COMPLIANCE COMMITTEE

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12 August 2015

Report of the technical review of the sixth national communication of Cyprus

Note by the secretariat

The report of the technical review of the sixth national communication of Cyprus was published on 27 August 2014. For purposes of rule 10, paragraph 2, of the rules of procedure of the Compliance Committee (annex to decision 4/CMP.2, as amended by decisions 4/CMP.4 and 8/CMP.9), the report is considered received by the secretariat on the same date. This report, FCCC/IDR.6/CYP, contained in the annex to this note, is being forwarded to the Compliance Committee in accordance with section VI, paragraph 3, of the annex to decision 27/CMP.1.

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Report of the technical review of the sixth national communication of Cyprus

Parties included in Annex I to the Convention are requested, in accordance with decision 9/CP.16, to submit a sixth national communication to the secretariat by 1 January 2014. In accordance with decision 7/CMP.8, Parties included in Annex I to the Convention that are also Parties to the Kyoto Protocol shall include in their sixth national communication supplementary information under Article 7, paragraph 2, of the Kyoto Protocol. In accordance with decision 15/CMP.1, these Parties shall start reporting the information under Article 7, paragraph 1, of the Kyoto Protocol with the inventory submission due under the Convention for the first year of the commitment period. This includes supplementary information on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol.

This report presents the results of the technical review of the sixth national communication and supplementary information under the Kyoto Protocol of Cyprus 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".

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I. Introduction and summary

A. Introduction

1. For Cyprus the Convention entered into force on 13 January 1998 and the Kyoto Protocol on 16 February 2005. Under the Convention, Cyprus made a commitment to contribute to the achievement of the joint European Union (EU) economy-wide emission reduction target of 20 per cent of greenhouse gas (GHG) emissions compared with the 1990 level by 2020. Cyprus became a Party included in Annex I to the Convention (Annex I Party) (as the term is defined under Article 1, paragraph 7, of the Kyoto Protocol) on 9 January 2013, and did not have a quantified emission reduction target in the first commitment period of the Kyoto Protocol. For the second commitment period of the Kyoto Protocol, from 2013 to 2020, Cyprus committed to contributing to the joint EU commitment[1] to reduce GHG emissions by 20 per cent compared with the base year[2] level.

2. This report covers the centralized technical review of the sixth national communication (NC6) of Cyprus, coordinated 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" (decision 23/CP.19) and the "Guidelines for review under Article 8 of the Kyoto Protocol" (decision 22/CMP.1). The Party indicated that its NC6 is a consolidated national communication (NC) covering the first, second, third, fourth, fifth and sixth NCs of Cyprus. Therefore, the NC6 referred to throughout this report covers the first, second, third, fourth, fifth and sixth NCs of Cyprus.

3. The review took place from 5 to 10 May 2014 in Bonn, Germany, and was conducted by the following team of nominated experts from the UNFCCC roster of experts: Mr. Hamid Alsadoon (Saudi Arabia), Mr. Kennedy Amankwa (Ghana), Mr. Fernando Farias (Chile), Ms. Violeta Hristova (Bulgaria), Mr. Hans Halvorson Kolshus (Norway), Ms. Asia Mohamed (Sudan), Mr. Rostislav Neveceral (Czech Republic), Mr. Asger Strange Olesen (Denmark), Ms. Natalya Parasyuk (Ukraine), Mr. Marcelo Rocha (Brazil), Ms. Lilia Taranu (Republic of Moldova) and Mr. Harry Vreuls (Netherlands). Mr. Amankwa and Mr. Vreuls were the lead reviewers. The review was coordinated by Ms. Xuehong Wang and Ms. Suvi Monni (secretariat).

4. During the review, the expert review team (ERT) reviewed each section of the NC6. Cyprus did not become an Annex I Party until 9 January 2013 (see para. 1), which was during the second commitment period of the Kyoto Protocol. The ERT noted that the NC6 reporting covers a period including only a part of 2013, and therefore the scope of reporting under Article 7, paragraph 2, of the Kyoto Protocol would be limited. However, in the NC6 and during the review, the Party reported some relevant information regarding reporting elements under Article 7, paragraph 2, of the Kyoto Protocol, which is reflected in relevant chapters of this report. The related recommendations in this report are given in

[1] Please note that the target under the Convention is taken by the EU and its 28 member States, while the target under the second commitment period of the Kyoto Protocol is taken by the EU, its 28 member States and Iceland. A political statement on fulfilling the second commitment period target of the Kyoto Protocol by the EU and its 28 member States jointly with Iceland is included in paragraph 45 of document FCCC/KP/CMP/2012/13.

[2] "Base year" refers to the base year of the joint EU commitment for the second commitment period under the Kyoto Protocol, which is 1990 for all gases except nitrogen trifluoride, for which the base year has not yet been determined.

consideration of the fact that in the next NC, Cyprus is expected to fully report the information required under Article 7, paragraph 2, of the Kyoto Protocol.

5. In accordance with decisions 23/CP.19 and 22/CMP.1, a draft version of this report was communicated to the Government of Cyprus. There were no comments from the Party.

B. Summary

6. The ERT conducted a technical review of the information reported in the NC6 of Cyprus in accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications" (hereinafter referred to as the UNFCCC reporting guidelines on NCs).

7. As the NC6 was the first NC submitted by Cyprus, this report does not include comparisons with the previous NC. During the review, the Party provided further relevant information on, for example, national circumstances, policies and measures (PaMs), public education and awareness-raising programmes, and its preparations for the complete reporting of Kyoto Protocol elements in its next NC.

1. Completeness and transparency of reporting

8. Gaps and issues related to the reporting of information in accordance with the UNFCCC reporting guidelines on NCs identified by the ERT are presented in table 1 below. The findings of the ERT regarding supplementary information under Article 7, paragraph 2, of the Kyoto Protocol are reflected in relevant paragraphs of this report.

2. Timeliness

9. The NC6 was submitted on 31 December 2013, before the deadline of 1 January 2014 mandated by decision 9/CP.16.

3. Adherence to the reporting guidelines

10. The information reported by Cyprus in its NC6 is mostly in adherence to the UNFCCC reporting guidelines on NCs as per decision 4/CP.5 (see table 1).

II. Technical review of the reported information in the national communication and supplementary information under the Kyoto Protocol

A. Information on greenhouse gas emissions and national circumstances relevant to greenhouse gas emissions and removals, including other elements related to the Kyoto Protocol

1. Information on relevant national circumstances

11. In its NC6, Cyprus has provided a concise description of the national circumstances and elaborated on the framework legislation and key policy documents on climate change. Further information on the review of the institutional and legislative arrangements for the coordination and implementation of PaMs is provided in chapter II.B below.

12. The reporting of national circumstances in NC6 was complete, but the ERT considered that some of the information lacked transparency.

Table 1
Assessment of completeness and transparency issues of reported information in the sixth national communication of Cyprus[a]

Sections of national communication	*Completeness*	*Transparency*	*Reference to paragraphs*
Executive summary	Complete	Transparent	
National circumstances	Complete	Partially transparent	14
Greenhouse gas inventory	Mostly complete	Transparent	16
Policies and measures (PaMs)	Mostly complete	Transparent	35, 36, 61
Projections and total effect of PaMs	Mostly complete	Mostly transparent	68, 69, 82
Vulnerability assessment, climate change impacts and adaptation measures	Mostly complete	Transparent	88
Financial resources and transfer of technology[b]	NA	NA	
Research and systematic observation	Mostly complete	Transparent	91
Education, training and public awareness	Complete	Transparent	

Abbreviation: NA = not applicable.

[a] A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in chapter IV of this report.

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

13. During the review, Cyprus provided additional information on the national circumstances, including on land use and biodiversity, taxes and incentive programmes related to energy, and fleet characteristics related to transport. Cyprus also provided information on its different industrial sectors, the control of imports through environmental legislation, waste management and agricultural production.

14. The ERT recommends that Cyprus improve transparency in its next NC by including more information on national circumstances in line with the information provided during the review, and encourages the Party to include more information on agricultural practices. The ERT also recommends that the Party elaborate in its next NC on how national circumstances and changes in national circumstances affect GHG emissions and removals over time.

15. The ERT noted that during the period 1990–2011 the population and gross domestic product (GDP) increased by 37.9 and 99.9 per cent, respectively, while GHG emissions per GDP decreased by 24.1 per cent and GHG emissions per capita increased by 8.6 per cent. Table 2 illustrates the national circumstances of Cyprus by providing some indicators relevant to GHG emissions.

Table 2
Indicators relevant to greenhouse gas emissions and removals for Cyprus

	1990	*2010*	*2011*	*Change 1990–2011 (%)*	*Change 2010–2011 (%)*
Population (million)	0.58	0.80	0.80	37.9	0.0
GDP (2005 USD billion using PPP)	10.49	20.87	20.97	99.9	0.5
TPES (Mtoe)	1.37	2.44	2.37	73.0	–2.9

	1990	*2010*	*2011*	*Change 1990–2011 (%)*	*Change 2010–2011 (%)*
GHG emissions without LULUCF (kt CO_2 eq)	6 090.85	9 443.54	9 154.37	50.3	–3.1
GHG emissions with LULUCF (kt CO_2 eq)	5 951.95	9 278.02	9 077.90	52.5	–2.2
GDP per capita (2005 USD thousand using PPP)	18.09	25.99	26.11	44.3	0.5
TPES per capita (toe)	2.35	3.04	2.95	25.5	–3.0
GHG emissions per capita (t CO_2 eq)	10.50	11.76	11.40	8.6	–3.1
GHG emissions per GDP unit (kg CO_2 eq per 2005 USD using PPP)	0.58	0.45	0.44	–24.1	–2.2

Sources: (1) GHG emissions data: Cyprus's 2013 GHG inventory submission; (2) Population, GDP and TPES data: International Energy Agency.

Note: The ratios per capita and per GDP unit are calculated relative to GHG emissions without LULUCF; the ratios are calculated using the exact (not rounded) values and may therefore differ from a ratio calculated with the rounded numbers provided in the table.

Abbreviations: GDP = gross domestic product, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, PPP = purchasing power parity, TPES = total primary energy supply.

2. Information on the greenhouse gas inventory, emissions and trends

16. In its NC6, Cyprus has provided a summary of information on GHG emission trends for the period 1990–2011. This information is fully consistent with the 2013 national GHG inventory submission. However, summary tables, including trend tables for emissions in carbon dioxide equivalent (CO_2 eq) (given in the common reporting format (CRF) tables), are not provided in the NC6. The ERT recommends that Cyprus, in its next NC, report summary tables, including trend tables, in CRF format. During the review, the ERT took note of the recently submitted 2014 annual submission, in which Cyprus reported 9,259.30 kt CO_2 eq of total national GHG emissions excluding land use, land-use change and forestry (LULUCF) for the year 2012.

17. Total GHG emissions[3] excluding emissions and removals from LULUCF increased by 50.3 per cent between 1990 and 2011, whereas total GHG emissions including net emissions or removals from LULUCF increased by 52.5 per cent over the same period. The main drivers of the overall emissions increase were increased electricity production and increased energy consumption in the residential and transport sectors. Carbon dioxide (CO_2) emissions accounted for 83.8 per cent of total GHG emissions in 2011 (without LULUCF) and increased by 55.9 per cent from 1990. Methane (CH_4) emissions accounted for 9.8 per cent of total GHG emissions in 2011 and increased by 24.8 per cent from 1990, while nitrous oxide (N_2O) emissions accounted for 5.0 per cent of total emissions and increased by 1.8 per cent from 1990. Hydrofluorocarbon (HFC) and sulphur hexafluoride (SF_6) emissions accounted for 1.4 per cent of total GHG emissions in 2011, while perfluorocarbon (PFC) emissions are not reported to occur in Cyprus. An analysis of the drivers of GHG emission trends in each sector is provided in chapter II.B below. Table 3 provides an overview of GHG emissions by sector from 1990 to 2011.

[3] In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of CO_2 eq excluding LULUCF.

Table 3
Greenhouse gas emissions by sector in Cyprus, 1990–2011

	GHG emissions (kt CO_2 eq)				*Change (%)*		*Share[a] by sector (%)*	
Sector	*1990*	*2000*	*2010*	*2011*	*1990–2011*	*2010 –2011*	*1990*	*2011*
1. Energy	4 213.76	6 360.55	7 440.55	7 137.02	69.4	–4.1	69.2	78.0
A1. Energy industries	1 770.93	2 968.29	3 880.34	3 721.96	110.2	–4.1	29.1	40.7
A2. Manufacturing industries and construction	1 081.46	1 400.39	651.23	511.37	–52.7	–21.5	17.8	5.6
A3. Transport	1 175.28	1 755.19	2 313.15	2 249.81	91.4	–2.7	19.3	24.6
A4.–A5. Other	185.17	234.97	595.82	653.89	253.1	9.7	3.0	7.1
B. Fugitive emissions	0.92	1.70	NA, NE, NO	NA, NE, NO	NA	NA	0.0	NA
2. Industrial processes	728.15	830.56	641.94	696.98	–4.3	8.6	12.0	7.6
3. Solvent and other product use	NE	NE	NE	NE	NA	NA	NA	NA
4. Agriculture	678.91	743.58	722.14	729.94	7.5	1.1	11.1	8.0
5. LULUCF	–138.90	–150.30	–165.53	–76.47	–44.9	–53.8	–2.3	–0.8
6. Waste	470.03	639.13	638.91	590.44	25.6	–7.6	7.7	6.4
GHG total with LULUCF	**5 951.95**	**8 423.51**	**9 278.02**	**9 077.90**	52.5	–2.2	**NA**	**NA**
GHG total without LULUCF	**6 090.85**	**8 573.82**	**9 443.54**	**9 154.37**	**50.3**	**–3.1**	**100.00**	**100.00**

Note: The changes in emissions and the share by sector are calculated using the exact (not rounded) values and may therefore differ from values calculated with the rounded numbers provided in the table.

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, NA= not applicable, NE = not estimated, NO = not occurring.

[a] The shares of sectors are calculated relative to GHG emissions without LULUCF; for the LULUCF sector, the negative values indicate the share of GHG emissions that was offset by GHG removals through LULUCF.

3. National system

18. Cyprus provided in its NC6 a description of how its national system is performing the general and specific functions defined in the guidelines for national systems under Article 5, paragraph 1, of the Kyoto Protocol (decision 19/CMP.1). The description includes most of the elements mandated by decision 15/CMP.1.

19. The ERT considered that the information on the functions of the different government agencies (see figure 3.3 of the NC6) and on the public review lacked transparency.

20. During the review, Cyprus provided additional information on the national system, elaborating on the ad hoc committee of experts chaired by the Department of Environment that brings together all ministries and departments that have policies or information that can contribute to the reduction of emissions. Cyprus also provided more information regarding the organizational structure of its national inventory system and the public review of the GHG inventory. The ERT recommends that Cyprus, in its next NC, report on its ad hoc committee of experts and elaborate on the sectoral data sources within the organizational structure of its national inventory system.

21. Noting that Cyprus became an Annex I Party on 9 January 2013, Cyprus confirmed that the national system referred to in Article 5, paragraph 1, of the Kyoto Protocol is under preparation, and it is anticipated that all the required information on the national system will be included in its next NC. The ERT recommends that the Party adhere to this plan.

4. National registry

22. In its NC6, Cyprus provided information on the national registry. Cyprus stated that its national registry is limited to the European Union Emissions Trading System (EU ETS) and that it therefore cooperates with other EU member States.

23. The ERT noted that Cyprus did not provide all mandatory reporting elements related to the national registry included in paragraph 32 of the annex to decision 15/CMP.1.

24. During the review, Cyprus provided additional information, elaborating on the name and contact details of its designated registry administrator.

25. Noting that Cyprus became an Annex I Party on 9 January 2013, the ERT recommends that Cyprus provide in its next NC all mandatory reporting elements related to the national registry included in paragraph 32 of the annex to decision 15/CMP.1.

5. Domestic and regional programmes and/or legislative arrangements and procedures related to the Kyoto Protocol

26. By decision 10/CP.17, Cyprus became an Annex I Party on 9 January 2013. Cyprus did not have a quantitative GHG reduction target under the first commitment period of the Kyoto Protocol. For the second commitment period, from 2013 to 2020, of the Kyoto Protocol, Cyprus committed to contributing to the joint EU commitment to reduce GHG emissions by 20 per cent compared with the base year level by 2020.

27. In its NC6, Cyprus reported on the legislative framework of its climate policy (see para. 40 below), but did not specifically refer to commitments under the second commitment period of the Kyoto Protocol. The ERT noted that Cyprus included in its NC6 information on the EU ETS and the effort-sharing decision (ESD), which sets a target for Cyprus of a 5 per cent GHG emission reduction compared with 2005 by 2020 for sectors not covered by the EU ETS (excluding LULUCF). During the review, the Party confirmed that the EU ETS, ESD and related PaMs also aim at emission reductions under the second commitment period of the Kyoto Protocol. The ERT recommends that Cyprus explicitly report in its next NC on domestic and regional legislative arrangements to meet its commitments under the Kyoto Protocol.

28. Regarding the second commitment period of the Kyoto Protocol, no information was provided in the NC6 on arrangements relevant for the implementation of activities under Article 3, paragraph 3, and any elected activities under Article 3, paragraph 4, of the Kyoto Protocol. During the review, Cyprus confirmed that the necessary national legislative arrangements and administrative procedures regarding the implementation of activities under Article 3, paragraph 3, and any elected activities under Article 3, paragraph 4, of the Kyoto Protocol are under preparation. Cyprus also confirmed that information on these arrangements will be reported in its next NC. The ERT recommends that Cyprus adhere to this plan.

29. The overall responsibility for climate change policymaking lies within the Ministry of Agriculture, Natural Resources and the Environment (MANRE), and a number of national institutions are involved in the implementation of this policy. MANRE is responsible for the coordination of implementation efforts, although competent ministries are responsible for integrating environmental objectives, including GHG mitigation targets, into their respective policies.

30. Implementation of the Kyoto Protocol is underpinned mainly by EU legislation. Climate change mitigation is one of the main objectives of the strategy for sustainable development published in 2007.

31. In the NC6, Cyprus reported on the legislation related to public access to environmental information. However, no information was provided specifically regarding provisions to make information on legislative arrangements and enforcement and administrative procedures established pursuant to the implementation of the Kyoto Protocol publicly accessible. During the review, Cyprus informed the ERT that according to the national legislative framework, all of the information on legislative arrangements and enforcement and administrative procedures are made publicly accessible (e.g. via the Department of Environment website or direct contact with officers). The ERT recommends that the Party include this information in its next NC.

32. In the NC6, the ERT did not find a description of national legislative arrangements and administrative procedures that seek to ensure that the implementation of activities under Article 3, paragraph 3, and elected activities under Article 3, paragraph 4, of the Kyoto Protocol also contribute to the conservation of biodiversity and the sustainable use of natural resources. During the review, Cyprus confirmed that in its next NC these reporting elements will be included, but that currently no such arrangements or procedures are in place. The ERT recommends that Cyprus adhere to the intention to include this information in the next NC.

B. Policies and measures, including those in accordance with Article 2 of the Kyoto Protocol

33. Cyprus has provided in its NC6 comprehensive and well-organized information on its package of PaMs implemented, adopted and planned in order to fulfil its commitments under the Convention and its Kyoto Protocol.

1. Policies and measures related to implementation of commitments under the Convention

34. In its NC6, Cyprus reported on its PaMs adopted, implemented and planned in achieving its commitments under the Convention.

35. Cyprus provided information on PaMs by sector and also, with a few exceptions, by gas and a description of the principal PaMs in chapter 4 of the NC6. However, the ERT noted that in the description of PaMs by sector, some mandatory information, such as name and objectives, was not consistently provided for all PaMs. The ERT also noted that in table 5.7 on the effects of implemented and adopted PaMs, the impacts were provided as CO_2 eq and no reference to GHGs affected was provided. During the review, the Party provided estimated GHG mitigation impacts by gas for some PaMs. In addition, the table for the summary of PaMs as required by the UNFCCC reporting guidelines on NCs (para. 17) was not provided for any of the sectors. The ERT recommends that Cyprus include this table for each sector and include all required information on PaMs therein in its next NC.

36. Cyprus included quantitative estimates of the impacts of PaMs by 2020 in chapter 5 of the NC6 and a general explanation across sectors that focussed on long-term changes in chapter 2. However, the ERT considered that the NC6 did not include explicit information on how Cyprus believes its PaMs are modifying longer-term trends in anthropogenic GHG emissions and removals consistent with the objectives of the Convention. During the review, the Party informed the ERT that the PaMs are part of a long-term sustainability strategy which includes energy conversion and an electricity production system, changes in the building structure, changes in the transport system, and waste handling systems. Cyprus

further explained that changes in the infrastructure of the country and social habits will have a longer-term impact on GHG emissions trends. The ERT recommends that Cyprus provide this information in its next NC.

37. Cyprus reported transparent information on how the implementation of PaMs is monitored and evaluated. During the review, Cyprus provided additional information, including information submitted under Article 3(2) of the GHG monitoring mechanism decision of the European Commission. The ERT welcomes this information, which is publicly available on the website of the Department of Environment.[4]

38. In its NC6, Cyprus reported on both costs so far and planned costs for most PaMs in the energy sector. The ERT welcomes this detailed information. During the review, Cyprus provided additional information on the type of financial instruments for a number of energy sector measures that increased the transparency of the reporting. The ERT encourages Cyprus to provide such information for all PaMs, where available, in its next NC. In the NC6, the Party did not include a brief definition of the term 'cost'. During the review, Cyprus clarified that the reported costs include the costs incurred by the Government of Cyprus for the preparation and implementation of the measures. This information added to the transparency of the reporting, and the ERT encourages Cyprus to include this information in its next NC.

39. Cyprus did not report on PaMs that could potentially increase emissions. During the review, Cyprus indicated that no such information is available. The ERT encourages Cyprus to explore ways to collect such information and include it in the next NC.

2. Policy framework and cross-sectoral measures

40. In Cyprus, the key framework and primary legal basis for the climate and energy policy is the EU climate and energy package. It includes the EU ETS, national renewable energy targets and the ESD, which sets a target for Cyprus of a 5 per cent GHG emission reduction compared with 2005 by 2020 for sectors not covered by the EU ETS (excluding LULUCF). Further to this, the 2007 sustainable development strategy provides strategic guidance on overall mitigation actions. EU and national laws promoting the use of renewable energy sources (RES), in particular the national law (No. 112(I)/2013) on the promotion and encouragement of the use of RES, are expected to be very effective. A target of achieving a 13 per cent share of RES of the final energy consumption by 2020 has been set. The use of RES in electricity, heating and cooling, and transport is estimated to deliver 18 per cent of the total national GHG savings of implemented and adopted PaMs by 2020. In combination with the planned introduction of natural gas primarily for electricity generation after 2018, these measures are estimated to deliver 48 per cent of all GHG savings of implemented and adopted PaMs by 2020.

41. According to the NC6, there are three levels of administration in Cyprus: national, prefectural and local. No PaMs are deferred to the prefectural or local levels, but these levels may be responsible for the implementation of PaMs adopted at the national level. Cyprus provided comprehensive information on PaMs at the national level, but limited information on the implementation of PaMs at subnational levels.

42. Table 4 provides a summary of the reported information on the PaMs of Cyprus.

[4] <http://www.moa.gov.cy/moa/environment/environment.nsf/724D802BD314A271C22579410036A4A3/$file/PROJ2013.pdf>.

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

Sectors affected	*List of key policies and measures*	*Estimate of mitigation impact (kt CO_2 eq)*
Policy framework and cross-sectoral measures	EU ETS and ESD	NR
Energy		
Energy supply	Introduction of natural gas	887
Renewable energy	Promotion of RES in electricity production	373
	Promotion of RES in heating and cooling	99
	Promotion of RES in transport	69
Energy efficiency	Promotion of energy efficiency in residential buildings	841
	Promotion of efficient light bulbs	60
Residential and commercial sectors	Promotion of energy savings in companies	45
Transport	Promotion of public transport	77
	Promotion of low-CO_2 vehicles (e.g. vehicle registration fee)	85
Industrial sectors	Promotion of alternative fuels and biomass in the cement industry	16
Agriculture	Promotion of anaerobic digestion	0.06
Waste management	Methane recovery from managed WDS	241
	Management of unmanaged WDS	40

Note: The greenhouse gas reduction estimates given are reductions in carbon dioxide equivalent for 2020.

Abbreviations: ESD = effort-sharing decision, EU ETS = European Union Emissions Trading System, NR = not reported, RES = renewable energy sources, WDS = waste disposal sites.

3. Policies and measures in the energy sector

43. Between 1990 and 2011, GHG emissions from the energy sector increased by 69.4 per cent (2,923.26 kt CO_2 eq), mainly owing to an increase in number of road vehicles and the effect of general growth in economic activity on energy demand. The trend in GHG emissions from fuel combustion showed notable increases in the energy industries (110.2 per cent or 1,951.03 kt CO_2 eq), transport (91.4 per cent or 1,074.52 kt CO_2 eq) and other sectors (244.8 per cent or 450.58 kt CO_2 eq).

44. ***Energy supply***. With regard to the energy supply, the main focus of PaMs is the shift away from oil to natural gas and RES. The shift to the latter is mainly driven by the target of achieving a 13 per cent share of RES in the final energy consumption by 2020, which is enshrined in the EU climate and energy package for Cyprus. The target for RES in transport is set at 10 per cent by 2020.

45. It is foreseen that the introduction of natural gas is to take place from 2018 onwards. During the review, Cyprus clarified that the political decision for the introduction of natural gas has been made and the necessary legal framework for its implementation has been adopted. With this information, the ERT considers the reporting on this measure complete and transparent.

46. However, the ERT considers that there is a lack of transparency regarding which energy supply measures are targeting entities falling under the EU ETS, and how the impacts of PaMs are distributed between the EU ETS and non-emissions trading system (non-ETS) sectors (see para. 81 below).

47. ***Renewable energy sources***. The current use of RES (solar, geothermal, biomass, wind) and the target trajectory is presented in NC6 tables 4.2 and 4.3, respectively. The share of RES in the total gross final energy consumption in Cyprus in 2010 was 6.5 per cent and the target is to increase the share to 13 per cent by 2020. The share of RES in heating and cooling was 16.2 and in electricity production 4.3 per cent, while the targets are 23.5 and 16 per cent by 2020, respectively. Increase in the use of RES is promoted by financial support, information campaigns and legislation. The ERT finds the information reported in the NC6 on PaMs promoting the use of RES complete and transparent.

48. However, the ERT considers that there is a lack of transparency regarding which RES measures are targeting entities falling under the EU ETS, and how the impacts of PaMs are distributed between the EU ETS and non-ETS sectors (see para. 81 below).

49. ***Energy efficiency***. Energy efficiency actions are driven mainly by EU directives, namely 2002/91/EC and 2010/31/EU, and the main PaMs include general energy efficiency measures in residential and tertiary buildings and the promotion of energy-efficient bulbs. The ERT finds the description of measures complete and transparent.

50. ***Residential and commercial sectors***. The main PaMs in the residential sector are related to energy efficiency (see para. 49 above). The main policy or measure for the commercial sector is a grant scheme for energy conservation by companies. The target for energy efficiency for the commercial sector is to achieve electricity savings of 1.3 per cent by 2020. The NC6 also included information on the estimated costs of this measure.

51. ***Transport sector***. Transport emissions increased by 91.4 per cent from 1990 to 2011 and comprise about 50 per cent of emissions occurring in sectors outside the EU ETS in Cyprus. PaMs to reduce transport emissions were implemented starting in 2009 and there are currently two in place: one for the promotion of public transport and one for the promotion of low-CO_2 vehicles.

52. The promotion of public transport concerns the development of mobility master plans and infrastructure development. Enabling legislation has been prepared and amended. The NC6 however did not describe how the target of a 4.4 per cent reduction in fuel consumption by 2020 is to be met. The ERT encourages Cyprus to provide more information on this measure in its next NC.

53. The promotion of low-CO_2 vehicles concerns vehicle registration fees and a road tax. Electric vehicles and vehicles which have emissions lower than 120 g CO_2 per km are exempted from the registration fee; for other vehicles registered after 1 January 2014, the fee is graduated based on CO_2 emissions. This measure is expected to deliver a reduction of CO_2 emissions from road transport of 5 per cent by 2020. Cyprus provided additional information during the review on how the achievement of this target would be calculated. However, the information was not fully transparent and the ERT encourages Cyprus to elaborate on the measure in its next NC.

54. ***Industrial sector***. The main policy or measure related to the industrial sector is on the promotion of biomass and alternative fuels in the cement industry. The target is for 3.8 per cent of energy to be produced from waste by 2020.

4. Policies and measures in other sectors

55. Between 1990 and 2011, GHG emissions from industrial processes, agriculture and waste increased by 7.5 per cent (140.27 kt CO_2 eq) owing to increases in the agriculture and

waste sectors. Emissions from industrial processes decreased (see para. 56 below). Emissions from solvent and other product use are reported as "not estimated".

56. ***Industrial processes***. Between 1990 and 2011, GHG emissions from the industrial processes sector decreased by 4.3 per cent (31.17 kt CO_2 eq), mainly owing to the decrease in CO_2 emissions from the production of mineral products.

57. No PaMs are reported for this sector, except those related to energy consumption in industry.

58. ***Agriculture***. Between 1990 and 2011, GHG emissions from the agriculture sector increased by 7.5 per cent (51.03 kt CO_2 eq), mainly owing to increases in CH_4 and N_2O emissions from manure management and CH_4 emissions from enteric fermentation.

59. In chapter 4.5 of the NC6, Cyprus provided some information on the promotion of anaerobic digestion. During the review, Cyprus provided additional information on the incentives given to encourage the use of anaerobic digestion in the agriculture sector. The ERT welcomes this information and encourages Cyprus to provide further information on this measure in its next NC.

60. ***LULUCF***. The LULUCF sector was a net removal of 76.47 kt CO_2 eq in Cyprus in 2011 and net GHG removals decreased by 62.43 kt CO_2 eq since 1990. The trend was solely driven by emissions and removals in forest land.

61. In the NC6, Cyprus reported that no PaMs are in place or planned for the LULUCF sector. Noting that Cyprus became an Annex I Party recently (in January 2013), the ERT recommends that Cyprus include any relevant information, even on the early stages of the development of PaMs for this sector in its next NC.

62. ***Waste management***. Between 1990 and 2011 GHG emissions from the waste sector increased by 25.6 per cent (120.41 kt CO_2 eq), mainly owing to CH_4 emissions from solid waste disposal.

63. Cyprus reports that the main PaMs in the waste sector are based on the EU landfill directive (1999/31/EC). The most important PaMs are related to the recovery of landfill gas and the management of currently unmanaged waste disposal sites.

5. Policies and measures related to implementation of commitments under the Kyoto Protocol

64. Cyprus reported information on its PaMs in chapter 4 of the NC6, but did not specifically refer to the implementation of its commitments under the Kyoto Protocol. During the review, the Party confirmed that the EU ETS, ESD and related PaMs also aim at emission reductions under the second commitment period of the Kyoto Protocol.

65. The NC6 did not include information on how Cyprus promotes and implements the International Civil Aviation Organization (ICAO)/International Maritime Organization (IMO) decisions to limit emissions from aviation and marine bunker fuels. During the review, Cyprus indicated that it recognizes the value of the action plans of ICAO member States regarding emission reductions towards achieving the global goals agreed at the 37th Session of the ICAO Assembly in 2010. Cyprus submitted its action plan in July 2012. Cyprus further indicated that it shares the view that comprehensive measures such as research and development in emission reduction technologies and the use of low-carbon sustainable alternative fuels are necessary to reduce emissions from aviation. Cyprus indicated during the review that it is implementing the relevant decisions of the IMO to limit emissions from marine bunker fuels by strictly adhering to the provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships. Cyprus also indicated that it promotes and encourages the voluntary monitoring and reporting of CO_2

emissions from ships. The ERT recommends that Cyprus include information on this matter in its next NC.

C. Projections and the total effect of policies and measures

66. In its NC6, Cyprus has reported on three GHG emission projection scenarios up to 2020: 'without measures', 'with measures' and 'with additional measures'.

1. Projections overview, methodology and key assumptions

67. The GHG emission projections provided by Cyprus in the NC6 include a 'with measures', a 'with additional measures' and a 'without measures' scenario until 2020, presented relative to actual inventory data for 1990, 1995, 2000, 2005 and 2010. Projections are presented on a sectoral basis, using the same sectoral categories used in the PaMs section, and on a gas-by-gas basis for the following GHGs: CO_2, CH_4, N_2O and HFCs. The ERT noted that PFC emissions are not reported to occur in Cyprus and that the magnitude of SF_6 emissions is negligible. Projections are also provided in an aggregated format for each sector as well as for a national total, using global warming potential values.

68. The NC6 does not include information required by the UNFCCC reporting guidelines on NCs on emission projections related to fuel sold to ships and aircraft engaged in international transport. During the review, Cyprus informed the ERT that such projections are not available. The ERT recommends that Cyprus provide projections related to fuel sold to ships and aircraft engaged in international transport in its next NC.

69. The NC6 did not include the relevant information on factors and activities for each sector to provide the reader with an understanding of the emission trends for the years 1990 to 2020. The ERT recommends that Cyprus provide such information in its next NC.

70. The 'with measures' projection includes currently implemented and adopted PaMs. The 'with additional measures' projection also includes planned PaMs. However, the NC6 does not transparently explain the nature of the 'without measures' projection, which should exclude all PaMs implemented, adopted or planned after the year chosen as the starting point for this projection. The ERT encourages Cyprus to provide this information in its next NC.

71. The NC6 does not include information on the starting point for the projections. During the review, Cyprus explained that the starting point is the GHG inventory for the year 2012. To improve transparency of reporting, the ERT encourages Cyprus to provide information on the starting point for the projections in its next NC.

72. Cyprus does not provide projections for the indirect GHGs carbon monoxide, nitrogen oxides and non-methane volatile organic compounds or for sulphur oxides. During the review, Cyprus informed the ERT that it plans to provide projections for indirect GHGs in its next NC. The ERT encourages Cyprus to adhere to this plan.

73. The NC6 does not provide sufficient information on models and approaches used for projecting GHG emissions and removals. During the review, Cyprus informed the ERT that no specific model was used for the projections. CO_2 emission projections from the Electricity Authority of Cyprus were used as a starting point for the emissions from electricity production. Emissions from the other sectors and CH_4 and N_2O emissions from the energy sector were estimated using a simple calculation based on the contribution of each sector and gas to the total national GHG emissions. The ERT noted that the NC6 of Cyprus did not provide information about key underlying assumptions and values of variables such as GDP growth, population growth, tax levels and international fuel prices. During the review, Cyprus explained that such assumptions were not used for the

projections. The ERT encourages Cyprus to provide information on models, approaches, key assumptions and variables used in its next NC in order to enhance the transparency of reporting on projections.

2. Results of projections

74. The projected changes in GHG emissions under the baseline scenario, in relation to 1990, and under the 'with measures' and 'with additional measures' scenarios, are an increase of 13.9 per cent, a decrease of 35.4 per cent and a decrease of 43.2 per cent, respectively.

75. The projections under the 'with measures' scenario in the NC6 show a decreasing trend in overall GHG emissions from 2011 to 2020. Total emissions amounted to 9,154.37 kt CO_2 eq in 2011, of which CO_2, CH_4 and N_2O emissions accounted for 7,672.29, 897.55 and 457.90 kt CO_2 eq, respectively. Total GHG emissions are expected to amount to 3,936.78 kt CO_2 eq in 2020, of which CO_2, CH_4 and N_2O emissions are projected to account for 3,105.22, 395.29 and 340.28 kt CO_2 eq, respectively. This represents a reduction in total emissions of 57.0 per cent by 2020 compared with 2011, and reductions in CO_2, CH_4 and N_2O emissions of 59.5, 56.0 and 25.7 per cent, respectively. The level of HFC emissions is expected to decrease from 126.63 kt CO_2 eq in 2011 to 95.99 kt CO_2 eq in 2020. The key results of Cyprus's GHG emission projections under different scenarios are presented in table 5 and the emission trends are illustrated in the figure below.

76. In the 'with measures' scenario, the largest decrease in emissions by 2020 compared with 2011 is expected to occur in the waste sector (71.8 per cent), followed by the energy sector including transport (62.3 per cent), whereas in agriculture and industrial processes, the emissions are expected to decrease by 24.2 per cent each. In the 'with additional measures' scenario the largest decrease in emissions by 2020 compared with 2011 is also expected to occur in the waste sector (78.7 per cent), followed by the energy sector including transport (68.5 per cent), whereas in agriculture and industrial processes, emissions in the 'with additional measures' scenario are equal to those in the 'with measures' scenario. In the 'without measures' scenario it is expected that emissions from all sectors will be about 24 per cent lower in 2020 compared with 2011.

77. Cyprus reports that for the period 2013–2020, EU legislation (i.e. the ESD) provides a country-specific GHG reduction target of 5 per cent for sectors not included in the EU ETS by 2020 compared with the 2005 level. The projected emissions in 2020 were 25.5, 57.7 and 62.9 per cent below the 2005 level under the 'without measures', 'with measures' and 'with additional measures' scenarios, respectively, including both EU ETS and non-ETS sectors. The ERT noted that reporting projected emissions for the sectors included and not included in the EU ETS separately could improve the transparency of information and enable an assessment by the ERT of the Party's progress towards its emission reduction target.

3. Total effect of policies and measures

78. In the NC6, Cyprus presented the expected total effect of implemented and adopted PaMs in accordance with the 'with measures' definition, compared with a situation without such PaMs. Information is presented in terms of GHG emissions avoided or sequestered in 2015 and 2020.

79. The ERT encourages Cyprus to provide information on the effect of PaMs for other years as well, including ex post assessments.

Table 5
Summary of greenhouse gas emission projections for Cyprus

	Greenhouse gas emissions (kt CO_2 eq per year)	*Changes in relation to the 1990 level (%)*
Kyoto Protocol target for the second commitment period (2013–2020)[a]	Not available yet	
Quantified economy-wide emission reduction target under the Convention[b]	Not available yet	
Inventory data 1990[c]	6 090.85	0.0
Inventory data 2011[c]	9 154.37	50.3
Average annual emissions for 2008–2011[c]	9 616.72	57.9
'Without measures' projections for 2020[d]	6 939.33	13.9
'With measures' projections for 2020[d]	3 936.78	–35.4
'With additional measures' projections for 2020[d]	3 457.85	–43.2

Abbreviation: NA = not applicable.

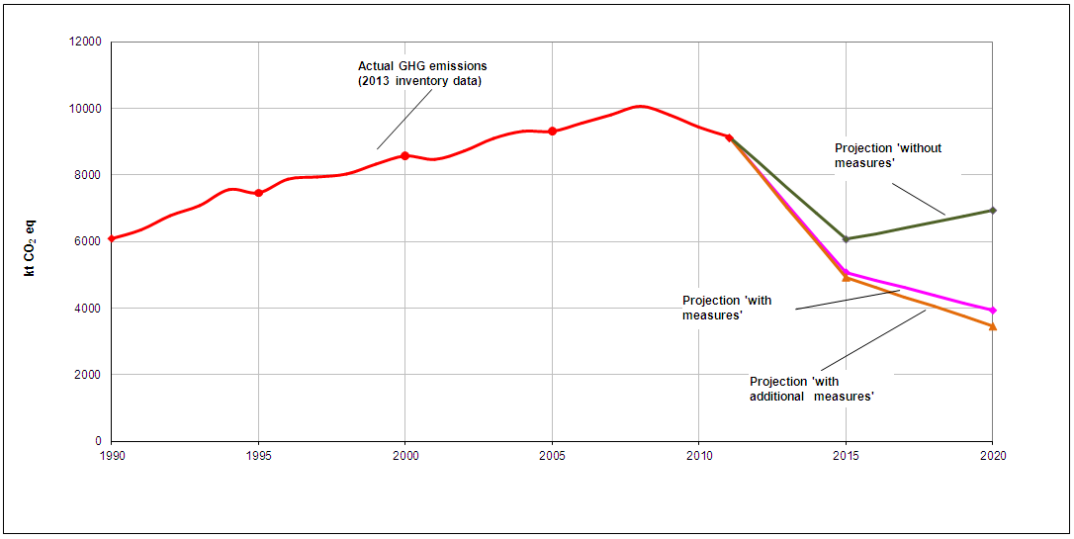
[a] The Kyoto Protocol target for the second commitment period (2013–2020) is a joint target for the European Union and its 28 member States and Iceland. The target is to reduce emissions by 20 per cent by 2020 compared with the base year (1990) level. The target for sectors not covered by the European Union Emissions Trading System is a 5 per cent reduction for Cyprus under the European Union effort-sharing decision compared with 2005.

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

[c] Cyprus's 2013 greenhouse gas inventory submission; the emissions are without land use, land-use change and forestry.

[d] Cyprus's sixth national communication and first biennial report.

Greenhouse gas emission projections



Sources: (1) Data for the years 1990–2011: Cyprus's 2013 greenhouse gas inventory submission; the emissions are without land use, land-use change and forestry; (2) Data for the years 2012–2020: Cyprus' sixth national communication and first biennial report; the emissions are without land use, land-use change and forestry.

Abbreviation: GHG = greenhouse gas.

80. Cyprus reported that the total estimated effect of implemented and adopted PaMs is 979 kt CO_2 eq for 2015 and 2,986 kt CO_2 eq for 2020. According to the information reported in the NC6, PaMs implemented in the energy sector will deliver the largest emission reductions by 2020, followed by PaMs implemented in the waste and transport sectors. The most effective PaMs and drivers behind GHG emission reductions are described in chapter II.B above. Table 6 provides an overview of the total effect of PaMs as reported by Cyprus.

81. The ERT noted that several PaMs have an impact on both emissions included in the EU ETS and those not included. The ERT noted that reporting the effects of PaMs for the EU ETS and non-ETS sectors separately could improve the transparency of information and enable an assessment by the ERT of Cyprus's progress towards its emission reduction target.

82. Cyprus explained in the NC6 that the difference between the 'with measures' and 'with additional measures' projections equals the total effect of planned PaMs, but did not elaborate on the estimated impact of implemented and adopted PaMs. The ERT noted that the effect of implemented and adopted PaMs equals the difference between the 'without measures' and 'with measures' projections for sectors other than energy and transport. During the review, Cyprus informed the ERT that for energy sector measures, the avoided energy consumption due to energy efficiency and energy saving measures was provided by the Energy Service of Cyprus and that the avoided emissions were estimated using emission factors. Cyprus also indicated that all measures are assumed as implemented from 2013 onwards except for the introduction of natural gas (2018 onwards). The ERT recommends that Cyprus provide more detailed information on approaches used in estimating the total effect of PaMs in its next NC in order to enhance the transparency of reporting.

Table 6
Projected effects of planned, implemented and adopted policies and measures in 2020

Sector	*Effect of implemented and adopted measures (kt CO_2 eq)*	*Relative value (% of 1990 emissions)*	*Effect of planned measures (kt CO_2 eq)*	*Relative value (% of 1990 emissions)*
Energy (without transport)	2 543.0	84.0	327.0	11.0
Transport	162.0	14.0	111.0	9.0
Industrial processes	NA	NA	NA	NA
Agriculture	0.06	0.0	0.06	0.0
Land-use change and forestry	NA	NA	NA	NA
Waste management	281.0	60.0	41.0	9.0
Total	**2 986.0**	**49.0**	**479.0**	**8.0**

Source: Cyprus's sixth national communication.

Note: See paragraph 82 for the methods used to estimate the total effect of policies and measures.

Abbreviation: NA = not applicable.

D. Provision of financial resources and technology transfer to developing country Parties

83. Cyprus is not included in Annex II to the Convention and is therefore not obliged to adopt measures and fulfil obligations as defined in Article 4, paragraphs 3, 4 and 5, of the Convention. However, its NC6 did include some relevant information regarding the provision of financial resources. The ERT assessed this information and the findings are reflected in this report. The ERT commends Cyprus for the information provided.

84. In its NC6, Cyprus has indicated what 'new and additional' financial resources it has provided pursuant to Article 4, paragraph 3, of the Convention. During the review, Cyprus provided additional information, elaborating on how the relevant decision by the Council of Ministers (No. 70,987 from 27 September 2010) authorized the Minister of Finance to find new and additional resources to fund climate change projects in developing countries.

85. Cyprus has also provided in the NC6 detailed information on the assistance it has provided to developing country Parties that are particularly vulnerable to the adverse effects of climate change to help them to meet the costs of adaptation to those adverse effects. Furthermore, Cyprus has provided information on financial resources related to the implementation of the Convention. Table 7 summarizes information on financial resources.

Table 7
Summary of information on financial resources for 2010 and 2012
(United States dollars)

	Years of disbursement	
Allocation channel of public financial support	*2010*	*2012*
Contributions through bilateral and regional channels	811 360	811 360

E. Vulnerability assessment, climate change impacts and adaptation measures

86. In its NC6, Cyprus has provided the required information on the expected impacts of climate change in the country and on adaptation options. However, the ERT noted that Cyprus did not provide an outline of the action taken to implement Article 4, paragraph 1(e), of the Convention with regard to adaptation.

87. During the review, Cyprus provided additional information elaborating on actions related to Article 4, paragraph 1(e), of the Convention with regard to adaptation. Cyprus indicated that the development of its Strategy for Adaptation to Climate Change Adverse Impacts was completed in March 2014 within the Life+ CYPADAPT project (LIFE10ENV/CY/000723). The project started in September 2011 and during the project period Cyprus had an opportunity to cooperate and share experiences in the development and implementation of climate change adaptation strategies with European and neighbouring countries, mainly in the Mediterranean basin. Cyprus reported that as a member of the Adaptation Steering Group (under the EU Directorate-General for Climate Action) and the Climate Change Adaptation Working Group under the European Environment Agency it participated in the formulation process of the European Adaptation Strategy and acquired knowledge on adaptation issues. Cyprus also mentioned that it cooperates closely with nearby countries such as Egypt, Israel and Morocco to exchange experience and learn more about the efforts being made by those countries to effectively overcome the negative impacts of climate change.

88. The ERT recommends that Cyprus provide in its next NC an outline of the action taken to implement Article 4.1(e) of the Convention with regard to adaptation. The ERT also encourages Cyprus to use the Intergovernmental Panel on Climate Change *Technical Guidelines for Assessing Climate Change Impacts and Adaptations* and the United Nations Environment Programme *Handbook on Methods for Climate Change Impact Assessment and Adaptation Strategies*. Table 8 summarizes the information on vulnerability and adaptation to climate change presented in the NC6.

Table 8
Summary of information on vulnerability and adaptation to climate change

Vulnerable area	*Examples/comments/adaptation measures reported*
Agriculture and food security	*Vulnerability*: Reduced crop yield/productivity; crop damage due to extreme weather conditions; decrease in soil fertility; decrease in water supply for agriculture; increase in crop pests and diseases *Adaptation*: Mechanical instead of chemical destruction of weeds; organic production; promotion of indigenous and locally adapted plants and animals; application of crop rotation and resistance enhancement of existing plants and animals against pests and diseases; planting tall, fast-growing trees on the southern edge of pastures
Biodiversity and natural ecosystems	*Vulnerability*: Increase in invasive species; alteration in spawning time of fish; change in the composition of local and regional marine ecosystem *Adaptation*: Support for the conservation of natural habitats and wildlife; funding scheme for productive investments in aquaculture; promotion of research on biodiversity and ecosystems; restoration of damaged ecosystems; protection of coastal and marine ecosystems from invasive species; preparation and implementation of the Strategic Plan for Biodiversity; enhancement/strengthening of the seed bank and ex situ conservation
Energy	*Vulnerability*: Increased energy demand for cooling and heating *Adaptation*: Installation of new power plants to satisfy future energy demand; energy efficiency measures undertaken or under way; establishment of the National Energy Efficiency Action Plan, which includes the implementation of measures for improving energy efficiency until 2020; use of solar energy for heating and cooling; introduction of natural gas in the energy supply portfolio to diversify the energy supply mix
Forests	*Vulnerability*: Dieback of tree species, insect attacks and diseases; increase in forest fires; windthrows and storm damage *Adaptation*: Prevention of forest fires; protection of trees against insects attacks and diseases; protection against dieback of tree species; storage of genetic propagation material in forest nurseries
Human health	*Vulnerability*: Deaths and health problems related to heatwaves and high temperatures; deaths and injuries from floods and storms; landslide-related deaths and injuries; vector-borne and rodent-borne diseases *Adaptation*: Prevention of heat mortality and morbidity; control of food-borne and waterborne diseases; management of human health risk from natural hazards; control of air pollution-related diseases; protection of public from infectious diseases
Infrastructure	*Vulnerability:* Damage to water infrastructure (water treatment, wastewater collection and treatment); damage to transport infrastructure; damage to communication network; damage to power supply infrastructure *Adaptation:* Hard coastal defence works, fishing shelters and artificial

Vulnerable area	*Examples/comments/adaptation measures reported*
	reefs (for sea flood protection); dams (for urban flood protection); sustainable urban drainage systems (for urban flood protection)
Water resources	*Vulnerability:* Frequent occurrence of drought; decreased water availability for domestic use and irrigation; deterioration in water quality
	Adaptation: Diversification of the utilization of water resources (reuse, desalination, rainwater harvesting); improvement of water-use efficiency in irrigation; decrease in water consumption; improvement in water conservation; improvement in forecasting, monitoring and alerting systems

89. The NC6 of Cyprus focuses on climate change impacts, vulnerability and adaptation measures. The impacts of climate change were assessed for the agriculture, energy, infrastructure, biodiversity, human health, forestry and water resources sectors. Cyprus reported that the future impacts were assessed as part of the Life+ CYPADAPT project by using the PRECIS (Providing Regional Climates for Impacts Studies) model and six other regional models in the ENSEMBLES prediction system for the future period (2021–2050) against the control period (1961–1990). The future vulnerability of each sector to climate change impacts was assessed in terms of its sensitivity, exposure and adaptive capacity using the available quantitative and qualitative data for Cyprus and the climate projections for the period 2021–2050. The NC6 of Cyprus also reported on the socio-economic and ecological impacts of climate change. The key socio-economic impacts reported are problems in human health and safety, a decline in agricultural productivity, damage to infrastructure and an increase in energy demand. With regard to ecological impacts, the NC reported forest damage, loss of biodiversity, drought and loss of soil fertility.

F. Research and systematic observation

90. Cyprus has provided information on its actions relating to research and systematic observation and addressed both domestic and international activities, including the Global Climate Observing System (GCOS). Furthermore, Cyprus has provided a summary of information on GCOS activities.

91. Cyprus did not provide the following reporting element required by the UNFCCC reporting guidelines on NCs: actions taken to support related capacity-building in developing countries. The ERT recommends that Cyprus report on its support for capacity-building in developing countries related to research and systematic observation in its next NC.

92. To enhance transparency, the ERT encourages Cyprus to include the following tables from the UNFCCC reporting guidelines on global climate change observing systems (chapter III of FCCC/CP/1999/7) in its next NC: table 1: Participation in the global atmospheric observing systems; table 2: Participation in the global oceanographic observing systems; and table 3: Participation in the global terrestrial observing systems.

93. Cyprus established the Research Promotion Foundation in 1996 to promote the development of scientific and technological research in the country. The National Research Council is responsible for adopting long-term strategies in research and innovation. The Cyprus Scientific Council and the National Council for Research and Innovation are the main bodies to formulate research strategy proposals. Cyprus has also made research a key priority area in its National Strategic Development Plan (2007–2013) and developed guidelines for research and development policy.

94. Cyprus is undertaking several research activities in climate change modelling and monitoring. Some of these research activities study the extreme changes in the future climate in Cyprus and surrounding areas. These include AGWATER (Options for Sustainable Agricultural Production and Water Use in Cyprus Under Global Change), COMBINE (Comprehensive Modeling of the Earth System for Better Climate Prediction and Projection), the Cyprus Ionospheric Forecasting Service and GROOM (Gliders for Research, Ocean Observation and Management). At the international level, Cyprus participates in all EU research-related programmes such as the EU framework programmes, the European Science Foundation Programme and EUREKA. Furthermore, Cyprus has signed bilateral agreements in science and research with Cuba, Egypt, France, Greece, Italy, Romania, Slovenia, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

95. Cyprus is taking action to support research and systematic observation. The key initiatives are as follows: increase in funding for research and systematic observation from EUR 89 million in 2011 to EUR 140 million in 2020; the development of the Copernicus Climate Change Service to provide information to increase the knowledge base that supports adaptation and mitigation policies; and technical cooperation between Cyprus and the European Space Agency (ESA). In addition to these actions, Cyprus has taken steps to develop its human resources in the area of research; its research infrastructure; and its international networking and cooperation.

96. Cyprus reported in the NC6 that it participates in GCOS in atmospheric observation, oceanic observation, terrestrial observation and satellite observation. A number of institutions are involved in Cyprus's global climate observation system. One of them is the Department of Meteorology (in the MANRE), which is responsible for issues relating to the weather and climate. Cyprus reported that its climatology section operates a dense network of meteorological stations: 143 rainfall stations, 22 climatological stations, 3 synoptic stations, 1 upper air station, 40 automatic stations, 2 stations measuring ultraviolet radiation and 17 radiation stations. The activities undertaken by Cyprus under its terrestrial observation programme include the monitoring of surface water quality and quantity and the health of the forest ecosystem. As part of its satellite observation activities, Cyprus participates in the Global Monitoring for Environment and Security programme, which promotes, among other things, information-sharing and space-related observations. Cyprus has also signed a cooperation agreement with ESA.

G. Education, training and public awareness

97. In the NC6, Cyprus has provided information on its actions relating to education, training and public awareness at both the domestic and international level. The NC6 of Cyprus provides extensive information on policies (on education, training and public awareness), training programmes, public information campaigns, resource centres, the involvement of non-governmental organizations (NGOs) and international cooperation.

98. During the review, Cyprus provided additional information which indicated that the Cyprus Pedagogical Institute of the Ministry of Education and Culture collaborates with the Department of Environment in the preparation of education programmes for schools in Cyprus. The educational programmes implemented are assessed and revised through this collaboration when necessary. Cyprus further indicated during the review that there is no assessment of public information campaigns to determine their effectiveness other than discussions held with the organizers on the success of the events or programmes. The ERT considers that the inclusion of information on the monitoring and evaluation of environmental education, training and public awareness programmes in Cyprus's next NC could increase transparency of the reporting.

99. Cyprus reported in the NC6 that formal environmental education is carried out at the primary, secondary and tertiary levels of the Cypriot education system. Informal environmental education and public awareness-raising are also carried out through the Network of Environmental Education Centres operated by the Ministry of Education and Culture. Cyprus reported that the Department of Environment, the Ministry of Education and Culture, the Cyprus Energy Agency, the Department of Forests as well as universities and other bodies are involved in environmental education, training and awareness-raising. Public access to environmental information is enhanced through the use of the websites of relevant ministries and agencies. At the international level, the Party reported that the Cyprus Energy Agency participates in more than 20 European projects. Two of these projects are the Surpassing Energy Targets through Efficient Public Buildings Project, which is aimed at improving energy efficiency in publicly owned and managed buildings through improved public policies, and the Euronet 50/50 Project, which focusses on the energy saving potentials of schools. In addition, the Department of Environment participates in international campaigns such as "A World You Like", which is a European communication campaign that shows how climate action can increase public welfare and bring economic benefits.

100. The NC6 reported that the Government of Cyprus gives high priority to public consultation and awareness. Draft legislation that is developed in Cyprus on climate change, energy and environmental issues is subjected to public consultation before being adopted. Cyprus provided information on the involvement of several institutions such as universities, ministries and agencies in activities relating to policy, education and public awareness. The universities in Cyprus develop and carry out undergraduate and postgraduate programmes in the areas of climate change, climate change impacts and mitigation. The Ministry of Education and Culture, in collaboration with the environmental education centres, organizes training seminars for teachers on environmental education and sustainable development. It was reported in the NC6 that the Cyprus Energy Agency undertakes public education and awareness-raising programmes by giving educational presentations in schools on renewable energy, energy efficiency and environmental protection. The NC6 mentioned that NGOs are involved in environmental campaigns in Cyprus. The key public awareness campaigns reported in the NC6 are the distribution of posters on energy saving as well as environmental documentaries and radio and television programmes to discuss environmental issues.

III. Summary of reviewed supplementary information under the Kyoto Protocol

101. Cyprus did not become an Annex I Party (as defined under Article 1, paragraph 7, of the Kyoto Protocol) until 9 January 2013, which is during the second commitment period of the Kyoto Protocol. The ERT noted that the NC6 reporting covers a period including only a part of 2013, and therefore the scope of reporting under Article 7, paragraph 2, of the Kyoto Protocol would be limited. However, in the NC6 and during the review, Cyprus reported some information regarding most of the reporting elements under Article 7, paragraph 2.

102. The supplementary information reported is located in different sections of the NC6. Table 9 provides an overview of supplementary information under Article 7, paragraph 2, of the Kyoto Protocol as well as references to the NC6 chapters in which this information is provided.

103. In the NC6, Cyprus has not reported the following elements of the supplementary information required under Article 7, paragraph 2, of the Kyoto Protocol: supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol; and identification of steps taken to promote and/or implement ICAO/IMO decisions in order to

limit or to reduce GHG emissions not included in the Montreal Protocol from aviation and marine bunker fuels. Cyprus also did not explicitly report on the domestic and regional programmes and/or legislative arrangements and enforcement and administrative procedures established pursuant to the implementation of the Kyoto Protocol. During the review, the Party provided further information on the promotion and implementation of ICAO/IMO decisions and on the domestic and regional programmes and/or legislative arrangements. The technical assessment of the information reported under Article 7, paragraph 2, of the Kyoto Protocol is contained in the relevant sections of this report. The ERT recommends that Cyprus report all the relevant supplementary information under Article 7, paragraph 2, of the Kyoto Protocol in its next NC.

Table 9
Overview of supplementary information under Article 7, paragraph 2, of the Kyoto Protocol

Supplementary information	*Reference to the sixth national communication*
National registry	Chapter 3.4
National system	Chapter 3.3
Supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17	Not reported
Policies and measures in accordance with Article 2	Chapter 4
Domestic and regional programmes and/or legislative arrangements and enforcement and administrative procedures	Not reported
Information under Article 10	Chapters 4, 7, 8 and 9
Financial resources	Not applicable

Note: Reporting on financial resources under the Kyoto Protocol is relevant for developed country Parties and other developed Parties that are included in Annex II to the Convention (Annex II Parties). As Cyprus is not an Annex II Party, it does not have an obligation to provide information on financial resources under Article 11 of the Kyoto Protocol, including on 'new and additional' resources.

IV. Conclusions and recommendations

104. The ERT conducted a technical review of the information reported in the NC6 of Cyprus according to the UNFCCC reporting guidelines on NCs. The ERT concludes that the NC6 provides a good overview of the national climate policy of Cyprus. The ERT noted that Cyprus did not become an Annex I Party (as defined under Article 1, paragraph 7, of the Kyoto Protocol) until 9 January 2013, which is during the second commitment period of the Kyoto Protocol. The ERT further noted that the NC6 reporting covers a period including only a part of 2013, and therefore the scope of reporting under Article 7, paragraph 2, of the Kyoto Protocol would be limited. However, in the NC6 and during the review, Cyprus reported some relevant information regarding the reporting elements under Article 7, paragraph 2, and the relevant findings of the ERT are included in this report. During the review, Cyprus provided additional information on national circumstances, PaMs, projections, financial support, public education and awareness-raising programmes, the implementation of ICAO/IMO decisions and its preparations for the complete reporting of Kyoto Protocol elements in its next NC.

105. Cyprus's emissions for 2011 were estimated to be 50.3 per cent above its 1990 level excluding LULUCF and 52.5 per cent above including LULUCF. The main drivers of the

overall increase in emissions were increased electricity production and increased energy consumption in the residential and transport sectors.

106. In the NC6, Cyprus presents GHG projections for the period from 1990 to 2020. Three scenarios are included: baseline ('without measures'); 'with measures'; and 'with additional measures'. The projected changes in GHG emissions under the baseline scenario, in relation to 1990, and under the 'with measures' and 'with additional measures' scenarios, are an increase of 13.9 per cent, a decrease of 35.4 per cent and a decrease of 43.2 per cent, respectively.

107. Under the Convention, Cyprus made a commitment to contribute to the achievement of the joint EU economy-wide emission reduction target of 20 per cent of GHG emissions compared with the 1990 level by 2020. The EU ETS sector has an EU-wide emission cap and the ESD sets Cyprus a 5 per cent reduction target for GHG emissions outside EU ETS (excluding LULUCF) by 2020 compared with 2005. In 2011, the emissions were estimated to be 1.7 per cent below the 2005 level. The projected emissions in 2020 were 25.5, 57.7 and 62.9 per cent below the 2005 level under the 'without measures', 'with measures' and 'with additional measures' scenarios, respectively, including both EU ETS and non-ETS sectors. The ERT noted that reporting projected emissions for the EU ETS and non-ETS sectors separately could improve the transparency of information and enable an assessment by the ERT of the Party's progress towards its emission reduction target.

108. In the NC6, Cyprus provided well-structured information on PaMs in relation to its target. The majority of emission reductions by 2020 are expected to be achieved through the increased use of renewable energy and the introduction of natural gas. Owing to the recent change of status of Cyprus to an Annex I Party, information in relation to institutional arrangements for the second commitment period under the Kyoto Protocol was generally not provided in the NC6, but some information was provided during the review.

109. Cyprus is not included in Annex II to the Convention and is therefore not obliged to adopt measures and fulfil obligations as defined in Article 4, paragraphs 3, 4 and 5, of the Convention. However, its NC6 did include some relevant information regarding the provision of financial resources. The ERT commends Cyprus for the information provided.

110. In the NC6, Cyprus reported on the observed and projected impacts of climate change, vulnerability and actions taken to adapt to climate change. Cyprus indicated that the key sectors vulnerable to climate change include: energy, forestry, health, infrastructure and biodiversity. The NC6 provides the sector-specific adaptation measures and actions being implemented at both the national and the EU level. Cyprus, however, did not provide in the NC6 information on its actions regarding cooperation with other countries on adaptation. During the review, Cyprus provided some information on this.

111. In the NC6, Cyprus provided comprehensive information on its education, training and public awareness activities at both the national and international levels. Formal education on climate change in Cyprus is undertaken at the primary, secondary and tertiary levels. Cyprus is also involved in a number of international public awareness programmes.

112. The NC6 provides information on Cyprus's research and systematic observation activities and programmes at both the domestic and international level. Cyprus has established the Research Promotion Foundation and is increasing its funding for research. Cyprus did not report on actions regarding support for capacity-building in developing countries in the area of research and systematic observation.

113. In the course of the review, the ERT formulated several recommendations relating to the completeness and transparency of Cyprus's reporting under the Convention. The key

recommendations[5] are that Cyprus:

(a) Improve completeness of reporting by including in the next NC the following information:

(i) GHG inventory summary tables, including trend tables in CRF format;

(ii) Information on each policy or measure by sector (including LULUCF) and gas, including the table mentioned in paragraph 35 above;

(iii) Information on how the Party believes its PaMs are modifying longer-term trends in anthropogenic GHG emissions and removals, consistent with the objective of the Convention;

(iv) Emission projections related to fuel sold to ships and aircraft engaged in international transport;

(v) Information on factors and activities for each sector to provide the reader with an understanding of the emission trends for the years 1990 to 2020;

(vi) Outline of the action taken to implement Article 4.1(e) of the Convention with regard to adaptation;

(vii) Actions taken to support research and systematic observation related capacity-building in developing countries;

(b) Improve the transparency of reporting by including in the next NC:

(i) More information on its national circumstances and how national circumstances and changes in national circumstances affect GHG emissions and removals over time;

(ii) More detailed information on approaches used in estimating the total effect of PaMs.

114. Noting that Cyprus did not become an Annex I Party (as defined under Article 1, paragraph 7, of the Kyoto Protocol) until 9 January 2013, the ERT recommends that Cyprus report in its next NC on all mandatory reporting elements under Article 7, paragraph 2, of the Kyoto Protocol. In particular, the ERT recommends that Cyprus, in the next NC, improve its reporting by:

(a) Including, in the description of its national system, all required reporting elements and further information on its ad hoc committee of experts and on the sectoral data sources;

(b) Including, in the description of its national registry, all mandatory reporting elements;

(c) Reporting explicitly on the legislative arrangements under the Kyoto Protocol, including on the EU ETS and ESD;

(d) Reporting on any provisions for making information on legislative arrangements and enforcement and administrative procedures established pursuant to the implementation of the Kyoto Protocol publicly accessible;

(e) Including information on any national legislative arrangements and administrative procedures regarding activities under Article 3, paragraph 3, and any elected activities under Article 3, paragraph 4, and how these arrangements and procedures seek to ensure that the implementation of activities under Article 3, paragraph 3, and any elected

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

activities under Article 3, paragraph 4, also contribute to the conservation of biodiversity and sustainable use of natural resources;

(f) Including information, in line with information provided during the review, on how the Party implements and promotes the decisions of ICAO and IMO.

V. Questions of implementation

115. During the review, the ERT assessed the NC6, with regard to timeliness, completeness, transparency and adherence to the reporting guidelines on NCs. The ERT also reviewed the supplementary information provided under Article 7, paragraph 2, of the Kyoto Protocol, taking into account that Cyprus did not become an Annex I Party (as defined under Article 1, paragraph 7, of the Kyoto Protocol) until 9 January 2013. No question of implementation was raised by the ERT during the review.

Annex

Documents and information used during the review

A. Reference documents

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

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

"Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol". Decision 15/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=54>.

"Guidelines for review under Article 8 of the Kyoto Protocol". Decision 22/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a03.pdf#page=51>.

"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 23/CP.19. Available at <http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=20>.

Sixth national communication of Cyprus. Available at <http://unfccc.int/files/national_reports/annex_i_natcom/submitted_natcom/application/pdf/cyp_nc6%5B1%5D.pdf>.

First biennial report of Cyprus. Available at <http://unfccc.int/files/national_reports/annex_i_natcom/submitted_natcom/application/pdf/cyp_nc6%5B1%5D.pdf>.

2013 GHG inventory submission of Cyprus. Available at <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php>.

2014 GHG inventory submission of Cyprus. Available at <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php>.

B. Additional information provided by the Party

Responses to questions during the review were received from Ms. Nicoletta Kythreotou (Ministry of Agriculture, Natural Resources and Environment), including additional material on policies and measures, greenhouse gas projections, the national registry and recent climate policy developments in Cyprus.