



## Framework Convention on Climate Change

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English only

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### Annual status report of the annual inventory of Luxembourg

1. This status report was prepared by the expert review team as part of the initial check of the annual inventory submitted in accordance with decision 15/CMP.1. It reflects the content of the inventory submission of 2011 as originally submitted by the Party, and of the resubmission received by 27 May 2011.

2. In this report, the following abbreviations are used:

A: afforestation  
AAU: assigned amount unit  
CER: certified emission reduction  
CM: cropland management  
CRF: common reporting format  
D: deforestation  
ERU: emission reduction unit  
FM: forest management  
GM: grazing land management  
GHG: greenhouse gas  
KP-LULUCF: Article 3, paragraphs 3 and 4, activities under the Kyoto Protocol  
ICER: long-term certified emission reduction  
LULUCF: land use, land-use change and forestry  
NIR: national inventory report  
R: reforestation  
RMU: removal unit  
RV: revegetation  
SBDT: sectoral background data tables  
SEF: standard electronic format  
SOPU: solvent and other product use  
tCER: temporary certified emission reduction

*Notation keys*  
C: confidential  
IE: included elsewhere  
NA: not applicable  
NE: not estimated  
NO: not occurring

*Greenhouse gases*  
CO<sub>2</sub>: carbon dioxide  
CH<sub>4</sub>: methane  
N<sub>2</sub>O: nitrous oxide  
HFCs: hydrofluorocarbons  
PFCs: perfluorocarbons  
SF<sub>6</sub>: sulphur hexafluoride  
NO<sub>x</sub>: nitrogen oxides  
CO: carbon monoxide  
NMVOCs: non-methane volatile organic compounds  
SO<sub>2</sub>: sulphur dioxide

GREENHOUSE GAS INVENTORY SUBMISSION											
	Date of receipt		Date of resubmission			Comments					
General information	NIR	15 April 2011		27 May 2011							
	CRF tables <sup>a</sup>	15 April 2011		27 May 2011							
	Additional information <sup>b</sup>										
	CRF provided for years	1990–2009									
	Base year or period <sup>c</sup>	1990			Base year for HFCs, PFCs and SF <sub>6</sub> <sup>d</sup>			1995			
	Gases covered	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	NO <sub>x</sub>	CO	NMVOCS	SO <sub>2</sub>
		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NIR	Description	The organization of the NIR follows the structure outlined in the updated UNFCCC reporting guidelines <sup>e</sup> on annual inventories following incorporation of the provisions of decision 14/CP.11, elaborated with annotated outline of the NIR.									
	Language of NIR	English									
CRF <sup>f</sup>	Missing source category larger than 7 per cent for categories included in Annex A to the Kyoto Protocol			No missing source category larger than 7 per cent has been identified.							

<sup>a</sup> CRF tables are contained in document FCCC/SBSTA/2006/9, annex II.

<sup>b</sup> Additional information can be any information submitted by a Party in conjunction with the NIR or CRF tables.

<sup>c</sup> Parties included in Annex I to the Convention undergoing the process of transition to a market economy may use a base year or a period of years other than 1990, in accordance with the provisions of Article 4, paragraph 6, of the Convention and decisions 9/CP.2 and 11/CP.4.

<sup>d</sup> A Party may select 1990 or 1995 as the base year for the fluorinated gases in accordance with Article 3, paragraph 8, of the Kyoto Protocol.

<sup>e</sup> “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines for annual inventories” (FCCC/SBSTA/2006/9).

<sup>f</sup> A Party has not reported an estimate for an Annex A category that accounted for 7 per cent or more of the Party’s aggregate emissions (decision 15/CMP.1, para. 3 (b)).

SUBMISSION OF SUPPLEMENTARY INFORMATION UNDER ARTICLE 7.1				
Reporting of supplementary information		<i>Date of receipt</i>	<i>Date of resubmission</i>	<i>Comments</i>
	KP-LULUCF information <sup>a</sup>	15 April 2011	27 May 2011	NIR, Page 410, Chapter 11
	KP-LULUCF CRF <sup>b</sup>	15 April 2011		CRF provided for years: 2008–2009
	Information on Kyoto units (ERUs, CERs, RMUs and AAUs) <sup>c</sup>	15 April 2011	27 May 2011	NIR, Page 426, Chapter 12
	SEF <sup>d</sup> with Kyoto units	15 April 2011		
	Change in national system <sup>e</sup>	15 April 2011	27 May 2011	NIR, Page 428, Chapter 13
	Change in national registry <sup>e</sup>	15 April 2011	27 May 2011	NIR, Page 429, Chapter 14
	Minimization of adverse impacts <sup>e</sup>	15 April 2011	27 May 2011	NIR, Page 434, Chapter 15

<sup>a</sup> Parties are required to include in their annual submission information on anthropogenic GHG emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, of the Kyoto Protocol, and, if any, elected activities under Article 3, paragraph 4, in accordance with the annex to decision 15/CMP.1, paragraphs 5–9.

<sup>b</sup> Parties are required to report anthropogenic GHG emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, of the Kyoto Protocol, and, if any, elected activities under Article 3, paragraph 4, using the agreed CRF tables adopted under decision 6/CMP.3. Parties may also elect to report these tables for the base year or 1990.

<sup>c</sup> Parties are required to include in their annual submission information on ERUs, CERs, tCERs, ICERs, AAUs and RMUs, in accordance with the annex to decision 15/CMP.1, section I.E.

<sup>d</sup> SEF for reporting Kyoto Protocol units, as adopted under decision 14/CMP.1 and required by the annex to decision 15/CMP.1, paragraph 11.

<sup>e</sup> The requirements for Parties to report on changes in national systems in accordance with Article 5, paragraph 1, changes in national registries, and the minimization of adverse impacts in accordance with Article 3, paragraph 14, are set out in sections I.F, I.G and I.H, respectively, of the annex to decision 15/CMP.1.

PART I																
Provision of information for the latest reported inventory year in the common reporting format: 2009																
Tables		Energy		Industrial processes		SOPU		Agriculture		LULUCF		KP-LULUCF <sup>a</sup>		Waste		
	Sectoral report tables	1	✓	2(I)	✓	3	✓	4	✓	5	✓	5(KP)		✓	6	✓
				2(II)	✓											
	Sectoral background data tables	1.A(a)	✓	2(I).A-G	✓	3.A-D	✓	4.A	✓	5.A	✓	5(KP-I)A.1.1		✓	6.A	✓
		1.A(b)	✓	2(II).C	✓			4.B(a)	✓	5.B	✓	5(KP-I)A.1.2		✓	6.B	✓
		1.A(c)	✓	2(II).E	✓			4.B(b)	✓	5.C	✓	5(KP-I)A.1.3		✓	6.C	✓
		1.A(d)	✓	2(II).F				4.C	✓	5.D	✓	5(KP-I)A.2		✓		
		1.B.1	✓					4.D	✓	5.E	✓	5(KP-I)A.2.1.		✓		
		1.B.2	✓					4.E	✓	5.F	✓	5(KP-I)B.1.		✓		
		1.C	✓					4.F	✓	5 (I)	✓	5(KP-I)B.2.		✓		
	Bunkers separately		✓						5 (II)	✓	5(KP-I)B.3.		✓			
									5 (III)	✓	5(KP-I)B.4.		✓			
									5 (IV)	✓	5(KP-II)1		✓			
									5 (V)	✓	5(KP-II)2		✓			
											5(KP-II)3		✓			
											5(KP-II)4		✓			
											5(KP-II)5		✓			
											Accounting table		✓			
Summary tables	Summary 1.A		✓	Summary 1.B		✓	Summary 2		✓							
Other tables	Summary 3		✓	Table 7 (Key categories)		✓	Table 9(a) (Completeness)		✓							
	Table 10 (Trends)		✓				Table 9(b) (Completeness)									
Comments																

<sup>a</sup> Parties are required to report anthropogenic GHG emissions by sources and removals by sinks from LULUCF activities under Article 3, paragraph 3, of the Kyoto Protocol, and, if any, elected activities under Article 3, paragraph 4, using the agreed CRF tables adopted under decision 6/CMP.3.

PART I									
Provision of information for the latest reported inventory year in the common reporting format: 2009 (continued)									
Totals	Provided for gases	CO <sub>2</sub> ✓	CH <sub>4</sub> ✓	N <sub>2</sub> O ✓	HFCs ✓	PFCs ✓	SF <sub>6</sub> ✓		
	Provided for years	1990–2009	1990–2009	1990–2009	1990–2009	2000–2009	1990–2009		
CO <sub>2</sub>	Comparison of CO <sub>2</sub> from fuel combustion	Reference approach	Sectoral approach	Difference more than 2 per cent		If difference is more than 2 per cent			
		✓	✓	✓		Explanation provided	✓		
HFCs, PFCs, SF <sub>6</sub>	Disaggregation by species			HFCs		PFCs		SF <sub>6</sub>	
				✓		✓			
	Reporting of actual and/or potential emission estimates in the category consumption of halocarbons and SF <sub>6</sub>			Actual	Potential	Actual	Potential	Actual	Potential
✓					✓		✓		
Notation keys	Used in	Summary table 1.A	✓	Sectoral report tables		✓	Sectoral background data tables		✓
	Comments								

PART II																
Provision of common reporting format tables for years reported																
		Years													Information gaps relating to reporting <sup>b</sup>	Comments
		Base year <sup>a</sup>	1990	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009			
Energy	SBDT	Sectoral report: table 1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 1.A(a)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 1.A(b)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 1.A(c)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 1.A(d)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 1.B.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation key NO is used.
		Table 1.B.2		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 1.C		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Industrial processes	Sectoral reports:	Table 2(I)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
		Table 2(II)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	SBDT	Table 2(I).A–G		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
		Table 2(II).C		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation keys NO, NA are used.	
		Table 2(II).E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Table 2(II).F																

PART II																
Provision of common reporting format tables for years reported (continued)																
		Years													Information gaps relating to reporting <sup>b</sup>	Comments
		Base year <sup>a</sup>	1990	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009			
Solvent use	Sectoral report: Table 3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SOPU Table 3.A–D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Agriculture	Sectoral report: Table 4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT	Table 4.A		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 4.B(a)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 4.B(b)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 4.C		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation keys NO, NA are used.
		Table 4.D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 4.E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation key NA is used.
		Table 4.F		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

PART II															
Provision of common reporting format tables for years reported (continued)															
	Base year <sup>a</sup>	Years											Information gaps relating to reporting <sup>b</sup>	Comments	
		1990	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009			
LULUCF SBDT	Sectoral report: Table 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5.A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5.B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5.C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5.D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5.E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5.F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (I)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation keys NO, NA are used.
	Table 5 (II)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation keys NA, NO are used.
	Table 5 (III)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (IV)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (V)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation keys NE, NO are used.



**PART II**

**Provision of common reporting format tables for years reported (continued)**

	Years											Information gaps relating to reporting <sup>b</sup>	Comments	
	Base year <sup>a</sup>	1990	1995	2000	2002	2003	2004	2005	2006	2007	2008			2009
Sectoral report: Table 5 (KP)											✓	✓		
Table 5 (KP-I) A.1.1											✓	✓		
Table 5 (KP-I) A.1.2											✓	✓		No numerical data are reported in this table for the years 2008–2009. For these years the notation key NO is used.
Table 5 (KP-I) A.1.3											✓	✓		No numerical data are reported in this table for the years 2008–2009. For these years the notation key NA is used.
Table 5 (KP-I) A.2											✓	✓		
Table 5 (KP-I) A.2.1											✓	✓		No numerical data are reported in this table for the years 2008–2009. For these years the notation key NA is used.
Table 5 (KP-I) B.1											✓	✓		
Table 5 (KP-I) B.2											✓	✓		
Table 5 (KP-I) B.3											✓	✓		
Table 5 (KP-I) B.4											✓	✓		
Table 5 (KP-II) 1											✓	✓		No numerical data are reported in this table for the years 2008–2009. For these years the notation keys NO, NA are used.
Table 5 (KP-II) 2											✓	✓		No numerical data are reported in this table for the years 2008–2009. For these years the notation key NA is used.
Table 5 (KP-II) 3											✓	✓		
Table 5 (KP-II) 4											✓	✓		No numerical data are reported in this table for the years 2008–2009. For these years the notation keys NO, NA are used.
Table 5 (KP-II) 5											✓	✓		
Accounting table											✓	✓		

KP-LULUCF

SBDT

PART II															
Provision of common reporting format tables for years reported (continued)															
		Years													
		Base year <sup>a</sup>	1990	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	Information gaps relating to reporting <sup>b</sup>	Comments
Waste	Sectoral report: Table 6		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT	Table 6.A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 6.B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 6.C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table. The notation key IE is used.
Summary and other tables	SBDT	Summary 1.A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Summary 1.B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	Summary 2 (CO <sub>2</sub> equivalent emissions)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	Summary 3 (Methods/emission factors)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	Table 7 (Key categories)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	Table 8(a) (Recalculation – recalculated data)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	Table 8(b) (Recalculation – explanatory information)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	Table 9(a) (Completeness)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 9(b) (Completeness)														
	Table 10 (Trends)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

<sup>a</sup> Parties included in Annex I to the Convention undergoing the process of transition to a market economy are allowed to use a base year or a period of years other than 1990, in accordance with the provisions of Article 4, paragraph 6, of the Convention and decisions 9/CP2 and 11/CP4.

<sup>b</sup> This column indicates that reporting gaps (blank cells) have been identified in a given table of the CRF. This was owing to limited use, or lack, of notation keys (NO, NE, NA, IE, C).

PART III						
Provision of information relating to recalculations						
Table 8(a) (Recalculated data)	✓	Comments				
Recalculation reported for years	1990–2008					
Recalculated sectors/gases	Energy	Industrial processes	Solvent and other product use	Agriculture	LULUCF	Waste
CO <sub>2</sub>	✓		✓		✓	
CH <sub>4</sub>	✓			✓		✓
N <sub>2</sub> O	✓			✓		✓
HFCs		✓				
PFCs		✓				
SF <sub>6</sub>		✓				
Table 8(b) (Explanatory information)	✓	✓	✓	✓	✓	✓
Percentage difference in aggregate greenhouse gas emission	Base year estimate: <sup>a</sup>		with LULUCF:	-2.16 %	without LULUCF:	-2.22 %
	Latest recalculated year: <sup>b</sup>		with LULUCF:	-1.92 %	without LULUCF:	-1.87 %

<sup>a</sup> Parties included in Annex I to the Convention undergoing the process of transition to a market economy are allowed to use a base year or a period of years other than 1990, in accordance with the provisions of Article 4, paragraph 6, of the Convention and decisions 9/CP.2 and 11/CP.4.

<sup>b</sup> The latest recalculated year is the submission year minus 3.

PART IV				
Provision of information relating to KP-LULUCF activities under Article 3, paragraphs 3 and 4				
		<i>Provided</i>	<i>Observation</i>	
Reporting requirements under decision 15/CMP.1, annex, paragraphs 5–9	Emissions by sources and removals by sinks are clearly distinguished from emissions from categories included in Annex A to the Kyoto Protocol		✓	
	Information on how inventory methodologies have been applied taking into account IPCC good practice guidance for LULUCF <sup>a</sup> and decision 16/CMP.1		✓	
	Information on geographical location of the boundaries of areas that encompass:			
		Units of land subject to activities under Article 3.3	✓	
		Units of land subject to activities under Article 3.3, which would otherwise be included in land subject to elected activities under Article 3.4		Luxembourg did not elect any activity under Article 3, paragraph 4.
		Land subject to elected activities under Article 3.4		
	Information on the spatial assessment unit for determining the area of accounting for afforestation, reforestation and deforestation		✓	
	Information on GHG emissions/removals resulting from activities under Article 3.3 and 3.4, for all geographical locations reported in the current and previous years since the beginning of the commitment period or the onset of the activity, whichever comes later		✓	
	Information on carbon pools (above-ground/below-ground biomass, litter, dead wood and soil organic carbon) that are not accounted for		✓	
	Information on anthropogenic GHGs from LULUCF activities under Article 3.3 and 3.4 factoring out removals from:			
		Elevated CO <sub>2</sub> concentrations above pre-industrial levels	✓	
		Indirect nitrogen deposition	✓	
	The dynamic effects of age structure resulting from activities prior to 1 January 1990	✓		

<sup>a</sup> The Intergovernmental Panel on Climate Change Good Practice Guidance for Land Use, Land-Use Change and Forestry.

<b>PART IV</b>				
<b>Provision of information relating to KP-LULUCF activities under Article 3, paragraphs 3 and 4 (continued)</b>				
		<i>Provided</i>	<i>Observation</i>	
<i>Reporting requirements under decision 15/CMP.1, annex, paragraphs 5-9</i>	Specific information to be reported for Article 3.3 activities:			
		Activities under Article 3.3 that began on or after 1 January 1990 and before 31 December of the last year of the commitment period, and are directly human induced	✓	
		How harvesting or forest disturbance that is followed by the re-establishment of forest is distinguished from deforestation	✓	
		Emissions/removals from lands harvested during the first commitment period following afforestation and reforestation on these units of land since 1990	✓	
	Specific information to be reported for Article 3.4 activities:			
		Activities under Article 3.4 that occurred since 1 January 1990 and are human induced		Luxembourg did not elect any activity under Article 3, paragraph 4.
		Cropland management, grazing land management, revegetation: emissions/removals reported for each year of the commitment period and for the base year for each of the elected activities on the geographical locations reported		
		Emissions/removals from Article 3.4 activities that are not accounted for under activities under Article 3.3		
		Forest management: information on the extent to which GHG removals by sinks offsets the debit incurred under Article 3.3		