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COMPLIANCE COMMITTEE

CC/ERT/ASR/2014/30  
24 June 2014

## **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 18 June 2014. 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 decisions 4/CMP.4 and 8/CMP.9), the report is considered received by the secretariat on the same date. This report, FCCC/ASR/2014/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.





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## Annual status report of the annual inventory of Sweden

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 2014 as originally submitted by the Party, and of the resubmission received by 27 May 2014.

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

AAU: assigned amount unit  
CER: certified emission reduction  
CRF: common reporting format  
ERU: emission reduction unit  
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  
RMU: removal unit  
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

### *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	11 April 2014		23 May 2014							
	CRF tables <sup>a</sup>	11 April 2014									
	Additional information <sup>b</sup>	11 April 2014				File names: MajaCederlund, SIAR Reports 2013-SE v 1 0.					
	CRF provided for years	1990–2012									
	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, in general, 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 an 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 on 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>	11 April 2014	23 May 2014	NIR, page 449, chapter 11.
	KP-LULUCF CRF <sup>b</sup>	11 April 2014		CRF provided for years: 2008–2012
	Information on Kyoto units (ERUs, CERs, RMUs and AAUs) <sup>c</sup>	11 April 2014	23 May 2014	NIR, page 470, chapter 12.
	SEF <sup>d</sup> with Kyoto Protocol units	11 April 2014		
	Change in national system <sup>e</sup>	11 April 2014	23 May 2014	NIR, page 476, chapter 13.
	Change in national registry <sup>e</sup>	11 April 2014	23 May 2014	NIR, page 476, chapter 14.
	Minimization of adverse impacts <sup>e</sup>	11 April 2014	23 May 2014	NIR, page 481, 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: 2012																
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: 2012 (continued)								
<i>Totals</i>	<i>Provided for gases</i>	<i>CO<sub>2</sub></i> ✓	<i>CH<sub>4</sub></i> ✓	<i>N<sub>2</sub>O</i> ✓	<i>HFCs</i> ✓	<i>PFCs</i> ✓	<i>SF<sub>6</sub></i> ✓	
	<i>Provided for years</i>	1990–2012	1990–2012	1990–2012	1990–2012	1990–2012	1990–2012	
<i>CO<sub>2</sub></i>	<i>Comparison of CO<sub>2</sub> from fuel combustion</i>	<i>Reference approach</i>	<i>Sectoral approach</i>	<i>Difference more than 2 per cent</i>		<i>If difference is more than 2 per cent</i>		
		✓	✓			<i>Explanation provided</i>		
<i>HFCs, PFCs, SF<sub>6</sub></i>	<i>Disaggregation by species</i>			<i>HFCs</i>		<i>PFCs</i>		<i>SF<sub>6</sub></i>
				✓		✓		
	<i>Reporting of actual and/or potential emission estimates in the category consumption of halocarbons and SF<sub>6</sub></i>			<i>Actual</i>	<i>Potential</i>	<i>Actual</i>	<i>Potential</i>	<i>Actual</i>
✓				✓	✓	✓	✓	✓
<i>Notation keys</i>	<i>Used in</i>	<i>Summary table 1.A</i>	✓	<i>Sectoral report tables</i>		✓	<i>Sectoral background data tables</i>	✓
	<i>Comments</i>							

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	2005	2006	2007	2008	2009	2010	2011			2012	
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		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		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 for the years 1990–2012. For the years 1990–2007 the notation key NO is used. For the years 2008–2012 the notation keys NO and NA are used.	
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	2005	2006	2007	2008	2009	2010	2011	2012			
SOPU	Sectoral report: Table 3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	SBDT 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 for the years 1990–2012. For these years the notation key NO is used.
	Table 4.D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 4.E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 1990–2012. For these years the notation key NO is used.
Table 4.F		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 1990–2012. For these years the notation keys NO and NE are used.	

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	2005	2006	2007	2008	2009	2010	2011	2012				
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)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (II)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 1990–2012. For these years the notation keys NA and NE are used.
	Table 5 (III)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (IV)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 5 (V)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

**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	2005	2006	2007	2008	2009	2010	2011			2012
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 2008–2012. 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 2008–2012. 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 2008–2012. For these years the notation key NO is used.
Table 5 (KP-I) B.1								✓	✓	✓	✓	✓		
Table 5 (KP-I) B.2								✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 2008–2012. For these years the notation key NA is used.
Table 5 (KP-I) B.3								✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 2008–2012. For these years the notation key NA is used.
Table 5 (KP-I) B.4								✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 2008–2012. For these years the notation key NA is used.
Table 5 (KP-II) 1								✓	✓	✓	✓	✓		
Table 5 (KP-II) 2								✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 2008–2012. For these years the notation key NE is used.
Table 5 (KP-II) 3								✓	✓	✓	✓	✓		
Table 5 (KP-II) 4								✓	✓	✓	✓	✓		No numerical data are reported in this table for the years 2008–2012. For these years the notation keys NO and NA are used.

KP-LULUCF

SBDT

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	2005	2006	2007	2008	2009	2010	2011			2012
Table 5 (KP-II) 5								✓	✓	✓	✓	✓		
Accounting table								✓	✓	✓	✓	✓		

PART II															
Provision of common reporting format tables for years reported (continued)															
		Years													
		Base year <sup>a</sup>	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	Information gaps relating to reporting <sup>b</sup>	Comments
Waste	Sectoral report: Table 6		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 6.A		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 6.B		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	Table 6.C		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Summary and other tables	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/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).

PART III						
Provision of information relating to recalculations						
Table 8(a) (Recalculated data)	✓	Comments				
Recalculation reported for years	1990–2011					
Recalculated sectors/gases	Energy	Industrial processes	SOPU	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:	-4.37%	Without LULUCF:	-0.05%
	Latest recalculated year: <sup>b</sup>		With LULUCF:	-4%	Without LULUCF:	-1.13%

<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	✓	
		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	✓	
		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		Sweden elected only forest management under Article 3, paragraph 4.
		Emissions/removals from Article 3.4 activities that are not accounted for under activities under Article 3.3		Information required in paragraph 9(c) of the annex to 15/CMP.1 is not included in the submission.
		Forest management: information on the extent to which GHG removals by sinks offsets the debit incurred under Article 3.3	✓	