



COMMISSION OF THE EUROPEAN COMMUNITIES

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

**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 2a**

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

## Appendix A Summary GHG emissions inventory tables for the EU-15

A1 EU-15, 1990

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	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>3,137,561.92</b>	<b>20,740.59</b>	<b>1,249.83</b>	<b>965.02</b>	<b>28,013.65</b>	<b>106.81</b>	<b>16,824.70</b>	<b>2.34</b>	<b>0.46</b>	<b>13,448.34</b>	<b>52,273.09</b>	<b>15,877.49</b>	<b>16,463.84</b>
<b>1. Energy</b>	<b>3,130,761.92</b>	<b>4,561.14</b>	<b>97.23</b>							<b>13,065.19</b>	<b>47,336.72</b>	<b>9,002.26</b>	<b>15,922.49</b>
A. Fuel Combustion													
Reference Approach <sup>(2)</sup>	3,119,422.48												
Sectoral Approach <sup>(2)</sup>	3,111,335.73	860.21	96.90							13,028.24	47,199.01	7,594.30	15,573.55
1. Energy Industries	1,151,379.53	41.23	30.47							2,883.49	521.08	55.82	10,223.23
2. Manufacturing Industries and Construction	612,761.21	61.55	22.48							1,854.10	3,748.73	136.94	2,872.31
3. Transport	688,170.13	206.91	19.92							6,818.05	32,185.26	5,874.70	765.20
4. Other Sectors	637,798.09	538.68	21.84							1,358.04	10,308.40	1,320.25	1,628.79
5. Other	21,226.77	11.85	2.19							114.55	435.53	206.60	84.02
B. Fugitive Emissions from Fuels	19,426.19	3,700.92	0.33							36.95	137.70	1,407.96	348.93
1. Solid Fuels	2,074.39	2,206.31	0.01							3.22	76.71	17.79	64.48
2. Oil and Natural Gas	17,351.80	1,494.61	0.31							33.74	61.00	1,390.17	284.46
<b>2. Industrial Processes</b>	<b>215,299.79</b>	<b>34.81</b>	<b>324.71</b>	<b>965.02</b>	<b>28,013.65</b>	<b>106.81</b>	<b>16,824.70</b>	<b>2.34</b>	<b>0.46</b>	<b>182.06</b>	<b>2,886.19</b>	<b>803.05</b>	<b>514.26</b>
A. Mineral Products	109,705.56	1.16	IE,NA,NE,NO							32.91	18.85	109.77	76.90
B. Chemical Industry	27,819.97	26.39	324.45	NA,NE,NO	C,NA,NE,NO	NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	111.99	169.49	392.39	262.18
C. Metal Production	77,419.59	5.00	0.04				13,341.03		0.07	20.04	2,678.36	19.87	96.85
D. Other Production <sup>(3)</sup>	72.98	0.24	0.21							15.62	12.58	246.65	77.56
E. Production of Halocarbons and SF <sub>6</sub>					27,458.66		2,898.36		0.08				
F. Consumption of Halocarbons and SF <sub>6</sub>				965.02	554.99	106.81	585.31	2.34	0.30				
G. Other	281.69	2.01	0.01	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.01	1.50	6.91	34.37	0.77

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.

(Sheet 2 of 3)

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)	(Gg)											
<b>3. Solvent and Other Product Use</b>	<b>9,530.74</b>		<b>13.52</b>							NA,NO,NE	NA,NO,NE	<b>4,172.59</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,597.71</b>	<b>768.88</b>							<b>146.94</b>	<b>752.36</b>	<b>595.36</b>	<b>4.41</b>
A. Enteric Fermentation		6,373.04											
B. Manure Management		2,116.55	78.76									327.99	
C. Rice Cultivation		104.08										0.13	
D. Agricultural Soils <sup>(4)</sup>		-31.80	689.35									177.43	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO							NO,NE	NO,NE	NO,NE	
F. Field Burning of Agricultural Residues		35.84	0.77							27.96	752.36	88.86	4.41
G. Other		NA,NO	NA,NE,NO							118.98	NA,NO	0.94	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-222,684.76</b>	<b>93.94</b>	<b>13.29</b>							<b>24.25</b>	<b>830.16</b>	<b>1,217.29</b>	<b>1.45</b>
A. Forest Land	<sup>(5)</sup> -302,550.27	61.17	0.86							17.26	583.96	63.15	
B. Cropland	<sup>(5)</sup> 73,117.05	10.92	12.09							2.71	95.57	NA,NE,NO	
C. Grassland	<sup>(5)</sup> -14,708.10	11.12	0.08							2.76	97.23	IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 3,979.47	5.03	0.20							0.10	3.55	NA,NE,NO	
E. Settlements	<sup>(5)</sup> 18,021.02	5.53	0.04							1.37	48.36	NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,257.42	0.17	0.00							0.04	1.49	NA,NE,NO	
G. Other	<sup>(5)</sup> -1,801.35	NA,NE,NO	0.02							NA,NE,NO	NA,NE,NO	1,154.14	1.45
<b>6. Waste</b>	<b>4,654.23</b>	<b>7,453.00</b>	<b>32.20</b>							<b>29.90</b>	<b>467.66</b>	<b>86.95</b>	<b>21.23</b>
A. Solid Waste Disposal on Land	<sup>(6)</sup> 218.47	6,811.50	0.05							0.90	28.05	48.29	0.79
B. Waste-water Handling		600.79	30.87							NA,NE,NO	NA,NE,NO	3.71	
C. Waste Incineration	<sup>(6)</sup> 4,435.76	22.72	0.85							25.10	437.68	26.47	16.27
D. Other		NA,NO	17.98	0.43						3.91	1.93	8.49	4.17
<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

(Sheet 3 of 3)

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>	<b>164,047.68</b>	<b>5.05</b>	<b>5.81</b>							<b>1,448.15</b>	<b>222.55</b>	<b>72.91</b>	<b>922.44</b>
Aviation	61,228.32	1.25	1.64							227.13	108.81	25.96	15.22
Marine	102,819.36	3.80	4.18							1,221.01	113.73	46.95	907.22
<b>Multilateral Operations</b>	<b>0.05</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>155,138.80</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.

A 2 EU-15 1991

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>(D)</sup>		PFCs <sup>(D)</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>3,122,085.42</b>	<b>20,585.45</b>	<b>1,235.30</b>	<b>1,089.95</b>	<b>27,699.45</b>	<b>137.38</b>	<b>15,411.15</b>	<b>2.40</b>	<b>0.47</b>	<b>13,389.74</b>	<b>50,562.50</b>	<b>15,229.71</b>	<b>14,984.29</b>
<b>I. Energy</b>	<b>3,163,904.51</b>	<b>4,509.93</b>	<b>99.27</b>							<b>13,027.67</b>	<b>45,614.92</b>	<b>8,573.36</b>	<b>14,550.90</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>												
A. Fuel Combustion	Sectoral Approach <sup>(2)</sup>	3,146,503.45											
1. Energy Industries		3,144,412.94	854.64	98.94						12,993.12	45,456.11	7,228.34	14,261.49
2. Manufacturing Industries and Construction		1,156,707.29	41.34	31.33						2,855.75	496.48	56.28	9,680.02
3. Transport		591,531.86	58.77	21.71						1,816.42	3,485.04	132.86	2,507.45
4. Other Sectors		701,915.74	195.94	21.51						6,841.66	31,200.71	5,529.01	739.90
5. Other		677,075.04	550.83	22.34						1,381.94	9,952.91	1,368.89	1,280.57
B. Fugitive Emissions from Fuels		17,183.01	7.76	2.05						97.36	320.96	141.29	53.55
1. Solid Fuels		19,491.58	3,655.29	0.33						34.55	158.82	1,345.02	289.41
2. Oil and Natural Gas		1,913.54	2,155.33	0.01						2.54	68.29	15.29	24.33
2. Oil and Natural Gas		17,578.04	1,499.96	0.32						32.01	90.53	1,329.74	265.08
<b>2. Industrial Processes</b>	<b>205,630.63</b>	<b>33.94</b>	<b>323.63</b>	<b>1,089.95</b>	<b>27,699.45</b>	<b>137.38</b>	<b>15,411.15</b>	<b>2.40</b>	<b>0.47</b>	<b>164.09</b>	<b>2,753.23</b>	<b>768.78</b>	<b>408.33</b>
A. Mineral Products		104,546.19	0.96	IE,NA,NE,NO						31.74	17.66	107.00	58.98
B. Chemical Industry		27,216.46	26.19	323.36	NA,NE,NO	C,NA,NE,NO	NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	96.23	160.00	367.37	211.97
C. Metal Production		73,443.75	4.51	0.03			11,944.20		0.07	18.99	2,556.76	19.00	71.11
D. Other Production <sup>(3)</sup>		49.68	0.26	0.23						15.86	12.73	242.98	63.58
E. Production of Halocarbons and SF <sub>6</sub>					27,115.60		2,830.52		0.07				
F. Consumption of Halocarbons and SF <sub>6</sub>				1,089.95	583.85	137.38	636.42	2.40	0.32				
G. Other		374.56	2.02	0.01	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.01	1.28	6.08	32.44	2.69

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.

(Sheet 2 of 3)

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)													
3. Solvent and Other Product Use	9,398.64		13.12							NA,NO,NE	NA,NO,NE	4,054.53	NA,NO,NE
4. Agriculture		8,414.44	753.62							137.75	745.05	545.43	4.62
A. Enteric Fermentation		6,236.45											
B. Manure Management		2,071.94	77.29									287.07	
C. Rice Cultivation		100.99										0.13	
D. Agricultural Soils <sup>(4)</sup>		-30.43	675.60									169.12	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE		NO,NE	
F. Field Burning of Agricultural Residues		35.50	0.73						26.36	745.05		88.25	4.62
G. Other		NA,NO	NA,NE,NO						111.39	NA,NO		0.86	0.00
5. Land Use, Land-Use Change and Forestry	<sup>(5)</sup> -261,399.13	95.71	13.07						23.19	812.81		1,189.64	0.30
A. Forest Land	<sup>(5)</sup> -341,579.07	60.81	0.67						15.69	548.77		56.32	
B. Cropland	<sup>(5)</sup> 72,144.61	11.86	12.05						2.95	103.79		NA,NE,NO	
C. Grassland	<sup>(5)</sup> -14,500.80	12.52	0.09						3.11	109.46		IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 3,775.51	5.00	0.20						0.07	2.48		NA,NE,NO	
E. Settlements	<sup>(5)</sup> 17,632.06	5.24	0.04						1.30	45.85		NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,504.07	0.28	0.00						0.07	2.46		NA,NE,NO	
G. Other	<sup>(5)</sup> -375.50	NA,NE,NO	0.02						NA,NE,NO	NA,NE,NO		1,133.33	0.30
6. Waste	4,550.76	7,531.44	32.59						37.04	636.49		97.97	20.13
A. Solid Waste Disposal on Land	<sup>(6)</sup> 266.64	6,890.98	0.06						1.09	31.72		49.98	0.97
B. Waste-water Handling		586.75	30.95						NA,NE,NO	NA,NE,NO		3.83	
C. Waste Incineration	<sup>(6)</sup> 4,284.12	30.35	1.05						32.34	603.14		34.25	15.78
D. Other		NA,NO	23.36	0.52					3.60	1.62		9.91	3.39
7. Other <i>(please specify)</i> <sup>(7)</sup>	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

(Sheet 3 of 3)

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>163,435.56</b>	<b>4.78</b>	<b>5.78</b>							<b>1,406.76</b>	<b>214.67</b>	<b>70.53</b>	<b>886.51</b>
Aviation	61,383.15	1.16	1.63							226.18	106.77	24.75	15.92
Marine	102,052.41	3.61	4.16							1,180.58	107.91	45.78	870.59
<b>Multilateral Operations</b>	<b>0.05</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>165,038.06</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 I.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.

A 3 EU-15, 1992

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>(d)</sup>		PFCs <sup>(d)</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>3,050,511.63</b>	<b>20,284.77</b>	<b>1,212.41</b>	<b>1,416.05</b>	<b>29,146.12</b>	<b>175.53</b>	<b>13,217.35</b>	<b>2.49</b>	<b>0.51</b>	<b>13,071.81</b>	<b>48,264.61</b>	<b>14,831.53</b>	<b>13,700.66</b>
<b>1. Energy</b>	<b>3,095,250.07</b>	<b>4,345.84</b>	<b>99.02</b>							<b>12,741.79</b>	<b>43,809.99</b>	<b>8,328.22</b>	<b>13,311.42</b>
A. Fuel Combustion	3,065,906.90												
Reference Approach <sup>(2)</sup>	3,065,906.90												
Sectoral Approach <sup>(2)</sup>	3,075,741.36	802.79	98.68							12,707.81	43,684.50	7,011.58	13,028.33
1. Energy Industries	1,120,285.80	40.01	30.78							2,639.28	473.64	55.91	8,908.64
2. Manufacturing Industries and Construction	566,427.70	55.54	21.24							1,730.26	3,426.24	130.12	2,275.39
3. Transport	726,429.87	194.74	23.27							6,903.97	30,620.79	5,460.04	757.51
4. Other Sectors	647,603.70	507.15	21.43							1,342.57	8,898.77	1,272.92	1,051.19
5. Other	14,994.30	5.34	1.97							91.72	265.07	92.59	35.60
B. Fugitive Emissions from Fuels	19,508.71	3,543.05	0.34							33.98	125.49	1,316.65	283.10
1. Solid Fuels	1,655.39	2,010.95	0.01							2.15	60.83	12.80	22.44
2. Oil and Natural Gas	17,853.32	1,532.10	0.33							31.83	64.66	1,303.84	260.66
<b>2. Industrial Processes</b>	<b>197,034.71</b>	<b>34.37</b>	<b>313.25</b>	<b>1,416.05</b>	<b>29,146.12</b>	<b>175.53</b>	<b>13,217.35</b>	<b>2.49</b>	<b>0.51</b>	<b>146.46</b>	<b>2,548.92</b>	<b>763.81</b>	<b>365.29</b>
A. Mineral Products	102,894.83	0.88	IE,NA,NE,NO							28.52	17.46	104.04	57.05
B. Chemical Industry	26,347.90	26.97	312.97	NA,NE,NO	C,NA,NE,NO	NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	83.77	153.89	364.64	186.71
C. Metal Production	67,337.43	4.26	0.03				9,677.89		0.07	17.94	2,359.64	18.57	67.27
D. Other Production <sup>(3)</sup>	54.42	0.26	0.23							15.18	12.67	246.05	51.67
E. Production of Halocarbons and SF <sub>6</sub>					28,370.10		2,850.25		0.08				
F. Consumption of Halocarbons and SF <sub>6</sub>				1,416.05	776.03	175.53	689.21	2.49	0.34				
G. Other	400.13	2.00	0.02	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.01	1.05	5.25	30.51	2.60

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, 1992 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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)													
3. Solvent and Other Product Use	9,081.10		13.00							NA,NO,NE	NA,NO,NE	3,922.61	NA,NO,NE
4. Agriculture		8,354.34	741.63							130.41	649.54	532.69	4.41
A. Enteric Fermentation		6,172.55											
B. Manure Management		2,081.85	75.67									281.83	
C. Rice Cultivation		99.43										0.08	
D. Agricultural Soils <sup>(4)</sup>		-30.45	665.32									170.62	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO							NO,NE	NO,NE	NO,NE	
F. Field Burning of Agricultural Residues		30.95	0.64							23.27	649.54	79.25	4.41
G. Other		NA,NO	NA,NE,NO							107.14	NA,NO	0.91	0.00
5. Land Use, Land-Use Change and Forestry	<sup>(5)</sup> -255,448.49	82.81	12.78							19.83	693.00	1,187.82	0.46
A. Forest Land	<sup>(5)</sup> -332,261.81	48.49	0.52							12.52	435.85	55.32	
B. Cropland	<sup>(5)</sup> 68,911.69	11.49	11.90							2.85	100.50	NA,NE,NO	
C. Grassland	<sup>(5)</sup> -14,532.30	12.12	0.08							3.01	105.93	IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 3,823.86	5.21	0.21							0.07	2.49	NA,NE,NO	
E. Settlements	<sup>(5)</sup> 17,681.91	5.23	0.03							1.30	45.75	NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,514.32	0.28	0.00							0.07	2.49	NA,NE,NO	
G. Other	<sup>(5)</sup> -586.16	NA,NE,NO	0.02							NA,NE,NO	NA,NE,NO	1,132.50	0.46
6. Waste	4,594.23	7,467.42	32.73							33.32	563.16	96.38	19.09
A. Solid Waste Disposal on Land	<sup>(6)</sup> 306.55	6,830.22	0.07							1.26	34.49	50.52	1.11
B. Waste-water Handling		582.86	31.08							NA,NE,NO	NA,NE,NO	3.74	
C. Waste Incineration	<sup>(6)</sup> 4,287.68	26.61	0.96							28.77	527.35	30.79	15.37
D. Other	NA,NO	27.73	0.61							3.29	1.32	11.33	2.61
7. Other <i>(please specify)</i> <sup>(7)</sup>	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, 1992 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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)					
Memo Items: <sup>(8)</sup>													
<b>International Bunkers</b>	<b>169,853.40</b>	<b>4.87</b>	<b>5.95</b>							<b>1,450.45</b>	<b>223.47</b>	<b>72.75</b>	<b>875.73</b>
Aviation	66,806.43	1.22	1.79							249.36	114.45	26.44	18.60
Marine	103,046.97	3.65	4.16							1,201.09	109.02	46.31	857.13
<b>Multilateral Operations</b>	<b>0.05</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>164,882.83</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.

A 4 EU-15, 1993

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	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>3,003,864.90</b>	<b>20,148.93</b>	<b>1,169.87</b>	<b>5,595.78</b>	<b>31,467.57</b>	<b>219.14</b>	<b>12,297.12</b>	<b>2.66</b>	<b>0.55</b>	<b>12,488.37</b>	<b>45,998.71</b>	<b>14,174.82</b>	<b>12,468.36</b>
<b>1. Energy</b>		<b>3,048,182.61</b>	<b>4,284.06</b>	<b>99.43</b>							<b>12,190.66</b>	<b>41,846.49</b>	<b>7,832.00</b>	<b>12,118.76</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	3,014,918.21												
	Sectoral Approach <sup>(2)</sup>	3,027,913.76	777.80	99.07							12,145.31	41,727.18	6,622.20	11,810.33
1. Energy Industries		1,072,428.17	41.91	29.39							2,380.27	454.05	54.04	7,994.78
2. Manufacturing Industries and Construction		548,856.64	54.06	20.28							1,626.75	3,559.16	122.92	2,071.38
3. Transport		733,718.25	185.38	25.81							6,703.33	28,838.71	5,144.87	752.12
4. Other Sectors		659,148.42	492.71	21.62							1,348.61	8,646.61	1,237.56	968.03
5. Other		13,762.28	3.74	1.96							86.34	228.65	62.81	24.00
B. Fugitive Emissions from Fuels		20,268.85	3,506.26	0.36							45.35	119.31	1,209.80	308.43
1. Solid Fuels		1,532.59	1,963.01	0.01							1.85	52.71	9.96	16.80
2. Oil and Natural Gas		18,736.27	1,543.25	0.35							43.50	66.60	1,199.84	291.63
<b>2. Industrial Processes</b>		<b>190,595.93</b>	<b>33.42</b>	<b>294.24</b>	<b>5,595.78</b>	<b>31,467.57</b>	<b>219.14</b>	<b>12,297.12</b>	<b>2.66</b>	<b>0.55</b>	<b>124.07</b>	<b>2,404.17</b>	<b>756.72</b>	<b>328.54</b>
A. Mineral Products		99,210.78	0.74	IE,NA,NE,NO							24.48	17.15	99.65	50.73
B. Chemical Industry		25,512.18	25.86	293.96	NA,NE,NO	C,NA,NE,NO	NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	67.59	163.64	368.31	168.01
C. Metal Production		65,484.57	4.61	0.03				8,500.34		0.08	15.85	2,206.03	18.11	60.33
D. Other Production <sup>(3)</sup>		50.63	0.27	0.23							15.31	12.93	242.08	46.96
E. Production of Halocarbons and SF <sub>6</sub>						28,223.37		3,019.00		0.08				
F. Consumption of Halocarbons and SF <sub>6</sub>					5,595.78	3,244.20	219.14	777.79	2.66	0.38				
G. Other		337.77	1.94	0.01	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.01	0.83	4.42	28.58	2.51

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, 1993 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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>8,779.53</b>		<b>12.75</b>							NA,NO,NE	NA,NO,NE	<b>3,799.47</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,356.28</b>	<b>717.72</b>							<b>120.77</b>	<b>497.39</b>	<b>520.72</b>	<b>4.57</b>
A. Enteric Fermentation		6,160.83											
B. Manure Management		2,104.45	75.09									281.74	
C. Rice Cultivation		97.56										0.05	
D. Agricultural Soils <sup>(4)</sup>		-30.28	642.14									173.28	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE		NO,NE	
F. Field Burning of Agricultural Residues		23.71	0.49						17.61	497.39		64.80	4.57
G. Other		NA,NO	NA,NE,NO						103.16	NA,NO		0.84	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-248,113.75</b>	<b>81.85</b>	<b>12.96</b>						<b>19.57</b>	<b>683.28</b>	<b>1,167.84</b>	<b>0.90</b>	
A. Forest Land	<sup>(5)</sup> -328,266.12	48.05	0.49						12.42	431.65		55.97	
B. Cropland	<sup>(5)</sup> 70,318.43	11.26	12.11						2.80	98.54		NA,NE,NO	
C. Grassland	<sup>(5)</sup> -11,751.32	11.70	0.08						2.90	102.29		IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 3,862.63	5.31	0.22						0.07	2.51		NA,NE,NO	
E. Settlements	<sup>(5)</sup> 16,546.48	5.24	0.04						1.30	45.88		NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,528.86	0.28	0.00						0.07	2.41		NA,NE,NO	
G. Other	<sup>(5)</sup> -352.70	NA,NE,NO	0.02						NA,NE,NO	NA,NE,NO		1,111.87	0.90
<b>6. Waste</b>	<b>4,420.56</b>	<b>7,393.32</b>	<b>32.78</b>						<b>33.31</b>	<b>567.39</b>	<b>98.08</b>	<b>15.60</b>	
A. Solid Waste Disposal on Land	<sup>(6)</sup> 296.21	6,757.42	0.07						1.22	33.57		50.25	1.08
B. Waste-water Handling		577.72	31.03						NA,NE,NO	NA,NE,NO		3.91	
C. Waste Incineration	<sup>(6)</sup> 4,124.35	26.39	0.98						29.10	532.81		31.17	12.69
D. Other	NA,NO	31.79	0.70						2.99	1.01		12.75	1.83
<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, 1993 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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>177,719.89</b>	<b>5.09</b>	<b>6.27</b>							<b>1,501.57</b>	<b>232.22</b>	<b>74.33</b>	<b>937.33</b>
Aviation	70,838.06	1.21	1.90							265.89	121.52	27.43	18.62
Marine	106,881.83	3.88	4.37							1,235.68	110.70	46.91	918.71
<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>168,966.92</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.

A 5 EU-15, 1994

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> 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>2,995,174.32</b>	<b>19,700.79</b>	<b>1,192.06</b>	<b>9,823.35</b>	<b>35,725.21</b>	<b>282.51</b>	<b>11,574.92</b>	<b>2.83</b>	<b>0.60</b>	<b>12,173.18</b>	<b>43,462.44</b>	<b>13,459.74</b>	<b>11,254.75</b>
<b>I. Energy</b>	<b>3,036,678.85</b>	<b>3,813.24</b>	<b>102.41</b>							<b>11,880.49</b>	<b>38,920.49</b>	<b>7,286.85</b>	<b>10,906.60</b>
A. Fuel Combustion													
Reference Approach <sup>(2)</sup>	3,006,600.63												
Sectoral Approach <sup>(2)</sup>	3,015,759.49	716.80	102.05							11,844.42	38,819.71	6,114.42	10,636.72
1. Energy Industries	1,080,342.17	47.02	29.60							2,286.67	495.61	55.57	7,196.78
2. Manufacturing Industries and Construction	559,689.60	56.01	20.64							1,631.44	3,704.26	125.18	1,890.25
3. Transport	737,226.02	175.41	29.15							6,523.66	26,631.31	4,774.28	721.07
4. Other Sectors	625,331.05	436.19	20.76							1,320.66	7,801.73	1,120.58	812.52
5. Other	13,170.65	2.18	1.90							81.99	186.80	38.81	16.11
B. Fugitive Emissions from Fuels	20,919.36	3,096.44	0.36							36.08	100.78	1,172.44	269.87
1. Solid Fuels	1,838.30	1,590.44	0.01							1.92	49.61	8.65	15.55
2. Oil and Natural Gas	19,081.06	1,506.00	0.34							34.15	51.18	1,163.78	254.32
<b>2. Industrial Processes</b>	<b>202,902.62</b>	<b>35.67</b>	<b>307.92</b>	<b>9,823.35</b>	<b>35,725.21</b>	<b>282.51</b>	<b>11,574.92</b>	<b>2.83</b>	<b>0.60</b>	<b>121.23</b>	<b>2,707.47</b>	<b>756.22</b>	<b>330.12</b>
A. Mineral Products	104,472.08	0.83	IE,NA,NE,NO							22.72	17.68	101.45	52.52
B. Chemical Industry	27,598.67	27.82	307.63	NA,NE,NO	C,NA,NE,NO	NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	C,NA,NE,NO	65.72	173.34	363.51	171.05
C. Metal Production	70,449.74	4.77	0.04				7,443.99		0.08	16.55	2,500.64	18.64	63.63
D. Other Production <sup>(3)</sup>	29.79	0.26	0.23							15.54	12.05	245.97	41.33
E. Production of Halocarbons and SF <sub>6</sub>					30,837.94		3,327.66		0.09				
F. Consumption of Halocarbons and SF <sub>6</sub>				9,823.35	4,887.28	282.51	803.27	2.83	0.41				
G. Other	352.33	1.98	0.01	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.03	0.70	3.77	26.65	1.59

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, 1994 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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>8,102.91</b>		<b>12.40</b>							NA,NO,NE	NA,NO,NE	<b>3,559.73</b>	NA,NO,NE												
<b>4. Agriculture</b>		<b>8,369.80</b>	<b>722.54</b>							<b>117.96</b>	<b>489.35</b>	<b>519.55</b>	<b>4.44</b>												
A. Enteric Fermentation		6,162.98																							
B. Manure Management		2,108.01	75.91									271.42													
C. Rice Cultivation		106.07										0.10													
D. Agricultural Soils <sup>(4)</sup>		-30.59	646.13									184.11													
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO							NO,NE	NO,NE	NO,NE													
F. Field Burning of Agricultural Residues		23.33	0.49							17.79	489.35	62.89	4.43												
G. Other		NA,NO	NA,NE,NO							100.17	NA,NO	1.03	0.00												
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-256,775.09</b>	<b>180.62</b>	<b>13.42</b>							<b>22.93</b>	<b>801.82</b>	<b>1,241.06</b>	<b>0.48</b>												
A. Forest Land	<sup>(5)</sup> -337,341.19	63.38	0.62							16.21	565.25	57.61													
B. Cropland	<sup>(5)</sup> 69,328.02	10.43	12.45							2.59	91.26	NA,NE,NO													
C. Grassland	<sup>(5)</sup> -10,646.09	10.77	0.07							2.67	94.12	IE,NA,NE,NO													
D. Wetlands	<sup>(5)</sup> 3,903.54	5.48	0.22							0.07	2.52	NA,NE,NO													
E. Settlements	<sup>(5)</sup> 16,636.52	5.28	0.04							1.31	46.23	NA,NE,NO													
F. Other Land	<sup>(5)</sup> 1,498.89	0.28	0.00							0.07	2.44	NA,NE,NO													
G. Other	<sup>(5)</sup> -154.76	85.00	0.02							NA,NE,NO	NA,NE,NO	1,183.45	0.48												
<b>6. Waste</b>	<b>4,265.03</b>	<b>7,301.46</b>	<b>33.37</b>							<b>30.56</b>	<b>543.31</b>	<b>96.32</b>	<b>13.11</b>												
A. Solid Waste Disposal on Land	<sup>(6)</sup> 239.97	6,662.65	0.06							0.99	28.76	49.13	0.87												
B. Waste-water Handling		576.48	31.48							NA,NE,NO	NA,NE,NO	3.59													
C. Waste Incineration	<sup>(6)</sup> 4,025.06	24.13	0.94							26.89	513.84	30.30	11.14												
D. Other	NA,NO	38.20	0.89							2.68	0.71	13.31	1.10												
<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, 1994 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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>	<b>178,350.05</b>	<b>4.98</b>	<b>6.43</b>							<b>1,504.60</b>	<b>242.41</b>	<b>74.88</b>	<b>907.47</b>
Aviation	74,727.49	1.22	2.00							283.68	128.08	28.59	20.88
Marine	103,622.56	3.76	4.42							1,220.91	114.33	46.29	886.58
<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>168,681.14</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.



A 6 EU-15, 1995

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> 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>3,023,502.28</b>	<b>19,580.31</b>	<b>1,195.66</b>	<b>18,706.01</b>	<b>41,291.94</b>	<b>411.21</b>	<b>10,949.57</b>	<b>651.28</b>	<b>0.65</b>	<b>11,869.91</b>	<b>41,592.63</b>	<b>12,940.84</b>	<b>9,940.57</b>
<b>1. Energy</b>		<b>3,065,410.67</b>	<b>3,796.75</b>	<b>106.27</b>							<b>11,568.33</b>	<b>36,992.08</b>	<b>6,836.10</b>	<b>9,595.96</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	3,044,692.44												
	Sectoral Approach <sup>(2)</sup>	3,043,873.69	702.32	105.93							11,533.22	36,879.24	5,783.31	9,340.27
1. Energy Industries		1,089,721.91	52.15	29.75							2,204.80	467.28	59.57	6,362.89
2. Manufacturing Industries and Construction		559,977.93	54.94	20.82							1,588.57	3,648.79	125.04	1,677.45
3. Transport		746,260.40	167.30	33.05							6,326.85	25,097.69	4,464.69	608.83
4. Other Sectors		635,700.45	426.61	20.59							1,330.80	7,499.67	1,119.17	678.25
5. Other		12,212.99	1.32	1.72							82.20	165.81	14.84	12.85
B. Fugitive Emissions from Fuels		21,536.98	3,094.43	0.34							35.11	112.84	1,052.79	255.69
1. Solid Fuels		1,866.46	1,650.58	0.01							1.80	49.54	8.28	11.98
2. Oil and Natural Gas		19,670.52	1,443.85	0.33							33.31	63.30	1,044.51	243.71
<b>2. Industrial Processes</b>		<b>208,515.81</b>	<b>33.77</b>	<b>303.88</b>	<b>18,706.01</b>	<b>41,291.94</b>	<b>411.21</b>	<b>10,949.57</b>	<b>651.28</b>	<b>0.65</b>	<b>129.68</b>	<b>2,876.75</b>	<b>697.84</b>	<b>328.41</b>
A. Mineral Products		108,312.10	0.84	IE,NA,NE,NO							33.08	17.40	105.81	53.63
B. Chemical Industry		28,983.19	25.85	303.59	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	63.73	179.58	309.82	189.18
C. Metal Production		70,880.01	4.80	0.03				7,059.71		0.08	16.57	2,664.20	18.49	47.87
D. Other Production <sup>(3)</sup>		22.80	0.27	0.23							15.91	12.82	239.01	37.41
E. Production of Halocarbons and SF <sub>6</sub>						32,864.47		2,814.47		0.10				
F. Consumption of Halocarbons and SF <sub>6</sub>					18,706.01	8,427.46	411.21	1,075.39	651.28	0.44				
G. Other		317.71	2.01	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.03	0.39	2.76	24.71	0.31

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, 1995 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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>8,214.70</b>		<b>12.25</b>							NA,NO,NE	NA,NO,NE	<b>3,533.27</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,404.56</b>	<b>727.14</b>							<b>121.54</b>	<b>469.63</b>	<b>518.85</b>	<b>4.26</b>
A. Enteric Fermentation		6,180.54											
B. Manure Management		2,128.61	76.35									270.82	
C. Rice Cultivation		103.65										0.09	
D. Agricultural Soils <sup>(4)</sup>		-30.63	650.31									186.47	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE		NO,NE	
F. Field Burning of Agricultural Residues		22.39	0.48						17.18	469.63		60.44	4.26
G. Other		NA,NO	NA,NE,NO						104.36	NA,NO		1.04	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-262,552.65</b>	<b>177.68</b>	<b>12.97</b>						<b>20.04</b>	<b>697.77</b>	<b>1,260.43</b>	<b>0.39</b>	
A. Forest Land	<sup>(5)</sup> -344,241.78	50.42	0.52						13.34	461.72		60.33	
B. Cropland	<sup>(5)</sup> 71,050.08	10.49	12.08						2.61	91.75	NA,NE,NO		
C. Grassland	<sup>(5)</sup> -10,742.52	10.67	0.07						2.65	93.27	IE,NA,NE,NO		
D. Wetlands	<sup>(5)</sup> 3,919.24	5.57	0.23						0.07	2.52	NA,NE,NO		
E. Settlements	<sup>(5)</sup> 16,526.52	5.27	0.04						1.31	46.13	NA,NE,NO		
F. Other Land	<sup>(5)</sup> 1,402.07	0.27	0.00						0.07	2.39	NA,NE,NO		
G. Other	<sup>(5)</sup> -466.25	95.00	0.02						NA,NE,NO	NA,NE,NO		1,200.10	0.39
<b>6. Waste</b>	<b>3,913.75</b>	<b>7,167.54</b>	<b>33.15</b>						<b>30.31</b>	<b>556.40</b>	<b>94.34</b>	<b>11.56</b>	
A. Solid Waste Disposal on Land	<sup>(6)</sup> 99.89	6,523.42	0.02						0.42	17.45		45.70	0.36
B. Waste-water Handling		574.75	31.06						0.00	0.00		3.57	
C. Waste Incineration	<sup>(6)</sup> 3,813.86	24.94	0.96						27.52	538.54		31.20	10.93
D. Other		NA,NO	44.44	1.10					2.38	0.40		13.87	0.26
<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

Note: All footnotes for this table are given at the end of the table on sheet 3.

EU-15, 1995 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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)					
Memo Items: <sup>(8)</sup>													
<b>International Bunkers</b>	<b>184,216.73</b>	<b>5.20</b>	<b>6.37</b>							<b>1,568.39</b>	<b>252.21</b>	<b>77.94</b>	<b>925.99</b>
Aviation	79,044.74	1.29	2.10							298.75	132.10	29.75	17.60
Marine	105,171.98	3.91	4.27							1,269.64	120.11	48.19	908.38
<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>171,849.07</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.

A 7 EU-15, 1996

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	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>3,080,030.21</b>	<b>19,319.09</b>	<b>1,211.11</b>	<b>29,126.07</b>	<b>47,133.43</b>	<b>574.98</b>	<b>10,504.33</b>	<b>673.80</b>	<b>0.64</b>	<b>11,610.25</b>	<b>40,007.85</b>	<b>12,440.82</b>	<b>8,913.93</b>
<b>1. Energy</b>		<b>3,152,056.35</b>	<b>3,675.55</b>	<b>107.29</b>							<b>11,332.63</b>	<b>35,907.69</b>	<b>6,550.91</b>	<b>8,631.57</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	3,140,972.95												
	Sectoral Approach <sup>(2)</sup>	3,130,207.86	723.13	106.94							11,300.70	35,789.01	5,562.18	8,382.46
	1. Energy Industries	1,105,023.46	57.61	30.88							2,141.34	464.16	60.24	5,700.17
	2. Manufacturing Industries and Construction	551,654.04	54.98	20.14							1,508.16	3,553.72	123.99	1,465.86
	3. Transport	762,985.53	161.70	32.72							6,205.79	24,008.80	4,216.33	529.92
	4. Other Sectors	699,592.42	447.89	21.52							1,375.50	7,622.10	1,150.02	674.56
	5. Other	10,952.42	0.96	1.69							69.91	140.23	11.60	11.94
	B. Fugitive Emissions from Fuels	21,848.49	2,952.42	0.35							31.93	118.69	988.73	249.11
	1. Solid Fuels	1,986.71	1,524.39	0.01							1.76	48.86	8.06	12.60
	2. Oil and Natural Gas	19,861.78	1,428.03	0.34							30.17	69.83	980.66	236.51
<b>2. Industrial Processes</b>		<b>199,417.13</b>	<b>32.55</b>	<b>308.82</b>	<b>29,126.07</b>	<b>47,133.43</b>	<b>574.98</b>	<b>10,504.33</b>	<b>673.80</b>	<b>0.64</b>	<b>107.61</b>	<b>2,466.68</b>	<b>673.00</b>	<b>268.25</b>
	A. Mineral Products	104,306.38	0.78	IE,NA,NE,NO							30.48	17.48	104.64	56.52
	B. Chemical Industry	28,850.16	25.04	308.54	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	44.66	178.15	290.50	125.30
	C. Metal Production	65,885.93	4.50	0.04				6,674.07		0.09	16.47	2,256.29	16.75	49.10
	D. Other Production <sup>(3)</sup>	49.75	0.26	0.23							15.69	12.77	242.23	37.03
	E. Production of Halocarbons and SF <sub>6</sub>					34,073.46		2,573.63		0.09				
	F. Consumption of Halocarbons and SF <sub>6</sub>				29,126.07	13,059.97	574.98	1,256.62	673.80	0.43				
	G. Other	324.91	1.96	0.02	NA,NE,NO	NA,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.03	0.31	1.98	18.88	0.29

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, 1996 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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>8,214.70</b>		<b>12.25</b>							NA,NO,NE	NA,NO,NE	<b>3,533.27</b>	NA,NO,NE												
<b>4. Agriculture</b>		<b>8,404.56</b>	<b>727.14</b>							<b>121.54</b>	<b>469.63</b>	<b>518.85</b>	<b>4.26</b>												
A. Enteric Fermentation		6,180.54																							
B. Manure Management		2,128.61	76.35									270.82													
C. Rice Cultivation		103.65										0.09													
D. Agricultural Soils <sup>(4)</sup>		-30.63	650.31									186.47													
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO							NO,NE	NO,NE	NO,NE													
F. Field Burning of Agricultural Residues		22.39	0.48							17.18	469.63	60.44	4.26												
G. Other		NA,NO	NA,NE,NO							104.36	NA,NO	1.04	0.00												
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-262,552.65</b>	<b>177.68</b>	<b>12.97</b>							<b>20.04</b>	<b>697.77</b>	<b>1,260.43</b>	<b>0.39</b>												
A. Forest Land	<sup>(5)</sup> -344,241.78	50.42	0.52							13.34	461.72	60.33													
B. Cropland	<sup>(5)</sup> 71,050.08	10.49	12.08							2.61	91.75	NA,NE,NO													
C. Grassland	<sup>(5)</sup> -10,742.52	10.67	0.07							2.65	93.27	IE,NA,NE,NO													
D. Wetlands	<sup>(5)</sup> 3,919.24	5.57	0.23							0.07	2.52	NA,NE,NO													
E. Settlements	<sup>(5)</sup> 16,526.52	5.27	0.04							1.31	46.13	NA,NE,NO													
F. Other Land	<sup>(5)</sup> 1,402.07	0.27	0.00							0.07	2.39	NA,NE,NO													
G. Other	<sup>(5)</sup> -466.25	95.00	0.02							NA,NE,NO	NA,NE,NO	1,200.10	0.39												
<b>6. Waste</b>	<b>3,913.75</b>	<b>7,167.54</b>	<b>33.15</b>							<b>30.31</b>	<b>556.40</b>	<b>94.34</b>	<b>11.56</b>												
A. Solid Waste Disposal on Land	<sup>(6)</sup> 99.89	6,523.42	0.02							0.42	17.45	45.70	0.36												
B. Waste-water Handling		574.75	31.06							0.00	0.00	3.57													
C. Waste Incineration	<sup>(6)</sup> 3,813.86	24.94	0.96							27.52	538.54	31.20	10.93												
D. Other		NA,NO	1.10							2.38	0.40	13.87	0.26												
<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, 1996 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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>8,158.10</b>		<b>12.49</b>								NA,NO,NE	NA,NO,NE	<b>3,493.39</b>	NA,NO,NE											
<b>4. Agriculture</b>		<b>8,470.47</b>	<b>736.92</b>								<b>125.52</b>	<b>501.22</b>	<b>499.16</b>	<b>4.57</b>											
A. Enteric Fermentation		6,231.82																							
B. Manure Management		2,133.24	76.80										272.61												
C. Rice Cultivation		112.13											0.11												
D. Agricultural Soils <sup>(4)</sup>		-30.61	659.61										160.90												
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO							NO,NE	NO,NE	NO,NE													
F. Field Burning of Agricultural Residues		23.89	0.51							18.51	501.22	64.72	4.57												
G. Other		NA,NO	NA,NE,NO							107.01	NA,NO	0.82	0.00												
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-283,407.33</b>	<b>162.01</b>	<b>12.13</b>								<b>17.11</b>	<b>595.68</b>	<b>1,132.17</b>	<b>0.32</b>											
A. Forest Land	<sup>(5)</sup> -362,947.98	38.46	0.43							10.14	350.01	46.18													
B. Cropland	<sup>(5)</sup> 70,348.09	10.88	11.33							2.70	95.19	NA,NE,NO													
C. Grassland	<sup>(5)</sup> -13,043.88	11.29	0.08							2.80	98.68	IE,NA,NE,NO													
D. Wetlands	<sup>(5)</sup> 3,968.59	5.75	0.23							0.07	2.53	NA,NE,NO													
E. Settlements	<sup>(5)</sup> 17,697.43	5.35	0.04							1.33	46.85	NA,NE,NO													
F. Other Land	<sup>(5)</sup> 1,341.34	0.28	0.00							0.07	2.41	NA,NE,NO													
G. Other	<sup>(5)</sup> -770.92	90.00	0.02							NA,NE,NO	NA,NE,NO	1,085.99	0.32												
<b>6. Waste</b>	<b>3,805.95</b>	<b>6,978.51</b>	<b>33.45</b>							<b>27.38</b>	<b>536.58</b>	<b>92.19</b>	<b>9.22</b>												
A. Solid Waste Disposal on Land	<sup>(6)</sup> 67.18	6,343.05	0.02							0.28	14.45	44.46	0.24												
B. Waste-water Handling		561.29	31.20							0.00	0.00	3.47													
C. Waste Incineration	<sup>(6)</sup> 3,738.77	24.13	0.91							25.49	521.86	29.97	8.66												
D. Other	NA,NO	50.04	1.33							1.60	0.27	14.30	0.31												
<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>	<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	NA,NO											

A 8 EU-15, 1997

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	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>3,024,636.30</b>	<b>18,783.44</b>	<b>1,207.22</b>	<b>40,854.94</b>	<b>53,170.98</b>	<b>825.39</b>	<b>9,515.42</b>	<b>698.28</b>	<b>0.57</b>	<b>11,208.85</b>	<b>38,061.73</b>	<b>12,230.39</b>	<b>8,162.51</b>
<b>1. Energy</b>	<b>3,087,989.73</b>	<b>3,526.02</b>	<b>106.94</b>							<b>10,930.33</b>	<b>33,604.73</b>	<b>6,161.21</b>	<b>7,874.28</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	3,074,000.32											
	Sectoral Approach <sup>(2)</sup>	3,067,209.26	684.79	106.60						10,905.93	33,511.86	5,174.94	7,629.79
1. Energy Industries		1,069,829.58	56.95	29.37						1,968.61	397.88	54.99	5,175.46
2. Manufacturing Industries and Construction		561,892.07	56.89	20.60						1,516.12	3,623.91	123.81	1,467.06
3. Transport		772,039.33	150.98	34.25						6,014.40	22,087.70	3,917.06	375.41
4. Other Sectors		652,907.95	419.11	20.72						1,335.03	7,276.45	1,067.74	600.23
5. Other		10,540.32	0.86	1.67						71.78	125.92	11.34	11.63
B. Fugitive Emissions from Fuels		20,780.47	2,841.23	0.34						24.39	92.88	986.27	244.49
1. Solid Fuels		1,864.97	1,469.01	0.01						1.58	48.79	7.95	12.51
2. Oil and Natural Gas		18,915.51	1,372.22	0.33						22.82	44.09	978.32	231.98
<b>2. Industrial Processes</b>	<b>208,506.35</b>	<b>31.56</b>	<b>298.52</b>	<b>40,854.94</b>	<b>53,170.98</b>	<b>825.39</b>	<b>9,515.42</b>	<b>698.28</b>	<b>0.57</b>	<b>108.91</b>	<b>2,669.02</b>	<b>661.69</b>	<b>275.57</b>
A. Mineral Products		107,331.62	0.79	IE,NA,NE,NO						30.01	15.92	105.35	54.36
B. Chemical Industry		29,087.11	23.82	298.22	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	44.60	175.55	272.77	126.23
C. Metal Production		71,740.35	4.71	0.04			6,484.86		0.08	17.34	2,460.48	18.83	53.20
D. Other Production <sup>(3)</sup>		48.70	0.28	0.25						16.62	13.59	246.16	34.21
E. Production of Halocarbons and SF <sub>6</sub>					36,630.01		1,552.01		0.03				
F. Consumption of Halocarbons and SF <sub>6</sub>					40,854.94	16,540.97	825.39	1,478.54	698.28	0.43			
G. Other		298.57	1.96	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	0.03	0.34	3.48	18.57	7.57

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, 1997 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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>8,289.87</b>		<b>12.26</b>							NA,NO,NE	NA,NO,NE	<b>3,524.14</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,430.47</b>	<b>743.33</b>							<b>124.96</b>	<b>545.49</b>	<b>516.29</b>	<b>5.06</b>
A. Enteric Fermentation		6,163.29											
B. Manure Management		2,157.95	77.04									269.90	
C. Rice Cultivation		113.83										0.11	
D. Agricultural Soils <sup>(4)</sup>		-30.59	665.77									174.18	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE	NO,NE		
F. Field Burning of Agricultural Residues		26.00	0.53						19.17	545.49	71.14		5.06
G. Other		NA,NO	NA,NE,NO						105.78	NA,NO	0.95		0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-283,396.37</b>	<b>152.81</b>	<b>12.21</b>						<b>18.58</b>	<b>645.03</b>	<b>1,273.34</b>	<b>0.65</b>	
A. Forest Land	<sup>(5)</sup> -363,644.13	44.98	0.49						11.83	407.18	55.20		
B. Cropland	<sup>(5)</sup> 69,846.09	10.36	11.35						2.57	90.63	NA,NE,NO		
C. Grassland	<sup>(5)</sup> -9,381.61	10.84	0.07						2.69	94.70	IE,NA,NE,NO		
D. Wetlands	<sup>(5)</sup> 4,007.50	5.93	0.24						0.07	2.53	NA,NE,NO		
E. Settlements	<sup>(5)</sup> 16,490.72	5.43	0.04						1.35	47.55	NA,NE,NO		
F. Other Land	<sup>(5)</sup> 1,320.58	0.28	0.00						0.07	2.45	NA,NE,NO		
G. Other	<sup>(5)</sup> -2,035.51	75.00	0.02						NA,NE,NO	NA,NE,NO	1,218.15		0.65
<b>6. Waste</b>	<b>3,246.71</b>	<b>6,642.57</b>	<b>33.95</b>						<b>26.07</b>	<b>597.46</b>	<b>93.72</b>	<b>6.94</b>	
A. Solid Waste Disposal on Land	<sup>(6)</sup> 54.30	6,006.50	0.01						0.23	13.05	42.24		0.20
B. Waste-water Handling		559.86	31.70						NA,NE,NO	NA,NE,NO	3.87		
C. Waste Incineration	<sup>(6)</sup> 3,192.41	23.17	0.91						25.01	584.27	32.83		6.12
D. Other	NA,NO	53.04	1.32						0.83	0.14	14.77		0.62
<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, 1997 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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)				
Memo Items: <sup>(8)</sup>													
<b>International Bunkers</b>	<b>210,171.35</b>	<b>5.60</b>	<b>7.68</b>							<b>1,810.96</b>	<b>271.67</b>	<b>89.21</b>	<b>1,071.04</b>
Aviation	88,063.35	1.39	2.34							336.00	144.45	31.81	20.98
Marine	122,108.00	4.21	5.34							1,474.96	127.22	57.40	1,050.06
<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>187,689.90</b>												

- (1) 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.
- (2) 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.
- (3) Other Production includes Pulp and Paper and Food and Drink Production.
- (4) Parties which previously reported CO<sub>2</sub> from soils in the Agriculture sector should note this in the NIR.
- (5) For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).
- (6) 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.
- (7) 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.
- (8) 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.

A 9 EU-15, 1998

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>3,076,549.42</b>	<b>18,324.97</b>	<b>1,142.68</b>	<b>57,947.67</b>	<b>54,095.09</b>	<b>912.57</b>	<b>8,865.11</b>	<b>721.81</b>	<b>0.54</b>	<b>11,038.53</b>	<b>36,409.74</b>	<b>11,806.39</b>	<b>7,622.77</b>
<b>1. Energy</b>		<b>3,134,491.30</b>	<b>3,320.08</b>	<b>108.99</b>							<b>10,726.44</b>	<b>32,032.59</b>	<b>5,822.10</b>	<b>7,337.47</b>
A. Fuel Combustion	Reference Approach <sup>(2)</sup>	3,134,284.36												
	Sectoral Approach <sup>(2)</sup>	3,114,636.66	671.28	108.66							10,700.00	31,940.90	4,901.41	7,083.54
	1. Energy Industries	1,103,456.70	59.77	30.43							1,891.96	424.73	53.79	4,899.15
	2. Manufacturing Industries and Construction	551,497.47	56.83	20.23							1,470.52	3,567.54	124.77	1,245.30
	3. Transport	795,915.03	143.89	35.90							5,942.13	20,771.64	3,658.61	384.60
	4. Other Sectors	653,616.45	409.93	20.55							1,333.69	7,056.17	1,053.60	545.11
	5. Other	10,151.01	0.85	1.55							61.71	120.82	10.63	9.38
B. Fugitive Emissions from Fuels		19,854.64	2,648.80	0.33							26.44	91.69	920.69	253.93
	1. Solid Fuels	1,512.38	1,279.37	0.01							1.45	48.16	7.62	10.53
	2. Oil and Natural Gas	18,342.26	1,369.43	0.32							24.98	43.52	913.07	243.40
<b>2. Industrial Processes</b>		<b>209,351.61</b>	<b>29.80</b>	<b>230.94</b>	<b>57,947.67</b>	<b>54,095.09</b>	<b>912.57</b>	<b>8,865.11</b>	<b>721.81</b>	<b>0.54</b>	<b>142.37</b>	<b>2,588.06</b>	<b>647.96</b>	<b>273.44</b>
A. Mineral Products		109,462.59	0.80	IE,NA,NE,NO							68.26	14.56	112.44	58.15
B. Chemical Industry		30,216.56	22.24	230.65	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	40.78	161.64	247.68	133.39
C. Metal Production		69,320.41	4.62	0.03				6,429.82		0.09	17.07	2,396.29	20.40	50.69
D. Other Production <sup>(3)</sup>		41.69	0.27	0.24							16.11	13.42	244.54	30.95
E. Production of Halocarbons and SF <sub>6</sub>						33,375.69		1,033.84		0.01				
F. Consumption of Halocarbons and SF <sub>6</sub>					57,947.67	20,719.39	912.57	1,401.45	721.81	0.41				
G. Other		310.37	1.86	0.02	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.03	0.15	2.15	22.91	0.26

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, 1998 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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>8,420.66</b>		<b>12.41</b>							NA,NO,NE	NA,NO,NE	<b>3,559.32</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,438.12</b>	<b>742.72</b>							<b>125.44</b>	<b>484.16</b>	<b>502.13</b>	<b>4.43</b>
A. Enteric Fermentation		6,152.96											
B. Manure Management		2,183.61	77.58									271.30	
C. Rice Cultivation		109.13										0.11	
D. Agricultural Soils <sup>(4)</sup>		-30.66	664.65									166.99	
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO							NO,NE	NO,NE	NO,NE	
F. Field Burning of Agricultural Residues		23.07	0.49							17.53	484.16	62.86	4.43
G. Other		NA,NO	NA,NE,NO							107.91	NA,NO	0.87	0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-278,782.98</b>	<b>151.07</b>	<b>13.34</b>							<b>20.73</b>	<b>721.77</b>	<b>1,183.62</b>	<b>0.67</b>
A. Forest Land	<sup>(5)</sup> -360,665.58	52.49	0.54							13.82	478.62	55.40	
B. Cropland	<sup>(5)</sup> 70,196.37	10.61	12.41							2.64	92.82	NA,NE,NO	
C. Grassland	<sup>(5)</sup> -8,308.23	11.18	0.08							2.78	97.79	IE,NA,NE,NO	
D. Wetlands	<sup>(5)</sup> 4,033.45	6.09	0.25							0.07	2.62	NA,NE,NO	
E. Settlements	<sup>(5)</sup> 16,717.64	5.51	0.04							1.37	48.25	NA,NE,NO	
F. Other Land	<sup>(5)</sup> 1,100.88	0.19	0.00							0.05	1.67	NA,NE,NO	
G. Other	<sup>(5)</sup> -1,857.50	65.00	0.02							NA,NE,NO	NA,NE,NO	1,128.22	0.67
<b>6. Waste</b>	<b>3,068.82</b>	<b>6,385.90</b>	<b>34.28</b>							<b>23.54</b>	<b>583.16</b>	<b>91.25</b>	<b>6.75</b>
A. Solid Waste Disposal on Land	<sup>(6)</sup> 48.65	5,753.97	0.01							0.21	12.30	40.98	0.18
B. Waste-water Handling		555.83	31.79							0.00	0.00	3.56	
C. Waste Incineration	<sup>(6)</sup> 3,020.17	22.29	0.95							23.28	570.84	31.90	6.04
D. Other		NA,NO	1.52							0.06	0.01	14.81	0.53
<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, 1998 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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>222,957.51</b>	<b>5.92</b>	<b>8.14</b>							<b>1,938.91</b>	<b>289.11</b>	<b>95.70</b>	<b>1,166.90</b>
Aviation	95,093.00	1.45	2.53							365.51	154.60	33.96	22.83
Marine	127,864.51	4.47	5.61							1,573.40	134.51	61.73	1,144.07
<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>190,773.64</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.

A 10 EU-15, 1999

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>3,036,911.33</b>	<b>17,912.83</b>	<b>1,076.77</b>	<b>72,436.41</b>	<b>47,113.67</b>	<b>1,342.32</b>	<b>8,682.74</b>	<b>868.13</b>	<b>0.45</b>	<b>10,761.01</b>	<b>34,027.62</b>	<b>11,332.97</b>	<b>6,756.04</b>
<b>1. Energy</b>	<b>3,110,912.14</b>	<b>3,242.99</b>	<b>109.01</b>							<b>10,453.15</b>	<b>29,921.67</b>	<b>5,381.03</b>	<b>6,485.12</b>
A. Fuel Combustion	3,085,770.29												
Reference Approach <sup>(2)</sup>													
Sectoral Approach <sup>(2)</sup>	3,092,550.45	649.66	108.61							10,428.15	29,847.58	4,536.84	6,267.10
1. Energy Industries	1,082,585.79	58.64	29.16							1,791.72	421.68	54.34	4,318.36
2. Manufacturing Industries and Construction	546,546.54	55.92	20.04							1,448.75	3,431.34	124.84	1,097.16
3. Transport	815,321.31	132.94	37.35							5,792.45	18,975.89	3,331.92	359.04
4. Other Sectors	638,513.01	401.36	20.58							1,334.88	6,896.36	1,016.08	483.03
5. Other	9,583.80	0.80	1.48							60.36	122.30	9.67	9.50
B. Fugitive Emissions from Fuels	18,361.69	2,593.33	0.40							25.00	74.09	844.19	218.01
1. Solid Fuels	1,434.72	1,274.74	0.01							1.36	39.20	7.12	9.00
2. Oil and Natural Gas	16,926.97	1,318.59	0.39							23.63	34.90	837.07	209.01
<b>2. Industrial Processes</b>	<b>205,895.57</b>	<b>28.98</b>	<b>168.47</b>	<b>72,436.41</b>	<b>47,113.67</b>	<b>1,342.32</b>	<b>8,682.74</b>	<b>868.13</b>	<b>0.45</b>	<b>136.95</b>	<b>2,442.40</b>	<b>603.21</b>	<b>260.82</b>
A. Mineral Products	110,692.89	0.66	IE,NA,NE,NO							65.61	12.81	110.66	56.18
B. Chemical Industry	29,040.24	21.54	168.17	NA,NO	C,NA,NO	NA,NO	C,NA,NO	C,NA,NO	C,NA,NO	38.05	154.17	209.96	114.06
C. Metal Production	65,800.49	4.61	0.03				6,246.71		0.09	16.63	2,258.72	19.45	52.03
D. Other Production <sup>(3)</sup>	51.79	0.28	0.24							16.34	13.34	245.53	28.04
E. Production of Halocarbons and SF <sub>6</sub>					23,062.36		697.89		0.01				
F. Consumption of Halocarbons and SF <sub>6</sub>				72,436.41	24,051.30	1,342.32	1,738.14	868.13	0.32				
G. Other	310.16	1.89	0.03	NA,NE,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.03	0.33	3.35	17.60	10.52

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, 1999 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 2 of 3)

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>8,420.66</b>		<b>12.41</b>							NA,NO,NE	NA,NO,NE	<b>3,559.32</b>	NA,NO,NE
<b>4. Agriculture</b>		<b>8,438.12</b>	<b>742.72</b>							<b>125.44</b>	<b>484.16</b>	<b>502.13</b>	<b>4.43</b>
A. Enteric Fermentation		6,152.96										271.30	
B. Manure Management		2,183.61	77.58										0.11
C. Rice Cultivation		109.13										166.99	
D. Agricultural Soils <sup>(4)</sup>		-30.66	664.65										
E. Prescribed Burning of Savannas		NA,NE,NO	NA,NE,NO						NO,NE	NO,NE	NO,NE		
F. Field Burning of Agricultural Residues		23.07	0.49						17.53	484.16	62.86		4.43
G. Other		NA,NO	NA,NE,NO						107.91	NA,NO	0.87		0.00
<b>5. Land Use, Land-Use Change and Forestry</b>	<sup>(5)</sup> <b>-278,782.98</b>	<b>151.07</b>	<b>13.34</b>						<b>20.73</b>	<b>721.77</b>	<b>1,183.62</b>	<b>0.67</b>	
A. Forest Land	<sup>(5)</sup> -360,665.58	52.49	0.54						13.82	478.62	55.40		
B. Cropland	<sup>(5)</sup> 70,196.37	10.61	12.41						2.64	92.82	NA,NE,NO		
C. Grassland	<sup>(5)</sup> -8,308.23	11.18	0.08						2.78	97.79	IE,NA,NE,NO		
D. Wetlands	<sup>(5)</sup> 4,033.45	6.09	0.25						0.07	2.62	NA,NE,NO		
E. Settlements	<sup>(5)</sup> 16,717.64	5.51	0.04						1.37	48.25	NA,NE,NO		
F. Other Land	<sup>(5)</sup> 1,100.88	0.19	0.00						0.05	1.67	NA,NE,NO		
G. Other	<sup>(5)</sup> -1,857.50	65.00	0.02						NA,NE,NO	NA,NE,NO	1,128.22		0.67
<b>6. Waste</b>	<b>3,068.82</b>	<b>6,385.90</b>	<b>34.28</b>						<b>23.54</b>	<b>583.16</b>	<b>91.25</b>	<b>6.75</b>	
A. Solid Waste Disposal on Land	<sup>(6)</sup> 48.65	5,753.97	0.01						0.21	12.30	40.98		0.18
B. Waste-water Handling		555.83	31.79						0.00	0.00	3.56		
C. Waste Incineration	<sup>(6)</sup> 3,020.17	22.29	0.95						23.28	570.84	31.90		6.04
D. Other	NA,NO	53.82	1.52						0.06	0.01	14.81		0.53
<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, 1999 Summary 1.A Summary report for National Greenhouse Gas Inventories (IPCC Table 7A)

(Sheet 3 of 3)

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>	<b>222,957.51</b>	<b>5.92</b>	<b>8.14</b>							<b>1,938.91</b>	<b>289.11</b>	<b>95.70</b>	<b>1,166.90</b>
Aviation	95,093.00	1.45	2.53							365.51	154.60	33.96	22.83
Marine	127,864.51	4.47	5.61							1,573.40	134.51	61.73	1,144.07
<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>190,773.64</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.