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## Report of the technical review of the second biennial report of Iceland

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 Iceland, 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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## **I. Introduction and summary**

### **A. Introduction**

1. This report covers the centralized technical review of the second biennial report (BR2)<sup>1</sup> of Iceland. 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 Iceland, which provided comments that were considered and incorporated into this final version of the report.

2. The review took place from 30 May to 4 June 2016 in Bonn, Germany, and was conducted by the following team of nominated experts from the UNFCCC roster of experts: Ms. Diana Barba (Colombia), Mr. Viorel Nelu Bellmondo Blujdea (Romania), Mr. Luis Caceres Silva (Ecuador), Ms. Hoy Yen Chan (Malaysia), Mr. Amnat Chidthaisong (Thailand), Ms. Balgis Elasha Osman (Sudan), Mr. Sabin Guendehou (Benin), Ms. Lisa Hanle (United States of America), Ms. Elsa Hatanaka (Japan), Mr. Harry Vreuls (Netherlands) and Mr. Jongikhaya Witi (South Africa). Mr. Guendehou and Mr. Vreuls were the lead reviewers. The review was coordinated by Mr. Bernd Hackmann, Ms. Sylvie Marchand and Ms. Kyoko Miwa (UNFCCC secretariat).

### **B. Summary**

3. The expert review team (ERT) conducted a technical review of the information reported in the BR2 of Iceland 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, Iceland provided the following additional relevant information: assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target; policies and measures (PaMs); and financial support provided to developing country Parties.

#### **1. Timeliness**

4. The BR2 and the common tabular format (CTF) were submitted on 2 March 2016, after the deadline of 1 January 2016 mandated by decision 2/CP.17. The ERT noted with concern the delay in the submission of the BR2 and CTF tables, and recommends that Iceland improve the timeliness of its reporting by submitting its next biennial report (BR) on time.

#### **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 Iceland in its BR2 is mostly in adherence with the UNFCCC reporting guidelines on BRs as per decision 2/CP.17.

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<sup>1</sup> 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.

Table 1  
**Summary of completeness and transparency issues related to mandatory reported information in the second biennial report of Iceland**

<i>Chapter of the biennial report</i>	<i>Completeness</i>	<i>Transparency</i>	<i>Paragraphs with recommendations</i>
Greenhouse gas emissions and trends	Complete	Transparent	
Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target	Complete	Mostly transparent	13
Progress in achievement of targets	Mostly complete	Partially transparent	25, 26, 45, 47, 53, 58
Provision of support to developing country Parties	Partially complete	Partially transparent	68, 71, 73, 79, 82, 83, 101, 103, 115, 118

*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. Iceland 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 Iceland’s 2016 annual inventory submission (in chapter 1.2, para. 1.2.1). 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 greenhouse gas inventories” that are required by paragraph 3 of the UNFCCC reporting guidelines on BRs. Further, Iceland provided information explaining that no changes in the national inventory arrangements since its first biennial report (BR1) have occurred.

7. The information reported in the BR2 and CTF table 1 on emission trends is not consistent with that reported in the 2016 annual inventory submission of Iceland. The ERT encourages Iceland to enhance the transparency of its reporting and to provide information that is consistent with its most recent national inventory in its next BR submission. To reflect the most recently available data, the 2 March 2016 version of Iceland’s 2016 annual inventory submission has been used as the basis for discussion in chapter II.A of this review report.

8. Total GHG emissions<sup>2</sup> excluding emissions and removals from land use, land-use change and forestry (LULUCF), increased by 26.5 per cent between 1990 and 2014, whereas total GHG emissions including net emissions and removals from LULUCF

<sup>2</sup> 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 2016 inventory submission, version 2 March 2016.

increased by 8.8 per cent over the same period. This overall increase reflects a peaking of emissions in 2008 at 5,140.34 kt of carbon dioxide equivalent (CO<sub>2</sub> eq) (excluding LULUCF), followed by a sharp decrease until 2010, due to the global economic recession, and an almost stable trend between 2011 and 2014. The increase in the total GHG emissions can be attributed mainly to CO<sub>2</sub> emissions, which increased by 55.4 per cent (excluding LULUCF) between 1990 and 2014. Over the same period, emissions of methane (CH<sub>4</sub>) increased by 13.6 per cent, while emissions of nitrous oxide (N<sub>2</sub>O) decreased by 8.2 per cent. The combined fluorinated gases, such as perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulphur hexafluoride (SF<sub>6</sub>), decreased by 46.7 per cent over the same period. Nitrogen trifluoride emissions are reported as “NO” (not occurring) in the country. The emission trends were driven mainly by emissions from the industrial processes sector, due to Iceland’s strong aluminium industry, and fuel combustion in the transport sector. The ERT noted that the LULUCF sector is the most significant net source of GHG emissions in Iceland.

9. The ERT noted that, during the period 1990–2014, Iceland’s gross domestic product (GDP) per capita increased by 43.7 per cent, with a significant peak in 2005 and a drop in 2008 due to the global economic recession. Over the same period, GHG emissions per GDP and GHG emissions per capita decreased by 31.5 and 1.5 per cent, respectively. Iceland explains in its BR2 the effects of the economic crisis in the year 2008 on the national economy and on the total and sectoral GHG emissions. The economic crisis mostly influenced a downward trend of emissions from construction and cement production. Over the same time emissions from heavy industry also decreased due to better production management. Table 2 below illustrates the emission trends by sector and some of the economic indicators relevant to GHG emissions for Iceland.

Table 2

**Greenhouse gas emissions by sector and some indicators relevant to greenhouse gas emissions for Iceland for the period 1990–2013**

Sector	GHG emissions (kt CO <sub>2</sub> eq)					Change (%)		Share by sector (%)	
	1990	2000	2010	2013	2014	1990–2014	2013–2014	1990	2014
1. Energy	1 738.08	2 002.74	1 826.14	1 674.45	1 679.84	–3.4	0.3	47.8	36.5
A1. Energy industries	13.82	3.79	1.36	2.60	2.53	–81.7	–2.9	0.4	0.1
A2. Manufacturing industries and construction	202.59	207.94	71.03	49.42	25.26	–87.5	–48.9	5.6	0.5
A3. Transport	618.99	662.22	889.53	859.22	861.07	39.1	0.2	17.0	18.7
A4.–A5. Other	840.51	973.54	669.71	586.67	604.31	–28.1	3.0	23.1	13.1
B. Fugitive emissions from fuels	62.17	155.26	194.51	176.54	186.69	200.3	5.7	1.7	4.1
C. CO <sub>2</sub> transport and storage	NO	NO	NO	NO	NO	–	–	–	–
2. IPPU	948.31	1 010.78	1 945.48	1 943.81	1 914.16	101.9	–1.5	26.1	41.6
3. Agriculture	779.58	719.12	713.04	687.80	747.67	–4.1	8.7	21.5	16.3
4. LULUCF	11 495.65	11 549.29	11 856.69	11 871.92	11 868.89	3.2	0.0	NA	NA
5. Waste	167.59	230.13	245.69	228.60	255.18	52.3	11.6	4.6	5.6
6. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sector	GHG emissions (kt CO <sub>2</sub> eq)					Change (%)		Share by sector (%)	
	1990	2000	2010	2013	2014	1990–2014	2013–2014	1990	2014
	<b>Total GHG emissions without LULUCF</b>	<b>3 633.56</b>	<b>3 962.77</b>	<b>4 730.35</b>	<b>4 534.66</b>	<b>4 596.85</b>	<b>26.5</b>	<b>1.4</b>	<b>100.0</b>
<b>Total GHG emissions with LULUCF</b>	<b>15 129.21</b>	<b>15 512.06</b>	<b>16 587.04</b>	<b>16 406.58</b>	<b>16 465.74</b>	<b>8.8</b>	<b>0.4</b>	<b>NA</b>	<b>NA</b>
<i>Indicators</i>									
GDP per capita (thousands 2011 USD using PPP)	28.71	33.67	38.91	40.98	41.26	43.7	0.7	NA	NA
GHG emissions without LULUCF per capita (t CO <sub>2</sub> eq)	14.26	14.09	14.87	14.01	14.04	-1.5	0.2	NA	NA
GHG emissions without LULUCF per GDP unit (kg CO <sub>2</sub> eq per 2011 USD using PPP)	0.50	0.42	0.38	0.34	0.34	-31.5	-0.4	NA	NA

Sources: (1) GHG emission data: Iceland's 2016 annual inventory submission, version 2 March 2016; (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

10. In its BR2 and CTF tables 2(a)–(f), Iceland reported a general description of its target, including associated conditions and assumptions. CTF tables 2(a)–(f) contain the required information in relation to the description of Iceland's emission reduction target. Further information on the target and the assumptions, conditions and methodologies related to the target is provided in this report (see paras. 11–18 below).

11. The ERT noted that the information provided by Iceland in its BR2 and CTF tables 2(a)–(f) did not transparently explain the relationship between Iceland's target under the Convention and how it relates to the joint target of the European Union (EU) and its member States under the Convention, in particular on: how the contribution from the LULUCF sector is counted towards achieving its target although this sector is excluded from the joint EU target; how the EU Emissions Trading System (EU ETS) applies to Iceland; and how sectors not covered under the EU ETS contribute to achieving the joint target.

12. During the review, Iceland provided additional information,<sup>3</sup> clarifying the relationship of its target to the joint EU target, and how this translates into emission

<sup>3</sup> *Aðgerðir í loftslagsmálum*. Available at [https://www.umhverfissraduneyti.is/media/PDF\\_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf](https://www.umhverfissraduneyti.is/media/PDF_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf).

reductions for sectors covered and not covered under the EU ETS, including LULUCF (see paras. 16, 18 and 46 below).

13. The ERT recommends that Iceland transparently report on its target and the associated conditions and assumptions, in particular on the conditions specifying the relationship between Iceland's target under the Convention and how it relates to the joint target of the EU and its member States, including with regard to the contribution from LULUCF.

14. For Iceland, the Convention entered into force on 21 March 1994. Under the Convention, Iceland made a commitment to contribute, in a joint effort with the EU and its member States, in line with Article 4 of the Kyoto Protocol.<sup>4</sup> This is further elaborated on in the achievement of the joint EU economy-wide emission reduction target of 20 per cent below the 1990 level by 2020 under the Doha Amendment to the Kyoto Protocol, although Iceland is not a member State of the EU.<sup>5</sup>

15. 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<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub> using global warming potential (GWP) values from the Intergovernmental Panel on Climate Change (IPCC) 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 EU ETS.

16. As Iceland is not a member State of the EU, the terms and conditions for Iceland to contribute to the joint EU target have been agreed between Iceland and the EU.<sup>6</sup> Under this arrangement, Iceland includes emissions and removals from the LULUCF sector as part of its target, which are calculated using an activity-based approach.

17. The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors from the EU member States and three members of the European Economic Area: Norway, Iceland and Liechtenstein. 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 (see also paras. 30 and 31 below).

18. Within the EU, emissions from sectors covered by the effort-sharing decision (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. Iceland is not part of the ESD as such, but corresponding emissions are subject to a bilateral agreement between the EU and its member States and Iceland, which covers all non-ETS sources, including LULUCF. Under this agreement, Iceland has a target to reduce emissions by about 22 per

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<sup>4</sup> See <<http://unfccc.int/resource/docs/2012/awglca15/eng/misc01a02.pdf>>.

<sup>5</sup> Council Decision (EU) 2015/1339 of 13 July 2015 “on the conclusion, on behalf of the European Union, of the Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder”, available at <<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015D1339>>.

<sup>6</sup> Council Decision (EU) 2015/1340 of 13 July 2015 “on the conclusion, on behalf of the European Union, of the Agreement between the European Union and its Member States, of the one part, and Iceland, of the other part, concerning Iceland's participation in the joint fulfilment of commitments of the European Union, its Member States and Iceland for the second commitment period of the Kyoto Protocol to the United Nations Framework Convention on Climate Change”, available at <<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015D1340>>.

cent below the 2005 level by 2020 for sectors not covered under the EU ETS, including LULUCF. This target for non-ETS sectors, for 2020, has been translated into 15,327.217 kt CO<sub>2</sub> eq allocated to Iceland for the period 2013–2020. During the review, Iceland provided additional information indicating that distributing this amount linearly and decreasing in time from about 2,218 kt CO<sub>2</sub> eq reported for 2012 would result in a projected emission level for sectors not covered under the EU ETS of 1,645 kt CO<sub>2</sub> eq in 2020.

19. The ERT notes that it would enhance the transparency of Iceland’s reporting and further facilitate the assessment by the ERT of whether Iceland is on track towards meeting its target, if Iceland would also report transparently on: how the contribution from the LULUCF sector is counted towards achieving its target (while this sector is excluded from the joint EU target under the Convention); how the EU ETS applies to Iceland; and how sectors not covered under the EU ETS contribute to achieving the joint target.

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

20. This chapter provides information on the review of the reporting by Iceland 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**

21. In its BR2 and CTF table 3, Iceland reported on its progress in the achievement of its target and the mitigation actions implemented and planned since its sixth national communication (NC6) and BR1 to achieve its target. Iceland 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 Iceland’s target is provided BR2 and in this report (see paras. 30–40 below and also table 3 below).

22. This report highlights the changes made since the publication of the Party’s NC6 and BR1. In its BR2, Iceland 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.

23. The ERT noted that there are inconsistencies in the information reported between table 3.2 of the BR2 and CTF table 3. For example, table 3.2 does not provide mitigation impacts for some mitigation actions, whereas this information is provided in CTF table 3. In addition, information reported by Iceland on the following elements is not transparent: mitigation impacts for some of the mitigation actions, such as tax incentives for vehicles, are reported as “IE” (included elsewhere) without any explanation of what other mitigation actions these impacts are linked to and the impacts for other PaMs are reported as “NE” (not estimated) without providing a transparent explanation.

24. During the review, Iceland provided additional information, elaborating on the inconsistencies between its BR2 and CTF table 3, indicating that the tables were not fully harmonized and that in cases where the impacts of mitigation actions were left blank, it is implied that they were not estimated. Iceland also explained that the mitigation impact of its carbon tax has not been re-evaluated and that the mitigation impact of this instrument is estimated at 50–100 kt CO<sub>2</sub> eq.

25. The ERT recommends that Iceland improve the transparency, where feasible, of the information reported on mitigation actions by providing an estimate of the mitigation effects or an explanation in the BR of the notation keys it has used, in particular those used



to describe the mitigation impacts of individual mitigation actions that are included elsewhere, and describe transparently how these mitigation actions contribute to the assessment of Iceland's emission reduction target.

26. The ERT noted that Iceland's Climate Change Action Plan dates back to 2010 and that Iceland, in its BR2, does not report on new, updated and/or planned PaMs that are not part of the action plan. To enhance the transparency of reporting, the ERT recommends that Iceland provide information on its mitigation actions, including on the PaMs it has implemented or plans to implement since its previous BR submission to achieve its target.

27. Iceland's BR2 does not provide information on mitigation actions that are planned or under development. The ERT noted that including this information in the next BR submission would aid the ERT in gaining a better understanding of how Iceland is planning to achieve its target for emissions from sectors not covered under the EU ETS.

28. Iceland provided, to the extent possible, detailed information on the assessment of the economic and social consequences of its response measures. Iceland reported that its efforts to reduce emissions and increase carbon sequestration can be expected to contribute to limiting adverse effects, in particular in developing countries that are most vulnerable to the impacts of climate change.

29. Iceland 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. In its BR2, Iceland explains that the national climate change committee formed in 2011 has the responsibility to monitor and evaluate Iceland's progress in meeting its 2020 target.

30. The key overarching cross-sectoral policy in Iceland is the EU ETS. 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<sub>2</sub>O emissions from chemical industries, PFC emissions from aluminium production and CO<sub>2</sub> emissions from industrial processes (since 2013).

31. In Iceland, the EU ETS covers five installations (three aluminium plants, a ferrosilicon plant and one fishmeal factory) responsible for about 43 per cent of Iceland's GHG emissions. The EU ETS is estimated to have a mitigation impact of reducing emissions by 100–150 kt CO<sub>2</sub> eq by 2020. Information concerning Iceland's 2020 target and the role of the EU ETS sectors is described in paragraph 17 above.

32. At the national level, Iceland introduced policies to achieve its domestic emission reduction target for sectors not included in the EU ETS (see para. 18 above). Iceland reports on its Climate Change Action Plan from 2010, which is the main instrument for defining and implementing mitigation PaMs. The key policies of this action plan, as reported in the BR2, are the carbon tax, its measures in the transport sector and measures in the LULUCF sector.

33. The carbon tax covers emissions from fossil fuels that are not included in the EU ETS. The tax is levied on fossil fuels in liquid or gaseous form with respect to the carbon content of the fuels. The ERT noted that about 90 per cent of CO<sub>2</sub> emissions in Iceland are covered by economic instruments (EU ETS and carbon tax).

34. In its BR2 and CTF table 3, Iceland reported on several measures to address GHG emissions from the transport sector, including taxes and levies for vehicles, comprising

changes in excise duty, biannual fees and value added tax. The excise duty on passenger cars has, since 1 January 2011, been based on the registered emissions of CO<sub>2</sub>, measured in grams per kilometre driven.

35. In addition, Iceland reports on measures in the transport sector, including tax exemptions for electric- and hydrogen-powered vehicles and increasing public transport and cycling. Iceland has an ongoing project initiated by the Icelandic Transport Authority (then called the Icelandic Maritime Administration) in 2010 to investigate the use of rapeseed oil to produce biodiesel for the Icelandic fishing fleet. Iceland further explained that this initiative has not been factored into the assessment of mitigation actions.

36. Iceland reported in its BR2 on a domestic target for the share of energy from renewable energy sources (RES) in the gross final consumption of energy for 2020 of 72 per cent. The share of RES in 2012 was about 76 per cent, and thus already surpassing its 2020 target by 4 per cent. The ERT welcomed this information.

37. With regard to energy efficiency, Iceland provided additional information during the review, explaining that enhancing energy efficiency forms part of its National Renewable Energy Action Plan, which, in turn, forms part of the PaMs that are linked to Iceland's 2020 target. A recent energy forecast from 2015 shows that electricity consumption in homes has decreased from 4.9 MWh per home per year in 2009 to 4.5 MWh per home per year in 2014, mainly due to the improved energy efficiency of lighting and other home appliances. This trend is expected to continue, reaching a minimum of 4 MWh per home per year by 2040. The ERT notes that reporting separately on the mitigation impact of the energy efficiency actions linked to the National Renewable Energy Action Plan will enhance the transparency of how Iceland reports on its mitigation actions.

38. In response to a recommendation made in the previous review report, Iceland improved the transparency of its reporting by including information on mitigation actions in the LULUCF sector. The objectives of a new forestry strategy are the enhancement of the role of forests as carbon sinks and the adaptation of forestry to climate change, including regional afforestation projects and the Mt. Hekla afforestation project. Due to the revegetation and afforestation PaMs in the LULUCF sector, carbon sequestration in Iceland increased by around 55 per cent between 2008 and 2013, amounting to 384 kt CO<sub>2</sub> eq in 2013. The ERT commends Iceland for including information on PaMs for the LULUCF sector in its BR2 and CTF table 3, in response to an observation made in the previous review report.

39. Iceland's national plan for waste management 2004–2016 has recently been updated for the period 2013–2024, and applies to the whole country. Due to the implementation of this plan, about 69 per cent of waste was recovered in 2013 compared with 15 per cent in 1995. The percentage of landfilled waste was reduced from around 79 per cent in 1995 to some 30 per cent in 2013.

40. During the review, Iceland explained that the collection and reduction of organic waste destined for landfilling and the collection of landfill gas are mandatory in terms of the Waste Management Act and its regulations. Therefore, the legal provisions on landfilling of organic waste are also addressed in a national plan for waste management. The ERT notes that the inclusion of this information in Iceland's next BR submission will enhance the understanding of how the mitigation impact of the landfilling policy is linked to the national plan for waste management.

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

Table 3  
**Summary of information on mitigation actions and their impacts reported by Iceland**

<i>Sector affected</i>	<i>List of key mitigation actions</i>	<i>Estimate of mitigation impact by 2020 (kt CO<sub>2</sub> eq)</i>
Policy framework and cross-sectoral measures	Climate Change Action Plan (2010)	NE
	EU ETS	100–150
	Carbon tax	50–100
Energy, including:		
Transport	Excise duty on vehicles	60
	Increased public transportation and cycling	30
Renewable energy/ energy efficiency	National Renewable Energy Action Plan	NE
LULUCF	Regional afforestation projects	NE
	Mt. Hekla afforestation project	NE
Waste	National plan for waste management (2004–2016 and 2013–2024)	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 ETS = European Union Emissions Trading System, LULUCF = land use, land-use change and forestry, NE = not estimated.

## 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

42. Iceland 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 from other market-based mechanisms, as well as on the contribution of LULUCF, to achieving its target.

43. Iceland reported that it will retain the option to use units from market-based mechanisms in addition to its participation in the EU ETS, even if it intends to reach its 2020 target mainly through domestic mitigation actions and increasing carbon sequestration. The use of market-based mechanisms has not yet been estimated.

44. The ERT noted that CTF tables 4, 4(a)I, and 4(b) do not include the information required by the UNFCCC reporting guidelines on BRs on the contribution from LULUCF and the quantity of units from market-based mechanisms under the Convention and from other market-based mechanisms.

45. The ERT noted that the contribution from LULUCF is counted towards reaching Iceland's target, while the use of market-based mechanisms is kept as an option but not yet estimated. The ERT therefore recommends that Iceland transparently report on the contribution from LULUCF as well as on the quantity of units from market-based mechanisms under the Convention or from other market-based mechanisms in CTF tables 4, 4(a)I and 4(b), in its next BR submission. The ERT noted that Iceland may use notation keys to transparently report in CTF tables 4, 4(a)I and 4(b), provided that these are transparently explained in a footnote or in the main text of the BR.

46. Iceland provided in CTF table 4(a)II information on emissions and removals from the LULUCF sector in relation to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol. The ERT noted that the values reported show an inconsistent calculation of the accounting amounts for forest management and revegetation, and it is not transparently reported how these values relate to the contribution from LULUCF towards Iceland's target. During the review, Iceland provided additional information,<sup>7</sup> indicating that the contribution from LULUCF activities under the Kyoto Protocol was a reduction of 256 kt CO<sub>2</sub> eq in 2008, which is expected to amount to a reduction of 775 kt CO<sub>2</sub> eq in 2020.

47. The ERT recommends that Iceland transparently report on emissions and removals from the LULUCF sector in relation to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol in CTF table 4(a)II. The ERT noted that Iceland may use notation keys to transparently report in CTF table 4(a)II, provided that these are transparently explained in a footnote or in the main text of the BR.

48. For 2013, Iceland reported in CTF table 4 total GHG emissions excluding LULUCF at 4,535.54 kt CO<sub>2</sub> eq. For 2014, Iceland's total GHG emissions excluding LULUCF were 4,596.85 kt CO<sub>2</sub> eq, or 26.5 per cent above its 1990 level, and during the same period, total GHG emissions including LULUCF increased by 8.8 per cent. In its BR2, Iceland reported on its potential use of units from market-based mechanisms to achieve its target. For the years 2010–2013, no units were reported in CTF table 4.

49. The ERT noted that Iceland may face challenges in achieving its target by implementing mitigation actions alone in order to make progress towards its target. It further noted that this development is not in line with the targets for Iceland under the arrangement with the EU, which foresees a decrease in emissions from 2013 onwards. Table 4 below illustrates Iceland'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 Iceland towards the achievement of its target**

<i>Year</i>	<i>Emissions excluding LULUCF (kt CO<sub>2</sub> eq)</i>	<i>Contribution from LULUCF (kt CO<sub>2</sub> eq)<sup>a</sup></i>	<i>Emissions including contribution from LULUCF (kt CO<sub>2</sub> eq)</i>	<i>Use of units from market-based mechanisms (kt CO<sub>2</sub> eq)<sup>b</sup></i>
1990	3 633.09	NA	NA	0
2010	4 731.77	NA	NA	0
2011	4 518.64	NA	NA	0
2012	4 551.61	NA	NA	0
2013	4 535.54	NE	NE	0
2014	4 596.59	NE	NE	0

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

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

<sup>7</sup> *Aðgerðir í loftslagsmálum.* Available at <[https://www.umhverfissraduneyti.is/media/PDF\\_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf](https://www.umhverfissraduneyti.is/media/PDF_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf)>.

<sup>a</sup> Iceland, in common tabular format table 4, does not report the contribution from LULUCF, as Iceland is contributing to the joint European Union (EU) target. However, although the joint EU target does not include emissions and removals from LULUCF, the agreement between Iceland and the EU allows Iceland to include emissions and removals from the LULUCF sector as part of its target; these are calculated using an activity-based approach.

<sup>b</sup> Iceland intends to use, in future years, units from market-based mechanisms.

### 3. Projections

50. Iceland reported in its BR2 and CTF table 6(a) projections for 2020 and 2030 relative to inventory data for 2011 under the ‘with measures’ (WEM) scenario. Projections are presented on a sectoral basis, using, to the extent possible, the same sectoral categories as used in the chapter on mitigation actions. The ERT notes that some sectoral categories are not completely the same, due to the overarching/cross-cutting nature of some measures. Projections are also presented on a gas-by-gas basis for the following GHGs: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFCs, HFCs and SF<sub>6</sub> (treating PFCs and HFCs collectively in each case). Projections are provided in an aggregated format for each sector, as well as totals, using GWP values from the IPCC Second Assessment Report. For LULUCF, Iceland reports projections for the sector as a whole as well as for each of its activities under the Kyoto Protocol, namely afforestation/reforestation and deforestation, forest management and revegetation. Emission projections related to fuel sold to ships and aircraft engaged in international transport were reported separately and not included in the totals. Iceland also reported on factors and activities influencing emissions for each sector.

51. Iceland reports in the BR2 that the projections reported in the BR2 and CTF table 6(a) are the same as those reported in its NC6/BR1, starting from 2011 and hence not from the latest year when inventory information was available (2014). The ERT encourages Iceland to provide updated projections, starting from the latest year for which inventory data are available.

52. In addition, the ERT noted that Iceland does not provide separate projections for emissions from sectors covered and not covered under the EU ETS. Presenting separate projections for sectors not covered under the EU ETS, including LULUCF, would further facilitate the assessment of whether Iceland is on track to achieving its target.

#### Overview of projection scenarios

53. The WEM scenario reported by Iceland includes implemented PaMs apparently up to 2010. The definition provided in the BR2 and the information in CTF table 6(a) indicate that the WEM scenario has not been fully 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”. The ERT noted that CTF table 3 provides information on PaMs that have been implemented after 2010. As Iceland did not update its projections, the ERT notes that this results in WEM projections that do not contain all relevant PaMs implemented since 2010. During the review, Iceland provided additional information on PaMs that have been implemented after 2010.<sup>8</sup> The ERT recommends that Iceland report projections under the WEM scenario including all relevant PaMs that have been implemented and adopted.

54. Iceland presents its projections only for a WEM scenario and did not report a ‘with additional measures’ (WAM) and a ‘without measures’ (WOM) scenario. The ERT encourages Iceland to report a WAM and a WOM scenario in its next BR submission.

<sup>8</sup> *Aðgerðir í loftslagsmálum*. Available at [https://www.umhverfissraduneyti.is/media/PDF\\_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf](https://www.umhverfissraduneyti.is/media/PDF_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf).

### Methodology and changes since the previous submission

55. Iceland refers to the information provided in its NC6/BR1 on the assumptions, methodologies, models and approaches used and on the key variables and assumptions used in the preparation of the projection scenarios in CTF table 5 of the BR2. The ERT encourages Iceland to provide complete and transparent information on the models and approaches used to prepare its projections in its next BR submission.

56. To prepare its projections, Iceland relied on the following key underlying assumptions: GDP growth rate, population growth, gross domestic oil consumption, gross electricity production, aluminium and ferrosilicon production, agricultural production, waste amount and LULUCF-related data. These variables and assumptions are reported in CTF table 5. The assumptions have not been updated on the basis of the most recent economic developments known at the time of the reporting on projections.

57. The methodology used in the BR2 is identical to that used for the preparation of the emission projections for the NC6/BR1. The approach for the projection model is a calculation of different emission sources on the basis of the given assumptions. The general assumptions for GDP and population growth or international oil prices are used for all sectors.

58. Iceland's BR2 does not include updated information on the factors and activities for each sector used in the preparation of sectoral projections for the understanding of emission trends in the years 1990–2020/2030, as required by the UNFCCC reporting guidelines on BRs. The ERT recommends that Iceland update and include this information in its next BR submission.

59. Iceland did not report on sensitivity analyses conducted in relation to its projections. The ERT noted that a sensitivity analysis may be helpful in the assessment of the prioritization of efforts for the implementation of PaMs. The ERT encourages Iceland to provide information on the sensitivity of its projections in a qualitative and, where possible, quantitative manner, for the assumptions affecting the main drivers of emissions and removals, in its next BR submission.

### Results of projections

60. Iceland's total GHG emissions excluding LULUCF in 2020 and 2030 are projected to be 4,337.94 and 4,313.90 kt CO<sub>2</sub> eq, respectively, under the WEM scenario, which represents an increase of 23.6 and 22.9 per cent, respectively, above the 1990 level.

61. The ERT noted that Iceland reported in CTF table 6 total GHG emissions including LULUCF in 2020 and 2030, which are projected to be 254.11 and 259.04 kt CO<sub>2</sub> eq, respectively. As the reported table does not contain projected emissions for LULUCF and these numbers are significantly lower than the projected emissions excluding LULUCF, the ERT noted that Iceland may have reported these values erroneously. The ERT also noted that Iceland reported in the BR2 on pages 33–35 and in tables 4.19 and 4.20 projected emissions and removals for activities under Article 3, paragraph 3 (afforestation, reforestation and deforestation), and Article 3, paragraph 4 (forest management), of the Kyoto Protocol, as well as for revegetation. Iceland projected net removals of 265.67 kt CO<sub>2</sub> eq in 2020 and 361.29 kt CO<sub>2</sub> eq in 2030 from afforestation, reforestation and deforestation, and for forest management, net removals of 84.19 kt CO<sub>2</sub> eq for the period 2013–2020 and 72.24 kt CO<sub>2</sub> eq for the period 2021–2030. For revegetation, Iceland projected that removals will increase to 273.6 kt CO<sub>2</sub> eq in 2030. During the review,

Iceland provided additional information on the projected impacts of LULUCF activities for the years 2020 and 2030 (see para. 46 above).<sup>9</sup>

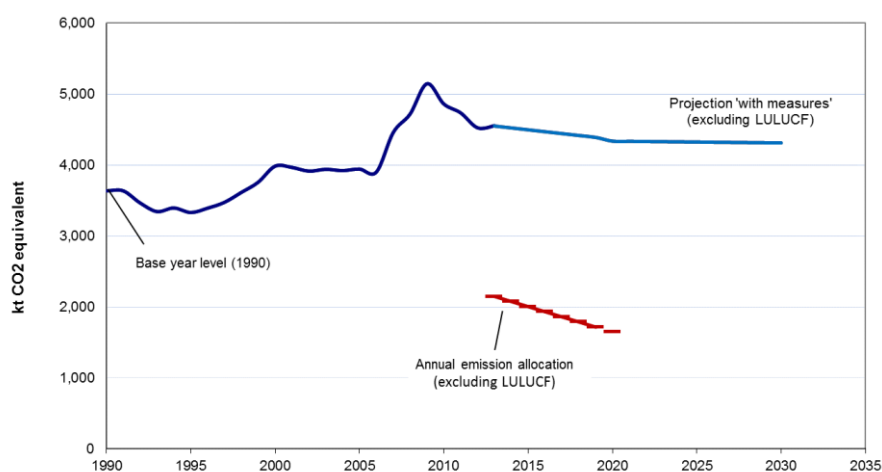
62. According to the projections reported for 2020 under the WEM scenario, the most significant emission reductions are expected to occur in the energy, agriculture and waste sectors, amounting to projected reductions of 302.7 kt CO<sub>2</sub> eq (26.1 per cent), 56.07 kt CO<sub>2</sub> eq (7.9 per cent) and 23.82 kt CO<sub>2</sub> eq (16.5 per cent), between 1990 and 2020, respectively. Emissions from the industrial processes and product use sector are projected to increase between 1990 and 2020 by 1,030.86 kt CO<sub>2</sub> eq (117.4 per cent). The pattern of projected emissions reported for 2030 under the same scenario slightly changes owing to increasing emissions in the energy sector between 2020 and 2030.

63. In 2020, the most significant increase between 1990 and 2020 is projected for CO<sub>2</sub> emissions of 1,098.41 kt CO<sub>2</sub> eq (50.8 per cent), while reductions are projected for CH<sub>4</sub> and N<sub>2</sub>O emissions of 41.96 kt CO<sub>2</sub> eq (10.3 per cent) and 59.83 kt CO<sub>2</sub> eq (11.5 per cent) between 1990 and 2020, respectively. The pattern of projected emissions reported for 2030 under the same scenario remains the same.

64. The ERT noted that Iceland will continue to contribute to the joint EU target, but may face challenges in meeting its target under the WEM scenario, even taking into consideration the expected impacts of mitigation actions as included in table 3 above.

65. The projected emission levels under the WEM scenario are presented in the figure below.

#### Greenhouse gas emission projections by Iceland



Sources: (1) Data for the years 1990–2013: Iceland’s 2016 annual inventory submission, version 2 March 2016; total GHG emissions excluding LULUCF; (2) Annual emission allocation for the years 2013–2020: Iceland’s second biennial report and additional information provided during the review (*Aðgerðir í loftslagsmálum*. Available at <[https://www.umhverfisraduneyti.is/media/PDF\\_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf](https://www.umhverfisraduneyti.is/media/PDF_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf)>).

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

<sup>9</sup> *Aðgerðir í loftslagsmálum*. Available at <[https://www.umhverfisraduneyti.is/media/PDF\\_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf](https://www.umhverfisraduneyti.is/media/PDF_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf)>.

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

66. In its BR2, Iceland reported information on the provision of financial, technological and capacity-building support required under the Convention.

67. The BR2 does not include, as required by the UNFCCC reporting guidelines on BRs, a description of Iceland's national approach for tracking the provision of financial, technological and capacity-building support to Parties not included in Annex I to the Convention (non-Annex I Parties), including information on indicators and delivery mechanisms used and allocation channels tracked.

68. During the review, Iceland provided additional information on its approach to tracking climate support and methodologies when collecting and reporting information. It provided information on the methodology that it adopted for tracking finance for adaptation and mitigation using the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) methodology on statistical reporting and related environmental/Rio Markers. The ERT recommends that Iceland include this information in its next BR submission.

69. The BR2 does not include, as required by the UNFCCC reporting guidelines on BRs, an indication of what new and additional financial resources Iceland has provided for the reporting years 2013 and 2014.

70. The ERT noted that in a footnote to CTF table 7, Iceland explained how it determines how much of its support is new and additional. In determining new and additional financial resources, Iceland considers its increasing official development assistance (ODA) volumes, as well as the growing share of climate-related ODA in its total ODA. In 2012, Iceland contributed approximately USD 2.4 million in new and additional support. The new and additional funding was drawn from the growing aid programme, and has not diverted funds from existing development priorities or programmes.

71. The ERT recommends that Iceland include in its next BR submission an indication of what new and additional financial resources it has provided for the reporting years and transparently clarify how it has determined that such resources are new and additional.

72. In addition, the BR2 does not include information on the assumptions and methodologies used to produce information on finance. The summary textual information of the BR2 is limited and refers only to 2014.

73. The ERT recommends that Iceland provide in its next BR submission the information required by the UNFCCC reporting guidelines on BRs on the assumptions and methodologies used to produce information on finance.

74. Iceland reported the financial support it provided to non-Annex I Parties, distinguishing between support for mitigation and adaptation activities and recognizing the capacity-building elements of such support. Iceland also provided information on the types of instruments used in the provision of assistance, such as grants.

### **1. Finance**

75. In its BR2 and CTF tables 7, 7(a) and 7(b), Iceland reported information on the provision of financial support required under the Convention, including on financial support provided, allocation channels and annual contributions (see paras. 88–93 below). The summary information was reported for 2013 and 2014.

76. Iceland provided information on the financial support it has provided, committed and/or pledged for the purpose of assisting 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).

77. The BR2 and CTF tables 7, 7(a) and 7(b) do not include the information required by the UNFCCC reporting guidelines on BRs on a description of how Iceland seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties with regard to climate change adaptation and mitigation.

78. During the review, Iceland provided additional information, stating that in line with best practices in development cooperation and OECD/DAC guidelines thereto, all cooperation in bilateral partner countries is based on close cooperation with local communities and their needs, and is based on a detailed needs assessment. In addition, Iceland informed the ERT that as a small donor country, it relies on the mechanisms of its multilateral partners to ensure that the support provided responds to the existing and emerging needs of non-Annex I Parties with regard to climate change adaptation and mitigation.

79. The ERT reiterates the recommendation made in the previous review report that Iceland provide in its next BR submission the information required by the UNFCCC reporting guidelines on BRs on a description, to the extent possible, of how it seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties with regard to climate change adaptation and mitigation, noting that the information provided by Iceland during the review may be included in its next BR submission in this context.

80. The ERT noted inconsistencies between the information provided by Iceland in CTF tables 7(a) and 7(b) for 2013 and 2014, regarding Iceland's bilateral and multilateral contributions, with summary information included in CTF table 7 for the years 2013 and 2014. The inconsistencies relate to the distributions and in the total amount of the climate-specific contributions by sector, type of support and contribution channel. In addition, the ERT found an inconsistency in the information reported in the text of the BR2 and in the information provided in CTF table 7, for the year 2014, on the amount of financial resources provided during 2014.

81. During the review, Iceland provided additional information to clarify the inconsistencies noted by the ERT and provided updated figures. The updated figures are used by the ERT in table 5 below.

82. The ERT recommends that Iceland enhance the transparency of its reporting by ensuring that its reported information in CTF tables 7(a) and 7(b) and the BR is consistent.

83. The BR2 does not contain textual summary information on allocation channels and annual financial support Iceland has provided for the purpose of assisting non-Annex I Parties for 2013. The ERT recommends that Iceland provide in its next BR submission textual summary information on allocation channels and annual financial support it has provided for the purpose of assisting non-Annex I Parties for all years of the analysed period.

84. Iceland provided information on the types of instrument used in the provision of its assistance (see para. 95 below). The BR2 does not include the information required by the UNFCCC reporting guidelines on BRs on private financial flows from bilateral sources directed towards mitigation and adaptation activities in non-Annex I Parties, as well as information on PaMs that promote private investment in mitigation and adaptation activities in developing country Parties and the definition of funds as being climate-specific.

85. During the review, Iceland provided additional information, informing the ERT that no PaMs have been implemented that promote private investment in mitigation and adaptation activities in developing country Parties. Further, Iceland clarified that there is no private support provided to developing countries. It also reported that there is no policy in place to promote the scaling up of private investment in mitigation and adaptation activities in developing countries.

86. The ERT reiterates the encouragement made in the previous review report that Iceland provide in its next BR submission the information required 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 and PaMs that promote the scaling up of private investment in mitigation and adaptation activities in developing country Parties and the definition of funds as being climate-specific.

87. With regard to the most recent financial contributions aimed at enhancing the implementation of the Convention by developing countries, Iceland reported that its climate finance has been allocated on the basis of Iceland's Strategy for International Development Cooperation 2013–2016, which identifies three priority areas: natural resources, human capital and peacebuilding, with gender quality and environmental sustainability as special cross-cutting themes. New targeted interventions have been designed to help develop the capacity of developing countries to adapt to climate change and build resilience to climate impacts as well as increasing the participation of women in international negotiations on climate change.

88. Iceland reported on its climate-specific public financial support provided in 2013 and 2014, totalling USD 7.64 million in 2013 and USD 9.34 million in 2014, or 21.9 per cent in 2013 and 25 per cent in 2014 of total ODA. The public climate-specific support decreased by 21.4 per cent and 3.9 per cent below the 2012 level in 2013 and 2014, respectively.

89. During the reporting period, Iceland placed a particular focus on Malawi, Ethiopia, Nicaragua, Uganda, Ukraine and the South Saharan African countries in general, for which it allocated USD 4.25 million through bilateral, regional and other channels.

90. Iceland also reported on its core general public financial support provided in 2013 and 2014, totalling USD 26.14 million in 2013 and USD 26.74 million in 2014.

91. The BR2 includes detailed information on the financial support provided through multilateral channels, and bilateral and regional channels in 2013 and 2014. More specifically, Iceland contributed climate-specific activities through multilateral channels, as reported in its updated numbers, which Iceland provided to the ERT during the review, for CTF table 7 for the years 2013 and 2014, of USD 6.56 and 6.17 million, respectively.

92. Iceland contributed to core and general activities through multilateral channels, as reported in its updated numbers for CTF table 7 for 2013 and 2014, USD 7.63 and 8.64 million for 2013 and 2014, respectively. These contributions were made to specialized multilateral climate change funds, such as the UNFCCC Trust Fund for Supplementary Activities, the Green Climate Fund and the Least Developed Countries Fund. The United Nations and other specialized bodies are the major multilateral channels with USD 3.38 million in 2013 and USD 3.11 million in 2014.

93. The updated numbers for CTF table 7(b), which Iceland provided to the ERT during the review, also include detailed information on the total financial support for climate-specific activities provided through bilateral (USD 1.08 and 1.53 million in 2013 and 2014, respectively) and regional (USD 1.64 million in 2014) channels. The South Africa regional project received the major share of financial support (38.6 per cent), and Malawi (16.6 per

cent) and Ethiopia (14.4 per cent) are the developing countries that received the major bilateral support in 2013 and 2014.

94. Table 5 includes some of the information reported by Iceland on its provision of financial support.

Table 5

**Summary of information on provision of core general and climate-specific financial support in 2013–2014 by Iceland**

(United States dollars)

<i>Allocation channel of public financial support</i>	<i>Years of disbursement</i>	
	<i>2013</i>	<i>2014</i>
Official development assistance <sup>a</sup>	34 914 092	37 327 634
Core general contributions through multilateral channels, including:		
Least Developed Countries Fund	189 352	167 972
Green Climate Fund		169 772
Trust Fund for Supplementary Activities	78 598	118 144
Financial institutions, including regional development banks for climate-specific activities	991 159	1 003 947
Financial institutions, including regional development banks for core general activities	2 122 275	3 135 271
United Nations bodies for core and general activities	5 241 542	5 046 501
Specialized United Nations bodies	5 472 237	5 840 585
Climate-specific contributions through bilateral, regional and other channels	1 077 846	3 167 235

<sup>a</sup> *Source:* Information provided by Iceland during the review.

95. The BR2 provides information on the types of support provided. In terms of the focus of public financial support, as reported in the updated numbers for CTF table 7 for 2013, the shares of total public financial support for climate-specific activities allocated for mitigation, adaptation and cross-cutting projects corresponding to these channels were 1.1, 15.6 and 83.3 per cent, respectively. In total, 85.9 per cent of the total public financial support was allocated through multilateral channels and 14.1 per cent of it was through bilateral, regional and other channels. In 2014, the shares of total public financial support for climate-specific activities allocated for mitigation, adaptation and cross-cutting projects corresponding to these channels were 4.1, 11.7 and 84.2 per cent, respectively. Altogether, 66.1 per cent of the total public financial support for climate-specific activities was allocated through multilateral channels and 33.9 per cent of it was through bilateral, regional and other channels.

96. The ERT noted that, in 2013, 97.5 per cent of the financial contributions for climate-specific activities made through multilateral channels was allocated for activities that are cross-cutting across mitigation and adaptation, 2.17 per cent for supporting the participation of women and 2.9 per cent for supporting fishing activities, as per the updated numbers for 2013 in CTF table 7(a). The corresponding figures for 2014 were 80.83, 9.84, 0.29 and 9.05 per cent for sectors with cross-cutting activities across mitigation and adaptation, water and sanitation, fishing and energy, respectively. Hence, most of the multilateral funding is being allocated to cross-cutting activities across mitigation and adaptation.

97. CTF tables 7(a) and 7(b) include information on the types of financial instrument used in the provision of assistance to developing countries. Iceland provided all its financial support as grants during 2013 and 2014.

## **2. Technology development and transfer**

98. In its BR2, Iceland provided information on measures and activities related to technology transfer, access and deployment benefiting developing countries, including information on activities undertaken by the public and private sectors.

99. During the review, Iceland provided additional information, informing the ERT that in the context of Iceland's international development cooperation, the reported projects include technology transfer and capacity-building components, and that it is not possible to account for and report on them separately.

100. Iceland did not report, as required by the UNFCCC reporting guidelines on BRs, information in tabular format in CTF table 8 on measures and activities related to technology transfer implemented or planned since its previous national communication or BR, including, to the extent possible, information on the recipient country, the target area of mitigation or adaptation, the sector involved and the sources of technology transfer from public or private sectors.

101. The ERT reiterates the recommendation made in the previous review report that Iceland provide in its next BR submission (both in textual and tabular format in CTF table 8) the information required by the UNFCCC reporting guidelines on BRs on measures and activities related to technology transfer implemented or planned.

102. The BR2 and CTF table 8 do not include the 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.

103. The ERT recommends that Iceland provide in its next BR submission the information required by the UNFCCC reporting guidelines on BRs on its support provided for the development and enhancement of the endogenous capacities and technologies of non-Annex I Parties.

104. The BR2 does not include information on success and failure stories with regard to technology transfer.

105. During the review, Iceland provided additional information, elaborating on its approach for assistance in this area and also about examples of success stories from its four United Nations University (UNU) training programmes: the UNU Geothermal Training Programme, since 1979, the UNU Fisheries Training Programme, since 1998, the UNU Land Restoration Training Programme, since 2010, and the UNU Gender Equality Studies and Training Programme, since 2013. Iceland also informed the ERT that the four UNU training programmes will be subjected to an external evaluation to assess, among other things, the effectiveness of their work.

106. The ERT encourages Iceland to provide information on success and failure stories in its next BR, including the information provided to the ERT during the review.

107. The ERT noted that, in its BR2, Iceland reported on its PaMs in relation to technology transfer and capacity-building together. Iceland provided in tabular format an "Overview of Iceland's support to climate-related projects and programmes, 2013–2014" with information on recipient countries, targeted areas, measures and activities, sectors, activities undertaken and the status of 39 projects and programmes.

108. The technology development and capacity-building activities to support developing countries are based on Iceland's Strategy for Development Cooperation 2013–2015 through

both bilateral and multilateral programmes in the fields of renewable energy, sustainable fisheries and sustainable land management and, from 2013, gender issues. In this regard, Iceland has bilateral agreements with Malawi, Mozambique and Uganda.

109. Key projects for Iceland are its four UNU training programmes for developing countries, which include strong technology transfer and capacity-building elements (see para. 99 above). During 2013 and 2014, Iceland received, on its four UNU training programmes, 150 fellows from least developed countries (40.7 per cent) and developing countries (49.3 per cent). The training programmes received about 13–14 per cent of Iceland's overall ODA.

110. Iceland is supporting a World Bank project for five years (2013–2017) aiming at promoting the utilization of geothermal energy in 13 countries in the East Africa Rift Valley (Burundi, Comoros, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Uganda, United Republic of Tanzania and Zambia).

111. Iceland considers the inclusion of gender aspects an important element in its technological and capacity-building support, due to the severe effects of climate change on women. In this regard, 5 of Iceland's 39 programmes reported are related to gender equality.

### **3. Capacity-building**

112. In its BR2, Iceland supplied information on how it provided capacity-building support for mitigation, adaptation and technology development and transfer for non-Annex I Parties.

113. The ERT noted that Iceland does not provide information on its capacity-building support in CTF table 9 and that information is only provided in the BR2 together with information on technology transfer, in tabular format.

114. During the review, Iceland provided additional information, informing the ERT that in the context of Iceland's international development cooperation, the reported projects include technology transfer and capacity-building components, and that it is not possible to account for and report on them separately.

115. The ERT recommends that Iceland provide information in CTF table 9, as required by the UNFCCC reporting guidelines on BRs, on its capacity-building support for mitigation, adaptation and technology development and transfer for non-Annex I Parties.

116. The BR2 does not include the information required by the UNFCCC reporting guidelines on BRs on how the capacity-building support provided responds to the existing and emerging capacity-building needs identified by non-Annex I Parties with respect to mitigation, adaptation and technology development and transfer.

117. During the review, Iceland provided additional information, elaborating on its UNU training programmes, and informed the ERT that as a small donor, it relies on the mechanisms of its multilateral partners to ensure that the support provided responds to the existing and emerging capacity-building needs of non-Annex I Parties.

118. The ERT reiterates the recommendation made in the previous review report that Iceland transparently report in its next BR the information required by the UNFCCC reporting guidelines on BRs on how the capacity-building support provided responds to the existing and emerging capacity-building needs identified by non-Annex I Parties with respect to mitigation, adaptation and technology development and transfer.

119. The BR2 includes information describing a number of individual capacity-building measures and activities carried out during the reporting period, focusing on climate-related

capacity development and technology transfer activities related to adaptation, mitigation and gender equality (see paras. 108–111 above).

### III. Conclusions

120. The ERT conducted a technical review of the information reported in the BR2 and CTF tables of Iceland 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 Iceland's quantified economy-wide emission reduction target; assumptions, conditions and methodologies related to the attainment of the target; progress made by Iceland in achieving its target; and Iceland's provision of support to developing country Parties.

121. Iceland's total GHG emissions excluding LULUCF related to its quantified economy-wide emission reduction target were estimated to be 26.5 per cent above its 1990 level, whereas total GHG emissions including LULUCF were 8.8 per cent above its 1990 level for 2014. The emission increase was driven by emissions from the industrial processes sector, due to Iceland's strong aluminium industry, and from fuel combustion in the transport sector.

122. Under the Convention, Iceland made a commitment to contribute in a joint effort with the EU and its member States, in line with Article 4 of the Kyoto Protocol.<sup>10</sup> This is further elaborated in the achievement of the joint EU economy-wide emission reduction target of 20 per cent below the 1990 level by 2020 under the Doha Amendment to the Kyoto Protocol. The target covers all sectors and the gases CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub>, expressed using GWP values from the AR4. For Iceland, emissions and removals from the LULUCF sector are 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. Iceland reported that it plans to make use of market-based mechanisms to achieve its target, even if it intends to reach its 2020 target mainly through domestic mitigation actions and increasing carbon sequestration.

123. Iceland is not part of the ESD as such, but corresponding emissions are subject to a bilateral agreement between the EU and its member States with Iceland, which covers all non-ETS sources, including LULUCF. Under this agreement, Iceland has a target to reduce emissions by about 22 per cent below the 2005 level by 2020 for sectors not covered by the EU ETS, including LULUCF. This target for non-ETS sectors, for 2020, has been translated into 15,327.217 kt CO<sub>2</sub> eq allocated to Iceland for the period 2013–2020. Distributing this amount linearly and decreasing in time from about 2,218 kt CO<sub>2</sub> eq reported for 2012 would result in a projected emission level for sectors not covered under the EU ETS of 1,645 kt CO<sub>2</sub> eq in 2020.

124. The key overarching cross-sectoral policy in Iceland is the EU ETS. In Iceland, the EU ETS covers five installations, responsible for about 43 per cent of Iceland's GHG emissions. The EU ETS is estimated to have a mitigation impact of 100–150 kt CO<sub>2</sub> eq by 2020. At the national level, Iceland has introduced policies to achieve its domestic emission reduction target for sectors not included in the EU ETS in its Climate Change Action Plan from 2010. The key policies of this action plan are the carbon tax, measures in the transport sector, measures in the LULUCF sector and measures in Iceland's fisheries sector.

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<sup>10</sup> See <<http://unfccc.int/resource/docs/2012/awglca15/eng/misc01a02.pdf>>.

125. For 2013, Iceland reported in CTF table 4 total GHG emissions excluding LULUCF at 4,535.54 kt CO<sub>2</sub> eq. For 2014, Iceland's total GHG emissions excluding LULUCF were 4,596.85 kt CO<sub>2</sub> eq, or 26.5 per cent above its 1990 level, and, during the same period, total GHG emissions including LULUCF increased by 8.8 per cent. For the years 2010–2013, no units were reported in CTF table 4.

126. The GHG emission projections provided by Iceland in its BR2 include those for the WEM scenario. Under this scenario, emissions are projected to be 23.6 per cent above the 1990 level in 2020. On the basis of the reported information, the ERT concluded that Iceland may face challenges to achieve its 2020 target, under the WEM scenario.

127. The ERT noted that Iceland is making progress towards its emission reduction target by implementing mitigation actions that deliver emission reductions and through the contribution of LULUCF. However, on the basis of the results of the projections for 2020 under the WEM scenario, the ERT noted that Iceland may face challenges in achieving its target. In this regard, Iceland indicated in its BR2 that it retains the option to use the units from market-based mechanisms in order to achieve its emission reduction target.

128. Iceland continues to allocate climate financing in line with the climate finance programmes such as the UNFCCC Trust Fund for Supplementary Activities, the Green Climate Fund and the Least Developed Countries Fund in order to assist developing country Parties to implement the Convention. It reduced the level of its financial support since its NC6/BR1, and its public financial support in 2013 and 2014 totalled USD 7.64 and 9.34 million per year, respectively. For these years, Iceland's support provided for adaptation actions was higher than that for mitigation. Financial support went to projects in sectors with cross-cutting activities across mitigation and adaptation, water and sanitation, fishing and energy. Hence, most of the multilateral funding is being allocated to cross-cutting activities across mitigation and adaptation. The technology development and capacity-building activities provided to support developing countries are provided through bilateral and multilateral programmes in the fields of renewable energy, sustainable fisheries, sustainable land management and, from 2013, gender issues. In this regard, Iceland has bilateral agreements with Malawi, Mozambique and Uganda.

129. In the course of the review, the ERT formulated the following recommendations for Iceland to improve its adherence to the UNFCCC reporting guidelines on BRs in its next BR:<sup>11</sup>

- (a) Improve the completeness of its reporting by:
  - (i) Providing information on factors and activities for each sector used in the preparation of sectoral projections for the understanding of emission trends in the years 1990–2020/2030 (see para. 58 above);
  - (ii) Providing a description of its national approach for tracking the provision of financial, technological and capacity-building support to non-Annex I Parties, including information on indicators and delivery mechanisms used and allocation channels tracked (see para. 68 above);
  - (iii) Providing an indication of what new and additional financial resources it has provided for the reporting years (see para. 71 above);
  - (iv) Providing information on the assumptions and methodologies used to produce the information on finance (see para. 73 above);

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<sup>11</sup> The recommendations are given in full in the relevant chapters of this report.

- (v) Providing a description, to the extent possible, of how it seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties with regard to climate change adaptation and mitigation (see para. 79 above);
- (vi) Providing textual summary information on allocation channels and annual financial support it has provided for the purpose of assisting non-Annex I Parties for all years of the analysed period (see para. 83 above);
- (vii) Providing information (both in textual and tabular format in CTF table 8) on measures and activities related to technology transfer implemented or planned (see para. 101 above);
- (viii) Providing information on its support provided for the development and enhancement of the endogenous capacities and technologies of non-Annex I Parties (see para. 103 above);
- (ix) Providing information in CTF table 9 on its capacity-building support for mitigation, adaptation and technology development and transfer for non-Annex I Parties (see para. 115 above);
- (b) Improve the transparency of its reporting by:
  - (i) Providing detailed information on its target and the associated conditions and assumptions, in particular on the conditions specifying the relationship between Iceland's target under the Convention and how it relates to the joint target of the EU and its member States, including with regard to the contribution from LULUCF (see para. 13 above);
  - (ii) Including detailed information on mitigation actions by providing an estimate of the mitigation impacts or an explanation of the notation keys it has used (see para. 25 above);
  - (iii) Providing detailed information on its mitigation actions, including on the PaMs it has implemented or plans to implement since its previous BR to achieve its target (see para. 26 above);
  - (iv) Providing detailed information on the contribution from LULUCF as well as on the quantity of units from market-based mechanisms under the Convention or from other market-based mechanisms in CTF tables 4, 4(a)I and 4(b) (see para. 45 above);
  - (v) Providing detailed information on emissions and removals from the LULUCF sector in relation to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol in CTF table 4(a)II (see para. 47 above);
  - (vi) Providing detailed information on projections under the WEM scenario including all relevant PaMs that have been implemented and adopted (see para. 53 above);
  - (vii) Ensuring that its reported information in CTF tables 7(a) and 7(b) and the BR is consistent (see para. 82 above);
  - (viii) Providing detailed information on how the capacity-building support provided responds to the existing and emerging capacity-building needs identified by non-Annex I Parties with respect to mitigation, adaptation and technology development and transfer (see para. 118 above);
- (c) Improve the timeliness of its reporting by submitting its next BR on time (see para. 4 above).



## Annex

### Documents and information used during the review

#### A. Reference documents

“UNFCCC biennial reporting guidelines for developed country Parties”. Annex 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 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/ISL. Report on the individual review of the annual submission of Iceland submitted in 2014. Available at <<http://unfccc.int/resource/docs/2015/arr/isl.pdf>>.

FCCC/IDR.6/ISL. Report of the technical review of the sixth national communication of Iceland. Available at <<http://unfccc.int/resource/docs/2015/idr/isl06.pdf>>.

FCCC/TRR.1/ISL. Report of the technical review of the first biennial report of Iceland. Available at <<http://unfccc.int/resource/docs/2015/trr/isl01.pdf>>.

2016 greenhouse gas inventory submission of Iceland. Available at <[http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/national\\_inventories\\_submissions/items/9492.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/9492.php)>.

Sixth national communication of Iceland. Available at

<[http://unfccc.int/files/national\\_reports/annex\\_i\\_natcom/submitted\\_natcom/application/pdf/nc6\\_br1\\_isl.pdf](http://unfccc.int/files/national_reports/annex_i_natcom/submitted_natcom/application/pdf/nc6_br1_isl.pdf)>.

First biennial report of Iceland. Available at

<[http://unfccc.int/files/national\\_reports/annex\\_i\\_natcom/submitted\\_natcom/application/pdf/nc6\\_br1\\_isl.pdf](http://unfccc.int/files/national_reports/annex_i_natcom/submitted_natcom/application/pdf/nc6_br1_isl.pdf)>.

Common tabular format tables of the first biennial report of Iceland. Available at

<[http://unfccc.int/files/national\\_reports/biennial\\_reports\\_and\\_iar/submitted\\_biennial\\_reports/application/pdf/isl\\_2014\\_v3.0\\_formatted.pdf](http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/isl_2014_v3.0_formatted.pdf)>.

Second biennial report of Iceland. Available at

<[http://unfccc.int/files/national\\_reports/biennial\\_reports\\_and\\_iar/submitted\\_biennial\\_reports/application/pdf/iceland\\_biennial\\_report\\_2nd.pdf](http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/iceland_biennial_report_2nd.pdf)>.

Common tabular format tables of the second biennial report of Iceland. Available at

<[http://unfccc.int/files/national\\_reports/biennial\\_reports\\_and\\_iar/submitted\\_biennial\\_reports/application/pdf/isl\\_2016\\_v2.0\\_formatted.pdf](http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/isl_2016_v2.0_formatted.pdf)>.

**B. Additional information used during the review**

Responses to questions during the review were received from Mr. Stefán Einarsson (Ministry for the Environment and Natural Resources), including additional material and the following documents<sup>1</sup> provided by Iceland:

Council European Union. 2015. *COUNCIL DECISION (EU) 2015/1339 of 13 July 2015 on the conclusion, on behalf of the European Union, of the Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder*. Available at <<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015D1339>>.

Council European Union. 2015. *Council Decision (EU) 2015/1340 of 13 July 2015 on the conclusion, on behalf of the European Union, of the Agreement between the European Union and its Member States, of the one part, and Iceland, of the other part, concerning Iceland's participation in the joint fulfilment of commitments of the European Union, its Member States and Iceland for the second commitment period of the Kyoto Protocol to the United Nations Framework Convention on Climate Change*. Available at <<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015D1340>>.

Samstarfshópur um aðgerðaáætlun í loftslagsmálum. 2015. *Skýrsla samstarfshóps til umhverfis-og auðlindaráðherra*. Available at <[https://www.umhverfisraduneyti.is/media/PDF\\_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf](https://www.umhverfisraduneyti.is/media/PDF_skrar/220915-Skyrsla-um-adgerdaaetlun-2015-ENDANLEG.pdf)>.

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