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COMPLIANCE COMMITTEE

CC/ERT/IRR/2017/6  
16 March 2017

**Report on the review of the report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol of Finland**

**Note by the secretariat**

The report on the review of the report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol of Finland was published on 16 March 2017. For purposes of rule 10, paragraph 2, of the rules of procedure of the Compliance Committee (annex to decision 4/CMP.2), the report is considered received by the secretariat on the same date. This report, FCCC/IRR/2016/FIN, 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.



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## **Report on the review of the report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol of Finland**

**Note by the expert review team**

### *Summary*

According to decision 2/CMP.8, each Party with a quantified emission limitation and reduction commitment inscribed in the third column of Annex B to the Kyoto Protocol, as contained in annex I to decision 1/CMP.8, shall submit to the secretariat a report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol. In accordance with decision 22/CMP.1, annex I, paragraph 11, in conjunction with decision 4/CMP.11, the report to facilitate the calculation of the assigned amount is subject to a review. This report presents the results of the technical review of the report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol, conducted by an expert review team in accordance with the “Guidelines for review under Article 8 of the Kyoto Protocol”. The review took place from 5 to 10 September in Bonn, Germany.

GE.17-04133(E)



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## I. Introduction<sup>1</sup>

1. The review of the report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol (hereinafter referred to as the report to facilitate the calculation of the assigned amount) of Finland was organized by the UNFCCC secretariat, in accordance with the “Guidelines for review under Article 8 of the Kyoto Protocol”.<sup>2</sup> The review took place from 5 to 10 September 2016 in Bonn, Germany, and was coordinated by Ms. Sevdalina Todorova (UNFCCC secretariat). Table 1 provides information on the composition of the expert review team (ERT) that conducted the review of Finland.

2. A draft version of this report was communicated to the Government of Finland, which provided comments that were considered and incorporated, as appropriate, into this final version of the report.

Table 1

**Composition of the expert review team that conducted the review of Finland**

<i>Area of expertise</i>	<i>Name</i>	<i>Party</i>
Generalist	Mr. Nagmeldin Elhassan	Sudan
	Mr. Marcelo Rocha	Brazil
Energy	Ms. Elena Gavrilova	The former Yugoslav Republic of Macedonia
	Mr. Michael Smith	New Zealand
	Mr. Daniel Tutu Benefoh	Ghana
IPPU	Mr. Mauro Meirelles de Oliveira Santos	Brazil
	Mr. Erhan Unal	Turkey
Agriculture	Mr. Steen Gyldenkærne	Denmark
	Ms. Alice Ryan	New Zealand
LULUCF	Mr. Craig Elvidge	New Zealand
	Ms. Sanaa Enkhtaivan	Mongolia
	Mr. Sandro Federici	San Marino
	Mr. Sabin Guendehou	Benin
Waste	Mr. Martiros Tsarukyan	Armenia
	Ms. Tatiana Tugui	Republic of Moldova

<sup>1</sup> At the time of publication of this report Finland had not yet submitted its instrument of ratification of the Doha Amendment, and the amendment had not yet entered into force. The implementation of the provisions of the Doha Amendment is therefore considered in this report in the context of decision 1/CMP.8, paragraph 6, pending the entry into force of the amendment.

<sup>2</sup> Decision 22/CMP.1 and its annex and any revisions contained in decision 4/CMP.11 and its annex I.

<i>Area of expertise</i>	<i>Name</i>	<i>Party</i>
Lead reviewers	Ms. Elena Gavrilova	
	Mr. Marcelo Rocha	

*Abbreviations:* IPPU = industrial processes and product use, LULUCF = land use, land-use change and forestry.

## II. Summary of the reporting on mandatory elements in the report to facilitate the calculation of the assigned amount

3. Table 2 provides a summary of the ERT’s assessment of the reporting of mandatory elements by Finland in its report to facilitate the calculation of the assigned amount. Key data and elections by the Party are included in table 4.

Table 2

### Expert review team’s assessment of the reporting of mandatory elements by Finland in its report to facilitate the calculation of the assigned amount

<i>Item</i>	<i>Comment</i>	
<i>General Party information</i>		
Date of submission		Original submission: 29 June 2016
Are there any missing categories or issues related to completeness <sup>a</sup> in the reporting of GHG emissions by sources and removals by sinks for the base year or period?	Yes	See ID#L.5, ID#L.9 and ID#L.11 in FCCC/ARR/2016/FIN
Was the GHG inventory recalculated in accordance with decision 4/CMP.7 for all years from 1990 to the most recent year available?	Yes	
Did the Party report the base year for NF <sub>3</sub> ?	Yes	See annex I, table 4
<i>Information related to agreement by the Party under Article 4 of the Kyoto Protocol to implement commitments jointly</i>		
Has complete information been reported in accordance with decision 3/CMP.11, paragraph 11, by the Party in fulfilment of its agreement under Article 4 of the Kyoto Protocol, in relation to the following:		
(a) Application of decision 1/CMP.8, paragraphs 23–26, related to carry-over and the previous period surplus reserve account	Yes	See annex I, table 4. For further information, see ID#6 in table 3
(b) Calculation of base-year emissions	Yes	See annex I, table 4
(c) Calculation of the assigned amount	Yes	See annex I, table 4. For further information, see ID#1 in table 3
(d) Calculation of the commitment period reserve	Yes	See annex I, table 4. For further information, see

<i>Item</i>		<i>Comment</i>
		ID#2 in table 3
(e) Application and calculation pursuant to decision 2/CMP.7, annex, paragraph 13	Yes	See annex I, table 4. For further information, see ID#4 in table 3
<i>Information related to the assigned amount and the commitment period reserve</i>		
Was the assigned amount in the original submission calculated in accordance with Article 3, paragraph 8, of the Kyoto Protocol and Article 3, paragraphs 7 bis, 8 and 8 bis, as contained in the Doha Amendment, and decision 13/CMP.1 in conjunction with decision 3/CMP.11?	Yes	See annex I, table 4. For further information, see ID#1 in table 3
Has the Party reported in the original submission the difference between the assigned amount for the second commitment period and average annual emissions for the first three years of the first commitment period, multiplied by 8?	No	See annex I, table 4. For further information, see ID#5 in table 3
Has the Party indicated in the original submission the approach <sup>b</sup> used to calculate average annual emissions for the first three years of the first commitment period?	Yes	See annex I, table 4. For further information, see ID#5 in table 3
Did land-use change and forestry constitute a net source of GHG emissions in the base year, and therefore did the Party include emissions from deforestation in the calculation of the assigned amount?	No	
Was the commitment period reserve in the original submission calculated in accordance with the annex to decision 11/CMP.1, the annex to decision 11/CMP.1, the annex to decision 13/CMP.1, paragraph 8 quinquies, and decision 1/CMP.8, paragraph 18?	Yes	See annex I, table 4
<i>Information related to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol</i>		
If the Party identified activities elected under Article 3, paragraph 4, of the Kyoto Protocol, are these elections in accordance with decision 2/CMP.7, annex, paragraphs 6–8?	NA	See annex I, table 4
Do the activities elected under Article 3, paragraph 4, of the Kyoto Protocol for the second commitment period include at least those activities elected for the first commitment period?	NA	
Is information reported on how the national system under Article 5, paragraph 1, of the Kyoto Protocol will identify land areas associated with all additional elected activities and how the Party ensures that land that was accounted for in the first commitment period continues to be accounted for in the second commitment period?	Yes	
Has the Party identified for each activity under Article 3, paragraphs 3 and 4, of the Kyoto Protocol whether it intends to account annually or for the entire commitment period?	Yes	See annex I, table 4

<i>Item</i>		<i>Comment</i>
Did the Party provide information on the forest management reference level, including, if appropriate, information on technical corrections and 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?	Yes	See annex I, table 4. For further information, see ID#3 in table 3
Has the Party reported the quantity amounting to 3.5% of the base-year GHG emissions, excluding LULUCF, in the original submission?	Yes	See annex I, table 4. For further information, see ID#4 in table 3
Did the Party indicate whether it intends to apply the provisions to exclude emissions from natural disturbances for the accounting for afforestation and reforestation and/or forest management and provide the relevant information in accordance with decision 2/CMP.7, annex, paragraph 33?	Yes	See annex I, table 4
<i>Information related to the national system and national registry</i>		
Was a description of the national system provided, in accordance with the guidelines for national systems under Article 5, paragraph 1, of the Kyoto Protocol?	NA	This information was already reported and reviewed as part of the initial review of the report to facilitate the calculation of the assigned amount for the first commitment period and did not need to be reported
Was a description of the national registry provided, in accordance with the requirements contained in the annex to decision 13/CMP.1, the annex to decision 5/CMP.1 and the technical standards for data exchange between registry systems adopted by the CMP?	NA	This information was already reported and reviewed as part of the initial review of the report to facilitate the calculation of the assigned amount for the first commitment period and did not need to be reported

*Abbreviations:* CMP = Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, NA = not applicable.

<sup>a</sup> Issues related to missing categories and completeness are only for those categories for which methods are available in the 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories.

<sup>b</sup> Parties may elect to calculate average annual emissions for the first three years of the first commitment period by including either the gases and sources listed in Annex A to the Kyoto Protocol, or the GHGs, sectors and source categories used to calculate the assigned amount for the second commitment period.

### III. Technical assessment of the elements reviewed

4. In accordance with decision 22/CMP.1, and in conjunction with decisions 4/CMP.11 and 10/CMP.11, the review of the report to facilitate the calculation of the assigned amount

for Finland has been undertaken together with the review of the inventory submission for the first years of the second commitment period.<sup>3</sup> Table 3 contains additional information, if any, to support the ERT's assessment included in table 2 above of the Party's capacity to account for its emissions and the assigned amount, specifically related to: the calculation of the assigned amount for the second commitment period and any adjustments applied; information related to Article 3, paragraph 7 ter, as contained in the Doha Amendment; information related to reporting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol; calculation of the commitment period reserve; and the national system and national registry.

Table 3

**Additional findings of the expert review team, if any, related to Finland's reporting of mandatory elements in its report to facilitate the calculation of the assigned amount**

<i>ID#</i>	<i>Finding classification</i>	<i>Description of the finding</i>	<i>Classification of problem</i>
1.	Calculation of the assigned amount	<p>The assigned amount submitted by the Party in its report to facilitate the calculation of the assigned amount was calculated in accordance with Article 3, paragraphs 7 bis, 8 and 8 bis, of the Kyoto Protocol, the annex to decision 13/CMP.1 and annex I to decision 3/CMP.11</p> <p>The ERT notes that the European Union, its member States and Iceland stated that they will fulfil their reduction targets under the second commitment period jointly.<sup>a</sup> The joint assigned amount for the European Union, its member States and Iceland is calculated pursuant to the quantified emission limitation and reduction commitment listed in the third column of the table contained in Annex B to the Kyoto Protocol, while the assigned amount of each member State is determined in accordance with the terms of the joint fulfilment agreement. Specifically, the assigned amount for Finland is fixed based on Annex II to European Commission decision 2013/162/EU and as adjusted by Commission implementing decision 2013/634/EU<sup>b</sup></p> <p>The ERT concludes that the assigned amount reported by Finland is in accordance with the joint fulfilment agreement by the European Union, its member States and Iceland</p>	Not a problem
2.	Calculation of the commitment period reserve	The commitment period reserve was calculated in accordance with the annex to decision 11/CMP.1, the annex to decision 11/CMP.1 and decision 1/CMP.8, paragraph 18	Not a problem
3.	Accounting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol	Finland has provided the values and explanatory information for the FMRL and the technical correction in the initial report and in the NIR. However, the ERT noted that the Party has not fully addressed the recommendation regarding the technical correction that is contained in paragraphs 35–39 of the "Report of the technical assessment of the forest management reference level submission of Finland submitted in 2011" <sup>3c</sup> as required by decision 2/CMP.8, annex I, paragraph 1(i). The issue was discussed with the Party during the review week. Noting the ongoing update of the model used by Finland for the construction of its FMRL and that the Party has selected the	Not a problem

<sup>3</sup> The annual review report on the 2016 inventory submission of Finland is available at <<http://unfccc.int/resource/docs/2017/arr/fin.pdf>>, while the annual review report on the 2015 inventory submission of Finland is available at <<http://unfccc.int/resource/docs/2016/arr/fin.pdf>>.



ID#	Finding classification	Description of the finding	Classification of problem
		option of accounting for the KP-LULUCF activities at the end of the commitment period, the ERT decided to include the issue in the annual review report of Finland (see ID#KL.6 in table 5 of FCCC/ARR/2016/FIN)	
4.	Accounting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol	Finland reports the value of the forest management cap both in its “Report to facilitate the calculation of the assigned amount for the second commitment period” and in the CRF tables with a slight difference between reported values (see ID#KL.11 in table 5 of FCCC/ARR/2016/FIN). The value reported is for the overall commitment period. The ERT agrees with the value reported in the report to facilitate the calculation of the assigned amount, namely 19 978 041 t CO <sub>2</sub> eq	Not a problem
5.	Reporting pursuant to Article 3.7 ter of the Doha Amendment	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, and as described in the report to facilitate the calculation of the assigned amount of the European Union, Article 3, paragraph 7 ter, of the Kyoto Protocol is applied to the joint assigned amount of the European Union, its member States and Iceland for the second commitment period. In its report, the European Union includes the value for the difference between the joint assigned amount for the second commitment period and average annual emissions for the first three years of the first commitment period for the member States and Iceland, multiplied by 8. The report of the European Union also clarifies that the approach used to calculate average annual emissions for the first three years of the first commitment period is including the gases and sources listed in Annex A to the Kyoto Protocol	Not a problem
6.	National registry	The ERT took note of the results of the technical assessment of the national registry, including the results of standardized testing, as reported in the standard independent assessment report that was forwarded to the ERT by the administrator of the international transaction log, pursuant to decision 16/CP.10. In the report to facilitate the calculation of the assigned amount, the Party noted that it will establish a PPSR account in its national registry. In the 2016 NIR (chapter 12, p.424), Finland stated that the PPSR did not “contain any units in 2014 or 2015 (or at the beginning of 2016) and there has been no cancellation of units for activities under Article 3, paragraphs 1 ter and 1 quater, or under Article 3, paragraph 7 ter”, of the Kyoto Protocol. During the review, Finland further clarified that the units not retired or cancelled in the first commitment period have not yet been transferred to the second commitment period	Not a problem
7.	Adjustments	The ERT has not identified the need to apply any adjustments to the estimate for the assigned amount for the second commitment period, as reported by Finland in its report to facilitate the calculation of the assigned amount	Not a problem

*Abbreviations:* ERT = expert review team, FMRL = forest management reference level, KP-LULUCF = land use, land-use change and forestry emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, NIR = national inventory report, PPSR = previous period surplus reserve.

<sup>a</sup> The report to facilitate the calculation of the assigned amount for the European Union is available at <[http://unfccc.int/national\\_reports/initial\\_reports\\_under\\_the\\_kyoto\\_protocol/second\\_commitment\\_period\\_2013-2020/items/9499.php](http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/second_commitment_period_2013-2020/items/9499.php)>.

<sup>b</sup> At the time of publication of this report, the European Union had not yet submitted its instrument of ratification of the Doha Amendment or information on the joint implementation of such an amendment.

<sup>c</sup> Available at <<http://unfccc.int/resource/docs/2011/tar/fin01.pdf>>.

#### **IV. Questions of implementation**

5. No questions of implementation were identified by the ERT during the review.

## Annex I

### Key relevant data for Finland

1. Table 4 provides key data and parameters for, and elections by, Finland, relevant for the implementation of the second commitment period of the Kyoto Protocol. The information included in table 4 is as given by the Party in its report to facilitate the calculation of the assigned amount, unless otherwise specified.

Table 4

#### Key relevant data for Finland<sup>a</sup>

<i>Key information or parameter provided</i>	<i>Comment</i>
<i>General Party information</i>	
Did the Party have a QELRC in the first commitment period?	Yes
Finland's QELRC in the second commitment period	Finland will implement its reduction target under the second commitment period jointly with the European Union, its member States and Iceland as described in ID#1, table 3. The QELRC for the European Union, its member States and Iceland is 80% of the base-year emissions
Has the Party reached an agreement under Article 4 of the Kyoto Protocol to fulfil its commitments jointly with other Parties?	Yes
Base year	1990
Base year for HFCs, PFCs and SF <sub>6</sub>	1995
Base year for NF <sub>3</sub>	1995
Base-year emissions, as reported by the Party and agreed by the ERT	71 350 147 t CO <sub>2</sub> eq
<i>Information related to the calculation of the assigned amount and the commitment period reserve</i>	
Assigned amount, as reported by the Party and agreed by the ERT	240 544 599 t CO <sub>2</sub> eq
Approach used to calculate the average annual emissions for the first three years of the first commitment period	The gases and sources listed in Annex A to the Kyoto Protocol. The difference is calculated on the basis of the joint assigned amount of the European Union, its member States and Iceland
Difference between the assigned amount for the second commitment period and average annual emissions for the first three years of the first commitment period, multiplied by 8, as reported by the Party	This difference is calculated on the basis of the joint assigned amount of the European Union, its member States and Iceland and is based on the gases and sources listed in Annex A to the Kyoto Protocol
Commitment period reserve, as reported by the Party and agreed by the ERT	216 490 140 t CO <sub>2</sub> eq

<i>Key information or parameter provided</i>	<i>Comment</i>
<i>Information related to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol</i>	
LULUCF parameters*	Minimum tree crown cover: 10% Minimum land area: 0.5 ha Minimum tree height: 5 m
Elections under Article 3, paragraphs 3 and 4, of the Kyoto Protocol:	
(a) Afforestation/reforestation	Commitment period accounting
(b) Deforestation	Commitment period accounting
(c) Forest management	Commitment period accounting
(d) Cropland management	Not elected
(e) Grazing land management	Not elected
(f) Revegetation	Not elected
(g) Wetland drainage and rewetting	Not elected
FMRL	-20.466 Mt CO <sub>2</sub> eq/year
Technical corrections to the FMRL, as reported in the original submission and agreed by the ERT	-10.975 Mt CO <sub>2</sub> eq/year
3.5% of total base-year GHG emissions, excluding LULUCF and including indirect CO <sub>2</sub> emissions, final value, as calculated by the ERT	2 497.255 kt CO <sub>2</sub> eq
3.5% of total base-year GHG emissions, excluding LULUCF and including indirect CO <sub>2</sub> emissions, multiplied by 8, as reported by the Party and agreed by the ERT	19 978.041 kt CO <sub>2</sub> eq
Will the Party exclude emissions from natural disturbances in accounting for:	
(a) Afforestation and reforestation	No
(b) Forest management	Yes

*Abbreviations:* ERT = expert review team, FMRL = forest management reference level, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, QELRC = quantified emission limitation and reduction commitment.

<sup>a</sup> An asterisk is included next to the “Key information or parameter” in all cases where the information was not submitted by the Party in its report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol, because the Party had already submitted this information in the report to facilitate the calculation of the assigned amount for the first commitment period of the Kyoto Protocol or because the information was not otherwise required.

2. Tables 5–7 provide an overview of total greenhouse gas emissions and removals as submitted by the Party. Where a Party has decided to voluntarily report indirect carbon dioxide emissions, this is noted in the relevant table.

Table 5  
**Total greenhouse gas emissions for Finland, base year<sup>a</sup>–2014<sup>b</sup>**  
 (kt CO<sub>2</sub> eq)

Year	Total GHG emissions excluding indirect CO <sub>2</sub> emissions		Total GHG emissions including indirect CO <sub>2</sub> emissions <sup>c</sup>		Land-use change (Article 3.7 bis as contained in the Doha Amendment) <sup>d</sup>
	Total including LULUCF	Total excluding LULUCF	Total including LULUCF	Total excluding LULUCF	
Base year	55 060.42	71 088.58	55 321.98	71 350.15	NA
1990	55 048.83	71 077.00	55 310.40	71 338.56	
1995	56 339.44	71 644.30	56 543.56	71 848.42	
2000	45 521.28	69 855.01	45 675.78	70 009.50	
2010	48 687.05	75 835.02	48 783.00	75 930.97	
2011	41 282.22	67 947.08	41 369.11	68 033.97	
2012	34 010.21	62 320.64	34 093.32	62 403.75	
2013	42 861.61	63 196.60	42 941.90	63 276.89	
2014	38 248.60	59 028.99	38 324.69	59 105.08	

*Abbreviations:* GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, NA = not applicable.

<sup>a</sup> Base year refers to the base year under the Kyoto Protocol, which is 1990 for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O, and 1995 for HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>.

<sup>b</sup> Emissions/removals reported in the sector other (sector 6) are not included in total GHG emissions.

<sup>c</sup> The Party has reported indirect CO<sub>2</sub> emissions in common reporting format table 6.

<sup>d</sup> The value reported in this column refers to 1990.

Table 6

**Greenhouse gas emissions by gas for Finland, excluding land use, land-use change and forestry, 1990–2014<sup>a</sup>**(kt CO<sub>2</sub> eq)

	<i>CO<sub>2</sub><sup>b</sup></i>	<i>CH<sub>4</sub></i>	<i>N<sub>2</sub>O</i>	<i>HFCs</i>	<i>PFCs</i>	<i>Unspecified mix of HFCs and PFCs</i>	<i>SF<sub>6</sub></i>	<i>NF<sub>3</sub></i>
1990	57 212.42	7 744.72	6 328.72	0.02	0.21	NO	52.48	NO
1995	58 330.37	7 469.56	5 984.20	26.90	0.42	NO	36.98	NO
2000	57 127.84	6 661.10	5 621.96	559.32	13.23	NO	26.06	NO
2010	63 923.97	5 487.22	4 676.58	1 820.34	1.06	NO	21.79	NO
2011	56 565.64	5 306.53	4 547.93	1 587.90	2.30	NO	23.67	NO
2012	51 066.39	5 264.88	4 527.42	1 517.25	5.66	NO	22.16	NO
2013	51 914.98	5 122.63	4 589.42	1 612.49	6.66	NO	30.70	NO
2014	47 673.82	5 016.97	4 626.45	1 743.28	10.30	NO	34.25	NO
<b>Per cent change 1990– 2014</b>	–16.7	–35.2	–26.9	7 256 008.2	4 876.3	NA	–34.7	NA

*Abbreviations:* NA = not applicable, NO = not occurring.

<sup>a</sup> Emissions/removals reported in the sector other (sector 6) are not included in total greenhouse gas emissions.

<sup>b</sup> CO<sub>2</sub> emissions include indirect CO<sub>2</sub> emissions reported in common reporting format table 6.

Table 7  
**Greenhouse gas emissions by sector for Finland, 1990–2014<sup>a, b</sup>**  
 (kt CO<sub>2</sub> eq)

	<i>Energy</i>	<i>IPPU</i>	<i>Agriculture</i>	<i>LULUCF</i>	<i>Waste</i>	<i>Other</i>
1990	53 658.31	5 539.53	7 467.47	–16 028.16	4 673.24	NO
1995	55 443.55	5 030.56	6 775.84	–15 304.86	4 598.47	NO
2000	53 813.48	5 921.50	6 420.70	–24 333.73	3 853.82	NO
2010	60 147.09	6 650.58	6 548.06	–27 147.97	2 585.24	NO
2011	52 796.82	6 362.17	6 370.35	–26 664.86	2 504.62	NO
2012	47 512.18	6 105.05	6 333.15	–28 310.43	2 453.37	NO
2013	48 389.78	6 098.79	6 456.48	–20 334.99	2 331.83	NO
2014	44 414.69	6 013.61	6 475.37	–20 780.39	2 201.41	NO
<b>Per cent change 1990–2014</b>	–17.2	8.6	–13.3	29.7	–52.9	NA

*Abbreviations:* IPPU = industrial processes and product use, LULUCF = land use, land-use change and forestry, NA = not applicable, NO = not occurring.

<sup>a</sup> Emissions/removals reported in the sector other (sector 6) are not included in total greenhouse gas emissions.

<sup>b</sup> Totals include indirect CO<sub>2</sub> emissions reported in common reporting format table 6.

## Annex II

### Documents and information used during the review

#### A. Reference documents

“Guidelines for national systems for the estimation of anthropogenic greenhouse gas emissions by sources and removals by sinks under Article 5, paragraph 1, of the Kyoto Protocol”. Annex to decision 19/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a03.pdf#page=14>.

“Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol”. Annex to decision 15/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf>.

“Guidelines for review under Article 8 of the Kyoto Protocol”. Annex to decision 22/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a03.pdf#page=51>.

“Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories”. Annex I to decision 24/CP.19. Available at <http://unfccc.int/resource/docs/2013/cop19/eng/10a03.pdf#page=4>.

“Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention”. Annex to decision 13/CP.20. Available at <http://unfccc.int/resource/docs/2014/cop20/eng/10a03.pdf#page=6>.

“Implications of the implementation of decisions 2/CMP.7 to 4/CMP.7 and 1/CMP.8 on the previous decisions on methodological issues related to the Kyoto Protocol, including those relating to Articles 5, 7 and 8 of the Kyoto Protocol, Part I: Implications related to accounting and reporting and other related issues”. Decision 3/CMP.11. Available at <http://unfccc.int/resource/docs/2015/cmp11/eng/08a01.pdf#page=5>.

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Standard independent assessment report, part 1, for Finland for 2016. Available at <[http://unfccc.int/files/kyoto\\_mechanisms/application/pdf/siar\\_2016\\_fin\\_1\\_2.pdf](http://unfccc.int/files/kyoto_mechanisms/application/pdf/siar_2016_fin_1_2.pdf)>.

Standard independent assessment report, part 2, for Finland for 2016. Available at <[http://unfccc.int/files/kyoto\\_mechanisms/application/pdf/siar\\_2016\\_fin\\_2\\_2.pdf](http://unfccc.int/files/kyoto_mechanisms/application/pdf/siar_2016_fin_2_2.pdf)>.

## **B. Additional information provided by the Party**

Responses to questions during the review were received from Ms. Riitta Pipatti (Statistics Finland), including additional material on the methodology and assumptions used. The following documents<sup>1</sup> were also provided by Finland:

2013/162/EU: Commission Decision of 26 March 2013 on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council (notified under document C(2013) 1708).

2013/634/EU: Commission Implementing Decision of 31 October 2013 on the adjustments to Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council.

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<sup>1</sup> Reproduced as received from the Party.

## Annex III

### Acronyms and abbreviations

CH <sub>4</sub>	methane
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
ERT	expert review team
FMRL	forest management reference level
GHG	greenhouse gas
HFC	hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
KP-LULUCF	LULUCF emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol
kt	kilotonne
LULUCF	land use, land-use change and forestry
Mt	million tonnes
NA	not applicable
NF <sub>3</sub>	nitrogen trifluoride
NIR	national inventory report
NO	not occurring
N <sub>2</sub> O	nitrous oxide
PFC	perfluorocarbon
PPSR	previous period surplus reserve
QELRC	quantified emission limitation and reduction commitment
SF <sub>6</sub>	sulphur hexafluoride
UNFCCC	United Nations Framework Convention on Climate Change