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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 3.12.2009  
SEC(2009) 1652 final  
Partie 2b

**COMMISSION STAFF WORKING DOCUMENT**

*Accompanying the*

**COMMUNICATION FROM THE COMMISSION**

**FIFTH NATIONAL COMMUNICATION FROM THE EUROPEAN COMMUNITY  
UNDER THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE  
(UNFCCC)**

**(required under Article 12 of the United Nations Framework Convention on Climate  
Change)**

**Part 2b**

**[COM(2009) 667 final]**

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Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
		emissions/removals			P	A	P	A	P	A				
		(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)				
<b>Total National Emissions and Removals</b>		<b>3,087,180.37</b>	<b>17,417.07</b>	<b>1,066.28</b>	<b>87,598.66</b>	<b>46,187.56</b>	<b>1,726.18</b>	<b>7,278.98</b>	<b>899.16</b>	<b>0.45</b>	<b>10,494.19</b>	<b>31,691.08</b>	<b>10,631.29</b>	<b>6,071.75</b>
<b>I. Energy</b>		<b>3,129,049.23</b>	<b>3,067.67</b>	<b>110.15</b>							<b>10,146.76</b>	<b>27,322.85</b>	<b>4,839.31</b>	<b>5,779.36</b>
A. Fuel Combustion		3,105,486.26												
Reference Approach <sup>(2)</sup>														
Sectoral Approach <sup>(2)</sup>		3,110,794.28	608.20	109.75							10,127.90	27,243.88	4,028.73	5,568.77
1. Energy Industries		1,111,268.50	56.43	29.98							1,823.72	448.52	54.87	3,874.99
2. Manufacturing Industries and Construction		550,965.20	56.66	20.16							1,399.68	3,442.23	127.36	965.67
3. Transport		816,324.34	119.58	37.88							5,546.48	16,642.19	2,881.98	270.47
4. Other Sectors		623,555.84	374.80	20.32							1,302.25	6,608.88	955.84	448.65
5. Other		8,680.40	0.73	1.41							55.77	102.06	8.68	9.00
B. Fugitive Emissions from Fuels		18,254.96	2,459.47	0.40							18.87	78.98	810.57	210.59
1. Solid Fuels		1,463.40	1,174.91	0.01							1.35	40.41	6.93	8.26
2. Oil and Natural Gas		16,791.56	1,284.57	0.39							17.51	38.57	803.65	202.33
<b>2. Industrial Processes</b>		<b>213,790.97</b>	<b>28.59</b>	<b>164.44</b>	<b>87,598.66</b>	<b>46,187.56</b>	<b>1,726.18</b>	<b>7,278.98</b>	<b>899.16</b>	<b>0.45</b>	<b>175.25</b>	<b>2,601.33</b>	<b>605.98</b>	<b>282.33</b>
A. Mineral Products		113,070.83	0.66	IE,NA,NE,NO							65.88	14.51	116.20	63.63
B. Chemical Industry		30,516.55	21.03	164.12	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	40.15	172.37	195.61	107.30
C. Metal Production		69,816.70	4.72	0.03				4,575.13		0.12	51.24	2,397.75	24.99	84.19
D. Other Production <sup>(3)</sup>		49.41	0.31	0.27							17.32	14.25	250.20	26.81
E. Production of Halocarbons and SF <sub>6</sub>						17,368.54		678.41		0.01				
F. Consumption of Halocarbons and SF <sub>6</sub>					87,598.66	28,819.03	1,726.18	2,025.44	899.16	0.30				
G. Other		337.47	1.86	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.03	0.65	2.44	18.97	0.39

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

EU-15, 2000 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>												
				P	A	P	A	P	A																
	(Gg)													CO <sub>2</sub> equivalent (Gg)											
<b>3. Solvent and Other Product Use</b>	7,987.16		11.58							NA,NO,NE	NA,NO,NE	3,363.33	NA,NO,NE												
<b>4. Agriculture</b>		8,351.37	734.26							128.45	454.21	499.61	4.14												
A. Enteric Fermentation		6,080.51										265.69													
B. Manure Management		2,177.69	76.04									0.10													
C. Rice Cultivation		101.52										174.04													
D. Agricultural Soils <sup>(4)</sup>		-30.01	657.83																						
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO							NO,NE	NO,NE	NO,NE													
F. Field Burning of Agricultural Residues		21.65	0.39							13.96	454.21	58.89	4.14												
G. Other		NA,NO	NA,NE,NO							114.50	NA,NO	0.90	0.00												
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> -266,355.90	144.89	10.94							21.56	751.86	1,235.48	0.65												
A. Forest Land	<sup>(5)</sup> -348,618.58	56.63	0.58							14.78	513.10	57.38													
B. Cropland	<sup>(5)</sup> 64,788.61	10.20	9.97							2.53	89.26	NA,NE,NO													
C. Grassland	<sup>(5)</sup> -4,256.59	11.05	0.08							2.74	96.60	IE,NA,NE,NO													
D. Wetlands	<sup>(5)</sup> 4,096.86	6.26	0.25							0.07	2.53	NA,NE,NO													
E. Settlements	<sup>(5)</sup> 17,715.45	5.53	0.04							1.37	48.35	NA,NE,NO													
F. Other Land	<sup>(5)</sup> 1,146.23	0.23	0.00							0.06	2.01	NA,NE,NO													
G. Other	<sup>(5)</sup> -1,227.88	55.00	0.02							NA,NE,NO	NA,NE,NO	1,178.10	0.65												
<b>6. Waste</b>	2,708.91	5,824.56	34.91							22.18	560.83	87.58	5.26												
A. Solid Waste Disposal on Land	<sup>(6)</sup> 26.55	5,228.00	0.01							0.12	9.94	37.43	0.10												
B. Waste-water Handling		510.46	32.04							0.00	0.00	3.36													
C. Waste Incineration	<sup>(6)</sup> 2,682.36	21.67	0.94							22.01	550.85	29.42	5.14												
D. Other		NA,NO	64.42	1.92						0.05	0.04	17.37	0.02												
<b>7. Other (please specify)<sup>(7)</sup></b>	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO												
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO												

EU-15, 2000 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Memo Items:</b> <sup>(8)</sup>													
<b>International Bunkers</b>	<b>237,551.68</b>	<b>6.18</b>	<b>8.64</b>							<b>1,964.18</b>	<b>261.79</b>	<b>92.37</b>	<b>1,181.52</b>
Aviation	108,848.57	1.46	3.44							404.60	129.00	31.98	23.80
Marine	128,703.11	4.72	5.19							1,559.58	132.80	60.39	1,157.72
<b>Multilateral Operations</b>	<b>0.32</b>	<b>0.00</b>	<b>0.00</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>199,702.60</b>												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.

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Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES		Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
		emissions/removals			P	A	P	A	P	A				
		(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)				
<b>Total National Emissions and Removals</b>		<b>3,135,270.69</b>	<b>16,835.46</b>	<b>1,043.36</b>	<b>106,381.24</b>	<b>44,388.87</b>	<b>1,918.05</b>	<b>6,491.02</b>	<b>920.03</b>	<b>0.43</b>	<b>10,278.89</b>	<b>29,885.13</b>	<b>10,152.94</b>	<b>5,806.68</b>
<b>1. Energy</b>		<b>3,202,851.52</b>	<b>2,897.68</b>	<b>112.33</b>							<b>9,954.04</b>	<b>25,798.52</b>	<b>4,528.47</b>	<b>5,528.76</b>
A. Fuel Combustion		3,178,630.37												
Reference Approach <sup>(2)</sup>											9,934.71	25,730.16	3,746.73	5,332.76
Sectoral Approach <sup>(2)</sup>		3,184,536.67	591.26	111.94										
1. Energy Industries		1,135,487.56	58.52	30.94							1,804.81	451.19	53.46	3,645.01
2. Manufacturing Industries and Construction		548,362.93	56.10	20.35							1,386.95	3,293.43	127.47	960.00
3. Transport		825,736.87	111.55	38.28							5,358.21	15,311.95	2,637.12	264.81
4. Other Sectors		667,363.32	364.41	21.08							1,337.19	6,581.16	921.16	454.57
5. Other		7,586.00	0.68	1.28							47.54	92.43	7.52	8.36
B. Fugitive Emissions from Fuels		18,314.85	2,306.42	0.39							19.33	68.36	781.74	196.01
1. Solid Fuels		1,393.76	1,013.37	0.01							1.29	27.65	6.77	8.97
2. Oil and Natural Gas		16,921.09	1,293.05	0.38							18.04	40.72	774.97	187.04
<b>2. Industrial Processes</b>		<b>208,874.78</b>	<b>27.92</b>	<b>163.08</b>	<b>106,381.24</b>	<b>44,388.87</b>	<b>1,918.05</b>	<b>6,491.02</b>	<b>920.03</b>	<b>0.43</b>	<b>161.67</b>	<b>2,446.77</b>	<b>595.01</b>	<b>267.08</b>
A. Mineral Products		111,191.28	0.69	16.80							59.25	14.64	117.83	59.26
B. Chemical Industry		29,897.05	20.69	162.76	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	35.96	173.30	185.14	101.96
C. Metal Production		67,408.93	4.38	0.03				3,920.84		0.12	48.70	2,241.71	22.79	81.90
D. Other Production <sup>(3)</sup>		43.25	0.31	0.27							17.28	14.82	254.66	23.83
E. Production of Halocarbons and SF <sub>6</sub>						10,908.44		662.26		0.00				
F. Consumption of Halocarbons and SF <sub>6</sub>					106,381.24	33,480.43	1,918.05	1,907.93	920.03	0.27				
G. Other		334.25	1.85	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.03	0.48	2.30	14.59	0.13

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.



EU-15, 2001 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)	CO <sub>2</sub> equivalent (Gg)						(Gg)					
<b>3. Solvent and Other Product Use</b>	<b>7,691.32</b>		<b>10.73</b>							NA,NO,NE	NA,NO,NE	<b>3,235.80</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,309.81</b>	<b>709.54</b>							<b>122.55</b>	<b>468.09</b>	<b>499.62</b>	<b>4.30</b>
A. Enteric Fermentation		6,028.10											270.84
B. Manure Management		2,186.53	76.49										0.10
C. Rice Cultivation		102.81											166.76
D. Agricultural Soils <sup>(4)</sup>		-29.95	632.70										
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE	NO,NE		
F. Field Burning of Agricultural Residues		22.31	0.35						12.53	468.09	60.98		4.30
G. Other		NA,NO	NA,NE,NO						110.02	NA,NO	0.93		0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-286,834.77</b>	<b>122.62</b>	<b>12.45</b>						<b>17.02</b>	<b>594.04</b>	<b>1,207.47</b>	<b>0.43</b>	
A. Forest Land	<sup>(5)</sup> -378,284.78	40.02	0.45						10.40	361.20	54.62		
B. Cropland	<sup>(5)</sup> 70,477.78	9.86	11.43						2.45	86.31	NA,NE,NO		
C. Grassland	<sup>(5)</sup> -4,843.30	10.69	0.07						2.66	93.49	IE,NA,NE,NO		
D. Wetlands	<sup>(5)</sup> 5,407.65	6.29	0.25						0.08	2.70	NA,NE,NO		
E. Settlements	<sup>(5)</sup> 18,649.72	5.55	0.04						1.38	48.59	NA,NE,NO		
F. Other Land	<sup>(5)</sup> 1,601.90	0.20	0.00						0.05	1.75	NA,NE,NO		
G. Other	<sup>(5)</sup> 156.26	50.00	0.21						NA,NE,NO	NA,NE,NO	1,152.85		0.43
<b>6. Waste</b>	<b>2,687.85</b>	<b>5,477.43</b>	<b>35.24</b>						<b>23.62</b>	<b>577.70</b>	<b>86.58</b>	<b>6.11</b>	
A. Solid Waste Disposal on Land	<sup>(6)</sup> 26.49	4,906.40	0.01						0.12	9.63	35.50		0.10
B. Waste-water Handling		483.26	32.24						0.00	0.00	3.25		
C. Waste Incineration	<sup>(6)</sup> 2,661.36	21.76	0.95						23.08	567.93	29.59		5.95
D. Other	NA,NO	66.01	2.03						0.42	0.14	18.24		0.06
<b>7. Other (please specify)<sup>(7)</sup></b>	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
Memo Items: <sup>(8)</sup>													
<b>International Bunkers</b>	<b>241,060.37</b>	<b>6.35</b>	<b>8.65</b>							<b>1,972.75</b>	<b>256.93</b>	<b>93.30</b>	<b>1,206.39</b>
Aviation	107,415.87	1.41	3.41							396.56	126.11	31.38	24.35
Marine	133,644.50	4.94	5.24							1,576.19	130.81	61.92	1,182.03
<b>Multilateral Operations</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>206,856.07</b>												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7, Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.



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Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES		Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
		emissions/removals			P	A	P	A	P	A				
		(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)				
<b>Total National Emissions and Removals</b>		<b>3,135,270.69</b>	<b>16,835.46</b>	<b>1,043.36</b>	<b>106,381.24</b>	<b>44,388.87</b>	<b>1,918.05</b>	<b>6,491.02</b>	<b>920.03</b>	<b>0.43</b>	<b>10,278.89</b>	<b>29,885.13</b>	<b>10,152.94</b>	<b>5,806.68</b>
<b>1. Energy</b>		<b>3,202,851.52</b>	<b>2,897.68</b>	<b>112.33</b>							<b>9,954.04</b>	<b>25,798.52</b>	<b>4,528.47</b>	<b>5,528.76</b>
A. Fuel Combustion		3,178,630.37												
Reference Approach <sup>(2)</sup>														
Sectoral Approach <sup>(2)</sup>		3,184,536.67	591.26	111.94							9,934.71	25,730.16	3,746.73	5,332.76
1. Energy Industries		1,135,487.56	58.52	30.94							1,804.81	451.19	53.46	3,645.01
2. Manufacturing Industries and Construction		548,362.93	56.10	20.35							1,386.95	3,293.43	127.47	960.00
3. Transport		825,736.87	111.55	38.28							5,358.21	15,311.95	2,637.12	264.81
4. Other Sectors		667,363.32	364.41	21.08							1,337.19	6,581.16	921.16	454.57
5. Other		7,586.00	0.68	1.28							47.54	92.43	7.52	8.36
B. Fugitive Emissions from Fuels		18,314.85	2,306.42	0.39							19.33	68.36	781.74	196.01
1. Solid Fuels		1,393.76	1,013.37	0.01							1.29	27.65	6.77	8.97
2. Oil and Natural Gas		16,921.09	1,293.05	0.38							18.04	40.72	774.97	187.04
<b>2. Industrial Processes</b>		<b>208,874.78</b>	<b>27.92</b>	<b>163.08</b>	<b>106,381.24</b>	<b>44,388.87</b>	<b>1,918.05</b>	<b>6,491.02</b>	<b>920.03</b>	<b>0.43</b>	<b>161.67</b>	<b>2,446.77</b>	<b>595.01</b>	<b>267.08</b>
A. Mineral Products		111,191.28	0.69	IE,NA,NE,NO							59.25	14.64	117.83	59.26
B. Chemical Industry		29,897.05	20.69	162.76	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	35.96	173.30	185.14	101.96
C. Metal Production		67,408.93	4.38	0.03				3,920.84		0.12	48.70	2,241.71	22.79	81.90
D. Other Production <sup>(3)</sup>		43.25	0.31	0.27							17.28	14.82	254.66	23.83
E. Production of Halocarbons and SF <sub>6</sub>						10,908.44		662.26		0.00				
F. Consumption of Halocarbons and SF <sub>6</sub>					106,381.24	33,480.43	1,918.05	1,907.93	920.03	0.27				
G. Other		334.25	1.85	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.03	0.48	2.30	14.59	0.13

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

EU-15, 2002 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)	CO <sub>2</sub> equivalent (Gg)						(Gg)					
<b>3. Solvent and Other Product Use</b>	7,691.32		10.73							NA,NO,NE	NA,NO,NE	3,235.80	NA,NO,NE
<b>4. Agriculture</b>		8,309.81	709.54							122.55	468.09	499.62	4.30
A. Enteric Fermentation		6,028.10										270.84	
B. Manure Management		2,186.53	76.49										
C. Rice Cultivation		102.81										0.10	
D. Agricultural Soils <sup>(4)</sup>		-29.95	632.70									166.76	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE		NO,NE	
F. Field Burning of Agricultural Residues		22.31	0.35						12.53	468.09		60.98	4.30
G. Other		NA,NO	NA,NE,NO						110.02	NA,NO		0.93	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> -286,834.77	122.62	12.45						17.02	594.04		1,207.47	0.43
A. Forest Land	<sup>(5)</sup> -378,284.78	40.02	0.45						10.40	361.20		54.62	
B. Cropland	<sup>(5)</sup> 70,477.78	9.86	11.43						2.45	86.31		NA,NE,NO	
C. Grassland	<sup>(5)</sup> -4,843.30	10.69	0.07						2.66	93.49		IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 5,407.65	6.29	0.25						0.08	2.70		NA,NE,NO	
E. Settlements	<sup>(5)</sup> 18,649.72	5.55	0.04						1.38	48.59		NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,601.90	0.20	0.00						0.05	1.75		NA,NE,NO	
G. Other	<sup>(5)</sup> 156.26	50.00	0.21						NA,NE,NO	NA,NE,NO		1,152.85	0.43
<b>6. Waste</b>	2,687.85	5,477.43	35.24						23.62	577.70		86.58	6.11
A. Solid Waste Disposal on Land	<sup>(6)</sup> 26.49	4,906.40	0.01						0.12	9.63		35.50	0.10
B. Waste-water Handling		483.26	32.24						0.00	0.00		3.25	
C. Waste Incineration	<sup>(6)</sup> 2,661.36	21.76	0.95						23.08	567.93		29.59	5.95
D. Other		NA,NO	66.01	2.03					0.42	0.14		18.24	0.06
<b>7. Other (please specify)<sup>(7)</sup></b>	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO

EU-15, 2002 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Memo Items:</b> <sup>(8)</sup>													
<b>International Bunkers</b>	<b>241,060.37</b>	<b>6.35</b>	<b>8.65</b>							<b>1,972.75</b>	<b>256.93</b>	<b>93.30</b>	<b>1,206.39</b>
Aviation	107,415.87	1.41	3.41							396.56	126.11	31.38	24.35
Marine	133,644.50	4.94	5.24							1,576.19	130.81	61.92	1,182.03
<b>Multilateral Operations</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>206,856.07</b>												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.

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Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES		Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
					P	A	P	A	P	A				
		(Gg)				CO <sub>2</sub> equivalent (Gg)						(Gg)		
<b>Total National Emissions and Removals</b>		<b>3,155,688.35</b>	<b>15,784.81</b>	<b>1,010.69</b>	<b>137,071.05</b>	<b>49,780.89</b>	<b>2,028.09</b>	<b>6,642.60</b>	<b>1,005.26</b>	<b>0.37</b>	<b>9,915.98</b>	<b>27,186.18</b>	<b>9,734.93</b>	<b>5,096.01</b>
<b>1. Energy</b>		<b>3,254,129.32</b>	<b>2,570.33</b>	<b>113.14</b>							<b>9,597.68</b>	<b>22,887.12</b>	<b>3,901.37</b>	<b>4,826.56</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	3,252,344.98												
	Sectoral Approach <sup>(2)</sup>	3,235,665.63	550.23	112.78							9,574.74	22,830.19	3,218.26	4,655.60
1. Energy Industries		1,193,415.69	60.51	31.90							1,894.46	486.03	57.29	3,340.73
2. Manufacturing Industries and Construction		541,569.01	55.46	20.27							1,383.25	3,307.31	132.15	712.51
3. Transport		841,858.87	94.43	38.38							4,950.69	12,836.17	2,166.88	223.37
4. Other Sectors		650,998.65	339.18	20.84							1,303.58	6,113.52	854.68	372.93
5. Other		7,823.42	0.65	1.39							42.76	87.16	7.26	6.06
B. Fugitive Emissions from Fuels		18,463.69	2,020.10	0.36							22.95	56.93	683.11	170.97
1. Solid Fuels		1,407.35	823.90	0.01							1.18	24.72	5.90	8.14
2. Oil and Natural Gas		17,056.34	1,196.20	0.35							21.77	32.21	677.21	162.83
<b>2. Industrial Processes</b>		<b>212,554.98</b>	<b>29.49</b>	<b>149.78</b>	<b>137,071.05</b>	<b>49,780.89</b>	<b>2,028.09</b>	<b>6,642.60</b>	<b>1,005.26</b>	<b>0.37</b>	<b>150.46</b>	<b>2,364.59</b>	<b>561.28</b>	<b>259.31</b>
A. Mineral Products		113,039.21	0.69	IE,NA,NE,NO							55.13	14.00	110.37	60.79
B. Chemical Industry		30,382.66	22.24	149.46	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	31.33	128.23	169.57	88.34
C. Metal Production		68,758.80	4.38	0.03				3,965.04		0.11	46.12	2,204.00	21.50	82.28
D. Other Production <sup>(3)</sup>		46.53	0.32	0.28							17.52	15.32	248.07	21.53
E. Production of Halocarbons and SF <sub>6</sub>						7,894.00		747.99		0.01				
F. Consumption of Halocarbons and SF <sub>6</sub>					137,071.05	41,886.60	2,028.09	1,929.57	1,005.26	0.23				
G. Other		327.78	1.85	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.02	0.36	3.03	11.77	6.37

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.



EU-15, 2003 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)	CO <sub>2</sub> equivalent (Gg)						(Gg)					
<b>3. Solvent and Other Product Use</b>	<b>7,372.81</b>		<b>10.25</b>							NA,NO,NE	NA,NO,NE	<b>3,101.19</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,126.89</b>	<b>689.81</b>							<b>120.18</b>	<b>523.16</b>	<b>535.66</b>	<b>4.94</b>
A. Enteric Fermentation		5,875.20										264.46	
B. Manure Management		2,147.55	73.06									0.10	
C. Rice Cultivation		109.11										200.71	
D. Agricultural Soils <sup>(4)</sup>		-29.90	616.37										
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE		NO,NE	
F. Field Burning of Agricultural Residues		24.93	0.38						13.56	523.16		69.38	4.94
G. Other		NA,NO	NA,NE,NO						106.62	NA,NO		1.01	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-321,062.42</b>	<b>143.90</b>	<b>12.27</b>						<b>25.28</b>	<b>870.85</b>		<b>1,550.61</b>	<b>0.96</b>
A. Forest Land	<sup>(5)</sup> -373,595.75	66.51	0.70						18.70	639.07		75.01	
B. Cropland	<sup>(5)</sup> 66,726.06	9.93	11.01						2.47	86.84		NA,NE,NO	
C. Grassland	<sup>(5)</sup> -40,545.26	10.45	0.07						2.59	91.28		IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 5,426.84	6.19	0.25						0.08	2.72		NA,NE,NO	
E. Settlements	<sup>(5)</sup> 18,812.79	5.55	0.04						1.38	48.56		NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,709.59	0.27	0.00						0.07	2.37		NA,NE,NO	
G. Other	<sup>(5)</sup> 403.32	45.00	0.21						NA,NE,NO	NA,NE,NO		1,475.60	0.96
<b>6. Waste</b>	<b>2,693.65</b>	<b>4,914.21</b>	<b>35.43</b>						<b>22.37</b>	<b>540.47</b>		<b>84.82</b>	<b>4.25</b>
A. Solid Waste Disposal on Land	<sup>(6)</sup> 15.88	4,339.13	0.01						0.08	8.98		31.67	0.06
B. Waste-water Handling		483.67	32.23						NA,NE,NO	NA,NE,NO		3.35	
C. Waste Incineration	<sup>(6)</sup> 2,677.77	21.23	0.95						22.24	531.45		29.13	4.16
D. Other	NA,NO	70.17	2.25						0.05	0.04		20.68	0.03
<b>7. Other (please specify)<sup>(7)</sup></b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO



EU-15, 2003 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Memo Items:</b> <sup>(8)</sup>													
<b>International Bunkers</b>	<b>248,503.28</b>	<b>6.50</b>	<b>9.90</b>							<b>2,029.40</b>	<b>260.38</b>	<b>94.96</b>	<b>1,280.95</b>
Aviation	108,891.32	1.42	3.43							394.39	126.16	31.38	24.13
Marine	139,611.96	5.07	6.47							1,635.01	134.22	63.58	1,256.82
<b>Multilateral Operations</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>221,432.97</b>												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.

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Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Total National Emissions and Removals</b>	<b>3,135,270.69</b>	<b>16,835.46</b>	<b>1,043.36</b>	<b>106,381.24</b>	<b>44,388.87</b>	<b>1,918.05</b>	<b>6,491.02</b>	<b>920.03</b>	<b>0.43</b>	<b>10,278.89</b>	<b>29,885.13</b>	<b>10,152.94</b>	<b>5,806.68</b>
<b>1. Energy</b>	<b>3,202,851.52</b>	<b>2,897.68</b>	<b>112.33</b>							<b>9,954.04</b>	<b>25,798.52</b>	<b>4,528.47</b>	<b>5,528.76</b>
A. Fuel Combustion	3,178,630.37												
Reference Approach <sup>(2)</sup>													
Sectoral Approach <sup>(2)</sup>	3,184,536.67	591.26	111.94							9,934.71	25,730.16	3,746.73	5,332.76
1. Energy Industries	1,135,487.56	58.52	30.94							1,804.81	451.19	53.46	3,645.01
2. Manufacturing Industries and Construction	548,362.93	56.10	20.35							1,386.95	3,293.43	127.47	960.00
3. Transport	825,736.87	111.55	38.28							5,358.21	15,311.95	2,637.12	264.81
4. Other Sectors	667,363.32	364.41	21.08							1,337.19	6,581.16	921.16	454.57
5. Other	7,586.00	0.68	1.28							47.54	92.43	7.52	8.36
B. Fugitive Emissions from Fuels	18,314.85	2,306.42	0.39							19.33	68.36	781.74	196.01
1. Solid Fuels	1,393.76	1,013.37	0.01							1.29	27.65	6.77	8.97
2. Oil and Natural Gas	16,921.09	1,293.05	0.38							18.04	40.72	774.97	187.04
<b>2. Industrial Processes</b>	<b>208,874.78</b>	<b>27.92</b>	<b>163.08</b>	<b>106,381.24</b>	<b>44,388.87</b>	<b>1,918.05</b>	<b>6,491.02</b>	<b>920.03</b>	<b>0.43</b>	<b>161.67</b>	<b>2,446.77</b>	<b>595.01</b>	<b>267.08</b>
A. Mineral Products	111,191.28	0.69	IE,NA,NE,NO							59.25	14.64	117.83	59.26
B. Chemical Industry	29,897.05	20.69	162.76	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	35.96	173.30	185.14	101.96
C. Metal Production	67,408.93	4.38	0.03				3,920.84		0.12	48.70	2,241.71	22.79	81.90
D. Other Production <sup>(3)</sup>	43.25	0.31	0.27							17.28	14.82	254.66	23.83
E. Production of Halocarbons and SF <sub>6</sub>					10,908.44		662.26		0.00				
F. Consumption of Halocarbons and SF <sub>6</sub>				106,381.24	33,480.43	1,918.05	1,907.93	920.03	0.27				
G. Other	334.25	1.85	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.03	0.48	2.30	14.59	0.13

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

EU-15, 2004 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)	CO <sub>2</sub> equivalent (Gg)						(Gg)					
<b>3. Solvent and Other Product Use</b>	<b>7,691.32</b>		<b>10.73</b>							NA,NO,NE	NA,NO,NE	<b>3,235.80</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,309.81</b>	<b>709.54</b>							<b>122.55</b>	<b>468.09</b>	<b>499.62</b>	<b>4.30</b>
A. Enteric Fermentation		6,028.10										270.84	
B. Manure Management		2,186.53	76.49									0.10	
C. Rice Cultivation		102.81										166.76	
D. Agricultural Soils <sup>(4)</sup>		-29.95	632.70										
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE	NO,NE		
F. Field Burning of Agricultural Residues		22.31	0.35						12.53	468.09	60.98		4.30
G. Other		NA,NO	NA,NE,NO						110.02	NA,NO	0.93		0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-286,834.77</b>	<b>122.62</b>	<b>12.45</b>						<b>17.02</b>	<b>594.04</b>	<b>1,207.47</b>	<b>0.43</b>	
A. Forest Land	<sup>(5)</sup> -378,284.78	40.02	0.45						10.40	361.20	54.62		
B. Cropland	<sup>(5)</sup> 70,477.78	9.86	11.43						2.45	86.31	NA,NE,NO		
C. Grassland	<sup>(5)</sup> -4,843.30	10.69	0.07						2.66	93.49	IE,NA,NE,NO		
D. Wetlands	<sup>(5)</sup> 5,407.65	6.29	0.25						0.08	2.70	NA,NE,NO		
E. Settlements	<sup>(5)</sup> 18,649.72	5.55	0.04						1.38	48.59	NA,NE,NO		
F. Other Land	<sup>(5)</sup> 1,601.90	0.20	0.00						0.05	1.75	NA,NE,NO		
G. Other	<sup>(5)</sup> 156.26	50.00	0.21						NA,NE,NO	NA,NE,NO	1,152.85		0.43
<b>6. Waste</b>	<b>2,687.85</b>	<b>5,477.43</b>	<b>35.24</b>						<b>23.62</b>	<b>577.70</b>	<b>86.58</b>	<b>6.11</b>	
A. Solid Waste Disposal on Land	<sup>(6)</sup> 26.49	4,906.40	0.01						0.12	9.63	35.50		0.10
B. Waste-water Handling		483.26	32.24						0.00	0.00	3.25		
C. Waste Incineration	<sup>(6)</sup> 2,661.36	21.76	0.95						23.08	567.93	29.59		5.95
D. Other		NA,NO	66.01	2.03					0.42	0.14	18.24		0.06
<b>7. Other (please specify)<sup>(7)</sup></b>		NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO

EU-15, 2004 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)				CO <sub>2</sub> equivalent (Gg)				(Gg)				
<b>Memo Items:</b> <sup>(8)</sup>													
<b>International Bunkers</b>	265,647.42	6.77	10.52							2,129.72	276.08	100.23	1,357.61
Aviation	117,398.72	1.51	3.71							422.99	136.26	33.76	26.38
Marine	148,248.70	5.26	6.81							1,706.73	139.82	66.47	1,331.23
<b>Multilateral Operations</b>	0.76	0.00	0.00							0.01	0.00	0.00	0.00
<b>CO<sub>2</sub> Emissions from Biomass</b>	236,871.17												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.



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Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES		Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
					P	A	P	A	P	A				
		(Gg)				CO <sub>2</sub> equivalent (Gg)						(Gg)		
<b>Total National Emissions and Removals</b>		<b>3,156,423.84</b>	<b>14,943.71</b>	<b>995.26</b>	<b>161,219.76</b>	<b>53,422.96</b>	<b>1,868.30</b>	<b>4,053.18</b>	<b>1,083.15</b>	<b>0.38</b>	<b>9,441.90</b>	<b>24,120.44</b>	<b>8,875.00</b>	<b>4,561.67</b>
<b>1. Energy</b>		<b>3,230,636.80</b>	<b>2,273.14</b>	<b>112.06</b>							<b>9,133.66</b>	<b>19,901.26</b>	<b>3,319.30</b>	<b>4,300.71</b>
A. Fuel Combustion		3,236,716.49												
Reference Approach <sup>(2)</sup>														
Sectoral Approach <sup>(2)</sup>		3,212,299.21	521.02	111.68							9,108.31	19,847.91	2,698.01	4,113.24
1. Energy Industries		1,195,673.95	61.33	31.66							1,871.55	492.63	53.77	2,906.30
2. Manufacturing Industries and Construction		527,804.69	55.76	20.69							1,398.09	3,239.02	135.49	668.84
3. Transport		848,403.58	78.19	37.23							4,540.31	10,282.74	1,708.98	195.26
4. Other Sectors		632,512.40	325.04	20.77							1,242.74	5,725.94	790.59	336.11
5. Other		7,904.59	0.69	1.34							55.63	107.58	9.17	6.74
B. Fugitive Emissions from Fuels		18,337.59	1,752.12	0.38							25.35	53.35	621.29	187.47
1. Solid Fuels		1,342.57	589.88	0.01							1.16	20.66	6.40	8.53
2. Oil and Natural Gas		16,995.02	1,162.24	0.37							24.19	32.69	614.89	178.94
<b>2. Industrial Processes</b>		<b>218,175.44</b>	<b>30.66</b>	<b>151.37</b>	<b>161,219.76</b>	<b>53,422.96</b>	<b>1,868.30</b>	<b>4,053.18</b>	<b>1,083.15</b>	<b>0.38</b>	<b>149.66</b>	<b>2,554.76</b>	<b>534.12</b>	<b>253.16</b>
A. Mineral Products		115,801.70	0.62	IE,NA,NE,NO							51.75	16.00	98.20	59.99
B. Chemical Industry		31,783.99	21.04	151.04	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	33.56	119.39	147.43	85.74
C. Metal Production		70,170.87	6.92	0.03				1,835.51		0.12	44.99	2,398.99	22.07	84.08
D. Other Production <sup>(3)</sup>		33.89	0.32	0.28							19.02	15.38	255.65	16.46
E. Production of Halocarbons and SF <sub>6</sub>						4,715.42		475.50		0.00				
F. Consumption of Halocarbons and SF <sub>6</sub>					161,219.76	48,704.06	1,868.30	1,742.17	1,083.15	0.23				
G. Other		384.99	1.76	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.02	0.34	5.00	10.76	6.88

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.



EU-15, 2005 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)												
<b>3. Solvent and Other Product Use</b>	7,423.33		9.71							NA,NO,NE	NA,NO,NE	3,122.01	NA,NO,NE
<b>4. Agriculture</b>		8,002.27	674.00							114.30	343.41	486.96	2.99
A. Enteric Fermentation		5,761.02											
B. Manure Management		2,146.49	72.24									263.33	
C. Rice Cultivation		108.35										0.09	
D. Agricultural Soils <sup>(4)</sup>		-29.96	601.49									178.90	
E. Prescribed Burning of Savannas		NA,NO	NA,NO							NO,NE	NO,NE	NO,NE	
F. Field Burning of Agricultural Residues		16.37	0.26							9.54	343.41	43.69	2.99
G. Other		NA,NO	NA,NE,NO							104.75	NA,NO	0.96	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> -302,467.83	126.13	11.90							20.65	720.30	1,327.42	0.39
A. Forest Land	<sup>(5)</sup> -391,059.70	53.89	0.58							14.19	492.80	58.68	
B. Cropland	<sup>(5)</sup> 65,588.78	10.00	10.74							2.48	87.47	NA,NE,NO	
C. Grassland	<sup>(5)</sup> -2,994.57	10.30	0.07							2.56	90.26	IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 5,453.55	6.54	0.27							0.07	2.51	NA,NE,NO	
E. Settlements	<sup>(5)</sup> 18,432.72	5.22	0.03							1.30	45.72	NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,480.97	0.18	0.00							0.04	1.53	NA,NE,NO	
G. Other	<sup>(5)</sup> 630.42	40.00	0.21							NA,NE,NO	NA,NE,NO	1,268.74	0.39
<b>6. Waste</b>	2,656.10	4,511.51	36.22							23.63	600.71	85.18	4.42
A. Solid Waste Disposal on Land	<sup>(6)</sup> 13.59	3,936.51	0.01							0.08	8.07	29.67	0.05
B. Waste-water Handling		481.05	32.59							NA,NE,NO	NA,NE,NO	3.52	
C. Waste Incineration	<sup>(6)</sup> 2,642.51	23.71	0.98							23.50	592.59	31.97	4.35
D. Other		70.23	2.65							0.05	0.04	20.02	0.02
<b>7. Other (please specify)<sup>(7)</sup></b>	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO

EU-15, 2005 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)						(Gg)			
<b>Memo Items:</b> <sup>(8)</sup>													
<b>International Bunkers</b>	<b>278,696.92</b>	<b>6.95</b>	<b>10.88</b>							<b>2,136.92</b>	<b>278.28</b>	<b>103.43</b>	<b>1,368.51</b>
Aviation	123,010.55	1.57	3.88							437.81	143.58	36.61	27.05
Marine	155,686.37	5.38	7.00							1,699.11	134.70	66.82	1,341.45
<b>Multilateral Operations</b>	<b>1.78</b>	<b>0.00</b>	<b>0.00</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>244,969.88</b>												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Total National Emissions and Removals</b>	<b>3,157,670.87</b>	<b>14,697.49</b>	<b>950.45</b>	<b>170,105.64</b>	<b>54,237.35</b>	<b>1,789.06</b>	<b>3,614.11</b>	<b>1,179.07</b>	<b>0.39</b>	<b>9,141.32</b>	<b>23,083.34</b>	<b>8,703.77</b>	<b>4,353.63</b>
<b>I. Energy</b>	<b>3,221,246.66</b>	<b>2,138.32</b>	<b>112.90</b>							<b>8,834.55</b>	<b>18,949.77</b>	<b>3,039.96</b>	<b>4,090.08</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>												
A. Fuel Combustion	Sectoral Approach <sup>(2)</sup>	3,210,430.36	511.15	112.54						8,807.27	18,889.46	2,443.23	3,908.62
1. Energy Industries		1,195,430.97	58.15	31.91						1,813.02	494.38	54.31	2,710.84
2. Manufacturing Industries and Construction		529,660.58	55.03	21.14						1,372.71	3,340.90	136.69	650.90
3. Transport		849,915.01	73.57	37.55						4,371.22	9,269.30	1,483.56	210.46
4. Other Sectors		620,362.57	323.78	20.57						1,201.18	5,690.93	760.88	329.61
5. Other		7,421.61	0.61	1.36						49.14	93.95	7.79	6.81
B. Fugitive Emissions from Fuels		18,455.91	1,627.17	0.36						27.28	60.31	596.73	181.47
1. Solid Fuels		1,393.04	530.03	0.01						1.20	24.48	6.34	8.58
2. Oil and Natural Gas		17,062.87	1,097.14	0.35						26.08	35.83	590.39	172.88
<b>2. Industrial Processes</b>	<b>220,749.70</b>	<b>30.52</b>	<b>116.94</b>	<b>170,105.64</b>	<b>54,237.35</b>	<b>1,789.06</b>	<b>3,614.11</b>	<b>1,179.07</b>	<b>0.39</b>	<b>148.00</b>	<b>2,405.75</b>	<b>536.77</b>	<b>255.28</b>
A. Mineral Products	117,464.55	0.92	IE,NA,NE,NO							52.82	16.41	106.73	61.18
B. Chemical Industry	30,997.19	20.05	116.61	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	28.12	128.58	134.61	88.61
C. Metal Production	71,898.14	7.45	0.03				1,568.43		0.14	46.56	2,240.69	21.73	82.51
D. Other Production <sup>(3)</sup>	20.13	0.32	0.28							20.15	15.65	263.24	15.98
E. Production of Halocarbons and SF <sub>6</sub>					2,577.47		345.13		0.01				
F. Consumption of Halocarbons and SF <sub>6</sub>				170,105.64	51,656.59	1,789.06	1,700.56	1,179.07	0.23				
G. Other	369.70	1.79	0.02	NA,NE,NO	NA,NO	NA,NE,NO	NA,NO	NA,NO	0.02	0.35	4.41	10.45	7.00

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)												
CO <sub>2</sub> equivalent (Gg)													
<b>3. Solvent and Other Product Use</b>	<b>7,333.70</b>		<b>9.89</b>							NA,NO,NE	NA,NO,NE	<b>3,100.32</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>7,979.65</b>	<b>662.10</b>							<b>115.60</b>	<b>420.33</b>	<b>501.62</b>	<b>3.84</b>
A. Enteric Fermentation		5,716.49											
B. Manure Management		2,163.58	71.13									258.89	
C. Rice Cultivation		109.29										0.10	
D. Agricultural Soils <sup>(4)</sup>		-29.75	590.67									186.72	
E. Prescribed Burning of Savannas		NA,NO	NA,NO							NO,NE	NO,NE	NO,NE	
F. Field Burning of Agricultural Residues		20.04	0.31							11.19	420.33	54.90	3.84
G. Other		NA,NO	NA,NE,NO							104.41	NA,NO	1.02	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-294,337.65</b>	<b>129.37</b>	<b>12.29</b>							<b>21.03</b>	<b>738.23</b>	<b>1,440.28</b>	<b>0.22</b>
A. Forest Land	<sup>(5)</sup> -395,583.28	58.44	0.61							14.65	513.30	59.39	
B. Cropland	<sup>(5)</sup> 66,429.01	9.88	11.10							2.45	86.44	NA,NE,NO	
C. Grassland	<sup>(5)</sup> 1,480.34	10.09	0.07							2.50	88.20	IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 4,672.66	6.52	0.26							0.07	2.61	NA,NE,NO	
E. Settlements	<sup>(5)</sup> 27,062.66	5.28	0.04							1.31	46.16	NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,378.61	0.17	0.00							0.04	1.52	NA,NE,NO	
G. Other	<sup>(5)</sup> 222.35	39.00	0.20							NA,NE,NO	NA,NE,NO	1,380.89	0.22
<b>6. Waste</b>	<b>2,678.46</b>	<b>4,419.64</b>	<b>36.33</b>							<b>22.14</b>	<b>569.27</b>	<b>84.82</b>	<b>4.20</b>
A. Solid Waste Disposal on Land	<sup>(6)</sup> 13.29	3,840.05	0.00							0.07	7.60	28.76	0.05
B. Waste-water Handling		484.99	32.79							NA,NE,NO	NA,NE,NO	3.54	
C. Waste Incineration	<sup>(6)</sup> 2,665.17	22.47	0.96							22.02	561.62	30.83	4.13
D. Other	NA,NO	72.13	2.57							0.04	0.04	21.69	0.02
<b>7. Other (please specify)<sup>(7)</sup></b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO



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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)	CO <sub>2</sub> equivalent (Gg)						(Gg)					
<b>Memo Items:</b> <sup>(8)</sup>													
<b>International Bunkers</b>	<b>293,890.22</b>	<b>7.29</b>	<b>11.65</b>							<b>2,287.68</b>	<b>296.82</b>	<b>110.02</b>	<b>1,426.51</b>
Aviation	128,201.05	1.60	4.04							456.89	150.34	38.30	30.01
Marine	165,689.17	5.69	7.61							1,830.80	146.48	71.72	1,396.50
<b>Multilateral Operations</b>	<b>2.73</b>	<b>0.00</b>	<b>0.00</b>							<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>CO<sub>2</sub> Emissions from Biomass</b>	<b>260,415.03</b>												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.



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Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)				(Gg)					
<b>Total National Emissions and Removals</b>	<b>3,125,915.64</b>	<b>14,521.00</b>	<b>943.54</b>	<b>178,931.66</b>	<b>56,635.24</b>	<b>1,725.10</b>	<b>3,349.11</b>	<b>1,214.56</b>	<b>0.39</b>	<b>8,812.29</b>	<b>22,082.63</b>	<b>8,205.16</b>	<b>4,163.46</b>
<b>I. Energy</b>	<b>3,155,622.00</b>	<b>2,036.45</b>	<b>111.77</b>							<b>8,511.49</b>	<b>18,156.76</b>	<b>2,868.34</b>	<b>3,898.02</b>
A. Fuel Combustion	3,166,984.77												
Reference Approach <sup>(2)</sup>													
Sectoral Approach <sup>(2)</sup>	3,137,251.89	514.49	111.43							8,487.79	18,095.64	2,289.91	3,723.16
1. Energy Industries	1,207,863.92	56.45	31.85							1,760.21	505.72	53.43	2,571.16
2. Manufacturing Industries and Construction	517,244.44	56.72	21.02							1,354.22	3,346.86	135.36	650.08
3. Transport	850,892.12	68.88	37.56							4,206.17	8,451.24	1,361.63	209.46
4. Other Sectors	553,577.21	331.89	19.70							1,118.38	5,704.99	732.18	285.96
5. Other	7,674.21	0.54	1.31							48.80	86.83	7.31	6.50
B. Fugitive Emissions from Fuels	18,370.11	1,521.96	0.34							23.69	61.12	578.43	174.86
1. Solid Fuels	1,397.00	435.99	0.01							1.08	24.47	6.12	10.52
2. Oil and Natural Gas	16,973.11	1,085.97	0.33							22.62	36.65	572.32	164.34
<b>2. Industrial Processes</b>	<b>225,787.47</b>	<b>31.63</b>	<b>118.34</b>	<b>178,931.66</b>	<b>56,635.24</b>	<b>1,725.10</b>	<b>3,349.11</b>	<b>1,214.56</b>	<b>0.39</b>	<b>150.19</b>	<b>2,325.02</b>	<b>523.10</b>	<b>256.52</b>
A. Mineral Products	119,297.86	0.97	IE,NA,NE,NO							54.56	15.29	100.27	60.51
B. Chemical Industry	32,307.41	20.85	118.01	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	28.89	128.37	128.06	90.16
C. Metal Production	73,837.02	7.73	0.03				1,429.86		0.13	46.05	2,161.39	20.56	84.63
D. Other Production <sup>(3)</sup>	29.46	0.32	0.28							20.37	15.63	263.76	14.67
E. Production of Halocarbons and SF <sub>6</sub>					1,831.99		322.40		C,NA,NO				
F. Consumption of Halocarbons and SF <sub>6</sub>				178,931.66	54,792.90	1,725.10	1,596.85	1,214.56	0.25				
G. Other	315.72	1.76	0.02	NA,NE,NO	NA,NO	NA,NE,NO	NA,NO	NA,NO	0.01	0.32	4.34	10.45	6.54

Note: A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.  
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

EU-15, 2007 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>		PFCs <sup>(1)</sup>		SF <sub>6</sub>		NO <sub>x</sub>	CO	NMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
	(Gg)				CO <sub>2</sub> equivalent (Gg)						(Gg)		
<b>3. Solvent and Other Product Use</b>	<b>7,281.64</b>		<b>10.28</b>							NA,NO,NE	NA,NO,NE	<b>3,078.07</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,011.73</b>	<b>655.60</b>							<b>111.79</b>	<b>420.51</b>	<b>480.06</b>	<b>3.84</b>
A. Enteric Fermentation		5,738.05											
B. Manure Management		2,170.11	71.80									263.30	
C. Rice Cultivation		113.26										0.11	
D. Agricultural Soils <sup>(4)</sup>		-29.74	583.49									160.72	
E. Prescribed Burning of Savannas		NA,NO	NA,NO							NO,NE	NO,NE	NO,NE	
F. Field Burning of Agricultural Residues		20.04	0.31							11.20	420.51	55.00	3.84
G. Other		NA,NO	NA,NE,NO							100.59	NA,NO	0.93	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-265,232.53</b>	<b>115.89</b>	<b>10.91</b>							<b>18.04</b>	<b>632.45</b>	<b>1,170.57</b>	<b>1.02</b>
A. Forest Land	<sup>(5)</sup> -355,121.98	46.19	0.56							11.68	408.57	60.45	
B. Cropland	<sup>(5)</sup> 62,838.72	9.69	9.79							2.41	84.83	NA,NE,NO	
C. Grassland	<sup>(5)</sup> -4,999.68	10.12	0.07							2.51	88.52	IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 4,776.69	6.41	0.26							0.07	2.62	NA,NE,NO	
E. Settlements	<sup>(5)</sup> 27,286.11	5.31	0.04							1.32	46.43	NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,368.76	0.17	0.00							0.04	1.49	NA,NE,NO	
G. Other	<sup>(5)</sup> -1,381.14	38.00	0.20							NA,NE,NO	NA,NE,NO	1,110.12	1.02
<b>6. Waste</b>	<b>2,457.05</b>	<b>4,325.31</b>	<b>36.64</b>							<b>20.79</b>	<b>547.87</b>	<b>85.01</b>	<b>4.05</b>
A. Solid Waste Disposal on Land	<sup>(6)</sup> 12.53	3,744.15	0.00							0.07	7.10	28.28	0.05
B. Waste-water Handling		485.56	33.02							NA,NE,NO	NA,NE,NO	4.37	
C. Waste Incineration	<sup>(6)</sup> 2,444.52	21.59	0.94							20.69	540.73	29.96	3.98
D. Other	NA,NO	74.01	2.67							0.03	0.04	22.40	0.02
<b>7. Other (please specify)<sup>(7)</sup></b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>	<b>NA,NO</b>
Other non-specified	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs		PFCs		SF <sub>6</sub>		NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	emissions/removals			P	A	P	A	P	A				
	(Gg)			CO <sub>2</sub> equivalent (Gg)						(Gg)			
<b>Memo Items:</b> <sup>(8)</sup>													
<b>International Bunkers</b>	298,759.91	7.33	12.40							2,374.68	306.59	111.94	1,439.74
Aviation	131,574.31	1.57	4.19							468.78	152.79	37.65	29.95
Marine	167,185.60	5.76	8.21							1,905.90	153.80	74.29	1,409.79
<b>Multilateral Operations</b>	1.96	0.00	0.00							0.01	0.00	0.00	0.00
<b>CO<sub>2</sub> Emissions from Biomass</b>	272,338.63												

<sup>(1)</sup> The emissions of HFCs and PFCs are to be expressed as CO<sub>2</sub> equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

<sup>(2)</sup> For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

<sup>(3)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(4)</sup> Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.

<sup>(5)</sup> For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(6)</sup> CO<sub>2</sub> from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

<sup>(7)</sup> If reporting any country-specific source category under sector "7, Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

<sup>(8)</sup> Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO<sub>2</sub> emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO<sub>2</sub> emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO<sub>2</sub> emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.