



Report on the technical review of the eighth national communication and the technical review of the fifth biennial report of Poland

Parties included in Annex I to the Convention were requested by decision 6/CP.25 to submit their eighth national communication to the secretariat by no later than 31 December 2022. According to decision 15/CMP.1, Parties included in Annex I to the Convention that are also Parties to the Kyoto Protocol are required to include in their national communications supplementary information under Article 7, paragraph 2, of the Kyoto Protocol. This report presents the results of the technical review of the eighth national communication and relevant supplementary information under the Kyoto Protocol of Poland, 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” and the “Guidelines for review under Article 8 of the Kyoto Protocol”.

Developed country Parties were requested by decision 6/CP.25 to submit their fifth biennial report to the secretariat by no later than 31 December 2022. This report presents the results of the technical review of the fifth biennial report of Poland, 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 of these submissions took place in Warsaw from 8 to 12 April 2024.



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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 ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ eq	carbon dioxide equivalent
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CRF	common reporting format
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
EURO-CORDEX	European branch of the international Coordinated Regional Climate Downscaling Experiment
F-gas	fluorinated gas
GDP	gross domestic product
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
IPPU	industrial processes and product use
KOBIZE	National Centre for Emissions Management of Poland
LULUCF	land use, land-use change and forestry
MESSAGE-PL	Polish model for energy supply strategy alternatives and their general environmental impacts
N ₂ O	nitrous oxide
NA	not applicable
NC	national communication
NE	not estimated
NECP	National Energy and Climate Plan
NF ₃	nitrogen trifluoride
NIR	national inventory report
NMVOOC	non-methane volatile organic compound
NO	not occurring
non-ETS sector	sector not covered by the European Union Emissions Trading System
NO _x	nitrogen oxides
ODS	ozone-depleting substance(s)
PaMs	policies and measures
PFC	perfluorocarbon
PRIMES	Price-Induced Market Equilibrium System (model)
reporting guidelines for supplementary information	“Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol. Part II: Reporting of supplementary information under Article 7, paragraph 2”
RES	renewable energy source(s)
SF ₆	sulfur hexafluoride

SO ₂	sulfur dioxide
STEAM-PL	Polish set of tools for energy demand analysis and modelling
UNFCCC reporting guidelines on BRs	“UNFCCC biennial reporting guidelines for developed country Parties”
UNFCCC reporting guidelines on NCs	“Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications”
WAM	‘with additional measures’
WEM	‘with measures’
WMO	World Meteorological Organization
WOM	‘without measures’

I. Introduction and summary

A. Introduction

1. This is a report on the in-country technical review of the NC8 and BR5 of Poland. 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” and “Part V: UNFCCC guidelines for the technical review of national communications from Parties included in Annex I to the Convention” (annex to decision 13/CP.20), and the “Guidelines for review under Article 8 of the Kyoto Protocol” (annex to decision 22/CMP.1 and annex I to decision 4/CMP.1).
2. In accordance with decision 13/CP.20, a draft version of this report was transmitted to the Government of Poland, which provided comments that were considered and incorporated, as appropriate, with revisions into this final version of the report.
3. The review was conducted from 8 to 12 April 2024 in Warsaw by the following team of nominated experts from the UNFCCC roster of experts: Yauheniya Bertash (Belarus), Dawa Chhoedron (Bhutan), Amnat Chidthaisong (Thailand), Erik Rasmussen (Denmark) and Babacar Sarr (Senegal). Amnat Chidthaisong and Erik Rasmussen were the lead reviewers. The review was coordinated by Pierre Brender (secretariat).

B. Summary

4. The ERT conducted a technical review of the information reported in the NC8 of Poland in accordance with the UNFCCC reporting guidelines on NCs,¹ the reporting guidelines for supplementary information, in particular the supplementary information required under Article 7, paragraph 2, and on the minimization of adverse impacts under Article 3, paragraph 14, of the Kyoto Protocol² and of the information reported in the BR5 of Poland in accordance with the UNFCCC reporting guidelines on BRs.³

1. Timeliness

5. The NC8 was submitted on 28 December 2022, before the deadline of 31 December 2022 mandated by decision 6/CP.25.
6. The BR5 was submitted on 28 December 2022, before the deadline of 31 December 2022 mandated by decision 6/CP.25. The CTF tables were also submitted on 28 December 2022.

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

7. Issues and gaps identified by the ERT related to the information reported by Poland in its NC8 are presented in tables 1–2. The information reported, including the supplementary information under the Kyoto Protocol, mostly adheres to the UNFCCC reporting guidelines on NCs. The ERT concludes that the issues of a mandatory nature related to supplementary information under the Kyoto Protocol do not influence the Party’s ability to fulfil its commitments for the second commitment period of the Kyoto Protocol.
8. The ERT noted that Poland made improvements to the reporting in its NC8 compared with that in its NC7, including by addressing many recommendations and encouragements from the previous review report in the areas of PaMs, and projections and the total effects of PaMs, for example by reporting PaMs by sector and by gas, the effect of most individual or

¹ Decision 6/CP.25, annex.

² Decision 15/CMP.1, annex, and decision 3/CMP.11, annex III.

³ Decision 2/CP.17, annex.

groups of PaMs, a WAM projections scenario, sensitivity analyses for the projections, and projections of emissions of the precursor gases CO, NO_x and NMVOCs, as well as SO₂.

Table 1

Assessment of completeness and transparency of mandatory information reported by Poland in its eighth national communication

<i>Section of NC</i>	<i>Completeness</i>	<i>Transparency</i>	<i>Reference to description of recommendation</i>
Executive summary	Complete	Transparent	–
National circumstances relevant to GHG emissions and removals	Mostly complete	Transparent	Issue 1 in table I.1
GHG inventory	Complete	Transparent	–
PaMs	Complete	Mostly transparent	Issue 3 in table I.3
Projections and the total effect of PaMs	Mostly complete	Transparent	Issue 5 in table I.4
Vulnerability assessment, climate change impacts and adaptation measures	Complete	Transparent	–
Financial resources and transfer of technology ^a	NA	NA	NA
Research and systematic observation	Mostly complete	Transparent	Issue 1 in table I.6
Education, training and public awareness	Complete	Transparent	–

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

^a Poland 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.

Table 2

Assessment of completeness and transparency of mandatory supplementary information under the Kyoto Protocol reported by Poland in its eighth national communication

<i>Supplementary information under the Kyoto Protocol</i>	<i>Completeness</i>	<i>Transparency</i>	<i>Reference to description of recommendation</i>
National system	Mostly complete	Transparent	Issue 1 in table I.8
National registry	Mostly complete	Transparent	Issue 2 in table I.8
Supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17	Complete	Transparent	–
PaMs in accordance with Article 2	Complete	Transparent	–
Domestic and regional programmes and/or arrangements and procedures	Mostly complete	Transparent	Issue 3 in table I.8
Information under Article 10 ^a	NA	NA	NA
Financial resources ^b	NA	NA	NA
Minimization of adverse impacts in accordance with Article 3, paragraph 14	Complete	Transparent	–

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

^a The assessment refers to information provided by the Party on the provisions contained in Article 4, paras. 3, 5 and 7, of the Convention, as reported under Article 10 of the Kyoto Protocol, which is relevant to Annex II Parties only.

^b Poland is not an Annex II Party and is therefore not obliged to provide information on financial resources under Article 11 of the Kyoto Protocol, including on “new and additional” resources.

9. Issues and gaps identified by the ERT related to the information reported by Poland in its BR5 are presented in table 3. The information reported completely adheres to the UNFCCC reporting guidelines on BRs.

10. The ERT noted that Poland made improvements to the reporting in its BR5 compared with that in its BR4, by addressing many recommendations and encouragements from the

previous review report in the areas of timeliness; its quantified economy-wide emission reduction target and related assumptions, conditions and methodologies; progress in achievement of quantified economy-wide emission reduction targets and relevant information; and projections. Only one encouragement, in the area of projections regarding the provision of a WOM scenario, was not addressed by the Party.

Table 3

Summary of completeness and transparency of mandatory information reported by Poland in its fifth biennial report

<i>Section of BR</i>	<i>Completeness</i>	<i>Transparency</i>	<i>Reference to description of recommendation</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	Complete	Transparent	–
Provision of support to developing country Parties ^a	NA	NA	NA

Note: The assessment of completeness and transparency by the ERT in this table is based only on the “shall” reporting requirements.

^a Poland 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 eighth national communication and fifth biennial report

A. National circumstances relevant to greenhouse gas emissions and removals

1. Technical assessment of the reported information

11. The NC8 contains key data on government administration, population trends, geography and land use, climate and climate change, economic developments, energy, transport, the buildings sector, industry, trade, the services sector, agriculture, forestry, resource efficiency and wastewater.

12. The chapter of the NC8 on national circumstances includes information that enables an understanding of the relationship between the developments in the national circumstances and GHG emission trends. The changing nature of those circumstances informs climate policy development and has an impact on the implementation of the Convention.

13. The main drivers affecting GHG emissions and removals are the continued use of hard coal and lignite, which together accounted for 40.6 per cent of primary energy consumption in 2020; the increase in the share of RES from 13.8 per cent in 2016 to 19.7 per cent in 2019, with solid biofuels contributing 65.6 per cent, followed by wind energy with 13.7 per cent, liquid biofuels with 10.4 per cent and biogas with 3.2 per cent, and the remaining 7.1 per cent contributed from other RES such as hydropower and solar; the deployment of energy-efficient technologies and the modernization of insulation and heating systems in houses and buildings; the rapid growth in road transport; the increase in waste sorting and recycling; the reduction of solid waste disposal on land; and changing weather conditions (reduced energy consumption for heating as a result of mild winters).

14. Following the economic transformation that started in 1989, Poland has prioritized economic restructuring and modernization, while reducing the related impact on the environment. Poland’s accession to the EU in 2004 boosted efforts to modernize the economy but also led to greater and more challenging commitments in relation to environmental protection owing to the application of EU-wide environmental and climate policies.

15. In 2015–2020 Poland’s population decreased by 0.4 per cent and GDP increased by 30.0 per cent, while GHG emissions per capita and GHG emissions per GDP unit decreased by 2.9 and 25.5 per cent respectively. GHG emissions (excluding LULUCF) decreased by about 35 per cent between the base year (1988) and 2020, despite the country’s steady economic growth in 1992–2019.

16. From 1990 to 2020, Poland’s GDP per capita (expressed in thousands of 2011 United States dollars using purchasing power parity) grew by 189.1 per cent. This dynamic economic growth weakened in 2020, reflecting global economic trends and actions taken in relation to the coronavirus disease 2019 pandemic. Between 2019 and 2020, total GHG emissions including LULUCF decreased by 4 per cent, mainly as a result of lower fossil fuel combustion in stationary sources, primarily owing to the decrease in the use of coal and lignite. The pandemic also contributed to a decrease in fuel combustion in transport in 2020 compared with the 2019 level.

17. The increase in primary energy demand in 2009–2019 was contained by various trends such as higher electricity imports, improved efficiency of thermal power plants and increased use of energy from renewable sources. The changes in final energy consumption since 1988 and between 2009 and 2019 are due to many factors, including changes in several sectors of Poland’s economy; changes in the lifestyle of the population through improvements in public awareness of the impact of the environment on health; energy savings, including through thermal modernization of buildings and optimization of industrial processes; structural changes in industrial production; and changes in weather conditions. Regarding changes in the level of final energy consumption, the largest increases were observed in transport (due to growing transport activity, reinforced by the low levels of activity in 1988 compared with Western European countries), industry (due to an increase in activity) and agriculture (due to a further intensification of agricultural production). Emissions in the energy sector decreased by almost 36 per cent between 1988 and 2020 owing to transformation in the energy and industry sectors due to structural changes, improved energy efficiency, a decrease in the use of hard coal and lignite and an increase in the share of energy from RES and natural gas.

18. The industry sector has developed significantly since 1988 and currently contributes the most to Poland’s economic growth. Energy consumption trends in the manufacturing industry are dominated by its three energy-intensive branches: the metallurgical, chemical and mineral industries, which had a combined share of 56.9 per cent of energy consumption in the manufacturing industry in 2019 (54.5 per cent in 2020). The transformation of the sector contributed to improvements in energy efficiency and in turn to a decrease in the energy intensity of industrial production and GHG emissions.

19. In 1988–2020, changes in the agriculture sector led to a reduction of almost 32 per cent in GHG emissions. These changes included a decrease in the cattle and sheep population, as well as structural changes resulting in a decrease in the number of farms. In the same period, access to financial instruments under the EU Common Agricultural Policy increased, along with opportunities for exports to the EU market, resulting in an increase in production.

20. GHG emissions from households decreased owing to the fuel switch from coal to natural gas, with a reduction in coal consumption of approximately 60 per cent between 1988 and 2020. The residential sector is one of the largest energy-consuming sectors in Poland, accounting for almost 25 per cent of total final energy consumption, primarily for heating purposes. Despite the fall in energy consumption, underlying factors, such as an increase in the number and size of housing units and a change in the lifestyle of the population due to a wealthier society, have counteracted the decrease in GHG emissions over the last decade.

21. Since 1990, there has been an annual increase in GHG emissions from the transport sector, except for a few years (1993, 2000–2003, 2012–2013 and 2020). The increase in transport sector emissions of 205 per cent between 1990 and 2020 (or a 157 per cent increase since 1988) is linked with the country’s economic growth and the increase in transport demand, resulting in higher fuel consumption, especially in the road transport sector.

22. Poland requested flexibility in accordance with Article 4, paragraphs 6 and 10, of the Convention in relation to the base-year definition. In accordance with Article 4, paragraph 6,

of the Convention and decision 9/CP.2, Poland, as a Party with an economy in transition, may use 1988 as its base year.⁴

2. Assessment of adherence to the reporting guidelines

23. The ERT assessed the information reported in the NC8 of Poland and identified issues relating to completeness and transparency, and thus adherence to the UNFCCC reporting guidelines on NCs. The findings are described in table I.1.

B. Greenhouse gas inventory information⁵

1. Technical assessment of the reported information

24. Poland reported information in its BR5 and NC8 on its historical GHG emissions and inventory arrangements using GWP values from the AR4. More recent information on GHG emissions was reported in Poland's 2023 inventory submission, which used GWP values from the AR5. Total GHG emissions⁶ excluding emissions and removals from LULUCF decreased by 21.7 per cent between 1990 and 2020, while total GHG emissions including net emissions or removals from LULUCF decreased by 20.9 per cent over the same period. Historical emissions decreased between 1988 and 1994, followed by a small increase in 1996 owing to developments in heavy industry and other sectors and dynamic economic growth, and a decrease thereafter until 2002, following which emissions remained relatively stable until 2011, with some inter-annual fluctuations, including a significant drop in 2009 and 2020 attributed to the global economic crisis and the pandemic respectively. Emissions excluding emissions and removals from LULUCF in 2021 increased compared with 2020. The changes in total emissions were driven mainly by factors such as the transformation of some sectors of Poland's economy, including the energy, transport and agriculture sectors, since the base year. Historically, emissions from the waste, energy and agriculture sectors have decreased the most, with the greatest reduction in absolute terms in the energy sector (excluding transport). Measures to improve energy efficiency, diversify the fuel mix, enhance RES and develop competitive energy markets are some of the key drivers of Poland's emission reductions.

25. Table 4 illustrates the emission trends by sector and by gas for Poland. The emissions reported in the 2023 inventory submission differ from those reported in CTF table 1 in that the emissions in CTF table 1 are based on the latest resubmission of the CRF tables following the review of the 2022 annual submission, for which GWP values from the AR4 were used. The estimates reported in Poland's 2023 inventory submission differ from those reported in the 2022 annual submission as they have been recalculated, resulting in a decrease in estimated total emissions without LULUCF by 0.2 per cent for 1990 and 1.1 per cent for 2020, and a decrease in estimated total emissions with LULUCF by 0.4 per cent for 1990 and 1.4 per cent for 2020.

Table 4

Greenhouse gas emissions by sector and by gas for Poland for 1990–2021

Sector	GHG emissions (kt CO ₂ eq)					Change (%)		Share (%)	
	1990	2000	2010	2020	2021	1990–2020	2020–2021	1990	2021
	1. Energy	385 148.74	324 336.88	344 423.02	307 991.99	336 170.52	–20.0	9.1	81.2

⁴ Under the Kyoto Protocol, Poland selected 1988 as the base year for emissions of CO₂, CH₄ and N₂O, 1995 as the base year for HFCs, PFCs and SF₆ and 2000 as the base year for NF₃.

⁵ GHG emission data in this section, which use GWP values from the AR5, are based on Poland's 2023 inventory submission, version 1. All emission data in the previous and subsequent chapters are based on Poland's BR5 CTF tables, which use GWP values from the AR4 unless otherwise noted.

⁶ In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of CO₂ eq excluding LULUCF and including indirect CO₂ emissions, unless otherwise specified.

	GHG emissions (kt CO ₂ eq)					Change (%)		Share (%)	
	1990	2000	2010	2020	2021	1990–2020	2020–2021	1990	2021
	A1. Energy industries	235 229.43	176 587.38	173 529.26	139 603.24	160 223.08	–40.7	14.8	49.6
A2. Manufacturing industries and construction	42 830.74	45 962.90	29 615.73	28 906.83	30 106.35	–32.5	4.1	9.0	7.5
A3. Transport	20 741.06	29 000.43	49 373.53	63 081.57	68 350.91	204.1	8.4	4.4	17.1
A4. and A5. Other	57 185.16	49 081.89	67 724.94	52 971.94	54 420.70	–7.4	2.7	12.1	13.6
B. Fugitive emissions from fuels	29 162.34	23 704.28	24 179.56	23 428.42	23 069.48	–19.7	–1.5	6.1	5.8
C. CO ₂ transport and storage	NO	NO	NO	NO	NO	NA	NA	NA	NA
2. IPPU	21 971.96	22 224.44	22 878.65	24 516.29	24 557.99	11.6	0.2	4.6	6.1
3. Agriculture	49 291.34	33 205.86	31 659.66	34 051.67	34 035.26	–30.9	–0.0	10.4	8.5
4. LULUCF	–28 493.66	–34 569.11	–32 962.30	–18 957.85	–20 094.72	33.5	–6.0	NA	NA
5. Waste	18 142.28	14 225.54	8 275.63	4 752.48	4 674.72	–73.8	–1.6	3.8	1.2
6. Other ^a	NO	NO	NO	NO	NO	NA	NA	NA	NA
<i>Gas^b</i>									
CO ₂	376 641.25	317 452.22	334 224.58	302 437.09	331 077.16	–19.7	9.5	79.4	82.9
CH ₄	69 949.23	52 447.01	47 759.43	43 188.11	42 704.71	–38.3	–1.1	14.7	10.7
N ₂ O	27 836.37	22 886.28	19 600.62	20 469.86	20 616.67	–26.5	0.7	5.9	5.2
HFCs	NO, NA	1 022.57	5 598.16	5 114.48	4 937.26	NA	–3.5	NA	1.2
PFCs	127.47	160.87	17.72	10.61	10.08	–91.7	–5.0	0.0	0.0
SF ₆	NA, NO	23.77	36.45	92.29	92.60	NA	0.3	NA	0.0
NF ₃	NA, NO	NA, NO	NA, NO	NO, NA	NO, NA	NA	NA	NA	NA
Total GHG emissions excluding LULUCF excluding indirect CO₂	474 554.32	393 992.73	407 236.96	371 312.43	399 438.49	–21.8	7.6	100.0	100.0
Total GHG emissions including LULUCF excluding indirect CO₂	446 060.66	359 423.62	374 274.66	352 354.58	379 343.77	–21.0	7.7	NA	NA
Total GHG emissions excluding LULUCF, including indirect CO₂	474 838.25	394 474.58	407 804.83	371 894.95	399 937.61	–21.7	7.5	NA	NA
Total GHG emissions including LULUCF, including indirect CO₂	446 344.59	359 905.48	374 842.53	352 937.10	379 842.88	–20.9	7.6	NA	NA

Source: GHG emission data: Poland's 2023 inventory submission, version 1.

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

^b Emissions by gas without LULUCF and excluding indirect CO₂.

26. In brief, Poland's national inventory arrangements were established in accordance with the Act of 17 July 2009 on the System to Manage the Emissions of Greenhouse Gases and Other Substances. There have been no changes in these arrangements since the BR4. KOBiZE is responsible for preparing the GHG emissions inventory. It submits the annual inventory to the Ministry of Climate and Environment, which supervises the activity and performance of KOBiZE. During the review, Poland further explained that the focal point for GHG inventory reporting to the EU and the UNFCCC within the Ministry of Climate and Environment is the Department of Air Protection and Climate Negotiations.

3. Assessment of adherence to the reporting guidelines

27. The ERT assessed the information reported in the NC8 and BR5 of Poland and identified issues relating to transparency and thus adherence to the UNFCCC reporting guidelines on NCs and the UNFCCC reporting guidelines on BRs. The findings are described in tables I.2 and II.1.

4. National system for the estimation of anthropogenic emissions by sources and removals by sinks

(a) Technical assessment of the reported information

28. Poland provided in the NC8 a description of how its national system for the estimation of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol is performing the general and specific functions defined in the annex to decision 19/CMP.1 in conjunction with decisions 3/CMP.11 and 4/CMP.11. The description includes most of the elements mandated by paragraph 30 of the annex to decision 15/CMP.1. The NC8 also contains a reference to the description of the national quality assurance/quality control and verification programme for the GHG inventory provided in the NIR of the 2022 annual submission.

(b) Assessment of adherence to the reporting guidelines

29. The ERT assessed the information reported in the NC8 of Poland and identified an issue relating to completeness and thus adherence to the reporting guidelines for supplementary information. The finding is described in table I.8.

5. National registry

(a) Technical assessment of the reported information

30. In its NC8 Poland provided information on how its national registry performs the functions in accordance with the annex to decision 13/CMP.1 in conjunction with decision 3/CMP.11 and the annex to decision 5/CMP.1 and complies with the requirements of the technical standards for data exchange between registry systems.

(b) Assessment of adherence to the reporting guidelines

31. The ERT assessed the information reported in the NC8 of Poland and identified an issue relating to completeness and thus adherence to the reporting guidelines for supplementary information. The finding is described in table I.8.

C. Quantified economy-wide emission reduction target and related assumptions, conditions and methodologies

1. Technical assessment of the reported information

32. Poland reported information on its economy-wide emission reduction target in its BR5. For Poland the Convention entered into force on 26 October 1994. Under the Convention Poland 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.

33. The 2020 target for the EU and its member States was formalized in the EU 2020 climate and energy package. The legislative package regulated emissions of CO₂, CH₄, N₂O, HFCs, PFCs and SF₆ 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 for 2020 under the Convention.

34. The EU-wide targets for 2020 under the Convention and for 2013–2020 under the Kyoto Protocol are primarily implemented through the EU ETS and ESD. The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors. An EU-wide emission cap was put in place for 2013–2020 for the EU ETS with the goal of reducing emissions by 21 per cent below the 2005 level by 2020. For 2030, a reduction target of 62 per cent below the 2005 level has been set for emissions covered by the EU ETS. The ESD was operational in 2013–2020 and covered sectors outside the EU ETS, including transport (excluding aviation and international maritime transport), residential and commercial buildings, agriculture, small industry and waste. The ESD was regulated through targets for each member State that added up to a reduction at the EU level of 10 per cent below the 2005 level by 2020. The ESR, the successor to the ESD, was adopted in 2018 and amended in 2023

with the target of reducing emissions covered under the ESR by 40 per cent below the 2005 level by 2030.

35. The EU generally allowed 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 could use such units to fulfil their requirements under the EU ETS in 2013–2020, and member States could use such units for their national ESD targets, within specific limitations.

36. 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 2050 climate-neutrality target was made binding in the first European Climate Law, adopted in 2021. It also increased the ambition of the 2030 emission reduction target to at least 55 per cent below the 1990 level. Member States will set out any increased ambition in the update of their NECPs.

37. Poland has a national target of limiting its emission growth to 14 per cent above the 2005 level by 2020 for ESD sectors. This target has been translated into binding quantified AEAs for 2013–2020. Poland's AEAs change following a linear path from 193,642.82 kt CO₂ eq in 2013 to 205,181.20 kt CO₂ eq in 2020.⁷ Under the revised ESR, Poland has a national target of reducing emissions from covered sectors to 17.7 per cent below the 2005 level by 2030.

38. In addition to its ESD target, Poland committed to increasing the share of electricity generated from RES in final energy consumption to 15 per cent and the share of RES in transport to 10 per cent, and reducing primary energy consumption by 13.6 Mtoe by 2020 under the legal and institutional instruments established at the EU and national level to achieve the ESD target. In addition, Poland reported in the NC8 on the EU longer-term target of reducing emissions by 40 per cent below the 1990 level by 2030, with associated targets of a 32 per cent share of RES in final energy consumption and a 32.5 per cent increase in energy efficiency by 2030. Considering the increased level of ambition in the recently updated EU GHG emission reduction target for 2030 (see para. 36 above), the EU ETS and ESR targets for 2030 have been revised, along with the provisions for establishing national targets for member States under the ESR. An updated nationally determined contribution of the EU was submitted in October 2023 which, among other things, reflects the updated ESR targets for EU member States, including Poland's 17.7 per cent emission reduction target (see para. 37 above).

39. During the review, Poland informed the ERT about the ongoing development of a final integrated and updated NECP, scheduled to be submitted to the European Commission in June 2024, which will include updated WEM and WAM projection scenarios that take into account the additional PaMs adopted after the submission of the NC8 and BR5. In the draft updated NECP submitted to the European Commission on 1 March 2024, Poland stated that economy-wide projections indicate that a 35 per cent reduction in total GHG emissions compared with the 1990 level could be achieved by 2030 (decreasing to approximately 288 Mt CO₂ eq), but highlighted that the projection estimates should not be viewed as targets.

2. Assessment of adherence to the reporting guidelines

40. The ERT assessed the information reported in the BR5 of Poland and recognized that the reporting is complete and transparent, and thus adheres 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.

⁷ According to the EU transaction log.

D. Information on policies and measures

1. Technical assessment of the reported information

41. Poland provided in its NC8 and BR5 information on its PaMs⁸ implemented, adopted and planned to fulfil its commitments under the Convention. Poland has modified the presentation of its PaMs, both in terms of the grouping of PaMs and their names. The main revisions to the PaMs reported in the NC8 and BR5 compared with those in the NC7 and BR4 were caused by amendments to EU regulations and the Party's use of a different approach to analysing PaMs, resulting in a more detailed presentation of PaMs by sector. Poland transparently described the changes to the reporting of PaMs. The key strategic pieces of legislation on which Poland's national mitigation climate policy is based are the EU 2030 climate and energy package; the European Green Deal; the NECP for 2021–2030, adopted by the Council of Ministers on 18 December 2019; the 2030 National Environmental Policy, adopted by the Council of Ministers on 16 July 2019; the National Air Pollution Control Programme, adopted by the Council of Ministers on 29 April 2019; and the Strategy for Responsible Development until 2020 (with an Outlook until 2030), adopted by the Council of Ministers on 14 February 2017. Poland also explained that it did not identify PaMs that are no longer in place since its NC7 and BR4, and that strategic documents are systematically updated and replaced by newer documents that uphold and expand upon the objectives and assumptions relating to the development of particular sectors.

42. Poland 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. Poland also indicated that there have been no significant changes to its institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of progress towards its target. The Ministry of Climate and Environment is responsible for national climate, energy and forestry policy and all related activities, including tracking progress in implementing and achieving the objectives of PaMs. Institutions reporting to the Ministry of Climate and Environment, as well as research and development institutes, are also involved in the climate governance of Poland, including the Institute of Environmental Protection – National Research Institute, which includes KOBiZE and is the national administrator of the EU ETS and performs other tasks related to climate policy, including the preparation of reports, inventories and projections submitted to the UNFCCC, pursuant to the Act of 17 July 2009 on the System to Manage the Emissions of Greenhouse Gases and Other Substances. The Forest Research Institute carries out research on CO₂ removals from the LULUCF sector, while the Institute of Meteorology and Water Management – National Research Institute carries out systematic climate change observations. With regard to Poland's sustainable development strategy and environmental policy, the Ministry of Economic Development and Technology is responsible for economic development and innovation, and construction; the Ministry of Development Funds and Regional Policy is responsible for economic and national development strategy and EU fund management; the Ministry of Agriculture and Rural Development is responsible for agriculture and rural development; the Ministry of Infrastructure is responsible for transport, the maritime economy, inland navigation and water/sewage management; and the Ministry of State Assets is responsible for mining and energy raw materials. In addition, the newly established Ministry of Industry, set up in March 2024, has taken over some of the responsibilities formerly assigned to the Ministry of State Assets, such as mineral deposit management.

43. Poland explained that assessments of the economic and social consequences of its response measures are undertaken for policies, strategies, plans and programmes that could have a significant impact on the environment, in accordance with the Act of 3 October 2008 on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessment, which specifies, *inter alia*, documents that are to be subject to a strategic environmental impact assessment. Such assessments involve preparing a forecast of the environmental impact of relevant policies and

⁸ The UNFCCC reporting guidelines on BRs use the term “mitigation actions”, whereas the UNFCCC reporting guidelines on NCs use the term “policies and measures”. The terms are used interchangeably in this report to refer to the relevant information in either the NC or BR.

programmes; these documents are made publicly available to enable individuals and national Governments to express their opinions thereon. Public authorities are required to take into account the results of such consultations. During the review, Poland reported some examples of policies that could lead to greater levels of emissions, including the provision of subsidies for the coal mining industry. The Party also clarified that the aid programme established under the closure plan for the Polish coal mining industry includes activities such as decommissioning coal mines, carrying out reclamation work in post-mining areas, repairing damage caused by mining and restoring areas to their pre-damaged state, and its aid is therefore mostly allocated to activities aimed at reducing GHG emissions in the long term.

44. In its reporting on PaMs, Poland provided the estimated emission reduction impacts in 2020 for 23 out of 54 (or 43 per cent) of its PaMs. The Party reported 26 PaMs (or 48 per cent) as “NE”, indicating that it was not possible to estimate the emission reduction effects owing to insufficient data. Additionally, five PaMs (or 9 per cent) were reported as “NA”, with the Party explaining that the ESD (setting an emission reduction target for each year) does not have a direct impact on emissions, and that for PaMs implemented after 2020, it is not possible to estimate the emission reduction impacts for that year.

45. Poland described its methodology for estimating the impacts of most of its PaMs. However, for energy sector PaMs related to the programmes run by the National Fund for Environmental Protection and Water Management, the Party only indicated that its approach is based on data provided by the Fund. During the review, Poland clarified that when estimating the impacts of these PaMs, it considers energy savings resulting from projects supported by these programmes, including reductions in energy consumption or production from RES. The data collected on energy savings inform the estimates of CO₂ emissions avoided. The methodology incorporates the CO₂ emission factors for electricity contained in the annual reports issued by KOBiZE, which are based on the national database on GHG emissions and other substances. The ex ante effects of a given programme are projected on the basis of the assumptions formulated by the National Fund for Environmental Protection and Water Management on expected programme outcomes, as reflected in the signed contracts with beneficiaries. Conversely, the ex post effects in a given year result from the cumulative impact of individual projects supported under the respective programme, with data sourced from implemented contracts.

46. 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 CO₂ emissions from cars and vans, the carbon capture and storage directive, and the general programmes for environmental conservation, namely the 7th Environment Action Programme and the clean air policy package. The 2021 European Climate Law, which forms part of the European Green Deal, made climate neutrality by 2050 legally binding and raised the EU-wide 2030 emissions reduction target to at least 55 per cent compared with the 1990 level. In 2023, the EU adopted several pieces of legislation that were part of the “Fit for 55” package intended to help achieve the new 2030 target. These new laws strengthened both the ESR and EU ETS 2030 targets, extended the EU ETS to include maritime shipping in 2024 and established the Social Climate Fund to address equitability of mitigation impacts. They also created the EU ETS 2 to cover at the point of distribution most fuel used in sectors not covered by the EU ETS, beginning in 2027.

47. The 2021–2030 EU-wide policies are operationalized through the NECPs of EU member States, which should set out national objectives for each of the five dimensions of the Energy Union, namely energy security; the internal energy market; energy efficiency; decarbonization; and research, innovation and competitiveness. The NECPs are periodically updated to reflect changes to EU policy, such as the implementation of the European Green Deal. Poland’s draft updated NECP for 2021–2030 submitted to the European Commission on 1 March 2024 provides a foundation for additional action. The document is an update of the NECP submitted to the European Commission in 2019 and presents the first of the two required analytical scenarios, namely the WEM (baseline) scenario. The final update of the NECP will include the more ambitious WAM (transformation) scenario, which is currently being developed by the Ministry of Climate and Environment. The final document containing the WEM and WAM scenarios will be presented for public and sectoral consultation with a

view to its finalization in the second and third quarters of 2024. As reflected in the draft updated NECP, Poland's new target under the revised ESR is a 17.7 per cent emission reduction in non-ETS sectors by 2030. The WEM scenario reported in the draft updated NECP projects a 14.1 per cent reduction in sectors covered by the ESR. Therefore, in order to achieve the target, additional reductions, amounting to 3.6 per cent, will be required. The draft updated NECP also sets out actions to increase the share of RES to 29.8 per cent by 2030 and reduce energy consumption by 5.9 per cent by 2030 compared with the PRIMES projection scenario for 2020.

48. Poland introduced national-level policies to achieve its targets under the ESD, the ESR and domestic emission reduction targets. The key policies reported are the white certificate scheme, the auction-based support scheme for RES and the cogeneration premium. The mitigation effect of the white certificate scheme, which supports measures for improving the energy efficiency of energy companies, increasing the energy savings of end users and reducing losses of electricity, heat or natural gas in transmission or distribution sectors, is the most significant. Other policies that have delivered significant emission reductions are measures to limit the use of F-gases and promote rational waste management, as well as other programmes supporting the development of RES and cogeneration.

49. In addition, Poland identified a list of 16 PaMs that may be considered as innovative and replicable by other Parties. The ERT noted with particular interest the pilot project to prepare sustainable urban mobility plans, which is reported in the NC8 and BR5 under a group of measures on the development of zero emissions urban transport. This pilot project, which is being implemented in cooperation with the European Commission, the Ministry of Development Funds and Regional Policy, the Ministry of Infrastructure, the Centre for EU Transport Projects and the Joint Assistance to Support Projects in European Regions initiative, supports cities that have expressed an interest in preparing and implementing sustainable urban mobility plans to promote urban mobility, environmental protection, health care and socioeconomic development, as well as to transfer knowledge and good practices to other territorial self-governing units.

50. Most of the PaMs reported by Poland in the NC8 and BR5 are presented as implemented. Poland also reported on two planned policies, namely the proposed adoption of more stringent requirements to limit the use of F-gases, as well as eco-schemes in the agriculture sector. The planned policy to strengthen the requirements on the placement and use of F-gases in the market has been developed to align with the provisions of the European Green Deal. The eco-schemes in the agriculture sector provide direct payments to farmers under the Polish Common Agricultural Policy Strategic Plan for 2023–2027, within the framework of the EU Common Agricultural Policy, to encourage practices that benefit the environment, the climate and animal welfare, extending beyond the requirements and obligations that apply for all Common Agricultural Policy payments. During the review, Poland explained that the eco-schemes are currently being implemented and provided information on the PaMs that have been adopted since the submission of the NC8 and BR5 and may affect the level of GHG emissions, as well as PaMs that include mitigation actions. Poland mentioned the Government Programme for the Construction of National Roads until 2030 (with a perspective until 2033) as a key document for the development of the road transport sector in Poland that provides investments for building a coherent network of national roads, ensuring the effective functioning of road passenger and freight transport. The Party also mentioned the civil aviation development policy in Poland until 2030 (with a perspective until 2040) that updates the existing national aviation policy and addresses new thematic issues to ensure the sustainable development of the civil aviation sector, taking into account external and internal conditions and needs. The Party also referred to the National Shipping Programme until 2030 that specifies actions to modernize the existing hydrotechnical infrastructure, digitize the sector and modernize the fleet while strengthening its resilience to climate change. Finally, Poland mentioned its National Waste Management Plan 2028, which covers activities for increasing the level of recycling of municipal waste to 55 per cent by 2025 and 65 per cent by 2035, reducing the share of landfilled waste to 30 per cent by 2025 and 10 per cent by 2035, and preventing the generation of food waste.

51. Poland highlighted the domestic mitigation actions that are under development, such as those being revised to align with the more ambitious 2030 target of the EU to reduce

domestic emissions by at least 55 per cent compared with the 1990 level. The mitigation actions that provide a foundation for significant additional action are those aimed at the deep decarbonization of all sectors of the economy considered in the draft updated NECP (see para. 47 above), including by developing RES to increase their share to up to 29.8 per cent by 2030, phasing out coal used for individual heating, promoting the thermal modernization of residential buildings, implementing regulatory changes to reduce barriers to the use of RES in heating, creating incentives for the development of district heating systems using RES, introducing ambitious measures for improving the energy efficiency of the economy, and providing financial subsidies to reduce the production capacity of mining companies and ensure social protection for employees of closed mines. Table 5 provides a summary of the reported information on the PaMs of Poland.

Table 5
Summary of information on policies and measures reported by Poland

<i>Sector</i>	<i>Key PaMs^a</i>	<i>Estimated mitigation impact in 2020 (kt CO₂ eq)</i>	<i>Estimated mitigation impact in 2030 (kt CO₂ eq)</i>
Policy framework and cross-sectoral measures	Greenhouse gas emission allowance trading system (EU ETS)	NE	NE
	Emission reductions in non-ETS sectors (a group of measures)	NA	NA
Energy			
Energy efficiency	White certificate scheme	17 770.00	48 187.00
	Energy audits and energy management systems	9 289.00	NE
	Thermal Modernisation and Renovation Fund	904.00	5 682.00
	Thermal modernisation relief	NE	16 235.00
Energy supply and renewable energy	Cogeneration premium	0.00	12 814.00
	Auction-based support scheme for RES	1 170.00	13 411.00
	Clean Air Priority Programme	391.00	14 000.00
	My Power Priority Programme	501.00	2 738.00
Transport	Other programmes supporting the development of RES and cogeneration (a group of measures)	276.00	3 441.00
	Development of electromobility (a group of measures)	12.00	969.00
IPPU	Requirements for improving the emission factors of vehicles (a group of measures)	372.00	NE
	Limitation of the use of fluorinated greenhouse gases (a group of measures)	3 489.00	7 389.00
Agriculture	Development of agricultural biogas plants (a group of measures)	513.00	1 002.00
LULUCF	Forest area development and improvement of the viability of forests (a group of measures)	133.00	1 463.00
Waste	Rational waste management (a group of measures)	4 273.00	7 290.00
	Development of water and wastewater management (a group of measures)	2 119.00	2 734.00

Note: The estimated mitigation impacts are estimates of emissions of CO₂ eq avoided in a given year as a result of the implementation of mitigation actions.

^a Names of PaMs reproduced as reported in Poland's BR5.

52. Cross-sectoral measures such as the EU ETS and the ESD are implemented through sector-specific actions. The white certificate scheme is an energy efficiency measure that has made a significant contribution to the achievement of the Party's 2020 target. Poland has established a financing mechanism to support mitigation actions, primarily through the National Fund for Environmental Protection and Water Management, which provides support

at the local, regional and national level to various beneficiaries, including the private sector, local and central government entities, academic institutions, research and development institutes, non-governmental organizations and individuals. In 1989–2023, it provided almost 100 billion zlotys in support. Poland explained during the review that it has added over 19 GW installed renewable energy capacity to the national power grid since 2019. The growth in the actual share of RES in total installed capacity to over 43 per cent by early 2024 was supported by the auction-based support scheme for RES and the My Power Priority Programme, which boosted the capacity of rooftop photovoltaic installations in homes to over 10 GW by early 2024. In the transport sector, Poland’s strategy for reducing GHG emissions focuses on reducing energy consumption and replacing conventional fuels with low to zero carbon content fuels. A group of measures supporting the development of electromobility is estimated to have the greatest effect on transport sector emissions. In the IPPU sector, a group of measures to limit the use of F-gases is expected to have the most significant effect. Data on the electronic systems for ODS and F-gases in Poland are collected through the Central Register of Operators, a centralized online system for logbooks maintained by F-gas and ODS equipment operators, and the Central Database of Reports, a centralized online system for annual reports on F-gases and ODS submitted by entities. In the agriculture sector, a group of measures supporting the development of agricultural biogas plants is one of the most significant PaMs. During the review, Poland explained that the preparation, implementation and operation of investments in agricultural biogas plants is facilitated in accordance with the Act of 13 July 2023. Poland also explained that the main policy or measure in the LULUCF sector is a group of measures that support forest area development and improvement of the viability of forests, supported by the Forest Carbon Farms Project, which are planned to be rolled out across 50,005 ha in 250 State forest units between 2022 and 2035. Finally, for the waste sector, a group of measures targeting rational waste management that involve reducing, labelling and banning single-use plastic packaging; reducing landfilling through fees; minimizing biodegradable waste; and implementing waste incineration was highlighted as having the greatest estimated impact.

53. In addition, Poland systematically assesses the mitigation impact of PaMs as part of its implementation of the EU regulation on the governance of the Energy Union and climate action (regulation 2018/1999), which requires EU member States to report every two years on PaMs implemented to reduce GHG emissions. Poland’s legislation on implementing EU regulations also provides for a corrective mechanism to revise adopted PaMs in cases where they are not sufficient to meet GHG emission reduction targets for non-ETS sectors.

2. Assessment of adherence to the reporting guidelines

54. The ERT assessed the information reported in the NC8 and BR5 of Poland and identified issues relating to transparency and thus adherence to the UNFCCC reporting guidelines on NCs. The findings are described in table I.3.

3. Domestic and regional programmes and legislative arrangements and procedures related to the Kyoto Protocol

(a) Technical assessment of the reported information

55. In its NC8 Poland reported that the implementation of the Kyoto Protocol is underpinned by the Act of 17 July 2009 on the System to Manage the Emissions of Greenhouse Gases and Other Substances, which establishes the tasks of KOBiZE, the operating rules for the national system for emission management, the operating rules for the national registry of Kyoto Protocol units, the rules for trading and management of Kyoto Protocol units, the operating rules for the National Green Investment Scheme, the conditions and principles for the realization of joint implementation projects within the territory of Poland, and the conditions and principles for the realization of joint implementation and clean development mechanism projects beyond the territory of Poland. Other important acts related to air and climate protection include the Act of 27 April 2001 on Environmental Law, the Act of 20 July 1991 on the Inspectorate for Environmental Protection, the Act of 3 October 2008 on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessment, and the Act of 12 June 2015 on the Greenhouse Gas Emissions Trading Scheme.

56. Poland's national development goals to be achieved by 2020 and 2030 are guided by the Strategy for Responsible Development, adopted on 14 February 2017 as an amendment to the National Development Strategy 2020 and further defined in the 2030 National Environmental Policy adopted on 16 July 2019. The aim of the 2030 National Environmental Policy is to ensure Poland's environmental safety and a high quality of life for all its citizens. It strengthens the Government's actions to build an innovative economy while complying with the principles of sustainable development. Its objectives have been established in response to the most important environmental challenges and in a way that enables environmental protection issues to be addressed together with economic and social needs, including those related to health and the climate. The implementation of Poland's environmental objectives is to be supported by horizontal objectives related to environmental education and the effective functioning of environmental protection instruments. The 2030 National Environmental Policy will provide the basis for investing EU funds under the EU multiannual financial framework 2021–2027. It also supports the implementation of Poland's international objectives and commitments, including those at the EU and United Nations level, particularly in the context of the EU 2030 climate and energy package objectives and the Sustainable Development Goals set out in the 2030 Agenda for Sustainable Development.

57. The overall responsibility for climate change policymaking lies with the Ministry of Climate and Environment, who is responsible for preparing and coordinating draft national strategies and monitoring the activities of government administration bodies and inter-institutional working teams in the field of climate policy. A range of ministries are responsible for integrating sustainable development strategy, environmental policy and national climate policy into sectoral policies under their respective attributions.

58. For the second commitment period of the Kyoto Protocol, from 2013 to 2020, Poland committed to contributing to the joint EU effort to reduce GHG emissions by 20 per cent below the base-year level (see paras. 32–35 above).

59. The Party has arrangements and enforcement procedures to meet its commitments under the Kyoto Protocol, including procedures for addressing non-compliance. These include both the Party's adherence to EU legislation on monitoring and assessment of progress at the EU level and by member States, and national arrangements for monitoring and assessment of progress at the national level. The national arrangements include a system for adopting policies, strategies and other planning and development documents by the Council of Ministers, which ensures that implemented sectoral policies are consistent with each other and that they meet the targets adopted under national, EU and international agreements. In addition, with respect to the emission reduction target under the ESD, Poland's legislation on implementing EU regulations provides for a corrective mechanism, which is triggered in the case of non-compliance. The mechanism includes the preparation and implementation of additional reduction measures according to a corrective plan, which also has to be submitted to the European Commission.

60. Poland has provisions in place to make information on legislative arrangements and administrative procedures related to compliance and enforcement publicly accessible, such as the Act of 17 July 2009 on the System to Manage the Emissions of Greenhouse Gases and Other Substances, whereby KOBiZE, which operates within the Institute of Environmental Protection – National Research Institute, was instructed to carry out that task.

61. Poland has national legislative arrangements and administrative procedures in place that seek to ensure that the implementation of activities under Article 3, paragraph 3, and any elected activities under Article 3, paragraph 4, of the Kyoto Protocol also contributes to the conservation of biodiversity and the sustainable use of natural resources. The Act of 28 September 1991 on Forests defines the principles of preservation, protection and enhancement of forest resources and the principles of forest management in connection with other elements of the environment and the national economy. Based on that Act, the State Forestry Policy, adopted on 22 April 1997, further outlines activities and indicates the linkages between forestry activities and intersectoral and international conditions. The forestry policy is aimed at ensuring sustainable and multifunctional forests and augmenting forest resources by increasing national forest cover to 30 per cent by 2020 and 33 per cent by 2050 and through the restitution and rehabilitation of forest ecosystems, mainly by reconstructing, in appropriate sites, single-species forest stands as mixed ones and

regenerating devastated and neglected forest stands. The Act of 3 February 1995 on the Protection of Agricultural Land and Forest Land regulates the principles for the protection of agricultural and forest land, while the Act of 16 April 2004 on Nature Conservation defines the scope of protection for Natura 2000 sites to ensure their effective protection. Sustainable forest management directly enhances the conservation of biodiversity and the sustainable use of natural resources.

(b) Assessment of adherence to the reporting guidelines

62. The ERT assessed the information reported in the NC8 of Poland and identified an issue relating to completeness and thus adherence to the reporting guidelines for supplementary information. The finding is described in table I.8.

4. Policies and measures in accordance with Article 2 and minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol

(a) Technical assessment of the reported information

63. In the NC8 Poland reported information on how it strives to implement PaMs under Article 2 of the Kyoto Protocol in such a way as to minimize adverse effects, including the adverse effects of climate change and effects on international trade and social, environmental and economic impacts on other Parties, especially developing country Parties. In Poland, policies, strategies, plans and programmes in all fields of the economy that may have a significant environmental impact must undergo a strategic environmental assessment (in accordance with the Act of 3 October 2008 on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessment), which includes an assessment of the possibility of transboundary impact, which the competent authority is obliged by law to monitor. In the NC8, Poland further explained that information on the minimization of the adverse impacts of proposed PaMs, including the assessment of their economic and social impacts, is also provided in Poland's 2022 NIR (chap. 15) and BR4 (section 4.3).

64. In addition, the European Commission prepares extensive impact assessments when proposing major new climate change policies, programmes and measures at the EU level, such as the EU 2020 climate and energy package, the EU 2030 climate and energy package or the "Fit for 55" package. Information from the analysis of the impact of PaMs implemented within the EU on third parties is provided in the NIRs and BRs of the EU, which are available on the UNFCCC website.⁹

65. The NC8 includes information on how Poland promotes and implements the decisions of the International Civil Aviation Organization and the International Maritime Organization to limit emissions from aviation and marine bunker fuels. In particular, with regard to aviation, as of January 2024, Poland is one of the 126 countries that participate in CORSIA, which was adopted by the International Civil Aviation Organization in 2016 to establish a global market-based measure to meet the challenges related to the reduction of CO₂ emissions from the international aviation sector. Regarding maritime shipping, Poland has transposed the requirements of the International Convention for the Prevention of Pollution from Ships (such as the energy efficiency design index for new ships and the ship energy efficiency management plan) into national law.

66. Further information on changes in how Poland strives to implement its commitments under Article 3, paragraph 14, of the Kyoto Protocol in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties was reported in the 2022 annual submission. Poland reported on the climate-related bilateral and regional assistance provided at the global level, including through the Eastern Partnership, and in Africa and Asia. In 2020, Poland provided total climate finance of EUR 3.9 million in the form of grants. Approximately 75 per cent of the Party's climate aid is related to adaptation actions and the remaining 25 per cent to mitigation measures. In 2020, 77 per cent of the support provided by Poland was related to technology transfer and the remaining 23 per cent to capacity-building projects. The beneficiaries of the Party's assistance in 2020 were

⁹ <https://unfccc.int/ghg-inventories-annex-i-parties/2023> and <https://unfccc.int/BR5>.

Albania, Georgia, Kenya, Lebanon, Mongolia, Myanmar, the Republic of Moldova, Senegal, South Africa, the Sudan, Uganda and the United Republic of Tanzania.

(b) Assessment of adherence to the reporting guidelines

67. The ERT assessed the information reported in the NC8 of Poland and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

E. Estimates of emission reductions and removals and the use of units from market-based mechanisms and land use, land-use change and forestry and progress in achieving the quantified economy-wide emission reduction target

1. Technical assessment of the reported information

68. Poland reported in its BR5 that it did not use units from market-based mechanisms to meet its commitment under the ESD. It reported in CTF tables 4 and 4(b) that it did not use any units from market-based mechanisms in 2019 or 2020. Given that the contribution of LULUCF activities is not included in the joint EU target under the Convention, reporting thereon is not applicable to Poland. Table 6 illustrates Poland's ESD emissions and use of units from market-based mechanisms for achieving its ESD target.

Table 6

Summary of information on emissions covered by the European Union effort-sharing decision annual emission allocation and use of units from market-based mechanisms by Poland
(kt CO₂ eq)

<i>Year</i>	<i>ESD emissions</i>	<i>AEA</i>	<i>Use of units from market-based mechanisms</i>	<i>AEAs transferred to (–) or from (+) other Parties</i>	<i>Annual AEA surplus/deficit</i>	<i>Cumulative AEA surplus/deficit</i>
2013	186 095.05	193 642.82	0.00	0.00	7 547.77	7 547.77
2014	181 543.02	194 885.55	0.00	0.00	13 342.52	20 890.30
2015	186 772.42	196 128.27	0.00	0.00	9 355.85	30 246.14
2016	198 664.76	197 370.99	0.00	0.00	–1 293.77	28 952.37
2017	211 506.73	199 974.47	0.00	0.00	–11 532.27	17 420.11
2018	213 033.37	201 710.05	0.00	0.00	–11 323.33	6 096.78
2019	209 084.93	203 445.62	0.00	0.00	–5 639.31	457.47
2020	205 093.21	205 181.20	0.00	0.00	87.99	545.46

Sources: Poland's BR5 and EU transaction log (AEAs), which use GWP values from the AR4.

Note: For a given year, a positive number (surplus) indicates that annual or cumulative ESD emissions were lower than the corresponding AEA or cumulative AEAs, while a negative number (deficit) indicates that annual or cumulative ESD emissions were higher than the corresponding AEA or cumulative AEAs.

2. Assessment of adherence to the reporting guidelines

69. The ERT assessed the information reported in the BR5 of Poland and recognized that the reporting is complete and transparent, and thus adheres 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.

3. Assessment of achievement of the quantified economy-wide emission reduction target

70. In assessing the Party's contribution towards achievement of the 2020 joint EU target on the basis of the information reported in its BR5, the ERT noted that, under the EU 2020 climate and energy package, Poland committed to limiting its emissions growth under the ESD to 14 per cent above the 2005 level by 2020 (see para. 37 above). This target has been translated into binding quantified AEAs for 2013–2020. In 2020 Poland's ESD emissions were 0.04 per cent (87.99 kt CO₂ eq) below the AEA. Poland has a cumulative surplus of

545.46 kt CO₂ eq with respect to its AEAs between 2013 and 2020. The ERT noted that the Party did not make use of units from market-based mechanisms in 2013–2020.

71. The ERT noted that the Party reported that the total GHG emissions excluding LULUCF of the EU and including the use of units from market-based mechanisms do not exceed the emission level corresponding to the target in 2020, and thus that the EU has achieved its joint target. See the report on the technical review of the BR5 of the EU for further details. Therefore, the ERT concluded that, on the basis of the information reported in the BR5, Poland has met its 2020 commitment under the Convention through its contribution to achieving the joint EU target.

72. The ERT noted that the Party's ESD emissions in 2020 do not exceed its AEA for 2020. The ERT noted that, to achieve its target under the ESD, Poland used its surplus AEAs from prior years under the flexibility allowed under the ESD to cover its AEA deficit for 2016–2019.

F. Projections

1. Projections overview, methodology and results

(a) Technical assessment of the reported information

73. Poland reported in its BR5 and NC8 updated projections for 2030–2040 relative to actual inventory data for 2020 under the WEM scenario, using GWP values from the AR4. According to CTF table 3, the WEM scenario reported by Poland includes all implemented and adopted PaMs with a start year of implementation of 2016 or earlier (except a group of measures in research and education for low-emission agricultural production, which were launched in 2016 and yet not included) and excludes measures with a later start year of implementation (except a group of measures aimed at rationalizing fertilizer use, which were launched in 2020). The ERT noted that some of the implemented PaMs (19 of the 52 groups of PaMs reported as implemented in CTF table 3), including PaMs with an estimated mitigation impact of more than 100 kt CO₂ eq in 2020 (e.g. the My Power Priority Programme and the Clean Air Programme), were not considered under the WEM scenario, although the 2020 GHG inventory was used as a basis for preparing the projections.

74. In addition to the WEM scenario, Poland reported the WAM scenario. The WAM scenario includes planned PaMs for the energy sector and the impacts of the implementation of EU regulations on F-gases in the IPPU sector. Poland provided a definition of its scenarios, explaining that its WEM scenario includes implemented PaMs aimed at reducing GHG emissions, such as those contained in the NECP for 2021–2030, the National Waste Management Plan 2022 and the Polish Nuclear Energy Programme, while its WAM scenario includes planned PaMs such as the Strategy for Responsible Development until 2020 (with an Outlook until 2030) and the Energy Policy of Poland until 2040. The WEM scenario also includes regulatory instruments that are currently in place, including those aimed at improving energy efficiency, improving the security of the fuel and energy supply, diversifying the fuel structure in the energy sector, enhancing the use of RES, developing competitive fuel and energy markets and limiting the impact of the energy sector on the environment. The definitions indicate that the scenarios were prepared in accordance with the UNFCCC reporting guidelines on BRs.

75. 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 CO₂, CH₄, N₂O, PFCs, HFCs and SF₆ (treating PFCs and HFCs collectively in each case) as well as NF₃ for 2030–2040. The projections are also provided in an aggregated format for each sector and for a Party total using GWP values from the AR4. Poland reported on factors and activities affecting emissions for each sector.

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

76. The methodology used for the preparation of the projections is different from that used for the preparation of the emission projections for the NC7. Poland did not report information

on changes since the submission of its NC7 in the assumptions, methodologies, models and approaches used for the projection scenarios. The ERT noted that Poland applied the country-specific models STEAM-PL and MESSAGE-PL for the energy sector, which are different from the models used for the NC7.

77. During the review, Poland explained that the emission projections reported in the NC7 were mainly based on the forecast of fuel and energy demand until 2050 developed by the Polish National Energy Conservation Agency in 2013, whereas the projections reported in the NC8 were based on the NECP for 2021–2030.

78. Poland reported a WAM scenario in addition to the WEM scenario in the NC8, whereas only a WEM scenario was reported in the NC7. The updated projections until 2040 in the NC8 show an estimated overall increase in emissions under the WEM scenario and a reduction in total emissions under the WAM scenario.

79. To prepare its projections, Poland relied on key underlying assumptions relating to population, GDP growth, primary energy consumption, gross electricity production, solid municipal waste generation, cattle population, nitrogen fertilizer use and production of clinker, lime, ammonia, nitric acid, iron ore sinter and pig iron. The assumptions were updated on the basis of the most recent economic developments known at the time of the preparation of the projections, such as a growing trend towards a decoupling of primary energy consumption from GDP growth, indicating a decreasing trend in energy intensity. The fuel mix is also changing, with a projected significant decrease in the share of solid fuels, in particular hard coal, and an increase in the shares of natural gas and biomass. However, the production of electricity using lignite is projected to increase further compared with the assumptions applied in the NC7. In the IPPU sector, a significant drop in the production of clinker, ammonia, nitric acid, iron ore sinter and pig iron is assumed after 2025–2030, with zero production assumed for iron ore sinter and pig iron in 2035 and 2040 respectively. Other significant changes applied in the projections include an increase in cattle population, a decrease in the use of inorganic nitrogen fertilizers and a decrease in solid waste disposal and incineration of waste.

80. Sensitivity analyses were conducted to assess the impact of a gradual decrease in F-gas emissions, an increase in the livestock population by 20 per cent and an increase in solid waste disposal by 15 per cent under the WEM and WAM scenario projections. Under the WEM scenario projections, the sensitivity analysis showed a slight improvement in emission reductions in line with a gradual decrease in F-gas emissions, but a slight increase in emissions as a result of an increase in the livestock population, and a negligible change in the projected emissions with an increase in solid waste disposal emissions compared with the original WEM scenario projections. Under the WAM scenario, the sensitivity analysis showed slightly lower emission reductions than those under the WEM scenario assuming a gradual decrease in F-gas emissions, while an increase in the livestock population resulted in the same increase in emissions shown in the equivalent sensitivity analysis under the WEM scenario, and an increase in solid waste disposal resulted in a negligible change in the projected emissions compared with the original WAM scenario projections.

(c) Results of projections

81. The projected emission levels under different scenarios are presented in table 7 and figure 1.

Table 7
Summary of greenhouse gas emission projections for Poland

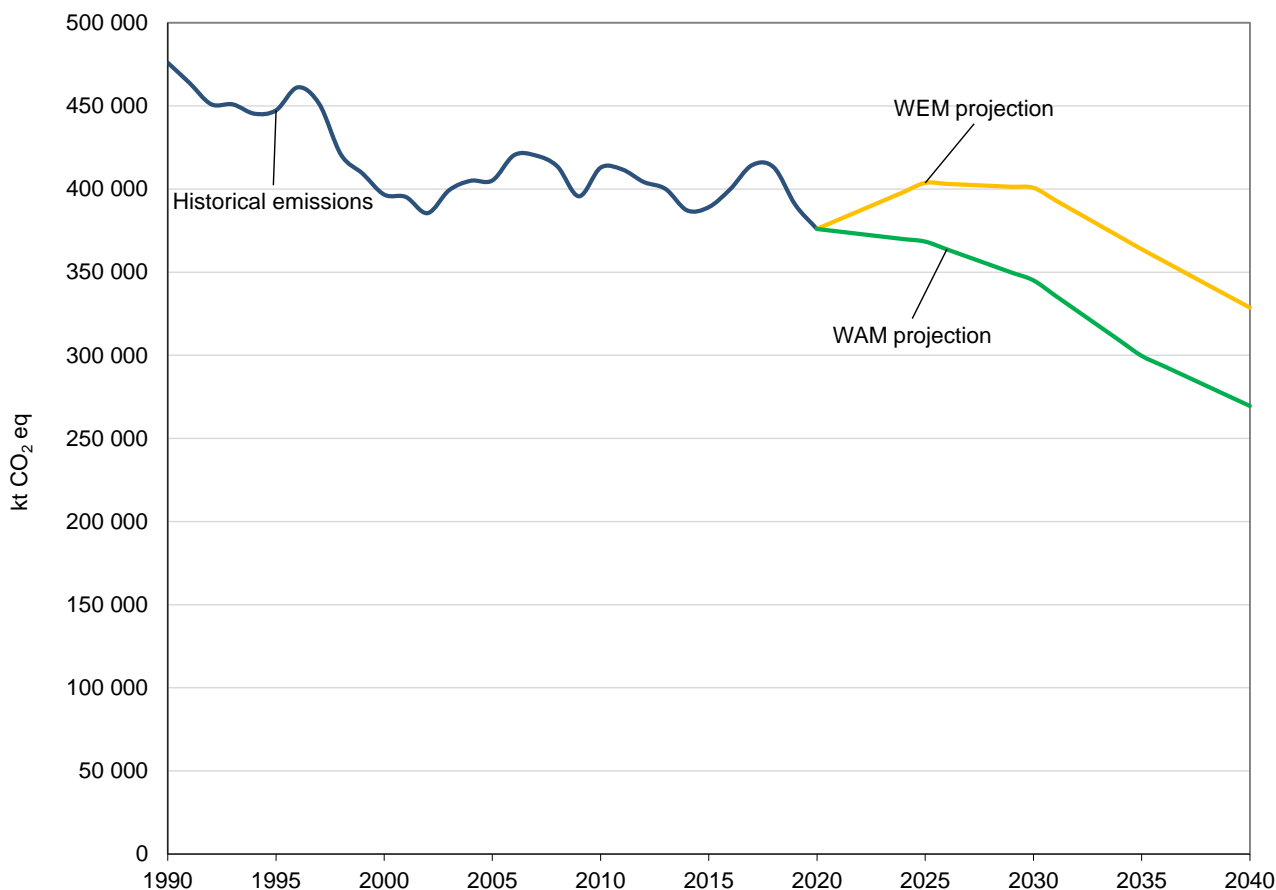
	<i>GHG emissions (kt CO₂ eq/year)</i>	<i>Change in relation to 1990 level (%)</i>	<i>Change in relation to 2020 level (%)</i>
Inventory data 1988	579 224.20	–	NA
Inventory data 1990	475 872.75	–	NA
Inventory data 2020	376 038.46	–21.0	NA
WEM projections for 2030	400 754.57	–15.8	6.6
WAM projections for 2030	345 110.15	–27.5	–8.2
WEM projections for 2040	328 655.56	–30.9	–12.6

	<i>GHG emissions (kt CO₂ eq/year)</i>	<i>Change in relation to 1990 level (%)</i>	<i>Change in relation to 2020 level (%)</i>
WAM projections for 2040	269 485.79	-43.4	-28.3

Sources: Poland’s NC8 and BR5 CTF table 6, which use GWP values from the AR4.

Note: The projections are of GHG emissions excluding LULUCF and including indirect CO₂.

Figure 1
Greenhouse gas emission projections reported by Poland



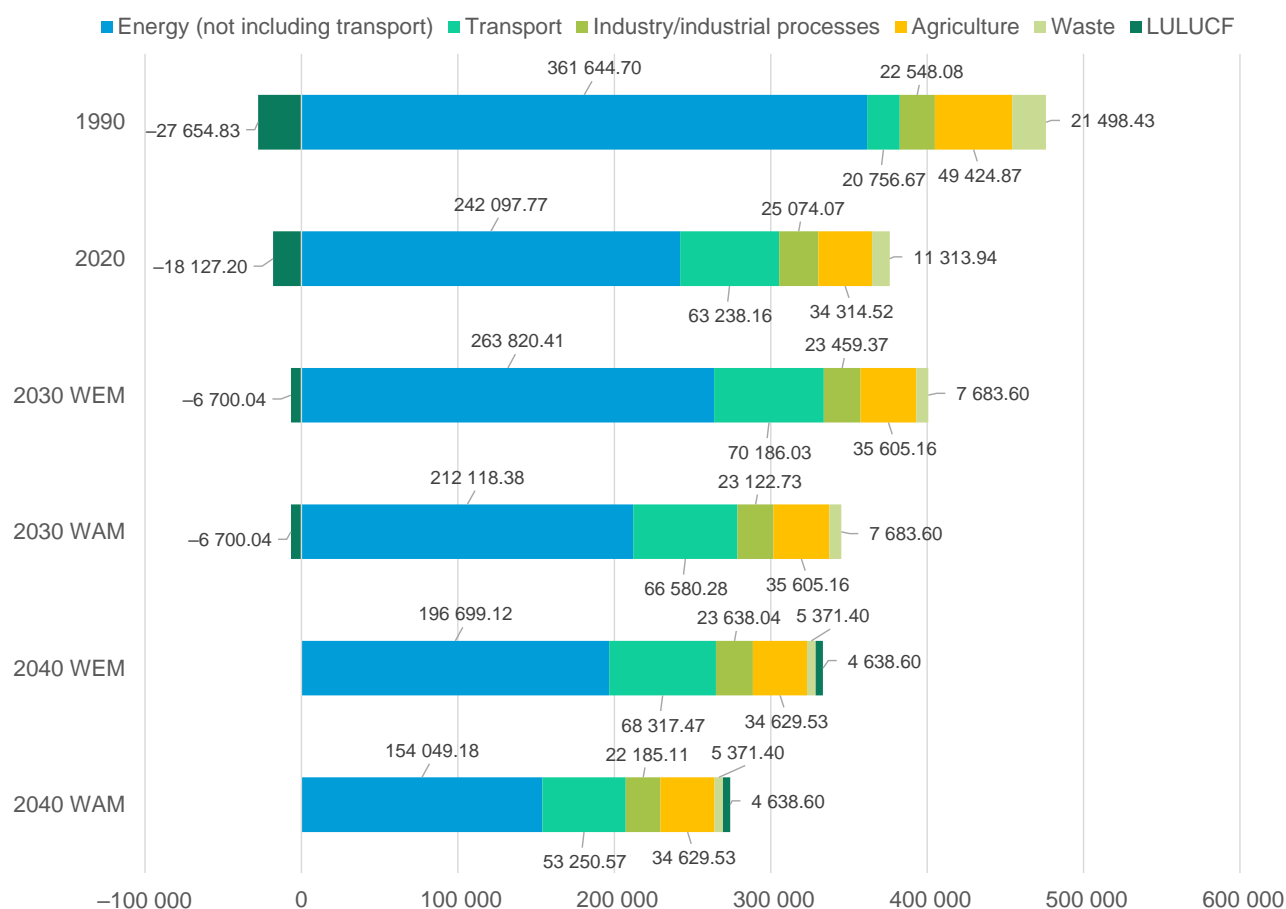
Source: Poland’s NC8 and BR5 CTF tables 1 and 6 (total GHG emissions excluding LULUCF), which use GWP values from the AR4.

82. Poland’s total GHG emissions excluding LULUCF and including indirect CO₂ are projected under the WEM scenario to decrease by 15.8 and 30.9 per cent below the 1990 level in 2030 and 2040 respectively. When including LULUCF, total GHG emissions including indirect CO₂ are projected under the WEM scenario to decrease by 12.1 and 25.6 per cent below the 1990 level in 2030 and 2040 respectively. Under the WAM scenario, emissions in 2030 and 2040 are projected to be lower than those in 1990 by 27.5 and 43.4 per cent respectively.

83. Poland presented the WEM and WAM scenarios by sector for 2030 and 2040, as summarized in figure 2 and table 8.

Figure 2
Greenhouse gas emission projections for Poland presented by sector

(kt CO₂ eq)



Sources: Poland's NC8 and BR5 CTF table 6, which use GWP values from the AR4.

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

Sector	GHG emissions and removals (kt CO ₂ eq)					Change (%)			
	1990	2030		2040		1990–2030		1990–2040	
		WEM	WAM	WEM	WAM	WEM	WAM	WEM	WAM
Energy (not including transport)	361 644.70	263 820.41	212 118.38	196 699.12	154 049.18	-27.0	-41.3	-45.6	-57.4
Transport	20 756.67	70 186.03	66 580.28	68 317.47	53 250.57	238.1	220.8	229.1	156.5
Industry/industrial processes	22 548.08	23 459.37	23 122.73	23 638.04	22 185.11	4.0	2.5	4.8	-1.6
Agriculture	49 424.87	35 605.16	35 605.16	34 629.53	34 629.53	-28.0	-28.0	-29.9	-29.9
LULUCF	-27 654.83	-6 700.04	-6 700.04	4 638.60	4 638.60	75.8	75.8	116.8	116.8
Waste	21 498.43	7 683.60	7 683.60	5 371.40	5 371.40	-64.3	-64.3	-75.0	-75.0
Total GHG emissions excluding LULUCF and including indirect CO₂	475 872.75	400 754.57	345 110.16	328 655.56	269 485.79	-15.8	-27.5	-30.9	-43.4

Sources: Poland's NC8 and BR5 CTF table 6, which use GWP values from the AR4.

84. According to the projections reported for 2030 under the WEM scenario, despite an estimated increase of 9.0 per cent between 2020 and 2030, the most significant absolute emission reductions are expected to occur in the energy sector excluding transport,

amounting to projected reductions of 27.0 per cent between 1990 and 2030. GHG emissions from transport are projected to increase by 238.1 per cent between 1990 and 2030.

85. The pattern of projected emissions reported for 2040 under the WEM scenario is similar to that reported for 2030 under the same scenario. The main emission reductions between 2030 and 2040 are projected to occur in the energy sector. However, net emissions of 4,638.60 kt CO₂ eq are projected to occur in the LULUCF sector in 2040. The overall reduction in emissions between 2030 and 2040 is mainly attributable to the significant reduction in the use of hard coal and lignite and the increased share of RES and nuclear energy in electricity generation, as well as an increase in energy efficiency and the implementation of other measures in the industry, transport, agriculture and waste sectors. In the IPPU sector, a significant reduction in emissions is projected in the metallurgical and chemical industry, where measures include the termination of production in integrated steel plants and the cessation of production of iron ore sinter, blast furnace pig iron and basic oxygen furnace steel from 2035. In the agriculture sector, the projected reduction in emissions is mainly attributed to the reduction in the use of inorganic fertilizers, while the projected reduction in emissions in the waste sector is attributed to the implementation of waste management measures.

86. Poland presented the WEM and WAM scenarios by gas for 2030 and 2040, as summarized in table 9.

Table 9

Summary of greenhouse gas emission projections for Poland presented by gas

Gas ^a	GHG emissions and removals (kt CO ₂ eq)					Change (%)			
	2030		2040		1990–2030		1990–2040		
	1990	WEM	WAM	WEM	WAM	WEM	WAM	WEM	WAM
CO ₂	376 813.58	331 756.85	278 158.60	264 577.75	208 715.27	–12.0	–26.2	–29.8	–44.6
CH ₄	67 611.93	43 678.31	42 058.27	39 863.62	38 157.67	–35.4	–37.8	–41.0	–43.6
N ₂ O	31 305.37	22 279.78	22 190.29	21 315.18	21 166.77	–28.8	–29.1	–31.9	–32.4
HFCs	NO	2 882.32	2 605.47	2 695.95	1 367.73	–	–	–	–
PFCs	141.87	6.12	6.12	3.66	3.66	–95.7	–95.7	–97.2	–97.2
SF ₆	NO	151.19	91.40	199.40	74.68	–	–	–	–
NF ₃	NO	NO	NO	NO	NO	–	–	–	–
Total GHG emissions without LULUCF	475 872.75	400 754.57	345 110.16	328 655.56	269 485.79	–15.8	–27.5	–30.9	–43.4

Sources: Poland's NC8 and BR5 CTF table 6, which use GWP values from the AR4.

^a Poland included indirect CO₂ emissions in its projections.

(d) Assessment of adherence to the reporting guidelines

87. The ERT assessed the information reported in the NC8 and BR5 of Poland and identified issues relating to completeness and transparency, and thus adherence to the UNFCCC reporting guidelines on NCs and the UNFCCC reporting guidelines on BRs. The findings are described in tables I.4 and II.2.

2. Assessment of the total effect of policies and measures

(a) Technical assessment of the reported information

88. In its NC8 Poland did not present the actual values of the estimated and expected total effect of its PaMs, in accordance with the WEM scenario, compared with a situation without such PaMs. The aggregated effect of implemented and adopted PaMs was illustrated for 2010, 2025, 2030, 2035 and 2040 in a figure comparing historical 2010 emissions and projected emissions (excluding LULUCF) under the WEM scenario with the emissions in the base year (1988) and 2010. However, the actual values were not reported in the figure. During the review, Poland explained that since it did not develop a WOM scenario, the total

effect of implemented and adopted PaMs was estimated using an alternative approach and that 2010 was applied as the reference year for presenting the total effect of PaMs under the WEM scenario, as many key PaMs included in the WEM scenario entered into force after 2010, for example measures resulting from the implementation of the Energy Policy of Poland until 2030, adopted in December 2009. However, the estimates were not presented in terms of GHG emissions avoided, by gas (on a CO₂ eq basis). In addition, Poland did not include in the NC8 the total effect in the latest inventory year (2020).

89. The total estimated effect of Poland’s implemented and adopted PaMs is a reduction of 166,322.35 kt CO₂ eq in 2010 compared with the base year. By 2030 and 2040, the reductions are expected to be 12,147.26 kt CO₂ eq and 84,246.28 kt CO₂ eq, respectively, compared with 2010. These estimates were made by the ERT on the basis of the WEM scenario, as presented in the NC8. According to the information reported in the NC8, PaMs implemented in the energy sector will deliver the largest emission reductions.

90. During the review, Poland presented the total expected effect of planned PaMs as emission reductions amounting to 35,270.69 kt CO₂ eq in 2025, 55,644.42 kt CO₂ eq in 2030, 64,158.37 kt CO₂ eq in 2035 and 59,169.77 kt CO₂ eq in 2040, calculated as the difference between the WEM and WAM scenario projections excluding LULUCF. Poland explained that these totals were not comparable to the total emission reduction effects for 2030 of the individual planned PaMs reported in NC8 table 4.31, where the effects were estimated on an individual basis using different approaches and methods. Table 10 provides an overview of the total effect of PaMs as reported by Poland.

91. In its NC8 Poland also reported that the Centre for Climate and Energy Analyses carried out analyses of the effect of possible future PaMs, including solutions and reduction effects proposed at the EU level in the “Fit for 55” package, the implementation of which could result in emission reductions in the energy sector of about 20–30 Mt CO₂/year by 2030.

Table 10
Projected effects of Poland’s planned, implemented and adopted policies and measures in 2030 and 2040
 (kt CO₂ eq)

Sector	2030		2040	
	Effect of implemented and adopted measures	Effect of planned measures	Effect of implemented and adopted measures	Effect of planned measures
Energy (without transport)	-28 816.19	-51 702.03	-95 937.48	-42 649.94
Transport	20 776.41	-3 605.75	18 907.85	-15 066.90
Industry/industrial processes	-6.32	-336.64	172.35	-1 452.93
Agriculture	3 599.06	0.00	2 623.43	0.00
Land-use change and forestry	NA	NA	NA	NA
Waste management	-7 700.22	0.00	-10 012.42	0.00
Total	12 147.26	-55 644.42	84 246.28	-59 169.77

Sources: Poland’s NC8 and BR5, which use GWP values from the AR4.

Note: The total effect of implemented and adopted PaMs is defined as the emission reductions achieved according to the WEM scenario for 2030 and 2040 compared with the emissions excluding LULUCF reported for 2010; the total effect of planned PaMs is defined as the difference between the WEM and the WAM scenarios.

(b) Assessment of adherence to the reporting guidelines

92. The ERT assessed the information reported in the NC8 of Poland and identified issues relating to completeness and transparency, and thus adherence to the UNFCCC reporting guidelines on NCs. The findings are described in table I.3.

3. Supplementary relating to the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol

(a) Technical assessment of the reported information

93. In the NC8 Poland reported that it does not plan to use market-based mechanisms to meet its Kyoto Protocol target. The ERT notes that reporting on the supplementary of such mechanisms is therefore not relevant for Poland.

(b) Assessment of adherence to the reporting guidelines

94. The ERT assessed the information reported in the NC8 of Poland and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

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

95. Poland 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, Poland provided information in its NC8 and BR5 on its provision of support to developing country Parties. The ERT commends Poland for reporting this information and suggests that it continue to do so in future NCs.

96. Poland continues to carry out a number of supporting activities, recognizing and understanding the need to support sustainable development in developing countries and countries with an economy in transition. A multiannual development assistance programme for 2021–2030 was adopted in January 2021. As an EU member State, the majority of aid provided by Poland is allocated through contributions to the EU general budget. Poland’s annual financial contribution to climate change related activities in developing countries increased from USD 6.0 million in 2016 to USD 20.6 million in 2020, aimed at, among other things, building resilience to natural disasters, disseminating innovative energy-efficient technologies and developing RES.

H. Vulnerability assessment, climate change impacts and adaptation measures

1. Technical assessment of the reported information

97. In its NC8 Poland provided information on the expected impacts of climate change in the country; the adaptation policies covering regional, sectoral and cross-sectoral vulnerabilities and considerations; and an outline of the action taken to implement Article 4, paragraph 1(b) and (e), of the Convention with regard to adaptation.

98. Climate change observations indicate that the mean annual air temperature in Poland has risen by 0.29 °C every 10 years since the mid-twentieth century. The climate change observed in Poland has not yet resulted in significant hazardous effects. However, changes in precipitation patterns, increases in the frequency and intensity of extreme climatic events such as heatwaves, floods and droughts, and strong winds were reported in the NC8. As they evolve, such changes in the climate increase the risk of hazards for human safety and health, the environment and the economy.

99. In its NC8 Poland explained that national climate change scenarios were developed on the basis of climate simulations from the EURO-CORDEX repository. Historical meteorological data were used for downscaling. Climate change scenarios for Poland are publicly available online on a website hosted by the Institute of Environmental Protection – National Research Institute.¹⁰ Poland applied the results of observations and climate projections to assess climate change vulnerability and impacts in the public health,

¹⁰ <https://klimada2.ios.gov.pl/klimat-scenariusze> (in Polish).

biodiversity, forestry, road transport, agriculture, tourism and water management sectors and highlighted the adaptation response actions taken and planned at different levels of government.

100. In its NC8 Poland explained that the method used for assessing climate change risk took into account the multidimensional features of and interactions between the applied hazard, exposure and vulnerability indicators. All the indicators were normalized to enable them to be compiled and compared. The risk levels were then determined through a scoring method and ranked from 1 (no risk) to 5 (very high risk). During the review, Poland provided additional information and reference material on the method used for assessing climate change risk. The method for determining risk provides a numerical basis for ranking and mapping communities across Poland in terms of the risk level and identifies the adaptation priorities, measures and activities that could be carried out. The risk level is illustrated as a risk map for a given risk type (e.g. heatwaves, droughts, floods, coastal erosion) and is publicly accessible through the website mentioned in paragraph 99 above.

101. Poland has addressed adaptation matters through the adoption of several policies, such as the Strategic Adaptation Plan for Sectors and Areas Vulnerable to Climate Change until 2020 with an Outlook until 2030, adopted in 2013; the National Environmental Policy 2030, adopted in 2019; and the preparation of urban adaptation plans. In the NC8, Poland provided updated information on adaptation measures taken to address current risks and vulnerabilities and on their status of implementation. During the review, Poland provided additional information on the outcomes of some implemented adaptation measures. In its NC8, Poland also mentioned that the basic national strategic documents on adaptation, namely the Strategic Adaptation Plan for Sectors and Areas Vulnerable to Climate Change until 2020 with an Outlook until 2030 and the National Environmental Policy 2030, contain a list of performance indicators that are measured and reported annually, while the Strategy for Responsible Development and the National Environmental Policy 2030 define Poland’s strategic projects, including a range of small-scale adaptation measures and initiatives. The implementation of the national strategic documents on adaptation is monitored and reported on every quarter. However, information on the effectiveness of the implemented adaptation measures was not provided in the NC8. Table 11 summarizes the information on vulnerability and adaptation to climate change presented in the NC8 of Poland.

Table 11
Summary of information on vulnerability and adaptation to climate change reported by Poland

<i>Vulnerable area</i>	<i>Examples/comments/adaptation measures reported</i>
Biodiversity and natural ecosystems	<p>Vulnerability: Drought has become an increasingly major problem given the related damage to the natural environment and the economy. The intensification of drought will lead in some areas to loss of biodiversity in terms of species and habitats. Water-dependent species and ecosystems are particularly vulnerable.</p> <p>Adaptation: Different types of drought were analysed across the country (atmospheric, agricultural and hydrological) and adaptation measures, including ‘renaturalization’ projects in the Central Basin of the Biebrza valley and in the Nida River delta, were implemented with the aim of halting the degradation of peat soil and restoring the natural habitats of the breeding bird populations.</p>
Coastal zones	<p>Vulnerability: Sea level rise and increased precipitation have led to seashore erosion and coastal flooding and will lead to a decrease in the salinity of the Baltic Sea.</p> <p>Adaptation: Sand is delivered to the shore as part of artificial beach nourishment, and measures to build, repair and maintain the permanent seashore reinforcements and monitor the seashore have been implemented in several areas, such as the seashore of the Vistula Lagoon at Piaski and Kały Rybackie, as well as measures to repair and restore the seashore reinforcements in Gdynia Oksywie.</p>
Forests	<p>Vulnerability: Drought is the main abiotic factor resulting in damage to and weakening of forest stands. The area of forests damaged by severe drought amounted to over 300,000 ha in the six years prior to the submission of the NC8, representing more than half the total area where abiotic and anthropogenic processes occurred in Poland.</p> <p>Adaptation: Several measures and projects aimed at the retention of soils and prevention of water erosion in lowland areas and the prevention, counteracting and limitation of the effects of forest fires have been implemented in all 17 regional directorates of State</p>

<i>Vulnerable area</i>	<i>Examples/comments/adaptation measures reported</i>
	Forests. Other measures include reconstructing monocultures, increasing the species and structural diversity of forest stands, promoting species that are better adapted to climate change, developing new and modernizing existing early warning and hazard prediction systems and promoting effective pest control measures.
Human health	<p>Vulnerability: Heatwaves and high temperatures have a direct effect on human health. The mortality rate in Poland during heatwaves, particularly among men and the elderly, has increased significantly. Higher temperatures, notably milder winters, also increase the risk of the development and range of vectors (e.g. mosquitoes or ticks) and vector-borne diseases (e.g. tick-borne encephalitis).</p> <p>Adaptation: In 2014–2020, more than 100 million zlotys was allocated to raise awareness of adaptation in schools and to co-finance the development of blue–green infrastructure in cities; for instance, creating tree corridors or restoring water streams with a view to supporting adaptation and reducing the impacts of climate hazards. In many cities, inhabitants have built community gardens, consisting of a common green public space and small parks (including 15 parks in Krakow), which could have a cooling effect and reduce the effects of heat on human health, especially in urban areas.</p>
Infrastructure and economy	<p>Vulnerability: Strong winds can lead to the destruction of and damage to property, especially old houses and commercial buildings. Floods and local inundations resulting from heavy rainfall are the main contributors to economic loss. This risk could increase in urban areas given the observed growth in urbanization with no or inadequate adaptation to climate change.</p> <p>Adaptation: The obligation to prepare urban adaptation plans for cities with 20,000 or more inhabitants has been implemented. The development of blue–green infrastructure forms an important part of the adaptation measures under these plans. As at April 2024, 105 cities with 20,000 or more inhabitants had adopted urban adaptation plans, including 35 of the 37 cities with more than 100,000 inhabitants.</p>
Water resources	<p>Vulnerability: Water shortages are associated with droughts. The frequency of floods is also increasing, which are particularly dangerous in mountainous and submontane areas, where they cause substantial damage, destroying forest stands and triggering landslides, and in urbanized areas, where they can result in inundations and flooding.</p> <p>Adaptation: Measures aimed at increasing landscape and soil retention of water, including by reducing evaporation and slowing down surface water run-off, have been implemented. For example, several rain gardens have been created in Gdańsk. Another example is the Local Monitoring and Flood Response Support Systems established for Elbląg, Gdańsk and Sopot that can determine the risk of a flood event and monitor flood risk in order to inform inhabitants of the potential risk.</p>

102. In the chapter of the NC8 on financial, technological and capacity-building support, Poland provided information on its assistance provided to developing countries in the area of climate change adaptation, including initiatives on water management, waste management, prevention of the effects of natural disasters and human-induced catastrophes, promotion of sustainable development, tackling climate change and its effects, and conservation of natural resources. The Party’s climate-related bilateral assistance was provided primarily to African countries, namely Ethiopia, Kenya, Senegal and the United Republic of Tanzania.

2. Assessment of adherence to the reporting guidelines

103. The ERT assessed the information reported in the NC8 of Poland and identified issues relating to completeness and transparency, and thus adherence to the UNFCCC reporting guidelines on NCs. The findings are described in table I.5.

I. Research and systematic observation

1. Technical assessment of the reported information

104. In its NC8 Poland provided information on its general policy and funding relating to research and systematic observation and both domestic and international activities. The National Science Centre and the National Centre for Research and Development are responsible for creating programmes and funding research projects in the areas of

fundamental research and applied research respectively. The BIOSTRATEG research and development programme on environment, agriculture and forestry, launched by the National Centre for Research and Development, focused on analysing climate change and its impacts on the environment and economy. Poland also provided information on its contributions to international programmes including the Global Climate Observing System, Future Earth, Biospheric Aspects of the Hydrological Cycle, the Global Land Project, Global Change and Terrestrial Ecosystems, the World Climate Programme and the Intergovernmental Panel on Climate Change.

105. Poland has implemented international and domestic policies and programmes on climate change research, systematic observation and climate modelling that aim to advance capabilities to predict and observe the physical, chemical, biological and human components of the Earth's system over space and time. Poland provided information on research projects and studies, including on the climatology of air pollutants and GHGs, high-latitude climate, oceanology research, modelling and forecasting, climate change impacts on the natural environment, socioeconomic analysis of climate change impacts, and research and development programmes on approaches to mitigation and adaptation.

106. In terms of activities related to systematic observation, Poland reported on national plans, programmes and support for ground- and space-based climate observing systems, including satellite and non-satellite climate observation. Poland also reported on challenges related to the maintenance of a consistent and comprehensive observation system. Many of these observation and measurement activities are part of the global meteorological and climate observation system, such as the World Radiation Data Centre, the European Environment Agency, the Helsinki Commission, the International Council for the Exploration of the Sea, the Circumpolar Active Layer Monitoring data centre at the University of Cincinnati and the National Snow and Ice Data Center at the University of Colorado Boulder.

107. Poland did not provide information in the NC8 on the identification of opportunities for and barriers to free and open international exchange of data and information and on action taken to overcome such barriers. During the review, Poland explained that it acknowledges the need for an international open data policy and supports the WMO unified data policy and the EU open data directive (directive 2019/1024). To that end, the Institute of Meteorology and Water Management – National Research Institute has made verified data on measurements collected in Poland through the meteorological and hydrological network publicly accessible as an open resource.¹¹ Poland also participates in the RODEO project on the provision of open access to public meteorological data and the development of shared federated data infrastructure for the development of information products and services, which provides open and unrestricted access to a vast range of meteorological data provided by 11 European national meteorological and hydrological services, the European Centre for Medium-Range Weather Forecasts and the European Meteorological Services Network.

108. In its NC8, Poland did not reflect actions taken to support capacity-building and the establishment and maintenance of observation systems and related data and monitoring systems in developing countries. During the review, Poland explained that as a member of WMO, it participates in the programmes and activities of WMO, such as those aimed at developing global measurement systems, including by providing support to developing countries. Poland is currently considering providing financial assistance for several aid initiatives related to the creation and maintenance of weather stations in developing countries through the Systematic Observations Financing Facility. Poland also actively supports implementation of the Early Warnings for All initiative, which aims to ensure that an integrated global early warning system is put in place to protect everyone on Earth from hazardous weather, water or climate events, including through the maintenance of observation systems and related data and monitoring systems in developing countries.

¹¹ See <https://danepubliczne.imgw.pl/>.

2. Assessment of adherence to the reporting guidelines

109. The ERT assessed the information reported in the NC8 of Poland and identified issues relating to completeness and thus adherence to the UNFCCC reporting guidelines on NCs. The findings are described in table I.6.

J. Education, training and public awareness

1. Technical assessment of the reported information

110. In its NC8 Poland provided information on its actions relating to education, training and public awareness at the domestic and international level. The Party provided information on the general policy on education, training and public awareness; primary, secondary and higher education; public information campaigns; training programmes; education materials; resource or information centres; the involvement of the public and non-governmental organizations; and its participation in international activities.

111. Poland reported in its NC8 that climate change related educational policy is set out in the National Environmental Policy 2030. The Strategy for Responsible Development, under the National Environmental Policy 2030, emphasizes the need to implement education activities within the framework of both the formal education system and the broader non-formal education system that help to raise public awareness, including an understanding of the impact of the climate on society and the economy. The Ministry of Education and Science is responsible for climate change education in the formal education system. The core curriculum document defines the compulsory content of the curriculum and learning objectives in educational institutions and establishes the criteria for school assessments and examination requirements. The core curriculum document also indicates that schools are obliged to deliver environmental education at all stages of education, from kindergartens upward, placing an emphasis on educating students to live in harmony with nature and developing attitudes that will steer them towards responsible behaviours.

112. Besides the formal education system, climate change knowledge is accessible through diverse sources such as associations, foundations and environmental non-governmental organizations. Their operations, including events and communication outreach (e.g. through the media and online), have contributed greatly to raising public awareness on the environment. In addition, training courses related to environmental education and protection have been delivered by various entities including universities, government entities, private companies and environmental non-governmental organizations. For example, the Centre for Education Development has contributed to a range of training courses providing further knowledge on climate change mitigation and raising the methodological skills of both teachers and educators.

113. In its NC8 Poland provided information on its participation in international education and awareness-raising activities. During the United Nations Climate Change Conference in Katowice, Poland actively participated in many activities related to climate change education. Poland also participated in and contributed to the sessions of the World Conference on Education for Sustainable Development organized by the United Nations Educational, Scientific and Cultural Organization and held in Berlin in May 2021.

114. In its NC8 Poland did not include information on the extent of public participation in the preparation or domestic review of the NC. During the review, Poland explained that, prior to interministerial and public consultations, the draft NC8 and BR5 were posted on the website of the Ministry of Climate and Environment for approximately one month for public comment. The draft NC8 and BR5 were then submitted to various committees and councils for consideration and adoption. The final version of the NC8 and BR5 report was posted on the website of the Ministry of Climate and Environment.

2. Assessment of adherence to the reporting guidelines

115. The ERT assessed the information reported in the NC8 of Poland and identified an issue relating to completeness and thus adherence to the UNFCCC reporting guidelines on NCs. The finding is described in table I.7.

III. Conclusions and recommendations

116. The ERT conducted a technical review of the information reported in the NC8 of Poland in accordance with the UNFCCC reporting guidelines on NCs. The ERT concluded that the reported information mostly adheres to the UNFCCC reporting guidelines on NCs and that the NC8 provides an overview of the national climate policy of Poland.

117. The information provided in the NC8 includes most of the elements of the supplementary information under Article 7, paragraph 2, of the Kyoto Protocol. Poland reported on the national system, the national registry, supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol (Poland reported that does not intend to make use of the mechanisms under the Kyoto Protocol to meet its Kyoto Protocol target), PaMs in accordance with Article 2 of the Kyoto Protocol, domestic and regional programmes and/or legislative arrangements and enforcement and administrative procedures, information under Article 10 of the Kyoto Protocol, and financial resources provided to developing country Parties. Supplementary information under Article 7, paragraph 1, of the Kyoto Protocol on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol was provided by Poland in its 2022 annual submission.

118. The ERT conducted a technical review of the information reported in the BR5 and BR5 CTF tables of Poland in accordance with the UNFCCC reporting guidelines on BRs. The ERT concluded that the reported information completely adheres to the UNFCCC reporting guidelines on BRs and that the BR5 and its CTF tables provide 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; and the progress of Poland towards achieving its target.

119. In its NC8 Poland reported on its key national circumstances related to GHG emissions and removals in the years following the submission of its previous NC, including population trends, geography and land use, climate and climate change, economic developments, energy, transport, the buildings sector, industry, trade, the services sector, agriculture, forestry, resource efficiency and wastewater. Emission decreases in Poland were driven by economic restructuring and modernization of industry following the country's economic transformation in the early 1990s and the gradual development of a dominant tertiary sector during the transition to a market economy. Measures have also been taken to increase energy efficiency and the share of RES in the energy mix; however, coal remains the main fuel in Poland's total primary energy supply.

120. Poland's total GHG emissions excluding LULUCF were estimated to be 21.7 per cent below its 1990 level, using GWP values from the AR5. Historical emissions decreased between 1988 and 1994, followed by a small increase in 1996 and a decrease thereafter until 2002, following which emissions remained relatively stable until 2011, with some inter-annual fluctuations, including a significant drop in 2009 and 2020 attributed to the global economic crisis and the pandemic respectively. The changes in total emissions were driven mainly by factors such as the transformation of some sectors of Poland's economy, including the energy, transport and agriculture sectors, since the base year. Historically, emissions from the waste, energy and agriculture sectors have decreased the most, with the greatest reduction in absolute terms in the energy sector (excluding transport). Measures to improve energy efficiency, diversify the fuel mix, enhance RES and develop competitive energy markets are some of the key drivers of Poland's emission reductions.

121. As reported in the BR5, under the Convention Poland committed to contributing to the achievement of the joint EU quantified economy-wide target of a 20 per cent reduction in emissions below the 1990 level by 2020. The target covered all sectors and CO₂, CH₄, N₂O, HFCs, PFCs and SF₆, expressed using GWP values from the AR4. Emissions and removals from the LULUCF sector were not included. Under the ESD Poland had a target of limiting its emission growth to 14 per cent above the 2005 level by 2020.

122. In addition to its ESD target, Poland committed to increasing the share of electricity generated from RES in final energy consumption to 15 per cent and the share of RES in transport to 10 per cent, and reducing primary energy consumption by 13.6 Mtoe by 2020

under the legal and institutional instruments established at the EU and national level to achieve the ESD target. The EU has a joint 2030 emission reduction target of at least 55 per cent below the 1990 level. This will be primarily implemented through the EU ETS and ESR, which have targets to reduce emissions by 2030 by 62 and 40 per cent respectively compared with the 2005 level. Under the revised ESR, Poland committed to achieving a 17.7 per cent reduction in emissions below the 2005 level by 2030. Poland did not report information on a longer-term national GHG emission reduction target, but referred to the European Climate Law adopted in 2021, according to which the EU committed jointly to reaching climate neutrality by 2050 with a view to reaching the long-term temperature goal specified in Article 2, paragraph 1(a), of the Paris Agreement. At the time of the review, detailed rules on implementation of the climate-neutrality target had not been defined.

123. The ERT noted that the total GHG emissions of the EU excluding LULUCF do not exceed the emission level corresponding to the target in 2020, and thus that the EU has achieved its joint target. The ERT therefore concluded that Poland has met its 2020 commitment under the Convention through its contribution to achieving the joint target of the EU. See the report on the technical review of the BR5 of the EU for further details. The ERT noted that the Party met its 2020 ESD target because its ESD emissions in 2020 did not exceed its AEA for 2020.

124. The GHG emission projections provided by Poland in its NC8 and BR5 correspond to the WEM and WAM scenarios. Under the WEM scenario, emissions in 2030 are projected to be 15.8 per cent below the 1990 level and 6.6 per cent above the 2020 level. Under the WAM scenario, emissions in 2030 are projected to be 27.5 per cent below the 1990 level and 8.2 per cent below the 2020 level.

125. Poland’s main policy frameworks relating to energy and climate change are related to the implementation of EU regulations, including under the climate and energy “Fit for 55” package. The Party described the mitigation actions that it has implemented to help it achieve its 2020 and longer-term targets, which include the EU ETS, the ESD and its successor, the ESR. The most significant emitting sectors identified in Poland’s 2021 GHG inventory are energy, transport and agriculture. In the energy sector, Poland has added over 19 GW of installed renewable energy capacity to the national grid since 2019, with renewables constituting over 43 per cent of the country’s total energy mix in early 2024. The key PaMs in this sector include the auction-based support scheme for RES and the My Power Priority Programme, which boosted the capacity of rooftop photovoltaic installations in homes to over 10 GW by early 2024. The strategy for reducing GHG emissions in transport focuses on reducing energy consumption and replacing conventional fuels with low to zero carbon content fuels. In the agriculture sector, the most significant measure is the development of agricultural biogas plants. This initiative is being implemented in accordance with the Act of 13 July 2023, which facilitates investments in agricultural biogas plants.

126. Poland has established a financing mechanism to support mitigation actions, primarily through the National Fund for Environmental Protection and Water Management.

127. Poland 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, it provided information in its BR5 and NC8 on its provision of support to developing country Parties. Poland continues to carry out a number of supporting activities, recognizing and understanding the need to support sustainable development in developing countries and countries with an economy in transition. Poland’s annual financial contribution to climate change related activities in developing countries increased from USD 6.0 million in 2016 to USD 20.6 million in 2020.

128. In its NC8 Poland provided information on the expected impacts of climate change in the country; the adaptation policies covering regional, sectoral and cross-sectoral vulnerabilities and considerations; and an outline of the action taken to implement Article 4, paragraph 1(b) and (e), of the Convention regarding adaptation. Impacts and vulnerability were assessed and risk maps presented for the entire territory of Poland. One of the important measures reported in the NC8 to address climate change related risks is the implementation of urban adaptation plans. Key adaptation measures implemented include developing blue–green infrastructure to cope with urban heatwaves, floods and droughts; protecting the Baltic

coast using artificial beach nourishment; building, repairing and maintaining the permanent seashore reinforcements; and implementing water retention measures in the urban environment, as well as in grassland and forest ecosystems.

129. In its NC8 Poland provided information on its activities relating to research and systematic observation, including on national policies, institutional arrangements and research programmes and projects related to climate change. Support for ground- and space-based climate observing systems, including satellite and non-satellite climate observation, was also described. In addition, Poland reported on challenges related to the maintenance of a consistent and comprehensive observation system. Many of these observation and measurement activities are part of the global meteorological and climate observation system.

130. In its NC8 Poland provided information on its actions relating to education, training and public awareness. Climate change related education has been integrated into all levels of the curricula of the formal education system. In the formal education system, schools are obliged to provide environmental education, including on climate change, at all education stages from kindergartens upward. Knowledge is also accessible via diverse training courses organized by various entities, including universities, governmental organizations, private companies and environmental non-governmental organizations. Their operations, including events and other activities such as communication outreach (e.g. via the media and online), have contributed greatly to raising public awareness of the environment.

131. In the course of the review, the ERT formulated the following recommendations for Poland to improve its adherence to the UNFCCC reporting guidelines on NCs in its next NC:

- (a) To improve the completeness of its reporting by:
 - (i) Explaining how its national circumstances affect GHG emissions and removals and how its national circumstances and changes therein (e.g. climate developments or changes in heating and cooling degree days, international energy prices, population changes, GDP growth by key economic sector such as services, manufacturing and agriculture, and structural changes of the economy) affect GHG emissions and removals over time (see issue 1 in table I.1);
 - (ii) Providing an estimate of the total effect of its PaMs, in accordance with the WEM definition, compared with a situation without such PaMs (see issue 5 in table I.4);
 - (iii) Providing information on actions taken to support capacity-building in developing countries with respect to research and systematic observation (see issue 1 in table I.6);
- (b) To improve the transparency of its reporting by providing for each policy and measure a brief description of the method used to estimate the related mitigation impact (see issue 3 in table I.3).

135. In the course of the review of Poland's NC8, the ERT formulated the following recommendation relating to adherence to the reporting guidelines for supplementary information, namely for the Party to improve the completeness of its reporting by:

- (a) Providing information on the name and contact information of the designated representative of the national entity with overall responsibility for the national GHG inventory (see issue 1 in table I.8);
- (b) Providing the name and contact information of the registry administrator designated by the Party to maintain the national registry; a list of the information publicly accessible by means of the user interface to the national registry; as well as the results of any test procedures that might be available or developed with the aim of testing the performance, procedures and security measures of the national registry undertaken pursuant to the provisions of decision 19/CP.7 relating to the technical standards for data exchange between registry systems (see issue 2 in table I.8);
- (c) Providing information on provisions to make information on legislative arrangements and enforcement and administrative procedures publicly accessible (see issue 3 in table I.8).

Annex I

Assessment of adherence to the reporting guidelines for the eighth national communication of Poland

Tables I.1–I.8 summarize the ERT assessment of adherence to the UNFCCC reporting guidelines on NCs for Poland’s NC8.

Table I.1

Findings on national circumstances relevant to greenhouse gas emissions and removals from the review of the eighth national communication of Poland

No.	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
1	<p>Reporting requirement specified in paragraph 3</p> <p>Issue type: completeness</p> <p>Assessment: recommendation</p>	<p>Poland did not explain how its national circumstances affect GHG emissions and removals, or how its national circumstances and changes therein affect GHG emissions and removals over time. For instance, Poland did not explain in its NC8 the effects on GHG emissions of climate developments or changes in heating and cooling degree days, international energy prices, population changes, GDP growth by key economic sector (e.g. services, manufacturing and agriculture) and changes to the structure of the economy.</p> <p>During the review, Poland explained how its national circumstances and changes therein have affected GHG emissions and removals over time, for example how the deep economic transformation since 1989 has led to economic restructuring and the modernization of many sectors, significantly reducing their impact on the environment, and led to the continuous growth of the Polish economy over the last two decades, in particular owing to the new opportunities for cooperation and trade, access to technologies and sales markets and sources of financing related to Poland’s accession to the EU in 2004. Poland’s membership of the EU boosted efforts to modernize the economy but also led to greater and more challenging commitments in relation to environmental protection owing to the application of EU-wide environmental and climate policies. The implementation of climate policies together with changes in the national circumstances have affected Poland’s GHG emissions, resulting in a reduction since the base year (1988).</p> <p>The ERT reiterates the recommendation from the previous review report that Poland explain how its national circumstances affect GHG emissions and removals and how its national circumstances and changes therein (e.g. climate developments or changes in heating and cooling degree days, international energy prices, population changes, GDP growth by key economic sector such as services, manufacturing and agriculture, and structural changes of the economy) affect GHG emissions and removals over time, in order to improve the completeness of its next NC.</p>
2	<p>Reporting requirement specified in paragraph 3</p> <p>Issue type: transparency</p> <p>Assessment: encouragement</p>	<p>In its NC8 Poland provided information on how its national circumstances are relevant to factors affecting GHG emissions and removals by including relevant disaggregated indicators to explain the relationship between the national circumstances and emissions or removals. However, for most of the indicators, annual data were provided only for 2015–2020 or 2016–2020.</p> <p>During the review, Poland provided examples of indicators with data for additional years from the base year (1988) onward, which improved the transparency of the information reported on the indicators.</p> <p>The ERT encourages Poland to improve the transparency of its reporting on the relationship between the national circumstances and emissions or removals. For instance, Poland could provide disaggregated indicators for additional years from the base year onward, for example for 1988, 1990, 2000, 2010, 2020, 2021, 2022 and 2023, in its next NC.</p>

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

Table I.2

Findings on greenhouse gas inventory information from the review of the eighth national communication of Poland

No.	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
1	Reporting requirement specified in paragraph 5 Issue type: transparency Assessment: encouragement	<p>The ERT noted a discrepancy between the total emissions including emissions and removals from LULUCF reported in the NC8 compared with those reported in the NIR of the most recent annual inventory submission available.</p> <p>During the review, Poland explained that the difference is due to the fact that its 2022 GHG inventory submission, which was resubmitted in May 2022, was reviewed in October 2022, during which some changes in the estimates of emissions and removals for the LULUCF sector were made to the CRF tables in response to the recommendations of that ERT. The 2022 NIR was not updated following the review, which is usually not required in cases where the CRF tables are resubmitted.</p> <p>To enhance transparency, the ERT encourages the Party to explain, in its next NC, any changes in the GHG inventory information compared with that provided in the NIR of the most recent annual inventory submission available.</p>

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

Table I.3

Findings on policies and measures from the review of the eighth national communication of Poland

No.	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
1	Reporting requirement specified in paragraph 12 Issue type: completeness Assessment: encouragement	<p>Poland did not report in its NC8 on policies and practices that encourage activities that lead to greater levels of anthropogenic GHG emissions than would otherwise occur.</p> <p>During the review, Poland provided some examples of policies that could increase GHG emissions, including subsidies provided for the coal mining industry. Poland also clarified that the aid programme established under the closure plan for the Polish coal mining industry includes activities such as decommissioning of coal mines, reclamation work in post-mining areas, and repairing damage caused by mining and restoring areas to their pre-damaged state, and its aid is therefore mostly allocated to activities aimed at reducing GHG emissions in the long term. Poland also explained that the second aid programme for the hard coal mining industry, notified to the European Commission, envisages the termination of hard coal mining and the liquidation of thermal coal mines in Poland in the long term, and therefore this measure will also result in a gradual reduction in GHG emissions.</p> <p>The ERT reiterates the encouragement from the previous review report for Poland to report on policies and practices that encourage activities that lead to greater levels of anthropogenic GHG emissions than would otherwise occur.</p>
2	Reporting requirement specified in paragraph 15 Issue type: transparency Assessment: encouragement	<p>For some measures maintained over time and thoroughly described in a previous NC and/or BR, namely the urban transport package and the measures on limiting the use of F-gases and developing agricultural biogas plants, Poland did not make a reference in the NC8 or BR5 to the respective descriptions reported in the BR4.</p> <p>During the review, Poland confirmed that the urban transport package and the measures on limiting the use of F-gases and developing agricultural biogas plants, listed as measures M11, M41 and M48, respectively, in the NC8, were referred to as measures M7, M16 and M20, respectively, in the BR4.</p> <p>The ERT encourages the Party to include, for all measures maintained over time and thoroughly described in a previous NC and/or BR, a reference to their description in the previous NC and/or BR and provide a brief description of those measures, focusing on any alterations to the PaMs or the effects achieved.</p>
3	Reporting requirement specified in paragraph 20 Issue type: transparency	<p>Poland referenced the relevant data source (the National Fund for Environmental Protection and Water Management) but did not provide a brief description of the methods used to estimate the mitigation impact of many measures related to the energy sector, namely the My Power Priority Programme, the Energy Plus Priority Programme, the Polish Geothermal Energy Plus Priority Programme, the District Heating Priority Programme, the Agroenergy Programme, other programmes supporting the development</p>

<i>No.</i>	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
	<p>Assessment: recommendation</p>	<p>of RES and cogeneration, the My Heat Priority Programme, the Clean Air Priority Programme and improvement of the operation of the energy efficiency system of buildings, listed as measures 13, 14, 15, 16, 17, 19, 21, 24 and 27 respectively in the NC8.</p> <p>During the review, Poland clarified that the reduction effect from programmes financed under the National Fund for Environmental Protection and Water Management in the energy sector was estimated using actual data on energy savings achieved in 2020 and the CO₂ emission factors contained in annual reports issued by KOBiZE (i.e. emission factors for CO₂, SO₂, NO_x, CO and total particulate matter for electricity on the basis of the information contained in the national database on GHG emissions and other substances). The ex ante effects for 2030 were estimated on the basis of assumptions developed by the National Fund for Environmental Protection and Water Management on the expected effects of a given programme, as reflected in the signed contracts with beneficiaries that constitute an obligation on the part of the beneficiaries to carry out specific projects (e.g. replacing boilers, facilitating thermal modernization of buildings, installing photovoltaic panels).</p> <p>The ERT recommends that Poland improve the transparency of the reporting on PaMs by providing for each policy and measure a brief description of the method used to estimate the related mitigation impact.</p>
<p>4</p>	<p>Reporting requirement specified in paragraph 21</p> <p>Issue type: completeness</p> <p>Assessment: encouragement</p>	<p>Poland did not provide information on the cost of PaMs, their non-GHG mitigation benefits and how they interact with other PaMs at the national level.</p> <p>During the review, Poland explained that information on the cost of PaMs, their non-GHG mitigation benefits and interactions between PaMs was not reported because it was not readily available and it decided to focus its efforts on reporting mandatory information.</p> <p>The ERT reiterates the encouragement from the previous report that Poland report, for each policy and measure, the cost, non-GHG mitigation benefits and interactions of PaMs.</p>

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

Table I.4

Findings on projections including aggregate effects of policies and measures reported in the eighth national communication of Poland

<i>No.</i>	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
<p>1</p>	<p>Reporting requirement specified in paragraph 25</p> <p>Issue type: completeness</p> <p>Assessment: encouragement</p>	<p>Poland did not report a WOM scenario in its NC8.</p> <p>During the review, Poland explained that reporting a WOM scenario is not a mandatory part of the submission, which is why it did not provide an explanation for not reporting a WOM scenario in the NC8. Poland also explained that owing to concerns regarding the need for additional resources that will contribute negligible added value to the current policymaking process and achievement of future goals, priority was given to developing reliable WEM and WAM scenarios.</p> <p>The ERT reiterates the encouragement from the previous review reports for Poland to improve the completeness of its reporting by providing a WOM scenario or an explanation in the NC as to why developing such a scenario is not appropriate given the national circumstances.</p>
<p>2</p>	<p>Reporting requirement specified in paragraph 26</p> <p>Issue type: transparency</p> <p>Assessment: encouragement</p>	<p>Although the WAM scenario provided by Poland includes implemented and planned policies, Poland did not provide an exhaustive list of the planned PaMs included therein. Poland explained in the NC8 that the WAM scenario assumes that the Party will take additional measures to fulfil its commitments under EU legislation and international agreements to reduce GHG emissions and air pollutants, specifically in the energy and IPPU sectors, and that the WAM scenario also takes into account a number of targeted EU regulations on F-gases in the IPPU sector, while the assumptions applied for the energy sector are based on the draft Energy Policy of Poland until 2040, whereby energy consumption is reduced through higher energy efficiency of buildings and implementation of the Clean Air Programme, among other measures.</p>

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
		<p>During the review, Poland provided a list of other PaMs included in the WAM scenario that are not included in the WEM scenario.</p> <p>The ERT encourages the Party to clarify in its next NC which planned PaMs are included in the WAM scenario.</p>
3	<p>Reporting requirement specified in paragraph 32</p> <p>Issue type: transparency</p> <p>Assessment: encouragement</p>	<p>In its NC8 Poland provided projections of indirect emissions of CO, NO_x and NMVOCs, as well as SO₂, only in graphical format and not in tabular format.</p> <p>During the review, the Party provided the projections of CO, NO_x, SO₂ and NMVOCs in tabular format.</p> <p>To increase transparency, the ERT encourages Poland to also present the information on the projections of CO, NO_x, SO₂ and NMVOCs in tabular format in its next NC.</p>
4	<p>Reporting requirement specified in paragraph 36</p> <p>Issue type: completeness</p> <p>Assessment: encouragement</p>	<p>In its NC8 Poland did not report the total expected effect of planned PaMs.</p> <p>During the review, Poland explained that the total effect of PaMs is the difference between the total GHG emissions excluding LULUCF projected under the WEM and WAM scenarios and that this was not comparable to the total estimated emission reduction of individual planned PaMs for 2030 reported in NC8 table 4.31, as their effects were estimated on an individual basis using different approaches and methods from the one used for calculating the total effect.</p> <p>The ERT encourages Poland to report the total expected effect of planned PaMs.</p>
5	<p>Reporting requirement specified in paragraph 37</p> <p>Issue type: completeness</p> <p>Assessment: recommendation</p>	<p>In its NC8 Poland presented the estimated total effect of its PaMs in accordance with the ‘with measures’ definition in terms of aggregated GHG emissions avoided (excluding LULUCF), for 2010 and 2025, 2030, 2035 and 2040, in a figure, without reporting the effects by gas. Moreover, Poland did not include the estimated effect for the most recent inventory year.</p> <p>During the review, Poland explained that since it did not develop a WOM scenario, the total effect of implemented and adopted PaMs was estimated applying an alternative approach using the total GHG emission reduction (excluding LULUCF) between the base year (1988) and 2010, and between the total for 2010 and projected emissions under the WEM scenario for 2025, 2030, 2035 and 2040, in addition to the reductions achieved by 2010. The Party also explained that 2010 was applied as the reference year for presenting the total effect of PaMs in the WEM scenario as many key PaMs included in the WEM scenario entered into force after that year, for example measures resulting from the implementation of the Energy Policy of Poland until 2030, adopted in December 2009.</p> <p>The ERT reiterates the recommendation from the previous review report for Poland to present in its next NC the estimate of the total effect of its PaMs in accordance with the WEM definition, compared with a situation without such PaMs, in terms of GHG emissions avoided or sequestered, by gas (on a CO₂ eq basis), in the most recent inventory year and in subsequent years that end in either a zero or a five, extending at least 15 years from the most recent inventory year (not cumulative savings).</p>
6	<p>Reporting requirement specified in paragraph 42</p> <p>Issue type: completeness</p> <p>Assessment: encouragement</p>	<p>Poland did not report information on the differences in assumptions, methods employed and results between the projections reported in the current NC and those reported in previous NCs. However, the Party did present information on the differences compared with the projections reported in the BR4.</p> <p>During the review, the Party provided further details on the changes in the assumptions, methods employed and results since the NC7.</p> <p>The ERT encourages the Party to report in its next NC information on the main differences in assumptions, methods employed and results between the emission projections reported in the current NC and those reported in previous NCs.</p>

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

Table I.5

Findings on vulnerability assessment, climate change impacts and adaptation measures from the review of the eighth national communication of Poland

<i>No.</i>	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
1	Reporting requirement specified in paragraph 46 Issue type: completeness Assessment: encouragement	Poland reported in its NC8 information on the criteria, scenarios and approaches used for the vulnerability assessment, but did not include information on the climate models and scientific materials used for the assessment. During the review, Poland explained that the climate projections using the results of simulations calculated under the EURO-CORDEX project were prepared using global climate models and various regional climate models. Poland also shared with the ERT a list of references for the scientific materials used in its vulnerability assessment. To enhance the completeness of the Party's reporting, the ERT encourages Poland to provide information on the climate models and scientific materials used for the vulnerability assessment in its next NC.
2	Reporting requirement specified in paragraph 46 Issue type: transparency Assessment: encouragement	Poland reported information on the methodology used to determine the level of climate-related risk, which was based on three elements: hazard (normalized scale 0–1), exposure (normalized scale 0–1) and vulnerability (normalized scale 0–1). However, it was not clear to the ERT how these normalized scales were classified into the risk levels of 1–5. During the review, Poland provided detailed information on the methodology used for the risk assessment, including on the normalization of the three elements (hazard, exposure and vulnerability) and the classification of risk levels. The ERT encourages Poland to increase the transparency of its reporting by providing in its next NC information on and references for the methodology used for determining the risk level, explaining, for example, how the levels of climate risk are normalized or classified.
3	Reporting requirement specified in paragraph 47 Issue type: completeness Assessment: encouragement	With the exception of information on protection of the Baltic coast, Poland did not include in the NC8 information on the progress and outcomes of adaptation action, including on the effectiveness of implemented adaptation measures. During the review, Poland provided additional information on the outcomes of adaptation measures, including the development of blue–green infrastructure, sustainable rainwater management, agroforestry and 'renaturalization' of water ecosystems. The ERT incorporated this information into the summary information in table 11. However, information on the effectiveness of implemented adaptation measures was not provided. The ERT encourages Poland to provide information on the progress and outcomes of adaptation actions, including the effectiveness of implemented adaptation measures, in its next NC.

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

Table I.6

Findings on research and systematic observation from the review of the eighth national communication of Poland

<i>No.</i>	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
1	Reporting requirement specified in paragraph 61 Issue type: completeness Assessment: recommendation	The NC8 did not reflect actions taken to support capacity-building in developing countries with respect to research and systematic observation in developing countries. During the review, Poland explained that, as a member of WMO, it contributes to the WMO Capacity Development Programme, which promotes collaboration between members and WMO programmes to support national meteorological and hydrological services in providing essential weather, climate and water-related services and contributing to global efforts to protect life and property from natural hazards. Poland further explained that the Ministry of Foreign Affairs developed the Solidarity for Development 2021–2030 10-year strategic programme, which includes climate research as one of its strategic cross-sectoral goals.

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
2	Reporting requirement specified in paragraph 65 Issue type: completeness Assessment: encouragement	<p>The ERT recommends that Poland provide information in its next NC on actions taken to support capacity-building in developing countries with respect to research and systematic observation.</p> <p>In its NC8 Poland did not report information on opportunities for and barriers to free and open international exchange of data and information and action taken to overcome such barriers with regard to systematic observation.</p> <p>During the review, Poland explained that it acknowledges the need for an international open data policy and supports the WMO unified data policy and EU open data directive (directive 2019/1024). To that end, the Party makes verified data on measurements collected in Poland by the meteorological and hydrological network publicly accessible as an open resource. Poland also participates in the RODEO project on the provision of open access to public meteorological data and development of shared federated data infrastructure for the development of information products and services, which is funded by the EU and the European Meteorological Services Network and is aimed at providing open and unrestricted access to a vast range of meteorological data provided by European national meteorological and hydrological services.</p> <p>The ERT reiterates the encouragement from the previous review report for Poland to report in its next NC information on opportunities for and barriers to free and open international exchange of data and information and action taken to overcome such barriers with regard to research and systematic observation.</p>
3	Reporting requirement specified in paragraph 67 Issue type: completeness Assessment: encouragement	<p>Poland did not provide information on national plans and programmes linked to support for developing countries to establish and maintain observing systems and related data and monitoring systems in the NC8.</p> <p>During the review, Poland provided additional information, explaining that as a member of WMO it participates in the programmes and activities operated by WMO aimed at developing global measurement systems, including by providing support to developing countries. Poland is currently considering providing financial assistance for several aid initiatives related to the creation and maintenance of weather stations in developing countries through the Systematic Observations Financing Facility. Poland further explained that it recognizes the development opportunity for national services, including their role in national and regional early warning systems, and actively supports, both substantively and financially, implementation of the Early Warnings for All initiative, which is aimed at ensuring that an integrated global early warning system is put in place to protect everyone on Earth from hazardous weather, water or climate events, building knowledge about the risk of such threats, improving the system for monitoring, detecting, processing and forecasting threats and their consequences, increasing resilience while identifying and assessing sensitivity, and improving communication.</p> <p>The ERT encourages Poland to include information on national plans and programmes linked to support for developing countries to establish and maintain observing systems and related data and monitoring systems in its next NC.</p>

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

Table I.7

Findings on education, training and public awareness from the review of the eighth national communication of Poland

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
1	Reporting requirement specified in paragraph 68 Issue type: completeness Assessment: encouragement	<p>Poland did not report on the extent of public participation in the preparation or domestic review of the NC.</p> <p>During the review, Poland explained that prior to interministerial and public consultations, the draft NC8 and BR5 were posted on the website of the Ministry of Climate and Environment for approximately one month for public comment. No comments were received. The draft NC8 and BR5 were then submitted to various committees and councils for consideration and adoption. The final version of the NC8 and BR5 report was posted on the website of the Ministry of Climate and Environment.</p>

No.	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
		The ERT reiterates the encouragement from the previous review report for Poland to report in its next NC on the extent of public participation in the preparation or domestic review of the NC.

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

Table I.8

Findings on minimization of adverse impacts and supplementary information related to the Kyoto Protocol reported in the eighth national communication of Poland

No.	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
1	Reporting requirement specified in paragraph 30 Issue type: completeness Assessment: recommendation	<p>Poland described its national system for the estimation of anthropogenic emissions by sources and removals by sinks, including the names of relevant ministries and institutions, but did not report the name and contact information of the designated representative of the national entity with overall responsibility for the national inventory of the Party.</p> <p>During the review, Poland explained that the national entity with overall responsibility for the national GHG inventory is the Ministry of Climate and Environment, Department of Air Protection and Climate Negotiations, Greenhouse Gas Emissions Management Unit, and that the name of the contact person is Kamila Drebszok-Krokos.</p> <p>The ERT recommends that Poland improve the completeness of its reporting by including in its next NC the name and contact information of the designated representative of the national entity with overall responsibility for the national GHG inventory.</p> <p>The ERT concludes that this potential problem of a mandatory nature does not influence the Party’s ability to fulfil its commitments for the second commitment period of the Kyoto Protocol.</p>
2	Reporting requirement specified in paragraph 32 Issue type: completeness Assessment: recommendation	<p>The description of how the Party’s national registry performs its functions does not include the name and contact information of the registry administrator designated by the Party to maintain the national registry; a list of the information publicly accessible by means of the user interface to the national registry; or the results of any test procedures that might be available or developed with the aim of testing the performance, procedures and security measures of the national registry undertaken pursuant to the provisions of decision 19/CP.7 relating to the technical standards for data exchange between registry systems.</p> <p>During the review, Poland explained that the registry administrator is KOBiZE, which operates within the Institute of Environmental Protection – National Research Institute, and shared relevant contact information. Poland also shared a list of the information publicly accessible by means of the user interface to the national registry, including account information, unit holdings and transaction information, and entities authorized to hold units, noting that some of the data have not been made publicly accessible owing to security requirements in accordance with relevant regulations. In addition, Poland shared information on test procedures undertaken.</p> <p>The ERT recommends that Poland improve the completeness of its reporting by including in its next NC the name and contact information of the registry administrator designated by the Party to maintain the national registry; a list of the information publicly accessible by means of the user interface to the national registry; as well as the results of any test procedures that might be available or developed with the aim of testing the performance, procedures and security measures of the national registry undertaken pursuant to the provisions of decision 19/CP.7 relating to the technical standards for data exchange between registry systems.</p> <p>The ERT concludes that this potential problem of a mandatory nature does not influence the Party’s ability to fulfil its commitments for the second commitment period of the Kyoto Protocol.</p>

<i>No.</i>	<i>Reporting requirement, issue type and assessment</i>	<i>Description of the finding with recommendation or encouragement</i>
3	Reporting requirement specified in paragraph 37 Issue type: completeness Assessment: recommendation	<p>Although Poland included information on procedures for addressing cases of non-compliance under domestic law, as recommended in the review of Poland’s NC7, it did not provide information on provisions to make information on legislative arrangements and enforcement and administrative procedures publicly accessible.</p> <p>During the review, Poland explained that bills not objected to by the President are published in the Journal of Laws.</p> <p>The ERT reiterates the recommendation from the previous review report that Poland provide information on provisions to make information on legislative arrangements and enforcement and administrative procedures publicly accessible, in order to improve the completeness of its reporting.</p> <p>The ERT concludes that this potential problem of a mandatory nature does not influence the Party’s ability to fulfil its commitments for the second commitment period of the Kyoto Protocol.</p>

Note: Item listed under reporting requirement refers to the relevant paragraph of the reporting guidelines for supplementary information. The reporting on the requirements not included in this table is considered to be complete and transparent, and thus adheres to the reporting guidelines for supplementary information.

Annex II

Assessment of adherence to the reporting guidelines for the fifth biennial report of Poland

The BR5 of Poland is the final BR under the measurement, reporting and verification system established under the Convention.¹ Nevertheless, ERTs continue to provide recommendations and encouragements to the Parties on completeness, transparency and adherence to the UNFCCC reporting guidelines on BRs. Parties may find these recommendations and encouragements relevant, as appropriate, when preparing their initial biennial transparency report under the enhanced transparency framework of the Paris Agreement. Tables II.1–II.2 summarize the ERT assessment of adherence to the UNFCCC reporting guidelines on BRs for Poland’s BR5.

Table II.1

Findings on greenhouse gas emissions and trends from the review of the fifth biennial report of Poland

No.	Reporting requirement and issue type	Description of the finding with recommendation or encouragement
1	Reporting requirement specified in paragraph 2 Issue type: transparency Assessment: encouragement	The ERT noted a discrepancy between the total emissions including emissions and removals from LULUCF reported in CTF table 1 in the BR5 and those reported in the NIR of the most recent annual inventory submission available at the time of preparation of the BR5. During the review, the Party explained that the difference is due to the fact that its 2022 GHG inventory submission, which was resubmitted in May 2022, was reviewed in October 2022, during which some changes in the estimates of emissions and removals for the LULUCF sector were made to the CRF tables in response to the recommendations of that ERT. The 2022 NIR was not updated following the review, which is usually not required in cases where the CRF tables are resubmitted. To enhance transparency, the ERT encourages the Party to explain, in its next submission, any changes in the GHG inventory information compared with that provided in the NIR of the most recent annual inventory submission available.

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 and transparent, and thus adheres to the UNFCCC reporting guidelines on BRs.

Table II.2

Findings on projections reported in the fifth biennial report of Poland

No.	Reporting requirement and issue type	Description of the finding with recommendation or encouragement
1	Reporting requirement ^a specified in paragraph 25 Issue type: transparency Assessment: encouragement	Poland did not report a WOM scenario in its NC8 and BR5. During the review, Poland explained that reporting a WOM scenario is not a mandatory part of the submission, which is why it did not provide an explanation for not reporting a WOM scenario. Poland also explained that owing to concerns regarding the need for additional resources that will contribute negligible added value to the current policymaking process and achievement of future goals, priority was given to developing reliable WEM and WAM scenarios. The ERT reiterates the encouragement from the previous review reports for Poland to improve the completeness of its reporting by providing a WOM scenario, or provide an explanation in its submission as to why developing such a scenario is not appropriate given the national circumstances.

¹ The Conference of the Parties, by decision 1/CP.24, decided that the final BRs shall be those submitted to the secretariat no later than 31 December 2022 and reaffirmed that, for Parties to the Paris Agreement, following the submission of the final BR, the modalities, procedures and guidelines contained in the annex to decision 18/CMA.1 will supersede the measurement, reporting and verification system established under decision 1/CP.16, paras. 40–47 and 60–64, and decision 2/CP.17, paras. 12–62.

No.	Reporting requirement and issue type	Description of the finding with recommendation or encouragement
2	Reporting requirement ^a specified in paragraph 26 Issue type: transparency Assessment: encouragement	<p>Although the WAM scenario provided by Poland includes implemented and planned PaMs, Poland did not provide an exhaustive list of its planned PaMs. Poland explained in the NC8 that the WAM scenario assumes that the Party will take additional measures to fulfil its commitments under EU legislation and international agreements to reduce GHG emissions and air pollutants, specifically in the energy and IPPU sectors, and that the WAM scenario also takes into account a number of targeted EU regulations on F-gases in the IPPU sector, while the assumptions applied for the energy sector are based on the draft Energy Policy of Poland until 2040, whereby energy consumption is reduced through higher energy efficiency of buildings and implementation of the Clean Air Programme, among other measures.</p> <p>During the review, Poland provided a list of other PaMs included in the WAM scenario that are not included in the WEM scenario.</p> <p>The ERT encourages the Party to clarify in its next NC which planned PaMs are included in the WAM scenario.</p>
3	Reporting requirement ^a specified in paragraph 32 Issue type: transparency Assessment: encouragement	<p>In its NC8 and BR5, Poland provided projections of indirect emissions of CO, NO_x and NMVOCs, as well as SO₂, only in graphical format and not in tabular format.</p> <p>During the review, the Party provided the projections of CO, NO_x, SO₂ and NMVOCs in tabular format.</p> <p>To increase transparency, the ERT encourages Poland to also present the information on the projections of indirect emissions of CO, NO_x, SO₂ and NMVOCs in tabular format in its next submission.</p>
4	Reporting requirement ^a specified in paragraph 42 Issue type: completeness Assessment: encouragement	<p>Poland did not report information on the differences in assumptions, methods employed and results between the projections reported in the current NC and BR and those reported in previous NCs, focusing instead on the presentation of differences compared with the projections reported in the BR4.</p> <p>During the review, the Party provided details on the changes in the assumptions, methods used and results since the NC7.</p> <p>The ERT encourages the Party to report information in its next submission on the differences in assumptions, methods employed and results between the projections reported in the current NC and BR and those reported in previous NCs.</p>
5	Reporting requirement ^b specified in paragraph 12 Issue type: completeness Assessment: encouragement	<p>Poland did not report on the changes since its most recent NC in the model or methodologies used for the preparation of projections in its BR5.</p> <p>During the review, the Party provided detailed information on the changes since the NC7.</p> <p>The ERT encourages the Party to include information on changes since its most recent NC in the model or methodologies used for the preparation of projections together with supporting documentation in its next submission.</p>

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

^a Item listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs, as per para. 11 of the UNFCCC reporting guidelines on BRs.

^b Item listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs.

Annex III

Documents and information used during the review

A. Reference documents

2022 GHG inventory submission of Poland.

Available at <https://unfccc.int/ghg-inventories-annex-i-parties/2022>.

2023 GHG inventory submission of Poland.

Available at <https://unfccc.int/ghg-inventories-annex-i-parties/2023>.

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

BR5 CTF tables of Poland. Available at <https://unfccc.int/BR5>.

BR5 of the EU. Available at <https://unfccc.int/BR5>.

BR5 of Poland. Available at <https://unfccc.int/BR5>.

“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. European Commission document COM(2019) 640 final. Available at 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 II: UNFCCC reporting guidelines on national communications”. FCCC/CP/2019/13/Add.1. Available at <https://unfccc.int/documents/210471>.

“Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol”. Annex to decision 15/CMP.1. Available at <https://unfccc.int/documents/4253>.

“Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol”. Annex III to decision 3/CMP.11. Available at <https://unfccc.int/documents/9101>.

“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>.

NECPs of Poland. Available at https://commission.europa.eu/publications/poland-draft-updated-necp-2021-2030_en.

NC8 of Poland. Available at <https://unfccc.int/NC8>.

NC8 of the EU. Available at <https://unfccc.int/NC8>.

Report on the individual review of the annual submission of Poland submitted in 2022. FCCC/ARR/2022/POL. Available at <https://unfccc.int/documents/627635>.

Report on the technical review of the BR4 of Poland. FCCC/TRR.4/POL. Available at <https://unfccc.int/documents/278828>.

Report on the technical review of the NC8 and the technical review of the BR5 of the EU. FCCC/IDR.8/EU–FCCC/TRR.5/EU. Available at <https://unfccc.int/documents/630393>.

“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 Monika Bejnar-Bejnarowicz and Sylwia Szymańska (Ministry of Climate and Environment of Poland), including additional material.
