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Report on the technical review of the third biennial report of Slovenia

Developed country Parties were requested by decision 2/CP.17 to submit their third biennial report to the secretariat by 1 January 2018. This report presents the results of the technical review of the third biennial report of Slovenia, 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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Abbreviations and acronyms

AEA	annual emission allocation
Annex II Party	Party included in Annex II to the Convention
BR	biennial report
CHP	combined head and power
CH_4	methane
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
CTF	common tabular format
ERT	expert review team
ESD	effort-sharing decision
EU	European Union
EU ETS	European Union Emissions Trading System
F-gas	fluorinated gas
GDP	gross domestic product
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
IE	included elsewhere
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
NA	not applicable
NC	national communication
NE	not estimated
NF_3	nitrogen trifluoride
NIR	national inventory report
NO	not occurring
non-ETS sectors	sectors not covered by the European Union Emissions Trading System
N_2O	nitrous oxide
OP GHG-2020	Operational Programme for Reducing Greenhouse Gas Emissions until 2020 with a View to 2030
PaMs	policies and measures
PFC	perfluorocarbon
RES	renewable energy sources
SEA	Slovenian Environment Agency
SF_6	sulfur hexafluoride
UNFCCC reporting guidelines on BRs	"UNFCCC biennial reporting guidelines for developed country Parties"
UNFCCC reporting guidelines on NCs	"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications"
WAM	'with additional measures'
WEM	'with measures'
WOM	'without measures'

I. Introduction and summary

A. Introduction

1. This is a report on the centralized technical review of the BR3[1] of Slovenia. 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).

2. In accordance with the same decision, a draft version of this report was transmitted to the Government of Slovenia, which provided no comments to be considered or incorporated into this final version of the report.

3. The review was conducted from 21 to 26 May 2018 in Bonn by the following team of nominated experts from the UNFCCC roster of experts: Ms. Amrita Narayan Achanta (India), Ms. Damla Dogan (Turkey), Mr. Christopher John Dore (United Kingdom of Great Britain and Northern Ireland), Mr. Sangay Dorji (Bhutan), Mr. A. Ricardo J. Esparta (Brazil), Mr. Sandro Federici (San Marino), Mr. Ross Alexander Hunter (United Kingdom), Mr. Naoki Matsuo (Japan), Ms. Roisin Moriarty (Ireland), Mr. Rotislav Neveceral (Czechia), Ms. Agnieszka Maria Patoka-Janowska (Poland) and Ms. Verica Taseska Gjorgievska (the former Yugoslav Republic of Macedonia). Mr. Dorji, Mr. Federici, Mr. Matsuo and Ms. Patoka-Janowska were the lead reviewers. The review was coordinated by Ms. Sevdalina Todorova, Mr. Davor Vesligaj and Ms. Marion Vieweg (UNFCCC secretariat).

B. Summary

4. The ERT conducted a technical review of the information reported in the BR3 of Slovenia in accordance with the UNFCCC reporting guidelines on BRs (annex I to decision 2/CP.17).

1. Timeliness

5. The BR3 was submitted on 13 March 2018, after the deadline of 1 January 2018 mandated by decision 2/CP.17. The CTF tables were also submitted on 13 March 2018.

6. Slovenia informed the secretariat on 10 November 2017 and 7 February 2018 about its difficulties with making a timely submission in accordance with decisions 13/CP.20 and 22/CMP.1. The ERT noted with great concern the delay in the submission and recommended that Slovenia make its next submission on time.

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

7. Issues and gaps identified by the ERT related to the reported information are presented in table 1. The information reported by Slovenia in its BR3 mostly adheres to the UNFCCC reporting guidelines on BRs.

[1] The BR submission comprises the text of the report and the CTF tables, which are both subject to the technical review.

Table 1

Summary of completeness and transparency of mandatory information reported by Slovenia in its third biennial report

Section of BR	*Completeness*	*Transparency*	*Reference to description of recommendations*
GHG emissions and trends	Complete	Transparent	
Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target	Complete	Mostly transparent	Issue 1 in table 3
Progress in achievement of targets	Mostly complete	Mostly transparent	Issue 2 in table 5, issue 1 in table 7, issue 3 in table 11
Provision of support to developing country Parties[a]	NA	NA	NA

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

[a] Slovenia is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3, 4 and 5, of the Convention.

II. Technical review of the information reported in the third biennial report

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

1. Technical assessment of the reported information

8. Slovenia provided a summary of information on GHG emission trends for the period 1986–2015 in its BR3 that is consistent with the 2017 national GHG inventory submission. Summary tables, including trend tables for emissions (in kt CO_2 eq), are provided in the BR3. During the review, the ERT took note of the Party's recently submitted 2018 annual submission, in which data on GHG emissions in 2016 were presented along with updated 1986–2015 data. To reflect the most recently reported data, Slovenia's 2018 annual submission was used as the basis for the discussion in chapter II.A below. A comparison with the inventory data provided in the Party's BR3 and 2017 annual submission is presented in paragraph 10 below.

9. Total GHG emissions[2] excluding emissions and removals from LULUCF decreased by 4.9 per cent between 1990 and 2016, whereas total GHG emissions including net emissions or removals from LULUCF decreased by 11.7 per cent over the same period. Table 2 illustrates the emission trends by sector and by gas for Slovenia.

Table 2

Greenhouse gas emissions by sector and by gas for Slovenia for the period 1990–2016

	GHG emissions (kt CO_2 eq)					*Change (%)*		*Share (%)*	
	1990	*2000*	*2010*	*2015*	*2016*	*1990–2016*	*2015–2016*	*1990*	*2016*
Sector									
1. Energy	14 645.26	15 244.45	16 320.02	13 397.99	14 241.84	–2.8	6.3	78.6	80.4

[2] In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of CO_2 eq excluding LULUCF, unless otherwise specified. Values in this paragraph are calculated based on the Party's 2018 annual submission, version 4.

	GHG emissions (kt CO_2 eq)					*Change (%)*		*Share (%)*	
	1990	*2000*	*2010*	*2015*	*2016*	*1990–2016*	*2015–2016*	*1990*	*2016*
A1. Energy industries	6 374.89	5 594.44	6 339.70	4 561.54	4 935.22	–22.6	8.2	34.2	27.9
A2. Manufacturing industries and construction	3 149.88	2 275.68	1 916.08	1 591.12	1 592.03	–49.5	0.1	16.9	9.0
A3. Transport	2 727.85	3 807.98	5 254.71	5 362.35	5 734.29	110.2	6.9	14.6	32.4
A4. and A5. Other	1 883.20	3 095.85	2 289.61	1 513.95	1 584.70	–15.9	4.7	10.1	8.9
B. Fugitive emissions from fuels	509.44	470.50	519.92	369.02	395.61	–22.3	7.2	2.7	2.2
C. CO_2 transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. IPPU	1 375.65	1 150.02	1 000.82	1 135.61	1 132.71	–17.7	–0.3	7.4	6.4
3. Agriculture	1 933.07	1 881.42	1 722.99	1 754.29	1 777.08	–8.1	1.3	10.4	10.0
4. LULUCF	–4 209.76	–4 745.60	–5 317.40	–4 978.34	–4 989.79	18.5	0.2	NA	NA
5. Waste	673.45	799.00	620.83	572.04	565.93	–16.0	–1.1	3.6	3.2
6. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
Gas [a]									
CO_2	15 074.43	15 430.09	16 352.63	13 599.14	14 399.79	–4.5	5.9	80.9	81.3
CH_4	2 507.11	2 496.67	2 262.48	2 107.06	2 145.81	–14.4	1.8	13.5	12.1
N_2O	828.48	956.59	762.10	773.98	781.14	–5.7	0.9	4.4	4.4
HFCs	NO	46.78	259.83	346.51	353.60	NA	2.0	NA	2.0
PFCs	207.59	129.75	9.64	15.74	19.78	–90.5	25.7	1.1	0.1
SF_6	9.83	15.01	17.99	17.49	17.44	77.4	–0.3	0.1	0.1
NF_3	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total GHG emissions without LULUCF	**18 627.44**	**19 074.90**	**19 664.66**	**16 859.93**	**17 717.56**	**–4.9**	**5.1**	**100.0**	**100.0**
Total GHG emissions with LULUCF	**14 417.68**	**14 329.29**	**14 347.25**	**11 881.59**	**12 727.77**	**–11.7**	**7.1**	**NA**	**NA**

Source: GHG emission data: Slovenia's 2018 annual submission, version 4.
[a] Emissions by gas without LULUCF and without indirect CO_2.

10. Between 1990 and 2016 the decrease in total emissions was driven mainly by economic factors, as well as by the impact of implemented environmental legislation and PaMs related to climate change in the later years. Since Slovenia gained its independence, reflected in the structural changes in the economy and the related drop in emissions at the beginning of the period, the economic and political conditions in the country have shown stability and this has translated into a stabilization of emissions. After the global economic crisis of 2008, the economy of Slovenia experienced stagnation, particularly affecting manufacturing industries and construction and the related GHG emissions. Emissions from transportation show a stable increasing trend over the entire period owing to the increased use of fuel for road (goods and passenger) transportation.

11. According to the Party's 2017 annual inventory submission used for the BR3, total GHG emissions in 2015 amounted to 16,831.16 kt CO_2 eq excluding LULUCF and 11,202.48 kt CO_2 eq including LULUCF. According to its recently submitted 2018 annual submission, total GHG emissions in 2015 amounted to 16,859.93 kt CO_2 eq excluding LULUCF and 11,881.59 kt CO_2 eq including LULUCF. Therefore, the estimated total GHG emissions without LULUCF and with LULUCF increased by 0.2 and 6.1 per cent, respectively, compared with as reported in the previous submission, owing to the recalculation of emissions and removals. The reasons for recalculations were explained in

the NIR and are mainly linked to the update of emission factors for agricultural soils, which largely affected the LULUCF sector.

12. In brief, Slovenia's 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" as required by paragraph 3 of the UNFCCC reporting guidelines on BRs. In accordance with Slovenian legislation, SEA is responsible for the overall coordination of the activities necessary for the development of the Party's emission inventories as well as for preparing the inventories for the purpose of reporting to the UNFCCC and the European Commission. The data providers include the Statistical Office of the Republic of Slovenia and other institutions and ministries. The ERT noted that the Party reported in its BR3 that there had been no significant changes in the national inventory arrangements since the BR2. For details on the inventory system and any improvements thereto, the BR3 refers to the Party's 2017 NIR.

2. Assessment of adherence to the reporting guidelines

13. The ERT assessed the information reported in the BR3 of Slovenia and recognized that the reporting is complete, transparent and adhering to the UNFCCC reporting guidelines on BRs. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

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

1. Technical assessment of the reported information

14. For Slovenia the Convention entered into force on 29 February 1996. Under the Convention the Party committed to contributing to the achievement of the joint 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 target 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.

15. The target for the EU and its member States is formalized in the EU 2020 climate and energy package. The legislative package regulates emissions of CO_2, CH_4, N_2O, HFCs, PFCs and SF_6 using GWP values from the IPCC Fourth Assessment Report to aggregate the GHG emissions of the EU until 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. The EU 2020 climate and energy package includes the EU ETS and the ESD (see chapter II.C.1 below). The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors. An EU-wide emissions cap has been put in place for the period 2013–2020 with the goal of reducing emissions by 21 per cent below the 2005 level by 2020. Emissions from non-ETS sectors are regulated through member State specific targets that add up to a reduction at the EU level of 10 per cent below the 2005 level by 2020.

17. Under the ESD, Slovenia has a target of limiting its emission growth to 4 per cent above the 2005 level by 2020 for non-ETS sectors. National emission targets for non-ETS sectors for 2020 have been translated into binding quantified AEAs for the period 2013–2020. Following the revision of the AEA values for 2017–2020 for all EU member States in

2017, Slovenia's AEAs change from 12,324 kt CO_2 eq in 2013 to 12,307 kt CO_2 eq in 2020 (the previous value was 12,533 kt CO_2 eq).[3] According to information provided by the Party during the review, the revision of the AEA value does not affect the projected compliance with the 2020 non-ETS target. In 2015 Slovenia's non-ETS emissions (10,722 kt CO_2 eq) were well below the target for 2015 (12,384 kt CO_2 eq). The share of the non-ETS emissions in 2015 was 63.7 per cent of the total national GHG emissions.

18. Under the ESD, Slovenia can make use of flexibility provisions, such as project-based credits amounting to 3 per cent of the annual AEA limit, which may be banked for own use by 2020 or transferred to other EU member States. Slovenia also meets the criteria for using credits (not bankable or transferable) from projects in the least developed countries and small island developing States up to an additional 1 per cent of its verified 2005 GHG emissions.

19. Under the EU 2020 climate and energy package, Slovenia undertook to achieve a 25 per cent share of RES in gross final energy use, a 10 per cent share of RES in transport fuel consumption and a 20 per cent improvement in energy efficiency, all by 2020. In addition, OP GHG-2020 provides indicative sectoral objectives for 2030 compared with 2005, such as to limit growth in transport GHG emissions to no more than 18 per cent and in agriculture to no more than 6 per cent, and to reduce GHG emissions from the energy sector by 16 per cent, from industry by 32 per cent and from the waste sector by 57 per cent. However, those goals may require revision upon adoption of the final climate policy and targets for 2030 at the EU level.

2. Assessment of adherence to the reporting guidelines

20. The ERT assessed the information reported in the BR3 of Slovenia and identified an issue relating to transparency and adherence to the UNFCCC reporting guidelines on BRs. The finding is described in table 3.

Table 3
Findings on the quantified economy-wide emission reduction target from the review of the third biennial report of Slovenia

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation*
1	Reporting requirement specified in paragraph 5 Issue type: transparency Assessment: recommendation	Slovenia reported in the BR3 and CTF table 2 on its quantified economy-wide emission reduction target, including conditions and assumptions relevant to its attainment. However, the information provided in the CTF tables is not fully transparent regarding gases covered and use of market-based mechanisms. In CTF table 2(e)I on market-based mechanisms under the Convention, Slovenia used the notation key "NA" but did not explain what the notation key means. In addition, CTF table 2(e)II on other market-based mechanisms was left empty. There was also an inconsistency in the reported information between CTF table 2(b) and 2(c) in terms of NF_3. During the review, Slovenia explained that the notation key "NA" or empty cells should be interpreted as "not relevant" or "not applicable". The ERT recommends that Slovenia improve the transparency of the reporting in its next BR by ensuring that all required information regarding gases covered and use of market-based mechanisms is filled in consistently across the CTF tables. The ERT noted that the use of notation keys, such as "NA" for not applicable information, along with a footnote under the relevant table explaining the meaning of the notation key applied, would further improve the transparency of the reporting on assumptions regarding the 2020 target.

Note: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on BRs.

[3] European Commission decision 2017/1471 of 10 August 2017 amending decision 2013/162/EU of 26 March 2013 to revise member States' AEAs for the period from 2017 to 2020.

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

1. Mitigation actions and their effects

(a) Technical assessment of the reported information

21. Slovenia provided information on its package of PaMs implemented, adopted and planned, by sector and by gas, in order to fulfil its commitments under the Convention and its Kyoto Protocol. Slovenia reported on its policy context and legal and institutional arrangements put in place to implement its commitments and monitor and evaluate the effectiveness of its PaMs.

22. Slovenia provided information on a set of PaMs including those updated or new since the submission of its NC6. Slovenia also provided information on changes made since the previous submission to its institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of the progress made towards its target. The Party's system for reporting and monitoring the achievement of its quantitative GHG emission reduction targets has not changed since its BR2. Improvement of the system is planned using the results of the LIFE ClimatePath2050 programme, which started in 2017 and will be updated and extended to meet EU 2030 policy needs.

23. Overall responsibility for climate change policymaking in Slovenia lies with the Ministry of the Environment and Spatial Planning. Implementation of climate policy is monitored under OP GHG-2020. So far, two reports on the implementation of OP GHG-2020 have been prepared and adopted by the Government of Slovenia, which consisted of two parts: an analysis of indicators for monitoring the impact of measures and an analysis of the implementation of the measures per responsible institution.

24. Slovenia reported on its self-assessment of compliance with its emission reduction target and national rules for taking action against non-compliance. For example, under OP GHG-2020 the Ministry of the Environment and Spatial Planning analyses the changes in key indicators and the implementation of EU-wide and national PaMs.

25. 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. The 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 carbon capture and storage directive, and the general programmes for environmental conservation, namely the 7th Environment Action Programme and the clean air policy package.

26. 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 operators (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).

27. In Slovenia, operators covered by the EU ETS are distributed across the following IPCC sectors: energy industries (most operators), manufacturing industries and construction (operators responsible for 63 per cent of GHG emissions from this sector) and industrial processes (covering 54 per cent of GHG emissions from this sector).

28. 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 and waste, together accounting for 55–60 per cent of the GHG emissions of the EU. The aim of the ESD is to decrease GHG emissions in the EU by 10 per cent below the 2005 level by 2020 and it includes binding annual targets for each member State for 2013–2020. Under the ESD,

Slovenia has a target to limit its emission growth to 4 per cent above the 2005 level by 2020.

29. Slovenia highlighted the EU-wide mitigation actions that are under development, such as the revision of the EU ETS in order to implement the EU 2030 GHG reduction target. By 2030 the EU ETS is to deliver an overall GHG emission reduction of 43 per cent compared with the 2005 level.

30. Slovenia introduced national-level policies to achieve its targets under the ESD and domestic emission reduction targets. The key policies reported include OP GHG-2020, defining indicative sectoral objectives for reducing GHG emissions not included in the EU ETS, and some sector-specific policies such as the Energy Efficiency Action Plan for 2014–2020 (updated in 2017), the National Renewable Energy Action Plan (2010–2020), the Transport Development Strategy of the Republic of Slovenia, the Waste Management Plan and the Waste Prevention Programme of the Republic of Slovenia. Reported measures stemming from these policies cover all sectors. The EU ETS has the highest reported mitigation impact for 2020 (515 kt CO_2 eq by 2020). The combined mitigation effect of increasing the efficiency of vehicles, promoting energy-efficient driving and promoting the use of low-emission fuels was reported as one figure and is the most significant over the longer term (494 kt CO_2 eq by 2020 and 1,494 kt CO_2 eq by 2030). Other policies that are expected to deliver significant emission reductions are the promotion of energy efficiency and use of RES in buildings, the collection of landfill gas, the reduction of landfilled biodegradable waste and the reduction of F-gas emissions from stationary equipment. Table 4 provides a summary of the reported information on the PaMs of Slovenia.

31. Slovenia did not highlight the domestic mitigation actions that are under development and focus on 2020 because the Party is on track to meeting its 2020 GHG emission reduction target and so has not planned any additional actions. However, Slovenia has started to prepare programme documents concerning 2030. At the end of 2017 Slovenia adopted the Slovenian Development Strategy 2030, which defines objectives related to a low-carbon circular economy and sustainable natural resources management. Slovenia's 'energy concept', which identifies directions for the development of energy policy by 2030 and 2050 was adopted by the Government in March 2018 and is awaiting parliamentary approval. Its overarching objective is to ensure sustainable energy use and it will therefore deal with three aspects of sustainability: climate variability, reliability of the energy supply, and power supply competitiveness. No information is available yet regarding the mitigation effects of these PaMs.

Table 4
Summary of information on policies and measures reported by Slovenia

Sector	*Key PaMs*	*Estimate of mitigation impact by 2020 (kt CO_2 eq)*
Policy framework and cross-sectoral measures	EU ETS	515
	OP GHG-2020	NE
	Environmental tax on CO_2 emissions	IE
	Taxes and charges	IE
	Green economic growth	NE
Energy	Modernization of thermal power plants	NE
Transport	Promotion of public passenger transport	NE
	Sustainable freight transport	66
	Increase in the efficiency of vehicles, promotion of energy-efficient driving and promotion of the use of low-emission fuels	42 494

Sector	*Key PaMs*	*Estimate of mitigation impact by 2020 (kt CO_2 eq)*
Renewable energy and energy efficiency	Promotion of energy efficiency and use of RES in households	IE
	Promotion of energy efficiency and use of RES in buildings in general	159
	Promotion of efficient energy use in industry	18
	Promotion of electricity and district heat generation from RES and CHP with high efficiency	NE
IPPU	Reduction of F-gas emissions from stationary equipment	61
	Reduction of F-gas emissions from mobile air conditioning systems	37
Agriculture	Increasing efficiency in animal production	2
	Rational use of fertilizers	20
LULUCF	Sustainable forest management	NE
Waste	Reduction of landfilled biodegradable waste	74
	Collection of landfill gas	105

Note: The estimates of mitigation impact are estimates of emissions of CO_2 or CO_2 eq avoided in a given year as a result of the implementation of mitigation actions.
Source: Slovenia's BR3 CTF table 3.

32. Slovenia has in place a system and institutional arrangements to implement, assess and monitor the progress of mitigation actions and their impacts via OP GHG-2020. However, the ERT noted that estimates of mitigation effect were reported in the BR3 for only some PaMs and that these differ from those reported in the NC6.

(b) Policies and measures in the energy sector

33. **Energy supply**. Slovenia has adopted and is implementing a range of PaMs in the energy sector (which contributed 80.4 per cent of the country's GHG emissions in 2016). The EU ETS, implemented through the Slovenian Environmental Protection Act, is considered to facilitate GHG emission reductions in energy supply, among other things, especially for large combustion plants. In Slovenia about 70 plants are covered by the EU ETS for the period 2013–2020, which are responsible for about 36.3 per cent of the total national GHG emissions. Slovenia's emissions covered by the EU ETS decreased by 26 per cent in the 2005–2016 period.

34. Modernization of thermal power plants constitutes another key area for emission reductions linked to the new requirements introduced by EU legislation (directive 2010/75/EU on industrial emissions). In recent years, several thermal power units have been closed or replaced by new ones, such as the Sostanj thermal plant. In addition, some power plants are in transition to using cleaner fuels: the Ljubljana heat and power plant invested in wood biomass co-incineration and is also planning a transition to natural gas.

35. **Renewable energy sources**. Development of RES in Slovenia is supported by a dedicated scheme introduced in 2002 to enable the growth of electricity produced from such sources. The Energy Act, amended in 2014, provides the legal basis for this measure.[4] Additionally, a decree on self-supply of electricity from RES entered into force in 2016 and

[4] Official Gazette of the Republic of Slovenia, Nos. 17/2014 and 81/2015; and Energy Act, Official Gazette of the Republic of Slovenia, Nos. 27/07–Official Consolidated Text, 70/08, 22/10, 37/11–Constitutional Court Decision, 10/12 and 94/12–ZDoh-2L.

135 such devices were installed during the year, mainly solar power plants and five hydropower plants.

36. As a result of the above-mentioned scheme, the share of RES in electricity generation has been growing in Slovenia, and in 2016 RES accounted for 17 per cent of primary fuel consumption and 31 per cent of the electricity generation in the country. In 2015 the RES support scheme included installations with a total capacity of 341 MW electric power, generating 639 GWh electricity (1 per cent increase compared with in 2014). In 2016 the electrical power of the installations amounted to 343 MW, generating 678.5 GWh electricity (an increase of 6.2 per cent compared with in 2015). Solar power plants constitute the main type of renewable energy technology applied in Slovenia and their number grew significantly in the period 2011−2013. RES installations under the support scheme contributed to the reduction of GHG emissions by 415.5 kt CO_2 eq in 2015 and by 443.1 kt CO_2 eq in 2016.

37. Since 2016 the support scheme has been limited to installations at lower thresholds of nominal capacity (i.e. 10 MW for RES generation units, with the exception of wind power where the threshold of 50 MW applies). The modified scheme provides for a fixed-price purchase only from installations of up to 500 kW, and bigger installations may only be granted operational support. In addition, installations must be selected in an open public call organized by the Energy Agency. The duration of the provision of support for electricity generated from RES is limited to 15 years.

38. **Energy efficiency**. Slovenia promotes energy efficiency by supporting highly efficient co-generation of electricity and heat (CHP) and efficient energy use in industry. The legal basis for this measure is the Energy Act. A promotion scheme for electricity production through CHP was introduced by Slovenia in 2002, along with the RES support scheme, and it has gone through several stages and amendments. The main changes introduced to the scheme in recent years relate to the threshold for participation in the scheme, which is now 20 MW for CHP generation units, and the length of the support period, which is 10 years. The rules for joining the scheme were also modified: now participation in an open public call organized by the Energy Agency is required.

39. The installed power of CHP systems has been growing in Slovenia; in 2016 the installed power of the CHP installations was 84.9 MW, with 325 GWh electricity generated. The reduction of GHG emissions due to the operation of CHP systems using fossil fuels was estimated to be 96.9 kt CO_2 eq in 2015 and 92.4 kt CO_2 eq in 2016.

40. Efficient energy use in industry has been promoted via the Cohesion Fund; a scheme for mandatory final energy savings for companies selling electricity; and Eco Fund loans (see paras. 47 and 48 below).

41. **Residential and commercial sectors**. Slovenia has in place measures dedicated to promoting energy efficiency in buildings and households. In 2015 the Action Plan for Nearly Zero-Energy Buildings up to 2020 was adopted by the Government, which includes targets for ‘nearly zero’ new buildings; renovation programmes; and measures for achieving the targets. In the same year, the Long-term Strategy for Promoting Investments in the Energy Renovation of Buildings was agreed.

42. The Energy Efficiency Action Plan for 2014–2020, adopted in May 2015, defines measures for more efficient use of energy in residential and public buildings. In 2017 the plan was updated and supplemented with new measures, such as support for optimizing the operation of energy systems, instruments for financing the renovation of multifamily houses and sustainable criteria for buildings. An update of the rules on efficient use of energy in buildings and the accompanying technical guidelines is also planned for the future.

43. There are also measures in place focusing on the production of district heat from RES and CHP (see paras. 34 and 37 above). The Energy Act defines a mandatory share for heat produced from RES, namely that, by 2020, heat distributors must ensure that heat is provided in line with at least one of the following criteria: (1) at least 50 per cent is generated from RES; (2) at least 50 per cent is generated from waste heat; (3) at least 75 per

cent is from high-efficiency CHP; or (4) at least 75 per cent is generated from a combination of the sources referred to in the first three items.

44. **Transport sector**. GHG emissions from transport have been growing, as has their overall share in the total national GHG emissions (see table 2), so measures dedicated to this sector play a key role in Slovenia's mitigation actions. Slovenia is highly exposed to transit transport because of its position at the crossroads of European corridors and the attractive price for oil derivatives, which has a significant impact on the sale of liquid motor fuels and, thus, on GHG emissions. Therefore, Slovenia has a variety of measures aimed at promoting public transport, sustainability of freight transport, efficiency of vehicles and driving, increased use of RES and non-motorized modes of transport.

45. Public passenger transport in Slovenia is governed by the Road Transport Act and the Railway Transport Act. Several measures targeting public transport are in place, such as uniform electronic ticketing and park-and-ride car parks, which aim to establish an efficient passenger transport system in order to decrease the number of personal vehicles in cities. OP GHG-2020 includes an indicative target for increasing passenger kilometres travelled by public transport (1,763 km in 2020). Regarding freight transport, the emphasis is on co-modality, which requires the modernization of existing infrastructure. The Transport Development Strategy and the Programme for the Development of Transport in the Republic of Slovenia have the objective of establishing efficient railway transport (the electrification of the whole Slovenian railway network, modernization, upgrades and newly built facilities) and efficient road freight transport (the introduction of electronic tolling for cargo vehicles and information technology for higher-capacity utilization of existing roads). Measures aimed at shifting the transit of cargo from road to railway are also being implemented (e.g. the inclusion of external costs in tolls and other taxes for freight transport). OP-GHG 2020 also established a target to increase freight railway transport to 25 per cent of total freight transport by 2013, which was achieved.

46. In 2017 the Government of Slovenia adopted a strategy on market development for the establishment of adequate infrastructure related to alternative fuels in the country's transport sector. The key objectives of the strategy are, from 2025, to limit new registrations of passenger vehicles and light-duty vehicles with a total carbon footprint above 100 g CO_2/km according to the manufacturer's declaration; and, after 2030, to disallow the new registration of cars with internal combustion using petrol or diesel with a total carbon footprint of more than 50 g CO_2/km. The existing limits for 2017 and 2020 are 130 g CO_2/km and 95 g CO_2/km for passenger cars and 175 and 147 g/km for light-duty vehicles, respectively.

47. The strategy proposes groups of measures for each alternative fuel (electricity, liquefied petroleum gas, liquefied natural gas, compressed natural gas, biofuels and hydrogen), for which a detailed action plan for 2018–2020 is under development. Measures are envisaged to provide the appropriate charging infrastructure for electric vehicles, and for compressed or liquefied natural gas vehicles, which will facilitate increasing the use of alternative fuel vehicles. The measures will be implemented in various ways, including through financial incentives and co-financing for the construction of adequate infrastructure for alternative fuels; changes in regulations; promoting innovative solutions; and eliminating administrative barriers. Some of the key measures include financial incentives for purchasing electric and plug-in hybrid vehicles, exemptions from certain charges for electric vehicles, free parking and other related incentives.

48. **Industrial sector**. PaMs in the industrial sector are aimed at achieving efficient use of energy in industry, especially through three framework financial mechanisms: the Cohesion Fund; a scheme for mandatory final energy savings for companies selling electricity; and Eco Fund loans. In 2015 the total amount of end-use energy savings resulting from these incentives was estimated to be 95 GWh. In 2016 further measures were introduced, resulting in energy savings estimated at 131.5 GWh (Ministry for Infrastructure, 2017).

49. In 2017 the Eco Fund provided EUR 4 million in grants to companies and other legal entities to promote measures for efficient use of energy in buildings (e.g. lighting

systems, charging systems, energy audits, energy management systems) and the use of RES (e.g. solar heating systems). It is expected that about 60 investment projects will be implemented, which will contribute to reducing energy use by almost 35 GWh/year and to an annual reduction of 19 kt CO_2 eq.

(c) Policies and measures in other sectors

50. **Industrial processes**. The PaMs in the industrial processes sector focus on the reduction of F-gas emissions, which have been increasing in Slovenia (see table 2). The implementation of the provisions of EU regulation 517/2014 relating to F-gases from 2014 will reduce F-gas emissions from stationary equipment by limiting F-gases on the EU market by means of a quantity cap and by limiting the use of F-gases with high GWP. The regulation also covers the handling of devices containing F-gases with a view to reducing leakage and increasing the safe handling of F-gases. Implementation of this measure will lead to an estimated 61 kt CO_2 eq emission reduction by 2020.

51. The EU directive on emissions from air conditioning systems in motor vehicles (2006/40/EC) was transposed into Slovenian legislation for category M1 and N1 motor vehicles (passenger motor vehicles and goods vehicles up to a total mass of 3.5 t). The directive was implemented in three phases and the final phase, which entered into force on 1 January 2017, prohibits the registration of vehicles with a built-in air conditioning system containing F-gases with a GWP above 150.

52. **Agriculture**. In 2011 a resolution was adopted on the Slovenian Agriculture and Food Industry Strategic Guidelines until 2020, "Let's secure food for tomorrow", which places among its strategic goals food security (ensured through stable food production and the provision of quality and affordable food to consumers), sustainable use of production potential and the provision of public goods related to agriculture. The overarching objective of the PaMs for agriculture is to reduce emissions per unit of food produced via the implementation of modern farming practices and increased efficiency in animal production.

53. The Rural Development Programme includes measures aimed at increasing efficiency in animal production, such as financing cattle breeding programmes and financing public advisory services for farmers on forage production, animal nutrition and general cattle production. The Ministry of Agriculture, Forestry and Food finances public agricultural services concerning, among other things, grazing management, which promotes emission reductions in the sector. Measures included in the Rural Development Programme (e.g. investments in physical assets, agri-environment-climate payments, organic farming) contribute to reducing emissions from nitrogen fertilizers via efficient use of mineral and animal fertilizers. All farms participating in the agri-environment-climate payments scheme must have a programme of activities that includes record-keeping on the use of mineral and animal fertilizers and follow requirements for crop rotation, fertilization based on analysis of mineral nitrogen in the soil, low-emission fertilization, greening of arable land, and so on.

54. **LULUCF**. Slovenia has in place PaMs in the area of sustainable forest management according to the principles of sustainability, environmental friendliness and multifunctionality. The main objective for the forestry sector is the sustainable development of the whole ecosystem in terms of biodiversity and all its ecological, economic and social functions.

55. The Slovenian Forest Service plays an important role in the management of all forest areas regardless of their ownership. However, as around 76 per cent of the forests in Slovenia constitute private property, this poses a challenge. Tree felling follows the Forest Management Plans for Forest Management Areas, which are valid for 10-year periods, according to which, in order to follow sustainable and environmentally friendly forest management, 7.5 million m^3/year wood may be cut down (75 per cent of forest growth per year) without endangering the stability of the forests and their habitats.

56. **Waste management**. In 2015 the quantity of deposited biodegradable waste in Slovenia was 75 per cent less than in 2005 and slightly higher than the linear path towards the indicative target for 2020 set in OP GHG-2020. By 2020 the amount of deposited

biodegradable waste has to be reduced by an additional 66 per cent. The ERT noted that the objective of OP GHG-2020 is more ambitious than the EU 2020 objective.

57. Slovenia adopted its Waste Management Plan and Waste Prevention Programme in 2016, which are the basis for achieving ambitious objectives by 2030 regarding reducing landfilled biodegradable waste, reducing waste volume and minimizing the negative impact of waste on the environment. In addition to the separate collection of waste and the mechanical biological treatment of mixed waste, additional measures such as raising tax on the landfilling of waste, improving the collection and management system, and introducing fees for the public services according to a 'pay as you throw' rule will contribute to further reducing the quantity of deposited biodegradable waste. The Waste Prevention Programme covers 34 instruments, such as awareness-raising, green public procurement and programmes for potential waste prevention in companies.

58. In Slovenia all landfill operators were obliged to build landfill gas capture facilities by the end of 2005. In 2015, 6.5 kt CH_4 was captured, which constitutes 30 per cent of the CH_4 generated by landfills, and the expected emission reduction resulting from landfill gas capture in 2020 is estimated at 105 kt CO_2 eq. Landfill gas is mostly used for the production of electricity.

(d) Response measures

59. Slovenia did not report on the assessment of the economic and social consequences of its response measures in the BR3.

(e) Assessment of adherence to the reporting guidelines

60. The ERT assessed the information reported in the BR3 of Slovenia and identified issues relating to completeness, transparency and adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 5.

Table 5
Findings on mitigation actions and their effects from the review of the third biennial report of Slovenia

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 8 Issue type: completeness Assessment: encouragement	Slovenia did not report information on the assessment of the economic and social consequences of its response measures. During the review, Slovenia explained that compulsory impact assessments are in place concerning the environmental and economic consequences of PaMs. The main focus of the assessments is on effects at the national level, but this does not rule out the consideration of international effects, since economic effects of measures cannot be analysed in isolation and address trade-related effects as well. Slovenia provided references to the annual inventory submission and NC7 of the EU, where this issue is discussed further. The ERT encourages Slovenia to improve the completeness of its reporting by including in its next BR information on the assessment of the economic and social consequences of its response measures.
2	Reporting requirement specified in CTF table 3 Issue type: completeness Assessment: recommendation	In CTF table 3, Slovenia provided information on mitigation impact for some of the presented PaMs. During the review, the Party explained that the effect of a measure was not estimated if the measure was forward-reaching and supposed to have an important effect after the projected period, or if projections had not been developed (such as in the case of LULUCF). The ERT recommends that Slovenia improve the completeness of its reporting by including in its next BR a quantitative estimate of the impacts of its PaMs, or clearly explain why this may not be possible due to its national circumstances.
3	Reporting requirement specified in	Slovenia provided brief descriptions of its PaMs in CTF table 3. However, the Party did not provide additional information on the cost and timescale of mitigation actions

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
	CTF table 3	as suggested in footnote (e) to the table.
	Issue type: completeness Assessment: encouragement	During the review, Slovenia provided additional information in this respect. Regarding costs of PaMs, Slovenia provided information for several PaMs, such as total public funds needed for the implementation of measures to achieve the non-ETS target until 2020 (EUR 1,131 million in 2014–2020) and costs related to the RES and CHP support scheme (EUR 243,895,050 in 2010–2014). The ERT encourages Slovenia to improve the completeness of its reporting by including in its next BR information on the cost and timescale of mitigation actions, or an explanation of why such additional information could not be provided.

Note: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on BRs.

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

(a) Technical assessment of the reported information

61. For 2014 Slovenia reported in CTF table 4 annual total GHG emissions excluding LULUCF of 16,610.33 kt CO_2 eq, which is 10.7 per cent below the 1990 level. In 2014 emissions from non-ETS sectors relating to the target under the ESD amounted to 10,495 kt CO_2 eq.

62. For 2015 Slovenia reported in CTF table 4 annual total GHG emissions excluding LULUCF of 16,831.16 kt CO_2 eq, which is 9.5 per cent below the 1990 level. In 2015 emissions from non-ETS sectors relating to the target under the ESD amounted to 10,722 kt CO_2 eq.

63. On its use of units from LULUCF activities, Slovenia reported blank cells in CTF table 4 for 2015 and 2016 and left CTF table 4(a) empty for 2015 and 2016 because it is not using units from the LULUCF sector to achieve its target under the Convention. Furthermore, Slovenia reported blank cells for the quantified units from market-based mechanisms in CTF tables 4 and 4(b) for 2015 and 2016. The ERT noted that the use of flexible mechanisms to meet the emission reduction target is possible under both the EU ETS and the ESD for EU member States, but that Slovenia is not planning to use market-based mechanisms under the ESD for meeting its annual trajectory target. In section 3 of the BR3, the Party reported that it plans to reach its 2013–2020 targets for non-ETS sectors without the use of certified emission reductions or emission reduction units. Table 6 illustrates Slovakia's total GHG emissions, the contribution of LULUCF and the use of units from market-based mechanisms to achieve its target.

Table 6
Summary of information on the use of units from market-based mechanisms and land use, land-use change and forestry by Slovenia to achieve its target

Year	Emissions excluding LULUCF (kt CO_2 eq)	Contribution of LULUCF (kt CO_2 eq)[a]	Emissions including contribution of LULUCF (kt CO_2 eq)	Use of units from market-based mechanisms (kt CO_2 eq)[b]
Base year[c]	20 372.27	NA	NA	NA
1990[c]	18 594.28	NA	NA	NA
2010	19 603.02	NA	NA	NA
2011	19 611.04	NA	NA	NA
2012	19 040.28	NA	NA	NA
2013	18 340.85	NA	NA	0.00
2014	16 610.33	NA	NA	0.00

2015	16 831.16	NA	NA	0.00
2016	NA	NA	NA	0.00

Sources: Slovenia's BR3 and CTF tables 1, 4, 4(a)I, 4(a)II and 4(b).

[a] The EU's unconditional commitment to reduce GHG emissions by 20 per cent below the 1990 level by 2020 does not include emissions/removals from LULUCF.

[b] Slovenia reports blank cells for the entire column.

[c] Table 4 provides the value for 1986 under base year/period (1990) in the Party's submission.

64. In assessing the progress towards the achievement of the 2020 target, the ERT noted that Slovenia's emission reduction target for non-ETS sectors is 4 per cent above the 2005 level (see para. 16 above). As discussed above, in 2015 Slovenia's emissions from non-ETS sectors were 13.4 per cent (1,662 kt CO_2 eq) below the AEA under the ESD. Slovenia is not using LULUCF or market-based mechanisms to meet its non-ETS target.

65. The ERT noted that Slovenia is making progress towards its emission reduction target by implementing mitigation actions that are delivering significant emission reductions. On the basis of the results of the projections (see para. 78 below), the ERT also noted that the Party is making progress towards achieving its target under the Convention.

(b) Assessment of adherence to the reporting guidelines

66. The ERT assessed the information reported in the BR3 of Slovenia and identified an issue relating to transparency and adherence to the UNFCCC reporting guidelines on BRs. The finding is described in table 7.

Table 7
Findings on estimates of emission reductions and removals and the use of units from the market-based mechanisms and land use, land-use change and forestry from the review of the third biennial report of Slovenia

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation*
1	Reporting requirement specified in paragraph 10 Issue type: transparency Assessment: recommendation	The ERT noted that some cells in CTF tables 4, 4(a)I, 4(b) were left empty and for some others (e.g. CTF table 4(a)II) the notation keys "NA" and "NO" were used; however, the meaning of the notation keys was not explained. In addition, the row for the base year/period in table 4 indicates 1990 as a base year, but the 1986 value is reported in the cell for the total emissions excluding LULUCF. During the review, Slovenia explained why some cells in the CTF tables were left empty and the meaning of the notation keys used, namely that empty cells and the notation key "NA" were applied when information was not applicable. The ERT reiterates the recommendation made in the previous review report (FCCC/TRR.2/SVN, para. 37) that Slovenia, in its next BR, improve the transparency of its reporting on progress made towards its emission reduction targets in CTF table 4 by filling in all relevant parts of the table in accordance with the assumptions related to the target and by reporting consistently across the CTF tables. This can be done, for example, by ensuring that all CTF tables are filled in appropriately and, if cells are not applicable (i.e. for LULUCF and market-based mechanisms), the Party use the notation key "NA" together with a footnote under the relevant table to explain the meaning of the notation key applied.

Note: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on BRs.

3. Projections overview, methodology and results

(a) Technical assessment of the reported information

67. Slovenia reported updated projections for 2020, 2025, 2030 and 2035 relative to actual inventory data for 2015 under the WEM scenario. The WEM scenario reported by Slovenia includes implemented and adopted PaMs. The definition indicates that the scenario was prepared according to the UNFCCC reporting guidelines on NCs.

68. Slovenia did not report WAM and WOM projections in its BR3. During the review, Slovenia explained that WOM scenario projections were prepared for each sector, but the definition of the WOM scenario is not completely consistent across sectors, which is the main reason the projections were not reported. Slovenia stated that the WAM scenario was not included in its reporting because the projections were not available for all or most of the sectors at the time of the BR3 preparation.

69. The WEM projections are presented on a sectoral basis (see table 11), using the same categories as those used in the reporting on mitigation actions, and on a gas-by-gas basis for CO_2, CH_4, N_2O, PFCs, HFCs and SF_6 (treating PFCs, HFCs and SF_6 collectively) for 1986–2035. The projections are also provided in an aggregated format for each sector except for the LULUCF sector as well as for a Party total using GWP values from the IPCC Fourth Assessment Report.

70. Slovenia did not report emission projections for indirect GHGs such as carbon monoxide, nitrogen oxides, non-methane volatile organic compounds or sulfur oxides.

71. Emission projections related to fuel sold to ships and aircraft engaged in international transport were reported separately and not included in the totals.

72. Slovenia reported on factors and activities affecting emissions for each sector included in the projections.

(b) Methodology, assumptions and changes since the previous submission

73. The methodology used for the preparation of the projections is similar to that used for the preparation of the emission projections for the BR2 and NC6. A linear network model for processes and connections (Reference Energy and Environmental System of Slovenia, known as REES-SLO2) developed in the Modular Energy System Analysis and Planning[5] environment was used for the energy sector projections. The same model was used for the transport sector, together with the EU PRIMES[6] model for assessing overall fuel consumption and transit fuel use in the country, and specific national transport models such as PET-SLO for projecting the structure of newly acquired personal vehicles. Projections of emissions from industrial processes were prepared using Excel on the basis of projected production and growth in F-gas consumption. For the waste and agriculture sectors, time series were developed using IPCC methodology. Details of models and methodologies were presented in section 5.9 of the NC7 (cross-referenced in the BR3). There were no projections presented for the LULUCF sector. Compared with the BR2, upgraded versions of models and methodologies (for IPPU, transport, waste and agriculture) and updated databases were used for the projections.

74. To prepare its projections, Slovenia relied on key underlying assumptions of the following: GDP, population, number of households, international oil, coal and gas prices, gross inland consumption and gross electricity production. These variables and assumptions were partly reported in CTF table 5 for historical data.

75. The assumptions were updated on the basis of the most recent economic developments known at the time of the preparation of the projections. With respect to the assumptions reported in CTF table 5, the key trends are as follows: GDP (at constant prices 2005) is projected to grow from EUR 32.48 billion in 2015 to EUR 36.28 billion in 2020 and EUR 47.17 billion in 2030. Between 2015 and 2020 the population is projected to decrease by 2.2 per cent, or from 2.06 to 2.02 million, while the number of households is projected to increase by 3.7 per cent (from 824,000 to 854,000 households). Gross inland consumption is expected to grow by 5.1 per cent over the same period (from 272.33 to 286.13 PJ), while gross electricity production is expected to grow by 1.3 per cent (from

[5] The energy system analysis toolbox initially developed by the Institute for Energy Economics and the Rational Use of Energy, at the University of Stuttgart in Germany.

[6] See https://ec.europa.eu/clima/sites/clima/files/strategies/analysis/models/docs/primes_model_2013-2014_en.pdf.

17.92 to 18.15 TWh). International fuel prices (coal, oil and gas) are expected to be EUR 3.36, 15.00 and 8.03 per GJ, respectively in 2020.

76. Slovenia did not provide an explanation of changes in the assumptions used in preparing the projection scenarios since the submission of its NC6. The ERT noted that some changes were made to the values of some key parameters compared with the previous projections. For example, compared with the BR2, assumptions for GDP increased by 6.78 per cent for 2020; for gross inland consumption, assumptions decreased by 4.3 and 4.03 per cent for 2020 and 2030, respectively; and, for the same years, assumptions for gross electricity production decreased by 2.24 and 3.22 per cent. These differences were not specifically addressed in the BR3.

77. Slovenia provided information on sensitivity analyses, which were conducted for the assumptions on transit transport and the implementation of measures for sustainable transport and environmental policies. The analyses were reported separately for the projections of transport emissions, total emissions and non-ETS emissions. The difference between the highest and lowest projections of GHG emissions from transport amounted to 30 per cent.

(c) Results of projections

78. The projected emission levels under the WEM scenario and information on the Kyoto Protocol target and the quantified economy-wide emission reduction target are presented in table 8 and the figure below as provided in BR3 CTF table 6(a).

Table 8
Summary of greenhouse gas emission projections for Slovenia

	GHG emissions (kt CO_2 eq per year)	*Changes in relation to base-year level (%)*	*Changes in relation to 1990 level (%)*
Quantified economy-wide emission reduction target under the Convention[a]	NA	NA	NA
Inventory data 1990[b]	18 594.28	NA	NA
Inventory data 2015[b]	16 831.16	–9.5	–9.5
WEM projections for 2020[c]	18 008.58	–3.1	–3.1
WAM projections for 2020[c]	–	–	–
WEM projections for 2030[c]	16 351.39	–12.1	–12.1
WAM projections for 2030[c]	–	–	–

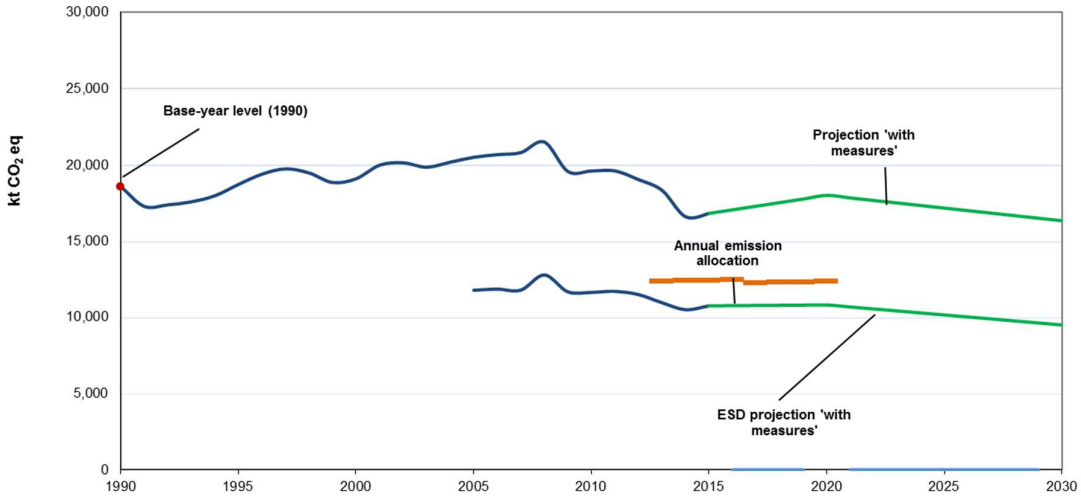
Note: The projections are for GHG emissions without LULUCF.

[a] The quantified economy-wide emission reduction target under the Convention is a joint target of the EU and its 28 member States. The target is to reduce emissions by 20 per cent compared with the base-year (1990) level by 2020.

[b] From Slovenia's BR3 CTF table 6.

[c] From Slovenia's NC7 and/or BR3.

Greenhouse gas emission projections reported by Slovenia



Sources: (1) data for 1990–2015: Slovenia's NC7, BR3 and 2017 annual inventory submission, version 1; total GHG emissions excluding LULUCF; (2) data for 2015–2030: Slovenia's NC7 and BR3; total GHG emissions excluding LULUCF.

79. Slovenia's total GHG emissions excluding LULUCF in 2020 and 2030 are projected to be 18,008.58 and 16,351.39 kt CO_2 eq respectively under the WEM scenario, which represents a decrease of 3.1 (585.7 kt CO_2 eq) and 12.1 (2,242.89 kt CO_2 eq) per cent, respectively, below the 1990 level. The 2020 projections suggest that Slovenia will continue contributing to the achievement of the EU target under the Convention (see para. 16 above).

80. Slovenia's target for non-ETS sectors is to limit its emission growth to 4 per cent above the 2005 level by 2020 (see para. 16 above). Slovenia's AEAs, which correspond to its national emission target for non-ETS sectors, change from 12,324 kt CO_2 eq in 2013 to 12,307 kt CO_2 eq for 2020. According to the projections under the WEM scenario, emissions from non-ETS sectors are estimated to reach 10,781 kt CO_2 eq by 2020, which is 12.4 per cent below the AEAs allocated for 2020 (a decrease of 8.2 per cent compared with the 2005 level). The ERT noted that this suggests that Slovenia expects to meet its ESD target under the WEM scenario.

81. Slovenia presented the WEM scenario by sector for 2020 and 2030, as summarized in table 9.

Table 9
Summary of greenhouse gas emission projections for Slovenia presented by sector

	GHG emissions and removals (kt CO_2 eq)					*Change (%)*			
		2020		*2030*		*1990–2020*		*1990–2030*	
Sector	*1990*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*
Energy (not including transport)	8 767.44	7 231.16	–	5 511.38	–	–17.5	–	–37.1	–
Transport	2 733.53	5 419.30	–	5 225.48	–	98.3	–	91.2	–
Industry/industrial processes	4 525.52	3 006.29	–	3 323.33	–	–33.6	–	–26.6	–
Agriculture	1 922.89	1 904.24	–	1 921.41	–	–1.0	–	–0.1	–
LULUCF	–4 454.15	NE	–	NE	–	NE	–	NE	–
Waste	644.90	447.58	–	369.78	–	–30.6	–	–42.7	–

	GHG emissions and removals (kt CO_2 eq)					Change (%)			
		2020		2030		1990–2020		1990–2030	
Sector	*1990*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*
Other (specify)									
Total GHG emissions without LULUCF	**18 594.28**	**18 008.58**	**–**	**16 351.39**	**–**	**–3.1**	**–**	**–12.1**	**–**

Source: Slovenia's BR3 CTF table 6.

82. The information in table 9 is as provided by the Party in CTF table 6(a) and differs from the sector allocation in the inventory section of this report because the emissions from fuel combustion in the industry sector are allocated under the IPPU sector and not under the energy sector. The analysis below follows the split of the sectors as provided in CTF table 6(a). According to the detailed data provided in annex C to the NC7, the emission contribution of fuel combustion in industry will be 1,697 and 2,052 kt CO_2 eq in 2020 and 2030, respectively, which is more than the emissions from the IPPU sector.

83. According to the projections reported for 2020 under the WEM scenario, the most significant emission reductions are expected to occur in the energy and industry sectors, amounting to projected reductions of 1,536.28 kt CO_2 eq (17.5 per cent) and 1,519.23 kt CO_2 eq (33.6 per cent) between 1990 and 2020, respectively. The decreasing emission trend in the energy sector mostly depends on the reduction of electricity production by coal-based units and their replacement with gas-powered units and the increase in the use of RES. Under the WEM scenario, the increase in emissions from the transport sector is limited to 2,658.77 kt CO_2 eq (98.3 per cent) by 2020. The main reason behind the trend is the increase in passenger and freight transport. Under the WEM scenario, the estimated emission reduction for the waste sector is 197.33 kt CO_2 eq (30.6 per cent) by 2020, which depends on the policies for landfilled biodegradable waste and volume of mixed waste.

84. The pattern of projected emissions reported for 2030 under the same scenario is generally the same, with an even higher decrease in emissions from the energy sector (by 37.1 per cent or 3,256.06 kt CO_2 eq above the 1990 level). However, there is a slight increasing trend between 2020 and 2030 in the emissions from the industry and agriculture sectors. By 2030, emissions from the industry and agriculture sectors are expected to increase by 317.04 kt CO_2 eq (10.5 per cent) and 17.17 kt CO_2 eq (0.9 per cent), respectively, compared with the 2020 level under the WEM scenario, while emissions from the energy sector are expected to decrease by 1,719.78 kt CO_2 eq (23.8 per cent) between 2020 and 2030.

85. Slovenia presented the WEM scenarios by gas for 2020 and 2030, as summarized in table 10.

Table 10
Summary of greenhouse gas emission projections for Slovenia presented by gas

	GHG emissions and removals (kt CO_2 eq)					Change (%)			
		2020		2030		1990–2020		1990–2030	
Gas	*1990*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*
CO_2	15 074.48	14 686.27	–	13 369.08	–	–2.6	–	–11.3	–
CH_4	2 471.10	2 107.75	–	1 950.75	–	–14.7	–	–21.1	–
N_2O	831.28	890.28	–	899.50	–	7.1	–	8.2	–
HFCs	0.00	296.60	–	104.36	–	NA	–	NA	–
PFCs	207.59	15.60	–	15.60	–	–92.5	–	–92.5	–
SF_6	9.83	12.08	–	12.10	–	22.9	–	23.1	–
NF_3	NO	NO	–	NO	–		–		–

	GHG emissions and removals (kt CO_2 eq)					Change (%)			
		2020		2030		1990–2020		1990–2030	
Gas	*1990*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*	*WEM*	*WAM*
Total GHG emissions without LULUCF	**18 594.28**	**18 008.58**	**–**	**16 351.39**	**–**	**–3.1**	**–**	**–12.1**	**–**

Source: Slovenia's BR3 CTF table 6.

86. For 2020 the most significant reductions are projected for CO_2 and CH_4 emissions: 388.21 kt CO_2 eq (2.6 per cent) and 363.35 kt CO_2 eq (14.7 per cent) between 1990 and 2020, respectively. Between 1990 and 2030 the most significant reductions are still projected for CO_2 and CH_4 emissions: 1,705.4 kt CO_2 eq (11.3 per cent) and 520.35 kt CO_2 eq (21.1 per cent), respectively. The main reason for the decreasing trend in CO_2 emissions is the reduction in the use of fossil fuels and the increase in the energy efficiency of buildings. CH_4 is projected to decrease because of decreasing emissions from the waste sector. Emissions of HFCs and N_2O are expected to increase by 296.60 kt CO_2 eq and 59.00 kt CO_2 eq, respectively, between 1990 and 2020. The estimated increase in N_2O emissions (by 7.1 and 8.2 per cent by 2020 and 2030, respectively) can be attributed to the agriculture sector. HFC emissions increased until 2015 and are expected to decrease by 14.4 and 69.9 per cent by 2020 and 2030, respectively, compared with the 2015 level.

(d) Assessment of adherence to the reporting guidelines

87. The ERT assessed the information reported in the BR3 of Slovenia and identified issues relating to completeness, transparency and adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 11.

Table 11
Findings on greenhouse gas emission projections reported in the third biennial report of Slovenia

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement[a] specified in paragraph 28 Issue type: completeness Assessment: encouragement	Slovenia did not provide WAM or WOM scenario projections in its BR3. During the review, Slovenia explained that WOM projections were not reported because of the inconsistency in the definition of the WOM scenario across sectors, and WAM projections were not included because they were not ready at the time of submission. To increase the completeness of its next BR, the ERT reiterates the encouragement made in the previous review report (FCCC/TRR.2/SVN, para. 44) that Slovenia report WAM and WOM projections following the scenario definitions included in the UNFCCC reporting guidelines on NCs.
2	Reporting requirement[a] specified in CTF table 6(a) Issue type: transparency Assessment: encouragement	According to footnote (b) to CTF table 6(a), emissions and removals reported for projections should be as reported in the latest GHG inventory and should be consistent with the emissions and removals reported in the table on GHG emissions and trends provided in the BR. Where the sectoral breakdown for the projections differs from that reported in the GHG inventory, Parties should explain in their BR how the inventory sectors relate to the sectors reported in CTF table 6(a). For the industry sector, the ERT noted that historical emission data did not correspond with the values reported in the 2017 national inventory submission. In response to a question raised by the ERT, Slovenia explained that emission values were taken from the national inventory but emissions from energy consumption in the industry sector (reported under category 1.A.2 in the NIR) were included in the projections for industry instead of in the projections for the energy sector. The ERT encourages Slovenia to increase the transparency of the reporting in its next BR by reporting projections using an allocation that is consistent with the categories used in the national inventory, or clearly explain the choice to change in allocation across sectors.

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
3	Reporting requirement[a] specified in paragraph 35 Issue type: completeness Assessment: recommendation	The ERT noted that Slovenia did not report any projections for the LULUCF sector in the BR3 and reported "NE" in CTF table 6(a). During the review, Slovenia explained that there is an ongoing project concerning the LULUCF sector, the results of which were not available for the current reporting cycle. Slovenia is planning to include LULUCF projections in its next BR. The ERT recommends that Slovenia improve the completeness of its reporting by providing projections for the LULUCF sector.
3	Reporting requirement[a] specified in paragraph 35 Issue: completeness Assessment: encouragement	The ERT noted that projections shall be presented for CO_2, CH_4, N_2O, PFCs, HFCs and SF_6 (treating PFCs and HFCs collectively in each case), and that Parties may provide projections of the indirect GHGs carbon monoxide, nitrogen oxides, non-methane volatile organic compounds and sulfur oxides. Slovenia did not include projections of the indirect GHGs in its BR3. The ERT reiterates the encouragement made in the previous review report (FCCC/IDR.6/SVN, para. 64) that Slovenia improve the completeness of its reporting by including projections for indirect GHGs, such as carbon monoxide, nitrogen oxides and non-methane volatile organic compounds and sulphur oxides, in its next BR.
4	Reporting requirement[a] specified in paragraph 43 Issue type: transparency Assessment: encouragement	The ERT noted that Slovenia provided information on the models used for the projections by sector. However, the information was not sufficiently precise as to the models used and their characteristics (e.g. for the transport sector), such as type of model, strengths and weaknesses of the model or approach used, and how the model or approach used accounts for any overlap or synergies that may exist between different PaMs. The ERT encourages Slovenia to improve the transparency of its reporting by providing in its next NC information on the models used for developing projections for each sector and their characteristics.
5	Reporting requirement[a] specified in paragraph 47 Issue type: transparency Assessment: encouragement	Slovenia provided information about key underlying assumptions and values of variables such as GDP, GDP growth, population growth and international fuel prices in CTF table 5, but the ERT noted that some values were not provided for the historical years 1990, 1995, 2000, 2010 and 2015 for a few parameters. During the review, Slovenia informed the ERT that historical values for international fuel prices were not provided due to a lack of consistent data for those years. The ERT reiterates the encouragement made in the previous review report (FCCC/TRR.2/SVN, para. 45) that Slovenia improve the transparency of its reporting by providing information on all key variables and assumptions for the historical period for the projections analysis, and also encourages the Party to provide an explanation as to why the historical data could not be provided in certain cases (e.g. as a footnote to the relevant tables).
6	Reporting requirement[b] specified in paragraph 12 Issue type: transparency Assessment: encouragement	In section 5.1 of its BR3 Slovenia reported that the model database was updated in order to better reflect the latest trends, and the BR3 makes reference to the NC7 for information on methodologies and their changes. However, neither the BR3 nor the NC7 reported clearly on changes to the methodologies used for the preparation of the GHG emission projections. During the review, Slovenia stated that the methodologies used for the preparation of the projections for the waste and agriculture sectors were changed in order to make them consistent with the national inventory. The ERT encourages Slovenia to improve the transparency of the reporting in its next BR by including information on the main differences in the methodologies applied for GHG projections compared with the previous NC and BR along with supporting documents.

Note: The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on NCs and on BRs.

[a] Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs.

[b] Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs.

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

88. Slovenia is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3, 4 and 5, of the Convention. However, Slovenia provided information in the BR3 on its provision of support to developing country Parties. The ERT commends Slovenia for reporting this information and suggests that it continue to do so in future BRs.

89. CTF table 7 indicated an allocation of EUR 773,833 for adaptation and EUR 1,575,822 for cross-cutting issues in 2015. The amounts in 2016 are EUR 90,575 for mitigation, EUR 1,110,752 for adaptation and EUR 1,775,181 for cross-cutting issues. All support was channelled through official development assistance in accordance with the methodology of the Development Assistance Committee of the Organisation for Economic Co-operation and Development.

90. The contribution of about EUR 3 million for climate finance or assistance to developing countries reported for 2016 represents an increase of 24.3 per cent compared with the contribution in 2015, and the Party reported its aspiration to maintain the assistance at around EUR 3.5 million by 2020. One third of the amount is channelled via multilateral assistance and almost EUR 2 million via bilateral assistance. Slovenia has tried to offer about half of the assistance to projects for adaptation to climate change, while the other half targets cross-cutting and GHG mitigation projects. The projects focus mainly on the Western Balkan countries (e.g. Albania, Montenegro, the former Yugoslav Republic of Macedonia) and include the transfer of knowledge, technologies or good practices from Slovenia to those countries.

91. In its BR3 Slovenia reported that for the first time it added resources from the Slovenian Climate Change Fund, where resources are gathered from the sale of allowances from the EU ETS, with the aim of allocating at least EUR 1 million per year for climate finance from the Fund by 2020. Slovenia plans to increase the annual contribution from its Climate Change Fund in order for the total climate finance to reach between EUR 6 million and 7 million in 2030. The share of climate finance in 2016 amounted to around 1 per cent of the total official development assistance and, by 2030, that is expected to increase to at least 30 per cent.

III. Conclusions and recommendations

92. The ERT conducted a technical review of the information reported in the BR3 and CTF tables of Slovenia in accordance with the UNFCCC reporting guidelines on BRs. The ERT concludes that the reported information mostly adheres to the UNFCCC reporting guidelines on BRs and provides an overview of 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 Slovenia in achieving its target; and the Party's provision of support to developing country Parties.

93. Slovenia's total GHG emissions excluding LULUCF covered by its quantified economy-wide emission reduction target were estimated to be 4.9 per cent below its 1990 level, whereas total GHG emissions including LULUCF were 11.7 per cent below its 1990 level, in 2016. The decreasing emission trend between 1990 and 2016 was driven by the major structural changes in the economy after Slovenia gained its independence in the early 1990s and the economic crisis in 2008, which caused lower consumption of energy and lower production in the manufacturing sector. The energy profile significantly changed during the period and there has been a sharp overall increase in emissions from transport since Slovenia joined the EU in 2004. The decrease in emissions in the other sectors can

also be attributed to the impact of implemented environmental legislation and PaMs related to climate change.

94. Under the Convention, Slovenia committed to contributing to the achievement of the joint EU quantified economy-wide emission reduction target of a 20 per cent reduction in emissions below the 1990 level by 2020. The target covers all sectors and CO2, CH4, N2O, HFCs, PFCs and SF6, expressed using GWP values from the IPCC Fourth Assessment Report. Emissions and removals from the LULUCF sector are not included. The EU generally allows its member States to use units from the Kyoto Protocol mechanisms and new market mechanisms for compliance purposes up to an established limit and subject to a number of restrictions on the origin and the type of project. Companies can make use of such units to fulfil their requirements under the EU ETS.

95. According to EU decision 406/2009/EC, under the ESD, Slovenia has a target to limit its emission growth to 4 per cent above the 2005 level by 2020. The 2015–2020 values for Slovenia's AEAs, which correspond to its national emission target for non-ETS sectors, change from 12,383 to12,307 kt CO_2 eq.

96. Slovenia's main policy framework relating to energy and climate change is derived from the EU climate policy. The key plans and programmes supporting Slovenia's climate change goals include OP GHG-2020, the Energy Efficiency Action Plan for 2014–2020 (updated in 2017), the National Renewable Energy Action Plan 2014-2020 (updated in 2017), the Transport Development Strategy of the Republic of Slovenia, the Resolution on the Slovenian Agriculture and Food Industry Strategic Guidelines until 2020 and the Waste Management Plan and Waste Prevention Programme. The legislative framework of Slovenia's climate change policy is set by the Environmental Protection Act, the Energy Act, the Road Transport Act and the Railway Transport Act. The mitigation actions with the most significant mitigation impact are the promotion of public passenger transport and of freight transport as well as the promotion of energy-efficient driving, energy efficiency and use of RES in buildings and the reduction of landfill biodegradable waste.

97. For 2015 Slovenia reported in CTF table 4 total GHG emissions excluding LULUCF of 16,831.16 kt CO_2 eq, which is 9.5 per cent below the 1990 level. LULUCF is not included in the target under the Convention and was therefore not reported on. Slovenia does not plan to use units from market-based mechanisms to achieve its ESD target.

98. The ERT noted that Slovenia is making progress towards its emission reduction target by implementing mitigation actions that deliver emission reductions. The GHG emission projections provided by Slovenia in the BR3 correspond to the WEM scenario. Under this scenario, emissions are projected to be 3.1 and 12.1 per cent below the 1990 level in 2020 and 2030, respectively. Slovenia reported a projection for non-ETS emissions under the WEM scenario of 10,781 kt CO_2 eq by 2020 which is 12.4 per cent below the AEAs for 2020 (a decrease of 8.2 per cent compared with the 2005 level). Based on the reported information, the ERT concludes that Slovenia expects to meet its 2020 target for non-ETS sectors under the WEM scenario.

99. Slovenia is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3, 4 and 5, of the Convention. However, Slovenia provided information in the BR3 on its provision of support to developing country Parties.

100. In the course of the review, the ERT formulated the following recommendations for Slovenia to improve its adherence to the UNFCCC reporting guidelines on BRs in its next BR:[7]

(a) To improve the completeness of its reporting by:

(i) Including a quantitative estimate of the impacts of its PaMs, or clearly explaining why this may not be possible due to its national circumstances (see issue 2, table 5);

[7] The recommendations are given in full in the relevant sections of this report.

(ii) Reporting projections for the LULUCF sector (see issue 3, table 11);

(b) To improve the transparency of its reporting by:

(i) Enhancing the description of its economy-wide emission reduction target, while ensuring that all required information regarding gases covered and use of international market-based mechanisms in achieving the emission reduction target is filled in consistently across the CTF tables (see issue 1, table 3);

(ii) Clarifying the information on progress made towards the emission reduction targets by filling in all relevant parts of CTF table 4 (e.g. on base-year emissions and on the use of LULUCF and units from market-based mechanisms) in accordance with the assumptions related to the target and reporting consistently across the CTF tables (see issue 1, table 7);

(c) To improve the timeliness of its reporting by submitting its next BR on time (see para. 6 above).

Annex

Documents and information used during the review

A. Reference documents

2017 GHG inventory submission of Slovenia. Available at https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/submissions/national-inventory-submissions-2017.

2018 GHG inventory submission of Slovenia. Available at https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2018.

BR3 of Slovenia. Available at https://unfccc.int/sites/default/files/resource/453201_Slovenia-BR3-NC7-1-7NC3BR-EN_v0b%20F.pdf.

BR3 CTF tables of Slovenia. Available at https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/national-communications-and-biennial-reports-annex-i-parties/third-biennial-reports-annex-i.

Eco Fund. 2017. *Business and Financial Plan by the Eco Fund, Slovenian environmental public fund, for 2017*.

"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.

"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.

Ministry for Infrastructure. 2017. *Energy Efficiency Action Plan for 2014–2020* (updated in 2017). Available at https://ec.europa.eu/energy/sites/ener/files/documents/NEAPSLOVENIA_en.pdf.

NC7 of Slovenia. Available at https://unfccc.int/sites/default/files/resource/453201_Slovenia-BR3-NC7-1-7NC3BR-EN_v0b%20F.pdf.

Report on the individual review of the annual submission of Slovenia submitted in 2016. FCCC/ARR/2016/SVN. Available at https://unfccc.int/index.php/documents/28190.

Report of the technical review of the second biennial report of Slovenia. FCCC/TRR.2/SVN. Available at https://unfccc.int/resource/docs/2016/trr/svn.pdf.

"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.

B. Additional information provided by the Party

Responses to questions during the review were received from Ms. Barbara Simonic (Ministry of Environment and Spatial Planning), including additional material. The following documents[1] were provided by Slovenia:

Operativni program ukrepov zmanjšanja emisij toplogrednih plinov do leta 2020 (The Operational Programme for Reducing GHG Emissions until 2020). Available at: http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/op_tgp/op_tgp_2020.pdf.

Institut "Jožef Stefan" and Center za energetsko učinkovitost. 2015. *Strokovne podlage za pripravo prvega letnega poročila o izvajanju OP TGP2020, končno poročilo projekta*. (The first report on monitoring implementation of The Operational Programme for Reducing GHG Emissions until 2020). Ljubljana. Available at http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/zakonodaja/varstvo_okolja/operativni_programi/1porocilo_opuzetp_2020_priloga1.pdf.

Energy agency. *POROČILO O DOSEGANJU NACIONALNIH CILJEV NA PODROČJU OVE IN SPTE ZA OBDOBJE 2015−2016*. 2017. (Report from evaluation of the support scheme for renewable electricity production and CHP electricity production), Available at: https://www.agen-rs.si/documents/10926/24862/Porocilo_cilji2015_2016/d8429203-36b5-4d2f-83fa-e31b87dh7c297.

Slovenia's Smart Specialisation Strategy – S4, 2015. Available at http://www.svrk.gov.si/fileadmin/svrk.gov.si/pageuploads/SPS_predstavitve/S4_dokument_2015_october_eng_clean_lekt.pdf.

"SLOVENIAN ERA ROADMAP". *Slovenian Strategy for Strengthening the European Research Area 2016–2020*, 2016. Available at https://rio.jrc.ec.europa.eu/en/library/slovenian-strategy-strengthening-european-research-area-2016-2020-era-roadmap.

Environmental NGO's in Slovenia: http://www.mop.gov.si/si/nevladne_organizacije/.

Environmental Protection Act (Official Gazette of the Republic of Slovenia [Uradni list RS], No. 39/06 – official consolidated text, 49/06 - ZMetD, 66/06 - CC Decision of the Constitutional Court, 33/07 – ZPNačrt, 57/08 – ZFO-1A, 70/08, 108/09, 108/09 – ZPNačrt-A, 48/12, 57/12, 92/13, 56/15, 102, 15 and 30/16, Slovene: Zakon o varstvu okolja; hereinafter: the ZVO-1).

The Aarhus Convention: National Implementation Report https://www.unece.org/env/pp/reports_trc_implementation_2017.html.

Land Cover Data of Slovenia: http://rkg.gov.si/GERK/WebViewer/.

The Nature Conservation Act: Official Gazette of the Republic of Slovenia [Uradni list RS], Nos. 96/04 – official consolidated text, 61/06 – ZDru-1, 8/10 – ZSKZ-B, and 46/14; Slovene: Zakon o ohranjanju narave.

Report on the Environment in the Republic of Slovenia (February 2017): http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/pomembni_dokumenti/porocilo_o_okolju_2017.pdf.

Slovenia Reduces CO_2: www.slovenija-CO_2.si.

ZUP: the General Administrative Procedure Act: Official Gazette of the Republic of Slovenia [Uradni list RS], Nos. 24/06 – official consolidated text, 105/06 – ZUS-1, 126/07, 65/08, 8/10, and 82/13, Slovene, Zakon o splošnem upravnem postopku.

[1] Reproduced as received from the Party.