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Report on the review of the report to facilitate the calculation of the emissions budget for the period 2013–2020 of New Zealand

Note by the expert review team

Summary

According to decision 2/CMP.8, each Party with a quantified emission limitation or reduction commitment inscribed in the third column of Annex B to the Kyoto Protocol, as contained in annex I to decision 1/CMP.8 (the Doha Amendment), shall submit to the secretariat a report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol. New Zealand does not have such a commitment; however, it submitted a report to facilitate the calculation of its emissions budget for the period 2013–2020 containing information relating to its base year as well as other relevant information. The Subsidiary Body for Scientific and Technological Advice, at its forty-first session, took note that a Party included in Annex I to the Convention that is a Party to the Kyoto Protocol with a commitment inscribed in the second column, but not in the third column, of the table contained in Annex B in the Doha Amendment may request the expert review team to review, as part of its review of that Party's annual inventory for the first year of the second commitment period, information relating to that Party's base year. This report presents the results of the technical review of the above-mentioned report submitted by New Zealand, 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 26 September to 1 October 2016 in Bonn, Germany.

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I. Introduction¹

1. New Zealand does not have a quantified emission limitation or reduction commitment inscribed in the third column of Annex B to the Kyoto Protocol, as contained in annex I to decision 1/CMP.8 (the Doha Amendment), and, therefore, does not have to submit to the secretariat a report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol. Instead of submitting such a report, New Zealand submitted a report to facilitate the calculation of its emissions budget for the period 2013–2020 containing greenhouse gas inventory data for its base year. In accordance with the “Guidelines for review under Article 8 of the Kyoto Protocol”,² the expert review team (ERT) performed a review of this report in conjunction with the review of the annual report that New Zealand submitted for the first year of the second commitment period.³ The review took place from 26 September to 1 October 2016 in Bonn, Germany, and was coordinated by Mr. Nalin Srivastava and Mr. Jongikhaya Witi (UNFCCC secretariat). Table 1 provides information on the composition of the ERT that conducted the review of New Zealand.

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

Table 1

Composition of the expert review team that conducted the review of New Zealand

<i>Area of expertise</i>	<i>Name</i>	<i>Party</i>
Generalist	Mr. Manfred Ritter	Austria
	Ms. Melissa Weitz	United States of America
Energy	Ms. Kristien Aernouts	Belgium
	Mr. Constantin Harjeu	Romania
	Ms. Lungile Glodine Manzini	South Africa
	Mr. Vishwa Bandhu Pant	India
	Mr. Steve Smyth	Canada
IPPU	Mr. Thapelo Clifford Mohale Letete	South Africa
	Ms. Ingrid Person Rocha e Pinho	Brazil
Agriculture	Mr. Jorge Lam Alvarez	Peru
	Mr. Kingsley Kwako Amoako	Ghana
	Ms. Yue Li	China
LULUCF	Ms. Sekai Ngarize	Zimbabwe
	Mr. Walter Oyhantçabal	Uruguay
	Mr. Atsushi Sato	Japan

¹ At the time of publication of this report, New Zealand had submitted its instrument of ratification of the Doha Amendment; however, 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.

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

³ FCCC/ARR/2016/NZL.

<i>Area of expertise</i>	<i>Name</i>	<i>Party</i>
Waste	Ms. Fatma Betül Demirok	Turkey
	Mr. Excellent Hachileka	Zambia
	Mr. Hans Oonk	Netherlands
Lead reviewers	Mr. Vishwa Bandhu Pant	
	Ms. Melissa Weitz	

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

II. Summary of the reporting on information in the emissions budget

3. Table 2 provides a summary of the ERT’s assessment of the reporting of the information relating to New Zealand’s base year as well as other information contained in the report to facilitate the calculation of the emissions budget for the period 2013–2020. Key data and elections by the Party are included in table 4. The data elements contained in table 4 were designed to convey information for Parties with a quantified emission limitation or reduction commitment inscribed in the third column of Annex B in the Doha Amendment. As New Zealand has not made such a commitment, several entries in table 4 are labelled as “NA” (not applicable).

Table 2

Expert review team’s assessment of the reporting of information by New Zealand in its report to facilitate the calculation of the emissions budget

<i>Item</i>	<i>Comment</i>	
<i>General Party information</i>		
Date of submission		Original submission: 29 July 2016
Are there any missing categories or issues related to completeness ^a in the reporting of GHG emissions by sources and removals by sinks for the base year or period?	Yes	See document FCCC/ARR/2016/NZL
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 ₃ ?	Yes	See annex I, table 4
<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?	NA	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	NA	For further information,

<i>Item</i>	<i>Comment</i>	
commitment period and average annual emissions for the first three years of the first commitment period, multiplied by eight?		see ID#1 in table 3
Has the Party indicated in the original submission the approach ^b used to calculate average annual emissions for the first three years of the first commitment period?	NA	For further information, see ID#1 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 base year?	No	See annex I, table 4
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 13/CMP.1, paragraph 8 quinquies, and decision 1/CMP.8, paragraph 18?	NA	For further information, see ID#1 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?	Yes	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?	NA	
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
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
Did the Party indicate whether it intends to apply the	Yes	See annex I, table 4

<i>Item</i>	<i>Comment</i>	
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?		
<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
	[delete line]	

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.

^a 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*.

^b 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 the conclusions of the Subsidiary Body for Scientific and Technological Advice at its forty-first session⁴ and the “Guidelines for review under Article 8 of the Kyoto Protocol”,⁵ the review of the information relating to New Zealand’s base year, as well as other information contained in the report to facilitate the calculation of the emissions budget for the period 2013–2020, has been undertaken together with the review of the inventory submission for the first year of the second commitment period.⁶ Table 3

⁴ FCCC/SBSTA/2014/5, paragraph 84.

⁵ Decision 22/CMP.1 and its annex and any revisions contained in decision 4/CMP.11 and its annex I.

⁶ The annual review report on the 2015 inventory submission of New Zealand is available at <<http://unfccc.int/resource/docs/2016/arr/nzl.pdf>>.

contains additional information, if any, to support the ERT's assessment included in table 2 above.

Table 3

Additional findings of the expert review team, if any, related to New Zealand's reporting of information in its report to facilitate the calculation of the emissions budget

<i>ID#</i>	<i>Finding classification</i>	<i>Description of the finding</i>	<i>Classification of problem</i>
1.	General	New Zealand does not have a quantified emission limitation or reduction commitment inscribed in the third column of Annex B to the Kyoto Protocol, as contained in the annex to decision 1/CMP.8. Therefore, the Party was not required to submit a report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol	Not a problem
2.	Accounting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol	New Zealand reported a forest management cap amount in its report to facilitate the calculation of the emissions budget using the base year GHG emissions excluding LULUCF from the 2016 submission. The ERT notes that in the CRF table "Accounting" of the 2016 submission, the forest management cap is reported as "NE" and the Party notes in the corresponding cell that this value will be reported once the emissions for the base year have been confirmed following the review of New Zealand's report to facilitate the calculation of the emissions budget	Not a problem

Abbreviations: CRF = common reporting format, ERT = expert review team, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, NE = not estimated.

IV. Questions of implementation

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

Annex I

Key relevant data for New Zealand

1. Table 4 provides key data and parameters for, and elections by, New Zealand, 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 emissions budget, unless otherwise specified.

Table 4

Key relevant data for New Zealand

<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
New Zealand's QELRC in the second commitment period	NA. New Zealand does not have a QELRC in the second commitment period of the Kyoto Protocol
Has the Party reached an agreement under Article 4 of the Kyoto Protocol to fulfil its commitments jointly with other Parties?	No
Base year	1990
Base year for HFCs, PFCs and SF ₆	1990
Base year for NF ₃	1990
Base year emissions, as reported by the Party and agreed by the ERT	65 828 380 t CO ₂ eq
<i>Information related to the calculation of the assigned amount and the commitment period reserve</i>	
Assigned amount, as reported by the Party	NA
Approach used to calculate the average annual emissions for the first three years of the first commitment period	NA
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	NA
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, final value, as calculated by the ERT	NA

<i>Key information or parameter provided</i>	<i>Comment</i>
Commitment period reserve, as reported by the Party	NA
<i>Information related to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol</i>	
LULUCF parameters	Minimum tree crown cover: 30% Minimum land area: 1 ha Minimum tree height: 5 m
Elections under Article 3, paragraphs 3 and 4, of the Kyoto Protocol:	
(i) Afforestation/reforestation	NA
(ii) Deforestation	NA
(iii) Forest management	NA
(iv) Cropland management	Not elected
(v) Grazing land management	Not elected
(vi) Revegetation	Not elected
(vii) Wetland drainage and rewetting	Not elected
FMRL	11.150 Mt CO ₂ eq/year
Technical corrections to the FMRL as reported in the original submission and agreed by the ERT	-17.245 Mt CO ₂ eq/year
3.5% of total base-year GHG emissions, excluding LULUCF and including indirect CO ₂ 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 ₂ emissions, final value, as calculated by the ERT	2 303.993 kt CO ₂ eq
3.5 per cent of total base-year GHG emissions, excluding LULUCF and including indirect CO ₂ emissions, multiplied by eight, as reported by the Party in the original submission and agreed by the ERT	18 431.946 kt CO ₂ eq
Will the Party exclude emissions from natural disturbances in accounting for:	
(a) Afforestation and reforestation	Yes

<i>Key information or parameter provided</i>	<i>Comment</i>
(b) Forest management	Yes

Abbreviations: CRF = common reporting format, ERT = expert review team, FMRL = forest management reference level, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, NA = not applicable, QELRC = quantified emission limitation or reduction commitment.

2. Tables 5–7 provide an overview of total greenhouse gas emissions and removals as submitted by New Zealand. 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 New Zealand, base year^a–2014^b
 (kt CO₂ eq)

<i>Year</i>	<i>Total GHG emissions excluding indirect CO₂ emissions</i>		<i>Total GHG emissions including indirect CO₂ emissions^c</i>		<i>Land-use change (Article 3.7 bis as contained in the Doha Amendment)^d</i>
	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>	
Base year	36 900.71	65 828.38	36 900.71	65 828.38	NA
1990	36 900.71	65 828.38	36 900.71	65 828.38	
1995	41 242.61	69 641.42	41 242.61	69 641.42	
2000	45 946.55	76 384.69	45 946.55	76 384.69	
2010	49 675.93	78 942.29	49 675.93	78 942.29	
2011	50 750.13	78 941.52	50 750.13	78 941.52	
2012	54 924.59	80 890.36	54 924.59	80 890.36	
2013	55 257.85	80 298.33	55 257.85	80 298.33	
2014	56 689.61	81 104.43	56 689.61	81 104.43	

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

^a Base year refers to the base year under the Kyoto Protocol, which is 1990 for all gases, including NF₃.

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

^c The Party has not reported indirect CO₂ emissions in common reporting format table 6.

^d The value reported in this column refers to 1990.

Table 6

Greenhouse gas emissions by gas for New Zealand, excluding land use, land-use change and forestry, 1990–2014^a(kt CO₂ eq)

	<i>CO₂</i> ^b	<i>CH₄</i>	<i>N₂O</i>	<i>HFCs</i>	<i>PFCs</i>	<i>Unspecified mix of HFCs and PFCs</i>	<i>SF₆</i>	<i>NF₃</i>
1990	25 419.77	32 157.59	7 326.59	NA, NO	909.93	NA	14.50	NA
1995	28 143.46	33 311.65	7 961.71	57.85	149.75	NA	17.01	NA
2000	32 355.96	35 269.02	8 429.22	252.90	67.61	NA	9.99	NA
2010	35 017.24	34 057.87	8 638.07	1 162.57	47.39	NA	19.15	NA
2011	34 366.58	34 235.49	8 808.48	1 479.43	35.15	NA	16.39	NA
2012	35 621.03	34 720.82	9 007.09	1 474.59	47.46	NA	19.38	NA
2013	35 094.29	34 615.50	9 003.29	1 518.45	48.13	NA	18.67	NA
2014	35 616.99	34 813.01	9 065.96	1 517.23	73.41	NA	17.83	NA
Per cent change 1990–2014	40.1	8.3	23.7	NA	-91.9	NA	23.0	NA

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

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

^b New Zealand did not report indirect CO₂ emissions in common reporting format table 6.

Table 7
Greenhouse gas emissions by sector for New Zealand, 1990–2014^{a, b}
 (kt CO₂ eq)

	<i>Energy</i>	<i>IPPU</i>	<i>Agriculture</i>	<i>LULUCF</i>	<i>Waste</i>	<i>Other^c</i>
1990	23 793.17	3 578.87	34 351.10	-28 927.67	4 105.24	NA
1995	25 905.15	3 201.91	36 162.29	-28 398.82	4 372.08	NA
2000	30 019.99	3 458.36	38 306.36	-30 438.14	4 599.97	NA
2010	32 198.49	4 654.49	37 713.23	-29 266.37	4 376.08	NA
2011	31 321.34	4 931.29	38 426.14	-28 191.39	4 262.76	NA
2012	32 430.17	4 920.76	39 347.53	-25 965.78	4 191.91	NA
2013	31 853.01	5 050.76	39 278.52	-25 040.48	4 116.03	NA
2014	32 240.22	5 193.58	39 585.25	-24 414.82	4 085.37	NA
Per cent change 1990–2014	35.5	45.1	15.2	-15.6	-0.5	NA

Abbreviations: IPPU = industrial processes and product use, LULUCF = land use, land-use change and forestry, NA = not applicable.

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

^b New Zealand did not report indirect CO₂ emissions in common reporting format table 6.

^c New Zealand did not complete the CRF tables for the sector other. In the 2014 annual submission, the sector other was reported as “NA”.

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>.

“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. Olia Glade (Ministry for the Environment), including additional material on the methodology and assumptions used. The following documents¹ were also provided by New Zealand:

Beca. 2007. *National Greenhouse Gas Inventory from Wastewater Treatment and Discharge*. Wellington: Ministry for the Environment. Report no. 2390956/100/TEN Rev B.

Copplestone and Kirk. 2015. *Ammonia and Urea Production*. Available at <<http://nzic.org.nz/ChemProcesses/production/1A.pdf>>.

CRL Energy Ltd. 2015. *Inventory of HFC, SF₆ and Other Industrial Process Emissions for New Zealand 2014*. Wellington: Ministry for the Environment. Report no. 15-11042.

Glade, O. 2016. Uncertainty tables gross and net with calculations. Spreadsheet available from the Ministry for the Environment.

¹ Reproduced as received from the Party.

Annex III

Acronyms and abbreviations

CH ₄	methane
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO ₂	carbon dioxide
CO ₂ eq	carbon dioxide equivalent
CRF	common reporting format
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	megatonne
NA	not applicable
NE	not estimated
NF ₃	nitrogen trifluoride
NO	not occurring
N ₂ O	nitrous oxide
PFC	perfluorocarbon
SF ₆	sulphur hexafluoride
UNFCCC	United Nations Framework Convention on Climate Change