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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 Latvia**

**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 the annex 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, 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 29 August to 3 September 2016 in Bonn, Germany.

GE.17-03682(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 Latvia 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 29 August to 3 September 2016 in Bonn, Germany, and was coordinated by Ms. Lisa Hanle and Ms. Claudia do Valle (UNFCCC secretariat). Table 1 provides information on the composition of the expert review team (ERT) that conducted the review of Latvia.

2. A draft version of this report was communicated to the Government of Latvia, which provided no comments.

Table 1

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

<i>Area of expertise</i>	<i>Name</i>	<i>Party</i>
Generalist	Ms. Olia Glade	New Zealand
	Mr. Mauro Meirelles de Oliveira Santos	Brazil
Energy	Mr. Graham Anderson	Germany
	Ms. Veronika Ginzburg	Russian Federation
	Mr. Haakon Marold	Australia
	Ms. Cuimei Ma	China
IPPU	Ms. Siriluk Chiarakorn	Thailand
	Mr. Predrag Novosel	Montenegro
	Mr. Alexander Valencia	Colombia
Agriculture	Mr. Amnat Chidthaisong	Thailand
	Mr. Sorin Deaconu	Romania
	Ms. Lilian Portillo	Paraguay
LULUCF	Ms. Bridget Fraser	New Zealand
	Mr. Doru Leonard Irimie	Romania
	Mr. Stanley Wapot	Vanuatu
Waste	Ms. Violeta Hristova	Bulgaria
	Mr. Igor Ristovski	The former Yugoslav Republic of Macedonia
Lead reviewers	Ms. Olia Glade	
	Mr. Mauro Meirelles de Oliveira Santos	

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

<sup>1</sup> At the time of publication of this report, Latvia 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.

## 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 Latvia 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 Latvia 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: 15 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 document FCCC/ARR/2016/LVA, annex III
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	For further information, see ID#5 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
(e) Application and calculation pursuant to decision 2/CMP.7, annex, paragraph 13	Yes	For further information, see ID#3 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, Article 3, paragraphs 7 bis and 8 bis, as	Yes	See annex I, table 4. For further information, see ID#1 in table 3

<i>Item</i>	<i>Comment</i>	
contained in the Doha Amendment, and decision 13/CMP.1 in conjunction with decision 3/CMP.11?		
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?	Yes	See annex I, table 4. For further information, see ID#4 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#4 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 18/CP.7, the annex to decision 11/CMP.1, the annex to decision 13/CMP.1, paragraph 8 quinquies, and decision 1/CMP.8, paragraph 18?	No	See annex I, table 4. For further information, see ID#2 in table 3
<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, 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	See annex I, table 4
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
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 document FCCC/ARR/2016/LVA, ID#KL.12
Has the Party reported the quantity amounting to 3.5% of	Yes	See annex I, table 4. For

<i>Item</i>	<i>Comment</i>	
the base year GHG emissions, excluding LULUCF, in the original submission?		further information, see ID#3 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 IPCC 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 Latvia has been undertaken together with the review of the inventory submission for the first year 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

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

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 Latvia'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 Latvia is fixed based on annex II to European Commission decision 2013/162/EU and as adjusted by the Commission implementing decision 2013/634/EU<sup>b</sup></p> <p>The ERT concludes that the assigned amount reported by Latvia is in accordance with the joint fulfilment agreement by the European Union, its member States and Iceland</p> <p>Latvia did not report base-year emissions in its report to facilitate the calculation of the assigned amount. During the review, the ERT calculated the base-year emissions to be 26 311 539 t CO<sub>2</sub> eq. The Party submitted revised estimates in response to the list of potential problems and further questions raised by the ERT (see document FCCC/ARR/2016/LVA), which affected the base-year emissions. The revised estimates for the base-year emissions (26 409 077 t CO<sub>2</sub> eq) do not affect the assigned amount for Latvia referred in table 4 below because the assigned amount is determined based on the allocations in the European Union decisions referenced above, and is not calculated using the base-year emissions estimates for Latvia. The ERT invites Latvia to communicate the revised base-year emissions to the European Union with a view to their being considered in the calculation of the joint assigned amount of the European Union, its member States and Iceland</p>	Not a problem
2.	Calculation of the commitment period reserve	<p>The commitment period reserve was not calculated in accordance with the annex to decision 18/CP.7, the annex to decision 11/CMP.1 and decision 1/CMP.8, paragraph 18</p> <p>To calculate 100% of the most recently reviewed inventory, the Party estimated the latest reviewed emissions to be 10 979 650 t CO<sub>2</sub> eq based on emissions from 2012, as contained in the 2014 annual review report, (leading to a CPR of 87 837 200 t CO<sub>2</sub> eq); however, the latest emissions in</p>	Not a problem

ID#	Finding classification	Description of the finding	Classification of problem
		<p>the original 2016 submission for 2014 were 11 373 587 t CO<sub>2</sub> eq (leading to a CPR of 90 988 696 t CO<sub>2</sub> eq). Owing to the submission of revised estimates in response to the list of potential problems and further questions raised by the ERT, Latvia submitted revised estimates, and the new GHG emission estimate for 2014 was 11 393 294 t CO<sub>2</sub> eq (leading to a CPR of 91 146 349 t CO<sub>2</sub> eq when calculated as eight times the most recently reviewed inventory). The error in the original submission did not have an effect on the CPR value as 90% of the assigned amount value (68 970 096 t CO<sub>2</sub> eq) is lower</p>	
3.	<p>Accounting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol</p>	<p>According to decision 6/CMP.9, paragraph 12, Latvia shall report in its report to facilitate the calculation of the assigned amount the value that is 3.5% of the base-year GHG emissions. The ERT notes that the earlier decision 2/CMP.7, paragraph 13, indicates that the additions to the assigned amount of a Party are equal to 3.5% of the base-year GHG emissions, excluding LULUCF, multiplied by the duration of the commitment period. Latvia reported a value of 7 351 802 t CO<sub>2</sub> eq, estimated as the base year × 3.5% × 8. In response to the list of potential problems and further questions raised by the ERT, the base year was recalculated (see ID#1 above). Taking into account the revised estimate of the base-year emissions (26 409 077 t CO<sub>2</sub> eq), the final calculated value for 3.5% of the base-year emissions, multiplied by 8, is 7 394 541 t CO<sub>2</sub> eq. This translates to an annual value of 924 317 t CO<sub>2</sub> eq</p>	Not a problem
4.	<p>Reporting pursuant to Article 3.7 ter of the Doha Amendment</p>	<p>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, 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 includes the gases and sources listed in Annex A to the Kyoto Protocol</p>	Not a problem
5.	<p>National registry</p>	<p>In its report to facilitate the calculation of the assigned amount, the Party noted that it will establish a previous period surplus reserve account. The ERT notes that the 2016 standard independent assessment report for Latvia indicates that implementation of functions related to the second commitment period of the Kyoto Protocol is planned in the European Union Emissions Trading System as soon as technically possible</p>	Not a problem
6.	<p>Adjustments</p>	<p>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 Latvia in its report to facilitate the calculation of the assigned amount</p>	Not a problem

*Abbreviations:* CPR = commitment period reserve, ERT = expert review team, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.



<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 and information on the joint implementation of such an amendment.

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

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

## Annex I

### Key relevant data for Latvia

1. Table 4 provides key data and parameters for, and elections by, Latvia, 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 Latvia<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
Latvia's QELRC in the second commitment period	Latvia 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, final, as reported by the Party	26 409 077 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	76 633 439 t CO <sub>2</sub> eq
Approach used to calculate the average annual emissions for the first three years of the first commitment period	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
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 eight, as reported by the Party and agreed by the ERT	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

<i>Key information or parameter provided</i>	<i>Comment</i>
Commitment period reserve, as reported by the Party and agreed by the ERT	68 970 096 t CO <sub>2</sub> eq
<i>Information related to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol</i>	
LULUCF parameters	Minimum tree crown cover: 20% Minimum land area: 0.1 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	-16.302 Mt CO <sub>2</sub> eq/year
Technical corrections to the FMRL as reported in the original submission and agreed by the ERT	9.922 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	Not reported in the original submission
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	924 317 t 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 in the original submission	7 351 801 t CO <sub>2</sub> eq
3.5% of total base-year GHG emissions, excluding LULUCF, multiplied by 8, final value as reported by the Party and agreed by the ERT	7 394 541 t CO <sub>2</sub> eq
Will the Party exclude emissions from natural disturbances in accounting for:	
(a) Afforestation and reforestation	No
(b) Forest management	No

*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 Latvia, base year–2014<sup>a, b</sup>**  
 (kt CO<sub>2</sub> eq)

	<i>Total GHG emissions excluding indirect CO<sub>2</sub> emissions</i>		<i>Total GHG emissions including indirect CO<sub>2</sub> emissions<sup>c</sup></i>		<i>Land-use change (Article 3.7 bis as contained in the Doha Amendment)</i>
	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>	
Base year	17 944.02	26 365.65	17 987.45	26 409.08	NA
1990	17 932.34	26 353.97	17 975.77	26 397.40	
1995	3 787.07	12 824.99	3 821.24	12 859.16	
2000	3 738.52	10 434.29	3 764.91	10 460.68	
2010	13 932.26	12 357.47	13 947.91	12 373.12	
2011	12 989.25	11 624.15	12 999.67	11 634.57	
2012	12 173.06	11 513.90	12 185.37	11 526.21	
2013	12 644.53	11 435.77	12 659.68	11 450.93	
2014	15 593.23	11 373.09	15 613.43	11 393.29	

*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.

Table 6

**Greenhouse gas emissions by gas for Latvia, 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	19 837.72	3 671.26	2 888.42	NO, NA, NE	NO, NA	NO, NA	NO, NA	NO, NA
1995	9 175.52	2 195.31	1 476.64	11.50	NO, NA	NO, NA	0.17	NO, NA
2000	7 096.34	1 922.68	1 420.33	20.46	NO, NA	NO, NA	0.88	NO, NA
2010	8 539.74	1 949.62	1 711.99	164.42	NO, NA	NO, NA	7.35	NO, NA
2011	7 818.08	1 897.77	1 726.28	184.97	NO, NA	NO, NA	7.47	NO, NA
2012	7 533.43	1 971.19	1 823.61	190.21	NO, NA	NO, NA	7.78	NO, NA
2013	7 368.38	2 010.24	1 859.45	204.35	NO, NA	NO, NA	8.50	NO, NA
2014	7 178.92	2 082.21	1 911.52	212.06	NO, NA	NO, NA	8.58	NO, NA
<b>Per cent change 1990–2014</b>	<b>–63.8</b>	<b>–43.3</b>	<b>–33.8</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

*Abbreviations:* NA = not applicable, NE = not estimated, 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 Latvia, 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	19 429.41	702.63	5 454.03	–8 421.63	811.33	NO
1995	9 533.54	211.44	2 402.49	–9 037.92	711.68	NO
2000	7 336.08	229.57	2 098.00	–6 695.77	797.04	NO
2010	8 419.61	682.77	2 430.52	1 574.79	840.22	NO
2011	7 544.07	823.04	2 456.41	1 365.10	811.05	NO
2012	7 229.13	891.39	2 573.92	659.16	831.77	NO
2013	7 153.90	828.50	2 639.74	1 208.75	828.80	NO
2014	6 992.69	837.20	2 726.42	4 220.14	836.99	NO
<b>Per cent change 1990–2014</b>	<b>–64.0</b>	<b>19.2</b>	<b>–50.0</b>	<b>–150.1</b>	<b>3.2</b>	<b>NA</b>

*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 do 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>>.

“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>>.

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

Responses to questions during the review were received from Ms. Agita Gancone (Climate and Environmental Policy Integration Department, Ministry of Environmental Protection and Regional Development), including additional material on the methodology and assumptions used.



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## 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
CPR	commitment period reserve
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
kt	kilotonne
LULUCF	land use, land-use change and forestry
Mt	million tonnes
NA	not applicable
NE	not estimated
NF <sub>3</sub>	nitrogen trifluoride
NO	not occurring
N <sub>2</sub> O	nitrous oxide
PFC	perfluorocarbon
QELRC	quantified emission limitation and reduction commitment
SF <sub>6</sub>	sulphur hexafluoride
UNFCCC	United Nations Framework Convention on Climate Change

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