



Bosna i Hercegovina

**Initial National Communication  
of Bosnia and Herzegovina  
under the United Nations Framework  
Convention on Climate Change**

**ANNEX I**



INITIAL NATIONAL COMMUNICATION (INC)  
OF BOSNIA AND HERZEGOVINA  
UNDER THE UNITED NATIONS  
FRAMEWORK CONVENTION  
ON CLIMATE CHANGE (UNFCCC)

**ANNEX I**

KEY SOURCES ANALYSIS AND COMMON  
REPORTING FORMAT FOR BOSNIA AND  
HERZEGOVINA 1990 YEAR

Banja Luka, October 2009



GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	(Gg)						
<b>Total Energy</b>	23.121,74	77,51	0,45	81,31	112,70	27,01	448,89
A. Fuel Combustion Activities (Sectoral Approach)	23.121,74	1,46	0,45	81,31	112,70	27,01	448,89
<b>1. Energy Industries</b>	<b>16.434,64</b>	<b>0,20</b>	<b>0,23</b>	<b>51,62</b>	<b>7,35</b>	<b>10,03</b>	<b>392,88</b>
a. Public Electricity and Heat Production	15.254,06	0,17	0,22	48,06	4,31	0,82	375,88
b. Petroleum Refining	0,00	0,00	0,00	NE	NE	NE	NE
c. Manufacture of Solid Fuels and Other Energy Industries	1.180,58	0,03	0,01	3,56	3,04	9,21	17,00
<b>2. Manufacturing Industries and Construction</b>	<b>530,16</b>	<b>0,07</b>	<b>0,01</b>	<b>1,81</b>	<b>0,17</b>	<b>0,13</b>	<b>6,97</b>
a. Iron and Steel	0,00	0,00	0,00	NE	NE	NE	NE
b. Non-Ferrous Metals	0,00	0,00	0,00	NE	NE	NE	NE
c. Chemicals	0,00	0,00	0,00	NE	NE	NE	NE
d. Pulp, Paper and Print	0,00	0,00	0,00	NE	NE	NE	NE
e. Food Processing, Beverages and Tobacco	0,00	0,00	0,00	NE	NE	NE	NE
f. Other (please specify)	530,16	0,07	0,01	1,81	0,17	0,13	6,97
				1,81	0,17	0,13	6,97
<b>3. Transport</b>	<b>2.308,06</b>	<b>0,59</b>	<b>0,12</b>	<b>22,85</b>	<b>104,17</b>	<b>12,85</b>	<b>3,66</b>
a. Civil Aviation	0,00	0,00	0,00	NE	NE	NE	NE
b. Road Transportation	2.308,06	0,59	0,12	22,85	104,17	12,85	3,66
c. Railways	0,00	0,00	0,00	NE	NE	NE	NE
d. Navigation	0,00	0,00	0,00	NE	NE	NE	NE
e. Other Transportation (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NM VOC	SO <sub>2</sub>
	(Gg)						
<b>4. Other Sectors</b>	3,848,88	0,60	0,09	5,03	1,01	4,00	45,38
a. Commercial/Institutional	3,683,71	0,41	0,07	4,50	0,97	3,86	44,27
b. Residential	165,17	0,19	0,02	0,53	0,04	0,14	1,11
c. Agriculture/Forestry/Fisheries	0,00	0,00	0,00	NE	NE	NE	NE
<b>5. Other (please specify)<sup>(1)</sup></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00
a. Stationary	0,00	0,00	0,00	0,00	0,00	0,00	0,00
b. Mobile	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>B. Fugitive Emissions from Fuels</b>							
<b>1. Solid Fuels</b>	0,00	76,05	0,00	0,00	0,00	0,00	0,00
a. Coal Mining	0,00	76,05	NE	NE	NE	NE	NE
b. Solid Fuel Transformation	0,00	0,00	NE	NE	NE	NE	NE
c. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>2. Oil and Natural Gas</b>							
a. Oil	0,00	0,00		NE	NE	NE	NE
b. Natural Gas	0,00	0,00				NE	NE
c. Venting and Flaring	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Venting	0,00	0,00				NE	NE
Flaring	0,00	0,00	0,00	NE	NE	NE	NE
d. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Memo Items:<sup>(2)</sup></b>							
<b>International Bunkers</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Aviation	0,00	0,00	0,00	NE	NE	NE	NE
Marine	0,00	0,00	0,00	NE	NE	NE	NE
Multilateral Operations	0,00	0,00	0,00	NE	NE	NE	NE
CO <sub>2</sub> Emissions from Biomass	0,00						

<sup>1</sup> Include military fuel use under this category.

<sup>2</sup> Please do not include in energy totals.

TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY  
Fuel Combustion Activities – Sectoral Approach  
(Sheet 1 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(1)</sup>				EMISSIONS		
	(TJ)	Consumption	CO <sub>2</sub> (t/TJ)	CH <sub>4</sub> (kg/TJ)	N <sub>2</sub> O (kg/TJ)	CO <sub>2</sub> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)	
<b>1.A. Fuel Combustion</b>									
Liquid Fuels	274,557,35	NCV	68,87	13,74	2,23	23,121,74	1,46	0,45	
Solid Fuels	58,244,47	NCV	92,31	3,17	1,51	4,011,33	0,80	0,13	
Gaseous Fuels	192,650,26	NCV	56,10	2,11	1,27	17,782,94	0,61	0,29	
Biomass	23,662,62	NCV	0,00	0,00	0,00 <sup>(b)</sup>	1,327,47	0,05	0,03	
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
<b>1.A.1. Energy Industries</b>									
Liquid Fuels	183,602,06	NCV	73,33	5,05	0,00	16,434,64	0,20	0,23	
Solid Fuels	3,962,66	NCV	92,41	1,02	1,38	290,60	0,02	0,00	
Gaseous Fuels	167,061,40	NCV	56,10	0,80	0,00	15,438,41	0,17	0,23	
Biomass	12,578,00	NCV	0,00	0,00	0,00 <sup>(b)</sup>	705,63	0,01	0,00	
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
<b>a. Public Electricity and Heat Production</b>									
Liquid Fuels	162,983,68	NCV	73,33	5,99	0,00	15,254,06	0,17	0,22	
Solid Fuels	1,668,11	NCV	94,74	1,02	1,40	122,33	0,01	0,00	
Gaseous Fuels	157,386,37	NCV	56,10	0,00	0,00	14,911,30	0,16	0,22	
Biomass	3,929,20	NCV	0,00	0,00	0,00 <sup>(b)</sup>	220,43	0,00	0,00	
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
<b>b. Petroleum Refining</b>									
Liquid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
Solid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
Gaseous Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
Biomass	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
<b>c. Manufacture of Solid Fuels and Other Energy Industries</b>									
Liquid Fuels	20,618,38	NCV	73,33	4,36	0,00	1,180,58	0,03	0,01	
Solid Fuels	2,294,54	NCV	54,48	1,03	1,03	168,27	0,01	0,00	
Gaseous Fuels	9,675,04	NCV	56,10	1,16	0,00	527,11	0,01	0,01	
Biomass	8,648,80	NCV	0,00	0,00	0,00 <sup>(b)</sup>	485,20	0,01	0,00	
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	

<sup>(1)</sup> Activity data should be calculated using net calorific values (NCV) as specified by the IPCC guidelines. If gross calorific values (GCV) were used, please indicate this by replacing "NCV" with "GCV" in this column.

<sup>(b)</sup> Carbon dioxide emissions from biomass are reported under Memo items. The content of the cells is not included in the totals.

**Note:** For the coverage of fuel categories, please refer to the IPCC Guidelines (Volume 1. Reporting Instructions - Common Reporting Framework, section 1.2, p. 1.19). If some derived gases (e.g. gas work gas, coke oven gas, blast gas, oxygen steel furnace gas, etc.) are considered, Parties should provide information on the allocation of these derived gases under the above fuel categories (liquid, solid, gaseous, biomass, other fuels) in the documentation box at the end of sheet 4 of this table.

<sup>(2)</sup> Accurate estimation of CH<sub>4</sub> and N<sub>2</sub>O emissions depends on combustion conditions, technology, and emission control policy, as well as fuel characteristics. Therefore, caution should be used when comparing the implied emission factors.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>				EMISSIONS		
	(TJ)	(t)	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
<b>1.A.2 Manufacturing Industries and Construction</b>									
Liquid Fuels	8,530,51	NCV	19,51	3,38	0,00	530,16	0,07	0,01	
Solid Fuels	2,956,97	NCV	84,77	10,77	1,79	57,69	0,01	0,00	
Gaseous Fuels	5,573,54	NCV	0,00	0,00	0,00	472,47	0,06	0,01	
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(3)</sup>	0,00	0,00	0,00	
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
<b>a. Iron and Steel</b>									
Liquid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Solid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Gaseous Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Biomass	0,00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO	
Other Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
<b>b. Non-Ferrous Metals</b>									
Liquid Fuels	0,00	NCV	NE	NE	NE	0,00	0,00	0,00	
Solid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Gaseous Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Biomass	0,00	NCV	NE	NE	NE	NE	NE	NE	
Other Fuels	0,00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO	
<b>c. Chemicals</b>									
Liquid Fuels	0,00	NCV	NE	NE	NE	0,00	0,00	0,00	
Solid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Gaseous Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Biomass	0,00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO	
Other Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
<b>d. Pulp, Paper and Print</b>									
Liquid Fuels	0,00	NCV	NE	NE	NE	0,00	0,00	0,00	
Solid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Gaseous Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Biomass	0,00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO	
Other Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
<b>e. Food Processing, Beverages and Tobacco</b>									
Liquid Fuels	0,00	NCV	NE	NE	NE	0,00	0,00	0,00	
Solid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Gaseous Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
Biomass	0,00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO	
Other Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE	
<b>f. Other (please specify)</b>									
Liquid Fuels	8,530,51	NCV	19,51	3,38	0,00	530,16	0,07	0,01	
Solid Fuels	2,956,97	NCV	84,77	10,77	1,79	57,69	0,01	0,00	
Gaseous Fuels	5,573,54	NCV	0,00	0,00	0,00	472,47	0,06	0,01	
Biomass	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00	



TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY  
Fuel Combustion Activities - Sectoral Approach  
(Sheet 3 of 4)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(1)</sup>				EMISSIONS					
	(TJ)	(tTJ)	CO <sub>2</sub> (tTJ)	CH <sub>4</sub> (kg/TJ)	N <sub>2</sub> O (kg/TJ)	CO <sub>2</sub> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)				
<b>1.A.3 Transport</b>												
Gasoline	32,847,76	(1)	80,65	36,83	2,51	2,308,06	0,59	0,12				
Diesel	11,948,17	NCV	64,33	7,18	4,31	963,60	0,44	0,03				
Natural Gas	20,899,59	NCV	0,00	0,00	0,00	1,344,46	0,15	0,09				
Solid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00				
Biomass	0,00	NCV	0,00	0,00	0,00 <sup>(b)</sup>	0,00	0,00	0,00				
Other Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00				
<b>a. Civil Aviation</b>												
Aviation Gasoline	0,00	NCV	NE	NE	NE	NE	NE	NE				
Jet Kerosene	0,00	NCV	NE	NE	NE	NE	NE	NE				
<b>b. Road Transportation</b>												
Gasoline	32,847,76	NCV	80,65	36,83	2,51	2,308,06	0,59	0,12				
Diesel Oil	11,948,17	NCV	64,33	7,18	4,31	963,60	0,44	0,03				
Natural Gas	0,00	NCV	NE	NE	NE	1,344,46	0,15	0,09				
Biomass	0,00	NCV	NO	NO	NO <sup>(b)</sup>	NE	NE	NE				
Other Fuels (please-specify)	0,00	NCV	0,00	0,00	0,00	NO	NO	NO				
<b>c. Railways</b>												
Solid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00				
Liquid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE				
Other Fuels (please-specify)	0,00	NCV	NE	NE	NE	NE	NE	NE				
<b>d. Navigation</b>												
Coal	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00				
Residual Oil	0,00	NCV	NE	NE	NE	0,00	0,00	0,00				
Gas/Diesel Oil	0,00	NCV	NE	NE	NE	NE	NE	NE				
Other Fuels (please-specify)	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00				
<b>e. Other Transportation</b>												
Liquid Fuels	0,00	NCV	0,00	0,00	0,00	0,00	0,00	0,00				
Solid Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE				
Gaseous Fuels	0,00	NCV	NE	NE	NE	NE	NE	NE				

TABLE 1.A(a). SECTORAL BACKGROUND DATA FOR ENERGY  
Fuel Combustion Activities – Sectoral Approach  
(Sheet 4 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>			EMISSIONS		
	Consumption (TJ)	<sup>(1)</sup>	CO <sub>2</sub> (t/TJ)	CH <sub>4</sub> (kg/TJ)	N <sub>2</sub> O (kg/TJ)	CO <sub>2</sub> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
<b>1.A.4 Other Sectors</b>								
Liquid Fuels	49,577.02	NCV				3,846.88	0.60	0.09
Solid Fuels	18,477.09	NCV	73.33	9.74	0.54	1,354.98	0.18	0.01
Gaseous Fuels	20,015.32	NCV	93.53	18.99	2.50	1,872.06	0.38	0.05
Biomass	11,084.62	NCV	56.10	3.61	2.71	621.84	0.04	0.03
Other Fuels	0.00	NCV	0.00	0.00	0.00 <sup>(3)</sup>	0.00	0.00	0.00
Other Fuels	0.00	NCV	0.00	0.00	0.00	0.00	0.00	0.00
<b>a. Commercial/Institutional</b>								
Liquid Fuels	47,788.86	NCV				3,683.71	0.41	0.07
Solid Fuels	18,411.15	NCV	73.33	9.78	0.54	1,350.14	0.18	0.01
Gaseous Fuels	18,633.96	NCV	92.89	10.20	1.61	1,730.85	0.19	0.03
Biomass	10,743.76	NCV	56.10	3.72	2.79	602.72	0.04	0.03
Other Fuels	0.00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO
Other Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE
<b>b. Residential</b>								
Liquid Fuels	1,788.16	NCV				165.17	0.19	0.02
Solid Fuels	65.94	NCV	73.40	0.00	0.00	4.84	0.00	0.00
Gaseous Fuels	1,381.36	NCV	102.23	137.55	14.48	141.21	0.19	0.02
Biomass	340.86	NCV	56.09	0.00	0.00	19.12	0.00	0.00
Other Fuels	0.00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO
Other Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE
<b>c. Agriculture/Forestry/Fisheries</b>								
Liquid Fuels	0.00	NCV	NE	NE	NE	0.00	0.00	0.00
Solid Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE
Gaseous Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE
Biomass	0.00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO
Other Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE
<b>1.A.5 Other (Not elsewhere specified)<sup>(4)</sup></b>								
Liquid Fuels	0.00	NCV				0.00	0.00	0.00
Solid Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE
Gaseous Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE
Biomass	0.00	NCV	NO	NO	NO <sup>(3)</sup>	NO	NO	NO
Other Fuels	0.00	NCV	NE	NE	NE	NE	NE	NE

<sup>(4)</sup> Include military fuel use under this category.

TABLE 1.A(b) SECTORAL BACKGROUND DATA FOR ENERGY  
CO<sub>2</sub> from Fuel Combustion Activities - Reference Approach (IPCC Worksheet 1-1)  
(Sheet 1 of 1)

FUEL TYPES	Unit	Production	Imports	Exports	International bunkers	Stock change	Apparent consumption	Conversion factor (1) <sup>(1)</sup> (TJ/Unit)	(1)	Apparent consumption (TJ)	Carbon emission factor (t C/TJ)	Carbon content (Gg C)	Carbon stored (Gg C)	Net carbon emissions (Gg C)	Fraction of carbon oxidized	Actual CO <sub>2</sub> emissions (Gg CO <sub>2</sub> )	
Primary Fuels	Crude Oil	NO	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
	Orimulsion	NO	NO	NO		NO	0,00	NO	NCV	0,00	NO	0,00	NO	0,00	NO	0,00	
Liquid Fossil	Natural Gas Liquids	NO	NO	NO		NO	0,00	NO	NCV	0,00	NO	0,00	NO	0,00	NO	0,00	
	Gasoline	kt	302,70	NE	NE	NE	302,70	44,80	NCV	13.560,96	18,90	256,30		256,30	0,99	930,38	
	Jet Kerosene		NE	NE	NE	NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
	Other Kerosene		NE	NE	NE	NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
	Shale Oil		NE	NE	NE	NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
	Gas / Diesel Oil	kt	428,50	NE	NE	NE	428,50	43,33	NCV	18.566,91	20,20	375,05	0,00	375,05	0,99	1.361,44	
	Residual Fuel Oil	kt	604,68	NE	NE	NE	604,68	42,00	NCV	25.396,71	21,10	535,87		535,87	0,99	1.945,21	
	LPG	NO	NO	NO	NO		NO	NO	NCV	0,00	NO	0,00	0,00	0,00	NO	0,00	
	Ethane	NO	NO	NO	NO		NO	NO	NCV	0,00	NO	0,00	0,00	0,00	NO	0,00	
	Naphtha	NO	NO	NO	NO		NO	NO	NCV	0,00	NO	0,00	0,00	0,00	NO	0,00	
Solid Fossil	Bitumen	NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	0,00	0,00	NE	0,00	
	Lubricants	NE	NE	NE	NE	NE	0,00	NE	NCV	0,00	NE	0,00	0,00	0,00	NE	0,00	
	Petroleum Coke	NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
	Refinery Feedstocks	NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
	Other Oil	NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
	Liquid Fossil Totals									57.524,58		1.167,22	0,00	1.167,22		4.237,02	
	Anthracite <sup>(2)</sup>	kt	7.522,75	NE	NE		NE	7.522,75	15,05	NCV	113.217,33	26,80	3.034,22		3.034,22	0,98	10.902,98
	Coking Coal		NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	0,00	0,00	NE	0,00
	Other Bit. Coal		NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00
	Sub-bit. Coal		NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00
Lignite	kt	6.371,13	NE	NE		NE	6.371,13	10,43	NCV	66.450,92	27,60	1.834,05		1.834,05	0,98	6.590,34	
Oil Shale		NE	NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
Peat		NO	NO	NO		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
BKG & Patent Fuel			NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
Coke Oven/Gas Coke			NE	NE		NE	0,00	NE	NCV	0,00	NE	0,00	NE	0,00	NE	0,00	
Solid Fuel Totals										179.668,24		4.868,27	0,00	4.868,27		17.493,32	
Gaseous Fossil	1000 m <sup>3</sup>	NO	622.700,47				622.700,47	0,038	NCV	23.662,62	15,50	362,04		362,04	0,995	1.320,84	
Total										260.855,44		6.397,53	0,00	6.397,53		23.051,10	
Biomass total										0,00		0,00	0,00	0,00		0,00	
Solid Biomass		NO	NO	NO		NO	0,00	NO	NCV	0,00	NO	0,00	NO	0,00	NO	0,00	
Liquid Biomass		NO	NO	NO		NO	0,00	NO	NCV	0,00	NO	0,00	NO	0,00	NO	0,00	
Gas Biomass		NO	NO	NO		NO	0,00	NO	NCV	0,00	NO	0,00	NO	0,00	NO	0,00	

<sup>(1)</sup> To convert quantities expressed in natural units to energy units, use net calorific values (NCV). If gross calorific values (GCV) are used in this table, please indicate this by replacing "NCV" with "GCV" in this column.

<sup>(2)</sup> If Anthracite is not separately available, include with Other Bituminous Coal.

TABLE 1.A(c) COMPARISON OF CO<sub>2</sub> EMISSIONS FROM FUEL COMBUSTION  
(Sheet 1 of 1)

BOSNIA AND HERZEGOVINA

1990

Submissio 2009

FUEL TYPES	Reference approach		National approach <sup>(1)</sup>		Difference <sup>(2)</sup>	
	Energy consumption (PJ)	CO <sub>2</sub> emissions (Gg)	Energy consumption (PJ)	CO <sub>2</sub> emissions (Gg)	Energy consumption (%)	CO <sub>2</sub> emissions (%)
Liquid Fuels (excluding international bunkers)	57,52	4.237,02	58,24	4.011,33	-1,24	5,63
Solid Fuels (excluding international bunkers)	179,67	17.493,32	192,65	17.782,94	-6,74	-1,63
Gaseous Fuels	23,66	1.320,84	23,66	1.327,47	-0,00	-0,50
Other <sup>(3)</sup>			0,00	0,00	0,00	0,00
Total <sup>(3)</sup>	260,86	23.051,18	274,56	23.121,74	-4,99	-0,31

<sup>(1)</sup> "National approach" is used to indicate the approach (if different from the Reference approach) followed by the Party to estimate its CO<sub>2</sub> emissions from fuel combustion reported in the national GHG inventory.

<sup>(2)</sup> Difference of the Reference approach over the National approach (i.e. difference = 100% x ((RA-NA)/NA), where NA = National approach and RA = Reference approach).

<sup>(3)</sup> Emissions from biomass are not included.

**Note:** In addition to estimating CO<sub>2</sub> emissions from fuel combustion by sector, Parties should also estimate these emissions using the IPCC Reference approach, as found in the IPCC Guidelines, Worksheet 1-1 (Volume 2. Workbook). The Reference approach is to assist in verifying the sectoral data. Parties should also complete the above tables to compare the alternative estimates, and if the emission estimates lie more than 2 percent apart, should explain the source of this difference in the documentation box provided.

TABLE 1.A(d) SECTORAL BACKGROUND DATA FOR ENERGY

BOSNIA AND HERZEGOVINA

Feedstocks and Non-Energy Use of Fuels

1990

(Sheet 1 of 1)

Submissio 2009

FUEL TYPE <sup>(1)</sup>	ACTIVITY DATA AND RELATED INFORMATION		IMPLIED EMISSION FACTOR	ESTIMATE of carbon stored in non-energy use of fuels (Gg C)	CO <sub>2</sub> not emitted (Gg CO <sub>2</sub> )	Subtracted from energy sector (specify source category)
	Fuel quantity (TJ)	Fraction of carbon stored	Carbon emission factor (t C/TJ)			
Naphtha <sup>(2)</sup>			0,00		0,00	
Lubricants			0,00		0,00	
Bitumen			0,00		0,00	
Coal Oils and Tars (from Coking Coal)			0,00		0,00	
Natural Gas <sup>(2)</sup>			0,00		0,00	
Gas/Diesel Oil <sup>(2)</sup>			0,00		0,00	
LPG <sup>(2)</sup>			0,00		0,00	
Butane <sup>(2)</sup>			0,00		0,00	
Ethane <sup>(2)</sup>			0,00		0,00	
Other (please specify)						

Documentation box: A fraction of energy carriers is stored in such products as plastics or asphalt. The non-stored fraction of the carbon in the energy carrier or product is oxidized, resulting in carbon dioxide emissions, either during the use of the energy carriers in the industrial production (e.g. fertilizer production), or during the use of the products (e.g. solvents, lubricants), or in both (e.g. monomers). To report associated emissions use the above table, filling an extra "Additional information" table, as shown below.

<sup>(1)</sup> Where fuels are used in different industries, please enter in different rows.

<sup>(2)</sup> The fuel lines continue from the table

<sup>(3)</sup> Enter these fuels when they are used as feedstocks to the left.

**Note:** The table is consistent with the IPCC Guidelines. Parties that take into account the emissions associated with the use and disposal of these feedstocks could continue to use their methodology, and provide explanation notes in the documentation box below.

Associated CO <sub>2</sub> emissions (Gg)	Allocated under (Specify source category) <sup>(a)</sup>

<sup>(a)</sup> e.g. Industrial Processes, Waste Incineration, etc.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTOR		EMISSIONS	
	Amount of fuel produced <sup>(1)</sup> (Mt)	CH <sub>4</sub> (kg/t)	CO <sub>2</sub> (kg/t)	CH <sub>4</sub> (Gg)	CO <sub>2</sub> (Gg)
<b>1. B. 1. a. Coal Mining and Handling</b>	0,00			76,05	0,00
i. Underground Mines <sup>(2)</sup>	0,00	0,00	0,00	66,26	0,00
Mining Activities		0,00	0,00	66,26	
Post-Mining Activities		0,00	0,00		
ii. Surface Mines <sup>(2)</sup>	0,00	0,00	0,00	9,79	0,00
Mining Activities		0,00	0,00	9,79	
Post-Mining Activities		0,00	0,00		
<b>1. B. 1. b. Solid Fuel Transformation</b>	0,00	0,00	0,00		
<b>1. B. 1. c. Other (please specify) <sup>(3)</sup></b>				0,00	0,00
	0,00	0,00	0,00		

Additional information <sup>(4)</sup>	
Description	Value
Amount of CH <sub>4</sub> drained (recovered) and utilized or flared (Gg)	
Number of active underground mines	
Number of mines with drainage (recovery) systems	

<sup>(4)</sup> For underground mines.

<sup>(1)</sup> Use the documentation box to specify whether the fuel amount is based on the run-of-mine (ROM) production or on the saleable production.

<sup>(2)</sup> Emissions both for Mining Activities and Post-Mining Activities are calculated with the activity data in lines Underground Mines and Surface Mines respectively.

<sup>(3)</sup> Please click on the button to enter any other solid fuel related activities resulting in fugitive emissions, such as emissions from abandoned mines and waste piles.

**Note:** There are no clear references to the coverage of 1.B.1.b. and 1.B.1.c. in the IPCC Guidelines. Make sure that the emissions entered here are not reported elsewhere. If they are reported under another source category, indicate this (IE) and make a reference in Table 9 (completeness) and/or in the documentation box.

TABLE 1.B.2. SECTORAL BACKGROUND DATA FOR ENERGY  
Fugitive Emissions from Oil, Natural Gas and Other Sources  
(Sheet 4 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS				EMISSIONS		
	Description <sup>(1)</sup>	Unit	Value	CO <sub>2</sub> (kg/unit) <sup>(2)</sup>	CH <sub>4</sub> (kg/unit) <sup>(2)</sup>	N <sub>2</sub> O (kg/unit) <sup>(2)</sup>	CO <sub>2</sub> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
<b>1. B. 2. a. Oil<sup>(3)</sup></b>							0,00	0,00	
i. Exploration	(e.g. number of wells drilled)		0,00	NO	NO		NO	NO	
ii. Production <sup>(4)</sup>	(e.g. PJ of oil produced)		0,00	NO	NO		NO	NO	
iii. Transport	(e.g. PJ oil loaded in tankers)		0,00	NE	NE		NE	NE	
iv. Refining / Storage	(e.g. PJ oil refined)		0,00	0,00	0,00				
v. Distribution of oil products	(e.g. PJ oil refined)		0,00	0,00	0,00				
vi. Other			0,00	0,00	0,00				
<b>1. B. 2. b. Natural Gas</b>							0,00	0,00	
Exploration				NO	NO		NO	NO	
i. Production <sup>(4)</sup> / Processing	(e.g. PJ gas produced)		0,00	NO	NO		NO	NO	
ii. Transmission	(e.g. PJ gas consumed)		0,00	0,00	0,00				
Distribution	(e.g. PJ gas consumed)			0,00	0,00				
iii. Other Leakage	(e.g. PJ gas consumed)			0,00	0,00		0,00	0,00	
at industrial plants and power stations				0,00	0,00				
in residential and commercial sectors				0,00	0,00				
<b>1. B. 2. c. Venting<sup>(5)</sup></b>							0,00	0,00	
i. Oil	(e.g. PJ oil produced)			0,00	0,00				
ii. Gas	(e.g. PJ gas produced)			0,00	0,00				
iii. Combined				0,00	0,00				
<b>Flaring</b>							0,00	0,00	0,00
i. Oil	(e.g. PJ gas consumption)		0,00	0,00	0,00				
ii. Gas	(e.g. PJ gas consumption)		0,00	0,00	0,00				
iii. Combined				0,00	0,00				
<b>1.B.2.d. Other (please specify)<sup>(6)</sup></b>							0,00	0,00	0,00

Additional information		
Description	Value	Unit
Pipelines length (km)		
Number of oil wells		
Number of gas wells		
Gas throughput (a)		
Oil throughput (a)		
Other relevant information (specify)		

Documentation box

<sup>(1)</sup> Specify the activity data used and fill in the activity data description column, as given in the examples in brackets. Specify the unit of the activity data in the unit column. Use the document box to specify whether the fuel amount is based on the raw material production or on the saleable production. Note cases where more than one variable is used as activity data.

<sup>(2)</sup> The unit of the implied emission factor will depend on the units of the activity data used, and is therefore not specified in this column. The unit of the implied emission factor for each activity will be kg/unit of activity data.

<sup>(3)</sup> Use the category also to cover emissions from combined oil and gas production fields. Natural gas processing and distribution from these fields should be included under 1.B.2.b.ii and 1.B.2.b.iii, respectively.

<sup>(4)</sup> If using default emission factors these categories will include emissions from production other than venting and flaring.

<sup>(5)</sup> If using default emission factors, emissions from Venting and Flaring from all oil and gas production should be accounted for here. Parties using the IPCC software could report those emissions together, indicating so in the documentation box.

<sup>(6)</sup> For example, fugitive CO<sub>2</sub> emissions from production of geothermal power could be reported here.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS			EMISSIONS		
	Consumption (TJ)	CO <sub>2</sub> (t/TJ)	CH <sub>4</sub> (kg/TJ)	N <sub>2</sub> O (kg/TJ)	CO <sub>2</sub> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
Marine Bunkers	0,00				0,00	0,00	0,00
Gasoline	0,00	NE	NE	NE	NE	NE	NE
Gas/Diesel Oil	0,00	NE	NE	NE	NE	NE	NE
Residual Fuel Oil	0,00	NE	NE	NE	NE	NE	NE
Lubricants	0,00	NE	NE	NE	NE	NE	NE
Coal	0,00	NE	NE	NE	NE	NE	NE
Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		0,00	0,00	0,00			
Aviation Bunkers	0,00				0,00	0,00	0,00
Jet Kerosene	0,00	NE	NE	NE	NE	NE	NE
Gasoline	0,00	NE	NE	NE	NE	NE	NE
Multilateral Operations <sup>(1)</sup>							

<sup>(1)</sup> Parties may choose to report or not report the activity data and emission factors for multilateral operation consistent with the principle of confidentiality stated in the UNFCCC reporting guidelines on inventories. In any case, Parties should report the emissions from multilateral operations, where available, under the Memo Items section of the Summary tables and in the Sectoral report table for energy.

**Note:** In accordance with the IPCC Guidelines, international aviation and marine bunker fuel emissions from fuel sold to ships or aircraft engaged in international transport should be excluded from national totals and reported separately for informational purposes only. Documentation box: Please explain how the consumption of international marine and aviation bunkers fuels was estimated and separated from the domestic consumption.

Documentation box: Please explain how the consumption of international marine and aviation bunkers fuels was estimated and separated from the domestic consumption.

Additional information		
Fuel consumption	Allocation <sup>(a)</sup> (percent)	
	Domestic	International
Marine	0,00	0,00
Aviation	0,00	0,00

<sup>(a)</sup> For calculating the allocation of fuel consumption, use the sums of fuel consumption by domestic navigation and aviation

<sup>(b)</sup> Table 1.A(a) and by international bunkers (Table 1.C).

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	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	MMVOC	SO <sub>2</sub>
				P	A	P	A	P	A				
CO <sub>2</sub> equivalent (Gg)													
Total Industrial Processes	3,339.33	0.04	0.69	0,00	0,00	0,00	0,00	0,00	0,00	1,76	11,81	43,67	4,27
A. Mineral Products	736.75	0,00	0,00							0,00	0,00	0,00	0,24
1. Cement Production	397.84												0,24
2. Lime Production	338.91												
3. Limestone and Dolomite Use	NE												
4. Soda Ash Production and Use	0,00												
5. Asphalt Roofing	NE										NE	NE	
6. Road Paving with Asphalt	NE									NE	NE	NE	NE
7. Other (please specify)	0,00	0,00	0,00							0,00	0,00	0,00	0,00
B. Chemical Industry	0,00	0,00	0,69	0,00	0,00	0,00	0,00	0,00	0,00	1,38	0,00	0,00	0,00
1. Ammonia Production	NE	NE								NE	NE	NE	NE
2. Nitric Acid Production			0,69							1,38			
3. Adipic Acid Production			NE							NE	NE	NE	NE
4. Carbide Production	0,00	0,00									NE	NE	NE
5. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
C. Metal Production	2,602.58	0,04	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,18	11,07	0,00	1,16
1. Iron and Steel Production	2,273.60	0,00								NE	NE	NE	NE
2. Ferroalloys Production	129.66	0,03								NE	NE	NE	NE
3. Aluminium Production	147.60	0,00					0,00			0,18	11,07	NE	1,16
4. SF <sub>6</sub> Used in Aluminium and Magnesium Foundries							0,00		0,00				
5. Other (please specify)	51.72	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	51.72	0,01											

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines. A = Actual emissions based on Tier 2 approach of the IPCC Guidelines. This only applies in sectors where methods exist for both tiers.  
<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.



TABLE 2(I) SECTORAL REPORT FOR INDUSTRIAL PROCESSES  
(Sheet 2 of 2)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	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>
		(Gg)															
		(Gg)			CO <sub>2</sub> equivalent (Gg)			CO <sub>2</sub> equivalent (Gg)			CO <sub>2</sub> equivalent (Gg)						
		P	A		P	A		P	A		P	A					
<b>D. Other Production</b>	0,00													0,20	0,74	43,67	2,87
1. Pulp and Paper														0,20	0,74	0,65	2,87
2. Food and Drink <sup>(2)</sup>	0,00															43,02	
<b>E. Production of Halocarbons and SF<sub>6</sub></b>																	
1. By-product Emissions						0,00			0,00							0,00	
Production of HFC-22						0,00			0,00							0,00	
Other						0,00			0,00							0,00	
2. Fugitive Emissions						0,00			0,00							0,00	
3. Other (please specify)						0,00			0,00							0,00	
<b>F. Consumption of Halocarbons and SF<sub>6</sub></b>																	
1. Refrigeration and Air Conditioning Equipment		0,00	0,00		0,00	0,00		0,00	0,00		0,00					0,00	
2. Foam Blowing		NE	0,00		NE	0,00		NE	0,00		NE					0,00	
3. Fire Extinguishers		NE	0,00		NE	0,00		NE	0,00		NE					0,00	
4. Aerosols/ Metered Dose Inhalers		NE	0,00		NE	0,00		NE	0,00		NE					0,00	
5. Solvents		NE	0,00		NE	0,00		NE	0,00		NE					0,00	
6. Semiconductor Manufacture		NE	0,00		NE	0,00		NE	0,00		NE					0,00	
7. Electrical Equipment		NE	0,00		NE	0,00		NE	0,00		NE					0,00	
8. Other (please specify)		0,00	0,00		0,00	0,00		0,00	0,00		0,00					0,00	
<b>G. Other (please specify)</b>	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00		0,00			0,00	0,00	0,00	0,00
	0,00																

<sup>(2)</sup> CO<sub>2</sub> from Food and Drink Production (e.g. gasification of water) can be of biogenic or non-biogenic origin. Only information on CO<sub>2</sub> emissions of non-biogenic origin should be reported.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS				EMISSIONS <sup>(2)</sup>				
	Production/Consumption quantity		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O			
	Description <sup>(1)</sup>	(kt)	(t/t)	(t/t)	(t/t)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(t)
<b>A. Mineral Products</b>											
1. Cement Production	Portland Cement Production	798.07				736.75	0,00		0,00		
2. Lime Production	Lime Production	429.00	0.50			397.84					
3. Limestone and Dolomite Use	NE	0,00	NE			NE					
4. Soda Ash						0,00					
Soda Ash Production	NE	0,00	NE			NE					
Soda Ash Use	NE	NE	NE			NE					
5. Asphalt Roofing	NE	0,00	NE			NE					
6. Road Paving with Asphalt	NE	0,00	NE			NE					
7. Other (please specify)						0,00	0,00		0,00		
Glass Production	NE	NE	NE			NE					
		0,00	NE	NE	NE	NE	NE	NE	NE	NE	
<b>B. Chemical Industry</b>											
1. Ammonia Production <sup>(3)</sup>	NE	0,00	NE	NE	NE	0,00	0,00	0,00	0,00	0,00	0,69
2. Nitric Acid Production	Nitric Acid Production	115.00			0.01						
3. Adipic Acid Production	NE	0,00			NE						
4. Carbide Production	NE	NE	NE	NE	NE	0,00	0,00		0,00		
Silicon Carbide	NE	0,00	NE	NE	NE	NE	NE	NE	NE	NE	
Calcium Carbide	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
5. Other (please specify)						0,00	0,00		0,00		
Carbon Black	NE	NE		NE					NE		
Ethylene	NE	NE	NE	NE	NE				NE		
Dichloroethylene	NE	NE	NE	NE	NE				NE		
Styrene	NE	NE	NE	NE	NE				NE		
Methanol	NE	NE	NE	NE	NE				NE		
		0,00	0,00	0,00	0,00						

<sup>(1)</sup> Where the IPCC Guidelines provide options for activity data, e.g. cement or clinker for estimating the emissions from Cement Production, specify the activity data used (as shown in the example in brackets) in order to make the choice of emission factor more transparent and to facilitate comparisons of implied emission factors.

<sup>(2)</sup> Enter cases in which the final emissions are reduced with the quantities of emission recovery, oxidation, destruction, transformation.

Adjusted emissions are reported and the quantitative information on recovery, oxidation, destruction, and transformation should be given in the additional columns provided.

<sup>(3)</sup> To avoid double counting make offsetting deductions from fuel consumption (e.g. natural gas) in Ammonia Production, first for feedstock use of the fuel, and then to a sequestering use of the feedstock.

TABLE 20(A)-G SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES  
Emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O  
(Sheet 2 of 2)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS				EMISSIONS <sup>(2)</sup>				
	Production/Consumption Quantity	(kt)	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
	Description <sup>(1)</sup>		(t/t)	(t/t)	(t/t)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
<b>C. Metal Production<sup>(4)</sup></b>											
1. Iron and Steel Production		0,00	0,00			2,602.58	0,04		2,602.58	0,04	0,00
Steel	Steel Production	1,421.00	1.60			2,273.60			2,273.60		
Pig Iron		0,00	NE	NE		NE	NE		NE	NE	
Sinter		0,00	NE	NE		NE	NE		NE	NE	
Coke	Coke Production	0,00	0,00	0,00							
Other (please specify)						0,00	0,00		0,00	0,00	
		0,00	0,00	0,00	0,00						
2. Ferroalloys Production	Ferrosilicon (75% Si)	33.24	3.90	0,00		129.66			129.66	0.03	
3. Aluminium Production	Aluminium Production	82.00	1.80	0,00		147.60			147.60		
4. SF6 Used in Aluminium and Magnesium Foundries											
5. Other (please specify)		12.03	4.30	0,00	0,00	51.72	0.01		51.72	0.01	0,00
<b>D. Other Production</b>											
1. Pulp and Paper											
2. Food and Drink			0,00								
G. Other (please specify)						0,00			0,00	0,00	0,00
		0,00	0,00	0,00	0,00						

<sup>(4)</sup> More specific information (e.g. data on virgin and recycled steel production) could be provided in the documentation box.

Note: In case of confidentiality of the activity data information, the entries should provide aggregate figures but there should be a note in the documentation box indicating this.

TABLE 2 (II) SECTORAL REPORT FOR INDUSTRIAL PROCESSES – EMISSIONS OF HFCs, PFCs AND SF6

(Sheet 1 of 2)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFC-23	HFC-32	HFC-41	HFC-43-10mee	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ca	Total HFCs <sup>(1)</sup>	CF4	C2F6	C3F8	CF10	C-4F8	CF12	CF14	Total PFCs <sup>(1)</sup>	SF6	
	(t)																							
Total Actual Emissions of Halocarbons (by chemical) and SF6	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>C. Metal Production</b>																								
Aluminium Production																								
SF6 Used in Aluminium Foundries																								
SF6 Used in Magnesium Foundries																								
E. Production of Halocarbons and SF6	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
1. By-product Emissions	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
Production of HFC-22	0,00																							
Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
2. Fugitive Emissions	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
3. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
<b>F(a). Consumption of Halocarbons and SF6 (actual emissions - Tier 2)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
1. Refrigeration and Air Conditioning Equipment	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
2. Foam Blowing	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
3. Fire Extinguishers	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
4. Aerosols/Metered Dose Inhalers	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
5. Solvents	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
6. Semiconductor Manufacture	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
7. Electrical Equipment																								
8. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
6. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	

<sup>(1)</sup> Although shaded, the columns with HFCs and PFCs totals in sheet 1 are kept for consistency with sheet 2 of the table. In accordance with the UNFCCC reporting guidelines for HFCs and PFCs "emissions should be reported for each relevant chemical". However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this column could be used for reporting aggregated values and appropriate notation keys should be entered in the cells for the individual chemicals.

Note: Where information is confidential the entries should provide aggregate figures but there should be a note indicating this in the relevant documentation boxes of the Sectoral background data tables or as a comment to the corresponding cell.

Gases with GWP not yet agreed upon by the COP, should be reported in Table 9 (Completeness), sheet 2.

<sup>(2)</sup> Note that the units used in this table differ from those used in the rest of the Sectoral report tables, i.e. [t] instead of [Gg].

TABLE 2 (II) SECTORAL REPORT FOR INDUSTRIAL PROCESSES – EMISSIONS OF HFCs, PFCs AND SF6

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFC-23	HFC-32	HFC-41	HFC-43-10mee	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ca	Total HFCs <sup>(1)</sup>	CF4	CF6	C3F8	CAF10	C-CAF8	CSF12	CF14	Total PFCs <sup>(2)</sup>	SF6	
	(t)																							
<b>F(p). Total Potential Emissions of Halocarbons (by chemical) and SF6<sup>(3)</sup></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Production <sup>(4)</sup>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Import:	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
In bulk	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
In products <sup>(5)</sup>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Export:	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
In bulk	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
In products <sup>(5)</sup>	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Destroyed amount	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>GWP values used</b>	11700	650	150	1300	2800	1000	1300	140	300	3800	2900	6300	560	6500	9200	7000	7000	7000	8700	7500	7400	7400	23900	
<b>Total Actual Emissions<sup>(6)</sup> (Gg CO<sub>2</sub> eq.)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
C. Metal Production																								
E. Production of Halocarbons and SF6	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
F(a) Consumption of Halocarbons and SF6	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
G. Other	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Ratio of Potential/Actual Emissions from Consumption of Halocarbons and SF6</b>																								
Actual emissions - F(a) (Gg CO <sub>2</sub> eq.)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Potential emissions - F(p) <sup>(7)</sup> (Gg CO <sub>2</sub> eq.)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Potential/Actual emissions ratio	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

<sup>(1)</sup> Potential emissions of each chemical of halocarbons and SF6 estimated using Tier 1a or Tier 1b of the IPCC Guidelines (Volume 3, Reference Manual, pp. 2.47-2.50). When potential emissions estimates are available in a disaggregated manner corresponding to the subsectors for actual emissions defined on sheet 1 of this table, these should be reported in an annex to sheet 2, using the format of sheet 1, sector F(a). Use Summary 3 of this common reporting format to indicate whether Tier 1a or Tier 1b was used.

<sup>(2)</sup> Production refers to production of new chemicals. Recycled substances could be included here, but it should be ensured that double counting of emissions is avoided. Relevant explanations should be provided as a comment to the corresponding cell.

<sup>(3)</sup> Relevant just for Tier 1b.

<sup>(4)</sup> Sums of the actual emissions of each chemical of halocarbons and SF6 from the source categories given in sheet 1 of the table multiplied by the corresponding GWP values.

<sup>(5)</sup> Potential emissions of each chemical of halocarbons and SF6 taken from row F(p) multiplied by the corresponding GWP values.

**Note:** As stated in the revised UNFCCC guidelines, Parties should report actual emissions of HFCs, PFCs and SF6, where data are available, providing disaggregated data by chemical and source category in units of mass and in CO<sub>2</sub> equivalents. Parties reporting actual emissions should also report potential emissions for the sources where the concept of potential emissions applies, for reasons of transparency and comparability.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>	EMISSIONS <sup>(2)</sup>	
	Description <sup>(1)</sup>	(t)	(kg/t)	(t)	<sup>(3)</sup>
<b>C. PFCs and SF6 from Metal Production</b>					
PFCs from Aluminium Production					
CF4			0,00		
C2F6			0,00		
SF6				0,00	
Aluminium Foundries	(SF6 consumption)		0,00		
Magnesium Foundries			0,00		
<b>E. Production of Halocarbons and SF6</b>					
<b>1. By-product Emissions</b>					
Production of HCFC-22					
HFC-23			0,00		
Other (specify chemical)					
			0,00		
<b>2. Fugitive Emissions</b>					
HFCs (specify chemical)					
			0,00		
PFCs (specify chemical)					
			0,00		
SF6			0,00		
<b>3. Other (please specify)</b>					
			0,00		

<sup>(1)</sup> Specify the activity data used as shown in the examples within brackets. Where applying Tier 1b (for C), Tier 2 (for E) and country specific methods,

<sup>(2)</sup> Specify any other relevant activity data used in the documentation box below.

<sup>(3)</sup> Emissions and implied emission factors are after recovery.

<sup>(4)</sup> Enter cases in which the final emissions are reported after subtracting the quantities of emission recovery, oxidation,

destruction, transformation. Enter these quantities in the specified column and use the documentation box for further explanations.

**Note:** Where the activity data are confidential, the entries should provide aggregate figures, but there should be a note in the documentation box indicating this.

TABLE 2(I).F. SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES  
Consumption of Halocarbons and SF6  
(Sheet 1 of 7)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTORS			EMISSIONS		
	Filled in new manufactured products	Amount of fluid		Product manufacturing factor	Product life factor	Disposal loss factor	From manufacturing	From stocks	From disposal
		In operating systems (average annual stocks)	Remained in products at decommissioning <sup>(1)</sup>						
				(% per annum)					
1 Refrigeration									
Air Conditioning Equipment									
Domestic Refrigeration (Specify chemical) <sup>(2)</sup>									
Commercial Refrigeration									
Transport Refrigeration									
Industrial Refrigeration									
Stationary Air-Conditioning									
Mobile Air-Conditioning									
2 Foam Blowing									
Hard Foam									
Soft Foam									

<sup>(1)</sup> Parties should use the documentation box to provide information on the amount of the chemical recovered (recovery efficiency) and other relevant information used in the emission estimation.

<sup>(2)</sup> Please click on the button to specify the chemical consumed, as given in the example. If needed, new rows could be added for reporting the disaggregated chemicals from a source by clicking on the corresponding button.

**Note:** Table 2.(I).F provides for reporting of the activity data and emission factors used to calculate actual emissions from consumption of halocarbons and SF6 using the "bottom-up approach" (based on the total stock of equipment and estimated emission rates from this equipment). Some Parties may prefer to estimate their actual emissions following the alternative "top-down approach" (based on annual sales of equipment and/or gas). These Parties should provide the activity data use in the current format and any other relevant information in the documentation box at the end of Table 2.(I).F.2. Data these Parties should provide includes <sup>(1)</sup> the amount of fluid used to fill new products, <sup>(2)</sup> the amount of fluid used to service existing products, <sup>(3)</sup> the amount of fluid originally used to fill retiring products (the total nameplate capacity of retiring products), <sup>(4)</sup> the product lifetime, and <sup>(5)</sup> the growth rate of product sales, if this has been used to calculate the amount of fluid originally used to fill retiring products. Alternatively, Parties may provide alternative formats with equivalent information. These formats may be considered for future versions of the common reporting format after the trial period.

TABLE 2(III).F. SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES  
Consumption of Halocarbons and SF6  
(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTORS			EMISSIONS		
	Filled in new manufactured products	Amount of fluid		Product manufacturing factor	Product life factor (% per annum)	Disposal loss factor	From manufacturing	From stocks	From disposal
		In operating systems (average annual stocks)	Remained in products at decommissioning <sup>(1)</sup>						
	(t)			(% per annum)			(t)		
3 Fire Extinguishers									
4 Aerosols									
Metered Dose Inhalers									
Other									
5 Solvents									
6 Semiconductors									
7 Electric Equipment									
8 Other (please specify)									

Note: Where the activity data are confidential, the entries should provide aggregate figures, but there should be a note indicating this and explanations in the documentation box.

Documentation box



GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	N <sub>2</sub> O	NM VOC
	(Gg)		
Total Solvent and Other Product Use	0,00	0,00	0,00
A. Paint Application	NE	NE	NE
B. Degreasing and Dry Cleaning	NE	NE	NE
C. Chemical Products, Manufacture and Processing			NE
D. Other (please specify)	0,00	0,00	0,00
(Use of N <sub>2</sub> O for Anaesthesia)	NE	NE	NE
(N <sub>2</sub> O from Fire Extinguishers)	NE	NE	NE
(N <sub>2</sub> O from Aerosol Cans)	NE	NE	NE
(Other Use of N <sub>2</sub> O)	NE	NE	NE
	NE	NE	NE

Please account for the quantity of carbon released in the form of NMVOC in both the NMVOC and the CO<sub>2</sub> columns.

**Note:** The IPCC Guidelines do not provide methodologies for the calculation of emissions of N<sub>2</sub>O from Solvent and Other Product Use. If reporting such data, Parties should provide additional information (activity data and emission factors) used to make these estimates in the documentation box to Table 3.A-D.

TABLE 3.A-D SECTORAL BACKGROUND DATA FOR SOLVENT AND OTHER PRODUCT USE  
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS <sup>(2)</sup>	
	Description	(kt)	CO <sub>2</sub>	N <sub>2</sub> O
			(t/t)	(t/t)
A. Paint Application		NE	NE	NE
B. Degreasing and Dry Cleaning		NE	NE	NE
C. Chemical Products, Manufacture and Processing				
D. Other (please specify) <sup>(1)</sup>				
(Use of N <sub>2</sub> O for Anaesthesia)		NE	NE	NE
(N <sub>2</sub> O from Fire Extinguishers)		NE	NE	NE
(N <sub>2</sub> O from Aerosol Cans)		NE	NE	NE
(Other Use of N <sub>2</sub> O)		NE	NE	NE
		NE		

<sup>(1)</sup> Some probable sources are provided in brackets. Complement the list with other relevant sources. Make sure that the order is the same as in Table 3.

<sup>(2)</sup> The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 3.

**Note:** The table follows the format of the IPCC Sectoral Report for Solvent and Other Product Use, although some of the source categories are not relevant to the direct GHG emissions.

Documentation box

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NM VOC
	(Gg)				
<b>Total Agriculture</b>	87.31	8.95	0,00	0,00	0,00
<b>A. Enteric Fermentation</b>	73.73				
1. Cattle	64.73				
Dairy Cattle	51.22				
Non-Dairy Cattle	13.51				
2. Buffalo	NE				
3. Sheep	NE				
4. Goats	NE				
5. Camels and Llamas	NO				
6. Horses	1.80				
7. Mules and Asses	NE				
8. Swine	0.61				
9. Poultry	NE				
10. Other (please specify)	6.59				
	6.59				
<b>B. Manure Management</b>	13.58	1.28			0,00
1. Cattle	9.95				
Dairy Cattle	7.90				
Non-Dairy Cattle	2.05				
2. Buffalo	NE				
3. Sheep	NE				
4. Goats	NE				
5. Camels and Llamas	NO				
6. Horses	0.13				
7. Mules and Asses	NE				
8. Swine	3.37				
9. Poultry	0.13				

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	NM VOC
	(Gg)				
<b>B. Manure Management (continued)</b>					
10. Anaerobic Lagoons		NE			NE
11. Liquid Systems		0.03			NE
12. Solid Storage and Dry Lot		1.13			NE
13. Other (please specify)	0,00	0.12			0,00
		0.12			
<b>C. Rice Cultivation</b>	0,00				0,00
1. Irrigated	0,00				NE
2. Rainfed	0,00				NE
3. Deep Water	0,00				NE
4. Other (please specify)	0,00				0,00
<b>D. Agricultural Soils <sup>(1)</sup></b>	0,00	7.67			0,00
1. Direct Soil Emissions	NE	7.67			
2. Animal Production <sup>(2)</sup>	NE	0,00			
3. Indirect Emissions	NE	0,00			
4. Other (please specify)	0,00	0,00			0,00
<b>E. Prescribed Burning of Savannas</b>	0,00	0,00	NE	NE	NE
<b>F. Field Burning of Agricultural Residues</b>	0,00	0,00	0,00	0,00	0,00
1. Cereals	0,00	0,00	NE	NE	NE
2. Pulse	0,00	0,00	NE	NE	NE
3. Tuber and Root	0,00	0,00	NE	NE	NE
4. Sugar Cane	NO	NO	NE	NE	NE
5. Other (please specify)	0,00	0,00	0,00	0,00	0,00
<b>G. Other (please specify)</b>	0,00	0,00	0,00	0,00	0,00

<sup>(1)</sup> See footnote 4 to Summary 1.A of this common reporting format. Parties which choose to report CO<sub>2</sub> emissions and removals from agricultural soils under 4.D. Agricultural Soils category of the sector Agriculture should indicate the amount (Gg) of these emissions or removals in the documentation box to Table 4.D. Additional information (activity data, implied emissions factors) should also be provided using the relevant documentation box to Table 4.D. This table is not modified for reporting the CO<sub>2</sub> emissions and removals for the sake of consistency with the IPCC tables (i.e. IPCC Sectoral Report for Agriculture).

<sup>(2)</sup> Only emissions of Pasture, Range and Paddock are to be reported under "Agricultural Soils". The rest of the emissions from animal production are reported under "Manure Management".

<sup>(3)</sup> The IPCC Guidelines do not provide methodologies for the calculation of CH<sub>4</sub> emissions, CH<sub>4</sub> and N<sub>2</sub>O removals from agricultural soils, or CO<sub>2</sub> emissions from savanna burning or agricultural residues burning. If you have reported such data, you should provide additional information (activity data and emission factors) used to make these estimates using the relevant documentation boxes of the Sectoral background data tables.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA <sup>(1)</sup> AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTORS <sup>(4)</sup>
	Population size <sup>(2)</sup>	Average daily feed intake	CH <sub>4</sub> conversion	CH <sub>4</sub>
	(1000 head)	(MJ/day)	(%)	(kg CH <sub>4</sub> /head/yr)
1. Cattle	0			0,00
Dairy Cattle <sup>(3)</sup>	632	NE	NE	81.00
Non-Dairy Cattle	241	NE	NE	56.00
2. Buffalo	0	NE	NE	NE
3. Sheep	0	NE	NE	NE
4. Goats	0	NE	NE	NE
5. Camels and Llamas	0	NO	NO	NO
6. Horses	100	NE	NE	18.04
7. Mules and Asses	0	NE	NE	NE
8. Swine	614	NE	NE	0.99
9. Poultry	0	NE	NE	NE
10. Other (please specify)				
				0,00

<sup>(1)</sup> In the documentation boxes to all Sectoral background data tables for Agriculture, Parties should provide information on whether the activity data is one year or a 3-year average.

<sup>(2)</sup> Parties are encouraged to provide detailed livestock population data by animal type and region in a separate table below the documentation box. This consistent set of animal population statistics should be used to estimate CH<sub>4</sub> emissions from enteric fermentation, CH<sub>4</sub> and N<sub>2</sub>O from manure management, N<sub>2</sub>O direct emissions from soil and N<sub>2</sub>O emissions associated with manure production, as well as emissions from the use of manure as fuel, and sewage-related emissions reported in the waste sector.

<sup>(3)</sup> Including data on dairy heifers, if available.

<sup>(4)</sup> The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 4.

Additional information				
Disaggregated list of animals (b)		Dairy Cattle	Non-Dairy Cattle	Other (specify)
Indicators:				
Weight	(kg)			
Feeding situation (c)				
Milk yield	(kg/day)			
Work	(hrs/day)			
Pregnant	(%)			
Digestibility of feed	(%)			

<sup>(a)</sup> Compare to Tables A-1 and A-2 of the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.31-4.34). These data are relevant if Parties do not have data on average feed intake.

<sup>(b)</sup> Disaggregate to the split actually used. Add columns to the table if necessary.

<sup>(c)</sup> Specify feeding situation as pasture, stall fed, confined, open range, etc.

Documentation box

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION							IMPLIED EMIS- SION FACTORS
	Population size <sup>(1)</sup>	Allocation by climate region <sup>(2)</sup>			Typical animal mass	VS <sup>(3)</sup> daily excretion	CH <sub>4</sub> producing potential (Bo) <sup>(3)</sup>	CH <sub>4</sub> <sup>(5)</sup>
		Cool	Temper- ate	Warm				
	(1000 head)	(%)			(kg)	(kg dm/head/yr)	(CH <sub>4</sub> m3/kg VS)	(kg CH <sub>4</sub> /head/yr)
1. Cattle	0		100.0		NE	NE	NE	0,00
Dairy Cattle <sup>(4)</sup>	632		100.0		NE	NE	NE	12.49
Non-Dairy Cattle	241		100.0		NE	NE	NE	8.50
2. Buffalo	0		100.0		NE	NE	NE	NE
3. Sheep	0		100.0		NE	NE	NE	NE
4. Goats	0		100.0		NE	NE	NE	NE
5. Camels and Llamas	0		NO		NO	NO	NO	NO
6. Horses	100		100.0		NE	NE	NE	1.30
7. Mules and Asses	0		100.0		NE	NE	NE	NE
8. Swine	614		100.0		NE	NE	NE	5.49
9. Poultry	8,544		100.0		NE	NE	NE	0.02

<sup>(1)</sup> See footnote 1 to Table 4.A of this common reporting format.

<sup>(2)</sup> Climate regions are defined in terms of annual average temperature as follows: Cool=less than 15°C; Temperate=15°C to 25°C inclusive; and Warm=greater than 25°C (see Table 4.2 of the IPCC Guidelines (Volume 3, Reference Manual, p. 4.8)).

<sup>(3)</sup> Provide average values, where original calculations were made at a more disaggregated level of these livestock

categories

<sup>(4)</sup> Including data on dairy heifers, if available.

<sup>(5)</sup> The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 4.

Animal category(a)	Indicator	Climate region	Animal waste management system					
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range paddock	Other
Dairy Cattle	Allocation(%)	Cool						
		Temperate						
		Warm						
	MCF(b)	Cool						
		Temperate						
		Warm						
Non-Dairy Cattle	Allocation(%)	Cool						
		Temperate						
		Warm						
	MCF(b)	Cool						
		Temperate						
		Warm						
Swine	Allocation(%)	Cool						
		Temperate						
		Warm						
	MCF(b)	Cool						
		Temperate						
		Warm						

<sup>(a)</sup> Copy the above table as many times as necessary.

<sup>(b)</sup> MCF = Methane Conversion Factor (IPCC Guidelines, (Volume 3, Reference Manual, p. 4.9)). In the case of use of other climate region categorization, please replace the entries in the cells with the climate regions for which the MCFs are specified.

Documentation box

TABLE 4.B(b): SECTORAL BACKGROUND DATA FOR AGRICULTURE  
N<sub>2</sub>O Emissions from Manure Management  
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION										
	Population size <sup>(1)</sup> (1000s)	Nitrogen excretion (kg N/head/yr)	Nitrogen excretion per animal waste management system (kg N/yr)							Other	
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range and paddock	Emission factor per animal waste management system (kg N <sub>2</sub> O-N/kg N)			
Non-Dairy Cattle	632									NE	
Dairy Cattle	241									0,000	
Sheep	0									0,000	
Swine	614									0,000	
Poultry	8,544									0,000	
Other (please specify)											
Total per AWMS <sup>(2)</sup>			0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0

<sup>(1)</sup> See footnote 1 to Table 4.A of this common reporting format.

<sup>(2)</sup> AWMS – Animal Waste Management System.

<sup>(3)</sup> The implied emission factor will not be calculated until the emissions are entered directly into Table 4.

Documentation box
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TABLE 4.C. SECTORAL BACKGROUND DATA FOR AGRICULTURE  
Rice Cultivation  
(Sheet 1 of 1)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTOR <sup>(1)</sup>	EMISSIONS
	Harvested area <sup>(2)</sup> (109 m2/yr)	Organic amendments added <sup>(3)</sup> :- type (t/ha)		
<b>1. Irrigated</b>				0,00
Continuously Flooded				
Intermittently			0,00	
Single Aeration			0,00	
Multiple Aeration			0,00	
<b>2. Rainfed</b>				0,00
Flood Prone			0,00	
Drought Prone			0,00	
<b>3. Deep Water</b>				0,00
Water Depth 50-100 cm			0,00	
Water Depth > 100 cm			0,00	
<b>4. Other (please specify)</b>				0,00
			0,00	
Upland Rice <sup>(4)</sup>				
Total <sup>(4)</sup>	0,00			

<sup>(1)</sup> The implied emission factor takes account of all relevant corrections for continuously flooded fields without organic amendment plus the correction for the organic amendments, if used, as well as of the effect of different soil characteristics, if taken into account, on methane emissions.

<sup>(2)</sup> Harvested area is the cultivated area multiplied by the number of cropping seasons per year.

<sup>(3)</sup> Specify dry weight or wet weight for organic amendments.

<sup>(4)</sup> These rows are included to allow comparison with the international statistics. Upland rice emissions are assumed to be zero and are ignored in the emission calculations.

**Documentation box:**

When disaggregating by more than one region within a country, provide additional information in the documentation box. Where available, provide activity data and scaling factors by soil type and rice cultivar.

TABLE 4.D. SECTORAL BACKGROUND DATA FOR AGRICULTURE

BOSNIA AND HERZEGOVINA

Agricultural Soils<sup>(1)</sup>

1990

(Sheet 1 of 1)

Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTORS		EMISSIONS
	Description	Value	Unit <sup>(2)</sup>		(Gg N <sub>2</sub> O)
<b>Direct Soil Emissions</b>	N input to soils (kg N/yr)				7.67
Synthetic Fertilizers	Use of synthetic fertilizers (kg N/yr)		(kg N <sub>2</sub> O-N/kg N)	0,000	6.390
Animal Wastes Applied to Soils	Nitrogen input from manure applied to soils (kg N/yr)		(kg N <sub>2</sub> O-N/kg N)	0,000	1.280
N-fixing Crops	Dry pulses and soybeans produced (kg dry biomass/yr)		(kg N <sub>2</sub> O-N/kg dry biomass)	0,000	
Crop Residue	Dry production of other crops (kg dry biomass/yr)		(kg N <sub>2</sub> O-N/kg dry biomass)	0,000	
Cultivation of Histosols	Area of cultivated organic soils (ha)		(kg N <sub>2</sub> O-N/ha)	0,000	
<b>Animal Production</b>	N excretion on pasture range and paddock (kg N/yr)		(kg N <sub>2</sub> O-N/kg N)	0,000	
Indirect Emissions					0,00
Atmospheric Deposition	Volatized N (NH <sub>3</sub> and NO <sub>x</sub> ) from fertilizers and animal wastes (kg N/yr)		(kg N <sub>2</sub> O-N/kg N)	0,000	
Nitrogen Leaching and Run-off	N from fertilizers and animal wastes that is lost through leaching and run off (kg N/yr)		(kg N <sub>2</sub> O-N/kg N)	0,000	
<b>Other (please specify)</b>					0,00
				0,000	

<sup>(1)</sup> See footnote 4 to Summary 1.A. of this common reporting format. Parties which choose to report CO<sub>2</sub> emissions and removals from agricultural soils under 4.D. Agricultural Soils category should indicate the amount [Gg] of these emissions or removals and relevant additional information (activity data, implied emissions factors) in the documentation box.

<sup>(2)</sup> To convert from N<sub>2</sub>O-N to N<sub>2</sub>O emissions, multiply by 44/28.

Fraction (a)	Description	Value
FracBURN	Fraction of crop residue burned	
FracFUEL	Fraction of livestock N excretion in excrements burned for fuel	
FracGASF	Fraction of synthetic fertilizer N applied to soils that volatilizes as NH <sub>3</sub> and NO <sub>x</sub>	
FracGASM	Fraction of livestock N excretion that volatilizes as NH <sub>3</sub> and NO <sub>x</sub>	
FracGRAZ	Fraction of livestock N excreted and deposited onto soil during grazing	
FracLEACH	Fraction of N input to soils that is lost through leaching and runoff	
FracNCRBF	Fraction of N in non-N-fixing crop	
FracNCRO	Fraction of N in N-fixing crop	
FracR	Fraction of crop residue removed from the field as crop	

<sup>(a)</sup> Use the fractions as specified in the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.92 - 4.113).

Documentation box



TABLE 4.E SECTORAL BACKGROUND DATA FOR AGRICULTURE

Prescribed Burning of Savannas

(Sheet 1 of 1)

BOSNIA AND HERZEGOVINA

1990

Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION				IMPLIED EMISSION FACTORS		EMISSIONS	
	Area of savanna burned (k ha/yr)	Average aboveground biomass density (t dm/ha)	Fraction of savanna burned	Biomass burned (Gg dm)	CH <sub>4</sub>	N <sub>2</sub> O	CH <sub>4</sub>	N <sub>2</sub> O
(specify ecological zone)	NO	NO	NO	NO	NO	NO	0,00	0,00
							NO	NO

Additional information	Living	Dead
Fraction of aboveground biomass		
Fraction oxidized		
Carbon fraction		

Document box.
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TABLE 4.F. SECTORAL BACKGROUND DATA FOR AGRICULTURE  
Field Burning of Agricultural Residues  
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS		EMISSIONS	
	Crop production (t)	Residue/ Crop ratio	Dry matter fraction of residue	Fraction burned in fields	Biomass burned (Gg dm)	Nitrogen fraction in biomass of residues	CH <sub>4</sub> (kg/t dm)	N <sub>2</sub> O (kg/t dm)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
<b>1. Cereals</b>										
Wheat	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Barley	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Maize	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Oats	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Rye	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Rice	NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO
Other (please specify)									0,00	0,00
							0,00	0,00		
<b>2. Pulse</b>										
Dry bean	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Peas	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Soybeans	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Other (please specify)									0,00	0,00
							0,00	0,00		
<b>3 Tuber and Root</b>										
Potatoes	NE	NE	NE	NE	NE	NE	NE	NE	0,00	NE
Other (please specify)									0,00	0,00
							0,00	0,00		
<b>4 Sugar Cane</b>	NO	NO	NO	NO	NO	NO	NO	NO	0,00	NO
<b>5 Other (please specify)</b>									0,00	0,00
							0,00	0,00		

Documentation box

TABLE 5 SECTORAL REPORT FOR LAND-USE CHANGE AND FORESTRY  
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions		CO <sub>2</sub> removals		Net CO <sub>2</sub> emissions/removals		CH <sub>4</sub> (Gg)	N <sub>2</sub> O	NO <sub>x</sub>	CO
	CO <sub>2</sub> emissions	CO <sub>2</sub> removals	CO <sub>2</sub> removals	Net CO <sub>2</sub> emissions/removals	CH <sub>4</sub> (Gg)	N <sub>2</sub> O				
Total Land-Use Change and Forestry	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Changes in Forest and Other Woody Biomass Stocks	0,00	0,00	0,00	0,00	0,00	0,00				
1. Tropical Forests	NO	NO	NO	0,00	0,00					
2. Temperate Forests	NE	NE	NE	0,00	0,00					
3. Boreal Forests	NE	NE	NE	0,00	0,00					
4. Grasslands/Tundra	NE	NE	NE	0,00	0,00					
5. Other (please specify)	0,00	0,00	0,00	0,00	0,00					
Harvested Wood <sup>(1)</sup>	NE	NE	NE	0,00	0,00					
B. Forest and Grassland Conversion <sup>(2)</sup>	0,00					0,00	0,00	0,00	0,00	0,00
1. Tropical Forests	NO					NO	NO	NO	NO	NO
2. Temperate Forests	NE					NE	NE	NE	NE	NE
3. Boreal Forests	NE					NE	NE	NE	NE	NE
4. Grasslands/Tundra	NE					NE	NE	NE	NE	NE
5. Other (please specify)	0,00					0,00	0,00	0,00	0,00	0,00
C. Abandonment of Managed Lands	0,00	0,00	0,00	0,00	0,00					
1. Tropical Forests	NO	NO	NO	0,00	0,00					
2. Temperate Forests	NE	NE	NE	0,00	0,00					
3. Boreal Forests	NE	NE	NE	0,00	0,00					
4. Grasslands/Tundra	NE	NE	NE	0,00	0,00					
5. Other (please specify)	0,00	0,00	0,00	0,00	0,00					
D. CO <sub>2</sub> Emissions and Removals from Soil	0,00	0,00	0,00	0,00	0,00					
Cultivation of Mineral Soils	NO	NO	NO	0,00	0,00					
Cultivation of Organic Soils	NE	NE	NE	0,00	0,00					
Liming of Agricultural Soils	NE	NE	NE	0,00	0,00					
Forest Soils	NE	NE	NE	0,00	0,00					
Other (please specify) <sup>(3)</sup>	0,00	0,00	0,00	0,00	0,00					
E. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

<sup>(1)</sup> Following the IPCC Guidelines, the harvested wood should be reported under Changes in Forest and Other Woody Biomass Stocks (Volume 3, Reference Manual, p.5.17).

<sup>(3)</sup> Include emissions from soils not reported under sections A, B and C.

<sup>(2)</sup> Include only the emissions of CO<sub>2</sub> from Forest and Grassland Conversion. Associated removals should be reported under section D.

**Note:** See footnote 4 to Summary 1.A of this common reporting format.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES			ACTIVITY DATA		IMPLIED EMISSION FACTORS	ESTIMATES
			Area of forest/ biomass stocks (kha)	Average annual growth rate (t dm/ha)	Implied carbon uptake factor (t C/ha)	Carbon uptake increment (Gg C)
Tropical	Plantations	Acacia spp.	NO	NO	NO	NO
		Eucalyptus spp.	NO	NO	NO	NO
		Tectona grandis	NO	NO	NO	NO
		Pinus spp	NO	NO	NO	NO
		Pinus caribaea	NO	NO	NO	NO
		Mixed Hardwoods	NO	NO	NO	NO
		Mixed Fast-Growing Hardwoods	NO	NO	NO	NO
		Mixed Softwoods	NO	NO	NO	NO
	Other Forests	Moist	NO	NO	NO	NO
		Seasonal	NO	NO	NO	NO
		Dry	NO	NO	NO	NO
	Other (specify)		NO	NO	NO	NO
					0,00	
Temperate	Plantations		NE	NE	NE	NE
					0,00	
	Commercial	Evergreen	NE	NE	NE	NE
		Deciduous	NE	NE	NE	NE
	Other (specify)		NE	NE	NE	NE
				0,00		
Boreal					0,00	
			Number of trees (1000s of trees)	Annual growth rate (kt dm/1000 trees)	Carbon uptake factor (t C/tree)	Carbon uptake increment (Gg C)
Non-Forest Trees (specify type)						0,00
			NE	NE	NE	NE
Total annual growth increment (Gg C)						0,00
Gg CO <sub>2</sub>						0,00

	Amount of biomass removed (kt dm)		Carbon emission factor (t C/t dm)	Carbon release (Gg C)
Total biomass removed in Commercial Harvest	NE	NE	NE	NE
Traditional Fuelwood Consumed	NE	NE	NE	NE
Total Other Wood Use	NE	NE	NE	NE
Total Biomass Consumption from Stocks <sup>(1)</sup> (Gg C)				0,00
Other Changes in Carbon Stocks <sup>(2)</sup> (Gg C)				NE
Gg CO <sub>2</sub>				0,00

Net annual carbon uptake (+) or release (-) (Gg C)	0,00
Net CO <sub>2</sub> emissions (-) or removals (+) (Gg CO <sub>2</sub> )	0,00

<sup>(1)</sup> Make sure that the quantity of biomass burned off-site is subtracted from this total.

<sup>(2)</sup> The net annual carbon uptake/release is determined by comparing the annual biomass growth versus annual harvest, including the decay of forest products and slash left during harvest. The IPCC Guidelines recommend default assumption that all carbon removed in wood and other biomass from forests is oxidized in the year of removal. The emissions from decay could be included under Other Changes in Carbon Stocks.

**Note:** Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

TABLE 5.B. SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY

Forest and Grassland Conversion  
(Sheet 1 of 1)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

Vegetation types	ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS						EMISSIONS							
	On and off site burning			Decay of above-ground biomass <sup>(1)</sup>			Burning			Decay			Burning			Decay				
	Area converted annually (kha)	Annual net loss of biomass (kt dm)	Quantity of biomass burned	Average area converted (kha)	Average annual net loss of biomass (t dm/ha)	Average quantity of biomass left to decay (kt dm)	On site (kt dm)	Off site (kt dm)	On site (kha)	Off site (kha)	On site (kt dm)	Off site (kt dm)	On site (t/ha)	Off site (t/ha)	On site (t/ha)	Off site (t/ha)	On site (Gg)	Off site (Gg)		
		On site	Off site					CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Tropical	Wet/Very Moist	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Moist, short dry season	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Moist, long dry season	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Dry	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Tropical Savanna/Grasslands	Montane Moist	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Montane Dry	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Temperate	Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Broadleaf	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Grasslands	Mixed Broadleaf/ Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Mixed Broadleaf/ Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Boreal	Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Forest-tundra	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Grasslands/Tundra	Other (please specify)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Total			0,00	0,00				0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

<sup>(1)</sup> Activity data are for default 10-year average. Specify the average decay time which is appropriate for the local conditions, if other than 10 years.

Emissions/Removals	On site	Off site
Immediate carbon release from burning	0,00	0,00
Total On site and Off site (Gg C)	0,00	
Delayed emissions from decay (Gg C)	0,00	
Total annual carbon release (Gg C)	0,00	
Total annual CO <sub>2</sub> emissions (Gg CO <sub>2</sub> )	0,00	

Additional information	
Fractions	On site
Fraction of biomass burned (average)	
Fraction which oxidizes during burning (average)	
Carbon fraction of aboveground biomass (average)	
Fraction left to decay (average)	
Nitrogen-carbon ratio	

Additional information	

**Note:** Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country-specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

TABLE 5.C. SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY

Abandonment of Managed Lands

(Sheet 1 of 1)

BOSNIA AND HERZEGOVINA

1990

Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS		ESTIMATES	
	Total area abandoned and regrowing <sup>(1)</sup>		Annual rate of aboveground biomass growth		Carbon fraction of aboveground biomass		Rate of aboveground biomass carbon uptake		Annual carbon uptake in aboveground biomass	
	first 20 years (kha)	>20 years (kha)	first 20 years (t dm/ha)	>20 years (t dm/ha)	first 20 years	>20 years	first 20 years (t C/ha/yr)	>20 years (t C/ha/yr)	first 20 years (Gg C/yr)	>20 years (Gg C/yr)
Original natural ecosystems	Wet/Very Moist	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Moist, short dry season	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Moist, long dry season	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Dry	NO	NO	NO	NO	NO	NO	NO	NO	NO
Tropical	Montane Moist	NO	NO	NO	NO	NO	NO	NO	NO	NO
	Montane Dry	NO	NO	NO	NO	NO	NO	NO	NO	NO
Tropical Savanna/Grasslands	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Temperate	Mixed Broadleaf/Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Broadleaf	NE	NE	NE	NE	NE	NE	NE	NE	NE
Grasslands		NE	NE	NE	NE	NE	NE	NE	NE	NE
		NE	NE	NE	NE	NE	NE	NE	NE	NE
Boreal	Mixed Broadleaf/Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Coniferous	NE	NE	NE	NE	NE	NE	NE	NE	NE
Grasslands/Tundra	Forest-tundra	NE	NE	NE	NE	NE	NE	NE	NE	NE
		NE	NE	NE	NE	NE	NE	NE	NE	NE
Other (please specify)		NE	NE	NE	NE	NE	NE	NE	NE	NE
							0,00	0,00		
							Total annual carbon uptake (Gg C)		0,00	
							Total annual CO <sub>2</sub> removal (Gg CO <sub>2</sub> )		0,00	

<sup>(1)</sup> If lands are regenerating to grassland, then the default assumption is that no significant changes in above-ground biomass occur.

**Note:** Sectoral background data tables on Land-use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

Documentation box

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	ESTIMATES
	Land area (Mha)	Average annual rate of soil carbon uptake/removal (Mg C/ha/yr)	Net change in soil carbon in mineral soils (Tg C over 20 yr)
Cultivation of Mineral Soils <sup>(1)</sup>			0,00
High Activity Soils	NE	NE	NE
Low Activity Soils	NE	NE	NE
Sandy	NE	NE	NE
Volcanic	NO	NO	NO
Wetland (Aquic)	NE	NE	NE
Other (please specify)			0,00
		0,00	
	Land area (ha)	Annual loss rate (Mg C/ha/yr)	Carbon emissions from organic soils (Mg C/yr)
Cultivation of Organic Soils			0,00
Cool Temperate			0,00
Upland Crops	NE	NE	NE
Pasture/Forest	NE	NE	NE
Warm Temperate			0,00
Upland Crops	NE	NE	NE
Pasture/Forest	NE	NE	NE
Tropical			0,00
Upland Crops	NO	NO	NO
Pasture/Forest	NO	NO	NO
	Total annual amount of lime (Mg)	Carbon conversion factor	Carbon emissions from liming (Mg C)
Liming of Agricultural Soils			0,00
Limestone Ca(CO <sub>3</sub> )	NE	NE	NE
Dolomite CaMg(CO <sub>3</sub> ) <sub>2</sub>	NE	NE	NE

Total annual net carbon emissions from agriculturally impacted soils (Gg C)	0,00
Total annual net CO <sub>2</sub> emissions from agriculturally impacted soils (Gg CO <sub>2</sub> )	0,00

<sup>(1)</sup> The information to be reported under Cultivation of Mineral Soils aggregates data per soil type over all land-use/management systems. This refers to land area data and to the emission estimates and implied emissions factors accordingly.

**Note:** Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

Year	Climate (a)	land-use/ management system (a)	Soil type					
			High activity soils	Low activity soils	Sandy	Volcanic	Wetland (Aquic)	Organic soil
20 years prior	(e.g. tropical, dry)	(e.g. savanna)						
		(e.g. irrigated cropping)						
inventory year								

<sup>(a)</sup> These should represent the major types of land management systems per climate regions presented in the country as well as ecosystem types which were either converted to agriculture (e.g., forest, savanna, grassland) or have been derived from previous agricultural land-use (e.g., abandoned lands, reforested lands). Systems should also reflect differences in soil carbon stocks that can be related to differences in management (IPCC Guidelines (Volume 2. Workbook, Table 5-9, p. 5.26, and Appendix (pp. 5-31 - 5.38)).

Documentation box
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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> <sup>(1)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	NO <sub>x</sub>	CO	MMVOC	SO <sub>2</sub>
	(Gg)						
<b>Total Waste</b>	0,00	47,26	0,00	0,00	0,00	0,00	0,00
<b>A. Solid Waste Disposal on Land</b>	0,00	47,26		0,00	0,00	0,00	
1. Managed Waste Disposal on Land	0,00	0,00		NE	NE	NE	
2. Unmanaged Waste Disposal Sites	0,00	47,26		NE	NE	NE	
3. Other (please specify)	0,00	0,00		0,00	0,00	0,00	
<b>B. Wastewater Handling</b>		0,00	0,00	0,00	0,00	0,00	
1. Industrial Wastewater		0,00	NE	NE	NE	NE	
2. Domestic and Commercial Wastewater		0,00	0,00	NE	NE	NE	
3. Other (please specify)		0,00	0,00	0,00	0,00	0,00	
<b>C. Waste Incineration</b>	0,00	0,00	0,00	NO	NO	NO	NO
D. Other (please specify)	0,00	0,00	0,00	0,00	0,00	0,00	0,00

<sup>(1)</sup> Note that CO<sub>2</sub> from Waste Disposal and Incineration source categories should only be included if it stems from non-biological or inorganic waste sources.



TABLE 6.A SECTORAL BACKGROUND DATA FOR WASTE

BOSNIA AND HERZEGOVINA

Solid Waste Disposal

1990

(Sheet 1 of 1)

Submissio 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION				IMPLIED EMISSION FACTOR		EMISSIONS <sup>(1)</sup>	
	Annual MSW at the SWDS	MCF	DOC degraded	CH <sub>4</sub> recovery <sup>(2)</sup>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub> <sup>(3)</sup>
					(Gg)	(Gg)	(Gg)	(Gg)
1 Managed Waste Disposal on Land	0,00				0,00	0,00		
2 Unmanaged Waste Disposal Sites					0,00	0,00	47.26	0,00
- deep (>5 m)	0,00				0,00	0,00	47.26	
- shallow (<5 m)					0,00	0,00		
3 Other (please specify)							0,00	0,00
					0,00	0,00		

Additional information	
Description	Value
Total population (1000s)(a)	
Urban population (1000s)(a)	
Waste generation rate (kg/capita/day)	
Fraction of MSW disposed to SWDS	
Fraction of DOC in MSW	
Fraction of wastes incinerated	
Fraction of wastes recycled	
CH <sub>4</sub> oxidation factor (b)	
CH <sub>4</sub> fraction in landfill gas	
Number of SWDS recovering CH <sub>4</sub>	
CH <sub>4</sub> generation rate constant (k) (c)	
Time lag considered (yr) (c)	
Composition of landfilled waste (%)	
Paper and paperboard	
Food and garden waste	
Plastics	
Glass	
Textiles	
Other (specify)	
Other - inert	
Other - organic	

<sup>(a)</sup> Specify whether total or urban population is used and the rationale for doing so.<sup>(b)</sup> See IPCC Guidelines (Volume 3, Reference Manual, p. 6.9).<sup>(c)</sup> For Parties using Tier 2 methods.

TABLE 6.A SECTORAL BACKGROUND DATA FOR WASTE

BOSNIA AND HERZEGOVINA

Solid Waste Disposal

1990

(Sheet 1 of 1)

Submissio 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTOR			EMISSIONS		
	Amount of incinerated wastes (Gg)	CO <sub>2</sub> (kg/t waste)	CH <sub>4</sub> (kg/t waste)	N <sub>2</sub> O (kg/t waste)	CO <sub>2</sub> <sup>(3)</sup> (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)
Waste Incineration (please specify)	0,00				0,00	0,00	0,00
(biogenic) <sup>(3)</sup>		0,00	0,00	0,00			
(plastics and other non-biogenic waste) <sup>(3)</sup>		0,00	0,00	0,00			
		0,00	0,00	0,00			

MSW - Municipal Solid Waste, SWDS - Solid Waste Disposal Site, MCF - Methane Correction Factor, DOC - Degradable Organic Carbon (IPCC Guidelines (Volume 3, Reference Manual, section 6.2.4)). MSW includes household waste, yard/garden waste, commercial/market waste and organic industrial solid waste. MSW should not include inorganic industrial waste such as construction or demolition materials.

<sup>(1)</sup> Actual emissions (after recovery).<sup>(2)</sup> CH<sub>4</sub> recovered and flared or utilized.<sup>(3)</sup> Under Waste Disposal, CO<sub>2</sub> emissions should be reported only when the disposed wastes are combusted at the disposal site which might constitute a management practice. CO<sub>2</sub> emissions from non-biogenic wastes are included in the totals, while the CO<sub>2</sub> emissions from biogenic wastes are not included in the totals.

Documentation box
All relevant information used in calculation should be provided in the additional information box and in the documentation box. Parties that use country specific models should note this with a brief rationale in the documentation box and fill the relevant cells only.

TABLE 6.B. SECTORAL BACKGROUND DATA FOR WASTE  
Wastewater Handling  
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND RELATED INFORMATION <sup>(1)</sup>				IMPLIED EMISSION FACTOR				EMISSIONS <sup>(2)</sup>			
	Total organic product		CH <sub>4</sub> recovered and/or flared		CH <sub>4</sub>		N <sub>2</sub> O <sup>(3)</sup> (kg/kg DC)		CH <sub>4</sub>		N <sub>2</sub> O <sup>(3)</sup> (Gg)	
	Wastewater	Sludge	Wastewater	Sludge	Wastewater (kg/kg DC)	Sludge (kg/kg DC)	Wastewater (Gg)	Sludge (Gg)	Wastewater (Gg)	Sludge (Gg)	Wastewater (Gg)	Sludge (Gg)
Industrial Wastewater	0,00	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Domestic and Commercial Wastewater	0,00	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Other (please specify)					0,00	0,00			0,00	0,00		0,00

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTOR		EMISSIONS	
	Population <sup>(4)</sup> (1000s)	Protein consumption (protein in kg/person/yr)	N <sub>2</sub> O	(kg N <sub>2</sub> O-N/kg sewage N produced)	N <sub>2</sub> O	(Gg)
	NE	NE	NE	NE	NE	NE
N <sub>2</sub> O from human sewage <sup>(3)</sup>						

<sup>(1)</sup> DC – degradable organic component. DC indicators are COD (Chemical Oxygen Demand) for industrial wastewater and BOD (Biochemical Oxygen Demand) for Domestic/ Commercial wastewater/sludge (IPCC Guidelines (Volume 3, Reference Manual, pp. 6.14, 6.18)).

<sup>(2)</sup> Actual emissions (after recovery).

<sup>(3)</sup> Parties using other methods for estimation of N<sub>2</sub>O emissions from human sewage or wastewater treatment should provide corresponding information on methods, activity data and emission factors used in the documentation box. Use the table to provide aggregate data.

<sup>(4)</sup> Specify whether total or urban population is used in the calculations and the rationale for doing so. Provide explanation in the documentation box.

	Domestic	Industrial
Total wastewater (m <sup>3</sup> ):	NE	NE
Treated wastewater (%):	NE	NE

	DC (kg BOD/1000 person/yr)
Domestic and Commercial	NE
Other	

Wastewater streams:	Wastewater output (m <sup>3</sup> )		DC (kgCOD/m <sup>3</sup> )
	Domestic	Industrial	
Industrial wastewater	NE	NE	NE
Non-ferrous	NE	NE	NE
Fertilizers	NE	NE	NE
Food and beverage	NE	NE	NE
Paper and pulp	NE	NE	NE
Organic chemicals	NE	NE	NE
Other (specify)	NE	NE	NE

Handling systems:	Industrial wastewater treated (%)	Ind. sludge treated (%)	Domestic wastewater treated (%)	Domestic sludge treated (%)
	Aerobic	NE	NE	NE
	Anaerobic	NE	NE	NE
	Other (specify)	NE	NE	NE

Documentation box

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> 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>		
					CO <sub>2</sub> equivalent (Gg)						P	A					P	A
					P	A	P	A	P	A								
<b>Total National Emissions and Removals</b>	26,461.07	0,00	212.12	10.09	0,00	0,00	0,00	0,00	0,00	0,00	0,00	83.07	124.51	70.68	453.16			
<b>1. Energy</b>	23,121.74		77.51	0.45								81.31	112.70	27.01	448.89			
A. Fuel Combustion	23,051.10																	
Reference Approach <sup>(2)</sup>																		
Sectoral Approach <sup>(2)</sup>	23,121.74		1.46	0.45								81.31	112.70	27.01	448.89			
1. Energy Industries	16,434.64		0.20	0.23								51.62	7.35	10.03	392.88			
2. Manufacturing Industries and Construction	530.16		0.07	0.01								1.81	0.17	0.13	6.97			
3. Transport	2,308.06		0.59	0.12								22.85	104.17	12.85	3.66			
4. Other Sectors	3,848.88		0.60	0.09								5.03	1.01	4.00	45.38			
5. Other	0,00		0,00	0,00								0,00	0,00	0,00	0,00			
<b>B. Fugitive Emissions from Fuels</b>	0,00		76.05	0,00								0,00	0,00	0,00	0,00			
1. Solid Fuels	0,00		76.05	0,00								0,00	0,00	0,00	0,00			
2. Oil and Natural Gas	0,00		0,00	0,00								0,00	0,00	0,00	0,00			
<b>2. Industrial Processes</b>	3,339.33		0.04	0.69	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1.76	11.81	43.67	4.27			
A. Mineral Products	736.75		0,00	0,00								0,00	0,00	0,00	0.24			
B. Chemical Industry	0,00		0,00	0.69	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1.38	0,00	0,00	0,00			
C. Metal Production	2,602.58		0.04	0,00								0,00	11.07	0,00	1.16			
D. Other Production <sup>(3)</sup>	0,00											0.20	0.74	43.67	2.87			
E. Production of Halocarbons and SF <sub>6</sub>					0,00	0,00	0,00	0,00	0,00	0,00	0,00							
F. Consumption of Halocarbons and SF <sub>6</sub>					0,00	0,00	0,00	0,00	0,00	0,00	0,00							
G. Other	0,00		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00			

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.

<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(I) of this common reporting format.

<sup>(2)</sup> Other Production includes Pulp and Paper and Food and Drink Production.

<sup>(3)</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. Where possible, the calculations using the Sectoral approach should be used for estimating national totals. Do not include the results of both the Reference approach and the Sectoral approach in national totals.

**Note:** The numbering of footnotes to all tables containing more than one sheet continue to the next sheet. Common footnotes are given only once at the first point of reference.

SUMMARY 1.A. SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)  
(Sheet 1 of 3)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> 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>
					CO <sub>2</sub> equivalent (Gg)												
					P	A	P	A	P	A	P	A	P				
<b>3. Solvent and Other Product Use</b>	0,00			0,00										NE	0,00		NE
<b>4. Agriculture</b>	0,00	0,00	87,31	8,95										0,00	0,00		0,00
A. Enteric Fermentation			73,73														
B. Manure Management			13,58	1,28											0,00		
C. Rice Cultivation			0,00												0,00		
D. Agricultural Soils	<sup>(4)</sup>	<sup>(4)</sup>	0,00	7,67											0,00		
E. Prescribed Burning of Savannas			0,00	0,00										NE	NE		
F. Field Burning of Agricultural Residues			0,00	0,00										0,00	0,00		
G. Other			0,00	0,00										0,00	0,00		NE
<b>5. Land-Use Change and Forestry</b>	<sup>(5)</sup> 0,00	<sup>(5)</sup> 0,00	0,00	0,00										0,00	0,00		0,00
A. Changes in Forest and Other Woody Biomass Stocks	<sup>(5)</sup> 0,00	<sup>(5)</sup> 0,00															
B. Forest and Grassland Conversion	0,00		0,00	0,00										0,00	0,00		NE
C. Abandonment of Managed Lands	<sup>(5)</sup> 0,00	<sup>(5)</sup> 0,00															
D. CO <sub>2</sub> Emissions and Removals from Soil	<sup>(5)</sup> 0,00	<sup>(5)</sup> 0,00															
E. Other	<sup>(5)</sup> 0,00	<sup>(5)</sup> 0,00	0,00	0,00										0,00	0,00		NE
<b>6. Waste</b>	0,00		47,26	0,00										0,00	0,00		0,00
A. Solid Waste Disposal on Land	<sup>(6)</sup> 0,00		47,26											0,00	0,00		
B. Wastewater Handling			0,00	0,00										0,00	0,00		
C. Waste Incineration	<sup>(6)</sup> 0,00		0,00	0,00										NO	NO		NO
D. Other	0,00		0,00	0,00										0,00	0,00		0,00
<b>7. Other (please specify)</b>	0,00	0,00	0,00	0,00										0,00	0,00		0,00

<sup>(4)</sup> According to the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.2, 4.87), CO<sub>2</sub> emissions from agricultural soils are to be included under Land-Use Change and Forestry (LUCF). At the same time, the Summary Report 7A (Volume 1, Reporting Instructions, Tables 27) allows for reporting CO<sub>2</sub> emissions or removals from agricultural soils, either in the Agriculture sector, under D. Agricultural Soils or in the Land-Use Change and Forestry sector under D. Emissions and Removals from Soil. Parties may choose either way to report emissions or removals from this source in the common reporting format, but the way they have chosen to report should be clearly indicated, by inserting explanatory comments to the corresponding cells of Summary 1.A and Summary 1.B. Double-counting of these emissions or removals should be avoided. Parties should include these emissions or removals consistently in Tables 8(a) (Recalculation - Recalculated data) and Table 10 (Emission trends).

<sup>(5)</sup> Please do not provide an estimate of both CO<sub>2</sub> emissions and CO<sub>2</sub> removals. "Net" emissions (emissions - removals) of CO<sub>2</sub> should be estimated and a single number placed in either the CO<sub>2</sub> emissions or CO<sub>2</sub> removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

<sup>(6)</sup> Note that CO<sub>2</sub> from Waste Disposal and Incineration source categories should only be included if it stems from non-biogenic or inorganic waste streams.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> 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>	
					CO <sub>2</sub> equivalent (Gg)		CO <sub>2</sub> equivalent (Gg)		CO <sub>2</sub> equivalent (Gg)		P	A	P	A	P					A
					P	A	P	A	P	A										
Memo Items: <sup>(7)</sup>																				
International Bunkers	0,00		0,00	0,00										0,00	0,00	0,00		0,00		
Aviation	0,00		0,00	0,00											NE	NE		NE		
Marine	0,00		0,00	0,00											NE	NE		NE		
Multilateral Operations	0,00		0,00	0,00											NE	NE		NE		
CO <sub>2</sub> Emissions from Biomass	0,00																			

<sup>(7)</sup> Memo Items are not included in the national totals.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> 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				
					CO <sub>2</sub> equivalent (Gg)									
<b>Total National Emissions and Removals</b>	26,461.07	0,00	212.12	10.09	0,00	0,00	0,00	0,00	0,00	0,00	83.07	124.51	70.68	453.16
<b>1. Energy</b>	23,121.74		77.51	0.45							81.31	112.70	27.01	448.89
A. Fuel Combustion	23,051.10													
Reference Approach <sup>(2)</sup>														
Sectoral Approach <sup>(2)</sup>	23,121.74		1.46	0.45							81.31	112.70	27.01	448.89
B. Fugitive Emissions from Fuels	0,00		76.05	0,00							0,00	0,00	0,00	0,00
<b>2. Industrial Processes</b>	3,339.33		0.04	0.69	0,00	0,00	0,00	0,00	0,00	0,00	1.76	11.81	43.67	4.27
<b>3. Solvent and Other Product Use</b>	0,00			0,00							NE	NE	0,00	NE
<b>4. Agriculture <sup>(3)</sup></b>	0,00	0,00	87.31	8.95							0,00	0,00	0,00	0,00
<b>5. Land-Use Change and Forestry</b>	<sup>(4)</sup> 0,00	<sup>(4)</sup> 0,00	0,00	0,00							0,00	0,00	0,00	0,00
<b>6. Waste</b>	0,00		47.26	0,00							0,00	0,00	0,00	0,00
<b>7. Other</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Memo Items:</b>														
<b>International Bunkers</b>	0,00		0,00	0,00							0,00	0,00	0,00	0,00
Aviation	0,00		0,00	0,00							NE	NE	NE	NE
Marine	0,00		0,00	0,00							NE	NE	NE	NE
<b>Multilateral Operations</b>	0,00		0,00	0,00							NE	NE	NE	NE
<b>CO<sub>2</sub> Emissions from Biomass</b>	0,00													

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.

<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(I) of this common reporting format.

<sup>(2)</sup> See footnote 4 to Summary 1.A.

<sup>(3)</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 document box of Table 1.A(G). Where possible, the calculations using the Sectoral approach should be used for estimating national totals. Do not include the results of both the Reference approach and the Sectoral approach in national totals.

<sup>(4)</sup> Please do not provide an estimate of both CO<sub>2</sub> emissions and CO<sub>2</sub> removals. "Net" emissions (emissions - removals) of CO<sub>2</sub> should be estimated and a single number placed in either the CO<sub>2</sub> emissions or CO<sub>2</sub> removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> <sup>(1)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	Total
	CO <sub>2</sub> equivalent (Gg)						
<b>Total (Net Emissions)<sup>(1)</sup></b>	26,461.07	4,454.52	3,127.90	0,00	0,00	0,00	34,043.49
<b>1. Energy</b>	23,121.74	1,627.71	139.50				24,888.95
A. Fuel Combustion (Sectoral Approach)	23,121.74	30.66	139.50				23,291.90
1. Energy Industries	16,434.64	4.20	71.30				16,510.14
2. Manufacturing Industries and Construction	530.16	1.47	3.10				534.73
3. Transport	2,308.06	12.39	37.20				2,357.65
4. Other Sectors	3,848.88	12.60	27.90				3,889.38
5. Other	0,00	0,00	0,00				0,00
B. Fugitive Emissions from Fuels	0,00	1,597.05	0,00				1,597.05
1. Solid Fuels	0,00	1,597.05	0,00				1,597.05
2. Oil and Natural Gas	0,00	0,00	0,00				0,00
<b>2. Industrial Processes</b>	3,339.33	0.84	213.90	0,00	0,00	0,00	3,554.07
A. Mineral Products	736.75	0,00	0,00				736.75
B. Chemical Industry	0,00	0,00	213.90	0,00	0,00	0,00	213.90
C. Metal Production	2,602.58	0.84	0,00		0,00	0,00	2,603.42
D. Other Production	0,00						0,00
E. Production of Halocarbons and SF <sub>6</sub>				0,00	0,00	0,00	0,00
F. Consumption of Halocarbons and SF <sub>6</sub>				0,00	0,00	0,00	0,00
G. Other	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>3. Solvent and Other Product Use</b>	0,00		0,00				0,00
<b>4. Agriculture</b>	0,00	1,833.51	2,774.50				4,608.01
A. Enteric Fermentation		1,548.33					1,548.33
B. Manure Management		285.18	396.80				681.98
C. Rice Cultivation		0,00					0,00
D. Agricultural Soils <sup>(2)</sup>		0,00	2,377.70				2,377.70
E. Prescribed Burning of Savannas		0,00	0,00				0,00
F. Field Burning of Agricultural Residues		0,00	0,00				0,00
G. Other		0,00	0,00				0,00
5. Land-Use Change and Forestry <sup>(1)</sup>	-7,423.53	0,00	0,00				-7,423.53
<b>6. Waste</b>	0,00	992.46	0,00				992.46
A. Solid Waste Disposal on Land	0,00	992.46					992.46
B. Wastewater Handling		0,00	0,00				0,00
C. Waste Incineration	0,00	0,00	0,00				0,00
D. Other	0,00	0,00	0,00				0,00
<b>7. Other (please specify)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00
							0,00
<b>Memo Items:</b>							
<b>International Bunkers</b>	0,00	0,00	0,00				0,00
Aviation	0,00	0,00	0,00				0,00
Marine	0,00	0,00	0,00				0,00
<b>Multilateral Operations</b>	0,00	0,00	0,00				0,00
<b>CO<sub>2</sub> Emissions from Biomass</b>	0,00						0,00

<sup>(1)</sup> For CO<sub>2</sub> emissions from Land-Use Change and Forestry the net emissions are to be reported. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

<sup>(2)</sup> See footnote 4 to Summary 1.A of this common reporting format.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> emissions	CO <sub>2</sub> removals	Net CO <sub>2</sub> emissions / removals	CH <sub>4</sub>	N <sub>2</sub> O	Total emissions
	CO <sub>2</sub> equivalent (Gg)					
<b>Land-Use Change and Forestry</b>						
A. Changes in Forest and Other Woody Biomass Stocks	0,00	0,00	0,00			0,00
B. Forest and Grassland Conversion	0,00		0,00	0,00	0,00	0,00
C. Abandonment of Managed Lands	0,00	0,00	0,00			0,00
D. CO <sub>2</sub> Emissions and Removals from Soil	0,00	0,00	0,00			0,00
E. Other	0,00	0,00	0,00	0,00	0,00	0,00
<b>Total CO<sub>2</sub> Equivalent Emissions from Land-Use Change and Forestry</b>	0,00	0,00	-7,423.53	0,00	0,00	0,00

Total CO <sub>2</sub> Equivalent Emissions without Land-Use Change and Forestry (a)	34,043.49
Total CO <sub>2</sub> Equivalent Emissions with Land-Use Change and Forestry (a)	26,619.96

<sup>(a)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry. Note that these totals will differ from the totals reported in Table 10s5 if Parties report non-CO<sub>2</sub> emissions from LUCF.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>	
	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>
<b>1. Energy</b>												
A. Fuel Combustion												
1. Energy Industries	C	CS	C	D	C	D						
2. Manufacturing Industries and Construction	C	CS	C	D	C	D						
3. Transport	COPERT	COPERT	COPERT	COPERT	COPERT	COPERT						
4. Other Sectors	C	CS,D	C	CS,D	C	CS,D						
5. Other	NE	NE	NE	NE	NE	NE						
<b>B. Fugitive Emissions from Fuels</b>												
1. Solid Fuels	NE	NE	C	D	NE	NE						
2. Oil and Natural Gas	NE	NE	NE	NE	NE	NE						
<b>2. Industrial Processes</b>												
A. Mineral Products	C	D	NE	NE	NE	NE						
B. Chemical Industry	NE	NE	NE	NE	C	D	NE	NE	NE	NE	NE	NE
C. Metal Production	C	D	C	D	NE	NE			NE	NE	NE	NE
D. Other Production	NE	NE										
E. Production of Halocarbons and SF <sub>6</sub>							NE	NE	NE	NE	NE	NE
F. Consumption of Halocarbons and SF <sub>6</sub>							NE	NE	NE	NE	NE	NE
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

<sup>(1)</sup> Use the following notation keys to specify the method applied: D (IPCC default), RA (Reference Approach), T1 (IPCC Tier 1), T1a, T1b, T1c (IPCC Tier 1a, Tier 1b and Tier 1c, respectively), T2 (IPCC Tier 2), T3 (IPCC Tier 3), C (Country Specific), M (Model). If using more than one method, enumerate the relevant methods. Explanations of any modifications to the default IPCC methods, as well as information on the proper use of methods per source category where more than one method is indicated, and explanations on the country specific methods, should be provided in the documentation box of the relevant Sectoral background data table.

<sup>(2)</sup> Use the following notation keys to specify the emission factor used: D (IPCC default), C (CORINARI), CS (Country Specific), PS (Plant Specific), M (Model). Where a mix of emission factors has been used, use different notations in one and the same cells with further explanation in the documentation box of the relevant Sectoral background data table.



GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>		CH <sub>4</sub>		N <sub>2</sub> O		HFCs		PFCs		SF <sub>6</sub>	
	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>	Method applied <sup>(1)</sup>	Emission factor <sup>(2)</sup>
3. Solvent and Other Product Use	NE	NE			NE	NE						
4. Agriculture												
A. Enteric Fermentation			T1	D								
B. Manure Management			T1	D	T1	D						
C. Rice Cultivation			NO	NO								
D. Agricultural Soils	NE	NE	NE	NE	T1	D						
E. Prescribed Burning of Savannas			NO	NO	NO	NO						
F. Field Burning of Agricultural Residues			NE	NE	NE	NE						
G. Other			NE	NE	NE	NE						
5. Land-Use Change and Forestry												
A. Changes in Forest and Other Woody Biomass Stocks	T1	D										
B. Forest and Grassland Conversion	NE	NE	NE	NE	NE	NE						
C. Abandonment of Managed Lands	NE	NE										
D. CO <sub>2</sub> Emissions and Removals from Soil	NE	NE										
E. Other	NE	NE	NE	NE	NE	NE						
6. Waste												
A. Solid Waste Disposal on Land	NE	NE	C	D								
B. Wastewater Handling			NE	NE	NE	NE						
C. Waste Incineration	NO	NO	NO	NO	NO	NO						
D. Other	NE	NE	NE	NE	NE	NE						
7. Other (please specify)	NE	NE	NE	NE	NE	NE						

<sup>(1)</sup> Use the following notation keys to specify the method applied: D (IPCC default), RA (Reference Approach), T1 (IPCC Tier 1), T1a, T1b, T1c (IPCC Tier 1a, Tier 1b and Tier 1c, respectively), T2 (IPCC Tier 2), T3 (IPCC Tier 3), C (CORINAIR), CS (Country Specific). If using more than one method, enumerate the relevant methods. Explanations of any modifications to the default IPCC methods, as well as information on the proper use of methods per source category where more than one method is indicated, and explanations on the country specific methods, should be provided in the documentation box of the relevant Sectoral background data table.

<sup>(2)</sup> Use the following notation keys to specify the emission factor used: D (IPCC default), C (CORINAIR), CS (Country Specific), PS (Plant Specific). Where a mix of emission factors has been used, use different notations in one and the same cells with further explanation in the documentation box of the relevant Sectoral background data table.

TABLE 7 OVERVIEW TABLE<sup>(1)</sup> FOR NATIONAL GREENHOUSE GAS INVENTORIES - COMPLETENESS AND QUALITY OF ESTIMATES  
(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	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>		
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	
<b>Total National Emissions and Removals</b>																					
<b>1 Energy</b>																					
A. Fuel Combustion Activities																					
Reference Approach	ALL	H																			
Sectoral Approach	ALL	H	ALL	H	ALL	H								ALL	H	ALL	H			ALL	H
1. Energy Industries	ALL	H	ALL	H	ALL	H								ALL	H	ALL	H			ALL	H
2. Manufacturing Industries and Construction	ALL	H	ALL	H	ALL	H								ALL	H	ALL	H			ALL	H
3. Transport	PART	M	PART	M	PART	M								PART	M	PART	M			PART	M
4. Other Sectors	ALL	H	ALL	H	ALL	H								ALL	H	ALL	H			ALL	H
5. Other	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE			NE	NE
B. Fugitive Emissions from Fuels	NE	NE	PART	L	NE	NE								NE	NE	NE	NE			NE	NE
1. Solid Fuels	NE	NE	PART	L	NE	NE															
2. Oil and Natural Gas	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE			NE	NE
<b>2 Industrial Processes</b>																					
A. Mineral Products	PART	M	NE	NE	NE	NE								NE	NE	NE	NE			NE	NE
B. Chemical Industry	NE	NE	NE	NE	PART	M	NE	NE	NE	NE	NE	NE	NE	PART	M	NE	NE			NE	NE
C. Metal Production	PART	M	PART	M	NE	NE								NE	NE	NE	NE			NE	NE
D. Other Production	NE	NE												PART	M	PART	M			PART	M
E. Production of Halocarbons and SF <sub>6</sub>							NE	NE	NE	NE	NE	NE	NE								

Note: To fill in the table use the notation key as given in the IPCC Guidelines (Volume 1, Reporting Instructions, Tables 37).

<sup>(1)</sup>This table is intended to be used by Parties to summarize their own assessment of completeness (e.g. partial, full estimate, not estimated) and quality (high, medium, low) of major source/sink inventory estimates. The latter could be understood as a quality assessment of the uncertainty of the estimates. This table might change once the IPCC completes its work on managing uncertainties of GHG inventories. The title of the table was kept for consistency with the current table in the IPCC Guidelines.

TABLE 7 OVERVIEW TABLE<sup>(1)</sup> FOR NATIONAL GREENHOUSE GAS INVENTORIES – COMPLETENESS AND QUALITY OF ESTIMATES  
(Sheet 2 of 3)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	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>		
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	
<b>2. Industrial Processes (continued)</b>																					
F. Consumption of Halocarbons and SF <sub>6</sub>																					
Potential <sup>(2)</sup>								NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Actual <sup>(3)</sup>								NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
<b>3. Solvent and Other Product Use</b>	NE	NE			NE	NE															
<b>4. Agriculture</b>																					
A. Enemic Fermentation			PART	M																	
B. Manure Management			PART	M	PART	M											NE	NE			
C. Rice Cultivation			NE	NE																	
D. Agricultural Soils	NE	NE	NE	NE	PART	M															
E. Prescribed Burning of Savannas			NO	NO	NO	NO								NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues			NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
G. Other			NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
<b>5. Land-Use Change and Forestry</b>																					
A. Changes in Forest and Other Woody Biomass Stocks	NE	NE																			
B. Forest and Grassland Conversion	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE

<sup>(2)</sup> Potential emissions based on Tier 1 approach of the IPCC Guidelines.

<sup>(3)</sup> Actual emissions based on Tier 2 approach of the IPCC Guidelines.

TABLE 7 OVERVIEW TABLE<sup>(1)</sup> FOR NATIONAL GREENHOUSE GAS INVENTORIES - COMPLETENESS AND QUALITY OF ESTIMATES  
(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	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>		
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	
5. Land-Use Change and Forestry (continued)																					
C. Abandonment of Managed Lands	NE	NE																			
D. CO <sub>2</sub> Emissions and Removals from Soil	NE	NE																			
E. Other	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	NE	NE												NE	NE	NE	NE	NE	NE	NE	NE
A. Solid Waste Disposal on Land	NE	NE	PART	M																	
B. Wastewater Handling			NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
C. Waste Incineration	NO	NO	NO	NO	NO	NO								NO	NO	NO	NO	NO	NO	NO	NO
D. Other	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
7. Other (please specify)	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
Memo Items:																					
International Bunkers	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
Aviation	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
Marine	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
Multilateral Operations	NE	NE	NE	NE	NE	NE								NE	NE	NE	NE	NE	NE	NE	NE
CO <sub>2</sub> Emissions from Biomass	NE	NE																			

TABLE 8(a) RECALCULATION – RECALCULATED DATA

Recalculated year: 1990

(Sheet 1 of 2)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>			CH <sub>4</sub>			N <sub>2</sub> O		
	Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>	Previous submission	Latest submission	Difference <sup>(1)</sup>
	CO <sub>2</sub> equivalent (Gg)	CO <sub>2</sub> equivalent (Gg)	(%)	CO <sub>2</sub> equivalent (Gg)	CO <sub>2</sub> equivalent (Gg)	(%)	CO <sub>2</sub> equivalent (Gg)	CO <sub>2</sub> equivalent (Gg)	(%)
<b>Total National Emissions and Removals</b>			0,00			0,00			0,00
<b>1. Energy</b>			0,00			0,00			0,00
1.A. Fuel Combustion Activities			0,00			0,00			0,00
1.A.1. Energy Industries			0,00			0,00			0,00
1.A.2. Manufacturing Industries and Construction			0,00			0,00			0,00
1.A.3. Transport			0,00			0,00			0,00
1.A.4. Other Sectors			0,00			0,00			0,00
1.A.5. Other			0,00			0,00			0,00
1.B. Fugitive Emissions from Fuels			0,00			0,00			0,00
1.B.1. Solid fuel			0,00			0,00			0,00
1.B.2. Oil and Natural Gas			0,00			0,00			0,00
<b>2. Industrial Processes</b>			0,00			0,00			0,00
2.A. Mineral Products			0,00			0,00			0,00
2.B. Chemical Industry			0,00			0,00			0,00
2.C. Metal Production			0,00			0,00			0,00
2.D. Other Production			0,00			0,00			0,00
2.G. Other			0,00			0,00			0,00
<b>3. Solvent and Other Product Use</b>			0,00			0,00			0,00
<b>4. Agriculture</b>			0,00			0,00			0,00
4.A. Enteric Fermentation			0,00			0,00			0,00
4.B. Manure Management			0,00			0,00			0,00
4.C. Rice Cultivation			0,00			0,00			0,00
4.D. Agricultural Soils <sup>(2)</sup>			0,00			0,00			0,00
4.E. Prescribed Burning of Savannas			0,00			0,00			0,00
4.F. Field Burning of Agricultural Residues			0,00			0,00			0,00
4.G. Other			0,00			0,00			0,00
<b>5. Land-Use Change and Forestry (net)<sup>(3)</sup></b>			0,00			0,00			0,00
5.A. Changes in Forest and Other Woody Biomass Stocks			0,00			0,00			0,00
5.B. Forest and Grassland Conversion			0,00			0,00			0,00
5.C. Abandonment of Managed Lands			0,00			0,00			0,00
5.D. CO <sub>2</sub> Emissions and Removals from Soil			0,00			0,00			0,00
5.E. Other			0,00			0,00			0,00

<sup>(1)</sup> Estimate the percentage change due to recalculation with respect to the previous submission (Percentage change = 100% x [(LS-PS)/PS], where LS = Latest submission and PS = Previous submission. All cases of recalculation of the estimate of the source/sink category, should be addressed and explained in Table 8(b) of this common reporting format.

<sup>(2)</sup> See footnote 4 to Summary 1.A of this common reporting format.

<sup>(3)</sup> Net CO<sub>2</sub> emissions/removals to be reported



TABLE 8(b) RECALCULATION – EXPLANATORY INFORMATION  
(Sheet 1 of 1)

BOSNIA AND HERZEGOVINA  
1990  
Submissio 2009

Specify the sector and source/sink category <sup>(1)</sup> where changes in estimates have occurred:	GHG	RECALCULATION DUE TO			
		CHANGES IN:			Addition/removal/ replacement
		Methods <sup>(2)</sup>	Emission factors <sup>(2)</sup>	Activity data <sup>(2)</sup>	of source/sink categories

<sup>(1)</sup> Enter the identification code of the source/sink category (e.g. 1.B.1) in the first column and the name of the category (e.g. Fugitive Emissions from Solid Fuels) in the second column of the table (see Table 8(a)).

<sup>(2)</sup> Explain changes in methods, emission factors and activity data that have resulted in recalculation of the estimate of the source/sink as indicated in Table 8(a). Include relevant changes in the assumptions and coefficients under the "Methods" column.

Documentation box
Use the documentation box to report the justifications of the changes as to improvements in the accuracy, completeness and consistency of the inventory.

TABLE 9 COMPLETENESS – (INFORMATION ON NOTATION KEYS)  
(Sheet 1 of 2)

BOSNIA AND HERZEGOVINA  
1990  
Submissio 2009

Sources and sinks not reported (NE) <sup>(1)</sup>				
GHG	Sector <sup>(2)</sup>	Source/sink category <sup>(2)</sup>	Explanation	
CO <sub>2</sub>				
CH <sub>4</sub>				
N <sub>2</sub> O				
HFCs				
PFCs				
SF <sub>6</sub>				
Sources and sinks reported elsewhere (IE) <sup>(3)</sup>				
GHG	Source/sink category	Allocation as per IPCC Guidelines	Allocation used by the Party	Explanation
CO <sub>2</sub>				
CH <sub>4</sub>				
N <sub>2</sub> O				
HFCs				
PFCs				
SF <sub>6</sub>				

<sup>(1)</sup> Please, clearly indicate sources and sinks which are considered in the IPCC Guidelines but are not considered in the submitted inventory. Explain the reason for excluding these sources and sinks, in order to avoid arbitrary interpretations. An entry should be made for each source/sink category for which the indicator "NE" is entered in the sectoral tables.

<sup>(2)</sup> Indicate omitted source/sink following the IPCC source/sink category structure (e.g. sector: Waste, source category: Wastewater Handling).

<sup>(3)</sup> Please clearly indicate sources and sinks in the submitted inventory that are allocated to a sector other than that indicated by the IPCC Guidelines. Show the sector indicated in the IPCC Guidelines and the sector to which the source or sink is allocated in the submitted inventory. Explain the reason for reporting these sources and sinks in a different sector. An entry should be made for each source/sink for which the indicator "IE" is used in the sectoral tables.

TABLE 9 COMPLETENESS – (INFORMATION ON NOTATION KEYS)  
(Sheet 2 of 2)

BOSNIA AND HERZEGOVINA  
1990  
Submissio 2009

Additional GHG emissions reported <sup>(4)</sup>						
GHG	Source category	Emissions (Gg)	Estimated GWP value (100-year horizon)	Emissions CO <sub>2</sub> equivalent (Gg)	Reference to the data source of GWP value	Explanation

<sup>(4)</sup> Parties are encouraged to provide information on emissions of greenhouse gases whose GWP values have not yet been agreed upon by the COP. Please include such gases in this table if they are considered

in the submitted inventory. Provide additional information on the estimation methods used.

TABLE 10 EMISSIONS TRENDS (CO<sub>2</sub>)  
(Sheet 1 of 5)

BOSNIA AND HERZEGOVINA

1990

Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	(Gg)											
<b>1. Energy</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Fuel Combustion (Sectoral Approach)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Solid Fuels												
2. Oil and Natural Gas												
<b>2. Industrial Processes</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF <sub>6</sub>												
F. Consumption of Halocarbons and SF <sub>6</sub>												
G. Other												
<b>3. Solvent and Other Product Use</b>												
<b>4. Agriculture</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils <sup>(2)</sup>												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
<b>5. Land-Use Change and Forestry <sup>(3)</sup></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO <sub>2</sub> Emissions and Removals from Soil												
E. Other												
<b>6. Waste</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Solid Waste Disposal on Land												
B. Waste-water Handling												
C. Waste Incineration												
D. Other												
<b>7. Other (please specify)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Total Emissions/Removals with LUCF <sup>(4)</sup></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Total Emissions without LUCF<sup>(4)</sup></b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Memo Items:</b>												
<b>International Bunkers</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Aviation												
Marine												
<b>Multilateral Operations</b>												
<b>CO<sub>2</sub> Emissions from Biomass</b>												

<sup>(1)</sup> Fill in the base year adopted by the Party under the Convention, if different from 1990.

<sup>(2)</sup> See footnote 4 to Summary 1.A of this common reporting format.

<sup>(3)</sup> Take the net emissions as reported in Summary 1.A of this common reporting format. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

<sup>(4)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO<sub>2</sub> emissions and removals from Land-Use Change and Forestry.



TABLE 10 EMISSIONS TRENDS (CH<sub>4</sub>)  
(Sheet 2 of 5)

BOSNIA AND HERZEGOVINA

1990

Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	(Gg)											
<b>Total Emissions</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>1. Energy</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Fuel Combustion (Sectoral Approach)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Solid Fuels												
2. Oil and Natural Gas												
<b>2. Industrial Processes</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF <sub>6</sub>												
F. Consumption of Halocarbons and SF <sub>6</sub>												
G. Other												
<b>3. Solvent and Other Product Use</b>												
<b>4. Agriculture</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
<b>5. Land-Use Change and Forestry</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO <sub>2</sub> Emissions and Removals from Soil												
E. Other												
<b>6. Waste</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Solid Waste Disposal on Land												
B. Waste-water Handling												
C. Waste Incineration												
D. Other												
<b>7. Other (please specify)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Memo Items:</b>												
<b>International Bunkers</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Aviation												
Marine												
<b>Multilateral Operations</b>												
<b>CO<sub>2</sub> Emissions from Biomass</b>												

TABLE 10 EMISSIONS TRENDS (N<sub>2</sub>O)  
(Sheet 3 of 5)

BOSNIA AND HERZEGOVINA

1990

Submission 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	(Gg)											
<b>Total Emissions</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>1. Energy</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Fuel Combustion (Sectoral Approach)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1. Solid Fuels												
2. Oil and Natural Gas												
<b>2. Industrial Processes</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF <sub>6</sub>												
F. Consumption of Halocarbons and SF <sub>6</sub>												
G. Other												
<b>3. Solvent and Other Product Use</b>												
<b>4. Agriculture</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
<b>5. Land-Use Change and Forestry</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO <sub>2</sub> Emissions and Removals from Soil												
E. Other												
<b>6. Waste</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
A. Solid Waste Disposal on Land												
B. Waste-water Handling												
C. Waste Incineration												
D. Other												
<b>7. Other (please specify)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
<b>Memo Items:</b>												
<b>International Bunkers</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Aviation												
Marine												
<b>Multilateral Operations</b>												
<b>CO<sub>2</sub> Emissions from Biomass</b>												

TABLE 10 EMISSION TRENDS ( HFCs, PFCs and SF6)  
(Sheet 4 of 5)

BOSNIA AND HERZEGOVINA  
1990  
Submission 2009

Chemical	GWP	
	HFCs	
HFC-23	11700	
HFC-32	650	
HFC-41	150	
HFC-43-10mee	1300	
HFC-125	2800	
HFC-134	1000	
HFC-134a	1300	
HFC-152a	140	
HFC-143	300	
HFC-143a	3800	
HFC-227ea	2900	
HFC-236fa	6300	
HFC-245ca	560	
	PFCs	
CF4	6500	
C2F6	9200	
C3F8	7000	
C4F10	7000	
c-C4F8	8700	
C5F12	7500	
C6F14	7400	
SF6	23900	

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
		(Gg)										
<b>Emissions of HFCs<sup>(9)</sup> - CO2 equivalent (Gg)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
HFC-23												
HFC-32												
HFC-41												
HFC-43-10mee												
HFC-125												
HFC-134												
HFC-134a												
HFC-152a												
HFC-143												
HFC-143a												
HFC-227ea												
HFC-236fa												
HFC-245ca												
<b>Emissions of PFCs<sup>(9)</sup> - CO2 equivalent (Gg)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
CF4												
C2F6												
C3F8												
C4F10												
c-C4F8												
C5F12												
C6F14												
<b>Emissions of SF6<sup>(9)</sup> - CO2 equivalent (Gg)</b>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
SF6												

<sup>(9)</sup> Enter information on the actual emissions. Where estimates are only available for the potential emissions, specify this in a comment to the corresponding cell. Only in this row the emissions are expressed as CO2 equivalent emissions in order to facilitate data flow among spreadsheets.

TABLE 10 EMISSION TRENDS (SUMMARY)  
(Sheet 5 of 5)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
		(Gg)										
Net CO <sub>2</sub> emissions/removals	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
CO <sub>2</sub> emissions (without LUCF) <sup>(6)</sup>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
CH <sub>4</sub>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
N <sub>2</sub> O	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
HFCs	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
PFCs	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
SF <sub>6</sub>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total (with net CO <sub>2</sub> emissions/removals)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total (without CO <sub>2</sub> from LUCF) <sup>(6) (8)</sup>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
		CO <sub>2</sub> equivalent (Gg)										
1. Energy	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2. Industrial Processes	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
3. Solvent and Other Product Use	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4. Agriculture	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5. Land-Use Change and Forestry <sup>(7)</sup>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
6. Waste	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
7. Other	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

<sup>(6)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO<sub>2</sub> emissions and removals from Land-Use Change and Forestry.

<sup>(7)</sup> Net emissions.

<sup>(8)</sup> The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry. Note that these totals will differ from the totals reported in Table Summary 2, if Parties report non-CO<sub>2</sub> emissions from LUCF.

TABLE 11 CHECK LIST OF REPORTED INVENTORY INFORMATION<sup>(1)</sup>

Party: BOSNIA AND HERZEGOVINA

Year: 1990

Contact info:	Focal point for national GHG inventories:					
	Address:					
	Telephone:		Fax:		E-mail:	
	Main institution preparing the inventory:					

General info:	Date of submission:					
	Base years:	1990	PFCs, HFCs, SF6:			
	Year covered in the submission:	1990				
	Gases covered:	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, CO, NH <sub>3</sub> , NMVOC, NO <sub>x</sub> , SO <sub>2</sub>				
	Omissions in geographic coverage:					

Tables:		Energy	Ind. Processes	Solvent Use	LUCF	Agriculture	Waste
	Sectoral report tables:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Sectoral background data tables:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Summary 1 (IPCC Summary tables):	IPCC Table 7A:		<input checked="" type="checkbox"/>	IPCC Table 7B:		<input checked="" type="checkbox"/>
	Summary 2 (CO <sub>2</sub> equivalent emissions):			<input checked="" type="checkbox"/>			
	Summary 3 (Methods/Emission factors):			<input checked="" type="checkbox"/>			
	Overview Table 7: (Uncertainty)	IPCC Table 8A:		<input type="checkbox"/>	National information:		<input checked="" type="checkbox"/>
	Recalculation tables:			<input checked="" type="checkbox"/>			
	Completeness table:			<input type="checkbox"/>			
	Trend table:			<input type="checkbox"/>			

CO <sub>2</sub>	Comparison of	Worksheet 1-1	Percentage of difference	Explanation of differences
	CO <sub>2</sub> from fuel combustion:	<input type="checkbox"/>	-0.31	<input type="checkbox"/>

Recalculation:		Energy	Ind. Processes	Solvent Use	LUCF	Agriculture	Waste
	CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	N <sub>2</sub> O	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	HFCs, PFCs, SF <sub>6</sub>		<input type="checkbox"/>				
	Explanations:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Recalculation tables for all recalculated years:				<input type="checkbox"/>		
	Full CRF for the recalculated base year:				<input type="checkbox"/>		

HFCs, PFCs, SF <sub>6</sub> :		HFCs		PFCs		SF <sub>6</sub>	
	Disaggregation by species:	<input type="checkbox"/>		<input type="checkbox"/>			
	Production of Halocarbons/SF <sub>6</sub> :	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
	Consumption of Halocarbons/SF <sub>6</sub> :	Actual	Potential	Actual	Potential	Actual	Potential
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FALSE
Potential/Actual emission ratio:	0,00		0,00		0,00		

Reference to National Inventory Report and/or national inventory web site:	
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Ministarstva vanjske trgovine  
i ekonomskih odnosa BiH



Ministarstva za prostorno uređenje,  
građevinarstvo i ekologiju RS

MINISTARSTVO  
OKOLIŠA I TURIZMA  
FEDERACIJE BIH

