

# **Germany's report**

## **to facilitate the calculation of the assigned amount**

**“pursuant to Article 3, paragraphs 7bis, 8 and 8bis of the  
Kyoto Protocol for the second commitment  
periodAccording to Decision 2/CMP.8”**

**Dessau-Rosslau 20.05.2016**

## **Imprint**

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This report was drawn up as part of the work of the Single National Entity with overall responsibility for emissions reporting at the Federal Environment Agency.

### ***Impressum***

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Angaben aus diesem Bericht können unter Benennung der Quelle weiter verwendet werden.

## **Disclaimer**

The deadline for submitting the report to facilitate the calculation of the assigned amount for the second commitment period under the Kyoto Protocol was originally 15 April 2015 in accordance with decision 2/CMP.8 of the Conference of the Parties serving as the meeting of the Parties to under the Kyoto Protocol. However, a functioning CRF reporter software was not available for the GHG inventory submissions and the calculation of the assigned amount in 2015. According to Decision 4/CMP.11 of the Conference of the Parties serving as the meeting of the Parties to under the Kyoto Protocol, the CRF Reporter version 5.0.0 was not functioning in order to enable Annex I Parties to prepare their inventory submissions. In the same Decision, the Conference of the Parties serving as the meeting of the Parties noted that a delay in the submission of the common reporting format tables by a Party also delays the submission of the report to facilitate the calculation of its assigned amount referred to in decision 2/CMP.8, paragraph 2.

"Functioning" software means that the data on the greenhouse emissions/removals are reported accurately both in terms of reporting format tables and XML format. The CRF reporter version 5.12.0, released on 27th November 2015, as well as its subsequent hotfixes, still contained issues in the reporting format tables and XML formats, in particular in relation to Kyoto Protocol requirements, and could therefore not be considered yet as functioning to allow submission of all the information required under Kyoto Protocol.

For this report the CRF reporter version 5.14.2, has been used.

Recalling the invitation of the Conference of Parties for Parties to submit as soon as practically possible, but no later than the corresponding delay in the CRF reporter availability the present report is the official submission of Germany for the year 2016 under the Kyoto Protocol.

# Introduction

The present document constitutes the official report to the United Nations Framework Convention on Climate Change by Germany to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol (hereafter Initial Report). It provides all the necessary information to facilitate the calculation of the assigned amount for Germany in accordance with decision 2/CMP.8<sup>1</sup> and pursuant to Article 3, paragraphs 7bis, 8 and 8bis of the Kyoto Protocol.

At the same time the report verifies the German contribution to the quantified emissions limitations and reductions (QELRC) of the European Union, its Member States and Iceland for the second commitment period of the Kyoto Protocol.

In particular the report contains the following information:

1. Complete inventories of anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHGs) – paragraph 1(a) in Annex I to Decision 2/CMP.8;
2. The identification of its selected base year for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride – paragraph 1(b) in Annex I to Decision 2/CMP.8;
3. The agreement under Article 4 of the Kyoto Protocol for the second commitment period, where the Party has reached such an agreement to fulfil its commitments under Article 3 of the Kyoto Protocol jointly with other Parties – paragraph 1(c) in Annex I to Decision 2/CMP.8;
4. The calculation of its assigned amount pursuant to Article 3, paragraphs 7bis, 8 and 8bis – paragraph 1(d) in Annex I to Decision 2/CMP.8;
5. The calculation of its commitment period reserve – paragraph 1(e) in Annex I to Decision 2/CMP.8;
6. The identification of its selection of single minimum values for tree crown cover, land area and tree height for use in accounting for its activities under Article 3, paragraphs 3 and 4, Forest definition – paragraph 1(f) in Annex I to Decision 2/CMP.8;
7. The identification of its election of activities under Article 3, paragraph 4, of the Kyoto Protocol for inclusion in its accounting for the second commitment period, in addition to those activities under Article 3, paragraph 4, of the Kyoto Protocol that were elected in the first commitment period – paragraph 1(g) in Annex I to Decision 2/CMP.8
8. The identification of whether, for each activity under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, it intends to account annually or for the entire commitment period – paragraph 1(h) in Annex I to Decision 2/CMP.8
9. The forest management reference level as inscribed in the appendix to the annex to decision 2/CMP.7 – paragraph 1(i) in Annex I to Decision 2/CMP.8
10. Information on how emissions from harvested wood products originating from forests prior to the start of the second commitment period have been calculated in the reference level – paragraph 1(j) in Annex I to Decision 2/CMP.8
11. An indication of whether it intends to apply the provisions to exclude emissions from natural disturbances for the accounting for afforestation and reforestation – paragraph 1(k) in Annex I to Decision 2/CMP.8
12. A description of its national system in accordance with Article 5, paragraph 1 – paragraph 1(l) in Annex I to Decision 2/CMP.8
13. A description of its national registry – paragraph 1(m) in Annex I to Decision 2/CMP.8

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<sup>1</sup> <http://unfccc.int/resource/docs/2012/cmp8/eng/13a01.pdf>

## 1 COMPLETE INVENTORIES OF ANTHROPOGENIC EMISSIONS BY SOURCES AND REMOVALS BY SINKS OF GREENHOUSE GASES (GHGs) – PARAGRAPH 1(A) IN ANNEX I TO DECISION 2/CMP.8

Complete inventories of anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHGs) not controlled by the Montreal Protocol, recalculated in accordance with Decision 4/CMP.7 for all years from 1990 to 2014; prepared in accordance with Article 5, paragraph 2, of the Kyoto Protocol and relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) and the Conference of the Parties (COP), will be provided in Germany's final annual GHG inventory submission for 2016 in conjunction with this report.

Further detailed information on emissions data in the Common Reporting Format (CRF) and the required information on the methods etc. are provided in the National Inventory Report (NIR) for Germany submitted by June, 15<sup>th</sup> 2016.

An overview on annual emissions as well as on the emission trends is provided in table 1.

## 2 THE IDENTIFICATION OF ITS SELECTED BASE YEAR FOR HYDROFLUOROCARBONS, PERFLUOROCARBONS AND SULPHUR HEXAFLUORIDE – PARAGRAPH 1(B) IN ANNEX I TO DECISION 2/CMP.8

In line with the specifications and options set out in the Kyoto Protocol and its follow up procedures and requirements, Germany identified 1990 as its base year for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions and 1995 as its base year for HFC, PFC, SF<sub>6</sub> and NF<sub>3</sub> emissions for the fulfilment of the reduction commitment.

The accounting of indirect emissions has not changed compared to the first commitment period. Insofar the indirect emissions from solvent use are included under IPPU.

Article 3, paragraph 7bis of the Kyoto Protocol is not applicable for Germany. The total base year emission is provided in table 2 and accounts to 1.249.872.163 tonnes CO<sub>2</sub> equivalents.

Table 2 Germany's base year information in relation to the second commitment period under the Kyoto Protocol

Tonnes CO <sub>2</sub> equivalents	Germany	
	Total (without LULUCF)	Total (without LULUCF, with indirect)
Indirect CO <sub>2</sub> (1990)	0	0
CO <sub>2</sub> (1990)	1.050.959.012	1.050.959.012
CH <sub>4</sub> (1990)	117.567.045	117.567.045
N <sub>2</sub> O (1990)	64.408.625	64.408.625
HFCs (1995)	8.379.320	8.379.320
PFCs (1995)	2.085.721	2.085.721
SF <sub>6</sub> (1995)	6.467.150	6.467.150
NF <sub>3</sub> (1995)	5.290	5.290
Base year, without Article 3(7bis)	1.249.872.163	1.249.872.163
Deforestation cf. Article 3, paragraph 7bis	NA	NA
<b>Base year, with Article 3(7bis)</b>	<b>1.249.872.163</b>	<b>1.249.872.163</b>

**TABLE 1 EMISSION TRENDS  
SUMMARY**

Inventory 2014  
Submission 2016 v15  
GERMANY

GREENHOUSE GAS EMISSIONS	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	(kt CO <sub>2</sub> eq)												
CO <sub>2</sub> emissions without net CO <sub>2</sub> from LULUCF	1050959,01	938047,13	899204,27	865912,02	877377,86	850749,69	853193,88	788377,20	832219,61	812439,51	816989,93	835745,60	792858,58
CO <sub>2</sub> emissions with net CO <sub>2</sub> from LULUCF	1017973,58	903301,89	859579,40	852187,36	863332,16	837240,83	832810,77	768705,87	814219,54	795084,61	800811,91	819721,03	776169,80
CH <sub>4</sub> emissions without CH <sub>4</sub> from LULUCF	117567,05	103060,97	86188,10	67162,22	63257,19	61054,49	60127,71	57937,20	57122,97	56049,95	56745,12	56112,03	54752,44
CH <sub>4</sub> emissions with CH <sub>4</sub> from LULUCF	118442,68	103932,32	87059,35	68027,94	64124,47	61920,60	60995,31	58806,16	57990,90	56916,42	57612,07	56978,03	55617,42
N <sub>2</sub> O emissions without N <sub>2</sub> O from LULUCF	64408,62	60476,99	42583,92	42986,78	42692,19	44613,58	45087,87	44291,49	36294,67	37629,29	36804,34	37363,84	38038,14
N <sub>2</sub> O emissions with N <sub>2</sub> O from LULUCF	65239,05	61291,36	43385,24	43735,35	43452,03	45383,11	45869,08	45087,05	37103,19	38450,66	37639,93	38204,87	38884,97
HFCs	50,32	2606,07	5972,05	8752,63	9135,86	9422,42	9368,03	9613,58	9914,69	10353,26	10547,63	10569,43	10750,37
PFCs	3060,23	2085,72	956,32	836,77	668,47	587,34	566,00	405,90	345,37	278,51	242,20	258,24	234,23
Unspecified mix of HFCs and PFCs	5705,72	5773,25	2077,74	911,02	750,70	565,91	802,16	1110,09	366,27	176,68	182,08	193,40	151,95
SF <sub>6</sub>	4343,64	6467,15	4072,50	3319,87	3241,50	3180,59	2971,21	2923,98	3047,04	3163,07	3154,89	3261,20	3396,17
NF <sub>3</sub>	6,88	5,29	8,92	34,49	27,84	12,02	29,60	29,08	61,43	61,21	35,21	16,03	20,28
<b>Total (without LULUCF)</b>	1246101,47	1118522,58	1041063,82	989915,79	997151,62	970186,03	972146,46	904688,52	939372,06	920151,48	924701,40	943519,78	900202,15
<b>Total (with LULUCF)</b>	1214822,11	1085463,05	1003111,53	977805,41	984733,02	958312,82	953412,16	886681,71	923048,43	904484,43	910225,93	929202,23	885225,19
<b>Total (without LULUCF, with indirect)</b>	1246101,47	1118522,58	1041063,82	989915,79	997151,62	970186,03	972146,46	904688,52	939372,06	920151,48	924701,40	943519,78	900202,15
<b>Total (with LULUCF, with indirect)</b>	1214822,11	1085463,05	1003111,53	977805,41	984733,02	958312,82	953412,16	886681,71	923048,43	904484,43	910225,93	929202,23	885225,19

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	(kt CO <sub>2</sub> eq)												
1. Energy	1035683,81	917311,00	869840,27	831684,76	841250,56	815072,33	819657,98	761730,91	801420,48	781217,04	787897,17	806408,27	762338,40
2. Industrial processes and product use	96381,81	97479,60	77114,80	75281,22	75494,47	76527,16	72747,71	65075,52	61949,89	62058,58	61079,52	60996,40	60975,32
3. Agriculture	77698,29	67367,75	66967,16	62919,51	62023,61	61445,57	63775,92	63104,90	62308,75	63936,21	63498,30	64649,92	66069,81
4. Land use, land-use change and forestry <sup>(5)</sup>	-31279,36	-33059,53	-37952,30	-12110,38	-12418,59	-11873,21	-18734,30	-18006,80	-16323,63	-15667,06	-14475,48	-14317,54	-14976,97
5. Waste	36311,02	36347,45	27122,97	20010,96	18363,24	17123,53	15947,53	14765,10	13677,25	12924,43	12213,49	11452,00	10804,60
6. Other	26,54	16,78	18,62	19,34	19,74	17,44	17,31	12,08	15,69	15,23	12,92	13,19	14,02
<b>Total (including LULUCF)<sup>(5)</sup></b>	1214822,11	1085463,05	1003111,53	977805,41	984733,02	958312,82	953412,16	886681,71	923048,43	904484,43	910225,93	929202,23	885225,19

The full overview is included in the CRF tables submitted by June 15<sup>th</sup> 2016.

### 3 THE AGREEMENT UNDER ARTICLE 4 OF THE KYOTO PROTOCOL FOR THE SECOND COMMITMENT PERIOD, WHERE THE PARTY HAS REACHED SUCH AN AGREEMENT TO FULFIL ITS COMMITMENTS UNDER ARTICLE 3 OF THE KYOTO PROTOCOL JOINTLY WITH OTHER PARTIES – PARAGRAPH 1(C) IN ANNEX I TO DECISION 2/CMP.8

The agreement under Article 4 of the Kyoto Protocol for the second commitment period, reached within the EU and its 28 Member States and with Iceland to fulfil the individual commitments under Article 3 of the Kyoto Protocol jointly, is included in Annex 1 to this report.

### 4 THE CALCULATION OF ITS ASSIGNED AMOUNT PURSUANT TO ARTICLE 3, PARAGRAPHS 7BIS, 8 AND 8BIS – PARAGRAPH 1(D) IN ANNEX I TO DECISION 2/CMP.8

The calculation of the total assigned amount for the EU, its 28 Member States and Iceland is included in the European Union's report to facilitate the calculation of the assigned amount.

Germany's contribution to EU28+ISL is calculated from the greenhouse gas inventory base year estimates referred to in section 1 above and the base year information included in section 2 above.

The sum of the respective annual emission levels 2013-2020 allocated to Germany under the ESD is equal to Germany's share of the total assigned amount for EU28+ISL. The number of assigned amount units to be issued by Germany is therefore 3.592.699.888 tonnes CO<sub>2</sub> equivalents corresponding to 449.087.486 tonnes CO<sub>2</sub> equivalents in average per year in 2013-2020.

The remaining part of Germany's contribution to the total assigned amount for EU28+ISL will be issued as assigned amount units by the European Union and is described in detail in the report to facilitate the calculation of the assigned amount for the European Union.

Table 3 Germany's total assigned amount 2013-2020 in relation to the second commitment period under the Kyoto Protocol

	Germany under the EU <sup>2</sup> Tonnes CO <sub>2</sub> equivalents
<b>Base year*</b>	1.249.872.163
Total Assigned Amount 2013-2020	3.592.699.888
Application of Article 3, paragraph 7bis	NA
<b>Total Assigned Amount 2013-2020</b>	3.592.699.888
Average Annual Assigned Amount in tonnes	449.087.486
Average Annual Assigned Amount in % of base year	35,9

\* without LULUCF

<sup>2</sup> The calculation is provided for total anthropogenic GHG emissions without LULUCF and without indirect emissions only. As described above further new indirect emissions (compared to CP I) are not included in the German inventories

## 5 THE CALCULATION OF ITS COMMITMENT PERIOD RESERVE – PARAGRAPH 1(E) IN ANNEX I TO DECISION 2/CMP.8

Based on the calculation of the assigned amounts for Germany as described in section 4 above, Germany's commitment period reserve for the commitment period 2013-2020 is related to the 90 per cent value of assigned amounts and can be calculated as 3.233.429.899 tonnes CO<sub>2</sub> equivalents in accordance with Decision 11/CMP.1 and as shown in table 4.

**Table 4** *Calculation of Germany's commitment period reserve*

	national total	under Article 4 (ESD-share)
	Tonnes CO <sub>2</sub> equivalents	
<b>Total Assigned Amount 2013-2020</b>		3.592.699.888
approach a) = 90% of AA		3.233.429.899
approach b) = most recent reviewed inventory (2014) <sup>3</sup>	900.202.154	438.930.777
<i>Times 8 (100%)</i>	7.201.617.232	3.511.446.216
<b>CPR (lowest of a or b )</b>		<b>3.233.429.899</b>

## 6 DIFFERENCE BETWEEN THE ASSIGNED AMOUNT FOR THE SECOND COMMITMENT PERIOD AND THE AVERAGE EMISSIONS FOR THE FIRST THREE YEARS OF THE PRECEDING COMMITMENT PERIOD

According to Article 3(7ter) of the Kyoto Protocol, any positive difference between the assigned amount of the second commitment period and the average annual emissions for the first three years of the preceding commitment period multiplied by eight shall be transferred to the cancellation account.

In line with the terms of the joint fulfilment of the European Union, its Member States and Iceland under Article 3 of the Kyoto Protocol, Article 3(7ter) is applied to the joint assigned amount of the second commitment period and not to the individual assigned amounts of Member States.

## 7 APPLICATION AND CALCULATION PURSUANT TO PARAGRAPH 13 IN THE ANNEX OF DECISION 2/CMP.7

According to paragraph 13 in the annex of decision 2/CMP.7 for the second commitment period, additions to the assigned amount of a Party resulting from forest management under Article 3(4), and from forest management project activities undertaken under Article 6, shall not exceed 3.5

<sup>3</sup> The last review of a German inventory took place in 2014. The reviewed inventory for 2012 was based on the calculation requirements of the first commitment period. The first complete inventory under KP II conditions is the actual one what will be under review in conjunction with the review of this report.



per cent of the base year greenhouse gas emissions excluding land use, land-use change and forestry pursuant to Article 3(7) and (8), or any amendments thereto, times the duration of the commitment period in years. As the base year greenhouse gas emissions excluding land use, land-use change and forestry for Germany are 1.249.872.163 tonnes CO<sub>2</sub> equivalents<sup>4</sup>, the maximum accountable quantities resulting from forest management that can be added to the assigned amounts are 349.964.205 tonnes CO<sub>2</sub> eq.

**8 THE IDENTIFICATION OF ITS SELECTION OF SINGLE MINIMUM VALUES FOR TREE CROWN COVER, LAND AREA AND TREE HEIGHT FOR USE IN ACCOUNTING FOR ITS ACTIVITIES UNDER ARTICLE 3, PARAGRAPHS 3 AND 4, FOREST DEFINITION – PARAGRAPH 1(F) IN ANNEX I TO DECISION 2/CMP.8**

In accordance with the requirements of decision 2/CMP8 the definition will remain the same as applied under the first commitment period.

“The following forest definition has been adopted in conformity with the FAO forest definition:”

- Stocking level/tree crown cover: at least 10 %
- Minimum area: 0.1 ha
- Potential minimum height of trees: 5 metres

**9 THE IDENTIFICATION OF ITS ELECTION OF ACTIVITIES UNDER ARTICLE 3, PARAGRAPH 4, OF THE KYOTO PROTOCOL FOR INCLUSION IN ITS ACCOUNTING FOR THE SECOND COMMITMENT PERIOD, IN ADDITION TO THOSE ACTIVITIES UNDER ARTICLE 3, PARAGRAPH 4, OF THE KYOTO PROTOCOL THAT WERE ELECTED IN THE FIRST COMMITMENT PERIOD – PARAGRAPH 1(G) IN ANNEX I TO DECISION 2/CMP.8**

In accordance with the requirements of decision 2/CMP8 the for the first commitment period chosen activity “forest management” will remain under the elective activities of Article 3 (4) of the Kyoto Protocol. In addition Germany has decided to elect the activities “cropland management” and “grazing land management” for the second commitment period of the Kyoto-Protocol.

**10 THE IDENTIFICATION OF WHETHER, FOR EACH ACTIVITY UNDER ARTICLE 3, PARAGRAPHS 3 AND 4, OF THE KYOTO PROTOCOL, IT INTENDS TO ACCOUNT ANNUALLY OR FOR THE ENTIRE COMMITMENT PERIOD – PARAGRAPH 1(H) IN ANNEX I TO DECISION 2/CMP.8**

Germany intends to use entire commitment period accounting for the activities under Articles 3(3) and 3(4) of the Kyoto Protocol.

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<sup>4</sup> Table 2 of this report.

## **11 THE FOREST MANAGEMENT REFERENCE LEVEL AS INSCRIBED IN THE APPENDIX TO THE ANNEX TO DECISION 2/CMP.7 – PARAGRAPH 1(I) IN ANNEX I TO DECISION 2/CMP.8**

According to the Decision 2 / CMP.793 anthropogenic greenhouse gas emissions by sources and sinks, resulting from forest management under Article 3.4, shall be counted against the Forest Management Reference Levels (FMRL) for the second commitment period of the Kyoto Protocol. The FMRL contains a value that projected the average annual net emissions of Forest Management in the second commitment period of historical data and policy decisions. For Germany, a FMRL of -22.41 MtCO<sub>2</sub>eq per year was reported (submitted in 2011 documents FMRL and related review report which can be found <http://unfccc.int/bodies/awg-kp/items/5896.php> on the UNFCCC website).

The IPCC KP Supplement require a technical correction of FMRL when methodological changes in the calculation of the time series appear, new historical data are available or pools were not taken into account in FMRL. The previously developed reference level did not include all pools and other emissions that are reported under the current rules of the GHG reporting to KP 3.4. Thus, Germany will submit a technical correction considering new predictive model results in the following submissions.

## **12 INFORMATION ON HOW EMISSIONS FROM HARVESTED WOOD PRODUCTS ORIGINATING FROM FORESTS PRIOR TO THE START OF THE SECOND COMMITMENT PERIOD HAVE BEEN CALCULATED IN THE REFERENCE LEVEL – PARAGRAPH 1(J) IN ANNEX I TO DECISION 2/CMP.8**

The method that had been applied in the FMRL (i.e. flux data method) is presented in detail in Rüter (2011). It is based on Equation 12.1 from IPCC 2006 GL using activity data from UNECE TIMBER database, calculating the carbon inflow back to the year 1900 as suggested. Missing activity data from before the first year for which activity data had been available (i.e. 1964) was assumed to equal the average of the first five years for which activity data are given (i.e. 1964-1968). As the method applied for estimating the HWP contribution to FMRL is not in line with the guidance provided in 2013 IPCC KP Supplement, Chapter 2.8 (e.g. following the method for estimating HWP from domestic origin and excluding HWP from Deforestation), Germany intends to apply a technical correction.

Ref.: Rüter, S. (2011) Projection of Net Emissions from Harvested Wood Products in European Countries : For the period 2013-2020. Thünen-Institute of Wood Research, Report No: 2011/01, 63 p. [http://literatur.vti.bund.de/digbib\\_extern/dn048901.pdf](http://literatur.vti.bund.de/digbib_extern/dn048901.pdf)

**13 AN INDICATION OF WHETHER IT INTENDS TO APPLY THE PROVISIONS TO EXCLUDE EMISSIONS FROM NATURAL DISTURBANCES FOR THE ACCOUNTING FOR AFFORESTATION AND REFORESTATION – PARAGRAPH 1(K) IN ANNEX I TO DECISION 2/CMP.8**

Germany does not intend to use the provision to exclude emissions caused by natural disturbances during the second commitment period of the Kyoto-Protocol.

**14 A DESCRIPTION OF ITS NATIONAL SYSTEM IN ACCORDANCE WITH ARTICLE 5, PARAGRAPH 1 – PARAGRAPH 1(L) IN ANNEX I TO DECISION 2/CMP.8**

A detailed description has been provided in conjunction with the initial report for the Kyoto-Protocol. As part of the annual inventory submission Germany has provided updates to structures and institutional arrangements organized within the national system. The last update report is contained in the annual submission 2016.

Regarding the KP-LULUCF activities, the concept of the Federal Ministry of Food and Agriculture (BMEL) describing the structures, institutional arrangements and quality management for KP-LULUCF and agriculture has been updated (new version from 09.04.2016). It contains additional descriptions of responsibilities and provisions for additional data and text by the Thünen Institute for the annual submissions of the activities under Articles 3.3 and 3.4 of the Kyoto Protocol: Afforestation/Reforestation (AR), Deforestation (D), Forest Management (FM) including the Forest Management Reference Level (FMRL) and Harvested Wood Products (HWP), Cropland Management (CM) and Grazing Land Management (GM). The concept is supported by a detailed document of the Thünen Institute, which has been updated to include the detailed share of responsibilities and work flow for the calculations, text and QA/QC procedures of the various contributing institutes within the Thünen Institute.

**15 A DESCRIPTION OF ITS NATIONAL REGISTRY – PARAGRAPH 1(M) IN ANNEX I TO DECISION 2/CMP.8**

A detailed description has been provided in conjunction with the initial report for the Kyoto-Protocol. As part of the annual inventory submission Germany has provided updates to structures, function, security measures and changes in institutional arrangements organized within the national registry. The last update report is contained in the annual submission 2016.

## **ANNEX 1:           AGREEMENT UNDER ARTICLE 4 KYOTO PROTOCOL**

### **Notification of the terms of the agreement to fulfil jointly the commitments of the European Union, its Member States and Iceland under Article 3 of the Kyoto Protocol for the second commitment period of the Kyoto Protocol**

#### **1.     Members of the agreement**

The European Union, its Member States and the Republic of Iceland, each being Parties to the Kyoto Protocol, are the members of this agreement ("the members"). The following are at present Member States of the European Union:

the Kingdom of Belgium, the Republic of Bulgaria, the Czech Republic, the Kingdom of Denmark, the Federal Republic of Germany, the Republic of Estonia, Ireland, the Hellenic Republic, the Kingdom of Spain, the French Republic, the Republic of Croatia, the Italian Republic, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Grand Duchy of Luxembourg, Hungary, the Republic of Malta, the Kingdom of the Netherlands, the Republic of Austria, the Republic of Poland, the Portuguese Republic, Romania, the Republic of Slovenia, the Slovak Republic, the Republic of Finland, the Kingdom of Sweden, and the United Kingdom of Great Britain and Northern Ireland.

Iceland is a member of this agreement pursuant to the Agreement between the European Union and its Member States and Iceland concerning Iceland's participation in the joint fulfilment of the commitments of the European Union, its Member States and Iceland for the second commitment period of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

#### **2.     Joint fulfilment of the commitments under Article 3 of the Kyoto Protocol for the second commitment period of the Kyoto Protocol**

In accordance with Article 4(1) of the Kyoto Protocol, the members will fulfil their commitments under Article 3 thereof as follows:

- the members will ensure that, in accordance with Article 4(5) and (6) of the Kyoto Protocol, in the Member States and Iceland the combined sum of the aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A to the Kyoto Protocol does not exceed their joint assigned amount;
- the application of Article 3(1) of the Kyoto Protocol to greenhouse gas emissions from aviation and shipping for the Member States and Iceland is based on the Convention's approach of only including emissions from domestic flights and domestic shipping in Parties' targets. The European Union approach under the second commitment of the Kyoto Protocol will remain the same as that of the first commitment period, given the lack of progress since Decision 2/CP.3 in attributing those emissions to Parties' targets. This is without prejudice to the stringency of the European Union's commitments under the climate and energy package, which remain unchanged. It is also without prejudice to the need to take measures concerning emissions of such gases from aviation and marine bunker fuels;
- each member may increase its ambition level by transferring assigned amount units, emission reduction units or certified emission reduction units to a cancellation account established in its national registry. The members will jointly submit the information required by paragraph 9 of Decision 1/CMP.8, and will jointly make any proposals for the purpose of Article 3(1ter) and (1quater) of the Kyoto Protocol;

- the members will continue to apply Article 3(3) and (4) of the Kyoto Protocol and decisions agreed thereunder individually;
- the combined base year emissions of the members will equal the sum of emissions in the respective base years applicable to each Member State and Iceland;
- if land use, land-use change and forestry constituted a net source of greenhouse gas emissions in 1990 for any Member State or Iceland, the relevant member shall, pursuant to Article 3(7bis) of the Kyoto Protocol, include in its emissions base year or period the aggregate anthropogenic carbon dioxide equivalent emissions by sources minus removals by sinks in the base year or period from land use, land-use change and forestry for the purpose of calculating the joint assigned amount of the members determined in accordance with Article 3 (7bis), (8) and (8bis) of the Kyoto Protocol;
- the calculation pursuant to Article 3(7ter) of the Kyoto Protocol shall apply to the joint assigned amount of the second commitment period for the members determined in accordance with Article 3 (7bis), (8) and (8bis) of the Kyoto Protocol and the sum of the average annual emissions of the members for the first three years of the first commitment period multiplied by eight;
- in accordance with Decision 1/CMP.8, units in a member's Previous Period Surplus Reserve account may be used for retirement during the additional period for fulfilling commitments of the second commitment period, up to the extent by which that member's emissions during the second commitment period exceed its respective assigned amount for that commitment period, as defined in this notification.

### 3. Respective emission levels allocated to the members to the agreement

The quantified emission limitation and reduction commitments for the members listed in the third column of Annex B to the Kyoto Protocol are 80 %. The joint assigned amount of the members for the second commitment period will be determined pursuant to Article 3(7 bis), (8) and (8 bis) of the Kyoto Protocol, and its calculation will be facilitated by the report submitted by the European Union pursuant to paragraph 2 of Decision 2/CMP.8.

The respective emission levels of the members are as follows:

- The emission level for the European Union is the difference between the joint assigned amount of the members, and the sum of the emission levels of the Member States and Iceland. Its calculation will be facilitated by the report submitted pursuant to paragraph 2 of Decision 2/CMP.8.
- The respective emission levels of the Member States and Iceland in accordance with Article 4(1) and (5) of the Kyoto Protocol are the sum of their respective amounts listed in Table 1 below and any results of the application of the second sentence of Article 3(7bis) of the Kyoto Protocol for that Member State or Iceland.

The assigned amounts of the members shall be equal to their respective emission levels.

The assigned amount of the European Union will be counted against the emissions of greenhouse gases from sources under the European Union Emissions Trading Scheme, in which its Member States and Iceland participate, to the extent that those emissions are covered under the Kyoto Protocol. The respective assigned amounts of the Member States and Iceland cover the greenhouse gas emissions by sources and removals by sinks in each Member State or Iceland from sources and sinks not covered

by Directive 2009/29/EC of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community. This includes all emissions by sources and removals by sinks covered by Article 3(3) and (4) of the Kyoto Protocol as well as all emissions of nitrogen trifluoride (NF3) under the Kyoto Protocol.

Members of this agreement shall report separately on the emissions by sources and removals by sinks covered by their respective assigned amounts.

**Table 1:**  
**Emission levels of the Member States and Iceland (before application of Article 3(7bis))**  
**in terms of tonnes of carbon dioxide equivalent for the second commitment period**  
**of the Kyoto Protocol**

Belgium	584 228 513
Bulgaria	222 945 983
Czech Republic	520 515 203
Denmark	269 321 526
Germany	3 592 699 888
Estonia	51 056 976
Ireland	343 467 221
Greece	480 791 166
Spain	1 766 877 232
France	3 014 714 832
Croatia	162 271 086
Italy	2 410 291 421
Cyprus	47 450 128
Latvia	76 633 439
Lithuania	113 600 821
Luxembourg	70 736 832
Hungary	434 486 280
Malta	9 299 769
Netherlands	919 963 374
Austria	405 712 317
Poland	1 583 938 824
Portugal	402 210 711
Romania	656 059 490
Slovenia	99 425 782
Slovakia	202 268 939
Finland	240 544 599
Sweden	315 554 578
United Kingdom	2 743 362 625
Iceland	15 327 217

## **ANNEX 2: SUBMISSION OF INFORMATION ON FOREST MANAGEMENT REFERENCE LEVELS BY GERMANY AND THE TECHNICAL ASSESSMENT REPORT**

**This Annex holds the information as requested by Annex I to Decision 2/CMP.8 para 1 (i) footnote 1**

A.1: "Submission of information on forest management reference levels by Germany" of 14 April 2011, which is published at [http://unfccc.int/files/meetings/ad\\_hoc\\_working\\_groups/kp/application/pdf/awgkp\\_germany\\_2011.pdf](http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/awgkp_germany_2011.pdf)

A.2 : The correction to the submission of information on forest management reference levels by Germany", as communicated 2 June 2011, which is published at [http://unfccc.int/files/meetings/ad\\_hoc\\_working\\_groups/kp/application/pdf/awgkp\\_germany\\_correction.pdf](http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/awgkp_germany_correction.pdf)

A.3: The "Report of the technical assessment of the forest management reference level submission of Germany submitted in 2011, FCCC/TAR/2011/DEU, 27 September 2011 and published at <http://unfccc.int/resource/docs/2011/tar/deu01.pdf>