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COMPLIANCE COMMITTEE

CC/ERT/ASR/2009/7  
30 June 2009

## **Annual status report of the annual inventory of Sweden**

### **Note by the secretariat**

The annual status report of the annual inventory of Sweden was published on 6 June 2009. For purposes of rule 10, paragraph 2, of the Rules of procedure of the Compliance Committee (annex to decision 4/CMP.2, as amended by decision 4/CMP.4), the report is considered received by the secretariat on the same date. This report, FCCC/ASR/2009/SWE, contained in the annex to this note, is being forwarded to the Compliance Committee in accordance with section VI, paragraph 3, of the annex to decision 27/CMP.1 and paragraph 49 of the annex to decision 22/CMP.1.





## Annual status report of the annual inventory of Sweden

1. This status report was prepared by the secretariat 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 2009 as originally submitted by the Party.
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  
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											
General information		Date of receipt			Date of resubmission			Comments			
	NIR	07 April 2009									
	CRF tables <sup>a</sup>	07 April 2009									
	Additional information <sup>b</sup>	07 April 2009									
	CRF provided for years	1990–2007									
	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 as outlined in the revised UNFCCC reporting guidelines <sup>e</sup> (decision 18/CP.8).									
	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% has been identified.									

SUBMISSION OF SUPPLEMENTARY INFORMATION UNDER ARTICLE 7.1										
Voluntary reporting of supplementary information <sup>g</sup>		Date of receipt			Date of resubmission			Comments		
	KP-LULUCF information <sup>h</sup>									
	KP-LULUCF CRF <sup>i</sup>							CRF provided for years: _____		
	Information on Kyoto units (ERUs, CERs, RMUs and AAUs) <sup>j</sup>	14 April 2009								
	SEF <sup>k</sup> with Kyoto units	07 April 2009								
	Change in national system <sup>l</sup>	07 April 2009						The information is included in annex 6:1 to its NIR.		
	Change in national registry <sup>l</sup>	07 April 2009						The information is included in annex 6:3 to its NIR.		
	Minimization of adverse impacts <sup>l</sup>									

<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)).

<sup>g</sup> Parties are required to submit supplementary information under Article 7, paragraph 1, of the Kyoto Protocol from the 2010 submission; however, they may elect to submit this information on a voluntary basis before this submission.

<sup>h</sup> Parties are required to include in their annual inventories 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 decision 15/CMP.1, annex, paragraphs 5–9.

<sup>i</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 are required to report these tables on a mandatory basis commencing with the 2010 submission; however, they may elect to report these tables on a voluntary basis before this submission. Parties may also elect to report these tables for the base year or 1990.

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

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

<sup>l</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 F, G and 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: 2007																	
Tables		Energy		Industrial processes		Solvent and other product use		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																	
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	1990–2007		1990–2007		1990–2007		1990–2007		1990–2007		1990–2007					
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 consumption of halocarbons and SF <sub>6</sub>				Actual	Potential	Actual	Potential	Actual	Potential	Actual	Potential					
				✓	✓	✓	✓	✓	✓	✓	✓						
Notation keys	Used in	Summary table 1.A			✓	Sectoral report tables			✓	Sectoral background data tables			✓				
	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 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	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005			2006	2007	
Energy	Sectoral report: Table 1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	SBDT	Table 1.A(a)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Table 1.A(b)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Table 1.A(c)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		Table 1.A(d)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		Table 1.B.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		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		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		Table 2(II).E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	No numerical data are reported in this table, but for years 1990-2004 notation key NO is used and for years 2005-2007 notation keys NO, NA are used.
		Table 2(II).F		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Solvent use	Sectoral report: Table 3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT	Table 3.A-D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

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	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005			2006	2007
Agriculture	Sectoral report: Table 4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 4.A		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 4.B(a)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 4.B(b)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 4.C		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table, but for years 1990–2003 notation keys NO, NE are used and for years 2004–2007 notation key NO is used.
	Table 4.D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 4.E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table, but for years 1990–2003 notation keys NE, NO are used and for years 2004–2007 notation key NO is used.
Table 4.F		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table, but notation keys NO, NE are used.	
LULUCF	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)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (II)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table, but notation key NE is used.
	Table 5 (III)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (IV)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (V)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		





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	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007			
Waste	Sectoral report: Table 6		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Table 6.A		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Table 6.B		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Table 6.C		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Summary and other tables	SBDT Summary 1.A		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Summary 1.B		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Summary 2 (CO <sub>2</sub> equivalent emissions)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Summary 3 (Methods/emission factors)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Table 7 (Key categories)																						
	SBDT Table 8(a) (Recalculation – recalculated data)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Table 8(b) (Recalculation – explanatory information)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Table 9(a) (Completeness)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT Table 9(b) (Completeness)																						
	SBDT 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/CP.2 and 11/CP.4.

<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).

<sup>c</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 are required to report these tables on a mandatory basis commencing with the 2010 submission; however, they may elect to report these tables on a voluntary basis before this submission. Parties may also elect to report these tables for the base year or 1990.

PART III Provision of information relating to recalculations						
Table 8(a) (Recalculated data)	✓	Comments				
Recalculation reported for years	1990–2006					
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: 202.77 %		without LULUCF: -0.15 %
		latest recalculated year: <sup>b</sup>		with LULUCF: 48.81 %		without LULUCF: 1.71 %

<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			Provided	Comments
Provision of information relating to KP-LULUCF activities under Article 3, paragraphs 3 and 4 <sup>a</sup>				
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>b</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		
		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		
	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		
	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			
	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			

<sup>a</sup> Parties are required to report anthropogenic greenhouse gas 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 are required to report these tables on a mandatory basis commencing with the 2010 submission; however, they may elect to report these tables on a voluntary basis before this submission. Parties may also elect to report these tables for the base year or 1990.

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