

**Production of biofuels and wastes**

Terajoules

**Table Notes**

The conversion of fuelwood (solid volume, 9.135 TJ/m<sup>3</sup>) is based on an average 20-30% moisture content of wood from an unspecified species.

The methodology used for estimating fuel bagasse production for certain countries is derived from the work done by the Economic Commission for Latin America and the Caribbean (ECLAC). Although several different methodologies have been devised, the one selected assumes a yield of 3.26 tons of fuel bagasse at 50% humidity per ton of cane sugar produced. This methodology was used for instances where bagasse production data were derived from

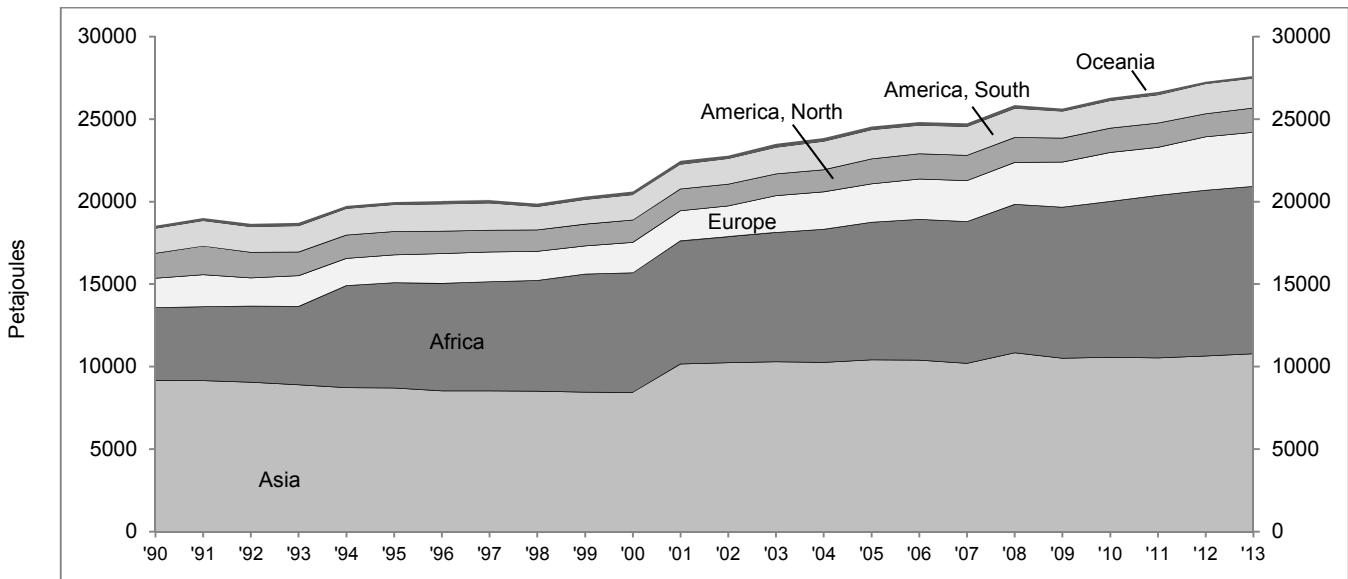
sugar production figures extracted from the Sugar Yearbook of the International Sugar Organization (London).

Biogasoline includes Other liquid biofuels.

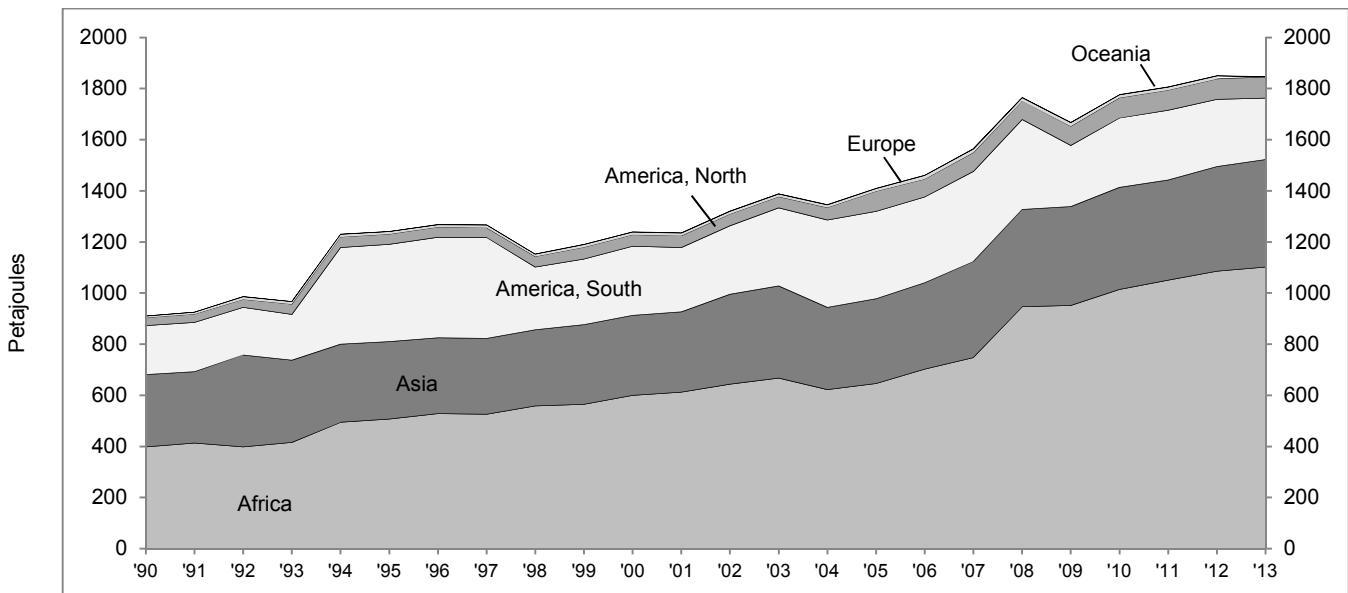
The total column excludes charcoal as it is the only secondary energy product in the table.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/classification.

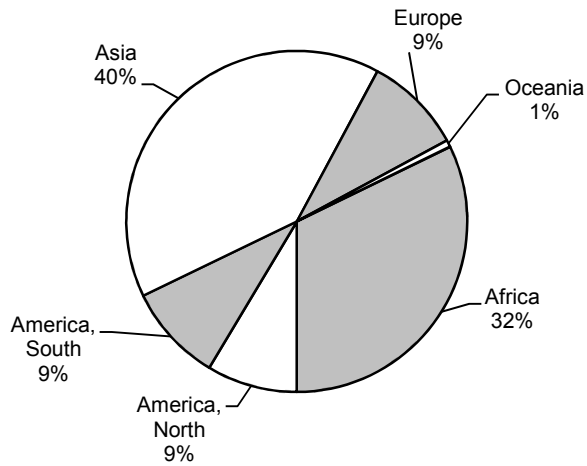
**Figure 29: Fuelwood production by region, 1990-2013**



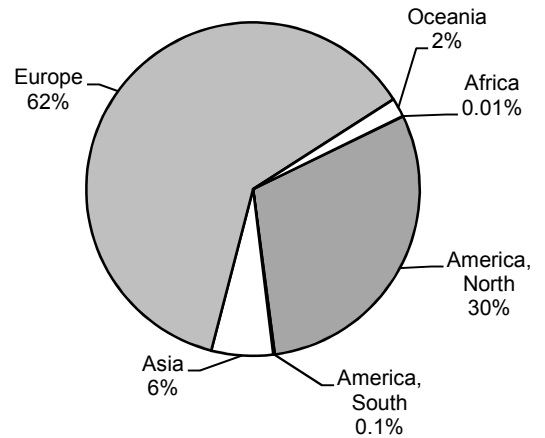
**Figure 30: Charcoal production by region, 1990-2013**



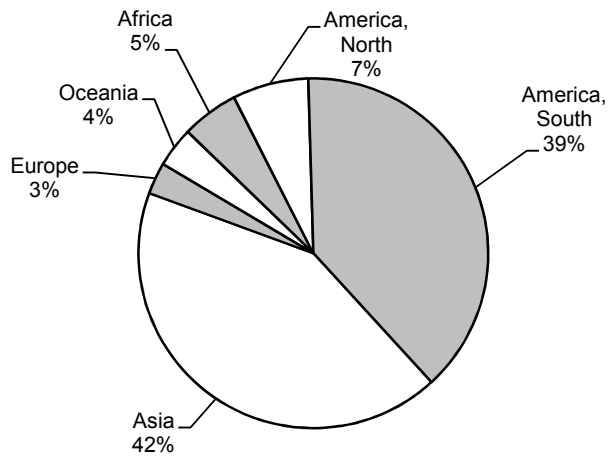
**Figure 31: Total solid biofuels production by region, 2013**



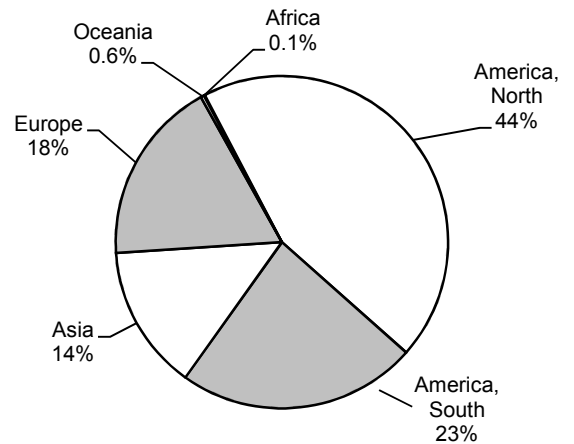
**Figure 32: Biogases production by region, 2013**



**Figure 33: Bagasse production by region, 2013**



**Figure 34: Liquids biofuels production by region, 2013**



**Figure 35: Energy production from wastes by region, 2013**

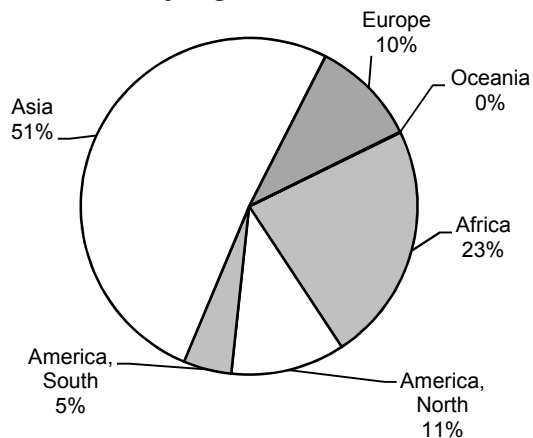


Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
World	2010	26,284,251	634,533	9,193,759	3,072,383	1,636,483	1,776,220
	2011	26,639,457	637,802	9,405,355	3,360,952	1,611,197	1,806,925
	2012	27,268,541	599,109	9,479,627	3,592,684	1,528,372	1,850,291
	2013	27,602,013	663,578	9,787,786	3,766,855	1,698,472	1,858,628
Africa	2010	9,442,540	139,754	2,823,705	194,104	..	1,013,739
	2011	9,842,420	143,324	2,893,660	202,869	..	1,050,384
	2012	10,038,479	146,794	2,964,384	190,549	..	1,085,922
	2013	10,132,401	150,460	3,047,306	198,985	..	1,101,987
Algeria	2010	2,169	..	..	..	..	..
	2011	674	..	..	..	..	..
	2012	652	..	..	..	..	..
	2013	918	..	..	..	..	..
Angola	2010	199,770	..	129,849	..	..	34,899
	2011	206,218	..	134,040	..	..	36,020
	2012	212,768	..	138,298	..	..	37,170
	2013	219,421	..	142,622	..	..	38,321
Benin	2010	85,673	..	375	252	..	7,228
	2011	88,105	..	386	252	..	7,434
	2012	90,546	..	397	252	..	7,641
	2013	92,996	..	408	252	..	7,847
Botswana	2010	6,242	..	..	..	..	2,129
	2011	6,270	..	..	..	..	2,146
	2012	6,299	..	..	..	..	2,164
	2013	6,328	..	..	..	..	2,181
Burkina Faso	2010	116,791	..	..	934	..	17,296
	2011	118,417	..	..	934	..	17,777
	2012	120,080	..	..	934	..	18,275
	2013	121,779	..	..	1,035	..	18,786
Burundi	2010	84,581	..	..	477	..	1,770
	2011	85,842	..	..	521	..	1,770
	2012	52,462	..	..	583	..	1,770
	2013	52,462	..	..	650	..	1,770
Cabo Verde	2010	924	..	..	..	..	19
	2011	946	..	..	..	..	21
	2012	969	..	..	..	..	24
	2013	992	..	..	..	..	26
Cameroon	2010	179,451	..	6,031	..	..	6,313
	2011	183,993	..	6,187	..	..	6,461
	2012	188,724	..	6,347	..	..	6,638
	2013	193,542	..	6,511	..	..	6,785
Central African Rep.	2010	18,270	..	..	..	..	5,671
	2011	18,270	..	..	..	..	5,774
	2012	18,270	..	..	..	..	5,880
	2013	18,270	..	..	..	..	5,988
Chad	2010	64,584	..	..	948	..	11,874
	2011	65,626	..	..	812	..	12,181
	2012	66,686	..	..	806	..	12,493
	2013	67,769	..	..	770	..	12,812
Comoros	2010	2,429	..	..	..	..	1,171
	2011	2,491	..	..	..	..	1,204
	2012	2,556	..	..	..	..	1,236
	2013	2,621	..	..	..	..	1,271
Congo	2010	25,427	..	12,714	..	..	5,369
	2011	37,561	..	18,780	..	..	6,166
	2012	39,381	..	19,691	..	..	5,664
	2013	40,389	..	20,195	..	..	5,812

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
763,091	2,307,805	1,835,838	543,219	628,446	46,899,809
840,124	2,436,375	1,781,196	2,421,927	738,452	49,872,838
858,113	2,562,923	1,773,414	874,046	852,513	49,389,343
844,429	2,726,914	1,924,079	1,007,129	923,147	50,944,401
20,850	..	2,975	..	80	12,624,008
20,850	..	2,975	..	80	13,106,177
20,850	..	3,028	..	121	13,364,207
20,850	..	3,109	..	365	13,553,476
..	..	..	..	..	2,169
..	..	..	..	..	674
..	..	..	..	..	652
..	..	..	..	..	918
..	..	..	..	..	329,619
..	..	..	..	..	340,258
..	..	..	..	..	351,066
..	..	..	..	..	362,043
..	..	..	..	..	86,300
..	..	..	..	..	88,743
..	..	..	..	..	91,195
..	..	..	..	..	93,656
..	..	..	..	..	6,242
..	..	..	..	..	6,270
..	..	..	..	..	6,299
..	..	..	..	..	6,328
..	..	..	..	..	117,725
..	..	..	..	..	119,351
..	..	..	..	..	121,014
..	..	..	..	..	122,813
..	..	..	..	..	85,058
..	..	..	..	..	86,362
..	..	..	..	..	53,046
..	..	..	..	..	53,112
..	..	..	..	..	924
..	..	..	..	..	946
..	..	..	..	..	969
..	..	..	..	..	992
..	..	..	..	..	185,482
..	..	..	..	..	190,180
..	..	..	..	..	195,071
..	..	..	..	..	200,053
..	..	..	..	..	18,270
..	..	..	..	..	18,270
..	..	..	..	..	18,270
..	..	..	..	..	18,270
..	..	..	..	..	65,533
..	..	..	..	..	66,437
..	..	..	..	..	67,491
..	..	..	..	..	68,539
..	..	..	..	..	2,429
..	..	..	..	..	2,491
..	..	..	..	..	2,556
..	..	..	..	..	2,621
..	..	..	..	..	38,141
..	..	..	..	..	56,341
..	..	..	..	..	59,072
..	..	..	..	..	60,584

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Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Côte d'Ivoire	2010	320,643	..	1,487	..	..	31,300
	2011	380,476	..	1,364	..	..	37,554
	2012	392,717	..	1,412	..	..	38,911
	2013	402,199	..	1,446	..	..	39,855
Dem. Rep. of the Congo	2010	764,232	..	15,404	..	..	21,476
	2011	806,022	..	15,835	..	..	22,214
	2012	780,461	..	16,274	..	..	23,010
	2013	801,949	..	16,722	..	..	23,630
Djibouti	2010	3,252	..	..	..	..	1,413
	2011	3,303	..	..	..	..	1,437
	2012	3,355	..	..	..	..	1,460
	2013	3,408	..	..	..	..	1,484
Egypt	2010	159,967	..	32,961	24,523	..	40,112
	2011	160,370	..	33,517	25,429	..	40,480
	2012	160,781	..	34,078	25,429	..	40,849
	2013	161,199	..	34,641	23,286	..	41,223
Equatorial Guinea	2010	4,083	..	..	..	..	266
	2011	4,083	..	..	..	..	266
	2012	4,083	..	..	..	..	280
	2013	4,083	..	..	..	..	289
Eritrea	2010	20,542	2,413	1,366	..	..	3,983
	2011	21,229	2,495	1,412	..	..	4,130
	2012	21,937	2,579	1,459	..	..	4,278
	2013	22,660	2,663	1,507	..	..	4,425
Ethiopia	2010	925,141	131,419	128,816	7,398	..	110,162
	2011	937,337	134,928	132,256	8,108	..	112,885
	2012	949,733	138,376	135,636	6,950	..	115,678
	2013	962,335	141,839	139,031	9,267	..	118,540
Gabon	2010	46,395	..	2,810	..	..	596
	2011	47,528	..	2,879	..	..	608
	2012	48,691	..	2,949	..	..	620
	2013	49,854	..	3,019	..	..	631
Gambia	2010	6,340	..	..	..	..	1,741
	2011	6,422	..	..	..	..	1,779
	2012	6,513	..	..	..	..	1,817
	2013	6,595	..	..	..	..	1,856
Ghana	2010	114,467	..	..	..	..	31,645
	2011	127,881	..	..	..	..	36,391
	2012	143,472	..	..	..	..	41,790
	2013	98,381	..	..	..	..	46,218
Guinea	2010	109,245	..	..	629	..	10,277
	2011	109,713	..	..	629	..	10,502
	2012	110,196	..	..	629	..	10,733
	2013	110,689	..	..	629	..	10,969
Guinea-Bissau	2010	23,751	..	..	..	..	1,890
	2011	24,092	..	..	..	..	1,935
	2012	24,438	..	..	..	..	1,981
	2013	24,788	..	..	..	..	2,027
Kenya	2010	*534,123	..	38,035	14,487	..	173,770
	2011	*555,572	..	27,622	14,765	..	178,283
	2012	*578,693	..	28,378	14,057	..	183,699
	2013	*600,973	..	22,353	15,057	..	188,664
Lesotho	2010	19,109	..	..	..	..	2,850
	2011	19,181	..	..	..	..	2,903
	2012	19,253	..	..	..	..	2,956
	2013	19,326	..	..	..	..	3,009

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Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	322,130
..	..	..	..	..	381,840
..	..	..	..	..	394,129
..	..	..	..	..	403,645
..	..	..	..	..	779,636
..	..	..	..	..	821,857
..	..	..	..	..	796,735
..	..	..	..	..	818,671
..	..	..	..	..	3,252
..	..	..	..	..	3,303
..	..	..	..	..	3,355
..	..	..	..	..	3,408
..	..	..	..	..	217,451
..	..	..	..	..	219,316
..	..	..	..	..	220,288
..	..	..	..	..	219,126
..	..	..	..	..	4,083
..	..	..	..	..	4,083
..	..	..	..	..	4,083
..	..	..	..	..	4,083
..	..	..	..	..	24,321
..	..	..	..	..	25,136
..	..	..	..	..	25,975
..	..	..	..	..	26,830
..	..	161	..	..	1,192,934
..	..	161	..	..	1,212,790
..	..	134	..	..	1,230,829
..	..	161	..	..	1,252,632
..	..	..	..	..	49,205
..	..	..	..	..	50,407
..	..	..	..	..	51,640
..	..	..	..	..	52,873
..	..	..	..	..	6,340
..	..	..	..	..	6,422
..	..	..	..	..	6,513
..	..	..	..	..	6,595
..	..	..	..	..	114,467
..	..	..	..	..	127,881
..	..	..	..	..	143,472
..	..	..	..	..	98,381
..	..	..	..	..	109,874
..	..	..	..	..	110,343
..	..	..	..	..	110,825
..	..	..	..	..	111,318
..	..	..	..	..	23,751
..	..	..	..	..	24,092
..	..	..	..	..	24,438
..	..	..	..	..	24,788
..	..	..	..	..	*586,646
..	..	..	..	..	*597,959
..	..	..	..	..	*621,128
..	..	..	..	..	*638,383
..	..	..	..	..	19,109
..	..	..	..	..	19,181
..	..	..	..	..	19,253
..	..	..	..	..	19,326

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Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Liberia	2010	64,021	..	..	..	..	6,919
	2011	66,265	..	..	..	..	7,177
	2012	68,588	..	..	..	..	7,445
	2013	70,992	..	..	..	..	7,722
Libya	2010	6,867	..	..	..	..	..
	2011	6,937	..	..	..	..	..
	2012	6,996	..	..	..	..	..
	2013	7,050	..	..	..	..	..
Madagascar	2010	119,669	..	..	2,014	..	35,252
	2011	119,669	..	..	1,762	..	35,252
	2012	119,166	..	..	1,888	..	34,989
	2013	121,733	..	..	1,938	..	36,184
Malawi	2010	49,378	..	..	7,016	..	14,450
	2011	49,928	..	..	7,678	..	14,804
	2012	50,500	..	..	8,056	..	15,167
	2013	51,094	..	..	7,722	..	15,538
Mali	2010	48,653	..	..	805	..	3,929
	2011	49,192	..	..	805	..	4,160
	2012	49,740	..	..	805	..	4,160
	2013	48,637	..	..	805	..	5,065
Mauritania	2010	16,775	..	..	..	..	5,475
	2011	17,148	..	..	..	..	5,623
	2012	17,532	..	..	..	..	5,773
	2013	17,925	..	..	..	..	5,927
Mauritius	2010	183	..	..	10,857	..	*12
	2011	183	..	..	10,525	..	*15
	2012	183	..	..	9,969	..	18
	2013	306	..	..	8,445	..	18
Morocco	2010	61,987	..	..	1,617	..	3,142
	2011	61,769	..	..	1,690	..	3,180
	2012	61,579	..	..	809	..	3,221
	2013	61,390	..	..	1,367	..	3,263
Mozambique	2010	317,443	..	16,669	7,089	..	13,423
	2011	325,576	..	17,096	9,807	..	13,688
	2012	333,814	..	17,529	9,985	..	20,503
	2013	342,172	..	17,968	9,645	..	20,414
Namibia	2010	3,630	..	4,704	..	..	..
	2011	3,695	..	4,788	..	..	..
	2012	3,763	..	4,877	..	..	..
	2013	*3,762	..	*4,877	..	..	..
Niger	2010	50,927	403	484	..	..	1,192
	2011	52,805	432	335	..	..	1,236
	2012	56,570	434	442	..	..	1,325
	2013	58,776	500	378	..	..	1,376
Nigeria	2010	2,053,167	..	2,042,696	755	..	89,356
	2011	2,184,881	..	2,100,060	755	..	102,749
	2012	2,369,125	..	2,159,419	273	..	118,148
	2013	2,338,398	..	2,220,569	273	..	110,419
Réunion	2010	283	..	..	4,191	..	434
	2011	283	..	..	4,082	..	435
	2012	283	..	..	4,095	..	435
	2013	283	..	..	*4,177	..	434
Rwanda	2010	75,096	..	..	151	..	15,774
	2011	*77,355	..	..	226	..	*16,449
	2012	*79,803	..	..	226	..	*16,968
	2013	*82,368	..	..	151	..	*17,865



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Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	64,021
..	..	..	..	..	66,265
..	..	..	..	..	68,588
..	..	..	..	..	70,992
..	..	..	..	..	6,867
..	..	..	..	..	6,937
..	..	..	..	..	6,996
..	..	..	..	..	7,050
..	..	..	..	..	121,682
..	..	..	..	..	121,431
..	..	..	..	..	121,054
..	..	..	..	..	123,671
*20,850	..	..	..	..	77,243
*20,850	..	..	..	..	78,456
*20,850	..	..	..	..	79,406
*20,850	..	..	..	..	79,666
..	..	..	..	..	49,458
..	..	..	..	..	49,997
..	..	..	..	..	50,545
..	..	..	..	..	49,443
..	..	..	..	..	16,775
..	..	..	..	..	17,148
..	..	..	..	..	17,532
..	..	..	..	..	17,925
..	..	..	..	..	11,040
..	..	..	..	..	10,708
..	..	..	..	..	10,152
..	..	..	..	240	8,991
..	..	..	..	..	63,604
..	..	..	..	..	63,459
..	..	..	..	..	62,388
..	..	..	..	..	62,757
..	..	..	..	..	341,201
..	..	..	..	..	352,479
..	..	..	..	..	361,328
..	..	..	..	..	369,785
..	..	..	..	..	8,334
..	..	..	..	..	8,483
..	..	..	..	..	8,640
..	..	..	..	..	*8,639
..	..	..	..	..	51,814
..	..	..	..	..	53,572
..	..	..	..	..	57,446
..	..	..	..	..	59,654
..	..	..	..	..	4,096,618
..	..	..	..	..	4,285,696
..	..	..	..	..	4,528,817
..	..	..	..	..	4,559,240
..	..	..	..	80	4,554
..	..	..	..	80	4,445
..	..	..	..	121	4,500
..	..	..	..	*125	*4,585
..	..	..	..	..	75,247
..	..	..	..	..	*77,581
..	..	..	..	..	*80,029
..	..	..	..	..	*82,520

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Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Sao Tome and Principe	2010	977	..	..	..	..	260
	2011	987	..	..	..	..	266
	2012	996	..	..	..	..	268
	2013	1,005	..	..	..	..	271
Senegal	2010	80,844	..	870	2,900	..	16,107
	2011	83,078	..	1,195	2,863	..	16,550
	2012	85,358	..	611	3,072	..	16,992
	2013	69,442	..	1,021	2,055	..	14,219
Seychelles	2010	29	..	..	..	..	..
	2011	29	..	..	..	..	..
	2012	29	..	..	..	..	..
	2013	29	..	..	..	..	..
Sierra Leone	2010	50,992	..	..	201	..	11,269
	2011	51,330	..	..	201	..	11,564
	2012	51,704	..	..	201	..	11,830
	2013	52,097	..	..	..	..	12,125
Somalia	2010	123,333	..	..	503	..	33,406
	2011	127,494	..	..	629	..	35,022
	2012	127,494	..	..	629	..	35,022
	2013	124,632	..	..	629	..	35,022
South Africa	2010	541,748	..	81,773	52,095	..	50,062
	2011	549,029	..	82,871	49,874	..	50,829
	2012	556,427	..	83,988	53,334	..	51,596
	2013	565,815	..	85,405	59,232	..	52,392
South Sudan	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	8,064	..	..	..	..	325
	2013	7,826	..	..	..	..	325
St. Helena and Depend.	2010	5	..	..	..	..	..
	2011	5	..	..	..	..	..
	2012	5	..	..	..	..	..
	2013	6	..	..	..	..	..
Sudan	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	336,998	..	38,584	..	..	44,929
	2013	342,035	..	38,429	..	..	45,725
Sudan (former)	2010	413,492	..	46,642	12,803	..	54,929
	2011	421,711	..	46,833	18,101	..	56,552
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Swaziland	2010	9,708	*4,050	..	14,942	..	1,257
	2011	9,847	*4,000	..	15,630	..	1,292
	2012	9,987	*3,950	..	15,390	..	1,325
	2013	10,131	*4,000	..	17,290	..	1,361
Togo	2010	97,714	..	935	..	..	17,730
	2011	100,480	..	955	..	..	18,231
	2012	103,262	..	1,225	..	..	18,733
	2013	105,967	..	1,257	..	..	19,234
Tunisia	2010	33,755	1,469	4,025	..	..	5,635
	2011	33,907	1,469	3,963	..	..	5,753
	2012	34,058	1,455	4,075	..	..	5,871
	2013	34,214	1,458	4,088	..	..	6,018
Uganda	2010	362,078	..	..	*10,811	..	27,478
	2011	380,016	..	..	*10,270	..	17,700
	2012	380,016	..	..	*11,506	..	17,700
	2013	377,138	..	..	*14,278	..	17,700

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	977
..	..	..	..	..	987
..	..	..	..	..	996
..	..	..	..	..	1,005
..	..	..	..	..	84,614
..	..	..	..	..	87,136
..	..	..	..	..	89,041
..	..	..	..	..	72,518
..	..	..	..	..	29
..	..	..	..	..	29
..	..	..	..	..	29
..	..	..	..	..	29
..	..	..	..	..	51,192
..	..	..	..	..	51,530
..	..	..	..	..	51,905
..	..	..	..	..	52,097
..	..	..	..	..	123,836
..	..	..	..	..	128,124
..	..	..	..	..	128,124
..	..	..	..	..	125,262
..	..	*2,814	..	..	678,430
..	..	*2,814	..	..	684,588
..	..	*2,894	..	..	696,644
..	..	*2,948	..	..	713,400
..	..	..	..	..	..
..	..	..	..	..	..
..	..	..	..	..	8,064
..	..	..	..	..	7,826
..	..	..	..	..	5
..	..	..	..	..	5
..	..	..	..	..	5
..	..	..	..	..	6
..	..	..	..	..	..
..	..	..	..	..	..
..	..	..	..	..	375,582
..	..	..	..	..	380,464
..	..	..	..	..	472,937
..	..	..	..	..	486,645
..	..	..	..	..	..
..	..	..	..	..	..
..	..	..	..	..	28,700
..	..	..	..	..	29,476
..	..	..	..	..	29,327
..	..	..	..	..	31,421
..	..	..	..	..	98,649
..	..	..	..	..	101,435
..	..	..	..	..	104,487
..	..	..	..	..	107,224
..	..	..	..	..	39,249
..	..	..	..	..	39,338
..	..	..	..	..	39,588
..	..	..	..	..	39,759
..	..	..	..	..	372,889
..	..	..	..	..	390,286
..	..	..	..	..	391,522
..	..	..	..	..	391,417

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
United Rep. of Tanzania	2010	626,112	..	118,926	7,271	..	50,003
	2011	645,439	..	122,578	7,151	..	51,537
	2012	665,915	..	126,790	8,056	..	53,130
	2013	708,344	..	130,691	7,739	..	54,752
Zambia	2010	240,786	..	41,110	..	..	30,769
	2011	248,383	..	42,407	..	..	31,742
	2012	256,417	..	43,779	..	..	32,775
	2013	264,870	..	45,222	..	..	33,866
Zimbabwe	2010	155,288	..	95,023	8,434	..	266
	2011	157,376	..	96,301	9,369	..	266
	2012	160,390	..	98,146	12,615	..	266
	2013	178,036	..	108,946	12,294	..	336
<b>America, North</b>	<b>2010</b>	<b>1,472,507</b>	<b>355,942</b>	<b>705,919</b>	<b>214,604</b>	<b>900,942</b>	<b>79,053</b>
	<b>2011</b>	<b>1,482,111</b>	<b>358,288</b>	<b>711,960</b>	<b>230,040</b>	<b>904,054</b>	<b>79,081</b>
	<b>2012</b>	<b>1,405,916</b>	<b>314,400</b>	<b>644,802</b>	<b>260,491</b>	<b>818,799</b>	<b>79,940</b>
	<b>2013</b>	<b>1,455,521</b>	<b>371,361</b>	<b>761,216</b>	<b>264,388</b>	<b>952,597</b>	<b>82,182</b>
Anguilla	2010	*2	..	..	..	..	..
	2011	*2	..	..	..	..	..
	2012	*2	..	..	..	..	..
	2013	*2	..	..	..	..	..
Aruba	2010	16	..	..	..	..	5
	2011	17	..	..	..	..	5
	2012	17	..	..	..	..	5
	2013	17	..	..	..	..	5
Bahamas	2010	301	..	..	..	..	31
	2011	303	..	..	..	..	32
	2012	304	..	..	..	..	32
	2013	305	..	..	..	..	33
Barbados	2010	46	..	..	1,388	..	9
	2011	45	..	..	857	..	9
	2012	45	..	..	769	..	9
	2013	45	..	..	575	..	9
Belize	2010	830	..	..	2,095	..	21
	2011	830	..	..	*2,443	..	21
	2012	*1,151	..	..	*3,158	..	22
	2013	1,151	..	..	*3,073	..	22
Bermuda	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
British Virgin Islands	2010	12	..	..	..	..	2
	2011	13	..	..	..	..	2
	2012	13	..	..	..	..	2
	2013	13	..	..	..	..	2
Canada	2010	341,109	..	..	..	172,107	..
	2011	340,450	..	..	..	170,418	..
	2012	261,873	..	..	..	175,027	..
	2013	287,969	..	..	..	192,191	..
Costa Rica	2010	17,913	..	4,878	10,772	..	42
	2011	17,163	..	4,965	8,613	..	32
	2012	12,350	..	4,966	9,285	..	36
	2013	12,213	..	4,966	11,061	..	30
Cuba	2010	10,423	..	50	23,375	..	2,006
	2011	11,921	..	13	30,502	..	1,564
	2012	11,062	..	88	30,580	..	974
	2013	11,126	..	*88	28,085	..	3,339

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	752,309
..	..	..	..	..	775,168
..	..	..	..	..	800,761
..	..	..	..	..	846,774
..	..	..	..	..	281,896
..	..	..	..	..	290,790
..	..	..	..	..	300,196
..	..	..	..	..	310,092
..	..	..	..	..	258,745
..	..	..	..	..	263,046
..	..	..	..	..	271,151
..	..	..	..	..	299,276
<b>143,593</b>	<b>299,584</b>	<b>1,055,178</b>	<b>52,072</b>	<b>234,592</b>	<b>5,434,932</b>
<b>145,235</b>	<b>302,408</b>	<b>1,118,743</b>	<b>106,941</b>	<b>242,521</b>	<b>5,602,301</b>
<b>143,003</b>	<b>305,379</b>	<b>1,071,007</b>	<b>111,909</b>	<b>277,410</b>	<b>5,353,115</b>
<b>103,672</b>	<b>303,110</b>	<b>1,093,055</b>	<b>203,578</b>	<b>277,689</b>	<b>5,786,187</b>
..	..	..	..	..	*2
..	..	..	..	..	*2
..	..	..	..	..	*2
..	..	..	..	..	*2
..	..	..	..	..	16
..	..	..	..	..	17
..	..	..	..	..	17
..	..	..	..	..	17
..	..	..	..	..	301
..	..	..	..	..	303
..	..	..	..	..	304
..	..	..	..	..	305
..	..	..	..	..	1,434
..	..	..	..	..	902
..	..	..	..	..	814
..	..	..	..	..	620
..	..	..	..	..	2,925
..	..	..	..	..	*3,273
..	..	..	..	..	*4,309
..	..	..	..	..	*4,224
..	*584	..	..	..	*584
..	*560	..	..	..	*560
..	*565	..	..	..	*565
..	*565	..	..	..	*565
..	..	..	..	..	12
..	..	..	..	..	13
..	..	..	..	..	13
..	..	..	..	..	13
4,748	5,229	29,292	4,526	9,920	566,932
5,080	5,229	35,108	3,938	9,921	570,144
5,252	5,465	36,475	3,754	9,921	497,766
5,429	5,384	36,073	4,048	9,921	541,015
..	..	597	..	..	34,160
..	..	632	..	..	31,373
..	..	742	..	..	27,343
..	..	742	..	4	28,986
..	..	393	..	..	34,241
..	..	399	..	..	42,835
..	..	375	..	..	42,104
..	..	374	..	..	39,673

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Dominica	2010	69	..	..	..	..	7
	2011	69	..	..	..	..	7
	2012	69	..	..	..	..	7
	2013	69	..	..	..	..	7
Dominican Republic	2010	19,781	..	..	11,385	..	2,902
	2011	19,709	..	..	10,816	..	2,953
	2012	19,570	..	..	11,908	..	2,995
	2013	26,843	..	..	8,866	..	3,045
El Salvador	2010	21,338	..	..	11,250	..	1,475
	2011	21,450	..	..	10,224	..	1,505
	2012	21,458	..	..	12,819	..	1,505
	2013	20,287	..	..	12,347	..	1,505
Greenland	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Grenada	2010	234	..	..	22	..	54
	2011	240	..	..	22	..	57
	2012	235	..	..	22	..	58
	2013	229	..	..	22	..	57
Guadeloupe	2010	137	..	..	..	..	62
	2011	137	..	..	..	..	62
	2012	137	..	..	..	..	62
	2013	137	..	..	..	..	62
Guatemala	2010	180,951	..	..	46,597	..	1,888
	2011	180,951	..	..	72,189	..	1,918
	2012	183,663	..	..	75,799	..	1,977
	2013	183,663	..	..	80,657	..	2,036
Haiti	2010	129,170	..	..	919	..	34,073
	2011	133,606	..	..	970	..	35,430
	2012	137,987	..	..	967	..	36,787
	2013	138,180	..	..	964	..	38,173
Honduras	2010	69,749	..	..	12,459	..	817
	2011	79,543	..	..	11,138	..	538
	2012	81,085	..	..	11,502	..	620
	2013	82,677	..	..	11,864	..	867
Jamaica	2010	2,773	..	..	2,461	..	1,133
	2011	2,773	..	..	3,409	..	1,133
	2012	2,773	..	..	3,357	..	1,133
	2013	2,773	..	..	3,687	..	1,133
Martinique	2010	91	..	..	*175	..	53
	2011	91	..	..	*175	..	53
	2012	91	..	..	*175	..	53
	2013	91	..	..	*175	..	53
Mexico	2010	259,311	..	88,970	..	..	2,242
	2011	253,496	..	90,579	..	..	2,508
	2012	252,826	..	98,021	..	..	2,360
	2013	255,520	..	115,749	..	..	2,183
Neth. Antilles (former)	2010	30	..	..	..	..	8
	2011	*31	..	..	..	..	*8
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Nicaragua	2010	40,988	..	1,834	9,775	..	531
	2011	42,087	..	2,196	9,523	..	502
	2012	42,078	..	2,755	11,670	..	531
	2013	41,933	..	3,794	15,269	..	531

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	69
..	..	..	..	..	69
..	..	..	..	..	69
..	..	..	..	..	69
..	..	..	..	..	31,166
..	..	..	..	..	30,525
..	..	..	..	..	31,478
..	..	..	..	..	35,709
..	..	..	..	..	32,588
..	..	..	..	..	31,674
..	..	..	..	..	34,276
..	..	..	..	..	32,634
..	90	..	..	..	90
..	91	..	..	..	91
..	103	..	..	..	103
..	102	..	..	..	102
..	..	..	..	..	256
..	..	..	..	..	262
..	..	..	..	..	257
..	..	..	..	..	251
..	..	..	..	..	137
..	..	..	..	..	137
..	..	..	..	..	137
..	..	..	..	..	137
..	..	..	..	..	227,548
..	..	..	..	..	253,140
..	..	..	..	..	259,462
..	..	..	..	..	264,320
..	..	..	..	..	130,089
..	..	..	..	..	134,576
..	..	..	..	..	138,954
..	..	..	..	..	139,144
..	..	..	..	..	82,208
..	..	..	..	..	90,681
..	..	..	..	..	92,587
..	..	..	..	..	94,541
..	..	..	..	..	5,234
..	..	..	..	..	6,183
..	..	..	..	..	6,130
..	..	..	..	..	6,460
..	*432	..	..	..	*698
..	*432	..	..	..	*698
..	*432	..	..	..	*698
..	*432	..	..	..	*698
..	..	..	..	1,900	350,181
..	..	..	..	2,154	346,229
..	..	..	..	1,822	352,669
5,945	..	..	..	1,970	379,184
..	..	..	..	..	30
..	..	..	..	..	*31
..	..	..	..	..	..
..	..	..	..	..	..
..	..	..	..	..	52,597
..	..	..	..	..	53,806
..	..	..	..	..	56,503
..	..	..	..	..	60,996

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Panama	2010	7,373	..	..	3,854	..	44
	2011	7,327	..	..	4,433	..	41
	2012	7,282	..	..	4,666	..	41
	2013	7,236	..	..	5,395	..	38
St. Lucia	2010	90	..	..	..	..	10
	2011	90	..	..	..	..	10
	2012	90	..	..	..	..	10
	2013	90	..	..	..	..	10
St. Vincent-Grenadines	2010	68	..	..	..	..	11
	2011	68	..	..	..	..	11
	2012	68	..	..	..	..	11
	2013	67	..	..	..	..	11
Trinidad and Tobago	2010	300	..	..	..	..	59
	2011	297	..	..	..	..	59
	2012	294	..	..	..	..	59
	2013	291	..	..	..	..	59
Turks and Caicos Islands	2010	9	..	..	..	..	4
	2011	9	..	..	..	..	4
	2012	9	..	..	..	..	4
	2013	10	..	..	..	..	4
United States	2010	369,392	*355,942	*610,187	78,078	*728,835	31,565
	2011	369,392	*358,288	*614,207	64,727	*733,636	30,621
	2012	369,383	*314,400	*538,972	83,816	*643,772	30,651
	2013	382,583	*371,361	*636,619	82,348	*760,406	28,969
<b>America, South</b>	<b>2010</b>	<b>1,667,954</b>	<b>..</b>	<b>526,444</b>	<b>1,413,914</b>	<b>37,602</b>	<b>271,182</b>
	<b>2011</b>	<b>1,711,875</b>	<b>..</b>	<b>611,072</b>	<b>1,326,252</b>	<b>35,291</b>	<b>272,653</b>
	<b>2012</b>	<b>1,809,301</b>	<b>..</b>	<b>640,385</b>	<b>1,379,918</b>	<b>33,035</b>	<b>263,128</b>
	<b>2013</b>	<b>1,812,298</b>	<b>..</b>	<b>647,999</b>	<b>1,456,915</b>	<b>32,644</b>	<b>240,481</b>
Argentina	2010	26,214	..	27,997	38,437	..	11,535
	2011	26,987	..	27,586	40,303	..	11,210
	2012	28,230	..	29,978	40,220	..	11,977
	2013	29,917	..	16,915	47,313	..	10,679
Bolivia (Plur. State of)	2010	21,466	..	4,099	9,289	..	1,062
	2011	21,630	..	4,262	7,980	..	1,062
	2012	21,798	..	4,431	11,001	..	1,062
	2013	21,970	..	4,606	12,084	..	1,062
Brazil	2010	1,058,235	..	424,400	1,238,107	..	217,681
	2011	1,049,520	..	511,647	1,134,709	..	225,262
	2012	1,039,325	..	534,041	1,189,968	..	217,917
	2013	987,722	..	554,035	1,259,722	..	195,143
Chile	2010	204,914	..	..	..	..	7,316
	2011	247,124	..	..	..	..	7,316
	2012	392,646	..	..	..	..	7,287
	2013	428,535	..	..	..	..	7,287
Colombia	2010	64,073	..	11,941	76,078	11,941	14,190
	2011	61,771	..	10,158	80,835	10,158	9,352
	2012	59,414	..	11,023	75,870	*8,641	7,139
	2013	57,706	..	10,796	78,565	7,630	8,142
Ecuador	2010	45,127	..	..	12,579	..	2,434
	2011	45,237	..	..	14,502	..	2,345
	2012	45,355	..	..	14,811	..	2,257
	2013	45,474	..	..	13,575	..	2,174
Falkland Is. (Malvinas)	2010	6	..	..	..	..	3
	2011	6	..	..	..	..	3
	2012	7	..	..	..	..	3
	2013	7	..	..	..	..	3



Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	11,227
..	..	..	..	..	11,760
..	..	..	..	..	11,948
..	..	..	..	..	12,630
..	..	..	..	..	90
..	..	..	..	..	90
..	..	..	..	..	90
..	..	..	..	..	90
..	..	..	..	..	68
..	..	..	..	..	68
..	..	..	..	..	68
..	..	..	..	..	67
..	..	..	..	..	300
..	..	..	..	..	297
..	..	..	..	..	294
..	..	..	..	..	291
..	..	..	..	..	9
..	..	..	..	..	9
..	..	..	..	..	9
..	..	..	..	..	10
138,845	293,249	1,024,895	47,546	222,772	3,869,741
140,155	296,096	1,082,605	103,003	230,446	3,992,554
137,751	298,814	1,033,416	108,155	265,667	3,794,146
92,298	296,627	1,055,866	199,530	265,794	4,143,432
..	..	<b>589,030</b>	<b>85,181</b>	<b>362</b>	<b>4,320,488</b>
..	..	<b>485,085</b>	<b>115,866</b>	<b>418</b>	<b>4,285,859</b>
..	..	<b>498,090</b>	<b>118,588</b>	<b>1,150</b>	<b>4,480,467</b>
..	..	<b>588,714</b>	<b>94,495</b>	<b>1,394</b>	<b>4,634,460</b>
..	..	2,707	72,238	..	167,593
..	..	3,779	96,600	..	195,255
..	..	5,628	97,704	..	201,760
..	..	10,023	73,526	..	177,695
..	..	..	..	..	34,854
..	..	..	..	..	33,872
..	..	..	..	..	37,230
..	..	..	..	..	38,660
..	..	576,843	..	..	3,297,586
..	..	469,590	..	..	3,165,465
..	..	478,916	..	..	3,242,250
..	..	564,837	..	..	3,366,315
..	..	..	..	362	205,276
..	..	..	..	418	247,542
..	..	..	..	273	392,919
..	..	..	..	559	429,094
..	..	6,164	12,586	..	182,783
..	..	7,141	18,202	..	188,265
..	..	7,818	19,633	..	182,399
..	..	*7,818	*19,633	..	182,147
..	..	107	..	..	57,813
..	..	134	..	..	59,873
..	..	161	..	..	60,327
..	..	188	..	..	59,237
..	..	..	..	..	6
..	..	..	..	..	6
..	..	..	..	..	7
..	..	..	..	..	7

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
French Guiana	2010	1,170	..	..	..	..	213
	2011	1,211	..	..	..	..	222
	2012	1,255	..	..	..	..	232
	2013	1,198	..	..	..	..	242
Guyana	2010	1,382	..	..	6,822	..	58
	2011	1,329	..	..	8,320	..	49
	2012	1,213	..	..	6,960	..	48
	2013	1,096	..	..	6,014	..	46
Paraguay	2010	102,296	..	24,485	3,021	..	14,155
	2011	99,660	..	23,362	3,021	..	13,561
	2012	96,611	..	23,412	3,021	..	12,966
	2013	90,272	..	23,627	..	..	13,610
Peru	2010	102,774	..	8,661	15,940	..	2,272
	2011	116,033	..	8,585	22,688	..	2,036
	2012	83,431	..	8,285	23,908	..	2,006
	2013	109,026	..	8,242	25,105	..	*1,859
Suriname	2010	963	..	*568	151	..	..
	2011	963	..	*603	151	..	..
	2012	1,028	..	*634	151	..	..
	2013	1,066	..	*665	151	..	..
Uruguay	2010	25,263	..	6,092	751	25,661	..
	2011	26,983	..	6,381	779	25,133	..
	2012	26,190	..	9,808	1,044	24,394	..
	2013	26,105	..	10,058	1,071	25,014	..
Venezuela (Bolivar. Rep.)	2010	14,072	..	18,201	12,738	..	266
	2011	13,420	..	18,488	12,965	..	236
	2012	12,798	..	18,773	12,965	..	236
	2013	12,205	..	19,055	13,317	..	236
<b>Asia</b>	<b>2010</b>	<b>10,568,788</b>	<b>136,751</b>	<b>4,744,243</b>	<b>1,153,544</b>	<b>182,801</b>	<b>399,785</b>
	<b>2011</b>	<b>10,537,620</b>	<b>133,736</b>	<b>4,801,990</b>	<b>1,397,944</b>	<b>172,134</b>	<b>392,319</b>
	<b>2012</b>	<b>10,643,411</b>	<b>135,104</b>	<b>4,914,827</b>	<b>1,526,788</b>	<b>175,083</b>	<b>409,073</b>
	<b>2013</b>	<b>10,790,475</b>	<b>139,172</b>	<b>5,021,443</b>	<b>1,596,784</b>	<b>191,348</b>	<b>420,965</b>
Afghanistan	2010	14,993	..	..	..	..	3,316
	2011	15,121	..	..	..	..	3,412
	2012	15,474	..	..	..	..	3,510
	2013	15,765	..	..	..	..	3,610
Armenia	2010	15,986	..	..	..	..	..
	2011	18,946	..	..	..	..	..
	2012	18,946	..	..	..	..	..
	2013	18,946	..	..	..	..	..
Azerbaijan	2010	3,416	..	..	..	..	..
	2011	3,672	..	..	..	..	..
	2012	3,700	..	..	..	..	..
	2013	3,855	..	..	..	..	148
Bahrain	2010	60	..	..	..	..	31
	2011	61	..	..	..	..	32
	2012	62	..	..	..	..	32
	2013	63	..	..	..	..	33
Bangladesh	2010	249,265	111,574	212,365	2,392	..	9,567
	2011	247,812	112,856	214,806	2,769	..	9,638
	2012	246,378	114,209	217,382	2,392	..	9,708
	2013	244,961	115,612	220,052	2,769	..	9,779
Bhutan	2010	44,259	..	..	..	..	207
	2011	44,734	..	..	..	..	826
	2012	45,218	..	..	..	..	826
	2013	45,712	..	..	..	..	826

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	1,170
..	..	..	..	..	1,211
..	..	..	..	..	1,255
..	..	..	..	..	1,198
..	..	..	..	..	8,205
..	..	..	..	..	9,649
..	..	..	..	..	8,173
..	..	..	..	..	7,110
..	..	2,927	..	..	132,729
..	..	3,107	..	..	129,150
..	..	3,265	..	..	126,309
..	..	3,852	..	..	117,751
..	..	..	0	0	127,375
..	..	992	478	0	148,775
..	..	1,876	589	877	118,965
..	..	1,394	37	835	144,638
..	..	..	..	..	1,682
..	..	..	..	..	1,717
..	..	..	..	..	1,812
..	..	..	..	..	1,882
..	..	281	357	..	58,405
..	..	343	585	..	60,204
..	..	426	662	..	62,524
..	..	603	1,299	..	64,150
..	..	..	..	..	45,011
..	..	..	..	..	44,873
..	..	..	..	..	44,536
..	..	..	..	..	44,577
<b>261,276</b>	<b>1,302,142</b>	<b>67,966</b>	<b>34,985</b>	<b>17,425</b>	<b>18,469,922</b>
<b>320,639</b>	<b>1,402,712</b>	<b>80,442</b>	<b>1,839,603</b>	<b>40,718</b>	<b>20,727,537</b>
<b>338,265</b>	<b>1,502,151</b>	<b>94,337</b>	<b>259,877</b>	<b>43,809</b>	<b>19,633,652</b>
<b>376,550</b>	<b>1,638,768</b>	<b>112,720</b>	<b>300,355</b>	<b>55,222</b>	<b>20,222,835</b>
..	..	..	..	..	14,993
..	..	..	..	..	15,121
..	..	..	..	..	15,474
..	..	..	..	..	15,765
..	..	..	..	..	15,986
..	..	..	..	..	18,946
..	..	..	..	..	18,946
..	..	..	..	..	18,946
..	..	..	..	..	3,416
..	..	..	..	..	3,672
..	..	..	..	..	3,700
..	2,104	..	..	..	5,959
..	..	..	..	..	60
..	..	..	..	..	61
..	..	..	..	..	62
..	..	..	..	..	63
..	..	..	..	..	575,595
..	..	..	..	..	578,244
..	..	..	..	..	580,361
..	..	..	..	..	583,394
..	..	..	..	..	44,259
..	..	..	..	..	44,734
..	..	..	..	..	45,218
..	..	..	..	..	45,712

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Brunei Darussalam	2010	107	..	..	..	..	9
	2011	107	..	..	..	..	9
	2012	107	..	..	..	..	9
	2013	107	..	..	..	..	9
Cambodia	2010	151,245	..	288	..	..	23,158
	2011	158,385	..	288	..	..	25,134
	2012	162,658	..	288	..	..	25,577
	2013	167,311	..	158	..	..	26,049
China	2010	1,724,899	..	..	265,965	..	50,889
	2011	1,693,905	..	..	262,953	..	50,607
	2012	1,663,483	..	..	299,316	..	50,328
	2013	1,633,621	..	..	330,599	..	50,050
China, Macao SAR	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Cyprus	2010	143	..	82	..	..	30
	2011	181	..	30	..	..	30
	2012	208	..	28	..	..	30
	2013	181	..	28	..	..	30
Georgia	2010	15,031	..	..	..	..	..
	2011	13,188	..	..	..	..	..
	2012	12,840	..	..	..	..	..
	2013	20,144	..	..	..	..	..
India	2010	3,777,353	..	3,464,883	524,763	..	84,960
	2011	3,826,013	..	3,540,340	706,534	..	84,960
	2012	3,874,672	..	3,614,237	734,928	..	84,960
	2013	3,923,089	..	3,682,785	*749,044	..	92,601
Indonesia	2010	1,725,212	..	458,214	55,748	..	17,759
	2011	1,783,344	..	464,165	56,094	..	19,854
	2012	1,768,546	..	469,995	64,848	..	19,913
	2013	1,795,239	..	475,710	64,269	..	9,676
Iran (Islamic Rep. of)	2010	45,675	1,175	6,250	..	..	35
	2011	45,675	1,175	7,500	..	..	24
	2012	73,994	1,175	7,500	..	..	32
	2013	73,994	1,175	7,500	..	..	35
Iraq	2010	1,661	..	..	..	..	443
	2011	1,700	..	..	..	..	443
	2012	1,739	..	..	..	..	443
	2013	1,779	..	..	..	..	708
Israel	2010	*550	..	..	..	..	..
	2011	*594	..	..	..	..	..
	2012	*183	..	..	..	..	..
	2013	*183	..	..	..	..	..
Japan	2010	38,596	..	110,429	3,830	182,801	413
	2011	39,282	..	116,418	2,440	172,134	354
	2012	39,054	..	123,311	3,251	165,523	354
	2013	42,856	..	129,642	3,120	181,750	354
Jordan	2010	2,759	..	..	..	..	1,180
	2011	2,832	..	..	..	..	1,215
	2012	2,905	..	..	..	..	1,248
	2013	2,978	..	..	..	..	1,281
Kazakhstan	2010	2,101	..	9	..	..	14
	2011	3,243	..	47	..	..	14
	2012	2,441	..	49	..	..	14
	2013	2,762	..	0	..	..	14

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	107
..	..	..	..	..	107
..	..	..	..	..	107
..	..	..	..	..	107
..	..	..	..	..	151,533
..	..	..	..	..	158,673
..	..	..	..	..	162,946
..	..	..	..	..	167,469
158,110	1,173,520	58,518	..	..	3,381,011
188,599	1,254,137	65,446	1,797,333	..	5,262,373
198,687	1,355,330	74,555	204,750	..	3,796,122
220,786	1,484,547	84,294	231,494	..	3,985,341
..	*1,915	..	..	..	*1,915
..	*1,541	..	..	..	*1,541
..	*1,627	..	..	..	*1,627
..	*1,842	..	..	..	*1,842
299	..	..	221	274	1,019
4	..	..	221	448	884
0	..	..	258	476	970
0	..	..	74	466	749
..	..	..	..	3	15,034
..	..	..	..	3	13,191
..	..	..	..	3	12,843
..	..	..	..	0	20,144
..	..	..	..	..	7,766,999
..	..	..	..	..	8,072,887
..	..	..	..	..	8,223,837
..	..	..	..	..	8,354,918
..	..	..	..	..	2,239,174
..	..	..	..	..	2,303,603
..	..	..	..	..	2,303,389
..	..	..	..	..	2,335,218
..	..	..	..	127	53,227
..	..	..	..	127	54,477
..	..	..	..	127	82,796
..	..	..	..	127	82,796
..	..	..	..	..	1,661
..	..	..	..	..	1,700
..	..	..	..	..	1,739
..	..	..	..	..	1,779
..	..	..	..	347	*897
..	..	..	..	391	*985
..	..	..	..	777	960
..	..	..	..	852	1,035
26,398	48,684	..	..	..	410,738
46,441	52,125	..	..	..	428,840
49,931	52,035	..	..	..	433,105
58,623	53,610	..	..	..	469,601
..	..	..	..	108	2,867
..	..	..	..	96	2,928
..	..	..	..	72	2,977
..	..	..	..	72	3,050
..	..	..	..	..	2,110
..	..	..	..	..	3,290
..	..	..	..	..	2,490
..	..	..	..	..	2,762

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Korea, Dem.Ppl's.Rep.	2010	44,963	..	..	..	..	4,632
	2011	45,202	..	..	..	..	4,661
	2012	45,444	..	..	..	..	4,691
	2013	45,686	..	..	..	..	4,750
Korea, Republic of	2010	8,034	..	5,758	..	..	..
	2011	7,050	..	10,196	..	..	..
	2012	21,178	..	718	..	9,560	..
	2013	28,710	..	1,573	..	9,598	..
Kuwait	2010	168	..	..	..	..	82
	2011	171	..	..	..	..	84
	2012	173	..	..	..	..	85
	2013	176	..	..	..	..	86
Kyrgyzstan	2010	156	..	..	..	..	..
	2011	158	..	..	..	..	..
	2012	160	..	..	..	..	..
	2013	160	..	..	..	..	..
Lao People's Dem. Rep.	2010	54,335	..	..	..	..	624
	2011	54,215	..	..	..	..	636
	2012	54,101	..	..	..	..	649
	2013	53,988	..	..	..	..	662
Lebanon	2010	5,015	..	..	..	..	325
	2011	5,006	..	..	..	..	325
	2012	4,997	..	..	..	..	325
	2013	4,988	..	..	..	..	325
Malaysia	2010	25,674	..	14,400	579	..	850
	2011	25,213	..	15,048	579	..	853
	2012	24,768	..	11,405	579	..	856
	2013	24,339	..	15,955	226	..	858
Maldives	2010	141	..	..	..	..	23
	2011	142	..	..	..	..	23
	2012	144	..	..	..	..	24
	2013	145	..	..	..	..	24
Mongolia	2010	8,313	..	..	..	..	..
	2011	*6,997	..	..	..	..	..
	2012	*5,481	..	..	..	..	..
	2013	*5,481	..	..	..	..	..
Myanmar	2010	416,457	..	25,351	2,000	..	784
	2011	419,825	..	25,556	*2,386	..	797
	2012	423,402	..	25,774	*2,355	..	826
	2013	427,107	..	26,000	*2,355	..	826
Nepal	2010	324,400	23,070	13,883	14,863	..	2,301
	2011	277,232	18,757	15,458	14,863	..	2,331
	2012	277,040	18,757	14,811	12,979	..	2,390
	2013	316,647	21,395	*14,811	14,821	..	2,419
Oman	2010	356	..	..	..	..	171
	2011	367	..	..	..	..	177
	2012	378	..	..	..	..	182
	2013	399	..	..	..	..	199
Other Asia	2010	10,794	..	..	..	..	..
	2011	12,898	..	..	..	..	..
	2012	10,274	..	..	..	..	..
	2013	8,839	..	..	..	..	..
Pakistan	2010	270,944	..	*157,950	96,920	..	2,133
	2011	270,944	..	*160,697	118,442	..	2,186
	2012	270,944	..	*163,428	129,268	..	2,242
	2013	270,944	..	*165,000	130,951	..	8,172

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	44,963
..	..	..	..	..	45,202
..	..	..	..	..	45,444
..	..	..	..	..	45,686
74,973	34,000	..	12,107	8,316	143,188
84,096	39,262	..	11,408	9,019	161,031
88,080	37,499	..	12,218	9,358	178,611
95,926	36,341	..	12,806	9,917	194,871
..	..	..	..	..	168
..	..	..	..	..	171
..	..	..	..	..	173
..	..	..	..	..	176
..	..	..	..	..	156
..	..	..	..	..	158
..	..	..	..	..	160
..	..	..	..	..	160
..	..	..	..	..	54,335
..	..	..	..	..	54,215
..	..	..	..	..	54,101
..	..	..	..	..	53,988
..	..	..	..	..	5,015
..	..	..	..	..	5,006
..	..	..	..	..	4,997
..	..	..	..	..	4,988
..	..	..	..	..	40,653
..	..	..	6,366	..	47,206
..	..	..	9,163	..	45,915
..	..	..	17,370	..	57,890
..	..	..	..	..	141
..	..	..	..	..	142
..	..	..	..	..	144
..	..	..	..	..	145
..	..	..	..	..	8,313
..	..	..	..	..	*6,997
..	..	..	..	..	*5,481
..	..	..	..	..	*5,481
..	..	..	..	..	443,808
..	..	..	..	..	447,767
..	..	..	..	..	451,531
..	..	..	..	..	455,462
..	..	..	..	2,793	379,009
..	..	..	..	2,765	329,075
..	..	..	..	4,296	327,883
..	..	..	..	6,711	374,385
..	..	..	..	..	356
..	..	..	..	..	367
..	..	..	..	..	378
..	..	..	..	..	399
..	43,848	27	..	..	54,669
..	55,114	3,823	..	323	72,158
..	55,210	4,372	..	283	70,139
..	55,412	4,750	..	254	69,255
..	..	..	..	..	525,814
..	..	..	..	..	550,083
..	..	..	..	..	563,640
..	..	..	..	..	566,895

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Philippines	2010	118,832	762	24,311	15,883	..	35,017
	2011	115,808	778	24,038	17,015	..	35,371
	2012	172,840	793	38,488	18,372	..	49,666
	2013	176,505	820	39,763	19,004	..	52,259
Qatar	2010	46	..	..	..	..	22
	2011	46	..	..	..	..	22
	2012	46	..	..	..	..	23
	2013	46	..	..	..	..	23
Singapore	2010	..	..	..	..	..	156
	2011	..	..	..	..	..	156
	2012	..	..	..	..	..	156
	2013	..	..	..	..	..	150
Sri Lanka	2010	162,657	..	..	1,066	..	0
	2011	162,788	..	..	842	..	0
	2012	159,638	..	..	1,004	..	0
	2013	156,526	..	..	1,475	..	873
State of Palestine	2010	3,332	..	720	..	..	..
	2011	3,089	..	627	..	..	..
	2012	2,762	..	702	..	..	..
	2013	3,013	..	436	..	..	..
Syrian Arab Republic	2010	276	..	..	..	..	30
	2011	282	..	..	..	..	30
	2012	287	..	..	..	..	30
	2013	293	..	..	..	..	30
Thailand	2010	537,091	170	205,075	148,112	..	141,394
	2011	501,003	*170	161,085	186,482	..	128,650
	2012	503,666	*170	180,016	221,809	..	130,243
	2013	518,371	*170	175,960	238,965	..	134,166
Timor-Leste	2010	1,097	..	..	..	..	..
	2011	1,052	..	..	..	..	..
	2012	1,009	..	..	..	..	..
	2013	1,009	..	..	..	..	..
Turkey	2010	142,014	..	44,275	..	..	..
	2011	102,418	..	45,692	..	..	..
	2012	98,396	..	46,696	..	..	..
	2013	113,169	..	66,070	..	..	..
Turkmenistan	2010	91	..	..	..	..	..
	2011	91	..	..	..	..	..
	2012	91	..	..	..	..	..
	2013	*91	..	..	..	..	..
Uzbekistan	2010	201	..	..	..	..	..
	2011	210	..	..	..	..	..
	2012	238	..	..	..	..	..
	2013	238	..	..	..	..	..
Viet Nam	2010	615,885	..	..	21,424	..	17,199
	2011	622,311	..	..	26,545	..	17,376
	2012	628,942	..	..	35,687	..	17,553
	2013	635,552	..	..	39,186	..	17,730
Yemen	2010	4,206	..	..	..	..	2,036
	2011	4,306	..	..	..	..	2,095
	2012	4,407	..	..	..	..	2,154
	2013	4,510	..	..	..	..	2,213
Europe	2010	2,964,690	2,086	314,037	0	509,026	11,431
	2011	2,900,746	2,455	311,131	103,588	493,935	11,441
	2012	3,242,572	2,811	307,246	102,071	481,153	11,178
	2013	3,283,155	2,585	301,813	110,210	500,741	11,653



Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	175	362	3,999	..	164,325
..	533	105	4,035	..	162,310
..	450	1,286	4,453	..	236,680
..	729	2,316	4,939	..	244,075
..	..	..	..	..	46
..	..	..	..	..	46
..	..	..	..	..	46
..	..	..	..	..	46
..	0	..	..	..	..
..	0	..	..	..	0
..	0	..	..	..	0
..	..	..	..	..	163,723
..	..	..	..	..	163,629
..	..	..	..	..	160,642
..	..	..	..	..	158,001
..	..	..	..	..	4,051
..	..	..	..	..	3,716
..	..	..	..	..	3,463
..	..	..	..	..	3,448
..	..	..	..	..	276
..	..	..	..	..	282
..	..	..	..	..	287
..	..	..	..	..	293
..	..	9,058	18,400	2,611	920,517
..	..	10,854	19,798	24,509	903,901
..	..	13,909	28,373	23,030	970,973
..	4,183	20,395	32,862	28,312	1,019,218
..	..	..	..	..	1,097
..	..	..	..	..	1,052
..	..	..	..	..	1,009
..	..	..	..	..	1,009
1,496	..	0	258	2,846	190,889
1,499	..	214	442	3,037	153,302
1,567	..	214	662	5,387	152,923
1,215	..	965	810	8,511	190,739
..	..	..	..	..	91
..	..	..	..	..	91
..	..	..	..	..	91
..	..	..	..	..	*91
..	..	..	..	..	201
..	..	..	..	..	210
..	..	..	..	..	238
..	..	..	..	..	238
..	..	..	..	..	637,309
..	..	..	..	..	648,856
..	..	..	..	..	664,629
..	..	..	..	..	674,738
..	..	..	..	..	4,206
..	..	..	..	..	4,306
..	..	..	..	..	4,407
..	..	..	..	..	4,510
<b>333,273</b>	<b>706,079</b>	<b>114,787</b>	<b>368,626</b>	<b>360,284</b>	<b>5,672,888</b>
<b>349,207</b>	<b>731,255</b>	<b>87,063</b>	<b>356,243</b>	<b>438,237</b>	<b>5,773,860</b>
<b>351,966</b>	<b>755,394</b>	<b>100,304</b>	<b>380,802</b>	<b>509,925</b>	<b>6,234,244</b>
<b>339,335</b>	<b>785,036</b>	<b>120,288</b>	<b>405,646</b>	<b>571,493</b>	<b>6,420,303</b>

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Albania	2010	8,578	..	..	..	..	..
	2011	8,706	..	..	..	..	..
	2012	8,642	..	..	..	..	..
	2013	8,433	..	..	..	..	..
Andorra	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Austria	2010	156,610	..	9,198	..	28,077	30
	2011	149,023	..	9,915	..	28,512	30
	2012	159,802	..	11,037	..	30,388	30
	2013	157,289	..	8,887	..	32,658	30
Belarus	2010	55,446	..	4,550	..	..	118
	2011	60,145	..	3,240	..	..	118
	2012	61,644	..	3,256	..	..	118
	2013	59,946	..	3,071	..	..	118
Belgium	2010	22,961	..	25,656	..	1,633	..
	2011	35,654	..	18,483	..	1,470	..
	2012	51,678	263	5,838	..	1,400	..
	2013	53,947	133	3,150	..	1,735	..
Bosnia and Herzegovina	2010	6,385	..	..	..	..	502
	2011	6,614	..	..	..	..	561
	2012	6,458	..	..	..	..	561
	2013	*6,458	..	..	..	..	679
Bulgaria	2010	34,559	..	366	..	4,534	502
	2011	37,269	..	234	..	5,653	472
	2012	41,388	..	772	..	4,265	118
	2013	40,906	..	850	..	5,235	148
Croatia	2010	19,812	..	1	..	..	118
	2011	26,709	..	34	..	..	118
	2012	29,017	..	21	..	..	148
	2013	29,479	..	12	..	..	177
Czech Republic	2010	70,415	..	4,698	..	12,577	..
	2011	69,603	..	5,076	..	12,395	..
	2012	72,181	..	5,208	..	12,749	..
	2013	77,009	..	4,761	..	14,218	..
Denmark	2010	46,037	..	25,272	..	..	..
	2011	42,104	..	21,004	..	..	..
	2012	42,625	..	19,241	..	..	..
	2013	41,486	..	21,455	..	..	..
Estonia	2010	31,437	..	7,232	..	1,427	..
	2011	29,553	..	8,701	..	1,059	..
	2012	32,115	..	9,220	..	1,056	..
	2013	35,807	..	7,471	..	1,408	..
Finland	2010	189,467	261	1,234	..	135,682	..
	2011	183,839	292	1,264	..	135,109	..
	2012	194,673	271	1,599	..	135,768	..
	2013	196,762	256	2,135	..	140,701	..
France	2010	389,984	99	8,490	0	48,669	*1,505
	2011	314,652	87	8,058	73	54,070	*1,475
	2012	365,171	97	10,980	0	33,188	*1,475
	2013	405,803	97	13,223	0	34,821	1,328
Germany	2010	427,840	..	..	..	33,135	59
	2011	411,791	..	..	..	33,230	59
	2012	425,016	..	..	..	32,642	59
	2013	417,169	..	5,614	..	33,674	59

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
..	..	..	..	..	8,578
..	..	..	..	..	8,706
..	..	..	..	..	8,642
..	..	..	..	..	8,433
..	*218	..	..	..	*218
..	*211	..	..	..	*211
..	*211	..	..	..	*211
..	*232	..	..	..	*232
19,738	14,381	2,609	10,194	6,418	247,224
20,748	15,468	2,173	8,795	7,080	241,714
20,244	15,554	2,975	8,685	8,640	257,325
17,154	15,721	2,680	6,477	8,178	249,044
9,049	..	..	1,398	90	70,533
7,544	..	..	1,141	128	72,198
1,135	..	..	1,214	182	67,431
1,037	..	..	957	381	65,392
14,671	30,872	3,406	11,555	5,336	116,090
16,018	38,110	6,534	10,414	5,372	132,055
16,918	29,194	7,252	10,893	6,601	130,037
13,116	28,700	7,171	10,746	7,913	126,610
..	..	..	..	..	6,385
..	..	..	..	..	6,614
..	..	..	..	..	6,458
..	..	..	..	..	*6,458
352	420	0	699	112	41,042
345	414	0	589	139	44,643
276	871	0	294	5	47,871
322	644	322	1,582	93	49,954
319	..	..	515	298	20,945
179	..	..	294	290	27,506
341	..	..	1,435	479	31,293
366	..	..	1,214	693	31,764
6,645	4,374	2,546	7,286	7,398	115,939
6,961	5,574	1,447	7,728	10,460	119,244
7,073	5,840	2,734	6,366	15,698	127,849
6,721	5,786	2,787	6,698	23,910	141,890
..	37,796	1,425	2,834	4,362	117,725
..	38,547	575	2,907	4,107	109,245
..	37,495	685	3,054	4,383	107,483
..	37,606	603	3,275	4,642	109,067
..	..	..	..	155	40,251
..	..	..	..	137	39,450
..	..	..	..	122	42,513
..	4,411	..	..	302	49,399
1,784	10,424	572	10,488	1,692	351,604
1,805	10,088	597	7,176	2,221	342,391
2,741	13,039	786	9,090	2,425	360,392
2,120	15,933	1,384	11,261	2,428	372,980
..	100,510	19,939	74,262	13,737	655,691
..	94,944	17,902	67,786	14,878	572,450
..	104,910	17,554	81,438	16,512	629,850
3,996	98,234	21,065	80,187	18,284	675,710
65,840	195,404	36,591	113,491	177,346	1,049,647
61,520	201,342	23,390	113,418	216,897	1,061,588
59,464	217,346	25,109	100,611	268,633	1,128,822
49,437	245,060	21,481	107,125	287,845	1,167,405

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Greece	2010	20,568	..	9,783	..	..	30
	2011	28,014	..	11,330	..	..	59
	2012	32,894	..	8,985	..	..	30
	2013	29,461	..	5,985	..	..	59
Hungary	2010	49,986	..	13,478	..	351	3
	2011	46,022	..	13,525	..	299	0
	2012	44,060	106	13,525	..	290	0
	2013	46,534	230	13,796	..	82	0
Iceland	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Ireland	2010	6,242	1,726	..	..	..	..
	2011	6,241	1,711	..	..	..	..
	2012	6,851	1,372	..	..	..	..
	2013	7,046	1,127	..	..	..	..
Isle of Man	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Italy	2010	138,150	..	8,398	..	..	295
	2011	156,996	..	9,087	..	..	295
	2012	294,361	..	9,136	..	..	295
	2013	303,913	..	7,918	..	..	295
Jersey	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Latvia	2010	66,763	..	60	..	..	266
	2011	72,830	..	43	..	..	295
	2012	78,233	..	38	..	..	325
	2013	73,277	..	58	..	..	295
Liechtenstein	2010	*183	..	..	..	..	..
	2011	*199	..	..	..	..	..
	2012	*203	..	..	..	..	..
	2013	172	..	..	..	..	..
Lithuania	2010	41,734	..	228	..	..	30
	2011	40,955	..	212	..	..	30
	2012	41,291	..	242	..	..	30
	2013	43,355	..	238	..	..	30
Luxembourg	2010	1,878	..	306	..	..	..
	2011	1,659	..	275	..	..	..
	2012	1,705	..	269	..	..	..
	2013	2,027	..	265	..	..	..
Malta	2010	..	..	..	..	..	..
	2011	..	..	..	..	..	..
	2012	..	..	..	..	..	..
	2013	..	..	..	..	..	..
Montenegro	2010	9,711	..	..	..	..	..
	2011	6,778	..	..	..	..	..
	2012	6,842	..	..	..	..	..
	2013	7,281	..	..	..	..	..
Netherlands	2010	34,921	..	10,440	..	..	177
	2011	30,730	..	10,947	..	..	177
	2012	34,388	..	11,448	..	..	177
	2013	34,153	..	12,466	..	..	177

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
1,341	..	..	4,563	2,065	38,320
1,175	..	..	3,974	3,048	47,541
625	..	..	5,042	3,710	51,256
883	..	..	5,594	3,704	45,627
1,449	4,458	643	5,189	1,516	77,070
2,187	3,484	643	5,851	2,540	74,551
1,804	3,766	6,432	5,299	2,212	77,494
564	3,475	7,584	5,152	3,215	80,632
..	36	..	..	22	58
..	0	..	..	48	48
..	0	..	..	73	73
..	0	..	..	71	71
..	625	..	2,613	2,445	13,651
..	1,039	..	994	2,411	12,396
13	3,680	..	994	2,341	15,251
4	4,455	..	920	2,017	15,569
..	*407	..	..	..	*407
..	*429	..	..	..	*429
..	*436	..	..	..	*436
..	*440	..	..	..	*440
10,998	65,178	4,306	29,403	21,250	277,683
12,232	70,588	3,298	21,749	46,218	320,168
13,626	67,560	3,686	10,562	49,352	448,282
12,994	69,302	4,485	16,891	76,013	491,516
..	*238	..	..	..	*238
..	679	..	..	..	679
..	*686	..	..	..	*686
..	*693	..	..	..	*693
105	334	402	1,582	558	69,804
84	69	54	2,208	920	76,208
84	51	54	3,312	2,175	83,947
84	85	80	2,429	2,695	78,708
..	328	..	..	..	511
..	315	..	..	..	513
..	328	..	..	..	531
..	356	..	..	..	529
..	..	965	3,275	418	46,620
..	..	482	2,944	463	45,056
..	..	563	3,938	484	46,517
155	943	616	4,306	649	50,262
597	1,113	..	..	490	4,384
576	1,225	..	..	511	4,246
603	1,203	..	..	658	4,438
641	1,185	..	..	636	4,754
..	..	..	37	0	37
..	..	..	37	31	68
..	..	..	37	93	130
..	..	..	37	65	102
..	..	..	..	..	9,711
..	..	..	..	..	6,778
..	..	..	..	..	6,842
..	..	..	..	..	7,281
..	64,543	822	14,058	12,286	137,070
..	67,940	110	18,069	12,263	140,058
..	63,855	0	43,314	12,454	165,459
..	60,809	11,095	50,600	13,052	182,175

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Norway	2010	51,643	..	..	..	..	..
	2011	49,408	..	..	..	..	..
	2012	48,183	..	..	..	..	..
	2013	41,013	..	..	..	..	..
Poland	2010	180,274	..	65,332	..	..	..
	2011	192,687	..	73,174	..	..	..
	2012	201,106	..	91,456	..	..	..
	2013	211,876	..	74,268	..	..	..
Portugal	2010	39,751	..	40,972	..	36,765	572
	2011	41,217	..	41,472	..	36,761	614
	2012	44,674	..	25,731	..	38,563	620
	2013	43,871	..	26,909	..	41,266	590
Republic of Moldova	2010	6,221	..	755	..	..	0
	2011	7,829	..	858	..	..	0
	2012	9,007	..	455	..	..	0
	2013	10,231	..	490	..	..	30
Romania	2010	163,287	..	..	..	..	266
	2011	145,527	..	..	..	..	472
	2012	158,895	..	..	..	..	528
	2013	153,097	..	..	..	..	531
Russian Federation	2010	123,275	..	..	..	..	2,242
	2011	126,651	..	..	..	..	1,505
	2012	144,541	..	..	..	..	1,564
	2013	126,851	..	..	..	..	1,800
Serbia	2010	43,393	..	..	..	..	..
	2011	43,938	..	..	..	..	236
	2012	43,602	..	..	..	..	266
	2013	46,178	..	..	..	..	325
Slovakia	2010	13,976	..	4,275	..	12,748	89
	2011	14,255	..	3,842	..	14,714	118
	2012	17,202	..	861	..	15,465	118
	2013	15,140	..	1,425	..	15,615	0
Slovenia	2010	21,880	..	345	..	..	..
	2011	23,350	..	328	..	..	..
	2012	23,155	..	290	..	..	..
	2013	23,657	..	269	..	..	..
Spain	2010	134,829	..	43,531	..	16,980	1,062
	2011	144,456	365	31,642	103,515	17,358	1,062
	2012	146,908	549	32,756	102,071	19,890	1,062
	2013	161,317	593	35,759	110,210	21,475	1,062
Sweden	2010	221,283	..	..	..	*176,448	..
	2011	220,726	..	..	..	*153,305	..
	2012	244,757	153	..	..	*155,489	..
	2013	227,662	149	..	..	*157,853	..
Switzerland	2010	39,340	..	..	..	..	..
	2011	34,970	..	..	..	..	..
	2012	39,200	..	..	..	..	..
	2013	41,970	..	..	..	..	..
T.F.Yug.Rep. Macedonia	2010	6,833	..	..	..	..	..
	2011	6,527	..	..	..	..	..
	2012	6,199	..	..	..	..	..
	2013	5,538	..	..	..	..	..
Ukraine	2010	59,441	..	..	..	..	3,570
	2011	54,381	..	..	..	..	3,747
	2012	52,234	..	..	..	..	3,658
	2013	58,254	..	..	..	..	3,924

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
1,119	11,814	..	..	1,243	65,819
3,841	14,299	..	3,349	1,235	72,132
1,024	15,062	..	2,613	1,187	68,069
855	17,369	192	1,214	1,099	61,742
11,760	5,007	4,100	13,984	4,797	285,254
12,992	6,793	3,699	13,358	5,732	308,435
13,250	5,672	4,636	22,264	7,033	345,417
14,761	5,612	5,119	23,626	7,593	342,854
2,611	8,030	137	11,666	1,287	141,219
2,101	8,245	137	13,469	1,883	145,285
6,017	7,197	137	11,187	2,362	135,868
1,986	8,097	301	11,003	2,736	136,170
197	..	0	..	0	7,173
180	..	0	..	0	8,867
374	..	27	..	0	9,864
130	..	274	..	36	11,161
1,276	0	1,474	442	129	166,608
1,200	0	1,447	3,938	547	152,659
1,131	4	1,769	3,717	1,143	166,659
1,695	14	1,099	5,042	822	161,768
167,991	..	..	..	..	291,266
170,277	..	..	..	..	296,928
177,809	..	..	..	..	322,350
177,615	..	..	..	..	304,466
388	..	..	..	..	43,781
288	..	..	..	..	44,226
50	..	..	..	39	43,691
38	..	..	..	171	46,387
731	1,613	2,600	4,158	600	40,701
750	1,416	2,814	4,600	1,918	44,309
1,175	1,407	2,734	4,048	2,594	45,486
5,165	1,099	2,787	3,864	2,300	47,395
975	..	..	699	1,273	25,172
1,228	..	..	0	1,506	26,412
1,333	..	..	37	1,597	26,412
1,453	..	..	74	1,454	26,907
..	14,586	11,256	30,949	11,600	263,731
..	16,332	9,862	24,987	11,520	360,037
..	14,710	8,120	18,253	12,177	355,434
..	12,240	9,702	26,496	11,954	389,745
868	51,800	15,045	7,286	4,654	477,384
1,583	49,786	11,281	9,568	4,993	451,242
1,283	53,698	11,809	13,763	5,303	486,255
1,580	57,233	8,366	8,979	6,070	467,892
10,030	44,610	0	258	3,143	97,381
10,080	45,410	0	221	3,421	94,102
10,260	46,060	0	258	3,745	99,523
10,500	44,220	0	184	4,087	100,961
..	..	..	74	..	6,907
..	..	..	166	..	6,694
..	..	..	33	..	6,231
..	..	..	0	..	5,538
..	..	..	..	..	59,441
..	..	..	..	..	54,381
..	..	..	..	..	52,234
..	..	..	..	..	58,254

Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Country or area	Year	Solid biofuels					
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
United Kingdom	2010	29,597	..	29,437	..	..	..
	2011	28,739	..	38,387	..	..	..
	2012	31,671	..	44,882	..	..	..
	2013	38,787	..	51,338	..	..	..
<b>Oceania</b>	<b>2010</b>	<b>167,772</b>	<b>..</b>	<b>79,410</b>	<b>96,217</b>	<b>6,112</b>	<b>1,030</b>
	<b>2011</b>	<b>164,684</b>	<b>..</b>	<b>75,543</b>	<b>100,260</b>	<b>5,783</b>	<b>1,047</b>
	<b>2012</b>	<b>128,861</b>	<b>..</b>	<b>7,983</b>	<b>132,868</b>	<b>20,302</b>	<b>1,050</b>
	<b>2013</b>	<b>128,162</b>	<b>..</b>	<b>8,011</b>	<b>139,572</b>	<b>21,142</b>	<b>1,360</b>
Australia	2010	67,168	..	72,106	91,484	6,112	679
	2011	63,562	..	68,235	94,634	5,783	679
	2012	28,029	..	675	128,108	20,302	679
	2013	29,189	..	703	133,408	21,142	714
Fiji	2010	338	..	..	3,736	..	71
	2011	338	..	..	4,629	..	71
	2012	338	..	..	3,762	..	71
	2013	338	..	..	5,297	..	71
French Polynesia	2010	40	..	..	..	..	..
	2011	41	..	..	..	..	15
	2012	41	..	..	..	..	15
	2013	41	..	..	..	..	15
Kiribati	2010	27	..	..	..	..	10
	2011	27	..	..	..	..	10
	2012	28	..	..	..	..	11
	2013	28	..	..	..	..	11
Micronesia(Fed. States of)	2010	49	..	..	..	..	20
	2011	50	..	..	..	..	21
	2012	51	..	..	..	..	21
	2013	51	..	..	..	..	21
New Zealand	2010	46,941	..	..	..	..	..
	2011	47,450	..	..	..	..	..
	2012	47,149	..	..	..	..	..
	2013	45,279	..	..	..	..	..
Papua New Guinea	2010	50,544	..	*5,263	934	..	177
	2011	50,544	..	*5,263	934	..	177
	2012	50,544	..	*5,263	934	..	177
	2013	50,544	..	*5,263	803	..	188
Samoa	2010	639	..	*25	63	..	13
	2011	639	..	25	*63	..	14
	2012	639	..	*25	*64	..	14
	2013	639	..	*26	*64	..	276
Solomon Islands	2010	1,174	..	*2,017	..	..	37
	2011	1,182	..	*2,020	..	..	38
	2012	1,191	..	*2,020	..	..	39
	2013	1,200	..	*2,020	..	..	40
Tonga	2010	19	..	..	..	..	7
	2011	19	..	..	..	..	7
	2012	19	..	..	..	..	7
	2013	19	..	..	..	..	7
Vanuatu	2010	831	..	..	..	..	15
	2011	831	..	..	..	..	16
	2012	831	..	..	..	..	16
	2013	831	..	..	..	..	17



Table 12

## Production of biofuels and wastes

Terajoules (TJ)

Non-biomass wastes		Liquid biofuels		Biogases	Total
Industrial waste	Municipal waste	Biogasoline	Biodiesel		
2,439	36,960	5,950	5,667	73,564	183,614
13,313	38,509	616	6,514	75,320	201,398
13,313	45,559	3,243	9,053	75,513	223,234
13,963	45,082	11,095	9,715	76,385	246,365
<b>4,099</b>	..	<b>5,902</b>	<b>2,355</b>	<b>15,703</b>	<b>377,570</b>
<b>4,193</b>	..	<b>6,888</b>	<b>3,275</b>	<b>16,478</b>	<b>377,105</b>
<b>4,029</b>	..	<b>6,648</b>	<b>2,870</b>	<b>20,098</b>	<b>323,658</b>
<b>4,022</b>	..	<b>6,193</b>	<b>3,054</b>	<b>16,984</b>	<b>327,140</b>
4,099	..	5,816	2,318	12,915	262,018
4,193	..	6,754	3,202	13,506	259,869
4,029	..	6,486	2,834	17,192	207,654
4,022	..	6,003	3,054	14,140	211,662
..	..	..	..	..	4,074
..	..	..	..	..	4,967
..	..	..	..	..	4,100
..	..	..	..	..	5,635
..	..	..	..	..	40
..	..	..	..	..	41
..	..	..	..	..	41
..	..	..	..	..	41
..	..	..	..	..	27
..	..	..	..	..	27
..	..	..	..	..	28
..	..	..	..	..	28
..	..	..	..	..	49
..	..	..	..	..	50
..	..	..	..	..	51
..	..	..	..	..	51
..	..	80	37	2,788	49,846
..	..	107	74	2,972	50,603
..	..	107	37	2,906	50,199
..	..	107	..	2,844	48,230
..	..	..	..	..	56,741
..	..	..	..	..	56,741
..	..	..	..	..	56,741
..	..	..	..	..	56,610
..	..	..	..	..	727
..	..	..	..	..	727
..	..	..	..	..	729
..	..	..	..	..	729
..	..	..	..	..	*3,190
..	..	..	..	..	*3,202
..	..	..	..	..	*3,211
..	..	..	..	..	*3,220
..	..	..	..	..	19
..	..	..	..	..	19
..	..	..	..	..	19
..	..	..	..	..	19
..	..	6	..	..	838
..	..	*27	..	..	859
..	..	*55	..	..	886
..	..	*82	..	..	913