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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 Slovakia**

**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 2016 in Bonn, Germany.

GE.17-03462(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 Slovakia 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. Suvi Monni and Mr. Pedro Torres (UNFCCC secretariat). Table 1 provides information on the composition of the expert review team (ERT) that conducted the review of Slovakia.

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

Table 1

### Composition of the expert review team that conducted the review of Slovakia

<i>Area of expertise</i>	<i>Name</i>	<i>Party</i>
Generalist	Mr. Ricardo Fernandez	European Union
	Mr. Michael Strogies	Germany
Energy	Mr. Jerome Elliott	Bahamas
	Ms. Carmen Meneses Lopez	Venezuela (Bolivarian Republic of)
	Mr. Anand Sookun	Mauritius
	Ms. Songli Zhu	China
IPPU	Ms. Valentina Idrissova	Kazakhstan
	Mr. Kakhaberi Mdivani	Georgia
Agriculture	Ms. Marta Alfaro	Chile
	Mr. Yuriy Pyrozhenko	Ukraine
LULUCF	Mr. Javier Fernandez	Costa Rica
	Mr. Vladimir Korotkov	Russian Federation
	Ms. Diana Marcela Vargas	Colombia
Waste	Ms. Maryna Bereznytska	Ukraine
	Mr. Ching Tiong Tan	Malaysia
Lead reviewers	Mr. Ricardo Fernandez	
	Ms. Songli Zhu	

*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, Slovakia 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 Slovakia 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 Slovakia 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 ID#3 in table 3
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. For further information, see ID#4 in table 3
<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#11 and ID#12 in table 3
(b) Calculation of base-year emissions	Yes	For further information, see ID#2 in table 3
(c) Calculation of the assigned amount	Yes	See annex I, table 4. For further information, see ID#1–ID#4 in table 3
(d) Calculation of the commitment period reserve	Yes	See annex I, table 4. For further information, see ID#8 in table 3
(e) Application and calculation pursuant to decision 2/CMP.7, annex, paragraph 13	Yes	For further information, see ID#9 in table 3

<i>Item</i>		<i>Comment</i>
<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 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–ID#4 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?	Yes	See annex I, table 4. For further information, see ID#6 and ID#7 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?	No	See annex I, table 4. For further information, see ID#6 and ID#7 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?	Yes	See annex I, table 4. For further information, see ID#8 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, 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
Did the Party provide information on the forest management reference level, including, if appropriate,	Yes	See annex I, table 4. For further information, see

<i>Item</i>		<i>Comment</i>
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?		ID#10 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#9 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 Slovakia 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 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 Slovakia'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 Slovakia 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>In its report to facilitate the calculation of the assigned amount, Slovakia did not provide a clear reference to the joint fulfilment agreement. In response to a question raised by the ERT during the review, Slovakia provided additional information with a transparent reference to the agreement under Article 4 of the Kyoto Protocol</p> <p>The ERT concludes that the assigned amount reported by Slovakia 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 assigned amount	<p>During the review week, the ERT identified that there were overestimations of N<sub>2</sub>O emissions in the base year for manure management and agricultural soils. Slovakia provided revised estimates by resubmitting its CRF tables on 9 September 2016. The ERT agreed with the Party's revised estimates</p> <p>The revised estimates for the base-year emissions do not affect the assigned amount for Slovakia, referred to in table 4 below. The ERT invites Slovakia to communicate the revised base-year emissions to the European Union with a view to being considered in the calculation of the joint assigned</p>	Not a problem

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

ID#	Finding classification	Description of the finding	Classification of problem
		amount of the European Union, its member States and Iceland	
3.	Calculation of the assigned amount	The ERT noted that Slovakia's emission estimate for solid waste disposal on land did not include emissions from three waste categories, which led to incompleteness of the base-year emission estimates (see W.9 in document FCCE/ARR/2016/SVK). On the basis of the information provided by the Party during the review, the ERT concluded that the impact of this omission was below the threshold in decision 24/CP.19, annex, paragraph 37(b), and further noted that this omission did not have an impact on the Party's assigned amount	Not a problem
4.	Calculation of the assigned amount	In its report to facilitate the calculation of the assigned amount, Slovakia stated that it selected 2010 as the base year for NF <sub>3</sub> . The ERT noted that this was not in accordance with Article 3, paragraph 8 bis, of the Kyoto Protocol. In response to a question raised by the ERT during the review, Slovakia explained that this was an error and stated that the selected NF <sub>3</sub> base year is year 2000. The ERT noted that Slovakia reported emissions of NF <sub>3</sub> as "not occurring" for both 2000 and 2010, and therefore the change in the selected base year for NF <sub>3</sub> did not have any implications on other information included in the report to facilitate the calculation of the assigned amount	Not a problem
5.	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 Slovakia in its report to facilitate the calculation of the assigned amount	Not a problem
6.	Reporting pursuant to Article 3.7 ter of the Doha Amendment	In line with the terms of the joint fulfilment agreement 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
7.	Reporting pursuant to Article 3.7 ter of the Doha Amendment	In its report to facilitate the calculation of the assigned amount, the Party included information on the assigned amount for the second commitment period and average annual emissions for the first three years of the preceding commitment period for Slovakia. During the review, Slovakia provided updated information, including the joint fulfilment agreement of the European Union, which clarified the application of the calculation pursuant to Article 3, paragraph 7 ter, of the Kyoto Protocol as explained in ID#6 above	Not a problem
8.	Calculation of the commitment	The commitment period reserve was calculated in accordance with the annex to decision 18/CP.7, the annex to decision 11/CMP.1 and decision	Not a problem



<i>ID#</i>	<i>Finding classification</i>	<i>Description of the finding</i>	<i>Classification of problem</i>
	period reserve	1/CMP.8, paragraph 18	
9.	Accounting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol	In its report to facilitate the calculation of the assigned amount, Slovakia reported the value that is 3.5% of total base-year GHG emissions excluding LULUCF multiplied by the duration of the commitment period (20 861.133 kt CO <sub>2</sub> eq). Slovakia provided, on 9 September 2016, a resubmission of its CRF tables (see ID#2 above). The Party also provided an updated calculation pursuant to decision 2/CMP.7, annex, paragraph 13. The revised value for 3.5% of the total base-year GHG emissions, excluding LULUCF and including indirect CO <sub>2</sub> emissions, was 2 599.503 kt CO <sub>2</sub> eq. The ERT agreed with this value	Not a problem
10.	Accounting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol	In the report to facilitate the calculation of the assigned amount, Slovakia reported the FMRL both using instantaneous oxidation for HWP and applying the first-order decay function for HWP. The FMRL included in annex I, table 4 of this document, is that reported in CRF table 4(KP-DB.1.1, which corresponds to the FMRL using instantaneous oxidation for HWP  In the report to facilitate the calculation of the assigned amount, Slovakia did not report on a technical correction to FMRL (see ID#KL.6 in document FCCC/ARR/2016/SVK)	Not a problem
11.	National registry	In the national inventory report, the Party did not refer to the PPSR account. The ERT notes that the 2016 standard independent assessment report for Slovakia indicates that the PPSR account relating to the second commitment period will be established in Slovakia's national registry before the end of the year 2016	Not a problem
12.	National registry	During the review, Slovakia provided information on the joint fulfilment agreement of the European Union. This information also included information relevant for paragraphs 25 and 26 of decision 1/CMP.8	Not a problem

*Abbreviations:* CRF = common reporting format, ERT = expert review team, FMRL = forest management reference level, GHG = greenhouse gas, HWP = harvested wood products, LULUCF = land use, land-use change and forestry, 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 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 Slovakia

1. Table 4 provides key data and parameters for, and elections by, Slovakia, 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 Slovakia<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
Slovakia's QELRC in the second commitment period	Slovakia 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> *	1990
Base year for NF <sub>3</sub>	2000
	Information provided during the review (see ID#4 in table 3)
Base-year emissions, as reported by the Party	74 504 046 t CO <sub>2</sub> eq
Base-year emissions, final	74 271 511 t CO <sub>2</sub> eq (see ID#2 in table 3)
<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	202 268 939 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	This difference is calculated on the basis of the

<i>Key information or parameter provided</i>	<i>Comment</i>
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 and agreed by the ERT	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	182 042 046 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: 0.3 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	0.358 Mt CO <sub>2</sub> eq/year (see ID#10 in table 3)
Technical corrections to the FMRL as reported in the original submission	Technical corrections not applied (see ID#10 in table 3)
3.5% of total base-year GHG emissions, excluding LULUCF and including indirect CO <sub>2</sub> emissions, as reported by the Party	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	2 599.503 kt CO <sub>2</sub> eq (see ID#9 in table 3)
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	20 861.133 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, final value	20 796.023 kt CO <sub>2</sub> eq
Will the Party exclude emissions from natural disturbances in accounting for:	

<i>Key information or parameter provided</i>	<i>Comment</i>
(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 Slovakia, base year<sup>a</sup>–2014<sup>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)<sup>d</sup></i>
	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>	
Base year	65 280.26	74 271.51	65 280.26	74 271.51	NA
1990	65 280.26	74 271.51	65 280.26	74 271.51	
1995	45 121.45	54 405.58	45 121.45	54 405.58	
2000	39 993.57	49 712.48	39 993.57	49 712.48	
2010	40 470.26	46 482.87	40 470.26	46 482.87	
2011	39 194.94	45 604.02	39 194.94	45 604.02	
2012	35 553.92	43 175.59	35 553.92	43 175.59	
2013	34 721.19	42 792.48	34 721.19	42 792.48	
2014	34 535.85	40 657.60	34 535.85	40 657.60	

*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>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub> and 2000 for 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 not 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 Slovakia, 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	61 837.57	7 121.28	4 997.74	NO	314.86	NO	0.06	NO
1995	44 679.54	6 132.91	3 439.84	10.49	132.65	NO	10.15	NO
2000	41 155.01	5 422.74	3 022.05	84.73	14.91	NO	13.04	NO
2010	38 385.94	4 707.52	2 815.09	529.68	25.01	NO	19.62	NO
2011	37 880.85	4 788.51	2 371.89	521.86	20.11	NO	20.80	NO
2012	35 867.90	4 408.50	2 322.24	530.05	25.66	NO	21.24	NO
2013	35 395.15	4 555.87	2 274.15	535.19	9.81	NO	22.30	NO
2014	33 387.43	4 363.29	2 335.55	546.02	11.15	NO	14.17	NO
<b>Per cent change 1990–2014</b>	<b>–46.0</b>	<b>–38.7</b>	<b>–53.3</b>	<b>NA</b>	<b>–96.5</b>	<b>NA</b>	<b>24 174.2</b>	<b>NA</b>

*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> Slovakia did not report indirect CO<sub>2</sub> emissions in common reporting format table 6.

Table 7  
**Greenhouse gas emissions by sector for Slovakia, 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	56 572.15	9 813.65	6 421.00	–8 991.25	1 464.71	NO
1995	39 470.07	9 377.21	4 137.91	–9 284.13	1 420.39	NO
2000	36 442.08	8 556.01	3 270.52	–9 718.90	1 443.87	NO
2010	32 597.94	9 519.04	2 867.57	–6 012.61	1 498.33	NO
2011	32 094.92	9 102.71	2 875.20	–6 409.08	1 531.19	NO
2012	29 635.00	9 019.52	2 956.86	–7 621.67	1 564.20	NO
2013	29 474.16	8 717.92	3 049.94	–8 071.29	1 550.45	NO
2014	27 029.14	8 930.97	3 111.91	–6 121.76	1 585.58	NO
<b>Per cent change 1990–2014</b>	<b>–52.2</b>	<b>–9.0</b>	<b>–51.5</b>	<b>–31.9</b>	<b>8.3</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> Slovakia did not report indirect CO<sub>2</sub> emissions 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=15>.

“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#page=56>.

“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>.

“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 II: Implications related to review and adjustments and other related issues”. Decision 4/CMP.11. Available at <http://unfccc.int/resource/docs/2015/cmp11/eng/08a01.pdf#page=30>.

Intergovernmental Panel on Climate Change. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Available at <http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html>.

Intergovernmental Panel on Climate Change. 2014. *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol*. Available at <http://www.ipcc-nggip.iges.or.jp/public/kpsg>.

Intergovernmental Panel on Climate Change. 2014. *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*. Available at <http://www.ipcc-nggip.iges.or.jp/public/wetlands/index.html>.

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

Responses to questions during the review were received from Ms. Szemesová (Slovak Hydrometeorological Institute), including additional material on the methodology and assumptions used.



## 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
CRF	common reporting format
ERT	expert review team
FMRL	forest management reference level
GHG	greenhouse gas
ha	hectare
HFC	hydrofluorocarbon
HWP	harvested wood products
IPPU	industrial processes and product use
kt	kilotonne
LULUCF	land use, land-use change and forestry
m	metre
Mt	megatonne
NA	not applicable
NF <sub>3</sub>	nitrogen trifluoride
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
t	tonne
UNFCCC	United Nations Framework Convention on Climate Change

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