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Report of the technical review of the second biennial report of the Netherlands

According to decision 2/CP.17, developed country Parties are requested to submit their second biennial reports by 1 January 2016, that is, two years after the due date for submission of a full national communication. This report presents the results of the technical review of the second biennial report of the Netherlands, conducted by an expert review team in accordance with the "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".

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Contents

I. Introduction and summary

A. Introduction

1. This report covers the centralized technical review of the second biennial report (BR2)[1] of the Netherlands. The review was organized by the secretariat in accordance with the "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", particularly "Part IV: UNFCCC guidelines for the technical review of biennial reports from Parties included in Annex I to the Convention" (annex to decision 13/CP.20). In accordance with the same decision, a draft version of this report was communicated to the Government of the Netherlands, which provided comments that were considered and incorporated, as appropriate with revisions, into this final version of the report.

2. The review took place from 7 to 12 March 2016 in Bonn, Germany, and was conducted by the following team of nominated experts from the UNFCCC roster of experts: Mr. Liviu Gheorghe (Romania), Ms. Pia Paola Huber (Austria), Ms. Tugba Icmeli (Turkey), Mr. Peter Aarup Iversen (Denmark), Ms. Karin Kindbom (Sweden), Mr. Hans Halvorson Kolshus (Norway), Ms. Julia Meisel (United States of America), Mr. Eric Kamoga Mugurusi (United Republic of Tanzania), Ms. Lilian Portillo (Paraguay), Mr. Janis Rekis (Latvia), Mr. Orlando Ernesto Rey (Cuba) and Mr. Ching Tiong Tan (Malaysia). Ms. Icmeli and Mr. Tan were the lead reviewers. The review was coordinated by Ms. Barbara Muik and Mr. Nalin Srivastava (UNFCCC secretariat).

B. Summary

3. The expert review team (ERT) conducted a technical review of the information reported in the BR2 of the Netherlands, in accordance with the "UNFCCC biennial reporting guidelines for developed country Parties" (hereinafter referred to as the UNFCCC reporting guidelines on BRs). During the review, the Netherlands provided the following additional relevant information: the challenges involved in fully disaggregating policies and measures (PaMs) by sector or by gas; clarification of the sectoral coverage, and the factors and activities used in the projections; clarification of how new and additional financial resources are determined; and support for the development and enhancement of the endogenous capacities and technologies of Parties not included in Annex I to the Convention (non-Annex I Parties).

1. Timeliness

4. The BR2 was submitted on 29 December 2015, before the deadline of 1 January 2016 mandated by decision 2/CP.17. The common tabular format (CTF) tables were submitted on 29 December 2015.

2. Completeness, transparency of reporting and adherence to the reporting guidelines

5. Issues and gaps related to the reported information identified by the ERT are presented in table 1 below. The information reported by the Netherlands in its BR2 is

[1] The biennial report submission comprises the text of the report and the common tabular format (CTF) tables. Both the text and the CTF tables are subject to the technical review.

mostly in adherence with the UNFCCC reporting guidelines on BRs as per decision 2/CP.17.

Table 1

Summary of completeness and transparency issues related to mandatory reported information in the second biennial report of the Netherlands

Section of the biennial report	*Completeness*	*Transparency*	*Paragraphs with recommendations*
Greenhouse gas emissions and trends	Complete	Transparent	–
Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target	Complete	Transparent	–
Progress in achievement of targets	Mostly complete	Mostly transparent	24, 39, 44, 47, 48
Provision of support to developing country Parties	Mostly complete	Mostly transparent	79, 914

Note: A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in chapter III.

II. Technical review of the reported information

A. All greenhouse gas emissions and removals related to the quantified economy-wide emission reduction target

6. The Netherlands has provided a summary of information on greenhouse gas (GHG) emission trends for the period 1990–2013 in its BR2 and CTF tables 1(a)–(d). The BR2 makes reference to the national inventory arrangements, which are explained in more detail in the national inventory report included in the 2015 annual inventory submission of the Netherlands (in chapter 1.2). The national inventory arrangements were established in accordance with the reporting requirements related to national inventory arrangements contained in the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories" that are required by paragraph 3 of the UNFCCC reporting guidelines on BRs. Further, the Netherlands provided information on changes in the national inventory arrangements since its first biennial report (BR1).

7. The information reported in the BR2 on emission trends is consistent with that reported in the 2015 annual inventory submission of the Netherlands. To reflect the most recently available data, version 1 of the 2015 annual inventory submission of the Netherlands has been used as the basis for discussion in chapter II.A of this review report.

8. In accordance with the Greenhouse Gas Monitoring Act (2005), the Ministry of Infrastructure and the Environment has assigned overall responsibility for the national inventory to the Netherlands Enterprise Agency,[2] designating it as the single national entity ("National Inventory Entity"). The Greenhouse Gas Monitoring Act was amended in 2014. The changes in the national inventory arrangements since the BR1 include: the replacement of the Monitoring Protocols based on the methodologies from the *Revised 1996 IPCC*

[2] See <RVO.nl>.

Guidelines for National Greenhouse Gas Inventories, previously published in the Government Gazette, with methodology reports based on the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* now published on the Netherlands Enterprise Agency website;[3] the designation of the national system under the Kyoto Protocol as the system to be used for the preparation of the national inventory under the Convention (i.e. the "national inventory arrangement"); and the merger of the NL Agency with another governmental organization (Dienst Regelingen) to form the Netherlands Enterprise Agency.

9. Total GHG emissions[4] excluding emissions and removals from land use, land-use change and forestry (LULUCF) decreased by 10.8 per cent between 1990 and 2013, whereas total GHG emissions including net emissions and removals from LULUCF decreased by 10.3 per cent over the same period. The carbon dioxide (CO_2) emissions (excluding LULUCF) increased by 3.6 per cent between 1990 and 2013. The decrease in the total GHG emissions can be attributed mainly to non-CO_2 emissions, which decreased by 49.9 per cent (excluding LULUCF) between 1990 and 2013. In particular, over this period, emissions of methane (CH_4) decreased by 41.6 per cent, while emissions of nitrous oxide (N_2O) decreased by 55.7 per cent. The combined fluorinated gases, such as perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulphur hexafluoride (SF_6), decreased by 69.9 per cent over this period.

10. The emission trends were driven mainly by the decrease in non-CO_2 emissions in the industrial processes and product use, agriculture and waste sectors owing to the impacts of PaMs, which offset the increase in CO_2 emissions from the energy and industry sectors stemming from economic expansion and population increase since 1990.

11. The ERT noted that, during the period 1990–2013, the gross domestic product (GDP) per capita of the Netherlands increased by 38.4 per cent, while GHG emissions per GDP unit and GHG emissions per capita decreased by 42.6 and 20.6 per cent, respectively. The ERT also noted that during 2013, GHG emissions per GDP increased by 0.5 per cent, while GDP per capita decreased by 1 per cent. Table 2 below illustrates the emission trends by sector and some of the economic indicators relevant to GHG emissions for the Netherlands.

Table 2
Greenhouse gas emissions by sector and some indicators relevant to greenhouse gas emissions for the Netherlands for the period 1990–2013

	GHG emissions (kt CO_2 eq)					*Change (%)*		*Share by sector (%)*	
Sector	*1990*	*2000*	*2010*	*2012*	*2013*	*1990–2013*	*2012–2013*	*1990*	*2013*
1. Energy	154 602.58	165 113.32	178 955.41	162 661.51	162 296.81	5.0	–0.2	70.4	82.9
A1. Energy industries	53 355.14	64 260.59	67 111.64	60 810.88	60 648.19	13.7	–0.3	24.3	31.0
A2. Manufacturing industries and construction	31 099.63	25 558.75	25 566.75	24 122.88	22 979.80	–26.1	–4.7	14.2	11.7
A3. Transport	29 136.82	35 605.13	37 851.07	36 709.32	35 601.02	22.2	–3.0	13.3	18.2

[3] <http://english.rvo.nl/topics/sustainability/national-inventory-entity>.

[4] In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of carbon dioxide equivalent excluding land use, land-use change and forestry, unless otherwise specified. Values in this paragraph are calculated based on the 2015 inventory submission, version 1.

Sector	GHG emissions (kt CO_2 eq)					Change (%)		Share by sector (%)	
	1990	*2000*	*2010*	*2012*	*2013*	*1990–2013*	*2012–2013*	*1990*	*2013*
A4.–A5. Other	37 873.83	38 035.38	45 514.52	39 068.71	40 567.46	7.1	3.8	17.3	20.7
B. Fugitive emissions from fuels	3 137.16	1 653.47	2 911.43	1 949.72	2 500.34	–20.3	28.2	1.4	1.3
C. CO_2 transport and storage	NO	NO	NO	NO	NO	NA	NA	NA	NA
2. IPPU	24 821.01	22 391.66	11 845.77	11 635.13	11 415.79	–54.0	–1.9	11.3	5.8
3. Agriculture	25 280.11	21 242.11	18 490.16	17 964.85	18 278.22	–27.7	1.7	11.5	9.3
4. LULUCF	5 671.22	6 196.61	5 923.34	6 175.60	6 236.52	10.0	1.0	–	–
5. Waste	14 773.35	10 218.94	4 500.30	4 006.50	3816.21	–74.2	–4.7	6.7	1.9
6. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indirect CO_2	1 062.72	525.54	347.56	338.12	329.28	–69.0	–2.6	NA	NA
Total GHG emissions without LULUCF	**219 477.06**	**218 966.02**	**213 791.64**	**196 267.99**	**195 807.03**	**–10.8**	**–0.2**	**100.0**	**100.0**
Total GHG emissions with LULUCF	**225 148.28**	**225 162.63**	**219 714.98**	**202 443.58**	**202 043.55**	**–10.3**	**–0.2**	**NA**	**NA**
Total GHG emissions without LULUCF, including indirect CO_2	**220 539.78**	**219 491.56**	**214 139.20**	**196 606.11**	**196 136.31**	**–11.1**	**–0.2**	**100.0**	**100.0**
Total GHG emissions with LULUCF, including indirect CO_2	**226 211.00**	**225 688.17**	**220 062.54**	**202 781.71**	**202 372.83**	**–10.5**	**–0.2**	**NA**	**NA**
Indicators									
GDP per capita (thousands 2011 USD using PPP)	27.81	35.71	39.19	38.88	38.49	38.4	–1.0	NA	NA
GHG emissions without LULUCF per capita (t CO_2 eq)	14.68	13.75	12.87	11.71	11.65	–20.6	–0.5	NA	NA
GHG emissions without LULUCF per GDP unit (kg CO_2 eq per 2011 USD using PPP)	0.53	0.39	0.33	0.30	0.30	–42.6	0.5	NA	NA

Sources: (1) GHG emission data: the 2015 annual inventory submission of the Netherlands, version 1; (2) GDP per capita data: World Bank.

Note: The ratios per capita and per GDP unit as well as the changes in emissions and the shares by sector are calculated relative to total GHG emissions without LULUCF using the exact (not rounded) values, and may therefore differ from the ratio calculated with the rounded numbers provided in the table.

Abbreviations: GDP = gross domestic product, GHG = greenhouse gas, IPPU = industrial processes and product use, LULUCF = land use, land-use change and forestry, NA = not applicable, NO = not occurring, PPP = purchasing power parity.

B. Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target

12. In its BR2 and CTF tables 2(a)–(f), the Netherlands reported a description of its target, including associated conditions and assumptions. CTF tables 2(a)–(f) contain the required information in relation to the description of the Party's emission reduction target, such as: the base year; the period for reaching the target; the gases and sectors covered; the global warming potential (GWP) values; the approach to counting emissions and removals from LULUCF; and the use of units from market-based mechanisms. Further information on the target and the assumptions, conditions and methodologies related to the target is provided in chapter 3 of the BR2 and in the report of the technical review of the first biennial report (see paras. 13 and 14 below).

13. For the Netherlands, the Convention entered into force on 21 March 1994. Under the Convention, the Netherlands committed to contributing to the achievement of the joint European Union (EU) economy-wide emission reduction target of 20 per cent below the 1990 level by 2020. The EU offered to move to a 30 per cent reduction on the condition that other developed countries commit to a comparable target and developing countries contribute according to their responsibilities and respective capabilities under a new global climate change agreement.

14. The target for the EU and its member States is formalized in the EU 2020 climate and energy package. This legislative package regulates emissions of CO_2, CH_4, N_2O, HFCs, PFCs and SF_6 using GWP values from the Intergovernmental Panel on Climate Change Fourth Assessment Report (AR4) to aggregate the GHG emissions of the EU up to 2020. Emissions and removals from the LULUCF sector are not included in the quantified economy-wide emission reduction target under the Convention. The EU generally allows its member States to use units from the Kyoto Protocol mechanisms as well as new market mechanisms for compliance purposes, subject to a number of restrictions in terms of origin and type of project and up to an established limit. Companies can make use of such units to fulfil their requirements under the European Union Emissions Trading System (EU ETS).

15. The EU 2020 climate and energy package includes the EU ETS and the effort-sharing decision (ESD) (see chapter II.C.1 below). Further information on this package is provided in chapter 3 of the BR2. The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors. For the period 2013–2020, an EU-wide cap has been put in place with the goal of reducing emissions by 21 per cent below the 2005 level by 2020. Emissions from sectors covered by the ESD are regulated by targets specific to each member State, which leads to an aggregate reduction at the EU level of 10 per cent below the 2005 level by 2020.

16. Under the ESD, the Netherlands has a target to reduce its total emissions to 16 per cent below the 2005 level by 2020 from sectors covered by the ESD (non-ETS sectors). National emission targets for the non-ETS sectors for 2020 have been translated into binding quantified annual emission allocations (AEAs) for the period 2013–2020. The Netherlands' AEAs change following a linear path from 122,948.13 kt CO_2 eq in 2013 to 107,042.71 kt CO_2 eq in 2020.[5]

[5] European Commission decision 2013/162/EU 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" and European Commission implementing decision 2013/634/EU 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".

17. In response to an encouragement made in the previous review report, the Netherlands has translated the target for the non-ETS sectors for 2020 into sectoral targets for CO_2 emissions in the energy, industry, transport, built environment and agriculture sectors and for non-CO_2 emissions in the agriculture and other sectors and has also provided information on the ministries responsible for their achievement. According to the information provided in the BR2, although the Netherlands is projected to reduce its GHG emissions by a greater amount than is required under the ESD, the Government announced that any surplus AEAs for the period 2013–2020 will be cancelled and will not be carried over beyond 2020.

C. Progress made towards the achievement of the quantified economy-wide emission reduction target

18. This chapter provides information on the review of the reporting by the Netherlands on the progress made in reducing emissions in relation to the target, mitigation actions taken to achieve its target, and the use of units from market-based mechanisms and LULUCF.

1. Mitigation actions and their effects

19. In its BR2 and CTF table 3, the Netherlands reported on its progress in the achievement of its target and the mitigation actions implemented before and since its sixth national communication (NC6) and BR1 to achieve its target. The Netherlands has provided information on mitigation actions introduced to achieve its target. The BR2 includes information on mitigation actions organized by sector and by gas. Further information on the mitigation actions related to the Party's target is provided in chapter 4 of the BR2 and CTF table 3.

20. This report highlights the changes made since the publication of the Party's NC6 and BR1. In its BR2, the Netherlands provided information on changes in its domestic institutional arrangements, including institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of the progress made towards its target.

21. The significant changes since the BR1 include the introduction of the Regulation on Offshore Wind Energy (2015), the Implementation Regulation on the Offshore Wind Energy Act (2015) and the EU CO_2 vehicle emission performance standards (2015).[6] The second phase of the smart meter roll-out, which started in 2015, aims to have smart meters fitted in at least 80 per cent of households and small businesses by 2020, as mandated by the EU climate and energy package. Under the EU CO_2 vehicle emission performance standards, beginning in 2015, the average CO_2 emissions of newly registered cars in 100 per cent of each manufacturer's fleet will have to comply with the limits set by the legislation (130 and 175 g/km for light-duty and light commercial vehicles, respectively). Further, from 2015 onwards, a government decision mandates that new non-residential buildings should be 50 per cent more energy efficient than mandated by the 2007 standards.

22. The BR2 and CTF table 3 do not include the information required by the UNFCCC reporting guidelines on BRs on the mitigation impacts of mitigation actions for the LULUCF and waste sectors. Further, the mitigation impacts of many other mitigation actions (e.g. long-term agreements on energy efficiency and energy investment allowance scheme) have been reported together and the mitigation impacts of some mitigation actions (e.g. agreement and energy for sustainable growth and green deals) are reported as "IE"

[6] Regulation (EC) No. 443/2009 of the European Parliament and of the Council of 23 April 2009.

(included elsewhere) in the BR2 and CTF table 3 without specifying under which actions they are included.

23. During the review, the Netherlands explained that the mitigation impacts of cross-sectoral mitigation actions, such as the reduction programme for non-CO_2 GHGs, were reported together in CO_2 eq, as it was not practically feasible to further disaggregate them by sector or by gas. The Netherlands further informed the ERT that mitigation actions relating to sustainable forestry activities were included in the mitigation action, "Agrocovenant", reported under the agriculture sector, and the mitigation action for the waste sector was included in the cross-cutting mitigation action, "Reduction programme on reduction of non-CO_2 GHGs". The Netherlands also clarified that the mitigation impacts of the agreement on energy for sustainable growth, reported as "IE" in CTF table 3, were included under the aggregate mitigation impact reported for the mitigation actions, long-term agreements for industry, the energy investment allowance and the "More with less" covenants under built environment, while the mitigation impacts of the green deals were included under the aggregate mitigation impact of the mitigation actions, long-term agreements for industry and the "More with less" covenant.

24. The ERT recommends that the Netherlands increase the transparency of its reporting in the next biennial report (BR) submission by: reporting mitigation impacts of individual mitigation actions or by providing a transparent explanation in the BR where it is not possible to do so; and clearly specifying in the BR, under which mitigation impacts the mitigation actions reported as "IE" in the BR2 and CTF table 3 are included, and that the information on mitigation actions related to sustainable forestry activities is included in the "Agrocovenant" mitigation action, reported under the agriculture sector.

25. In response to an encouragement included in the previous review report, the Netherlands provided, to the extent possible, detailed information on the assessment of the economic and social consequences of its response measures in its BR2. The Netherlands explained that as an integral part of its foreign policy, its climate change policy seeks to contribute to resilient communities by addressing both mitigation and adaptation with a focus on the most vulnerable groups, including women (see para. 832 below).

26. The Netherlands supports the World Bank Partnership for Market Readiness to promote collective innovation and support implementation of market-based mechanisms, pledging USD 7.2 million thereto. The Netherlands has also made use of all the Kyoto Protocol market-based mechanisms. It is collaborating with various countries to share its expertise on water, food security and energy. All biofuels produced in the Netherlands comply with the sustainability criteria contained in the EU renewable energy directive.[7] The enhanced sustainability requirements of the subsidy scheme to stimulate sustainable energy production (SDE+) for the production of renewable energy prohibit the use of biomass that competes with food.

27. The Netherlands reported, to the extent possible, on the domestic arrangements established for the process of self-assessment of compliance with emission reductions required by science, and on the progress made in the establishment of national rules for taking action against non-compliance with emission reduction targets. The Netherlands explained that the Environmental Management Act designates the authorities responsible for the enforcement of legal measures and allows them to issue sanctions for violations. Likewise, in the event of violations of building permits under the Building Decree, municipal authorities have recourse to administrative and criminal sanctions.

[7] EU directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing directives 2001/77/EC and 2003/30/EC.

28. The key overarching cross-sectoral policy in the EU is the 2020 climate and energy package adopted in 2009, which includes the revised EU ETS and the ESD. This package is supplemented by renewable energy and energy efficiency legislation and legislative proposals on the 2020 targets for CO_2 emissions from cars and vans, the CO_2 capture and storage directive, and the general programmes for environmental conservation, namely the 7th Environment Action Programme and the Clean Air Policy Package (see table 3 below).

29. In operation since 2005, the EU ETS is a cap-and-trade system that covers all significant energy-intensive installations (mainly large point emissions sources such as power plants and industrial facilities), which produce 40–45 per cent of the GHG emissions of the EU. It is expected that the EU ETS will guarantee that the 2020 target (a 21 per cent emission reduction below the 2005 level) will be achieved for sectors under the scheme. The third phase of the EU ETS started in 2013 and the system now includes aircraft operations (since 2012) as well as N_2O emissions from chemical industries, PFC emissions from aluminium production and CO_2 emissions from industrial processes (since 2013).

30. The ESD became operational in 2013 and covers sectors outside the EU ETS, including transport (excluding domestic and international aviation, and international maritime transport), residential and commercial buildings, agriculture, waste and other sectors, together accounting for 55–60 per cent of the GHG emissions of the EU. The ESD aims to decrease GHG emissions in the EU by 10 per cent below the 2005 level by 2020 and includes binding annual targets for each member State for 2013–2020, which are underpinned by the national policies and actions of the member States (see para. 16 above).

31. At the national level, the Netherlands introduced policies to achieve its targets under the ESD and domestic emission reduction targets, including those for implementing the EU directives and decisions on climate and energy efficiency by transposing them into national PaMs. The key policies reported in the BR2 are: the fiscal incentives for environmentally friendly investments comprising the arbitrary depreciation of environmental investments (VAMIL), environmental investment allowances (MIA) and energy investment allowances (EIA);[8] the agreement on energy for sustainable growth;[9] the long-term agreements on energy efficiency;[10] the reduction programme for non-CO_2 GHGs; stimulation of sustainable energy production (SDE+);[11] the national PaMs implementing the EU ecodesign directive and intensifying the ecodesign directive (built environment);[12] the EU decision on use of biofuels as renewable energy for transport; and the "Agrocovenant".

32. The mitigation effect of SDE+, the subsidy scheme to stimulate renewable energy production, is the most significant. Other policies that are expected to have significant emission reductions are VAMIL/MIA/EIA, the long-term agreements on energy efficiency, the PaMs implementing the EU ecodesign directive and the reduction programme for non-CO_2 GHGs.

33. The PaMs put in place by the Netherlands include both cross-sectoral and sectoral PaMs comprising a variety of instruments such as regulatory instruments, voluntary agreements, fiscal measures and performance standards. The focus of the PaMs is on transition to a sustainable energy system through the promotion of investment in energy efficiency and renewable energy through measures such as VAMIL/MIA/EIA, SDE+ and the agreement on energy for sustainable growth, which is a cross-sectoral agreement with

[8] <http://www.rvo.nl/subsidies-regelingen/miavamil/milieulijst>.

[9] <https://www.government.nl/topics/energy-policy/contents/energy-agreement-for-sustainable-growth>.

[10] <http://iepd.iipnetwork.org/policy/long-term-agreement-energy-efficiency-eu-ets-enterprises-lee>.

[11] <http://english.rvo.nl/subsidies-programmes/sde>.

[12] <http://ec.europa.eu/growth/industry/sustainability/ecodesign/index_en.htm>.

the participation of over 40 governmental and non-governmental parties, including employers, trade unions and environmental organizations, to promote the transition to sustainable energy through energy efficiency, renewable energy and job creation. It aims at an average energy efficiency improvement of 1.5 per cent per year and a 14 per cent share of renewable energy in the total energy consumption of the Netherlands by 2020.

34. As part of its energy policy, the Dutch Government has concluded long-term agreements on energy efficiency with various industrial and non-industrial sectors over the period 2005–2020, comprising both large industrial companies participating in the EU ETS and other medium- and small-sized enterprises. The "Agrocovenant" is an agreement related to the agriculture and horticulture sectors, which aims to avoid 3,500–4,500 kt CO_2 eq of cumulative CO_2 emissions and 4,000–6,000 kt CO_2 eq of cumulative non-CO_2 emissions by 2020 compared to 1990, to improve average annual energy efficiency by 2 per cent over the period 2011–2020, and to produce 200 PJ of biomass and 12 PJ of wind energy by 2020.

35. Table 3 below provides a concise summary of the key mitigation actions and estimates of their mitigation effects reported by the Netherlands to achieve its target.

Table 3
Summary of information on mitigation actions and their impacts reported by the Netherlands

Sector affected	*List of key mitigation actions*	*Estimate of mitigation impact in 2020 (kt CO_2 eq)*
Policy framework and cross-sectoral measures	EU ETS [a]	IE
	Agreement on energy for sustainable growth [a]	IE
	Green deals[a]	IE
	Reduction programme for non-CO_2 greenhouse gases	1 770
	Maintaining the Environmental Protection Act in industry and the built environment	940
	EU F-gas regulation and various other measures (F-gases)	360
Energy, including:		
Transport	EU decision on the use of biofuels as renewable energy for transport	1 600
	Fiscal policy on car efficiency and EU directives on emission standards, green deals and fuel tax	1 400
Renewable energy	Scheme to stimulate sustainable energy production	13 910
Energy efficiency	Long-term agreements for energy efficiency[b]	IE
	Fiscal incentives for environmentally friendly investment[b]	IE
	Energy performance coefficients[b]	IE
	EU ecodesign directive and intensifying the	2 690

Sector affected	*List of key mitigation actions*	*Estimate of mitigation impact in 2020 (kt CO_2 eq)*
	ecodesign directive (built environment)	
	Smart metering (built environment)	360
	"More with less" covenant (social housing organizations) (built environment)	250
IPPU	Included in cross-sectoral PaMs	IE
Agriculture	"Agrocovenant" [b]	IE
	Emissions trading system in the horticulture sector	130
	Legislation on manure management	100
LULUCF	Nature policy	NE
Waste	National Waste Management Plan 2009–2021	NE

Note: The estimates of mitigation impact are estimates of emissions of carbon dioxide or carbon dioxide equivalent avoided in a given year as a result of the implementation of mitigation actions.

Abbreviations: EU = European Union, EU ETS = European Union Emissions Trading System, F-gas = fluorinated gas, IPPU = industrial processes and product use, IE = included elsewhere, LULUCF = land use, land-use change and forestry, NE = not estimated, PaMs = policies and measures.

[a] Mitigation impacts are included under the mitigation actions in individual sectors.

[b] Mitigation impacts are reported together for a cluster of mitigation actions.

36. In 2015, a Dutch court ruled that the Government should reduce national GHG emissions by 25 per cent below the 1990 level by 2020. The Government has to begin the implementation of this ruling pending a decision on the Government's appeal against it. An ongoing evaluation of the effectiveness of the GHG reduction measures will inform any additional mitigation steps required.

2. Estimates of emission reductions and removals and the use of units from the market-based mechanisms and land use, land-use change and forestry

37. The Netherlands reported in its BR2 and CTF tables 4, 4(a)I, 4(a)II and 4(b) its use of units from market-based mechanisms under the Convention and the contribution of LULUCF to achieving its target for 2013. Further relevant information on emissions and removals and the use of units is provided in chapter 4.14 of the BR2.

38. The Netherlands has not reported information on the base year or on the years 2010–2012 in CTF table 4 (reporting on progress). The value reported for total GHG emissions excluding LULUCF for 2013 (108,915.32 kt CO_2 eq) is the total emissions from the non-ETS sectors for that year. Further, CTF tables 4(a)I and 4(a)II are not filled in. During the review, in response to a question from the ERT, the Netherlands clarified that its reporting is in line with the UNFCCC reporting guidelines on BRs because the target for the Netherlands is part of the EU target under the Convention and under the ESD, the target for the Netherlands only covers the non-ETS emissions for the period 2013–2020.

39. The ERT, however, notes that according to the UNFCCC reporting guidelines for the BRs, Parties are required to report their total GHG emissions excluding LULUCF in CTF table 4. Thus, while noting that LULUCF is not part of the EU target under the Convention, the ERT recommends that the Netherlands improve the transparency of its

reporting in its next BR submission by including the information on total emissions excluding LULUCF for the base year and other years in CTF table 4, as required by the UNFCCC reporting guidelines on BRs, and by explaining in a footnote to CTF tables 4, 4(a)I and 4(a)II why it did not report the required information on the contribution from LULUCF.

40. For 2013, the Netherlands reported in CTF table 1 annual total GHG emissions excluding LULUCF of 195,807.03 kt CO_2 eq. In 2013, emissions from the non-ETS sectors relating to the target under the ESD were 108,915.32 kt CO_2 eq.

41. The Netherlands reported in its BR2 that it does not intend to use the contribution from LULUCF and units from market-based mechanisms towards the achievement of its 2020 target. Table 4 below illustrates the Party's total GHG emissions, the contribution of LULUCF and the use of units from market-based mechanisms to achieve its target.

Table 4
Summary of information on the use of units from market-based mechanisms and land use, land-use change and forestry as part of the reporting on the progress made by the Netherlands towards the achievement of its target

Year	*Emissions excluding LULUCF (kt CO2 eq)*	*Contribution from LULUCF (kt CO2 eq)a*	*Emissions including contribution from LULUCF (kt CO2 eq)*	*Use of units from market-based mechanisms (kt CO2 eq)*
1990	219 477.06	NA	NA	NA
2010	213 791.64	NA	NA	NA
2011	200 048.97	NA	NA	NA
2012	196 267.99	NA	NA	NA
2013	195 807.03	NA	NA	NA

Sources: The Netherlands' second biennial report and common tabular format tables 1, 4(a) I, 4(a)II and 4(b).

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

[a] The unconditional commitment of the European Union to reduce greenhouse gas emissions by 20 per cent below the 1990 level by 2020 does not include emissions and removals from LULUCF.

42. To assess the progress towards the achievement of the 2020 target, the ERT noted that the emission reduction target of the Netherlands from sectors not covered by the EU ETS sectors under the ESD is 16 per cent below the 2005 level by 2020 (see para. 16 above). As discussed in chapter II.B above, in 2013 the Party's emissions from the sectors not covered by the EU ETS are 108,915.32 kt CO_2 eq, or 11.4 per cent (14,032.81 kt CO_2 eq) below the AEAs under the ESD. The Party's provisional emissions from the non-ETS sectors for 2014 are 97,900 kt CO_2 eq, or 18.9 per cent below its AEA for that year. Based on the information reported in its BR2, the ERT concluded that the Netherlands is making progress towards its emission reduction target by implementing domestic mitigation actions.

3. Projections

43. The Netherlands reported in its BR2 and CTF table 6(a) updated projections for 2020 and 2030 relative to actual inventory data for the period 1990–2013 (including 1990, 1995, 2000, 2005, 2010 and 2013) under the 'with measures' (WEM) scenario. Projections are presented on a sectoral basis, using the same sectoral categories as used in the section on mitigation actions, and on a gas-by-gas basis for the following GHGs: CO_2, CH_4, N_2O,

PFCs, HFCs and SF_6 (treating PFCs and HFCs collectively in each case). Projections are also provided in an aggregated format for each sector as well as for a Party total, using GWP values from the AR4. Emission projections related to fuel sold to ships and aircraft engaged in international transport were reported separately and were not included in the totals. Further information on the projections is provided in chapter 5 of the BR2 and in this report (see paras. 61–69 below).

44. In its BR2, the Netherlands has not included the information on projections for the LULUCF sector in the WEM scenario, as required by the UNFCCC reporting guidelines on BRs. During the review, the Netherlands explained that it did not provide projections for the LULUCF sector as that sector is not included in the joint EU target. The ERT notes that, based on the UNFCCC reporting guidelines on BRs, reporting on projections is not restricted to sectors covered by a Party's quantified economy-wide emission reduction target as is the case for mitigation actions. The ERT recommends that the Netherlands improve the completeness of its reporting by including the projections for the LULUCF sector in its next BR submission.

45. The information on projections reported by the Netherlands in its BR2 lacks transparency with regard to the coverage of sectors and gases used for the projections and how the coverage relates to the sectors as reported in CTF table 6(a). For example, the BR2 presents the projections for CO_2 emissions from the energy and industry sectors together, whereas they are reported separately in CTF table 6(a). It is also not clear whether the projections of CO_2 emissions from energy consumption in the agriculture sector are included in the projections for the agriculture sector or in those for the energy sector in CTF table 6(a). The ERT noted that the information on projections of emissions for some gases for some sectors is not included in the BR2, whereas those emissions are included in the national totals in CTF table 6(a) (including projections of N_2O emissions in the energy and waste sectors and CH_4 emissions in the energy and industrial processes sectors). Furthermore, the sum of the projections for individual sectors in CTF table 6(a) is not the same as the projected national total GHG emissions reported in the same table.

46. During the review, the Netherlands clarified that the projections of CO_2 emissions from the industrial processes and agriculture sectors are included in the projections for the energy and agriculture sectors, respectively, in CTF table 6(a). The Party also clarified that although it provided the information on the inclusion of projected CO_2 emissions from energy consumption in the agriculture sector in CTF table 6(a), owing to technical issues with the CTF system, this information was not included in the version made available to the ERT. In addition, the Party explained that the projected national total GHG emissions were also incorrectly calculated owing to technical issues with the CTF system.

47. While noting the explanation provided by the Party, the ERT recommends that the Netherlands enhance the transparency of its reporting on projections by providing, in its next BR: a clear explanation of the sectoral coverage used for the projections and how the coverage relates to the sectors reported in CTF table 6(a); and projections for all the sectors and gases reported in CTF table 6(a).

48. The BR2 does not provide transparent information on the factors and activities for each sector, as required by the UNFCCC reporting guidelines on BRs. The BR2 only includes limited historical information on the factors and activities in the description of emission trends for each sector. During the review, the Netherlands provided additional information on the sectoral factors and activities for the years and scenarios used for the projections, including: the energy balance for 2020 and 2030 for the WEM and 'with additional measures' (WAM) scenarios; the CO_2 prices used in the ETS sectors in the WEM and WAM scenarios for the period 2000–2030; and the livestock numbers for the period 2005–2030. In order to enhance the transparency of its reporting, the ERT recommends that the Netherlands provide, in its next BR submission, information on the

factors and activities for each sector, in line with the information provided during the review.

49. In addition to the WEM scenario, the Netherlands reported in the BR2 and CTF table 6(c) on the WAM scenario. The projections are presented by sector and by gas in the same way as for the WEM scenario for the period 1990–2013 (including for 1990, 1995, 2000, 2005, 2010 and 2013). The Netherlands provided information, including supporting documentation, on the changes since the submission of its NC6/BR1 in the assumptions, methodologies, models and approaches used and on the key variables and assumptions used in the preparation of the projection scenarios using CTF table 5 (see paras. 50–52 below). The Netherlands also provided information on the sensitivity analysis of the projections and underlying assumptions.

50. The WAM scenario does not include the projections for the LULUCF sector. During the review, the Netherlands explained that it did not provide projections for the LULUCF sector as that sector is not included in the joint EU target. The ERT encourages the Netherlands to improve the completeness of its reporting by including projections for the LULUCF sector in its next BR submission.

51. In the BR2, the projections are not presented in tabular format by sector and by gas. As in the case of the WEM scenario, the information on projections is not transparent with regard to the coverage of sectors and gases used for the projections and how the coverage relates to the sectors as reported in CTF table 6(c), as well as the accuracy of the values used for the projections reported in CTF table 6(c) (see para. 45 above).

52. During the review, in response to a question raised by the ERT, the Netherlands provided information on the projections by sector and by gas in tabular format. The Netherlands also clarified the sectoral coverage used for the projections in the WAM scenario. The Party further clarified that as in the case of projections under the WEM scenario, although it provided the information on the inclusion of projected CO_2 emissions from energy consumption in the agriculture sector in CTF table 6(c), owing to technical issues with the CTF system, this information was not included in the version made available to the ERT. In addition, the Party explained that the projected national total GHG emissions were also incorrectly calculated owing to technical issues with the CTF system.

53. The ERT encourages the Netherlands to enhance the transparency of its reporting on projections by providing information on the projections by sector and by gas in tabular format in its next BR submission. In order to enhance the transparency of its reporting of projections under the WAM scenario, the ERT further encourages the Netherlands to provide, in its next BR submission: a clear explanation of the sectoral coverage used for the projections and how it relates to the sectors reported in CTF table 6(c); and projections for all sectors and gases reported in CTF table 6(c).

54. The information provided in the BR2 on the models or approaches used for the projections for sectors other than the energy sector, lacks transparency with regard to: the type of model or approach used and its characteristics; the summary of the strengths and weaknesses of the model or approach used; the original purpose for which the model or approach was designed and, if applicable, how it has been modified for climate change purposes; and how the model or approach used accounts for any overlap or synergies that may exist between different PaMs.

55. During the review, in response to a question raised by the ERT, the Netherlands provided additional information, elaborating on the models and assumptions used for the projections for other sectors. The ERT encourages the Netherlands to improve the transparency of its reporting on projections by including in its next BR submission information on the models or approaches used for each sector, including: the gases and sectors for which the model or approach was used; the type and characteristics of the model

or approach; a summary of the strengths and weaknesses of the model or approach used; and how the model or approach accounts for any overlap or synergies that may exist between different PaMs.

Overview of projection scenarios

56. The WEM scenario reported by the Netherlands includes implemented and adopted PaMs up to 1 May 2015. The Netherlands also reported a WAM scenario, which includes planned PaMs. The definition of the scenarios provided by the Party indicates that they have been prepared according to the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications".

Methodology and changes since the previous submission

57. The methodology used in the BR2 is different from that used for the preparation of the emission projections for the NC6/BR1. The Netherlands reported supporting information further explaining the methodologies and the changes made since the NC6/BR1. The projections of GHG emissions are developed as part of the Dutch national system for projections and reporting on PaMs established in 2015. The Energy Research Centre of the Netherlands has developed projections for the energy sector using the national energy outlook modelling system (NEOMS). NEOMS uses a combination of 12 energy models for the various sectors and sub-sectors (e.g. industry and agriculture, service, household and transport) to calculate the projections of energy demand, energy supply and emissions for the energy system and individual sectors based on historical data and assumptions regarding economic activity, energy market development, demography, technological development and PaMs.

58. According to the additional information provided by the Party during the review, the projections for the waste sector are developed using the same model as used for the GHG inventory. The projections for the other sectors are calculated based on the multiplication of projected activity data by emission factors.

59. To prepare its projections, the Netherlands relied on the following key underlying assumptions: population, population growth (per cent), international oil price, gas and coal prices, GDP growth rate and the number of households, as reported in CTF table 5. These assumptions have been updated on the basis of the most recent economic developments known at the time of the reporting on projections. In general, while the prices for energy resources and the CO_2 tax in the EU ETS sectors used for the GHG projections in the BR2 are lower than those used in the BR1 for 2020 and 2030, the population and GDP growth rates are slightly higher.

60. The Netherlands performed a sensitivity analysis of the projections for a combination of exogenous factors, including the economy, demography, fuel prices, CO_2 prices, technological development, human behaviour and PaMs, by estimating the overall uncertainty of the projections using a Monte Carlo analysis. As reported in the BR2, the uncertainty range for the total GHG emissions in 2020 and 2030 is 2 and 5 per cent, respectively, in both WEM and WAM projection scenarios.

Results of projections

61. The Party's total GHG emissions excluding LULUCF in 2020 and 2030 are projected to be 180,857.00 and 174,537.00 kt CO_2 eq, respectively, under the WEM scenario, which represents a decrease of 17.6 and 20.5 per cent, respectively, below the 1990 level. Under the WAM scenario, the Party's total GHG emissions in 2020 and 2030 are projected to be 178,357.00 kt and 173,037.00, respectively, representing a decrease of

18.7 and 21.2 per cent, respectively, below the 1990 level. The 2020 projections suggest that the Netherlands will continue contributing to the achievement of the EU target under the Convention (see para. 15 above).

62. The Party's target for the emissions from sectors covered by the ESD (non-ETS sectors) is to reduce its total emissions by 16 per cent below the 2005 level by 2020 (see para. 16 above). In its BR2, the Party has also separately reported projections for sectors covered by the EU ETS and non-ETS sectors under the WEM and WAM scenarios.

63. According to the projections under both WEM and WAM scenarios, emissions from the non-ETS sectors are estimated to decrease from 109,000 kt CO_2 eq in 2013 to 100,000 kt CO_2 eq in 2020 compared with its AEA for 2020 of 107,042.71 kt CO_2 eq. At the same time, owing to the planned mitigation actions affecting only the emissions from the sectors covered by the EU ETS in 2020, these emissions are projected to decrease from 87,000 kt CO_2 eq in 2013 to 81,000 and 79,000 kt CO_2 eq in 2020 under the WEM and WAM scenarios, respectively. Further, according to the BR2, the cumulative emissions of the Netherlands for 2013–2020 are projected to be 819,000 kt CO_2 eq, compared with aggregate AEAs for 2013–2020 of 919,963.37 kt CO_2 eq. The ERT noted that this suggests that the Netherlands expects to meet the target under the WEM scenario (see para. 16 above).

64. According to the projections reported for 2020 under the WEM scenario, the most significant emission reductions are expected to occur in the waste management/waste sector, followed by the industry/industrial processes sector and the energy sector amounting to projected reductions of 12,027.83 kt CO_2 eq (81.9 per cent), 11,341.46 kt CO_2 eq (71.9 per cent) and 10,784.58 kt CO_2 eq (8.6 per cent), between 1990 and 2020, respectively. The pattern of projected emissions reported for 2030 under the same scenario remains the same – waste management/waste sector (13,035.38 kt CO_2 eq, or 88.8 per cent), followed by the energy sector (12,870.84 kt CO_2 eq, or 10.3 per cent) and the industry/industrial processes sector (12,615.87 kt CO_2 eq, or 79.9 per cent). While GHG emissions from the transport subsector are projected to increase by 3,656.49 kt CO_2 eq (11.8 per cent) and 2,557.01 kt CO_2 eq (8.3 per cent) in 2020 and 2030, respectively, compared to the 1990 level.

65. Under the WEM scenario, the projected emission reductions for the waste sector stem from the impact of PaMs on improved waste management (e.g. reduction in the disposal of waste in landfills and reduction in the biogenic component of waste). Emissions in the energy and industry sectors, taken together, are also projected to decrease owing to the suite of implemented PaMs promoting investment in renewable energy and energy efficiency (e.g. SDE+, long-term agreements on energy efficiency and the energy investment allowance scheme).

66. If additional measures are considered (i.e. under the WAM scenario), the patterns of emission reductions by 2020 presented by sector and by gas slightly changes slightly. The energy sector becomes the most prominent source of reductions, followed by the waste management/waste sector. The projected emission growth in the transport subsector under the WAM scenario is less prominent (a 3,556.49 kt CO_2 eq, or 11.5 per cent increase, and a 1,757.01 kt CO_2 eq, or 5.7 per cent increase below the 1990 level by 2020 and 2030, respectively). Under the WAM scenario, the energy sector is projected to contribute more to emission reductions as it incorporates a more stringent enforcement of the Environmental Management Act under the energy agreement apart from the assumption of a slightly higher price for CO_2.

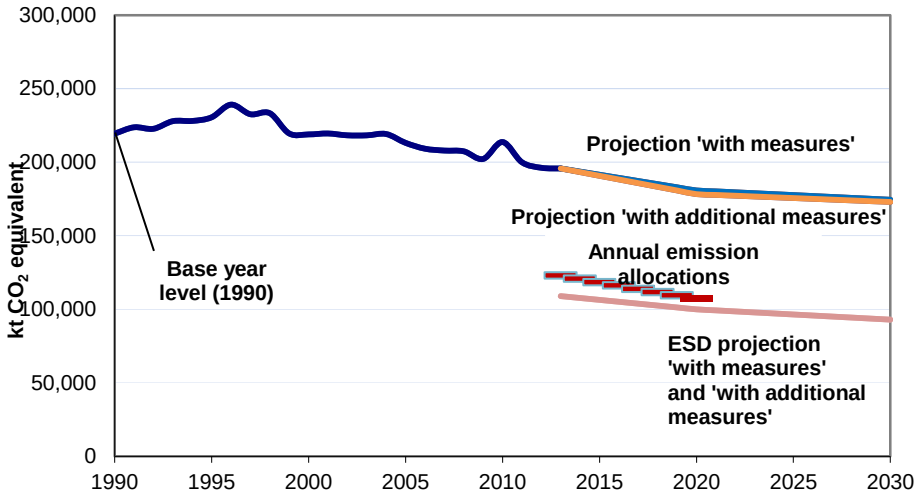
67. According to the projections presented by gas, reductions in CH_4 emissions are expected to contribute the most to the Party's overall emission reductions. Under the WEM scenario, reductions in CH_4 emissions will make up approximately 37.6 per cent of the aggregate GHG emission reductions below the 1990 level (14,535.51 kt CO_2 eq) by 2020,

followed by N_2O with 25.4 per cent (9,809.52 kt CO_2 eq) and CO_2 with 20.9 per cent (8,056.27 kt CO_2 eq). In 2030, reductions in CH_4 emissions will make up approximately 35.2 per cent of the aggregate GHG emission reductions below the 1990 level (15,835.51 kt CO_2 eq), followed by CO_2 with 26.6 per cent (11,956.27 kt CO_2 eq) and N_2O with 21.8 per cent (9,809.52 kt CO_2 eq).

68. Under the WAM scenario, reductions in CH_4 emissions will make up approximately 35.1 per cent of the aggregate GHG emission reductions below the 1990 level (14,435,51 kt CO_2 eq) by 2020, followed by CO_2 with 25.9 per cent (10,656.27 kt CO_2 eq) and N_2O with 23.9 per cent (9,809.52 kt CO_2 eq). In 2030, reductions in CH_4 emissions will make up approximately 33.7 per cent of the aggregate GHG emission reductions below the 1990 level (15,635.51 kt CO_2 eq), followed by CO_2 with 29.4 per cent (13,656.27 kt CO_2 eq) and N_2O with 21.1 per cent (9,809.52 kt CO_2 eq).

69. The projected emission levels under the different scenarios and the Party's quantified economy-wide emission reduction target are presented in the figure below.

Greenhouse gas emission projections by the Netherlands



Sources: (1) Data for the years 1990–2013: the 2015 annual inventory submission of the Netherlands, version 1; total GHG emissions excluding land use, land-use change and forestry; (2) Data for the years 2013–2030: the second biennial report of the Netherlands; total GHG emissions excluding land use, land-use change and forestry.

Abbreviations: ESD = effort-sharing decision, GHG = greenhouse gas.

D. Provision of financial, technological and capacity-building support to developing country Parties

70. In its BR2, the Netherlands reported information on the provision of financial, technological and capacity-building support required under the Convention. The BR2 includes information on the national approach to tracking the provision of support, indicators, delivery mechanisms used and allocation channels tracked. The Netherlands reported a description of the methodology used to report financial support, including underlying assumptions.

71. The Netherlands provided details on what new and additional support it has provided (see para. 83 below). Further information on the Party's provision of support to developing country Parties is provided in chapters 6.2 and 6.3 of the BR2.

72. The Netherlands distinguished, to the extent possible, between support provided to non-Annex I Parties for mitigation and adaptation activities, noting the capacity-building elements of such activities. The Netherlands highlighted the changes made since the previous submission, while also making reference to the BR1 where more detailed information was reported.

73. The Netherlands included in its BR2 information on how it has sought to refine its approach to tracking climate support and methodologies since the BR1. For bilateral climate finance, the Netherlands uses the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee[13] Rio Markers to report support for climate-related activities. According to this methodology, a portion of bilateral support is determined as climate-related support based on whether mitigation or adaptation is the 'principal' (100 per cent) or a 'significant' (40 per cent) objective of any activity, while avoiding double counting amongst climate objectives.

74. To identify the climate-related component of multilateral finance, the Netherlands applies a climate-relevant percentage of its core contributions to multilateral development banks, climate-relevant funds and climate-relevant multilateral organizations. While the Netherlands applies the climate-relevant percentage established by OECD Development Assistance Committee where available, in a number of other cases, it sets these percentages in close cooperation with the organizations concerned, ranging from 5 to 20 per cent.

75. Although the Netherlands does not yet track private climate-related finance, the BR2 provides information on the activities currently under way, including the "PILOT – Tracking Mobilized Private Climate Finance" study to report thereon from 2015 onwards. According to the BR2, a review performed by a group of independent experts and coordinated by the Dutch Sustainability Unit of the Netherlands Commission for Environmental Assessment resulted in a more consistent approach to using the Rio Markers.

1. Finance

76. In its BR2 and CTF tables 7, 7(a) and 7(b), the Netherlands reported information on the provision of financial support required under the Convention, including on financial support provided, committed and pledged, allocation channels and annual contributions (see paras. 83 and 84 below). The summary information was reported for 2013–2014.

77. The Netherlands described how its resources address the adaptation and mitigation needs of non-Annex I Parties. It also described how those resources assist non-Annex I Parties to mitigate and adapt to the adverse effects of climate change, facilitate economic and social response measures, and contribute to technology development and transfer and capacity-building related to mitigation and adaptation (see chapters II.D.2 and II.D.3 below).

78. The Netherlands focuses on poverty alleviation in its climate finance, prioritizing the poorest communities and countries. The Netherlands seeks to integrate climate policies into its bilateral relations with its partner countries by focusing its climate-related support to those countries based on climate profiles[14] of 15 developing countries and regions that encompass climate change impacts, national government policies and climate change projects. The supported projects address national priorities, needs and policy frameworks based on a country-driven approach to aid delivery and national ownership. Several

[13] <http://www.oecd.org/dac/>.

[14] <http://dsu.eia.nl/publications/advisory-reports/7152>.

projects entail public–private partnerships, including cooperation between Government partners, local non-governmental organizations and companies.

79. The Party's BR2 and CTF tables 7, 7(a) and 7(b), do not clarify how it has determined the financial resources provided pursuant to Article 4, paragraph 3, of the Convention as being new and additional. During the review, the Netherlands explained that it does not have separate budgets for development aid and climate finance as it has decided to integrate development and climate policies for greater impact, especially on the poorest and the most vulnerable. In order to improve the transparency of its reporting, the ERT recommends that, in its provision of information on new and additional financial resources in its next BR submission, the Netherlands clarify how it has determined such resources as being new and additional.

80. The Netherlands provided information on the types of instrument used in the provision of its assistance (see para. 87 below). It also reported information on measures that promote private investment in mitigation and adaptation activities in developing country Parties (see para. 90 below).

81. The BR2 does not include the information requested by the UNFCCC reporting guidelines on BRs on: private financial flows leveraged by bilateral climate finance towards mitigation and adaptation activities in non-Annex I Parties. During the review, the Netherlands provided additional information, explaining that while it was not possible to report on the private climate finance leveraged by bilateral climate finance for the period 2013–2014 owing to the lack of a defined methodology for reporting such information, the Netherlands is currently developing such a methodology and will report this information from 2015 onwards. To improve the transparency of its reporting, the ERT reiterates the encouragement made in the previous review report that the Netherlands provide information on private financial flows leveraged by bilateral climate finance towards mitigation and adaptation activities in non-Annex I Parties in its next BR submission.

82. With regard to the most recent financial contributions aimed at enhancing the implementation of the Convention by developing countries, the Netherlands reported that its allocation of bilateral and multilateral climate finance has a strong focus on poverty alleviation in the poorest countries and gender integration. According to the coalition agreement titled "Building Bridges",[15] which reaffirms its commitment to a strong international climate policy, the Party's international climate finance has focused on themes including water management, food security and emergency response. In 2013 and 2014, EUR 286 million and 395 million, respectively, were spent on climate projects and programmes in the fields of renewable energy, forestry, water management and climate-resilient agriculture, directed at both mitigation and adaptation activities.

83. The Netherlands reported on its climate-specific public financial support provided in 2013 and 2014, totalling USD 380.46 million in 2013 and USD 522.40 million in 2014. The BR2 reports that the Netherlands delivered on its fast-start finance commitment during the period 2010–2012. Since 2013, the Party has stepped up its efforts to address climate change, with the budget for climate finance increasing year on year to EUR 550 million in 2016, of which EUR 100 and 200 million in 2015 and 2016, respectively, will be in the form of mobilized private climate finance. During the reporting period, the Netherlands placed a particular focus on countries in sub-Saharan Africa, Asia and Latin America, including Afghanistan, Bangladesh, Benin, Bolivia (Plurinational State of), Burundi, Colombia, Ethiopia, Ghana, Indonesia, Kenya, Mali, Mozambique, Pakistan, Rwanda, Senegal, South Sudan, Uganda and Yemen.

[15] <http://www.building-bridges.rec.org/>.

84. The BR2 includes detailed information on the financial support provided through multilateral channels, and bilateral and regional channels in 2013 and 2014. More specifically, the Netherlands contributed through multilateral channels, as reported in its BR2 and in CTF table 7(a), USD 95.49 and 135.62 million for 2013 and 2014, respectively. These contributions were made to specialized multilateral climate change funds, such as the Least Developed Countries Fund, the Global Environment Facility and financial institutions, including regional development banks. The BR2 and CTF table 7(b) also include detailed information on the total financial support provided though bilateral and regional (USD 284.98 and 386.78 million) channels in 2013 and 2014, respectively. Table 5 includes some of the information reported by the Netherlands on its provision of financial support.

Table 5
Summary of information on provision of financial support in 2013–2014 by the Netherlands
(Millions of United States dollars)

	Years of disbursement	
Allocation channel of public financial support	*2013*	*2014*
Official development assistance[a]	5 435.45	5 572.97
Climate-specific contributions through multilateral channels, including:	95.49	135.62
Global Environment Facility	15.43	15.18
Least Developed Countries Fund	26.55	–
Other multilateral climate change funds	0.67	3.18
Financial institutions, including regional development banks	46.75	94.28
Specialized United Nations bodies	6.08	22.98
Climate-specific contributions through bilateral, regional and other channels	284.98	386.78

[a] *Source*: Query Wizard for International Development Statistics, available at <http://stats.oecd.org/qwids>.

85. The BR2 provides information on the types of support provided. In terms of the focus of public financial support, as reported in CTF table 7 for 2013, the shares of total public financial support allocated for mitigation, adaptation and cross-cutting projects corresponding to these channels were 26.0, 11.8 and 62.2 per cent, respectively. In total, 25.1 per cent of the total public financial support was allocated through multilateral channels and 74.9 per cent of it was through bilateral, regional and other channels. In 2014, the shares of total public financial support allocated for mitigation, adaptation and cross-cutting projects corresponding to these channels were 21.2, 33.9 and 44.9 per cent, respectively. Altogether, 26 per cent of the total public financial support was allocated through multilateral channels and 74 per cent of it was through bilateral, regional and other channels.

86. The ERT noted that, in 2013, 9.9 per cent of financial contributions made through multilateral channels were allocated to the energy sector and the remaining 90.1 per cent to funding for activities that are cross-cutting across mitigation and adaptation and those targeting multiple sectors including energy, agriculture, forestry, and water and sanitation, as reported in CTF table 7(a). The corresponding figures for 2014 were 3.7 and 96.3 per cent, respectively. Hence, most of the multilateral funding is being allocated to cross-

cutting activities and those targeting multiple sectors including energy, agriculture, forestry, and water and sanitation.

87. CTF tables 7(a) and 7(b) include information on the types of financial instrument used in the provision of assistance to developing countries. The ERT noted that in 2013 and 2014, the Party's entire public financial support to developing countries was provided through grants.

88. In its BR2, the Netherlands clarified that private finance is mainly related to investment in technologies and services in the energy, agriculture, and water and sanitation sectors. It also reported on how it promotes the provision of financial support to developing countries from the private sector through public funds, which it sees as pivotal to effectively increase both mitigation and adaptation efforts in developing countries. The Netherlands supported innovative investment projects in emerging markets in Africa, Asia, Central and Eastern Europe and Latin America through its Private Sector Investment (PSI) programme. A PSI project involves an investment by a Dutch or foreign company in cooperation with a local company in one of the eligible developing countries. Supported projects include climate-relevant initiatives such as renewable electricity production, biofuel production and crop improvement.

89. The Netherlands reported on the difficulty in reporting on private financial flows leveraged by bilateral climate finance for mitigation and adaptation activities in non-Annex I Parties owing to the lack of information on initiatives undertaken by the private sector. The Netherlands has, however, taken steps to include private financial flows in its reporting from 2015 onwards.

90. As part of the international effort led by the OECD research collaborative to enhance the transparency of mobilized private financial flows, the Ministry of Foreign Affairs of the Netherlands initiated a pilot study to calculate the total level of private climate finance mobilized by public interventions in 2012 and to calculate an estimate for the 2015 budget. According to the "PILOT" study (see para. 75 above), in 2012, the Netherlands has mobilized a total of EUR 57 million of private financial flows for climate finance through public finance worth EUR 117 million. The mobilized private finance is projected to be lower for 2015, at EUR 53 million, partially due to the non-inclusion of some expected contributions.

2. Technology development and transfer

91. In its BR2 and CTF table 8, the Netherlands provided information on measures and activities related to technology transfer, access and deployment of climate-friendly technologies for the benefit of developing countries, including information on activities undertaken by the public and private sectors.

92. The BR2 and CTF table 8 do not include information required by the UNFCCC reporting guidelines on BRs on support provided for the development and enhancement of the endogenous capacities and technologies of non-Annex I Parties.

93. During the review, the Netherlands explained that it does not specifically track projects or programmes that support the development and enhancement of endogenous capacities and technologies as it does not have separate budgets for development aid and climate finance. However, it provided some examples of programmes that enhance endogenous capacities and technologies, including the Energising Development programme[16] to support the introduction of clean cooking technology; the Capacity-building

[16] <http://endev.info/content/Main_Page>.

for Scaling-up of Evidence-based Best Practices in Ethiopia programme[17] to identify innovative best practices among farmers; and the Integrated Seed Sector Development programmes undertaken in Ethiopia and Uganda to build the capacity of local seed groups to become local seed businesses for the production of improved drought-/flood-resilient seeds.

94. The ERT reiterates the recommendation made in the technical review report of the BR1 that the Netherlands provide information on its support for the development and enhancement of the endogenous capacities and technologies of non-Annex I Parties in its next BR submission.

95. The BR2 does not include the information requested by the UNFCCC reporting guidelines on BRs on success and failure stories regarding technology development and transfer. During the review, the Netherlands provided information on the Dutch Risk Reduction Team (DRR-Team)[18] as an example of a success story in this regard. DRR-Team is a programme aimed at sharing expertise and technical, finance and governance recommendations on how to prevent disasters, recover from calamities and build a more sustainable and safer water supply that takes climate change into account. The ERT reiterates the encouragement made in the previous review report that the Netherlands provide information on success and failure stories regarding technology transfer in its next BR submission.

96. The ERT noted that, in its BR2, including CTF table 8, the Netherlands reported on measures to promote, facilitate and finance the transfer and deployment of climate-friendly technologies. The ERT took note of the information provided in CTF table 8 on recipient countries, target areas, measures and focus sectors of technology transfer programmes. As an integral part of its climate finance, the Netherlands provides climate-related technological support to developing countries across the world, primarily in the energy, agriculture, and water and sanitation sectors, through the participation of both the public and the private sectors.

97. The private sector and several knowledge institutions in the Netherlands are partners in providing support for technological development and transfer to developing countries. The Netherlands Enterprise Agency has various programmes in place focusing on innovative investment projects and transfer of technology, knowledge and skills in social and economic sectors.

98. The main programmes include the PSI programme (see para. 88 above); the Facility for Sustainable Entrepreneurship and Food Security,[19] which encourages public–private partnerships in the field of food security and private sector development targeting adaptation in agriculture; the Sustainable Water Fund, a public–private partnership facility in the field of water and sanitation, targeting adaptation in water and sanitation; the National Geothermal Capacity-Building Programme, focusing on knowledge transfer of geothermal energy towards mitigation in the energy sector; the Energy Sector Management Assistance Programme, focusing on knowledge transfer of geothermal energy towards mitigation in the energy sector; the Energising Development programme, focusing on access to local renewable energy towards mitigation in the energy sector; and the DRR-Team, targeting mitigation and adaptation in water and sanitation (see para. 95 above).

[17] <https://www.wageningenur.nl/en/show/CASCAPE-1.htm>.

[18] <http://www.dutchwatersector.com/drr/>.

[19] <http://english.rvo.nl/subsidies-programmes/facility-sustainable-entrepreneurship-and-food-security-fdov>.

3. Capacity-building

99. In its BR2 and CTF table 9, the Netherlands supplied information on how it provided capacity-building support for mitigation, adaptation and technology that responds to the existing and emerging needs identified by non-Annex I Parties.

100. The Netherlands described individual measures and activities related to capacity-building support in textual and tabular format.

101. The Netherlands reported that it supported climate-related capacity development activities relating to both adaptation and mitigation, responding to the existing and emerging capacity-building needs of non-Annex I Parties by following the principles of national ownership, stakeholder participation, country-driven demand, and cooperation between donors and across programmes. Capacity-building and institutional strengthening is one of the important selection criteria in its assessment of projects. During the reporting period, the Netherlands supported almost 170 different climate-relevant programmes and projects that included capacity-building activities.

102. The BR2 and CTF table 9 include information describing a number of individual capacity-building measures and activities carried out during the reporting period. The Netherlands continued to support the Climate and Development Knowledge Network[20] with a contribution of EUR 2.07 million in 2014 and a total planned contribution of EUR 18 million in the period 2009–2017. The Climate and Development Knowledge Network helps developing countries to mitigate and adapt to climate change alongside poverty reduction and human development by providing government leaders and decision makers with technical assistance, research and knowledge-sharing tools to plan, finance and deliver climate-compatible development. Partners for Resilience,[21] a partnership of the Netherlands Red Cross, CARE Netherlands,[22] Cordaid,[23] the Red Cross/Red Crescent Climate Centre[24] and Wetlands International,[25] contributes to the resilience of communities by integrating climate change adaptation, ecosystem management and restoration into disaster risk reduction. The Netherlands also supports the World Bank risk management programme[26] whose goal is to reduce flood vulnerability in Beni, Bolivia (Plurinational State of).

103. The Netherlands is one of the donors to the Ethiopian Agricultural Growth Programme[27] that focuses on capacity-building to scale up evidence-based practices in agricultural production, taking into account resilience to climate change. The African Biogas Partnership Programme, funded by the Netherlands, is building a commercial biogas sector in six African countries (Burkina Faso, Ethiopia, Kenya, Senegal, Uganda and United Republic of Tanzania). Since it began in 2009, 15,000 biogas installations have been constructed, providing households with clean energy, organic fertilizer, and a safer and healthier living environment.

104. The Netherlands is also supporting the Ho Chi Min City Flood and Inundation Management Project, which aims to alleviate the flooding and inundation problems of Ho Chi Min City through an integrated approach to flood and inundation management and by strengthening the technical and management capabilities of the Ho Chi Min City Steering Centre for the Flood Control Programme and relevant Vietnamese agencies.

[20] <http://cdkn.org/?loclang=en_gb>.
[21] <http://www.partnersforresilience.nl/>.
[22] <http://www.care.org/>.
[23] <https://www.cordaid.org/en/>.
[24] <http://www.climatecentre.org/>.
[25] <https://www.wetlands.org/>.
[26] <http://www.worldbank.org/en/topic/disasterriskmanagement>.
[27] <http://ethioagp.org/>.

III. Conclusions

105. The ERT conducted a technical review of the information reported in the BR2 and CTF tables of the Netherlands in accordance with the UNFCCC reporting guidelines on BRs. The ERT concludes that the reported information is mostly in adherence with the UNFCCC reporting guidelines on BRs and provides an overview on: emissions and removals related to the Party's quantified economy-wide emission reduction target; assumptions, conditions and methodologies related to the attainment of the target; progress made by the Netherlands in achieving its target; and the Party's provision of support to developing country Parties.

106. The Party's total GHG emissions excluding LULUCF related to its quantified economy-wide emission reduction target were estimated to be 10.8 per cent below its 1990 level, whereas total GHG emissions including LULUCF are 10.3 per cent below its 1990 level for 2013. The emission decrease was driven by the decrease in non-CO_2 emissions in the industrial processes and product use, agriculture and waste sectors and the impacts of PaMs.

107. Under the Convention, the Netherlands is committed to contributing to the achievement of the joint EU quantified economy-wide target of a 20 per cent reduction in emissions below the 1990 level by 2020. The target covers all sectors and the gases CO_2, CH_4, N_2O, HFCs, PFCs and SF_6, expressed using GWP values from the AR4. Emissions and removals from the LULUCF sector are not included in the quantified economy-wide emission reduction target under the Convention. The EU generally allows its member States to use units from the Kyoto Protocol mechanisms as well as new market mechanisms for compliance purposes, subject to a number of restrictions in terms of origin and type of project and up to an established limit. Companies can make use of such units to fulfil their requirements under the EU ETS.

108. Under the ESD, the Netherlands has a target to reduce its emissions by 16 per cent below the 2005 level by 2020. The Netherlands' AEAs, which correspond to its national emission target for the non-ETS sectors, change linearly from 122,948.13 kt CO_2 eq in 2013 to 107,042.71 kt CO_2 eq in 2020.

109. The Party's main policy framework relating to energy and climate change is the agreement on energy for sustainable growth, the long-term agreements on energy efficiency and the "Agrocovenant". Key legislation supporting the climate change goals of the Netherlands includes the Environmental Management Act and the Housing Act. The mitigation actions with the most significant mitigation impact are SDE+, the subsidy scheme for renewable energy production, VAMIL/MIA/EIA, the long-term agreements on energy efficiency, the PaMs implementing the EU ecodesign directive and the reduction programme for non-CO_2 GHGs.

110. As reported in CTF table 1, in 2013, the total GHG emissions excluding LULUCF of the Netherlands were 195,807.03 kt CO_2 eq. The Netherlands reported that it did not intend to use units from the market-based mechanisms to achieve its target. In 2013, the Party's emissions from the non-ETS sectors were 11.3 per cent (13,948.13 kt CO_2 eq) below its AEAs under the ESD and provisionally 18.9 per cent below its AEAs in 2014. Based on the reported information, the ERT concluded that the Netherlands is making progress towards its emission reduction target by implementing domestic mitigation actions.

111. The GHG emission projections provided by the Netherlands in its BR2 include those for the WEM and WAM scenarios. Under these two scenarios, emissions are projected to be 17.6 and 18.7 per cent below the 1990 level in 2020, respectively. Emissions from the non-ETS sectors are projected to reach 100,000.00 kt CO_2 eq by 2020 under both the WEM

and WAM scenarios compared with its AEA for 2020 of 107,042.71 kt CO_2 eq. The cumulative emissions of the Netherlands for 2013–2020 are projected to be 819,000.00 kt CO_2 eq compared with its aggregate AEAs of 919,963.37 kt CO_2 eq. On the basis of the reported information, the ERT concluded that the Netherlands expects to contribute towards the achievement of the EU target for 2020.

112. The Netherlands continues to allocate climate financing in line with the climate finance programmes in order to assist developing country Parties to implement the Convention. The Party's annual public climate-related financial support in 2013 and 2014 totalled USD 380.46 million and 522.40 million, respectively. For 2013, the support provided by the Netherlands for mitigation action was higher than the support provided for adaptation, but in 2014 it was lower. Most of the financial support provided through multilateral channels was for activities that are cross-cutting across mitigation and adaptation and for those targeting multiple sectors, including energy, agriculture, forestry, and water and sanitation.

113. As an integral part of its climate finance, the Netherlands provides climate-related technological support to developing countries across the world, primarily in the energy, agriculture and water and sanitation sectors, through the participation of both the public and the private sectors. The Netherlands reported that it supported climate-related capacity-building activities relating to both adaptation and mitigation to respond to the existing and emerging capacity-building needs of non-Annex I Parties by following the principles of national ownership, stakeholder participation, country-driven demand and cooperation between donors and across programmes.

114. In the course of the review, the ERT formulated the following recommendations for the Netherlands to improve its adherence to the UNFCCC reporting guidelines on BRs in its next BR:[28]

(a) Improve the completeness of its reporting by:

(i) Including projections for the LULUCF sector under the WEM scenario (see para. 44 above);

(ii) Providing information on its support for the development and enhancement of the endogenous capacities and technologies of non-Annex I Parties (see para. 92 above);

(b) Improve the transparency of its reporting by:

(i) Reporting mitigation impacts of individual mitigation actions or by: providing a transparent explanation in the BR where it is not possible to do so; and clearly specifying in the BR, under which mitigation impacts the mitigation actions reported as "IE" in the BR2 and CTF table 3 are included, and that the information on mitigation actions relating to sustainable forestry activities is included in the "Agrocovenant" mitigation action, reported under the agriculture sector (see para. 24 above);

(ii) Including the information on total emissions excluding LULUCF for the base year and other years in CTF table 4, as required by the UNFCCC reporting guidelines on BRs, and by explaining in a footnote to CTF tables 4, 4(a)I and 4(a)II why it did not report the required information on the contribution of LULUCF (see para. 39 above);

[28] The recommendations are given in full in the relevant chapters of this report.

(iii) Providing in the BR a clear explanation of how the sectoral coverage used for the projections relates to the sectors reported in CTF table 6(a) and projections for all the sectors and gases reported in CTF tables 6(a) (see para. 46 above);

(iv) Providing information on the factors and activities for the projections for each sector in tabular format (see para. 48 above);

(v) Clarifying its determination of new and additional financial resources (see para. 79 above).

Annex

Documents and information used during the review

A. Reference documents

"UNFCCC biennial reporting guidelines for developed country Parties". Annex I to decision 2/CP.17. Available at <http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf#page=4>.

"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=2>.

"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications". FCCC/CP/1999/7. Available at <http://unfccc.int/resource/docs/cop5/07.pdf>.

"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>.

FCCC/ARR/2014/NLD. Report on the individual review of the annual submission of the Netherlands submitted in 2014. Available at <http://unfccc.int/resource/docs/2015/arr/nld.pdf>.

FCCC/IDR.6/NLD. Report of the technical review of the sixth national communication of the Netherlands. Available at <http://unfccc.int/resource/docs/2014/idr/nld06.pdf>.

FCCC/TRR.1/NLD. Report of the technical review of the first biennial report of the Netherlands. Available at <http://unfccc.int/resource/docs/2014/trr/nld01.pdf>.

2015 greenhouse gas inventory submission of the Netherlands. Available at <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8812.php>.

Sixth national communication of the Netherlands. Available at <http://unfccc.int/files/national_reports/annex_i_natcom/submitted_natcom/application/pdf/the_netherlands_nc6[1].pdf>.

First biennial report of the Netherlands. Available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/the_netherlands_br1.pdf>.

Common tabular format tables of the first biennial report of the Netherlands. Available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/nld_2014_v2.0_formatted.pdf>.

Second biennial report of the Netherlands. Available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/the_netherlands_second_biennial_report.pdf>.

Common tabular format tables of the second biennial report of the Netherlands. Available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/nld_2016_formatted.pdf>.

B. Additional information used during the review

Responses to questions during the review were received from Mr. Harry Vreuls (Netherlands Enterprise Agency, RVO.nl), including additional material provided by the Netherlands.