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## **Technical analysis of the first biennial update report of Costa Rica submitted on 9 December 2015**

### **Summary report by the team of technical experts**

#### *Summary*

According to 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, were to 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, according to 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 the Party's first BUR. The process of ICA consists of two steps: the technical analysis of the submitted BUR, followed by a workshop for 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 Costa Rica conducted 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. According to 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, were to 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, according to 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 the Party's first BUR. The process of ICA consists of two steps: the technical analysis of the submitted BUR, resulting in a summary report for each BUR analysed, followed by a workshop for 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 Costa Rica 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. Costa Rica submitted its first BUR on 9 December 2015.
4. The technical analysis of the BUR took place from 29 February to 4 March 2016 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. Inês de Sousa Mourão (Cape Verde), Mr. Carlos Mansilla (former member of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) from Guatemala), Ms. Julia Martínez (former CGE member from Mexico), Mr. Raúl Salas (Mexico), Ms. Beatriz Sánchez Jiménez (Spain), and Ms. Sina Wartmann (Germany). Ms. Martínez and Ms. Sánchez Jiménez were the co-leads. Ms. Alma Jean and Ms. Karen Ortega (secretariat) provided administrative support to the TTE.
5. During the technical analysis, the TTE and Costa Rica engaged in consultation via e-mail on the identification of capacity-building needs for the preparation of BURs and participation in the ICA process. Following the technical analysis of the BUR, the TTE prepared and shared a draft summary report with Costa Rica on 31 May 2016 for its review and comment. Costa Rica, in turn, provided its feedback on the draft summary report on 8 September 2016.
6. The TTE responded to and incorporated the comments referred to in paragraph 5 above and finalized the summary report in consultation with Costa Rica on 27 September 2016.

## **II. Technical analysis of the 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 the actions, increase the transparency of mitigation actions and their effects, and shall entail the following:

(a) The identification of the extent to which the elements of information listed in paragraph 3(a) of the ICA modalities and guidelines (decision 2/CP.17, annex IV) have been included in the BUR of the Party concerned (see chapter II.B below);

(b) A technical analysis of the information reported 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 below);

(c) The identification, in consultation with the Party concerned, of capacity-building needs related to the facilitation of reporting in accordance with the UNFCCC reporting guidelines on BURs and to participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention (see chapter II.D below).

8. The remainder of this chapter presents the results of each of the three parts of the technical analysis of Costa Rica’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; information on 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 information on support received.

10. Further, according to decision 20/CP.19, annex, paragraph 15(a), in undertaking the technical analysis of the submitted BUR, the TTE is to identify the extent to which the elements of information listed in paragraph 9 above have been included in the BUR of the Party concerned. The results of that 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 paragraphs 3–10 of the UNFCCC reporting guidelines on BURs. Further, as per paragraph 3 of those guidelines, non-Annex I Parties are to submit updates of their national GHG inventories in accordance with paragraphs 8–24 of the “Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention” contained in the annex to decision 17/CP.8. The scope of such updates should be consistent with the non-Annex I Party’s capacity and time constraints

and the availability of its data, as well as the level of support provided by developed countries Parties for biennial update reporting.

12. Table 1 presents the results of the identification of the extent to which the elements of information on GHGs are included in the first BUR of Costa Rica 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 Costa Rica**

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/ Partly/No/NA</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	
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, the IPCC good practice guidance 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 total GHG emissions for 2012, including LULUCF, reported in the BUR are 11,250.20 Gg CO <sub>2</sub> eq
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:		
	(a) 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)	NA	In its NIR, Costa Rica provided comparable information based on the 2006 IPCC Guidelines
	(b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF <sub>6</sub> )	NA	In its NIR, Costa Rica provided comparable information based on the 2006 IPCC Guidelines
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:		
	(a) Tables included in annex 3A.2 to chapter 3 of the IPCC good practice guidance for LULUCF	No	Costa Rica included in table 2.5 of its BUR a summary table of AFOLU emission estimates. However, this

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/ Partly/No/NA</i>	<i>Comments on the extent of the information provided</i>
			table is not in the format of tables presented in annex 3A.2.1 to chapter 3 of the IPCC good practice guidance for LULUCF, and the table does not include comparable information in the case of carbon stock changes
	(b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines	NA	Comparable information based on the 2006 IPCC Guidelines is provided
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	Partly	Costa Rica has developed six GHG emission inventories covering the years 1990, 1995, 2000, 2005, 2010 and 2012. The third national communication includes emissions for the year 2010. Costa Rica indicated in its BUR that only 2005 and 2010 data were recalculated using the methodology from the 2006 IPCC Guidelines
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)	Partly	Costa Rica provided total emissions, including LULUCF, for 2005 and 2010 recalculated using the 2006 IPCC Guidelines. However, the Party did not submit summary information tables for any of the previous years to 2012
Decision 2/CP.17, annex III, paragraph 10	Additional or supporting information, including sector-specific information, may be supplied in a technical annex	Yes	Costa Rica submitted an NIR along with its first 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	Partly	The institutional arrangements for data collection and elaboration of the inventories are briefly mentioned. Information on the roles of the institutions involved is not presented
Decision	Each non-Annex I Party shall, as	Yes	

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/ Partly/No/NA</i>	<i>Comments on the extent of the information provided</i>
17/CP.8, annex, paragraph 14	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:  (a) CO <sub>2</sub> (b) CH <sub>4</sub> (c) N <sub>2</sub> O		
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>	Yes	
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:  (a) International aviation (b) Marine bunker fuels	Yes	
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:  (a) CO (b) NO <sub>x</sub> (c) NMVOCs	Yes	
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	Yes	
Decision 17/CP.8, annex, paragraph 21	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		

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/ Partly/No/NA</i>	<i>Comments on the extent of the information provided</i>
	through capacity-building:		
	(a) Information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol	Yes	
	(b) Explanation of the sources of emission factors	Yes	
	(c) Explanation of the sources of activity data	Yes	
	(d) 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:	NA	The Party does not estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the guidelines used (the 2006 IPCC Guidelines and the Revised 1996 IPCC Guidelines)
	(i) Source and/or sink categories		
	(ii) Methodologies		
	(iii) Emission factors		
	(iv) Activity data		
	(e) Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building	Yes	
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 estimating these uncertainties:		
	(a) Level of uncertainty associated with inventory data	Yes	
	(b) Underlying assumptions	No	The Party did not provide information on underlying assumptions in either the BUR or the NIR
	(c) Methodologies used, if any, for estimating these uncertainties	Yes	

*Abbreviations:* AFOLU = agriculture, forestry and other land use, 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*, LULUCF = land use, land-use change and forestry, NA = not applicable, NIR = national inventory report, 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 the reporting of information on mitigation actions in BURs are contained in decision 2/CP.17, annex III, paragraphs 11–13.

14. Costa Rica did report on mitigation actions in its first BUR. The information on mitigation actions reported is not provided in tabular format.

15. Table 2 presents the results of the identification of the extent to which the elements of information on mitigation actions are included in the first BUR of Costa Rica 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 Costa Rica

<i>Decision</i>	<i>Provision of the reporting guidelines</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	Yes	Information on the gases covered by the mitigation actions is included in the BUR, as well as quantitative goals and progress indicators
	(b) Information on:		
	(i) Methodologies	No	
	(ii) Assumptions	No	
	(c) Information on:		
	(i) Objectives of the action	Yes	
	(ii) Steps taken or envisaged to achieve that action	Yes	
	(d) Information on the progress of implementation of the 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:		
	(i) Progress of implementation of	No	

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/ Partly/No</i>	<i>Comments on the extent of the information provided</i>
	the mitigation actions		
	(ii) Progress of implementation of the underlying steps taken or envisaged	Partly	Information on the underlying steps taken or envisaged was not provided for the mitigation actions in the BUR (chapters 4.1.1, 4.1.2 and 4.1.4–4.1.6)
	(iii) Results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible	Partly	Information on the results achieved was not provided for the mitigation actions in the BUR (chapters 4.1.1, 4.1.2 and 4.1.4–4.1.6)
	(e) Information on international market mechanisms	Yes	
Decision 2/CP.17, annex III, paragraph 13	Parties should provide information on the description of domestic measurement, reporting and verification arrangements	No	

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

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

17. Table 3 presents the 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 Costa Rica 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 Costa Rica**

<i>Decision</i>	<i>Provision of the 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:		
	(a) Constraints and gaps	Yes	
	(b) Related financial, technical and capacity-building needs	Partly	Costa Rica only presented the financial needs associated with mitigation measures
Decision 2/CP.17, annex III, paragraph 15	Non-Annex I Parties should provide updated information on financial resources, technology transfer, capacity-building and technical support received from the Global Environment Facility, Annex II Parties and	Yes	

<i>Decision</i>	<i>Provision of the reporting requirements</i>	<i>Yes/ Partly/No</i>	<i>Comments on the extent of the information provided</i>
	other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current biennial update report		
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:		
	(a) Technology needs, which must be nationally determined	No	
	(b) Technology support received	No	

### C. Technical analysis of the information reported

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

19. For information reported on national GHG inventories, the technical analysis also focused on the consistency of the methods used for preparing 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 paragraph 2 of the UNFCCC reporting guidelines on BURs, the BUR should provide an update to the 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 their national communications, non-Annex I Parties report on their national circumstances following the reporting guidance contained in decision 17/CP.8, annex, paragraphs 3–5.

21. In accordance with decision 17/CP.8, annex, paragraph 3, Costa Rica, in its BUR, reported the following information on its national circumstances: the structure of the Government, geography, climate, hydrography, demography, social profile, economy and industry, energy, construction, waste, tourism, agriculture and forestry; and information on the climate and economy, in relation to how they may affect the Party's ability to deal with mitigating and adapting to climate change.

22. Costa Rica described in its BUR the institutional arrangements relevant to the preparation of its national communications and BURs on a continuous basis, explaining that the National Meteorological Institute within the Ministry of Environment (MINAE-INM) is the entity responsible for the coordination of the preparation of three national communications, six GHG inventories and the first BUR. The description of the institutional arrangements did not cover key aspects of the institutional arrangements, such

as: the legal status and roles and responsibilities of the overall coordinating entity; the involvement and roles of other institutions and experts; mechanisms for information/data exchange; quality assurance/quality control procedures; provisions for public consultation and other forms of stakeholder engagement; and future improvement plans. Seeking further technical clarification with the Party during the technical analysis, Costa Rica clarified that the responsible entity has the technical capacities to produce BURs on a regular basis, but that there is a need for financial support. Also, Costa Rica stated that there are several initiatives to develop the capacities to prepare BURs among specialists in different ministries and agencies who are involved in the process of preparing the report, and that the existing institutional arrangements need to be improved.

23. The information reported transparently describes the institutional arrangements (existing) of Costa Rica. The TTE noted that the transparency of the information on the national circumstances and cross-cutting issues relevant to the preparation of BURs on a continuous basis could be further enhanced by including a more detailed description of the institutional arrangements, as well as information on how the arrangements allow the preparation of BURs on a continuous basis, the support needed for securing this continuity, the mechanisms for information/data exchange, quality assurance/quality control procedures, and provisions for public consultation and other forms of stakeholder engagement.

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

24. Costa Rica reported in its BUR information on national GHG inventories covering GHG emissions and removals for 2012 using the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines) for the estimation of direct GHGs and the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* for the estimation of indirect GHGs.

25. Costa Rica reported on carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), non-methane volatile organic compounds (NMVOCs) and sulphur dioxide (SO<sub>2</sub>) per sector and per gas in Gg of CO<sub>2</sub> equivalent (CO<sub>2</sub> eq), and emissions in units of mass are provided in the national inventory report (NIR), which was submitted together with the BUR. The NIR also provided: an overview of the GHG inventory (in the form of tables 1 and 2) or comparable information as stipulated by decision 2/CP.17, annex III, paragraph 9; information on the methodological approach (tiers); and emission estimates for international shipping and aviation.

26. The GHG emissions reported in the BUR for 2012 include 5,661.41 Gg CO<sub>2</sub>, 204.73 Gg CH<sub>4</sub> and 3.14 Gg N<sub>2</sub>O. The energy sector is the main contributor, with 65 per cent of emissions (69 per cent of which are emitted by the transport sector). The remainder come from the waste sector (17 per cent); the agriculture, forestry and other land use (AFOLU) sector (9 per cent) and the industrial processes and product use (IPPU) sector (10 per cent). The TTE noted that the AFOLU sector is a net sink of CO<sub>2</sub> owing to removals by forest land (7,438.50 Gg CO<sub>2</sub> in 2012). The total GHG emissions for 2012 reported in the BUR are 11,250.20 Gg CO<sub>2</sub> eq, including LULUCF.

27. The TTE noted that Costa Rica's NIR contains additional information not presented in the main BUR document. Although the NIR and the BUR were submitted together, the BUR does not make any reference to the NIR. During the technical analysis, Costa Rica clarified that the NIR was not included as a principal reference because of an editing error.

28. The TTE noted that the BUR does not provide GHG emission estimates for some categories (lubricants, paraffin waxes, harvested wood products and CO<sub>2</sub> in soils), due to a lack of data as indicated in the BUR. During the technical analysis, Costa Rica clarified that

research on these categories is ongoing and that it expects to report estimates for these categories in its next BUR.

29. Overall uncertainty values are presented for both total GHG emissions including and excluding the forestry sector. However, sectoral uncertainty values, as well as assumptions used, are not presented. The TTE noted that reporting assumptions used and providing a qualitative explanation of the uncertainty analysis could enhance the transparency of the information on uncertainty. During the technical analysis, Costa Rica clarified that it expects to report information on assumptions associated with uncertainty values in its next BUR.

30. The BUR contains a trend-based as well as a level-based key category analysis using the year 2000 as the baseline year. During the technical analysis, Costa Rica clarified that data from earlier inventory years were not suitable as baseline data, because they had not been recalculated and hence were not consistent with the 2006 IPCC Guidelines. Costa Rica also further clarified that it recalculated the values for 2005 and 2010 to be consistent with the 2006 IPCC Guidelines and included total sectoral values, in Gg CO<sub>2</sub> eq, in its BUR. However, the TTE noted that summary tables with this information are not included in the BUR, and recalculated data for 2000 was not included in the BUR. During the technical analysis, Costa Rica also clarified that data for the years 1990 and 1995 will be recalculated and presented in its next national communication. The TTE commends Costa Rica for the planned improvements. The TTE noted that the transparency of the information could be further enhanced by including summary tables for the years 2000, 2005 and 2010, as well as including summary tables with recalculated estimates for the years 1990 and 1995.

31. Costa Rica mentioned in its BUR and NIR the procedures and arrangements undertaken to collect and archive data for the preparation of national GHG inventories. Regarding the archiving procedures, during the technical analysis week, Costa Rica clarified that the previous GHG information was archived and the archiving system is built in an integrated manner within MINAE-INM. Costa Rica provided information on the institutions involved in the GHG inventory and the structure in place. The TTE observed that the information is transparently reported, while noting that the transparency of information could be further improved by including, among other things, details of the roles and responsibilities and specific arrangements for data collection, in line with decision 17/CP.8, annex, paragraph 13.

32. For the energy sector, Costa Rica presented GHG emissions and information on activity data sources, emission factors and methodologies in its BUR. The BUR indicates that national emission factors for CO<sub>2</sub> estimates have been developed for all fuels used in Costa Rica. The TTE commends Costa Rica for developing country-specific emission factors. The TTE also commends Costa Rica for reporting estimates using both the sectoral and the reference approaches. The TTE observed that there is a difference of 1.77 per cent in the estimates for 2012 between these approaches and noted that the transparency of the information reported could be enhanced by including the reasons for this difference.

33. For the IPPU sector, Costa Rica presented GHG emissions and information on activity data sources, emission factors and methodologies in its BUR. Where available, estimates related to industrial production processes are based on installation-specific data. The TTE commends Costa Rica for its efforts in collecting installation-specific data and reporting them in a transparent manner.

34. For the AFOLU sector, Costa Rica presented GHG emissions and information on data sources, emission factors and methodologies in its BUR. The TTE commends Costa Rica for also including the main values for activity data, such as deforested areas and livestock numbers.

35. For the waste sector, Costa Rica presented GHG emissions and information on activity data sources, emission factors and methodologies in its BUR.

36. The TTE noted that Costa Rica reported information on the GHG inventory in a transparent manner in its NIR, which was submitted together with the BUR.

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

37. As indicated in table 2 above, Costa Rica reported in its BUR, in line with paragraphs 11–13 of the UNFCCC reporting guidelines on BURs, information on mitigation actions and their effects, to the extent possible.

38. Costa Rica included information on emission projection scenarios from 2014 to 2030 in its BUR (chapter 3), covering the energy, IPPU, AFOLU and waste sectors. The TTE commends Costa Rica for providing information on projections in the BUR.

39. The BUR provides information on eight mitigation actions in the form of programmes, plans, national strategies, nationally appropriate mitigation actions (NAMAs) projects and clean development mechanism (CDM) projects. The mitigation actions reported by Costa Rica cover the energy, IPPU, AFOLU and waste sectors. The sectors covered are consistent with the 2006 IPCC Guidelines. The TTE noted that the time period covered for the mitigation actions is not provided. Also, the GHGs covered by the mitigation actions are only partly reported, because some mitigation actions (e.g. chapter 4.1.6, “Proyecto Aguas Residuales”) only included CO<sub>2</sub> and not the other GHGs. Costa Rica also provided information on the objectives and quantitative goals and progress indicators, to the extent possible. During the technical analysis, in response to a technical clarification sought by the TTE, Costa Rica clarified that it is still working on the identification of sources and sinks in order to include additional information in the next BUR.

40. Information on the methodologies and assumptions used to assess the mitigation actions and to estimate the associated GHG emission reductions was not provided in the BUR. In response to a technical clarification sought by the TTE, Costa Rica clarified that it uses the same methodology as that used to develop the national GHG inventory, but there was no additional information on the methodologies and assumptions to assess the impacts of mitigation actions. The TTE noted that the transparency of the information provided on mitigation actions could be enhanced by describing the methodologies and assumptions, planned or used, to assess the mitigation actions and estimate GHG emission reductions.

41. Regarding the assessment of interactions between mitigation actions, Costa Rica has identified some possible interactions between the NAMAs and the activities on reducing emissions from deforestation and forest degradation in developing countries (REDD-plus).<sup>1</sup> During the technical analysis, Costa Rica clarified that it is still working on defining the scope of the assessment in order to include additional details in future BURs.

42. The objectives for each mitigation action are provided in the BUR; these are noted to be consistent with the description and scope of the mitigation actions. The steps taken and envisaged are also provided for each mitigation action, although the level of detail provided differs (e.g. BUR chapters 4.1.3.G and 4.1.4.G) and in other instances, the status of implementation (i.e. planned, adopted, implemented) is not clearly defined. The TTE

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<sup>1</sup> In decision 1/CP.16, paragraph 70, the Conference of the Parties encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks.

noted that differentiating the information provided by steps taken or steps envisaged, to the extent possible, as well as the status of the implementation could enhance the transparency of the information provided in the BUR.

43. The mitigation action reported under chapter 4.1.3 of the BUR states that, during the period 2010–2013, Costa Rica achieved a reduction in GHG emissions amounting to 8,889,753 t CO<sub>2</sub> eq, with an uncertainty of 20 per cent. The TTE, while noting that no information was provided on how the uncertainty was estimated, acknowledges the effort of Costa Rica in providing such information.

44. The mitigation actions reported in chapter 4.1 of the BUR do not include information on the progress of implementation and the results achieved. During the technical analysis, Costa Rica clarified that the mitigation actions reported in chapters 4.1.1, 4.1.2, 4.1.4 and 4.1.5 had not produced any results at the time of drafting the BUR, while those reported in chapter 4.1.6 are still under design. Costa Rica only reports the results achieved for a mitigation action in chapter 4.2 of the BUR. The TTE noted that providing additional information on the status and the timeline of the progress of implementation (i.e. under design, implementation, implemented) of each mitigation action would further enhance the transparency of the BUR.

45. The BUR provides detailed information on two CDM projects in Costa Rica: one covering the AFOLU sector and the other covering both the energy and IPPU sectors. For the former, the BUR provides the information that, from 2010 to 2012, the project underwent a validation process carried out by a designated operational entity, but no results were provided after this date. For the latter, the BUR provides information on the results obtained for the year 2012, amounting to a total reduction of 210 Gg CO<sub>2</sub> eq. The TTE noted a difference with the use of separator marks (i.e. commas and points) between the quantitative goals of the mitigation actions in chapters 4.2.1.E and 4.2.2. of the BUR, which the Party clarified during the technical analysis, explaining that this is a matter of editing while preparing the BUR document.

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

46. Costa Rica reported in its BUR the economic and financial, political, legal and regulatory, institutional and organizational barriers to capacity-building; however, it provided limited information on financial, technical and capacity-building needs. Costa Rica indicated that there are opportunities for improving and extending technical cooperation and capacity-building in specific areas, and promoting technology transfer. In particular, during the technical analysis, Costa Rica clarified that the financial resources are critical for ensuring the sustainability of the work on the preparation of the BUR. The TTE noted that reporting the support needed for ensuring the preparation on the BUR in a continuous manner (including financial, technical and capacity-building needs) could further enhance the transparency of the information reported in the BUR.

47. With regard to the development and transfer of technology, Costa Rica did not report on technology needs and technological support received. The TTE noted that reporting such information could further enhance the transparency of the BUR.

48. The TTE acknowledged the effort made by Costa Rica to report on constraints and gaps, and related financial, technical and capacity-building needs, and on financial resources, technology transfer, capacity-building and technological support received. The TTE noted the reporting to be mostly transparent, since the information on technology needs and technological support received is not reported in the BUR. The TTE noted that the inclusion of information on technology support needed and received in future BUR could further enhance the transparency of the overall information reported in this chapter.

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

49. Costa Rica did not provide any information on the description of the arrangements for domestic MRV of mitigation actions. The TTE noted that, in accordance with decision 2/CP.17, annex III, paragraph 13, reporting on domestic MRV could enhance the transparency of the information in the BUR. This includes all the underlying processes required (i.e. data collection, data management, quality control and quality assurance, institutional arrangements, data management systems, assessment of sources and sinks, and estimation of emissions and removals,). Costa Rica clarified that it was not possible to provide information on MRV of mitigation action arrangements because it is still in the process of defining the systems.

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

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

- (a) Enhance reporting methodologies and assumptions, for example related to land areas in transition and energy products from fuel and solvents;
- (b) Identify the international cooperation and financial support received from the public and private sectors for updating BURs and national communications;
- (c) Develop awareness among policy makers and the general public to support these processes over a longer term;
- (d) Provide estimates of the required funds and cost/benefit for mitigation actions;
- (e) Further strengthen the existing institutional arrangements related to the preparation of BURs on a continuous basis;
- (f) Establish a quality control and quality assurance system to ensure the high quality of data for the assessment of mitigation actions;
- (g) Estimate and report quantitative GHG results achieved or expected from the mitigation actions provided in the BUR;
- (h) Further support the identification and assessment of possible interactions between mitigation actions;
- (i) Enhance the reporting on international markets;
- (j) Further enhance the validation/verification process for mitigation actions;
- (k) Further support the design and implementation of domestic arrangements for MRV of mitigation actions;
- (l) Identify and report on financial, technical and capacity-building needs;
- (m) Identify and report on technology transfer needs and technology support received.



### III. Conclusions

51. The TTE concludes that:

(a) Most of the elements of information listed in paragraph 3(a) of the ICA modalities and guidelines are included in the first BUR of Costa Rica;

(b) The information was reported transparently on the existing institutional arrangements of Costa Rica. At the same time, the TTE noted opportunities to further enhance the transparency of the reported information by including a more complete description of the institutional arrangements and how they would allow for the preparation of BURs on a continuous basis. Such information may include reporting on legal status, roles and responsibilities of the overall coordinating entity, involvement and roles of other institutions and experts, mechanisms for information/data exchange, quality assurance/quality control procedures, provisions for public consultation and other forms of stakeholder engagement, and future improvement plans;

(c) The TTE noted that Costa Rica reported information transparently in its NIR, which was submitted as a part of the BUR, and commends Costa Rica for this. At the same time, the TTE noted the lack of specific references to the NIR in the BUR which, if addressed, would further enhance the transparency of the information on GHG emissions and removals;

(d) In accordance with paragraphs 11 and 12 of the UNFCCC reporting guidelines on BURs, Costa Rica provided information on eight mitigation actions in the form of programmes, plans, national strategies, NAMAs, projects and CDM projects. The sectors covered are energy, IPPU, AFOLU and waste, consistent with the 2006 IPCC Guidelines. Costa Rica also provided information on the objectives and quantitative goals and progress indicators, to the extent possible. Methodologies and assumptions were not included in the BUR, because Costa Rica is still working to define the methods to assess the mitigation actions. Further information on the underlying steps taken was only provided for the mitigation action “National Strategy of REDD+”. Costa Rica has two projects under the CDM, and is in the process of developing a domestic MRV system for its mitigation actions. The transparency of the information could be enhanced by providing additional detailed methodologies and assumptions used. Additionally, the transparency could be further enhanced by providing, to the extent possible, differentiated information on the steps taken and steps envisaged, as well as the status of implementation for all reported mitigation actions;

(e) The TTE acknowledged the effort made by Costa Rica to report on constraints and gaps, and related financial, technical and capacity-building needs, and on financial resources and capacity-building support received. The information was generally reported in a transparent manner. The TTE noted the reporting to be mostly transparent and the inclusion of information on technology support needed and received in the next BUR could further enhance the transparency of the overall information reported in the respective section.

52. The TTE, in consultation with Costa Rica, identified 13 capacity-building needs related to the facilitation of reporting in accordance with the UNFCCC reporting guidelines on BURs and to participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention. The key capacity-building needs prioritized by Costa Rica are summarized in chapter II.D above.

## Annex

### Documents and information used during the technical analysis

#### A. 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 Costa Rica. Available at <http://unfccc.int/8722.php>.

Inventario nacional de gases de efecto invernadero y absorción de carbono. 2012. Costa Rica. Ministerio de Ambiente y Energía. Instituto Meteorológico Nacional. Available at [http://unfccc.int/national\\_reports/non-annex\\_i\\_natcom/reporting\\_on\\_climate\\_change/items/8722.php](http://unfccc.int/national_reports/non-annex_i_natcom/reporting_on_climate_change/items/8722.php).

Third national communication of Costa Rica. 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).

#### B. Additional information provided by the Party

The following documents<sup>1</sup> were provided by the Party in response to the technical clarification sought during the technical analysis:

MINAET, 2011. Evaluación de Necesidades Tecnológicas ante el Cambio Climático (Technology Needs Assessment). Informe Final sobre Tecnologías en Mitigación (Final Report on Mitigation Technologies)

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