



United Nations

FCCC/TRR.4/LVA



Framework Convention on  
Climate Change

Distr.: General  
2 September 2020

English only

---

## Report on the technical review of the fourth biennial report of Latvia

Developed country Parties were requested by decision 2/CP.17 to submit their fourth biennial report to the secretariat by 1 January 2020. This report presents the results of the technical review of the fourth biennial report of Latvia, 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”. The review took place from 15 to 19 June 2020 remotely.

GE.20-11413(E)



\* 2 0 1 1 4 1 3 \*

Please recycle 



## Contents

	<i>Page</i>
Abbreviations and acronyms .....	3
I. Introduction and summary .....	4
A. Introduction .....	4
B. Summary.....	4
II. Technical review of the information reported in the fourth biennial report .....	5
A. Information on greenhouse gas emissions and removals related to the quantified economy-wide emission reduction target .....	5
B. Quantified economy-wide emission reduction target and related assumptions, conditions and methodologies .....	7
C. Progress made towards the achievement of the quantified economy-wide emission reduction target.....	8
D. Provision of financial, technological and capacity-building support to developing country Parties.....	24
III. Conclusions and recommendations .....	24
Annex	
Documents and information used during the review.....	26

## Abbreviations and acronyms

AEA	annual emission allocation
Annex II Party	Party included in Annex II to the Convention
AR	Assessment Report of the Intergovernmental Panel on Climate Change
BR	biennial report
CH <sub>4</sub>	methane
CHP	combined heat and power
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
CTF	common tabular format
ERT	expert review team
ESD	European Union effort-sharing decision
ESR	European Union effort-sharing regulation
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
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
MEPRD	Ministry of Environmental Protection and Regional Development
Mtoe	million tonnes of oil equivalent
NA	not applicable
NC	national communication
NE	not estimated
NECP	National Energy and Climate Plan
NF <sub>3</sub>	nitrogen trifluoride
NO	not occurring
N <sub>2</sub> O	nitrous oxide
PaMs	policies and measures
PFC	perfluorocarbon
RES	renewable energy source(s)
SF <sub>6</sub>	sulfur hexafluoride
UNFCCC reporting guidelines on BRs	“UNFCCC biennial reporting guidelines for developed country Parties”
UNFCCC reporting guidelines on CTF tables	“Common tabular format for ‘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 BR4<sup>1</sup> of Latvia. 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 Latvia, which provided comments that were considered and incorporated, as appropriate, into this final version of the report.

3. The review was conducted together with the review of one other Party included in Annex I to the Convention from 15 to 19 June 2020 remotely<sup>2</sup> by the following team of nominated experts from the UNFCCC roster of experts: David Bartholomew Fredericks (Guyana), Newton Paciornik (Brazil), Duška Šaša (Croatia), Adrian Schilt (Switzerland), David Glen Thistlethwaite (United Kingdom of Great Britain and Northern Ireland) and Clement Madalitso Tikiwa (Malawi). Mr. Paciornik and Mr. Schilt were the lead reviewers. The review was coordinated by Marion Vieweg-Mersmann and Karin Simonson (secretariat).

### B. Summary

4. The ERT conducted a technical review of the information reported in the BR4 of Latvia in accordance with the UNFCCC reporting guidelines on BRs (annex I to decision 2/CP.17).

#### 1. Timeliness

5. The BR4 was submitted on 27 December 2019, before the deadline of 1 January 2020 mandated by decision 2/CP.17. The CTF tables were submitted on 20 December 2019.

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

6. Issues and gaps identified by the ERT related to the reported information are presented in table 1. The information reported by Latvia in its BR4 mostly adheres to the UNFCCC reporting guidelines on BRs.

Table 1

**Summary of completeness and transparency of mandatory information reported by Latvia in its fourth biennial report**

<i>Section of BR</i>	<i>Completeness</i>	<i>Transparency</i>	<i>Reference to description of recommendation(s)</i>
GHG emissions and removals	Complete	Transparent	
Quantified economy-wide emission reduction target and related assumptions, conditions and methodologies	Complete	Transparent	
Progress in achievement of targets	Mostly complete	Mostly transparent	Issue 1 in table 4 Issue 1 in table 6 Issue 7 in table 10

<sup>1</sup> The BR submission comprises the text of the report and the CTF tables, which are both subject to the technical review.

<sup>2</sup> Owing to the circumstances related to the coronavirus disease 2019, the technical review of the BR submitted by Latvia had to be conducted remotely.

<i>Section of BR</i>	<i>Completeness</i>	<i>Transparency</i>	<i>Reference to description of recommendation(s)</i>
Provision of support to developing country Parties <sup>a</sup>	NA	NA	NA

*Note:* A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in chap. III below. The assessment of completeness and transparency by the ERT in this table is based only on the “shall” reporting requirements.

<sup>a</sup> Latvia is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paras. 3–5, of the Convention.

## II. Technical review of the information reported in the fourth 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

7. Total GHG emissions<sup>3</sup> excluding emissions and removals from LULUCF decreased by 55.4 per cent between 1990 and 2018, whereas total GHG emissions including net emissions or removals from LULUCF decreased by 18.3 per cent over the same period. The trend in total GHG emissions shows a significant decrease between 1990 and 1995 due to economic changes in the country (i.e. the transition from a centrally planned economy to a market economy encompassing a considerable decrease in the share of industrial sector output in the GDP), which coincided with a significant decrease in population (63.2 per cent between 1990 and 2017). The subsequent rapid growth of Latvia’s economy in 2000–2007, during which GDP growth reached 82.4 per cent, resulted in an increase in total GHG emissions of 17.6 per cent. The implementation of climate PaMs throughout 2008–2017, however, resulted in a slight decrease in GHG emissions of 4.8 per cent. Total GHG emissions including LULUCF have fluctuated since 1990, mostly driven by a reduction in CO<sub>2</sub> removals in living biomass (due to an increased harvest rate) combined with ageing of forests, increased forest mortality and conversion of forest lands to settlements.

8. Table 2 illustrates the emission trends by sector and by gas for Latvia. Note that information in paragraph 7 above and in table 2 is based on Latvia’s 2020 annual submission, version 2, which has not yet been subject to review. All emission data in subsequent chapters of this report are based on data from Latvia’s BR4 CTF tables unless otherwise noted. The emissions reported in the 2020 annual submission differ from the data reported in CTF table 1 as a result of recalculations to reflect methodological improvements, particularly in the LULUCF sector. In the 2020 submission, the LULUCF estimates mostly reflect greater removals compared with the 2019 submission. In some years, the increase in removals is substantial (e.g. 28.1 per cent higher for 2006); however, for 2014 and 2017, significantly lower removals were reported (43.2 and 55.2 per cent, respectively).

Table 2  
Greenhouse gas emissions by sector and by gas for Latvia for 1990–2018

<i>Sector</i>	<i>GHG emissions (kt CO<sub>2</sub> eq)</i>					<i>Change (%)</i>		<i>Share (%)</i>	
	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>2017</i>	<i>2018</i>	<i>1990–</i>	<i>2017–</i>	<i>1990</i>	<i>2018</i>
						<i>2018</i>	<i>2018</i>		
1. Energy	19 338.20	7 380.98	8 503.42	7 245.71	7 697.11	–60.2	13.7	73.6	65.7
A1. Energy industries	6 243.84	2 499.83	2 273.41	1 548.97	1 933.15	–69.0	0.8	23.8	16.5
A2. Manufacturing industries and construction	3 962.94	1 175.66	1 106.54	670.44	762.38	–80.8	0.6	15.1	6.5

<sup>3</sup> In this report, the term “total GHG emissions” refers to the aggregated national GHG emissions expressed in terms of CO<sub>2</sub> eq excluding LULUCF and excluding indirect CO<sub>2</sub> emissions, unless otherwise specified.

	GHG emissions (kt CO <sub>2</sub> eq)					Change (%)		Share (%)	
	1990	2000	2010	2017	2018	1990–2018	2017–2018	1990	2018
	A3. Transport	3 041.34	2 213.51	3 278.99	3 325.87	3 353.90	10.3	0.1	11.6
A4. and A5. Other	5 842.48	1 341.34	1 752.86	1 547.73	1 556.61	–73.4	50.7	22.2	13.3
B. Fugitive emissions from fuels	247.59	150.64	91.61	152.70	91.07	–63.2	–40.4	0.9	0.8
C. CO <sub>2</sub> transport and storage	NO	NO	NO	NO	NO	–	–	–	–
2. IPPU	654.31	234.55	700.16	736.98	860.73	31.5	16.8	2.5	7.3
3. Agriculture	5 593.02	2 211.51	2 406.35	2 697.52	2 609.40	–53.3	–3.3	21.3	22.3
4. LULUCF	–10 208.72	–9 903.52	–241.54	–1 321.05	1 417.54	–113.9	–207.3	NA	NA
5. Waste	703.04	683.95	651.72	536.62	548.43	–22.0	2.2	2.7	4.7
6. Other <sup>a</sup>	NO	NO	NO	NO	NO	–	–	–	–
<i>Gas<sup>b</sup></i>									
CO <sub>2</sub>	19 504.13	7 064.72	8 548.88	7 222.78	7 859.29	–59.7	8.8	74.2	67.1
CH <sub>4</sub>	3 594.97	1 872.60	1 791.27	1 813.31	1 733.57	–51.8	–4.4	13.7	14.8
N <sub>2</sub> O	3 189.47	1 558.71	1 748.09	1 933.33	1 873.76	–41.3	–3.1	12.1	16.0
HFCs	NO, NE, NA	14.08	166.06	237.08	238.51	–	0.6	–	2.0
PFCs	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	–	–	–	–
SF <sub>6</sub>	NO, NA	0.88	7.35	10.32	10.54	–	2.2	–	0.1
NF <sub>3</sub>	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	–	–	–	–
<b>Total GHG emissions excluding LULUCF</b>	<b>26 288.57</b>	<b>10 510.98</b>	<b>12 261.65</b>	<b>11 216.83</b>	<b>11 715.67</b>	<b>–55.4</b>	<b>4.4</b>	<b>100.0</b>	<b>100.0</b>
<b>Total GHG emissions including LULUCF</b>	<b>16 079.86</b>	<b>607.47</b>	<b>12 020.11</b>	<b>9 895.78</b>	<b>13 133.22</b>	<b>–18.3</b>	<b>32.7</b>	<b>NA</b>	<b>NA</b>
<b>Total GHG emissions excluding LULUCF, including indirect CO<sub>2</sub></b>	<b>26 329.06</b>	<b>10 535.64</b>	<b>12 277.97</b>	<b>11 235.96</b>	<b>11 727.48</b>	<b>–55.5</b>	<b>4.4</b>	<b>NA</b>	<b>NA</b>
<b>Total GHG emissions including LULUCF, including indirect CO<sub>2</sub></b>	<b>16 120.34</b>	<b>632.13</b>	<b>12 036.43</b>	<b>9 914.90</b>	<b>13 145.02</b>	<b>18.5</b>	<b>32.6</b>	<b>NA</b>	<b>NA</b>

Source: GHG emission data: Latvia's 2020 annual submission, version 2.

<sup>a</sup> Emissions and removals reported under the sector other (sector 6) are not included in the total GHG emissions.

<sup>b</sup> Emissions by gas excluding LULUCF and excluding indirect CO<sub>2</sub>.

9. In brief, Latvia's national inventory arrangements were established in accordance with the Cabinet of Ministers regulation on development and management of the national system for GHG inventories and projections (regulation 737, adopted on 12 December 2017). The Climate Change Department of MEPRD is designated as the single national entity with overall responsibility for the Latvian GHG inventory. Other institutions involved in the compilation of Latvia's GHG inventory are the Latvian Environment, Geology and Meteorology Centre; the Latvian State Forest Research Institute "Silava"; the Latvian University of Life Sciences and Technologies and the Institute of Physical Energetics. Since the BR3, the main changes in arrangements include the 2018 update to quality assurance/quality control and the process for producing projections (in relation to responsibilities, timing, etc.) as per order 1-2/160 of 3 October 2018 of MEPRD, in accordance with regulation 737.

## 2. Assessment of adherence to the reporting guidelines

10. The ERT assessed the information reported in the BR4 of Latvia and recognized that the reporting is complete, transparent and thus 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. Quantified economy-wide emission reduction target and related assumptions, conditions and methodologies**

### **1. Technical assessment of the reported information**

11. For Latvia the Convention entered into force on 21 June 1995. Under the Convention, Latvia 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.

12. 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<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub> using GWP values from the AR4 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 for compliance purposes, subject to a number of restrictions in terms of origin and type of project and up to an established limit. Operators and airline operators can use such units to fulfil their requirements under the EU ETS, and member States can use such units for their national ESD targets, within specific limitations.

13. The EU 2020 climate and energy package includes the EU ETS and the ESD (see paras. 26–27 below). The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors. An EU-wide emission cap has been put in place for 2013–2020 with the goal of reducing emissions by 21 per cent below the 2005 level by 2020. Emissions from ESD 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.

14. The European Commission set out its vision for a climate-neutral EU in November 2018, and in December 2019 presented the European Green Deal as a road map with actions for making the EU economy sustainable. The European Council endorsed in December 2019 the objective of making the EU climate-neutral by 2050. As part of the European Green Deal, the Commission proposed in March 2020 to enshrine the 2050 climate-neutrality target into the first European Climate Law. The European Green Deal calls for increased ambition in the 2030 emission reduction target to at least 50 per cent below the 1990 level. Member States will set out any increased ambition in the update of their NECPs.

15. Latvia has a national target of limiting its emission growth to 17 per cent above the 2005 level by 2020 for sectors under the ESD. This target has been translated into binding quantified AEAs for 2013–2020. Latvia's AEAs change from 9,260.06 kt CO<sub>2</sub> eq in 2013 to 9,991.83 kt CO<sub>2</sub> eq in 2020.<sup>4</sup>

16. Latvia also reported that the Cabinet of Ministers adopted Latvia's Climate Neutrality Strategy for 2050 on 28 January 2020. This document, currently available in Latvian only, has been submitted to the European Commission and will be translated and submitted officially to the secretariat in late 2020. Consistent with the previous version, the Strategy proposes ambitious GHG reductions in line with the scientific findings of the IPCC and the goals of the Paris Agreement, but does not prescribe specific measures for achieving these goals. Rather, the Strategy lays out milestones for each decade, with short-term goals to be further elaborated through measures such as the NECP.

17. In January 2020, Latvia submitted the NECP to the European Commission. The long-term aim of the NECP is to promote a sustainable, climate-neutral economy; it targets all elements of the Energy Union objectives and targets, from reducing GHG emissions to increasing the use of renewable fuels. As part of the NECP, Latvia has established a GHG emission reduction target for 2030, along with a number of sectoral targets, as described in paragraph 27 below.

---

<sup>4</sup> European Commission decision 2017/1471 amended decision 2013/162/EU to revise member States' AEAs for 2017–2020.

## **2. Assessment of adherence to the reporting guidelines**

18. The ERT assessed the information reported in the BR4 of Latvia and recognized that the reporting is complete, transparent and thus 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.

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

### **1. Mitigation actions and their effects**

#### **(a) Technical assessment of the reported information**

19. Latvia 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. Latvia reported on its policy context and legal and institutional arrangements in place for implementing its commitments and monitoring and evaluating the effectiveness of its PaMs.

20. Latvia provided information on a set of PaMs similar to those previously reported, with a few exceptions. Some of the planned measures mentioned in the BR3 have now progressed to the implementation phase, and some new, longer-term measures are being planned and drafted, including extensions to the two investment support programmes aimed at improving the energy efficiency of apartment and State government buildings (2021–2027), reflecting the periodic renewal of EU funding. For the agriculture sector, there is one new planned measure; for the energy sector, new mitigation estimates from feed-in-tariffs (390.00 kt CO<sub>2</sub> eq in 2020) that were not reported in the BR3 are now reported in the BR4. Measures that have been discontinued since the BR3 include cross-sectoral measures (e.g. financial instruments to address possible emission reductions and increase public awareness of climate change); three agriculture sector measures (on cropland drainage, crop rotation and production of legumes); significant GHG-reducing measures in the energy sector (e.g. EU co-financing for district heating systems as well as for energy efficiency measures in residential buildings, and biogas production and use for energy and electricity production); and IPPU sector measures (e.g. F-gas reduction and improved control of fugitive emissions from F-gases).

21. Latvia also provided information on changes since its previous submission to its institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of progress towards its target. In 2018 Latvia amended the Law on Pollution, which is the primary national policy document on climate change. The changes conferred a new responsibility onto MEPRD, in cooperation with the Ministries of Transport and Economics and other ministries, to submit an annual report to the Cabinet of Ministers regarding the fulfilment of commitments on GHG emission reductions and CO<sub>2</sub> removals. The revised Law stipulates that the report provide an assessment of progress on national commitments on mitigating GHG emissions to date. Furthermore, the revised Law requires the elaboration of proposals for any additional measures needed to fulfil those commitments (consistent with the established sectoral policy planning documents) and the identification of any conditions needed to meet the 2030 commitments under the Convention and as part of the EU (including for sectors covered by the ESR), including delegation of authority, as necessary. The revised Law also stipulates that such proposals be evaluated for their socioeconomic impacts and assessed for cost-efficiency.

22. Latvia made changes to its measurement, reporting and verification arrangements through adopting an updated quality assurance/quality control programme to determine specific tasks and a timetable for preparing national projections. This was introduced in March 2018 through order 1-2/160 to complement the national arrangements established through regulation 737 (see para. 9 above).

23. In its reporting on its PaMs, Latvia provided the estimated emission reduction impacts for most of its PaMs. Where estimated impacts were not provided, the Party supplied an



explanation applicable to all PaMs. Latvia reported that individual mitigation impacts could not be assessed for several PaMs owing to the complexity of interactions between measures and the consequential difficulty of determining an impact as specific to an individual policy or measure. Furthermore, in estimating the mitigation impact of some educational and behavioural measures, Latvia reported that it can be hard to quantify precisely how such measures directly result in changes in activity and emissions.

24. The Party described the methodologies used to estimate the impacts of PaMs for the LULUCF sector. Latvia indicated that it used IPCC tier 3 methodologies for calculating emissions and removals from LULUCF and tier 2 methodologies for calculating carbon stock changes in organic soils in forest lands. The BR4 does not provide information on methodologies used for other sectors.

25. Latvia reported on its self-assessment of compliance with its emission reduction targets. As described in paragraph 21 above, Latvia's system of self-assessment includes its annual reporting to the Cabinet of Ministers on progress to date on the fulfilment of its national commitments. Furthermore, Latvia's progress in reducing emissions under the EU ETS is monitored through annual reporting to the EU, while ESD-related emission reductions are reported in line with Commission Implementing Regulation (EU) 749/2014. According to the information reported in the BR4, Latvia's self-assessment indicates that it will meet its 2020 ESD target with national measures. Latvia did not provide information on national rules for taking action against self-compliance.

26. The key overarching related 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<sub>2</sub> emissions from cars and vans, the carbon capture and storage directive, and the general programmes for environmental conservation, namely the 7<sup>th</sup> Environment Action Programme and the clean air policy package. The 2030 climate and energy framework, adopted in 2014, includes more ambitious targets that will be updated as part of the European Green Deal.

27. The achievement of the Energy Union objectives and targets is ensured through a combination of Energy Union initiatives and national policies set out in integrated NECPs. The NECPs are periodically updated to reflect changes to EU policy, such as the implementation of the European Green Deal. As mentioned in paragraph 17 above, Latvia's NECP specifies that it will achieve, by 2030, the following: a 65 per cent reduction in GHG emissions relative to the 1990 level; a 6 per cent reduction in GHG emissions in ESD sectors relative to the 2005 level; removals of 3.1 Mt CO<sub>2</sub> from the accounted LULUCF categories; at least a 6 per cent reduction in intensity of GHG emissions in the transport energy life cycle; a 50 per cent share of RES energy in the final energy consumption mix; a 3.5 per cent share of advanced biofuels and biogas in the gross final energy consumption mix (specific to the transport sector); 1.76 Mtoe in cumulative final energy savings (mandatory national target); an area of 500,000 m<sup>2</sup> of government building renovations (3 per cent per year); a 30–40 per cent share of imports in gross national energy consumption; a 60 per cent interconnection capacity (out of total generation capacity); at least 2 per cent of GDP investment in research and development; and a ranking of 40 or higher in the Global Competitiveness Index.

28. 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 the chemical industry, PFC emissions from aluminium production and CO<sub>2</sub> emissions from some industrial processes that were not covered in the previous phases of the EU ETS (since 2013). Auctioning is the default method for allocating allowances; however, harmonized rules for free allocations, based on benchmark values achieved by the most efficient 10 per cent of installations, are still in place as a safeguard for the international competitiveness of industrial sectors at risk of carbon leakage. For 2030, an emission reduction target of 43 per cent below the 2005 level has been set for the EU ETS.

29. The ESD became operational in 2013 and covers 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. As described in paragraph 15 above, Latvia has a national target of limiting its emission growth to 17 per cent above the 2005 level by 2020 for sectors under the ESD and is on track to achieve that target. The ESR, successor to the ESD, was adopted in 2018. It sets national emission reduction targets for 2030 ranging from 0 to 40 per cent below the 2005 level and trajectories with annual limits for 2021–2030 for all member States, and keeps many of the flexibilities of the ESD. Collectively, the national targets of member States will deliver GHG emission reductions of 30 per cent compared with the 2005 level by 2030. Latvia's domestic ESR target is a reduction in GHG emissions of 6 per cent compared with the 2005 level by 2030.

30. Latvia highlighted the EU-wide mitigation actions that are under development, such as the ambition to set a long-term target for climate neutrality in Europe by 2050, as set out in the European Commission's long-term strategy for the reduction of GHG emissions of November 2018. Among the mitigation actions that will have a significant impact on future emissions are those that will be prescribed in EU legal acts to implement the 2030 climate and energy targets and any elaboration of the 2050 climate-neutrality targets under the European Green Deal.

31. Latvia introduced national-level policies to achieve its targets under the ESD and domestic emission reduction targets. The key policies reported by Latvia include the Energy Policy Strategy (2016–2020), the Electricity Market Law, the investment support programme for district heating systems, the Law on Excise Duties, the Electricity Tax Law, the electric vehicles charging infrastructure development programme, requirements for manure spreading, and the Waste Management Plan 2013–2020. The mitigation effect of preferential feed-in tariffs for RES electricity and CHP electricity production is the most significant. Other measures that have delivered significant emission reductions include increasing the land area under organic farming relative to total agricultural land and implementing the Biofuel Mix Obligation Requirement, which are expected to deliver a mitigation impact of 213.00 kt CO<sub>2</sub> eq and 81.00 kt CO<sub>2</sub> eq, respectively, in 2020.

32. The ERT noted that a mitigation action of particular interest is the second phase of the investment support programme for district heating systems (2014–2020) because it builds on the gains made over the initial phase (2007–2013), with co-funding for both phases provided by the EU Cohesion Fund and national budgets, to develop district heating pipeline networks, develop effective biomass production units and install solid biomass CHP units. The second phase of this measure is aimed at improving the efficiency of the systems and minimizing heat losses across the large district heating networks in Latvia through further improvements to the heating technologies, including heat production boilers, CHP production units, solar heat collectors and heat pumps. The measure interacts with other efforts to reduce emissions and builds a consistent long-term strategy that makes innovative and efficient use of the forest resources available in the country.

33. Latvia highlighted the domestic mitigation actions that are under development, such as the investment support programme to increase energy efficiency in apartment buildings and the investment support programme to increase energy efficiency in State government buildings, both of which build on previous phases and are currently covered under the 2021–2027 EU Cohesion Fund programme period. In the agriculture sector, a new measure plans to provide support to precision farming practices, thereby promoting a reduction in synthetic nitrogen use, including biogas production, and in turn, providing economic support to farmers to maintain drainage systems, produce biogas and apply fertilizers efficiently. Nine new PaMs are planned in the LULUCF sector; they promote a range of approaches to mitigate GHG emissions, including increasing the carbon stock in soils, promoting more efficient use of nutrients, restoring and maintaining cropland drainage systems and promoting forest management practices to protect, restore and maintain forests and orchards. None of these planned PaMs are projected to be in place and producing mitigation impacts by 2020, but by 2030, the mitigation impact is expected to be significant and count towards the 2030 target,

in accordance with the EU regulation on LULUCF. Among the mitigation actions that provide a foundation for significant additional action in 2030 are the LULUCF measures planned for implementation from 2021. These include the provision of support for pre-commercial thinning of forest stands (projected to result in a rapid and significant increase in carbon stock, mitigating 884 kt CO<sub>2</sub> eq in 2030); the reconstruction of drainage systems in forest land, restoring and performing preventive maintenance on drainage ditches to manage CO<sub>2</sub> removals following forest regeneration (projected to mitigate 285 kt CO<sub>2</sub> eq in 2030); the introduction of legumes into conventional crop rotation to increase the carbon stock in soils (projected to mitigate 242 kt CO<sub>2</sub> eq in 2030); and the afforestation of nutrient-poor soils in grassland and cropland to increase the carbon stock in soils and living and dead biomass pools (projected to mitigate 189 kt CO<sub>2</sub> eq in 2030). Table 3 provides a summary of the reported information on the PaMs of Latvia.

Table 3

**Summary of information on policies and measures reported by Latvia**

<i>Sector</i>	<i>Key PaMs</i>	<i>Estimate of mitigation impact in 2020 (kt CO<sub>2</sub> eq)</i>	<i>Estimate of mitigation impact in 2030 (kt CO<sub>2</sub> eq)</i>
Policy framework and cross-sectoral measures	EU ETS	NE	NE
	Climate Neutrality Strategy for 2050	NA	NE
Energy			
Transport	Biofuel Mix Obligation Requirement	81.00	88.00
	Fuel economy rating labelling on new passenger cars	56.00	135.00
	Annual taxation of vehicles	41.00	47.00
	Electric vehicles charging infrastructure development programme	10.00	115.00
Renewable energy	Preferential feed-in tariffs for RES electricity and CHP electricity producers	390.00	200.00
	Investment support to promote RES, by-products and waste use for bioeconomy development	12.00	21.00
Energy efficiency	Investment support programme for district heating systems, 2014–2020	71.50	76.00
	Investment support programme to increase energy efficiency in multi-apartment buildings, 2014–2020	26.00	40.00
	Investment support programme to increase energy efficiency in public sector buildings, 2014–2020	14.00	21.00
	Investment support in the manufacturing industry sector to promote energy efficiency and RES use	8.00	21.00
	Energy labelling on household appliances	NE	NE
	Voluntary agreements on energy efficiency	NE	NE
IPPU	Reduced emissions of F-gases	NE	NE
Agriculture	Increased land area under organic farming relative to total agricultural land	213.00	370.00
	Growing of legumes	66.10	66.10
	Support for advancing precision farming technologies and livestock feeding practices, promoting the reduced use of synthetic nitrogen, including biogas production	NE	NE
	Maintenance of amelioration systems	NE	NE
	LULUCF	Development and adaptation of drainage systems in forest land	15.60
	Maintenance of biodiversity in grasslands	13.70	13.70

<i>Sector</i>	<i>Key PaMs</i>	<i>Estimate of mitigation impact in 2020 (kt CO<sub>2</sub> eq)</i>	<i>Estimate of mitigation impact in 2030 (kt CO<sub>2</sub> eq)</i>
	Pre-commercial thinning (forests)	NE	884.00
	Reconstruction of drainage systems in forest land	NE	284.00
	Introduction of legumes into conventional crop rotation	NE	242.00
	Afforestation of nutrient-poor soils in grassland and cropland	NE	189.00
	Sowing of undergrowth plants with winter crops	NE	127.00
Waste	Increased municipal waste recycling	NE	NE
	Reduced biodegradable waste landfilling	NE	NE

*Note:* The estimates of mitigation impact are estimates of emissions of CO<sub>2</sub> eq avoided in a given year as a result of the implementation of mitigation actions.

## (b) Policies and measures in the energy sector

34. **Energy efficiency.** Under Latvia's Environmental Policy Strategy (2014–2020), 3 of the 16 core activities involve improving energy efficiency, including promoting energy efficiency in buildings, increasing the efficiency of lighting infrastructure, and promoting the use of RES and energy efficiency in district heating. The EU directive on energy efficiency (directive 2012/27/EU), which was incorporated into national legislation in Latvia's 2016–2020 Energy Policy Strategy, complementing the Strategy, establishes three quantitative targets for energy efficiency: primary energy savings of 0.67 Mtoe by 2020; cumulative energy savings of 0.85 Mtoe by 2020; and annual energy savings of 3 per cent from improvements to government buildings. Latvia's Energy Efficiency Law (5 May 2005) establishes the policy framework and legal requirements for further measures, such as the Energy Efficiency Obligation Scheme (established under regulation 226 of 19 May 2017), which in turn regulates electricity suppliers of a certain size (i.e. those that sold at least 10 GWh of electricity in 2016), as well as energy audits and energy efficiency requirements for large companies and different levels of government and commercial consumers. Energy efficiency programmes specific to the non-energy sectors are included in the paragraphs below.

35. **Energy supply and renewables.** Latvia's Electricity Market Law, which incorporates the EU directive on renewable energy (directive 2009/28/EC) into national legislation, establishes the target of increasing the use of RES from 32.6 per cent of gross final energy consumption (2005) to 40 per cent in 2020. The Law aims to promote RES electricity production, establish an efficient electricity market and ensure customer access to a choice of affordable and reliable energy suppliers. In addition, Latvia has introduced legislation to establish excise duties on fuels, with taxation rates set according to fuel type and end use (e.g. there are exemptions for specific industries). The Law on Excise Duties 2003 establishes tax rates on natural gas, which is the main fossil fuel in Latvia for stationary combustion, but also sets tax rates for residual fuel oil and gas oil, other than for electricity and CHP producers. In addition, the Electricity Tax Law applies taxes to entities involved in electricity generation, distribution, supply and trading, but excludes household users and exempts electricity produced from RES, including hydroelectric power, co-generation (that meets certain efficiency criteria) and electricity produced for public transit.

36. The energy sector policy with the greatest projected mitigation impact concerns preferential feed-in tariffs for RES electricity and CHP electricity production. Although access to these tariffs ceased in 2011 for new applicants, the mitigation impacts from the existing RES electricity and CHP in the scheme remain until it expires. By 2020 this policy is projected to mitigate 390 kt CO<sub>2</sub> eq, declining to 200 kt CO<sub>2</sub> eq by 2030. To address the cessation of feed-in tariffs and the lack of access to similar financial incentives for new RES producers, Latvia is implementing other measures to increase the share and production of RES. One such measure concerns investment support for RES, by-products and waste use for bioeconomy development, which is co-financed by the national Rural Development

Programme (EUR 16 million in total public allocations is planned for the period to 2020). This measure is used to promote the increasing use of RES, particularly RES derived from animal manure. Its success is in part due to its dual objectives – to increase the supply of RES, decreasing emissions from other energy sources, while simultaneously reducing CH<sub>4</sub> emissions from manure decomposition and supporting rural development. This measure, which was implemented in 2019, is expected to have a mitigation impact of 12.00 kt CO<sub>2</sub> eq in 2020, growing to 21.00 kt CO<sub>2</sub> eq in 2030.

37. **Residential and commercial sectors.** Under the Energy Policy Strategy described in paragraph 34 above, Latvia has updated its Law on the Energy Performance of Buildings, initially adopted in 2012, to meet EU requirements under directive 2010/31/EC. The update establishes new mandatory minimum energy performance requirements and new principles for energy efficiency certification standards for buildings. Latvia classifies residential and non-residential buildings into six categories based on energy performance indicators, with requirements for new public buildings to meet near-zero energy use for heating ( $\leq 40$  kWh per m<sup>2</sup> per year for residential and  $\leq 45$  kWh per m<sup>2</sup> for non-residential buildings) and requirements for reconstructing and renovating existing buildings (which vary according to the size, type and capacity of the building).

38. Given the large proportion of district heating facilities in Latvia (compared with heating by other means), improving the energy efficiency of district heating systems is promoted via both regulatory performance standards and economic measures. The 2016 regulation on energy efficiency requirements for district heating systems establishes minimum energy efficiency requirements, including specific targets for heat production boilers, CHP units, solar heat collectors, heat pumps and district heating networks. Economic measures include the investment support programme for district heating systems, which accesses EU Cohesion Fund finances to construct or reconstruct district heating systems so as to reduce losses in heat delivery. This measure is projected to mitigate 72.00 kt CO<sub>2</sub> eq in 2020 and 76.00 kt CO<sub>2</sub> eq in 2030. EU funding of up to EUR 60 million for this measure is channelled through the operational Growth and Employment Programme (2014–2020).

39. Further funding of up to EUR 166.5 million is available from the same Cohesion Fund framework to achieve improved energy efficiency in residential buildings. With this in mind, Latvia has implemented the investment support programme to increase energy efficiency in multi-apartment buildings (2014–2020), which provides grants and low interest loans co-financed by the European Regional Development Fund. Funds will be available to renovate apartment buildings and install waste prevention measures, such as smart meters, thereby improving the energy efficiency of heat supply and hot water systems. The measure is projected to mitigate 26.00 kt CO<sub>2</sub> eq in 2020 and 40.00 kt CO<sub>2</sub> eq in 2030.

40. **Transport sector.** To encourage efficiency improvements in vehicles and broader uptake of low-carbon fuels and electric vehicles while reducing overall demand for personal transport, Latvia has been using excise duties on fossil fuels, including gasoline, diesel and liquefied natural gas, since 1993. In 2002, Latvia put in place measures to increase consumer awareness of the fuel efficiency of personal vehicles, including labelling requirements for vehicle fuel consumption in litres per 100 km and CO<sub>2</sub> emissions in grams per 100 km to incentivize better consumer choices. Since 2007, annual taxation of personal vehicles based on the combined impact of their CO<sub>2</sub> emissions and engine capacity has been in place to further incentivize low-carbon choices. In 2010, Latvia implemented the Biofuel Mix Obligation Requirement, as referred to in paragraph 31 above, which establishes the following minimum renewable fuel mixes (i.e. of total fuel volume): 4.5–5.0 per cent for bioethanol, 4.5–7.0 per cent for biodiesel derived from plant sources and 4.5 per cent for paraffinic biodiesel from biomass. This requirement is expected to produce a mitigation benefit of 81.00, 86.00 and 88.00 kt CO<sub>2</sub> eq in 2020, 2025 and 2030, respectively.

41. With funding from the EU, Latvia is also advancing the development of an electric vehicle market and national fast-charging infrastructure, with mitigation benefit to both the energy and the transport sector. Under Latvia's Alternative Fuels Development Plan (2017–2020), and with support from the European Regional Development Fund (EUR 8.34 million) and State budget (EUR 7.09 million), funding has been approved to support new electric vehicle infrastructure, including establishing 140 electric vehicle charging points with fast-charge capacity of at least 50 kW. This measure is expected to produce a mitigation impact

of 10.0 kt CO<sub>2</sub> eq in 2020, increasing to 35.0 kt CO<sub>2</sub> eq in 2025 and further increasing to 115.0 kt CO<sub>2</sub> eq in 2030. The Alternative Fuels Development Plan will also assist Latvia in extending its alternative fuel infrastructure to include liquefied natural gas, compressed natural gas and hydrogen.

42. **Industrial sector.** More than EUR 25 million in support is available to 2020 through the EU Cohesion Fund for measures that foster innovative, energy-saving practices in the manufacturing sector. Specifically, funding is used to support efforts that promote energy efficiency and increase the share of RES in industrial production, targeting firms both large and small. An additional EUR 80 million is available through the European Fund for Agricultural Development to co-finance measures under Latvia's Rural Development Programme. Such measures include improving the energy efficiency of food processing and agricultural production.

(c) **Policies and measures in other sectors**

43. **Industrial processes.** Legislation in the industrial sector is framed by the EU directive on integrated pollution prevention and control of industrial emissions (directive 2010/75/EU), which is incorporated into national legislation in Latvia's Law on Pollution (15 March 2001 and subsequent updates), and which promotes the use of best available industrial process technologies in an effort to reduce GHG emissions from IPPU. More specifically, the EU regulation on F-gases (regulation 517/2014) and the EU directive on emissions from air conditioning systems in motor vehicles (directive 2006/40/EC), in combination with Latvia's national regulations on ozone-depleting substances (regulation 563), set out specific requirements for the containment, use, recovery and destruction of F-gases, as well as restrictions on activities involving ozone-depleting substances in industrial production. In CTF table 3, Latvia noted a regulatory measure aimed at preventing and minimizing emissions of F-gases by banning the sale, maintenance or service of products or equipment containing HFCs with high GWP. The measure, which was put in place in 2015, does not have an estimated mitigation impact.

44. **Agriculture.** Although one of the largest GHG emission decreases from 1990 was reported in the agriculture sector, this sector still represents the second largest source of national emissions (a share of almost 24.6 per cent in 2017). The agricultural soils subsector is responsible for the largest contribution to sectoral emissions (60.8 per cent in 2017), followed by enteric fermentation (31.2 per cent in 2017). Latvia reported three categories of measures: regulatory (four measures), economic (three measures) and voluntarily negotiated (three measures). The vast majority of measures tackle emissions from agricultural soils and manure management (predominantly N<sub>2</sub>O and CH<sub>4</sub> emissions). Measures encompass activities such as restricting nitrogen use in nitrate vulnerable zones; fertilization planning; requirements for the collection, storage and disposal of manure; integrated farming (crop rotation, soil tests, field monitoring, etc.); the introduction of leguminous plants on arable land to fix nitrogen and sequester carbon; organic farming; biogas production from animal manure and the application of precision fertilization and livestock feeding; as well as the renovation of existing amelioration systems or construction of new ones. Precision farming is the only measure defined as planned (from 2021); all other measures are indicated as implemented, with many having been in place from 2014 or earlier, following several regulations. Mitigation impacts have not been estimated (see CTF table 3) for measures in the agriculture sector, apart from one related to the increase of land under organic farming (370 kt CO<sub>2</sub> eq in 2030).

45. **LULUCF.** The total forest area (including afforested lands) in 2017 covered almost 50 per cent of the total territory of Latvia; however, in recent years (specifically 2014, 2015 and 2018) the LULUCF sector, which is dominated by the forest subsector in Latvia, represented a net source of GHG emissions owing to high felling rates, forest maturity and land-use change. Accordingly, Latvia has implemented and planned a number of PaMs to address emissions from forest land, cropland and grassland. With regard to forest land, mitigation actions encompass different aspects of afforestation, regeneration of forest stands, pre-commercial thinning, improvement of the economic and ecological value of resources, and the reconstruction of drainage systems. Forest-related measures are all intended to improve overall forest management. Some measures, such as the regeneration of forest stands

after natural disturbances, pre-commercial thinning and the reconstruction of drainage systems are planned measures, to be implemented from 2021 onward, at which point any mitigation contribution could count towards the 2030 target, consistent with the EU regulation on LULUCF. In terms of the impact of LULUCF measures, the largest mitigation impact is expected to come from pre-commercial thinning.

46. **Waste management.** The umbrella policy document on waste management in Latvia is the Waste Management Plan (2013–2020), in line with the EU directive on the landfill of waste (directive 99/31/EC) and the EU directive on waste (directive 2008/98/EC), which define specific goals, including to reduce the amount of biodegradable municipal waste that is landfilled and increase the amount of recycled waste. Hence, the main measure reported in Latvia's BR4 is the reduction of biodegradable waste landfilling (implemented in 2006), which is related to the aforementioned Waste Management Plan and which, together with municipal waste recycling (implemented in 2012), is included in the WEM scenario. The promotion of recycling and reuse is executed through tax legislation that sets tax rates for non-hazardous and hazardous waste.

**(d) Response measures**

47. Latvia reported limited information on its assessment of the economic and social consequences of its response measures, noting that it has established processes to assess such impacts and complies with the system of impact assessment required by the European Commission. Latvia further noted that the European Commission system uses an integrated, cost–benefit assessment approach and that further information on the approach is included in chapter 15 of Latvia's 2019 national inventory submission.

**(e) Assessment of adherence to the reporting guidelines**

48. The ERT assessed the information reported in the BR4 of Latvia and identified issues relating to transparency and thus adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 4.

Table 4

**Findings on mitigation actions and their effects from the review of the fourth biennial report of Latvia**

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
1	Reporting requirement specified in CTF table 3  Issue type: transparency  Assessment: recommendation	Latvia did not include in CTF table 3 of its BR4 two mitigation measures reported in the BR3, namely the electrification of the railway network in 2020 and the promotion of public understanding of the importance of and possibilities for GHG emission reduction in 2020, 2025 and 2030. The ERT noted that, as per the recommendation in the previous review report, the Party also had not reported the mitigation impacts of these mitigation actions in CTF table 3.  During the review, Latvia explained that CTF table 3 includes only measures that have a quantified impact on GHG emission projections. Information measures, such as the promotion of public understanding of the importance of and possibilities for GHG emission reduction, are generally considered to have limited quantitative impact, unless combined with other measures, such as economic, regulatory or financial measures. As a result, Latvia explained that this measure was not reported in the BR4. It also clarified that the measure on the electrification of railway networks is no longer financially supported, and therefore has also been excluded from the BR4.  The ERT recommends that Latvia explain which mitigation measures have not been included in CTF table 3 because of the lack of a quantified estimate of their mitigation impact or those that have not been reported because they have been discontinued.
2	Reporting requirement specified in paragraph 8  Issue type: transparency	Latvia reported limited information on the assessment of the economic and social consequences of its response measures in its BR4. Latvia noted the existence of an impact assessment system (analysing benefits and costs, addressing all significant economic, social and environmental impacts) established for the adoption of all new policy initiatives, and referred to its 2019 national inventory submission for more information. However, the ERT noted that the inventory information addresses the

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
	Assessment: encouragement	<p>minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol, so its relevance to the reporting requirement relating to the assessment of the economic and social consequences of its response measures under the UNFCCC reporting guidelines on BRs is not clear.</p> <p>During the review, Latvia referred to various processes it has established to assess the economic and social consequences of its climate policy. One example is Latvia's use of biofuel and bioliquid sustainability criteria, which aim to ensure that any biofuels produced in Latvia, imported into Latvia from another EU member State or imported from a third country meet certain sustainability requirements. Latvia also indicated that most of its wood pellet production companies are engaged in the voluntary Sustainable Biomass Programme, which has developed a certification system to ensure that feedstock is sourced from legal and sustainable sources. With regard to information provided in its BR3, Latvia explained that the Institute of Physical Energetics has carried out studies to evaluate particular types of impacts of climate PaMs, such as impacts on employment, the export–import balance and energy supply security, but the results have not yet been included in climate and energy policy planning documents. Consequently, these were not publicly available and hence were not included in the BR4. For the first time, part of this information (impacts of PaMs on employment and the export–import balance) is included in Latvia's NECP, adopted in January 2020. Latvia explained that this information will be included in the next BR.</p> <p>The ERT encourages the Party to improve the transparency of its reporting by providing the relevant information on the assessment of the economic and social consequences of its response measures in relation to the UNFCCC reporting guidelines on BRs in its next BR.</p>
3	<p>Reporting requirement specified in paragraph 24</p> <p>Issue type: completeness</p> <p>Assessment: encouragement</p>	<p>Latvia reported on its self-assessment of compliance with emission reductions in comparison with emission reduction commitments or the level of emission reduction that is required by science, but provided no information on the progress made in the establishment of national rules for taking local action against domestic non-compliance with emission reduction targets.</p> <p>During the review, the Party provided information indicating that there is an annual interministerial process to prepare and submit, by 31 December, a detailed report to the Cabinet of Ministers regarding progress towards fulfilling Latvia's commitments in relation to GHG emission reductions and CO<sub>2</sub> removals. The Party indicated that the report should include an assessment of the fulfilment of commitments; projections to track progress on the main targets; and, if necessary, proposals regarding additional measures for fulfilling the commitments. These proposals must correspond to the sectoral policy planning documents for the relevant period, be cost-efficient and have undergone socioeconomic evaluation. Latvia also noted, without elaborating, that action is undertaken by the relevant entities (e.g. ministries) when progress falls behind expectations.</p> <p>The ERT encourages the Party to report on its progress in establishing national rules for taking local action against domestic non-compliance with emission reduction targets in its next BR.</p>

*Note:* Item listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs or to the CTF table number from the UNFCCC reporting guidelines on CTF tables. The reporting on the requirements not included in this table is considered to be complete, transparent and thus 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

49. Latvia reported that it does not intend to use units from market-based mechanisms under the Kyoto Protocol and other market-based mechanisms under the Convention to meet its commitment under the ESD. Latvia therefore reported in CTF tables 4 and 4(b) that it did not use any units from market-based mechanisms in 2016 or 2017. Given that the contribution of LULUCF activities is not included in the joint EU target under the Convention, reporting of the contribution of LULUCF activities is not applicable for Latvia. Table 5 illustrates



Latvia’s ESD emissions and the use of units from market-based mechanisms to achieve its ESD target.

Table 5

**Summary of information on the use of units from market-based mechanisms by Latvia to achieve its target**

<i>Year</i>	<i>ESD emissions (kt CO<sub>2</sub> eq)</i>	<i>AEA (kt CO<sub>2</sub> eq)</i>	<i>Use of units from market- based mechanisms (kt CO<sub>2</sub> eq)<sup>a</sup></i>	<i>Annual AEA surplus/deficit (kt CO<sub>2</sub> eq)<sup>b</sup></i>	<i>Cumulative AEA surplus/deficit (kt CO<sub>2</sub> eq)</i>
2013	8 776.86	9 260.06	NA	483.20	483.20
2014	9 017.60	9 351.24	NA	333.64	816.84
2015	9 005.12	9 442.42	NA	437.30	1 254.14
2016	9 107.44	9 533.59	NA	426.15	1 680.29
2017	9 243.09	9 729.36	NA	486.27	2 166.56

*Sources:* Latvia’s BR4 and CTF table 4(b), information provided by the Party during the review and EU transaction log (AEAs).

<sup>a</sup> The use of “NA” indicates that the Party stated in its BR that it does not intend to use market-based mechanisms to achieve its target.

<sup>b</sup> A positive number (surplus) indicates that ESD emissions were lower than the AEA, while a negative number (deficit) indicates that ESD emissions were greater than the AEA.

50. In assessing the progress towards achieving the 2020 joint EU target, the ERT noted that Latvia’s emission reduction target for the ESD is to limit emission growth to 17 per cent above the base-year level (see para. 15 above). In 2017, Latvia’s emissions covered by the ESD were 5.0 per cent (486.27 kt CO<sub>2</sub> eq) below the AEA under the ESD. Latvia has a cumulative surplus of 2,166.56 kt CO<sub>2</sub> eq with respect to its AEAs between 2013 and 2017.

51. The ERT noted that Latvia is making progress towards its ESD target by implementing mitigation actions that are delivering significant emission reductions.

**(b) Assessment of adherence to the reporting guidelines**

52. The ERT assessed the information reported in the BR4 of Latvia and identified an issue relating to transparency and thus adherence to the UNFCCC reporting guidelines on BRs. The finding is described in table 6.

Table 6

**Findings on estimates of emission reductions and removals and on the use of units from market-based mechanisms and land use, land-use change and forestry from the review of the fourth biennial report of Latvia**

<i>No.</i>	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation</i>
1	Reporting requirement specified in paragraph 10  Issue type: completeness  Assessment: recommendation	Latvia did not report the quantity of units from market-based mechanisms under the Convention and units from other market-based mechanisms for 2017–2018 in CTF table 4(b), nor explain the reasons for not reporting such information. The ERT noted that Latvia reported the quantity of units from market-based mechanisms under the Convention and the quantity of units from other market-based mechanisms using the notation key “NA” for the same years in CTF table 4.  During the review, Latvia clarified that units from market-based mechanisms under the Convention and units from other market-based mechanisms for 2017–2018 should also be reported as “NA” in CTF table 4(b).  The ERT recommends that Latvia report the quantity of units from market-based mechanisms under the Convention and the quantity of units from other market-based mechanisms in CTF table 4(b) for 2017–2018 or explain why it did not report such information (e.g. by using notation keys or customized footnotes).

*Note:* Item 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 thus adhering to the UNFCCC reporting guidelines on BRs.

### 3. Projections overview, methodology and results

#### (a) Technical assessment of the reported information

53. Latvia reported updated projections for 2020 and 2030 relative to actual inventory data for 2017 under the WEM scenario. The WEM scenario reported by Latvia includes PaMs defined in policy documents that were developed by the Government of Latvia up until 2018.

54. In addition to the WEM scenario, Latvia reported the WAM scenario. The WAM scenario includes measures that are described in approved documents, but for which legal regulation and implementation mechanisms have not yet been elaborated. These definitions provided in the BR4 indicate that the scenarios were prepared according to the UNFCCC reporting guidelines on BRs. The ERT noted that while in some cases PaMs are considered in a direct and explicit way in the models used, in other cases, the implemented, adopted and planned PaMs are considered indirectly, that is, in the expert judgments which form the basis for deriving the key underlying assumptions used to calculate emission projections.

55. The projections are presented on a sectoral basis, using the same sectoral categories as those used in the reporting on mitigation actions, and on a gas-by-gas basis for 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) as well as NF<sub>3</sub> for 2020–2035, with values for 2020 and 2030 also reported in CTF tables 6(a) and 6(b). The projections are also provided in an aggregated format for each sector and for a Party total using GWP values from the AR4. Latvia reported on factors and activities affecting emissions for each sector for the projected period, but did not include all years in the historical period (e.g. 1990–2010). During the review, Latvia explained that the significant economic changes that Latvia experienced from 1990 to 2000 meant that the historical data from this period were not considered representative or appropriate for informing the projections into the future.

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

56. The methodology used for the preparation of the projections is identical to that used for the preparation of the emission projections for the NC7. Latvia provided information on the changes since the submission of its NC7 in the assumptions used in the projection scenarios. New macroeconomic long-term development forecasts for 2030, outlining the future trends for economic development in Latvia, were submitted by the Ministry of Economics in 2018. These macroeconomic indicators were used to prepare the key variables and assumptions such as GDP, number of households and population, as reported in CTF table 5 and used in the preparation of the projection scenarios.

57. The methodology and models used for estimating emission projections were described at the sectoral level. Latvia used several models for estimating projections, which are complemented by exogenous data and based on the emissions estimated in the GHG inventory. The models used are Latvia's Market Allocation model, an Excel-based top-down accounting model for F-gases, and models based on IPCC methodologies for the waste sector and for agriculture, forestry and other land use. The characteristics of the models were transparently described in the BR4, including information on gases and/or sectors covered, original approach and changes implemented, strengths and weaknesses, and how the models account for any overlap or synergies that may exist between different PaMs.

58. Latvia provided information on sensitivity analyses. The Ministry of Economics developed an alternative economic development scenario, which provides for faster GDP growth (20 per cent) and a larger population (12 per cent) in 2030. These new assumptions were applied to the energy and waste sectors. For the agriculture sector, a sensitivity analysis was developed on the basis of an alternative scenario for milk yield that incorporates different factors (e.g. average herd size, proportion of various cattle breeds, number of organic dairy farms, feeding strategies). A LULUCF sector sensitivity analysis was conducted considering different intensities of forest management.

#### (c) Results of projections

59. The projected emission levels under different scenarios and information on the quantified economy-wide emission reduction target are presented in table 7 and figure 1.

Table 7  
Summary of greenhouse gas emission projections for Latvia

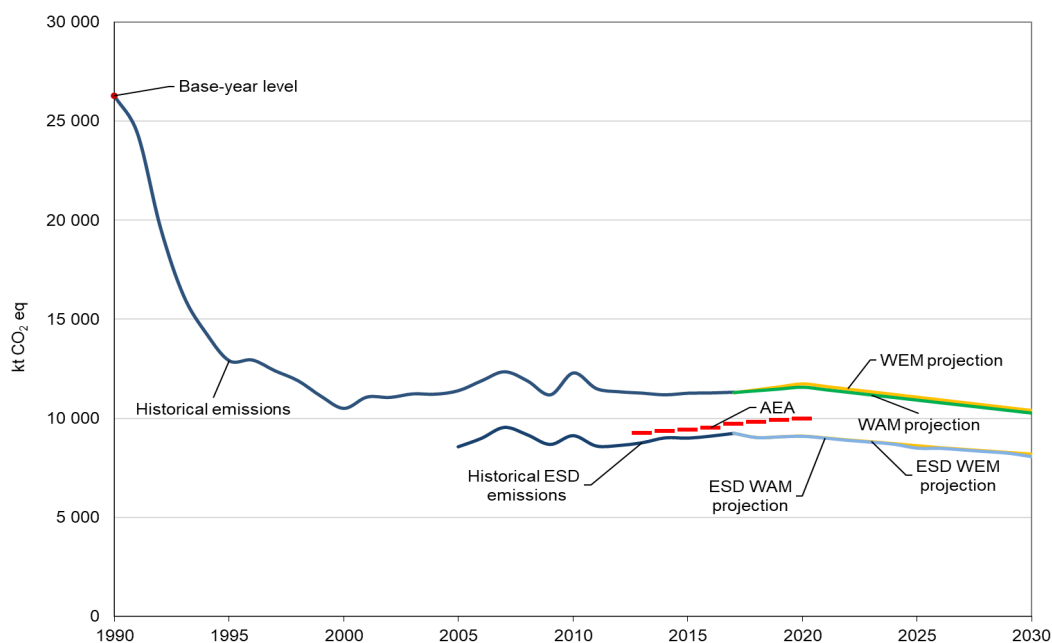
	Total GHG emissions		Emissions under the ESD	
	GHG emissions (kt CO <sub>2</sub> eq per year)	Change in relation to 1990 level (%)	ESD emissions (kt CO <sub>2</sub> eq per year)	Comparison to 2020 AEA (%)
2020 AEA under the ESD <sup>a</sup>	NA	NA	9 991.83	NA
Inventory data 1990	26 259.46	–	NA	NA
Inventory data 2017	11 306.20	–56.9	9 271.02	–7.2
WEM projections for 2020	11 752.16	–55.2	9 101.44	–8.9
WAM projections for 2020	11 577.59	–55.9	9 088.67	–9.0
WEM projections for 2030	10 408.29	–60.4	8 201.27	NA
WAM projections for 2030	10 262.21	–60.9	8 049.84	NA

Source: Latvia's BR4 and CTF table 6.

Note: The projections are for GHG emissions excluding LULUCF and excluding indirect CO<sub>2</sub>.

<sup>a</sup> The quantified economy-wide emission reduction target under the Convention is a joint target of the EU and its member States. The target is to reduce emissions by 20 per cent compared with the base-year (1990) level by 2020. Latvia's target under the ESD is to limit emissions to 17 per cent above the 2005 level by 2020.

Figure 1  
Greenhouse gas emission projections reported by Latvia



Sources: EU transaction log (AEAs) and Latvia's BR4 and CTF tables 1 and 6.

60. Latvia's total GHG emissions excluding LULUCF and excluding indirect CO<sub>2</sub> in 2020 and 2030 are projected under the WEM scenario to decrease by 55.2 and 60.4 per cent, respectively, below the 1990 level. Under the WAM scenario, emissions in 2020 and 2030 are projected to be lower than those in 1990 by 55.9 and 60.9 per cent, respectively. The ERT noted that Latvia's total emissions excluding LULUCF are projected to increase by 3.9 per cent between 2017 and 2020 and to decrease by 7.9 per cent between 2017 and 2030 under the WEM scenario. Under the WAM scenario, emissions excluding LULUCF are projected to increase by 2.4 per cent between 2017 and 2020 and to decrease by 9.2 per cent between 2017 and 2030. The ERT also noted that, conversely, GHG emissions including LULUCF are projected to sharply increase between 2017 and 2030 (by 56.7 and 51.7 per cent under the WEM and the WAM scenario, respectively).

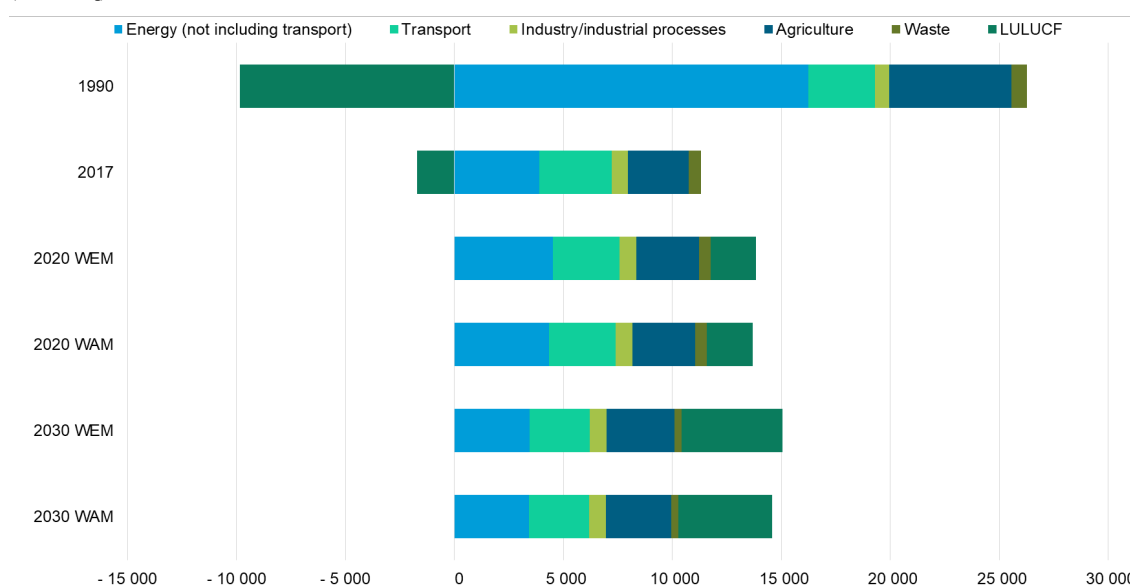
61. Latvia's target under the ESD is to limit its ESD emission growth to 17 per cent above the 2005 level by 2020 (see para. 15 above). Latvia's AEAs, which correspond to its national emission target for ESD sectors, change from 9,260.06 kt CO<sub>2</sub> eq in 2013 to 9,991.83 kt CO<sub>2</sub>

eq in 2020. The projected level of emissions under the WEM and WAM scenarios is 8.9 and 9.0 per cent, respectively, below the AEAs for 2020. The ERT noted that the Party’s cumulative surplus of AEAs in 2017 is 2,166.56, which suggests that Latvia expects to meet its target under the WEM scenario.

62. In addition to Latvia’s target under the ESD, as described in paragraph 29 above, the Cabinet of Ministers adopted Latvia’s Climate Neutrality Strategy for 2050 in January 2020. The Strategy includes a 55 per cent reduction in emissions below the 1990 level by 2020, and a 65 per cent reduction by 2030. The projections included in the BR4 indicate that Latvia will need to implement additional PaMs in order to meet the Strategy goals.

63. Latvia presented the WEM and WAM scenarios by sector for 2020 and 2030, as summarized in figure 2 and table 8. It also provided WEM and WAM scenarios for 2025 and 2035 in its BR4.

Figure 2  
**Greenhouse gas emission projections for Latvia presented by sector**  
 (kt CO<sub>2</sub> eq)



Source: Latvia’s BR4 CTF table 6.

Table 8  
**Summary of greenhouse gas emission projections for Latvia presented by sector**

Sector	GHG emissions and removals (kt CO <sub>2</sub> eq)					Change (%)			
	1990	2020		2030		1990–2020		1990–2030	
		WEM	WAM	WEM	WAM	WEM	WAM	WEM	WAM
Energy (not including transport)	16 248.52	4 504.89	4 330.34	3 452.41	3 408.74	-72.3	-73.3	-78.8	-79.0
Transport	3 040.44	3 075.55	3 075.55	2 771.31	2 771.31	1.2	1.2	-8.9	-8.9
Industry/industrial processes	654.31	756.11	756.11	756.29	756.29	15.6	15.6	15.6	15.6
Agriculture	5 616.57	2 879.46	2 879.46	3 102.07	3 009.71	-48.7	-48.7	-44.8	-46.4
LULUCF	-9 828.92	2 093.91	2 093.91	4 636.20	4 300.74	-121.3	-121.3	-147.2	-143.8
Waste	699.62	536.16	536.16	326.20	316.15	-23.4	-23.4	-53.4	-54.8
Other	-	-	-	-	-	-	-	-	-
<b>Total GHG emissions excluding LULUCF</b>	<b>26 259.46</b>	<b>11 752.16</b>	<b>11 577.59</b>	<b>10 408.29</b>	<b>10 262.21</b>	<b>-55.2</b>	<b>-55.9</b>	<b>-60.4</b>	<b>-60.9</b>

Source: Latvia’s BR4 CTF table 6.

64. According to the projections reported for 2020 under the WEM scenario, the most significant emission reductions are expected to occur in the energy (excluding transport) and agriculture sectors, amounting to projected reductions of 72.3 per cent and 48.7 per cent, respectively, between 1990 and 2020. However, most of the reduction is observed between 1990 and 1995. The ERT noted that Latvia's GHG emissions from the energy sector (excluding transport) are projected to decrease by 11.5 per cent between 2017 and 2030 under the WEM scenario, even as GDP is expected to grow by 38.4 per cent over the same period. Emission reductions are occurring as the result of the implementation of PaMs (e.g. deployment of RES and energy efficiency measures). In the agriculture sector, however, GHG emissions are projected to increase by 11.5 per cent between 2017 and 2030 owing to the increase in emissions from enteric fermentation (related to the increased milk yield), manure management (livestock concentration in big farms) and N<sub>2</sub>O emissions from soils (increased use of fertilizers).

65. If additional measures are considered (i.e. under the WAM scenario), the patterns of emission reductions by 2020 (presented by sector) remain the same. However, for 2030, the patterns change slightly owing to the implementation of additional PaMs. In the energy sector (excluding transport), for example, emissions are projected to decrease by 12.6 per cent between 2017 and 2030 as a result of additional planned measures (Investment Support Programmes to Increase Energy Efficiency in Apartment Buildings and State Central Government Buildings, both scheduled for implementation in 2021–2027). In the agriculture sector, the increase in emissions between 2017 and 2030 is projected to be lower than in the WEM scenario (8.2 per cent), owing to the implementation of additional PaMs (e.g. provision of support to precision farming practices and practices promoting the reduction of synthetic nitrogen use, including biogas production).

66. GHG emissions from the LULUCF sector are expected to grow sharply between 2017 and 2030 in the WEM scenario (from a net sink of 1,706.85 kt CO<sub>2</sub> eq in 2017 to a net source of 4,636.20 kt CO<sub>2</sub> eq in 2030). This is associated with a reduction in living biomass on forest land due to the planned increase in harvest rate, combined with the ageing of forests, resulting in decreasing growth increments and increasing natural mortality. Under the WAM scenario, the implementation of additional PaMs makes it possible to reduce the net emissions in 2030 by 7.2 per cent in comparison with the WEM scenario.

67. Latvia presented the WEM and WAM scenarios by gas for 2020 and 2030, as summarized in table 9. Latvia also provided WEM and WAM scenarios for 2025, 2030 and 2035 in its BR4.

Table 9

**Summary of greenhouse gas emission projections for Latvia presented by gas**

Gas	GHG emissions and removals (kt CO <sub>2</sub> eq)					Change (%)				
	1990	2020			2030		1990–2020		1990–2030	
		WEM	WAM	WEM	WAM	WEM	WAM	WEM	WAM	
CO <sub>2</sub> <sup>a</sup>	19 504.91	7 721.53	7 567.84	6 456.36	6 433.28	–60.4	–61.2	–66.9	–67.0	
CH <sub>4</sub>	3 537.27	1 780.95	1 761.26	1 655.46	1 640.20	–49.7	–50.2	–53.2	–53.6	
N <sub>2</sub> O	3 217.28	2 008.28	2 007.09	2 095.95	1 988.21	–37.6	–37.6	–34.9	–38.2	
HFCs	–	231.21	231.21	190.42	190.42	–	–	–	–	
PFCs	–	–	–	–	–	–	–	–	–	
SF <sub>6</sub>	–	10.19	10.19	10.10	10.10	–	–	–	–	
NF <sub>3</sub>	–	–	–	–	–	–	–	–	–	
<b>Total GHG emissions without LULUCF</b>	<b>26 259.46</b>	<b>11 752.16</b>	<b>11 577.59</b>	<b>10 408.29</b>	<b>10 262.21</b>	<b>–55.2</b>	<b>–55.9</b>	<b>–60.4</b>	<b>–60.9</b>	

Source: Latvia's BR4 CTF table 6.

<sup>a</sup> Latvia did not include indirect CO<sub>2</sub> emissions in its projections.

68. For the WEM scenario, the most significant reductions are projected for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions: 60.4, 49.7 and 37.6 per cent, respectively, between 1990 and 2020, excluding LULUCF and excluding indirect CO<sub>2</sub> emissions. As mentioned in paragraph 64

above, most of that reduction is observed between 1990 and 1995. Projections excluding the LULUCF sector for 2020 show an upward trend compared with the last historical year (2017) for CO<sub>2</sub>, while for the other GHGs, emissions projected for 2020 fall below 2017 levels.

69. Under the WEM scenario, emission reductions for 2030 are greater than in 2020, with the most significant reductions projected for CO<sub>2</sub>, followed by CH<sub>4</sub> and N<sub>2</sub>O: 66.9, 53.2 and 34.9 per cent, respectively, between 1990 and 2030. Compared with the projections for 2020, significant reductions in emissions are projected for CO<sub>2</sub> (16.4 per cent) and CH<sub>4</sub> (7.0 per cent), which are linked to PaMs in the energy sector, while projections for N<sub>2</sub>O show an increase of 4.4 per cent between 2020 and 2030, which is linked to the increase in the use of fertilizers.

70. If additional measures are considered (i.e. under the WAM scenario), the patterns of emission reductions by 2020 presented by gas remain the same. In 2030, CO<sub>2</sub> and CH<sub>4</sub> emissions under the WAM scenario are projected to be similar to those under the WEM scenario. N<sub>2</sub>O emissions are projected to be significantly lower under the WAM scenario, with a decrease of 38.2 per cent linked to an additional measure (practices promoting the reduction of synthetic nitrogen use).

71. The projections presented in the BR4 of Latvia are significantly different from those presented in the BR3 because they are based on a new economic scenario developed by the Ministry of Economics. In the new scenario, the population in 2030 is 14.6 per cent lower than in the previous submission scenario and GDP in 2030 is 16.1 per cent lower than in the previous submission. These new drivers, together with the effect of additional implemented PaMs, result in a revised projected GHG emission total (excluding LULUCF) in 2030 that is 14.7 per cent lower than in the previous submission.

**(d) Assessment of adherence to the reporting guidelines**

72. The ERT assessed the information reported in the BR4 of Latvia and identified issues relating to completeness and transparency and thus adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 10.

Table 10

**Findings on greenhouse gas emission projections reported in the fourth biennial report of Latvia**

No.	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
1	Reporting requirement <sup>a</sup> specified in paragraph 28  Issue type: completeness  Assessment: encouragement	Latvia did not include a WOM projection in its BR4.  During the review, Latvia explained that it plans to concentrate on mandatory reporting issues in its next submission and that its experience to date with the development of a WOM scenario has been limited to the energy sector. Latvia also indicated that it will investigate the resources needed to elaborate a WOM scenario.  The ERT encourages Latvia to report a WOM projection, or explain why it has not done so, in its next BR.
2	Reporting requirement <sup>a</sup> specified in paragraph 30  Issue type: transparency  Assessment: encouragement	Latvia provided information in its BR4 regarding the sensitivity analyses carried out. The ERT noted that the description of the analyses has improved in comparison with the previous submission but the information still lacks transparency in the variables affected and the results obtained in each sensitivity analysis. In particular, data are shown only in diagrams and no tables are included.  During the review, Latvia provided further information on the sensitivity analyses, including a description of the assumptions and the numerical results for the analyses carried out for the energy, agriculture and waste sectors.  The ERT reiterates the encouragement from the previous review report for Latvia to enhance the transparency of its reporting of its sensitivity analyses in its next BR by including detailed descriptions of the assumptions made and presenting the results in numerical tables in addition to diagrams.

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
3	<p>Reporting requirement<sup>a</sup> specified in paragraph 32</p> <p>Issue type: transparency</p> <p>Assessment: encouragement</p>	<p>In its BR4, Latvia used 2016 as the starting point for projections, even though 2017 is the latest year for which inventory data are available. The ERT noted that Latvia reported the GHG data for 2017 in CTF tables 6(a) and 6(c), despite not using them in the projections.</p> <p>During the review, Latvia clarified that the projections had been developed using the 2018 inventory submission and explained that the projections in the BR4 are methodologically consistent with data submitted to the European Commission.</p> <p>The ERT encourages Latvia, in its next BR, to use the latest year for which inventory data are available as the starting point for its projections, or provide a clear justification for using a year other than the latest year for which inventory data are available.</p>
4	<p>Reporting requirement<sup>a</sup> specified in paragraph 35</p> <p>Issue type: completeness</p> <p>Assessment: encouragement</p>	<p>Latvia did not report projections of indirect GHGs in its BR4.</p> <p>During the review, Latvia explained that projections of emissions of indirect GHGs, excluding carbon monoxide, are reported under the Convention on Long-Range Transboundary Air Pollution. The Party provided a link to the report.</p> <p>The ERT reiterates the encouragement from the previous review report for Latvia to provide projections of indirect GHGs (carbon monoxide, nitrogen oxides and non-methane volatile organic compounds), as well as sulfur oxides, in its next BR.</p>
5	<p>Reporting requirement<sup>a</sup> specified in paragraph 38</p> <p>Issue type: transparency</p> <p>Assessment: encouragement</p>	<p>The Party did not report diagrams illustrating the WAM projections in its BR4.</p> <p>During the review, Latvia confirmed that it included diagrams for the WEM scenario for all sectors in the BR4 according to the reporting guidelines and that data for the WAM projections were included in BR4 tables, including tables 6.4, 6.6, 6.9, 6.11, 6.16 and 6.18.</p> <p>The ERT encourages Latvia to enhance the transparency of its reporting by including diagrams using data from the WAM projections in its next BR submission.</p>
6	<p>Reporting requirement<sup>a</sup> specified in paragraph 47</p> <p>Issue type: transparency</p> <p>Assessment: encouragement</p>	<p>Data on key underlying assumptions and values of variables for 1990 to 2010 were not reported in CTF table 5 (i.e. cells were left blank).</p> <p>During the review, Latvia explained that since the economy has experienced significant changes (transition from a planned economy to market economy principles) over 1990–2000, and the energy system has experienced major changes, historical data are not used in projections. Rather, they are used only for internal analysis of historical processes. In addition, for the most part, the calculation of GHG emission projections does not use regression equations but instead specially designed models that are calibrated using historical values.</p> <p>The ERT encourages Latvia to report data on key underlying assumptions and values of variables for the entire historical period in CTF table 5 or transparently explain in its next BR why it has not done so. The ERT notes that this can be done using various approaches; for example, customized footnotes and/or notation keys that explain why some cells are left blank.</p>
7	<p>Reporting requirement<sup>a</sup> specified in paragraph 48</p> <p>Issue type: transparency</p> <p>Assessment: recommendation</p>	<p>Latvia provided information on relevant factors and activities for each sector for projected years in its BR4, but did not report this information for all historical years.</p> <p>During the review, Latvia explained that, for 1990–2000, some of the information was not available or was inaccurate, therefore, it would not be useful to present it. Latvia indicated that it would include the relevant information on factors and activities for each sector for 2000–2010 in the next BR.</p> <p>The ERT recommends that Latvia present information on factors and activities driving emission trends in each sector in a tabular format from 1990 onward, including a justification for gaps where information is not available or judged not sufficiently accurate.</p>

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

<sup>a</sup> Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs, as per paragraph 11 of the UNFCCC reporting guidelines on BRs.

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

73. Latvia is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3–5, of the Convention. However, Latvia provided information in its BR4 on its provision of support to developing country Parties. The ERT commends Latvia for reporting this information and suggests that it continue to do so in future BRs.

74. In CTF tables 7 and 7(b), Latvia provided quantitative information on financial support allocated in 2017 and 2018 through bilateral channels (with Uzbekistan) for cross-cutting activities. The total climate-specific financial contributions provided by Latvia through bilateral channels in 2017 and 2018 were USD 28,234.12 and USD 46,573.30, respectively. Latvia indicated in CTF table 9 that it provided capacity-building support to Uzbekistan, and that it intends to continue supporting developing countries in the future.

### **III. Conclusions and recommendations**

75. The ERT conducted a technical review of the information reported in the BR4 and CTF tables of Latvia 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; the progress of Latvia towards achieving its target; and the Party's provision of support to developing country Parties.

76. Latvia's total GHG emissions excluding LULUCF covered by its quantified economy-wide emission reduction target were estimated to be 56.9 per cent below its 1990 level, whereas total GHG emissions including LULUCF were 41.6 per cent below its 1990 level, in 2017. Emissions reached the highest point in 1990 and have remained relatively stable since 2000. Overall, GHG emissions excluding LULUCF decreased by 55.4 per cent between 1990 and 2018 as a result of the changing economic environment in Latvia combined with a concurrent drop in population. While Latvia's economy improved in 2000–2007, the implementation of mitigation measures since then has helped to buffer any increase in emissions. Also, between 1990 and 2018, emissions and removals in the LULUCF sector fluctuated, with the sector producing net emissions in a number of recent years owing to the age-class structure of the forests and increased harvest rates. Future PaMs aim to reduce LULUCF emissions while facilitating the transition to a bioeconomy that relies more heavily on RES from the forest sector.

77. Under the Convention, Latvia 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 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. Emissions and removals from the LULUCF sector and indirect CO<sub>2</sub> emissions are excluded.

78. Under the ESD, Latvia has a target of limiting its emission growth to 17 per cent above the 2005 level by 2020. The 2013–2020 progression in Latvia's AEAs (its national emission target under the ESD) is 9,260.06–9,991.83 kt CO<sub>2</sub> eq.

79. In addition to its ESD target, in January 2020, Latvia committed to achieving climate neutrality as part of its Climate Neutrality Strategy for 2050. Also in January 2020, Latvia submitted its NECP, which includes a commitment to reduce emissions by 65 per cent by 2030, relative to the 2005 level. As part of the NECP, Latvia reported on the EU joint 2030 targets under the EU ETS and ESR, noting that it has committed to an ESR target of a 6 per cent reduction in emissions by 2030, relative to the 2005 level, in addition to a suite of complementary objectives involving renewable energy.

80. In 2017, Latvia's ESD emissions were 5.0 per cent below the AEA under the ESD. In addition, the ERT noted that in 2017, Latvia did not make use of any market-based mechanisms. Even with its exclusion of the use of market-based mechanisms over 2013–



2017, Latvia has a cumulative surplus of 2,166.00 kt CO<sub>2</sub> eq with respect to its AEAs. The Party met its ESD target in 2013–2017 using national measures, and looks capable of doing so to 2020.

81. The GHG emission projections provided by Latvia in its BR4 correspond to the WEM and WAM scenarios. Under these scenarios, emissions are projected to be 55.2 and 55.9 per cent, respectively, below the 1990 level by 2020. According to the projections under the WEM scenario, ESD emissions are estimated to reach 9,101.44 kt CO<sub>2</sub> eq by 2020. Under the WAM scenario, Latvia's emissions from ESD sectors in 2020 are projected to be 9,088.67 kt CO<sub>2</sub> eq. The projected level of emissions under the WEM and WAM scenarios is 8.9 and 9.0 per cent, respectively, below the AEAs for 2020. The ERT noted that the Party's cumulative surplus of AEAs is 2,166.56, which suggests that Latvia expects to meet its target under the WEM scenario.

82. Latvia's main policy framework relating to energy and climate change is the Environmental Policy Strategy (2014–2020). Building on its predecessor, this version of the Strategy sets targets for primary energy savings and improvements to State-owned buildings. Key legislation supporting Latvia's longer-term climate change goals includes the Climate Neutrality Strategy for 2050. The existing mitigation actions with the most significant mitigation impact are the preferential feed-in tariffs for RES electricity and CHP electricity production, the increasing of land area under organic farming and the investment support programme for district heating systems.

83. Latvia is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3–5, of the Convention. However, Latvia provided information on its provision of support to developing country Parties. Through bilateral channels, Latvia reported the provision of cross-cutting financial and capacity-building support to Uzbekistan in 2017 and 2018 (USD 28,234.12 and 46,573.30, respectively). Financial and capacity-building support was directed at supporting training activities across various sectors (e.g. energy, water and sanitation) to improve sustainable environmental planning, water management, recycling and waste management in Uzbekistan.

84. In the course of the review, the ERT formulated the following recommendations for Latvia to improve its adherence to the UNFCCC reporting guidelines on BRs in its next BR:

(a) To improve the completeness of its reporting by providing consistent quantitative information in the CTF tables (e.g. CTF tables 4 and 4(b)) on the use of units from market-based mechanisms, or using notation keys or footnotes to explain why this information has not been reported (see issue 1 in table 6);

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

(i) Indicating which PaMs were not included in CTF table 3 and providing explanations for any exclusions (see issue 1 in table 4);

(ii) Providing information on factors and activities driving emission trends, or an explanation as to why these have not been provided or were not deemed relevant (see issue 7 in table 10).

## Annex

### Documents and information used during the review

#### A. Reference documents

2019 GHG inventory submission of Latvia. Available at <https://unfccc.int/documents/194812>.

2020 GHG inventory submission of Latvia. Available at <https://unfccc.int/documents/227704>.

BR3 of Latvia. Available at <https://unfccc.int/documents/198256>.

BR4 of the EU. Available at <https://unfccc.int/BRs>.

BR4 of Latvia. Available at <https://unfccc.int/BRs>.

BR4 CTF tables of Latvia. Available at <https://unfccc.int/BRs>.

“Common tabular format for ‘UNFCCC biennial reporting guidelines for developed country Parties’”. Annex to decision 19/CP.18. Available at <https://unfccc.int/resource/docs/2012/cop18/eng/08a03.pdf>.

“Compilation of economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention”. FCCC/SBSTA/2014/INF.6. Available at <http://unfccc.int/resource/docs/2014/sbsta/eng/inf06.pdf>.

European Green Deal. Available at [https://ec.europa.eu/info/files/communication-european-green-deal\\_en](https://ec.europa.eu/info/files/communication-european-green-deal_en).

“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>.

National Energy and Climate Plan of Latvia. English translation (provided by the European Commission). Available at [https://ec.europa.eu/energy/sites/ener/files/documents/ec\\_courtesy\\_translation\\_lv\\_necp.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/ec_courtesy_translation_lv_necp.pdf).

Report on the individual review of the annual submission of Latvia submitted in 2018. FCCC/ARR/2018/LVA. Available at [https://unfccc.int/sites/default/files/resource/arr2018\\_LVA.pdf](https://unfccc.int/sites/default/files/resource/arr2018_LVA.pdf).

Report on the technical review of the third biennial report of Latvia. FCCC/TRR.3/LVA. Available at <https://unfccc.int/documents/181231>.

“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 Agita Gancone (MEPRD), including additional material. The following documents<sup>1</sup> were provided by Latvia:

VARAM (Ministry of Environmental Protection and Regional Development of the Republic of Latvia). 2020. *Latvijas stratēģija klimatneitralitātes sasniegšanai līdz 2050. Gadam. (Latvia's Climate Neutrality Strategy for 2050)*. Available at: <http://polsis.mk.gov.lv/documents/6641>.

---

---

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