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## Summary report on the technical analysis of the first biennial update report of Chile submitted on 10 December 2014

In accordance with decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention (non-Annex I Parties), consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report (BUR) by December 2014. The least developed country Parties and small island developing States may submit BURs at their discretion.

Further, in accordance with paragraph 58(a) of the same decision, the first round of international consultation and analysis (ICA) will be conducted for non-Annex I Parties, commencing within six months of the submission of their first BURs. The process of ICA includes two steps: the technical analysis of the submitted BURs, followed by a workshop on the facilitative sharing of views under the Subsidiary Body for Implementation.

This summary report presents the results of the technical analysis of the first BUR of Chile undertaken by a team of technical experts in accordance with the modalities and procedures contained in the annex to decision 20/CP.19.

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## **I. Introduction and process overview**

### **A. Introduction**

1. In accordance with decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention (non-Annex I Parties), consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report (BUR) by December 2014. The least developed country Parties and small island developing States may submit BURs at their discretion. Further, in accordance with paragraph 58(a) of the same decision, the first round of international consultation and analysis (ICA) will be conducted for non-Annex I Parties commencing within six months of the submission of their first BURs. The process of ICA includes two steps: the technical analysis of the submitted BURs, resulting in a summary report for each BUR analysed, followed by a workshop on the facilitative sharing of views under the Subsidiary Body for Implementation.

2. This summary report presents the results of the technical analysis of the first BUR of Chile undertaken by a team of technical experts (TTE) in accordance with the provisions on the composition, modalities and procedures of the TTE under ICA contained in the annex to decision 20/CP.19.

### **B. Process overview**

3. Chile submitted its first BUR on 10 December 2014.

4. The technical analysis of the BUR took place from 18 to 22 May 2015 in Bonn, Germany, and was undertaken by the following TTE drawn from the UNFCCC roster of experts on the basis of the criteria defined in decision 20/CP.19, annex, paragraphs 2–6: Ms. Estefania Ardila Robles (Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention member from Colombia), Ms. Diana Barba (Colombia), Ms. Mausami Desai (United States of America), Mr. Cristobal Felix Diaz Morejon (Cuba), Ms. Thelma Krug (Brazil) and Ms. Maria Jose Lopez (Belgium). Ms. Ardila Robles and Ms. Desai were the co-leads. Ms. Alma Jean and Ms. Ting Li (secretariat) provided administrative support to the TTE.

5. During the technical analysis, in addition to the written exchange between the TTE and Chile, through the secretariat, to provide technical clarifications on the information reported in the BUR, the TTE and Chile also engaged in discussion via teleconferencing, primarily to reach a common understanding on the identification of the capacity-building needs. Following the technical analysis of the BUR, the TTE prepared and shared a draft summary report with Chile on 5 August 2015 for its review and comments. Chile, in turn, provided its feedback on the draft summary report on 6 October 2015.

6. The TTE responded to and incorporated the comments referred to in paragraph 5 above from Chile and finalized, in consultation with Chile, the summary report on 26 November 2015.

## **II. Technical analysis of information reported in the biennial update report**

### **A. Scope of the technical analysis**

7. The scope of the technical analysis is outlined in decision 20/CP.19, annex, paragraph 15, according to which the technical analysis aims to, without engaging in a discussion on the appropriateness of these actions, increase transparency of mitigation actions and their effects, and shall entail the following:

(a) Identification of the extent to which the elements of information listed in the ICA guidelines contained in decision 2/CP.17, annex IV, paragraph 3(a), are included in the BUR of the Party concerned (see chapter II.B);

(b) A technical analysis of the information contained in the BUR, specified in the “UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention” (hereinafter referred to as the UNFCCC reporting guidelines on BURs) contained in annex III to decision 2/CP.17, and any additional technical information provided by the Party concerned (see chapter II.C);

(c) Identification of, in consultation with the Party concerned, capacity-building needs related to the facilitation of reporting in accordance with annex III to decision 2/CP.17 and to the participation in ICA in accordance with annex IV to decision 2/CP.17, taking into account Article 4, paragraph 3, of the Convention (see chapter II.D).

8. The remainder of this chapter presents the results of each of the three parts of the technical analysis of Chile’s BUR outlined in paragraph 7 above.

### **B. Overview of the elements of information reported**

9. The elements of information referred to in paragraph 7(a) above include: the national greenhouse gas (GHG) inventory report; mitigation actions, including a description of such actions, an analysis of their impacts and the associated methodologies and assumptions, and the progress made in their implementation; information on domestic measurement, reporting and verification (MRV); and support received.

10. Further, in accordance with decision 20/CP.19, annex, paragraph 15(a), in undertaking the technical analysis of the submitted BUR, the TTE shall identify the extent to which the elements of information listed in the guidelines contained in decision 2/CP.17, annex IV, paragraph 3(a), are included in the BUR of the Party concerned. The results of this analysis are presented in tables 1, 2 and 3 below.

#### **1. National greenhouse gas inventory**

11. The parts of the UNFCCC reporting guidelines on BURs on reporting information on GHG emissions by sources and removals by sinks in BURs are contained in decision 2/CP.17, paragraph 41(g), and annex III, paragraphs 3–10, of the same decision. Further, as per decision 2/CP.17, annex III, paragraph 3, non-Annex I Parties should submit updates of national GHG inventories according to paragraphs 8–24 of the “Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention” as contained in the annex to decision 17/CP.8. The scope of the updates on national GHG inventories should be consistent with capacities, time constraints, data availabilities and the level of support provided by developed country Parties for biennial update reporting.

12. Table 1 below presents results of the identification of the extent to which the elements of information on GHGs are included in the first BUR of Chile in accordance with the relevant parts of the UNFCCC reporting guidelines on BURs.

Table 1

**Identification of the extent to which the elements of information on greenhouse gases are included in the first biennial update report of Chile**

<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly/No</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, paragraph 41(g)	The first BUR shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available	Yes	The inventory information is provided for years up to 2010, and the year of submission is 2014
Decision 2/CP.17, annex III, paragraph 5	The updates of the sections on the national inventories of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol should contain updated data on activity levels based on the best information available using the Revised 1996 IPCC Guidelines for National GHG Inventories, the IPCC good practice guidance and Uncertainty Management in National GHG Inventories, and the IPCC good practice guidance for LULUCF; any change to the emission factor may be made in the subsequent full national communication	Yes	The Party has used updated data on activity levels based on the best information available using the 2006 IPCC Guidelines
Decision 2/CP.17, annex III, paragraph 9	The inventory section of the BUR should consist of a national inventory report as a summary or as an update of the information contained in decision 17/CP.8, annex, chapter III (National greenhouse gas inventories), including:	Yes	The Party provides a detailed update of the information, using the 2006 IPCC Guidelines for the first time
	<ul style="list-style-type: none"> <li>Table 1 (National greenhouse gas inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol and greenhouse gas precursors)</li> </ul>	Yes	The information is reported in chapter II, table 6, of the BUR
	<ul style="list-style-type: none"> <li>Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF<sub>6</sub>)</li> </ul>	Yes	The information is reported in chapter II, table 7, of the BUR
Decision 2/CP.17, annex III, paragraph 6	Non-Annex I Parties are encouraged to include, as appropriate and to the extent that capacities permit, in the inventory section of the BUR:		
	<ul style="list-style-type: none"> <li>Tables included in annex 3A.2 to chapter 3 of the IPCC good practice guidance for LULUCF</li> <li>The sectoral report tables annexed to the Revised 1996 IPCC Guidelines</li> </ul>	NA	The Party did not provide in the BUR the tables included in annex 3A.2 to chapter 3 of the IPCC good practice guidance for LULUCF  The Party did not provide in the BUR the sectoral report tables annexed to the Revised 1996 IPCC Guidelines
Decision 2/CP.17, annex III, paragraph 7	Each non-Annex I Party is encouraged to provide a consistent time series back to the years reported in the previous national communications	Yes	The Party reported consistent time series from 1990 to 2010

<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly/No</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 8	Non-Annex I Parties that have previously reported on their national GHG inventories contained in their national communications are encouraged to submit summary information tables of inventories for previous submission years (e.g. for 1994 and 2000)	Yes	Summary tables are provided in annex 3 to the BUR for the years 1994 and 2000
Decision 2/CP.17, annex III, paragraph 10	Additional or supporting information, including sector-specific information, may be supplied in a technical annex	Yes	Supporting information is provided in annexes 1, 2 and 3 to the BUR
Decision 17/CP.8, annex, paragraph 13	Non-Annex I Parties are encouraged to describe procedures and arrangements undertaken to collect and archive data for the preparation of national GHG inventories, as well as efforts to make this a continuous process, including information on the role of the institutions involved	Yes	The Party provides information in the BUR regarding the institutional arrangements for the elaboration of the national inventories and the BURs
Decision 17/CP.8, annex, paragraph 14	Each non-Annex I Party shall, as appropriate and to the extent possible, provide in its national inventory, on a gas-by-gas basis and in units of mass, estimates of anthropogenic emissions of the following gases by sources and removals by sinks:		
	<ul style="list-style-type: none"> <li>• CO<sub>2</sub></li> </ul>	Yes	Estimates in units of mass are provided in chapter II, table 6, of the BUR
	<ul style="list-style-type: none"> <li>• CH<sub>4</sub></li> </ul>	Yes	Estimates in units of mass are provided in chapter II, table 6, of the BUR
	<ul style="list-style-type: none"> <li>• N<sub>2</sub>O</li> </ul>	Yes	Estimates in units of mass are provided in chapter II, table 6, of the BUR
Decision 17/CP.8, annex, paragraph 15	Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of HFCs, PFCs and SF <sub>6</sub>	Partly	Emissions from SF <sub>6</sub> either were not estimated due to a lack of activity data or did not occur
Decision 17/CP.8, annex, paragraph 19	Non-Annex I Parties should, to the extent possible, and if disaggregated data are available, report emissions from international aviation and marine bunker fuels separately in their inventories:		
	<ul style="list-style-type: none"> <li>• International aviation</li> </ul>	Yes	Estimates are provided in annex 3 to the BUR
	<ul style="list-style-type: none"> <li>• Marine bunker fuels</li> </ul>	Yes	Estimates are provided in annex 3 to the BUR
Decision 17/CP.8, annex, paragraph 16	Non-Annex I Parties are encouraged, as appropriate, to report on anthropogenic emissions by sources of other GHGs such as:		
	<ul style="list-style-type: none"> <li>• CO</li> </ul>	Partly	CO emissions were not estimated for the industrial processes and waste sectors
	<ul style="list-style-type: none"> <li>• NO<sub>x</sub></li> </ul>	Partly	NO <sub>x</sub> emissions were not estimated for the industrial processes and waste sectors
	<ul style="list-style-type: none"> <li>• NMVOCs</li> </ul>	Partly	NMVOC emissions were not

<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly/No</i>	<i>Comments on the extent of the information provided</i>
			estimated for the industrial processes and waste sectors
Decision 17/CP.8, annex, paragraph 17	Other gases not controlled by the Montreal Protocol, such as SO <sub>x</sub> , included in the Revised 1996 IPCC Guidelines, may be included at the discretion of the Parties	Partly	The Party only provides estimates for SO <sub>2</sub> emissions for the energy sector in chapter II, table 6, of the BUR
Decision 17/CP.8, annex, paragraph 21	<p>Non-Annex I Parties are encouraged to provide information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol, including a brief explanation of the sources of emission factors and activity data. If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe the source and/or sink categories, methodologies, emission factors and activity data used in their estimation of emissions, as appropriate. Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building:</p> <ul style="list-style-type: none"> <li>• Information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol</li> <li>• Explanation of the sources of emission factors</li> <li>• Explanation of the sources of activity data</li> <li>• If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe: <ul style="list-style-type: none"> <li>○ Source and/or sink categories</li> <li>○ Methodologies</li> <li>○ Emission factors</li> <li>○ Activity data</li> </ul> </li> <li>• Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building</li> </ul>	<p>Partly</p> <p>Yes</p> <p>Yes</p> <p>NA</p> <p>Yes</p>	<p>The Party mentions the use of the 2006 IPCC Guidelines methodologies, but is not explicit on which equation has been applied. The Party also provides in chapter II, table 2, of the BUR the level of reporting (tier level) and use of default values</p> <p>The Party has reported the sources of emission factors</p> <p>The Party has reported the sources of activity data</p> <p>The Party did not report any country-specific sources or sinks</p> <p>The Party has identified such areas</p>
Decision 17/CP.8, annex, paragraph 24	Non-Annex I Parties are encouraged to provide information on the level of uncertainty associated with inventory data and their underlying assumptions, and to describe the methodologies used, if any, for		

<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly/No</i>	<i>Comments on the extent of the information provided</i>
	estimating these uncertainties:		
	<ul style="list-style-type: none"> <li>Level of uncertainty associated with inventory data</li> </ul>	Partly	The Party identifies the main sources of uncertainties for all sectors (and categories); however, no quantitative data are provided During the teleconference, the Party indicated that uncertainty was calculated but not included in the BUR
	<ul style="list-style-type: none"> <li>Underlying assumptions</li> </ul>	Yes	Main sources are identified
	<ul style="list-style-type: none"> <li>Methodologies used, if any, for estimating these uncertainties</li> </ul>	Yes	Method 1 from the 2006 IPCC Guidelines was used

*Abbreviations:* BUR = biennial update report, GHG = greenhouse gas, IPCC = Intergovernmental Panel on Climate Change, IPCC good practice guidance = *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, IPCC good practice guidance for LULUCF = *Good Practice Guidance for Land Use, Land-Use Change and Forestry*, NA = not applicable, NMVOC = non-methane volatile organic compound, Revised 1996 IPCC Guidelines = *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*, 2006 IPCC Guidelines = *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

## 2. Mitigation actions and their effects

13. The parts of the UNFCCC reporting guidelines on BURs on reporting information on mitigation actions in the BUR are contained in decision 2/CP.17, annex III, paragraphs 11–13.

14. Chile did report mitigation actions in its first BUR in a tabular format, including those still in the planning or conceptual stages. Chile also describes a number of measures related to mitigation actions. The TTE acknowledges the information on these other related measures, but notes that the analysis presented here focuses on the information on the nine mitigation actions highlighted in chapter III, section 5, and annex 4 to the BUR.

15. Table 2 below presents results of the identification of the extent to which the elements of information on mitigation actions are included in the first BUR of Chile in accordance with the relevant parts of the UNFCCC reporting guidelines on BURs.

Table 2

### Identification of the extent to which the elements of information on mitigation actions are included in the first biennial update report of Chile

<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly/No</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 12	For each mitigation action or groups of mitigation actions including, as appropriate, those listed in document FCCC/AWGLCA/2011/INF.1, developing country Parties shall provide the following information to the extent possible:		
(a)	Name and description of the mitigation action, including information on the nature of the action, coverage (i.e. sectors and gases), quantitative goals and progress indicators	Partly	Chapter III, sections 4–7, and annex 4 to the BUR are comprehensive and describe NAMAs, in addition to measures related to these mitigation actions (actions and portfolios of actions)



<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly /No</i>	<i>Comments on the extent of the information provided</i>
			considered for low carbon development, and international market mechanisms) Progress indicators are not consistently provided for the other sectoral measures described in chapter III, section 4, of the BUR
(b)	Information on methodologies and assumptions: <ul style="list-style-type: none"> <li>Methodologies</li> </ul>	Partly	The methodologies are partially described in chapter III, section 5 tables 6 and 7, and annex 4 to the BUR For NAMAs, most methodologies are described as expected reduction estimations, with the exception of the Chilean Forestry NAMA, where some accounting frameworks are indicated. The methods chosen for calculation are not provided Methodologies are not provided for the other sectoral measures related to mitigation
	<ul style="list-style-type: none"> <li>Assumptions</li> </ul>	Partly	For NAMAs, the assumptions are partially provided in chapter III, section 5, tables 6 and 7, and annex 4 to the BUR. Key parameters such as emission factors are not consistently presented for NAMAs Methodologies are not provided for the other sectoral measures related to mitigation
(c)	Objectives of the action and steps taken or envisaged to achieve that action: <ul style="list-style-type: none"> <li>Objectives of the action</li> </ul>	Yes	The objectives of mitigation actions are provided in chapter III, sections 4 and 5, tables 6 and 7, and annex 4 to the BUR
	<ul style="list-style-type: none"> <li>Steps taken or envisaged to achieve that action</li> </ul>	Yes	The steps taken or envisaged to achieve mitigation actions are identified under the planning to comply with reduction goal and progress columns in chapter III, section 5, table 6, of the BUR
(d)	Information on the progress of implementation of the		

<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly /No</i>	<i>Comments on the extent of the information provided</i>
	mitigation actions and the underlying steps taken or envisaged, and the results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible: <ul style="list-style-type: none"> <li>• Progress of implementation of the mitigation actions</li> </ul>	Yes	The progress of implementation for some mitigation actions (as appropriate and applicable) is described in chapter III, sections 4 and 5, tables 6 and 7, and annex 4 to the BUR. Chile also reports its progress on formulation of mitigation actions that have not started the implementation phase. The TTE notes that most other measures were in progress
	<ul style="list-style-type: none"> <li>• Underlying steps taken or envisaged</li> </ul>	Yes	Progress on steps taken and envisaged is provided in chapter III, section 5, tables 6 and 7, and annex 4 to the BUR. This information is not provided for other measures, but the TTE notes that most other measures identified in chapter III, section 4, of the BUR were in progress
	<ul style="list-style-type: none"> <li>• Results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible</li> </ul>	Yes	Most NAMAs included in the BUR are in the formulation phase or starting their implementation phase. Therefore, no emission reductions have yet been achieved, only projected reductions (except for one NAMA)
(e)	Information on international market mechanisms	Yes	This information is provided in chapter III, section 7, in particular table 9, of the BUR
Decision 2/CP.17, annex III, paragraph 13	Parties should provide information on the description of domestic measurement, reporting and verification arrangements	Yes	This information is provided in chapter III, section 8, of the BUR

*Abbreviations:* BUR = biennial update report, NAMA = nationally appropriate mitigation action, TTE = team of technical experts.

### 3. Finance, technology and capacity-building needs and support received

16. The parts of the UNFCCC reporting guidelines on BURs on reporting information on finance, technology and capacity-building needs and support received in the BUR are contained in decision 2/CP.17, annex III, paragraphs 14–16.

17. Table 3 below presents results of the identification of the extent to which the elements of information on finance, technology and capacity-building needs and support

received are included in the BUR of Chile in accordance with the relevant parts of the UNFCCC reporting guidelines on BURs.

Table 3

**Identification of the extent to which the elements of information on finance, technology and capacity-building needs and support received are included in the first biennial update report of Chile**

<i>Decision</i>	<i>Reporting requirements</i>	<i>Yes/ Partly /No</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 14	Non-Annex I Parties should provide updated information on constraints and gaps, and related financial, technical and capacity-building needs:		
	<ul style="list-style-type: none"> <li>• Constraints and gaps</li> </ul>	Yes	The information is provided in chapter IV of the BUR, specifically in sections 2.1 and 2.5
	<ul style="list-style-type: none"> <li>• Related financial, technical and capacity-building needs</li> </ul>	Yes	The information is provided in chapter IV, sections 2, 2.1 and 2.5, of the BUR
Decision 2/CP.17, annex III, paragraph 15	Non-Annex I Parties should also provide updated information on financial resources, technology transfer, capacity-building and technical support received from the GEF, Annex II Parties and other developed country Parties, the GCF and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR	Yes	This aspect is developed in detail in chapter IV, sections 3, 3.1 (tables 6–13), 3.2 (tables 14–16) and 3.3 (table 17), of the BUR
Decision 2/CP.17, annex III, paragraph 16	With regard to the development and transfer of technology, non-Annex I Parties should provide information on technology needs, which must be nationally determined, and technology support received:		
	<ul style="list-style-type: none"> <li>• Technology needs, which must be nationally determined</li> </ul>	No	This information is not provided in the BUR. Consultation with the Party confirmed that this is currently excluded
	<ul style="list-style-type: none"> <li>• Technology support received</li> </ul>	Yes	The information is provided in chapter IV, sections 3.3 and 4.3.3, and the technology transfer table 17, of the BUR

*Abbreviations:* BUR = biennial update report, GCF = Green Climate Fund, GEF = Global Environment Facility.

### C. Technical analysis of the information reported

18. The technical analysis referred to in paragraph 7(b) above aims to, without engaging in discussion on the appropriateness of these actions, increase transparency of mitigation actions and their effects. Accordingly, the technical analysis focused on the transparency of information reported in BURs.

19. In addition to covering the information in the BUR and any additional technical information provided by the Party concerned, the technical analysis also focused, in relation to information reported on national GHG inventories, on the consistency of the methods used for developing those inventories with the appropriate methods developed by the Intergovernmental Panel on Climate Change (IPCC) and referred to in the UNFCCC

reporting guidelines on BURs. The results of the technical analysis are presented in the remainder of the chapter.

**1. Information on national circumstances and institutional arrangements relevant to the preparation of national communications on a continuous basis**

20. As per the scope defined in decision 2/CP.17, annex III, paragraph 2, the BURs should provide an update to information contained in the most recently submitted national communication, including, among other things, information on national circumstances and institutional arrangements relevant to the preparation of national communications on a continuous basis. For national communications, non-Annex I Parties report national circumstances following reporting guidance contained in decision 17/CP.8, annex, paragraphs 3–5.

21. In accordance with decision 17/CP.8, annex, paragraph 3, Chile, in its BUR, reported the following information on national circumstances: a description of its main geographical, political and demographic features; its climate; public spending on education, research and innovation, and technology transfer; its developmental and economic country profile; and its climate change policy framework, including relevant agencies and arrangements for implementation.

22. As encouraged in decision 17/CP.8, annex, paragraph 4, Chile provided a summary of relevant information regarding its national circumstances in tabular format, including key indicators and their sources. This information transparently describes its national circumstances, in particular, the biophysical, demographic, political and economic features of Chile.

23. The TTE noted that the information on key development variables such as population, gross domestic product growth and sectoral economy features adequately supports the understanding and analysis of the information contained in subsequent sections of the BUR, in particular, the sectoral trends in the GHG inventory, mitigation action (existing and potential) needs and the level of support received.

24. Chile, in its BUR, describes institutional arrangements relevant to the preparation of national communications and BURs on a continuous basis. The description covers key aspects of the institutional arrangements such as legal status and roles and responsibilities of the overall coordinating entity, existing inter-institutional coordination mechanisms that are relevant to the national communication and BUR processes, involvement and roles of other institutions and experts, mechanisms for information/data exchange, quality assurance/quality control procedures, provisions for stakeholder engagement and future improvement plans.

25. Regarding the overall arrangements for the preparation of BURs on a continuous basis, Chile highlighted the progress made in establishing a national entity (Office of Climate Change at the Ministry of Environment) with a dedicated budget and staff. Although there are financial and technical capacity-building needs that should be addressed if the BUR process is to become continuous and systematic, Chile has taken on the responsibility of coordinating and compiling reports to the UNFCCC. Another notable action is nominating climate change focal points in the organizational structure of the relevant ministries who participate in a number of steps of the BUR process, including data collection and validation of results.

26. For the GHG inventory preparation process, Chile provided information on the purpose, scope, organizational structure and core work areas of the national GHG inventory system (SNICHILE), which demonstrates that efforts have been undertaken to address the challenge of producing inventories on a regular basis. A general description of the activities and procedures under each core area has also been provided by Chile. Additional

information on existing arrangements to secure continuous engagement from relevant agencies in the inventory preparation (e.g. in the form of formal agreements, legal instruments or institutional planning instruments) could enhance the transparency of reporting in this area.

27. Information on the institutional arrangements in place (e.g. agencies involved and general processes for report preparation) for producing the mitigation component of the submitted BUR was not specifically provided in the BUR. Nonetheless, Chile provides a description of the rationale and plans to establish institutional arrangements to conduct MRV of mitigation actions (both at a national level and focused on nationally appropriate mitigation actions (NAMAs)). Arrangements for establishing a national MRV would be linked to those of preparing the GHG inventories, in which Chile has made significant progress. Chile indicated that MRV arrangements were in the process of design and discussion at the time that the BUR was being prepared; information in the BUR indicates that the coordinating entity would be the Office of Climate Change. Such arrangements would, in the future, facilitate continuous and transparent reporting.

28. The Party presents a clear outline of the steps involved in the collection, compilation and validation of information on constraints and gaps, and support needed and received, and of the institutions participating in the processes. However, existing arrangements and mechanisms to undertake such activities are not reflected in the BUR, and neither are specific plans to improve in this area.

29. The information reported transparently describes most of the institutional arrangements, existing or planned, of Chile. Moreover, it demonstrates that arrangements are being set up with the purpose of meeting the requirements of the preparation of national communications and BURs on a continuous basis.

30. In providing its feedback to the summary report, Chile has indicated its national actions to enhance transparency of reporting on the information highlighted by the TTE in paragraphs 26 and 28 above, and to present this information in its subsequent BUR.

## **2. National greenhouse gas emissions by sources and removals by sinks**

31. Chile has included in its BUR a national inventory report containing an update of its second national communication, which addressed anthropogenic emissions and removals for the year 2006. The update was carried out for all years in the period 1990–2010 using the methodologies established in the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines), thus generating a consistent 21 year time series. Therefore, the methods used are consistent throughout the complete time series. The previous national inventory was constructed using the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* and *Good Practice Guidance for Land Use, Land-Use Change and Forestry*, and the application of the 2006 IPCC Guidelines implies the updating of methodologies and emission factors as well as the reporting on additional subcategories. The TTE commends the Party for the use of the more recent 2006 IPCC Guidelines.

32. The BUR provided transparent information regarding the tier level applied to the different subcategories, and transparently indicated where default values have been applied. This makes it possible to understand and reproduce the GHG estimate calculations performed. However, no further information was provided on the methodologies used to generate the estimates such as references to the 2006 IPCC Guidelines equations used. The TTE noted that additional information could be relevant to the identification of potential mitigation efforts, particularly for the land use, land-use change and forestry (LULUCF)

sector. In providing its feedback on the summary report, Chile has indicated its intention to include the equations used from the 2006 IPCC Guidelines in its subsequent BUR.

33. Chile has not included in the BUR the sectoral worksheets included in the 2006 IPCC Guidelines, but it has provided updated activity data in annex 1 to the BUR. In providing its feedback on the draft summary report prepared by the TTE, Chile indicated that, to improve transparency of reporting, the relevant tables will be included in the subsequent BUR. With regard to emission factors, Chile provided the TTE with additional information during the technical analysis week on the updates introduced in the BUR, facilitating the technical analysis of the national GHG inventory. The TTE noted with appreciation the efforts made by Chile to continuously improve the emission factors, in particular, for the key categories of sources and sinks.

34. The TTE noted that, consistent with the guidelines contained in decision 17/CP.8, annex, paragraph 15, Chile reported information on anthropogenic emissions by sources of hydrofluorocarbons and perfluorocarbons. However, information on sulphur hexafluoride (SF<sub>6</sub>) was not reported. In providing its feedback to the TTE on the draft summary report, Chile indicated that it is working to improve data collection for SF<sub>6</sub>, and expects to include this information in its subsequent BUR.

35. Chile has also advanced, in the BUR, the treatment of uncertainty in relation to the previous inventory, providing the main sources of uncertainty for each sector and applying the propagation of error method from the 2006 IPCC Guidelines. Chile concluded that the main source of uncertainty is associated with the use of default emission factors and highlighted the need to ensure the development of country-specific emission factors, particularly for the key categories, as mentioned in paragraph 34 above.

36. For the energy sector, Chile has estimated carbon dioxide (CO<sub>2</sub>) emissions from fuel combustion using both the reference approach and the sectoral approach, and analysed the differences between the approaches, which is documented in the inventory report. Chile has also disaggregated data emissions from domestic and international aviation and marine fuels and reported them as memo items. In this sector, Chile plans to improve the energy balances, improve the supporting institutional arrangements to involve a greater number of representatives of data providers and disaggregate further transport fuel consumption by transport modes. Chile also plans to improve the capacity to estimate the carbon content of the fuels to generate country-specific emission factors. Following communication with the Party during the technical analysis week, the TTE noted that this sector in particular is more vulnerable to staff changes when there is a change in government. Chile further confirmed the current capacity-building need of the energy inventory team because the team is new owing to the recent change in government.

37. Chile has estimated GHG emissions in all categories of the industrial processes sector using the tier 1 or tier 2 methodologies from the 2006 IPCC Guidelines. For categories where a numerical value is not reported, Chile reported the appropriate notation key "NE" (not estimated), except for the production of halocarbons and SF<sub>6</sub>, for which "NE" was reported in the tables and "NO" (not occurring) in the text. Following communication with the Party during the technical analysis week, Chile confirmed that "NO" should be reported instead of "NE" for that sector. Chile also explained that statistics for single consumers are not available in the country. However, Chile is establishing the necessary institutional arrangements to ensure the regular development and submission of these estimates through the implementation of a working group involving the sectoral inventory team and the importers. These institutional arrangements will ensure that improvements can be made to enhance the completeness of future national GHG inventories.

38. The TTE noted that emissions were not estimated for carbon monoxide, nitrogen oxides and non-methane volatile organic compounds for the industrial processes and waste sectors. In providing its feedback on the draft summary report, Chile indicated that its work is ongoing to improve data collection, to improve the estimation of those gases and to include this information in its subsequent BUR.

39. Chile also plans to improve the emission estimates for the waste sector by using information from the Pollutant Releases and Transfers Register that will be in place from 2015 and by improving the collection, processing and generation of activity data.

40. Chile reports agriculture, forestry and other land-use emissions and removals in two separate sections: agriculture and LULUCF.

41. For the agriculture sector, Chile has provided a summary table with GHG emissions for the years 1990, 1995, 2000, 2005, and 2010 using the categories as defined in the 2006 IPCC Guidelines for all years in the period 1990–2010, except for prescribed burning of savannahs, which does not occur in the country. The estimates for the years 2000 and 2006 are consistent with those in the second national communication. The TTE noted that the inclusion of the emission factors used could increase the transparency and facilitate the technical analysis.

42. Emissions from liming and urea, direct and indirect nitrous oxide emissions from managed soils, and rice cultivation are all provided, with the sources of information and assumptions adequately described. The inclusion of the methodologies and the emission factors used (even if they are default values) could facilitate the technical analysis of the BUR and increase the transparency of the updated information.

43. Chile provided, in its BUR, an update regarding the carbon pools included in the forestry and other land-use inventory. Emissions from dead wood, which were not addressed in previous inventories, were included for approximately 56.0 per cent of the national territory. The specific methodologies and emission factors used are not provided in the BUR. Estimates for litter and soil organic carbon were not reported in the second national communication nor in the BUR, due to a lack of reliable data or the non-availability of data in an adequate format to reliably estimate the emissions associated with these carbon pools. In communication with the TTE during the technical analysis week, Chile explained that the data necessary to include soil organic carbon in the inventory exist, but that they require proper organization by soil type and management practice. The TTE notes the difficulties in organizing such data in a timely manner and notes that a tier 1 approach could be used until better data become available, noting that this may increase the uncertainty of the overall report.

44. Chile included in its BUR a transition matrix with the annual land-use changes based on available data from the Department of Forest Ecosystems Monitoring of the National Forest Corporation. The data were mapped into the 2006 IPCC Guidelines land-use categories and enable the TTE to identify the major land-use changes from 1990 to 2010. This information is a significant improvement since the previous inventory, and facilitates the identification of potential areas where mitigation actions can be designed, implemented and/or monitored.

45. Chile included in its BUR non-CO<sub>2</sub> emissions associated with forest fires in natural and planted forests, which were mainly responsible for the annual variations in the carbon sink reported for the forestry and other land-use sector. No information is provided in the BUR regarding the methodologies and emission factors used, such as the mass of fuel available for combustion, which is critical for estimating the non-CO<sub>2</sub> emissions. The BUR includes in annex 1 the annual area burned by type of forest (native or planted) for the period 1990–2010, which clearly demonstrates the relationship between the annual area affected by fires and the corresponding GHG emissions balance. The TTE notes that the

provision of information regarding the methodological approach, assumptions and emission factors (even if default values are used) in the BUR could facilitate the technical analysis and would enhance the transparency of the information.

46. In providing its feedback to the summary report, Chile has indicated its national actions to enhance transparency of reporting on the information highlighted by the TTE in paragraphs 32–34, 38, 41–43 and 45 above, and to present this information in its subsequent BUR.

### **3. Mitigation actions and their effects, including associated methodologies and assumptions**

47. As indicated in table 2 above, Chile reported, in its BUR, information on mitigation actions and their effects. The TTE acknowledges that the information reported in the BUR describing mitigation is very comprehensive, providing both international and national contexts.

48. Chile's BUR frames mitigation planning and actions in the context of its voluntary goal to reduce emissions by 20 per cent in 2020 below the 'business as usual' scenario projected from 2007 emissions. BUR notes that the implementation of NAMAs, with the necessary international support, will be the primary mechanism used to achieve this voluntary commitment. Consistent with decision 2/CP.17, annex III, paragraphs 11–13, the BUR highlights and provides details on nine NAMAs that will contribute to this overall goal. These mitigation actions cover all sectors (energy, waste, industry, forestry and agriculture) and all six types of GHGs. Five of the nine NAMAs are registered in the UNFCCC NAMA database. These five NAMAs cover all sectors (energy, waste, industry, forestry and agriculture) and all six types of GHGs. As per the information reported, in addition to communication with Chile during the technical analysis week, energy efficiency, renewable energy measures and LULUCF measures will be the main focus of Chile's NAMAs.

49. The NAMAs, including the five registered NAMAs, are at various stages of formulation and implementation, and will be implemented over the 2012–2021 time-horizon. For example, based on information in chapter III, section 5, table 6, there are four NAMAs in the conceptual stage, three in the planning stage and three that are either starting or are under implementation.

50. The NAMA being implemented, the clean production agreements, is a programme targeted towards engaging the private sector (at the corporate level) to apply clean production best practices, including energy efficiency and waste management, which can produce GHG emission reductions. The NAMA implementation period is nine years, from 2012 to 2020. The programme has a goal to sign 10 agreements per year, and projected GHG reductions from this goal have been estimated on both annual and accumulated GHG reductions over the implementation period (chapter III, section 5, table 6, of the BUR). Since 2012, four agreements have produced preliminary results (estimated emission reductions), which are included in the reported information.

51. The BUR provides information that is consistent with decision 2/CP.17, paragraphs 11 and 12, on NAMAs in a tabular format. In addition, the BUR includes a description of other related sectoral measures that have been initiated or are planned, including actions by the private sector, in a more limited tabular format. These other measures, many of which have been implemented, include educational programmes, regulations and programmes that will support the implementation of future mitigation actions, including identified NAMAs. Chile, noted in comments to the TTE, that there is a lack of information on the progress of the implementation for all the actions identified, but that it is working to gather this information and intends to report in its next BUR. Chile also describes, in its BUR, a larger



analysis that it is undertaking to develop a low carbon economy under two international projects: Mitigation Action Plans and Scenarios Chile and Low Emission Capacity Building Chile.

52. As noted in paragraph 14 above, the analysis of the TTE, with regard to the transparency of the reported mitigation actions, focused primarily on the NAMAs presented in chapter III, section 5, and annex 4, and this is discussed in the paragraphs 54–55 below.

53. Overall, Chile's BUR is largely transparent and comprehensive with regard to describing the planned and proposed mitigation actions. The TTE commends the efforts made by Chile to cover all the aspects related to the description of the mitigation actions, including their nature, coverage, quantitative goals and progress indicators, in accordance with decision 2/CP.17, annex III, paragraph 12(a). The description of actions is consistent and clearly communicated. The sectors covered and associated GHG emissions are consistent with the UNFCCC reporting guidelines on BURs and are clearly identified. The Party also consistently identifies the implementation time frame or NAMA period associated with each action, and it appears that the Party provides the anticipated results or accumulated reduction goals for all actions. Annex 4 to the BUR also provides information on the required funding or costs to implement the NAMAs. Further, for tracking progress, Chile clearly and consistently identifies quantitative progress indicators for each NAMA. The underlying goals for the NAMAs are presented for most actions in quantitative terms. However, the bases for goals are not clearly or consistently explained for all actions (e.g. the National Climate Change and Forestry Resources Strategy, where the bases for the goals are not clearly described quantitatively or qualitatively) or it appears that some bases for goals are given in the assumptions box in tabular format (e.g. fleet replacement targets for the Green Zone for Transportation in Santiago). While most aspects are clearly explained and allow the TTE to understand the nature of the actions, sectors covered, etc., the transparency could be enhanced through more consistent provision of information on the basis of goals for each mitigation action.

54. In accordance with decision 2/CP.17, annex III, paragraph 12(b), Chile includes a tabular presentation of the methodologies and assumptions used to formulate mitigation actions. However, the methodologies and assumptions used for the estimation and review of anticipated results or GHG emission reductions are not transparently explained for each action. For some actions, key parameters are identified, but the source or basis for average emission factors or emission rates is not provided (e.g. for Renewable Energy for Self-Consumption in Chile). The TTE noted that the sources for assumptions of some key parameters were provided for the National Program for Industrial and Commercial Catalyzing on Organic Waste Management in Chile in the industrial and commercial sectors. Overall, information is provided on assumptions, but this information cannot be readily related to methodologies and calculated estimated reductions. Specifically, for each NAMA identified, the methodology is generally described as the methodology for the estimation of expected emission reductions or a baseline; annex 4 elaborates on this for some actions, but does not consistently provide information on the calculation approach or anticipated calculation approach and related details (e.g. relevant baselines, etc.) for each action. The TTE takes note of the NAMA constraints presented by Chile, which explain some of the challenges to presenting information. The transparency of the effects of planned or implemented mitigation actions could be enhanced by providing greater information about methodologies, and sources of emission factors should be provided by the Party and included in subsequent BURs. This would be useful to aid the understanding of how expected emission reductions of each mitigation action are calculated. Chile, in providing its feedback to the summary report, indicated that methodological information is not yet available for most actions, but that it is working to develop this, and also to standardize information collected in order to transparently describe this information in its next BUR.

55. In accordance with decision 2/CP.17, annex III, paragraph 12(c), the objectives of mitigation actions included in the BUR are transparently described. In addition, for most mitigation actions, there is a clear differentiation between steps taken and steps envisaged to achieve the objectives of the mitigation actions. For each mitigation action, Chile outlines the phases and stages to realize NAMA reduction goals. For example, for Renewable Energy for Self-Consumption in Chile, the Party identifies the steps envisaged under the planning stage to comply with the reduction goal category in table 6 and then addresses the progress and status with respect to those steps and overall implementation. Further, where there are interim results, in the case of the clean production agreements, Chile does report on the status of results.

56. Chile transparently describes its participation in the clean development mechanism (CDM). Chile presents complete statistics related to its participation in international carbon markets, mainly in the CDM and voluntary carbon markets. These statistics include information on the total projects and sectors covered, and the quantity of certified emission reductions that have been issued for Chilean CDM projects.

57. In providing its feedback to the summary report, Chile has indicated its national actions to enhance transparency of reporting on the information on mitigation actions, highlighted by the TTE in paragraphs 51, 53 and 54 above, in order to present this information in its subsequent BUR.

**4. Constraints and gaps, and related financial, technical and capacity-building needs, including a description of support needed and received**

58. Chile identifies constraints and gaps that are directly related to institutional arrangements in the area of mitigation, in particular, the Party indicates that there are difficulties in coordinating and determining the roles and functions for data and information exchange, and methodological and technical gaps related to collecting information in the areas of mitigation and support received.

59. In addition, the Party specifically indicates that there are methodological and technical gaps related to collecting information in the areas of mitigation and support received.

60. The lack of importance given to the GHG inventory preparation at the interministerial level is identified by the Party as the main arrangement-related constraint in this area. The Party informs that it was provided with financial support to execute projects such as the Partnership for Market Readiness and LECB, which incorporates activities that specifically contribute to designing the institutional arrangements for domestic MRV of mitigation actions. Although technical and capacity-building support may have been dedicated to enhancing institutional arrangements in other sectors, in particular, in the GHG inventory, information on support included in the BUR could be presented in such a way that it better reflects if and how relevant projects and programmes are contributing to address this identified need.

61. With regard to the funding and support received for mitigation efforts, an existing gap is the need for having definitive structures and processes for data gathering, assessment and report development. There is a lack of a permanent budget from the public sector, ministries, regional and local governments for application of adaptation and mitigation measures and actions. The institutionalization of climate change and the strengthening of the related technical capabilities of Chile have made significant progress during the last few years, as demonstrated in the second national communication and the first BUR of Chile, but it is still possible to identify needs, gaps and constraints that block the development of climate action in Chile, or in areas where there is still a high potential for mitigation. The

TTE notes that this information was presented in a disaggregated and transparent manner in the BUR.

62. Another constraint, as identified by the Party in the BUR, is the lack of coordination between sectors and the definition of attributions and competences, specifically in the management of relevant information.

63. The main gaps and needs regarding financial resource support and in terms of capacity-building and technology transfer have been grouped together in the BUR in sections and tables, and are sorted according to the type of support required.

64. The TTE notes that in addition to receiving support, the Party has supported other countries in the region in capacity-building and technical assistance.

65. Chile, as a developing country, still seeks international support opportunities in the areas of financial resources, capacity-building, technical assistance and technology transfer in order to implement an ambitious mitigation project portfolio and contribute to the fulfilment of the goals stated by the UNFCCC.

66. The Party's BUR is transparent with regard to: constraints and gaps; support received in the form of capacity-building and technical assistance projects; and the direct transfer of a specific technology or technologies, accompanied by the required technical support and capacity-building. The information provided is clear, and details are consistently provided across these components, with the exception of the identification of technology needs. During the technical analysis week, the Party confirmed that it had not been possible to include this information in the BUR, mainly due to the time limitations of gathering information from ministerial focal points and other sectoral entities. Chile indicated, in comments, to the TTE that it is working to improve data collection on this issue.

67. The TTE notes that inclusion of this information in the next BUR will enhance the transparency of the reported information with regard to technology needs, but also with regard to the related capacity-building and financial needs. Further, the Party expressed its desire to conduct a technology needs assessment in preparation for its second BUR.

68. The TTE recognized the Party's efforts to collect and integrate information related to support received, but noted the information on the amount of funding received in the English version of the Executive Summary (section 4.3.1 of the BUR) is inconsistent with the corresponding information in the Spanish version of the BUR. During consultation with the TTE during the technical analysis week, the Party confirmed the inconsistency, and indicated, in its feedback to the summary report, that an amended Executive Summary in English would be resubmitted to the secretariat.

69. In providing its feedback to the summary report, Chile has indicated its national actions to enhance transparency of reporting on the information highlighted by the TTE in paragraph 66 above, and to present this information in its subsequent BUR.

## **5. Domestic measurement, reporting and verification**

70. The Party describes its plans to establish an MRV system for mitigation actions that integrates existing systems and tools, as well as the existing institutional arrangements and those being established at the time of the BUR preparation. The MRV system will have two purposes (or lines of action): the first is to support the tracking of Chile's voluntary reduction goal (national level MRV) and the second is focused specifically on the tracking of progress on achieving individual NAMAs. Annex 4 to the BUR provides a description of plans for developing MRV systems associated with four of the five registered NAMAs. Chile notes that its intent is that this overall system will improve the transparency, comparability and quality of data for tracking progress on mitigation efforts.

71. Consistent with decision 2/CP.17, annex III, paragraph 13, Chile clearly indicates that it is undertaking a study on the design of institutional arrangements for the MRV system, which is focusing on the technical requirements, institutional coordination processes and associated communication and dissemination of the design of the MRV system (e.g. by developing an MRV manual). While the BUR does not elaborate on specific existing or proposed arrangements and roles between institutions, or within institutions, table 10 (chapter III, section 8) and annex 4 suggest various ministries and institutions that play a leading role in managing the implementation of MRV systems. For example, the Renewable Energy Center within the Ministry of Economy is responsible for managing the MRV systems of the self-supply NAMA, including the collection and management of relevant information.

72. In accordance with decision 2/CP.17, annex III, paragraph 13, and decision 21/CP.19, annex, paragraph 4, Chile's BUR clearly conveys that NAMAs are in the planning phase and hence the measurement methods and related systems/arrangements for collecting information to monitor and verify actions are being designed for individual actions as indicated in chapter III, section 8, tables 7 and 10, of the BUR. The BUR suggests that the responsibilities for collection and management of relevant information to monitor actions will reside with different institutions, in particular, those that have the relevant authorities and mandates to oversee implementation of a particular NAMA. For the NAMA in the implementation phase (clean production agreements), and those NAMAs that are still being planned, the BUR transparently describes the anticipated use of tools such as digital platforms for information collection (i.e. the platform *Compite Mas*) to support future monitoring and verification of actions (see chapter III, section 5, table 7, and annex 4). However, the Party does not consistently document or transparently describe in detail the associated processes for collecting, processing and storing data from participating facilities in the system. The TTE notes that the Office of Climate Change, with additional international financial and technical support, is assessing the possibility of creating an integrated system, to be included in existing and future initiatives of MRV with the goal to have a consolidated and integrated MRV system that allows the tracking of individual mitigation actions, along with a national MRV for Chile's voluntary commitment to reduce its GHG emissions compared to its 2007 emissions. The transparency of the MRV system arrangements could be further enhanced by including information on the methods and processes for collection of required data.

73. In accordance with decision 21/CP.19, annex, paragraph 4(c), the TTE notes that Chile is planning the implementation of registered NAMAs, including the design of associated MRV systems. The BUR does not provide information on how reductions were assured or verified for the single NAMA currently being implemented as part of the estimation study conducted by the implementing organization (Council on Clean Production). The TTE notes Chile's efforts to transparently identify the current constraints for this NAMA with regard to a lack of specification on verification and certification requirements in annex 4 of the BUR.

#### **D. Identification of capacity-building needs**

74. In consultation with Chile, the TTE identified the following capacity-building needs related to the facilitation of the preparation of subsequent BURs and participation in ICA:

(a) With regard to GHG inventory development, Chile mentions the importance of ensuring a sufficient number of qualified technical staff in the National Greenhouse Gas Inventory System to increase the quality of the inventories. In addition, it mentions the need to create the internal capacity to generate country-specific emission factors, especially for the key categories;

(b) Chile indicates that capacity-building activities are needed to address knowledge gaps in the energy sector of the GHG inventory, resulting from the turnover of the expert team involved. Specifically, the staff require training on how to understand and apply the 2006 IPCC Guidelines to the energy sector;

(c) In order to enable continuous and sustainable reporting on the support needed and received in its BURs, Chile requires capacity-building assistance to address technical and knowledge gaps to enable the systematic collection of relevant data and information, through adequate mechanisms and institutional arrangements;

(d) Establishing procedures and specific arrangements to guarantee the continuous involvement of relevant institutions in the systematic collection, compilation and validation of data and information on constraints and gaps, and support needed and received in each of the action areas identified in the BUR is needed;

(e) In order to implement and assess impacts from key NAMAs, Chile indicated that capacity-building and exchange of good practices associated with the design of monitoring (e.g. identifying suitable methodologies), reporting (e.g. collecting and tracking information) and verification “MRV” systems for mitigation measures, in particular those associated with improving energy efficiency, but also other sectors, is needed;

(f) Chile indicated that capacity-building to conduct a technology needs assessment is necessary, particularly with regard to facilitating the systematic collection of data and information for preparing BURs, but also for implementing MRV systems for planned mitigation actions.

### III. Conclusions

75. The TTE concludes that:

(a) All of the elements of information listed in paragraph 3(a) of the ICA guidelines are included in the first BUR of Chile;

(b) In summary, the TTE commends the Party for its comprehensive BUR and highlights the following from its analysis:

(i) Overall, the Party presents a comprehensive description of the institutional arrangements in place or planned, and improvements undertaken to ensure the sustainability of the BUR preparation process on a continuous basis. The enhanced areas of reporting contained in the BUR, such as mitigation actions and their effects and finance, technology and capacity-building needs and support received, are the priority areas in which institutional arrangements need to be further defined and strengthened;

(ii) Chile has taken into account the need to continuously improve the transparency, consistency, comparability, completeness and accuracy in its national GHG inventories, and is planning to facilitate these improvements through adequate steps and institutional arrangements;

(iii) Chile has transparently and comprehensively described the planning and implementation of mitigation actions that are under way. Chile has set a voluntary goal for reducing emissions and anticipates achieving this goal, primarily through the implementation of NAMAs. Identifying, implementing and documenting appropriate methodologies, approaches and processes for collection of data, including identifying key data to monitor and verify NAMA actions, appear to be a constraint and a key need for Chile to enhance future reporting;

(iv) The Party sufficiently and comprehensively summarizes constraints and gaps, and related financial, technical and capacity-building needs. The main challenge that the Party faces is securing domestic and international finance to implement actions and to achieve its voluntary goal.

(v) Chile, in providing its feedback on the summary report, has recognized the areas identified by the TTE where transparency of the information can be enhanced, as reflected in paragraphs 46, 57 and 69 above. Chile has indicated its intention to include this information in its subsequent BUR.

76. The TTE, in consultation with Chile, identified six capacity-building needs related to the facilitation of reporting in accordance with annex III to decision 2/CP.17 and to the participation in ICA in accordance with annex IV to decision 2/CP.17, taking into account Article 4, paragraph 3, of the Convention. Key capacity-building needs prioritized by Chile are summarized in chapter II.D above.

## Annex

### **Documents and information used during the technical analysis**

#### **Reference documents**

“Composition, modalities and procedures of the team of technical experts for undertaking the technical analysis of biennial update reports from Parties not included in Annex I to the Convention”. Annex to decision 20/CP.19. Available at <<http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=12>>.

“Modalities and guidelines for international consultation and analysis”. Annex IV to decision 2/CP.17. Available at <<http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf>>.

“UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention”. Annex III to decision 2/CP.17. Available at <<http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf>>.

“Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention”. Annex to decision 17/CP.8. Available at <<http://unfccc.int/resource/docs/cop8/07a02.pdf#page=2>>.

First biennial update report of Chile. Available at <<http://unfccc.int/8722.php>>.

Second national communication of Chile. Available at <[http://unfccc.int/national\\_reports/non-annex\\_i\\_natcom/items/2979.php](http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php)>.

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