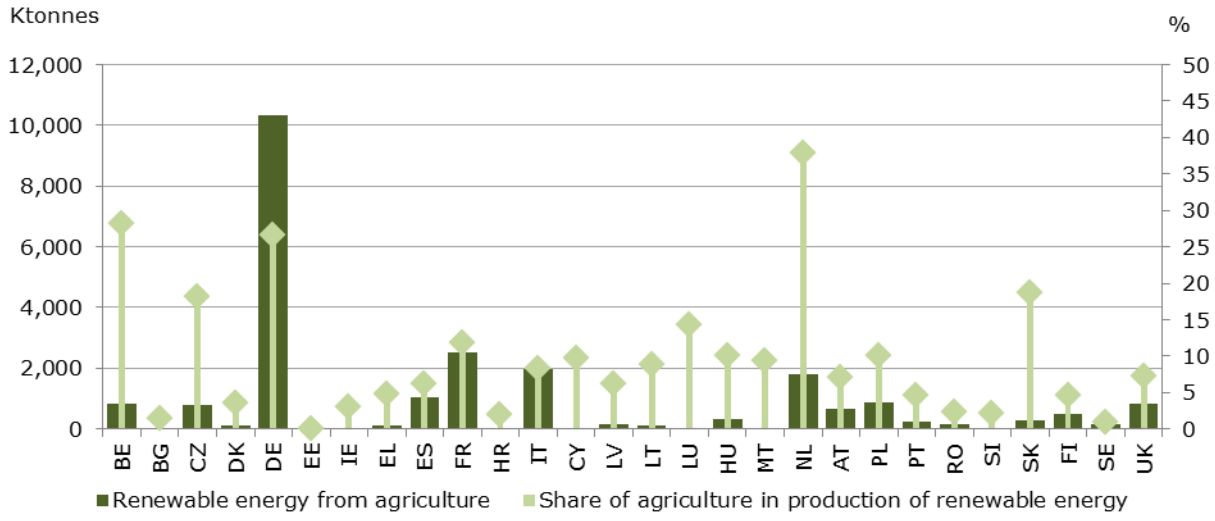
Furthermore, in the EU-15 the share of agriculture in the total production of renewable energy is higher (12.4%) than in the EU-N13 (8.1%). On the other hand, the weight of forestry in the total production of renewable energy is greater in the EU-N13 (69.8%) than in the EU-15 (39.6%).

Germany contributes 42.2% of the European production of renewable energy from agriculture.

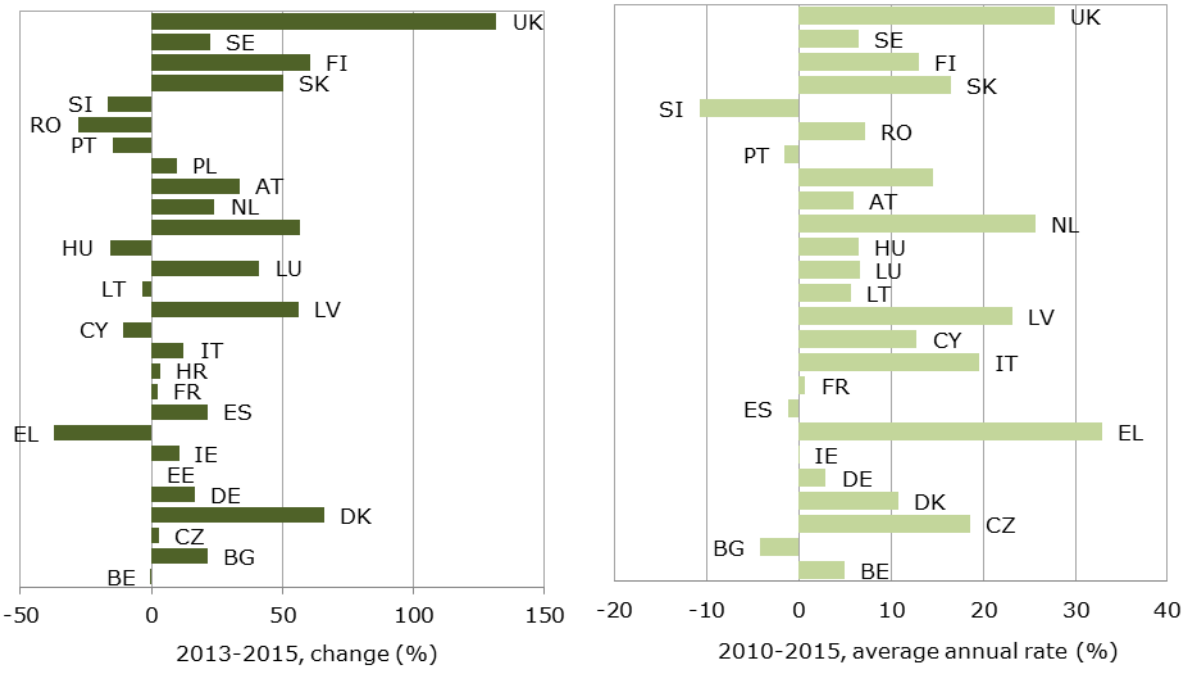
In the agricultural sector in particular, the production of renewable energy is very unevenly distributed among countries. Almost 70% of the total production in the EU-28 comes from four countries: Germany (42.2%), followed by France (10.9%), Italy (8.0%) and the Netherlands (7.9%). The remaining Member States produce much smaller amount s.

When looking at the importance of the agricultural sector in the production of total renewable energy, the following Member States take the lead: the Netherlands (37.8%), Belgium (28.2%) and Germany (26.6%).

Graph 2 – Production of renewable energy from agriculture at Member State level, 2015



Graph 3 - Change in production of renewable energy from agriculture at Member State level

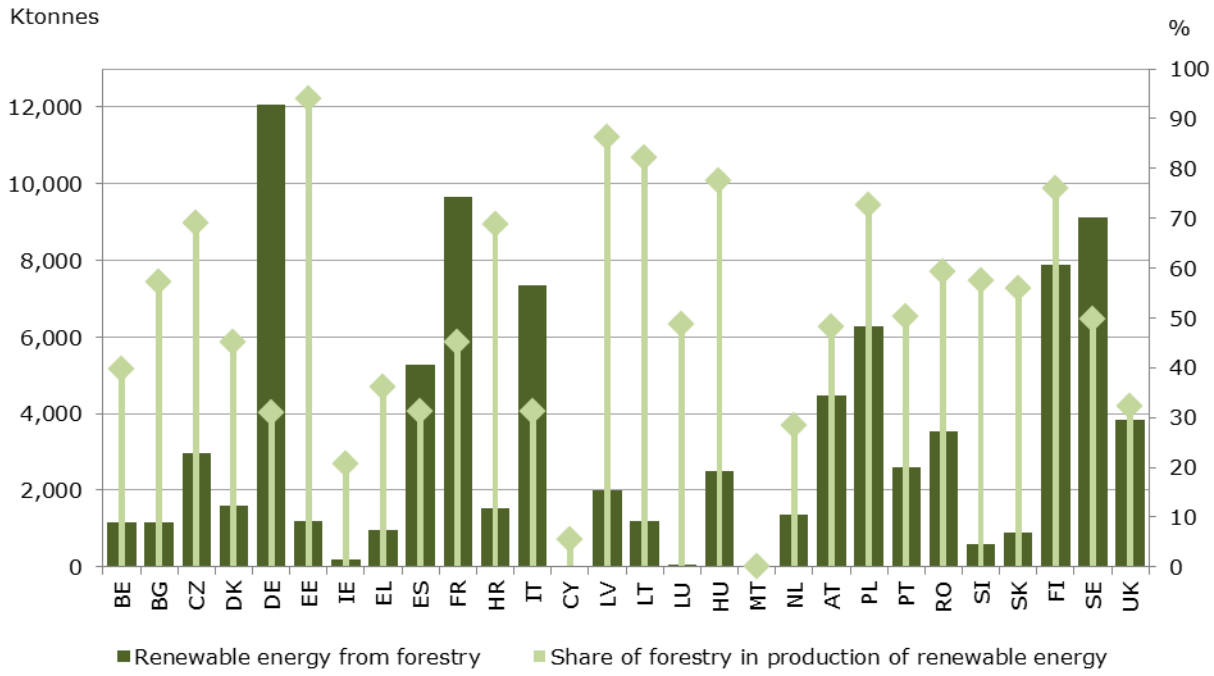


Note: Countries for which data is missing are not shown on graphs.

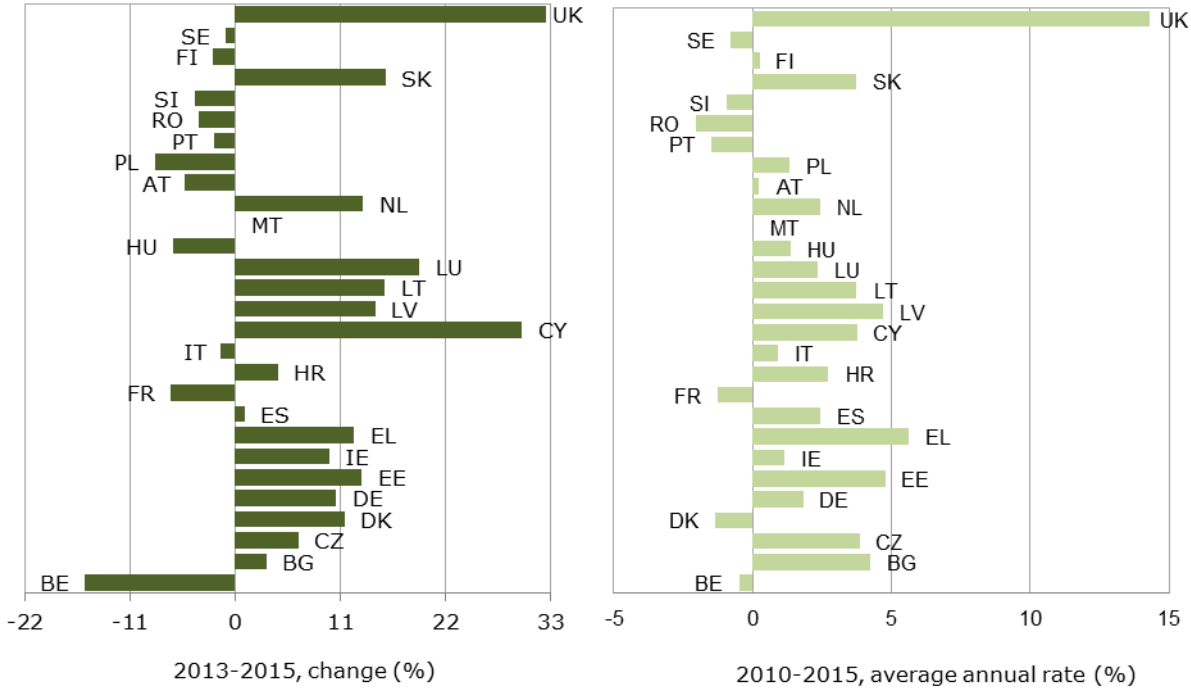
Forestry is especially important is the main source of renewable energy for Estonia, Latvia and Lithuania.

In the forestry sector in 2015, there were three Member States which contributed more than 10% to the total production of renewable energy in the EU-28: Germany (13.2%), France (10.6%) and Sweden (10.0%). Forestry remains the main source of renewable energy for many countries, especially for the Baltic States (over 80%), Hungary (77.5%), Finland (76%) and Poland (72.6%).

Graph 4 – Production of renewable energy from forestry at Member State level, 2015



Graph 5 - Change in production of renewable energy from forestry at Member State level



Agriculture and forestry only contribute a minor share to total energy production

As regards the importance of renewable energy production from agriculture and forestry in total energy production, this is generally quite limited, with only 11 Member States generating more than 20% of their energy from these sources.

Graph 6 - Production of renewable energy from agriculture and forestry as a share of total primary energy production by MS, 2015

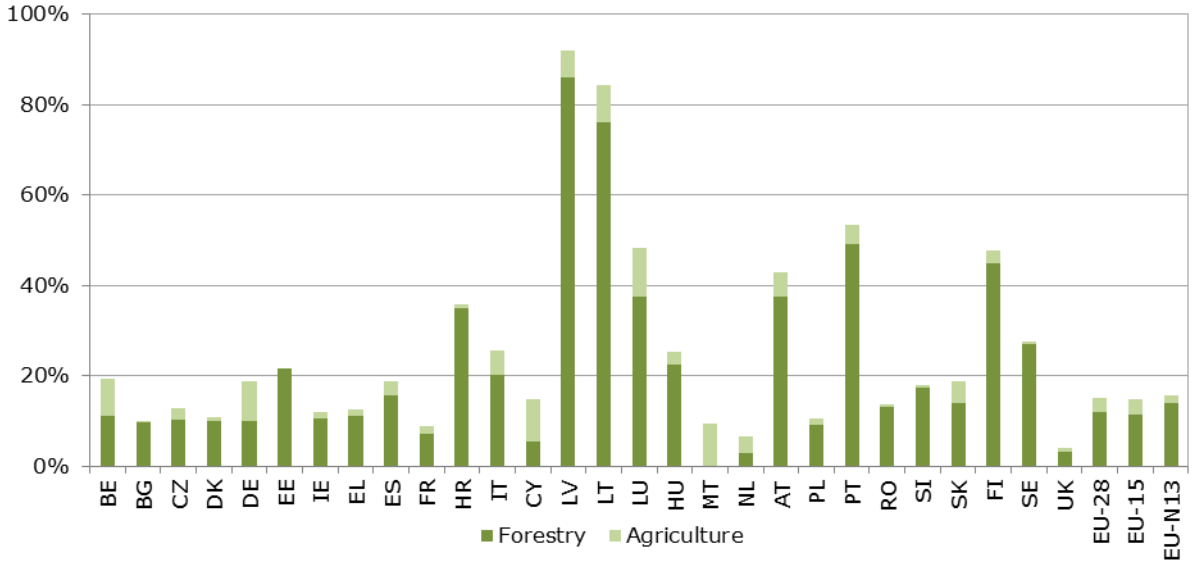


Table 1 - Production of renewable energy from agriculture

Indicator	C. 43 - Climate change: production of renewable energy from agriculture and forestry			Change in production of renewable energy from agriculture	
Sub-indicator	Production of renewable energy from agriculture				
Measurement	Production of renewable energy from agriculture	Share of agriculture in production of renewable energy		Change in the production of renewable energy from agriculture	
Source	DG Agriculture estimates on data from EurObserER, EBB & Strategie Grains			EurObserER, EBB & Strategie Grains	
Year	2015			2013-2015	2010-2015
Unit	1000 tonnes of oil equivalent	%		%	Average annual growth rate (%)
Country					
Belgium	833	28.2		0.0	5.0
Bulgaria	31	1.5		21.5	-4.2
Czech Republic	774	18.1		2.7	18.6
Denmark	129	3.6		66.1	10.8
Germany	10,329	26.6		16.6	2.9
Estonia	0	0.0		0.0	n.a.
Ireland	29	3.0		10.7	0.1
Greece	125	4.7		-37.3	32.9
Spain	1,053	6.2		21.6	-1.1
France	2,537	11.8		2.3	0.7
Croatia	43	1.9		3.4	n.a.
Italy	1,959	8.3		12.4	19.5
Cyprus	12	9.7		-10.7	12.8
Latvia	145	6.2		56.3	23.2
Lithuania	130	8.9		-3.5	5.6
Luxembourg	16	14.2		41.2	6.6
Hungary	325	10.0		-15.7	6.5
Malta	1	9.3		56.6	n.a.
Netherlands	1,817	37.8		24.0	25.6
Austria	658	7.1		33.7	5.9
Poland	863	10.0		9.6	14.6
Portugal	237	4.6		-14.9	-1.6
Romania	140	2.4		-27.8	7.1
Slovenia	22	2.2		-16.4	-10.8
Slovakia	297	18.7		50.5	16.5
Finland	488	4.7		60.9	13.1
Sweden	163	0.9		22.6	6.5
United Kingdom	850	7.2		131.8	27.7
EU-28	24,006	11.7		15.5	6.5
EU-15	21,224	12.4		17.1	5.7
EU-N13	2,783	8.1		4.9	13.5

Note: Before 2012, no data had been available on biodiesel and biogas in HR. When no data available, EU aggregates are calculated without it. "N.a." in the average growth rate column means that some data is missing.

Table 2 - Production of renewable energy from forestry

Indicator	C.43 - Climate change: production of renewable energy from agriculture and forestry		Change in production of renewable energy from forestry	
Sub-indicator	Production of renewable energy from forestry			
Measurement	Production of renewable energy from forestry	Share of forestry in production of renewable energy	Change in the production of renewable energy from forestry	
Source	Eurostat, Energy Statistics		Eurostat, Energy Statistics	
Year	2015		2013-2015	2010-2015
Unit	1000 tonnes of oil equivalent (wood and wood wastes)	%	%	Average annual growth rate (%)
Country				
Belgium	1,171	39.6	-15.6	-0.5
Bulgaria	1,160	57.1	3.4	4.2
Czech Republic	2,954	69.0	6.7	3.9
Denmark	1,590	45.1	11.5	-1.4
Germany	12,062	31.0	10.6	1.8
Estonia	1,209	94.0	13.3	4.8
Ireland	202	20.5	9.9	1.2
Greece	952	36.1	12.5	5.6
Spain	5,260	31.2	1.1	2.4
France	9,661	45.1	-6.7	-1.2
Croatia	1,532	68.8	4.6	2.7
Italy	7,340	31.2	-1.4	0.9
Cyprus	7	5.5	30.0	3.8
Latvia	2,009	86.2	14.7	4.7
Lithuania	1,205	82.2	15.7	3.7
Luxembourg	55	48.7	19.3	2.3
Hungary	2,511	77.5	-6.4	1.4
Malta	0	0.0	0.0	0.0
Netherlands	1,364	28.3	13.5	2.4
Austria	4,474	48.1	-5.2	0.2
Poland	6,268	72.6	-8.3	1.3
Portugal	2,603	50.2	-2.2	-1.5
Romania	3,521	59.3	-3.7	-2.0
Slovenia	590	57.5	-4.2	-0.9
Slovakia	890	55.9	15.8	3.7
Finland	7,901	76.0	-2.2	0.3
Sweden	9,129	49.7	-0.9	-0.8
United Kingdom	3,824	32.3	32.6	14.3
EU-28	91,443	44.6	1.2	1.2
EU-15	67,587	39.6	1.5	0.9
EU-N13	23,856	69.8	0.3	1.9

Context indicator	**43 – Production of renewable energy from agriculture and forestry**
Comments on methodology and data	Data on bioethanol provided in Stratégie grains: No data available for EE, EL, HR, CY, LU, MT, PT, SI. Data on biodiesel provided by the European Biodiesel Board: DK and SE figures aggregated by the source and therefore were not included. Data on biogas provided by EurObserv'ER: Production estimates taken from different issues of Biogas Barometer. The figures include data for municipal solid waste methanisation plants. Consequently, they overestimate the production of biogas from agriculture.