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Technical analysis of the first biennial update report of El Salvador submitted on 29 September 2018

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, consistently with their capabilities and the level of support provided for reporting, were to submit their first biennial update report by December 2014. As mandated, the least developed country Parties and small island developing States may submit biennial update reports at their discretion. This summary report presents the results of the technical analysis of the first biennial update report of El Salvador, conducted by a team of technical expert in accordance with the modalities and procedures contained in the annex to decision 20/CP.19.

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Contents

	<i>Paragraphs</i>	<i>Page</i>
Abbreviations and acronyms		3
I. Introduction and process overview.....	1–8	4
A. Introduction	1–4	4
B. Process overview	5–8	4
II. Technical analysis of the biennial update report	9–65	5
A. Scope of the technical analysis	9–10	5
B. Extent of the information reported.....	11–12	5
C. Technical analysis of the information reported.....	13–63	5
D. Identification of capacity-building needs.....	64–65	12
III. Conclusions	66–71	13
Annexes		
I. Extent of the information reported by El Salvador in its first biennial update report.....		15
II. Documents and information used during the technical analysis		21

Abbreviations and acronyms

AD	activity data
AFOLU	agriculture, forestry and other land use
BUR	biennial update report
CGE	Consultative Group of Experts
CH ₄	methane
CO	carbon monoxide
COP	Conference of the Parties
CO ₂	carbon dioxide
CO ₂ eq	carbon dioxide equivalent
EF	emission factor
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
ICA	international consultation and analysis
IPCC	Intergovernmental Panel on Climate Change
IPCC good practice guidance	<i>Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories</i>
IPCC good practice guidance for LULUCF	<i>Good Practice Guidance for Land Use, Land-Use Change and Forestry</i>
LULUCF	land use, land-use change and forestry
MRV	measurement, reporting and verification
NAMA	nationally appropriate mitigation action
NC	national communication
NE	not estimated
NMVOC	non-methane volatile organic compound
NO	not occurring
non-Annex I Party	Party not included in Annex I to the Convention
NO _x	nitrogen oxides
N ₂ O	nitrous oxide
PFC	perfluorocarbon
QA/QC	quality assurance/quality control
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
Revised 1996 IPCC Guidelines	<i>Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories</i>
SF ₆	sulfur hexafluoride
SO ₂	sulfur dioxide
TTE	team of technical experts
UNFCCC guidelines for the preparation of NCs from non-Annex I Parties	“Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention”
UNFCCC reporting guidelines on BURs	“UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention”
2006 IPCC Guidelines	<i>2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>

I. Introduction and process overview

A. Introduction

1. The process of ICA consists of two steps: a technical analysis of the submitted BUR and a facilitative sharing of views under the Subsidiary Body for Implementation, resulting in a summary report and record, respectively.
2. According to decision 2/CP.17, paragraph 41(a), non-Annex I Parties, consistently with their capabilities and the level of support provided for reporting, were to submit their first BUR by December 2014.
3. Further, according to paragraph 58(a) of the same decision, the first round of ICA is to commence for non-Annex I Parties within six months of the submission of the Parties' first BUR. The frequency of developing country Parties' participation in subsequent rounds of ICA, depending on their respective capabilities and national circumstances, and the special flexibility for small island developing States and the least developed country Parties, will be determined by the frequency of the submission of BURs.
4. This summary report presents the results of the technical analysis of the first BUR of El Salvador, undertaken by a 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

5. In accordance with the mandate referred to in paragraph 2 above, El Salvador submitted its first BUR on 29 September 2018. During the technical analysis, the Party clarified that the funding for the first BUR was approved in February 2015 and received thereafter, resulting in a delay to the start of activities for the development of the BUR.
6. The technical analysis of the BUR took place from 25 February to 1 March 2019 in Bonn 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: Michinobu Aoyama (member of the CGE from Japan), Luis Cáceres Silva (former member of the CGE from Ecuador), Ruleta Camacho Thomas (former member of the CGE from Antigua and Barbuda), Lisa Hanle (United States of America), Jenny Mager (Chile), Dingane Sithole (Zimbabwe), Tian Wang (member of the CGE from China) and Brian Zutta (Peru). Ms. Hanle and Ms. Mager were the co-leads. The technical analysis was coordinated by Karen Ortega and Anna Sikharulidze (secretariat).
7. During the technical analysis, in addition to the written exchange, through the secretariat, to provide technical clarifications on the information reported in the BUR, the TTE and El Salvador engaged in consultation¹ on the identification of capacity-building needs for the preparation of BURs and participation in the ICA process. Following the technical analysis of El Salvador's first BUR, the TTE prepared and shared a draft summary report with El Salvador on 28 May 2019 for its review and comment. El Salvador, in turn, provided its feedback on the draft summary report on 28 August 2019.
8. The TTE responded to and incorporated El Salvador's comments referred to in paragraph 7 above and finalized the summary report in consultation with the Party on 28 November 2019.

¹ The consultation was conducted via teleconferencing.

II. Technical analysis of the biennial update report

A. Scope of the technical analysis

9. 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 reporting guidelines on BURs (decision 2/CP.17, annex III), 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).

10. The remainder of this chapter presents the results of each of the three parts of the technical analysis of El Salvador's BUR outlined in paragraph 9 above.

B. Extent of the information reported

11. The elements of information referred to in paragraph 9(a) above include the national 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 MRV; and information on support needed and received.

12. 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 11 above have been included in the BUR of the Party concerned. The TTE considers that the reported information is partially consistent with the UNFCCC reporting guidelines on BURs. Specific details on the extent of the information reported for each of the required elements are provided in annex I.

C. Technical analysis of the information reported

13. The technical analysis referred to in paragraph 9(b) above aims to increase the transparency of mitigation actions and their effects, without engaging in a discussion on the appropriateness of those actions. Accordingly, the focus of the technical analysis was on the transparency of the information reported in the BUR.

14. 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 IPCC and referred to in the UNFCCC reporting guidelines on BURs.

15. The results of the technical analysis are presented in the remainder of this chapter.

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

16. 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 NC, including information on national circumstances and institutional

arrangements relevant to the preparation of NCs on a continuous basis. In their NCs, non-Annex I Parties report on their national circumstances following the reporting guidance contained in decision 17/CP.8, annex, paragraphs 3–5, and they could report similar information in their BUR, which is an update of their most recently submitted NC.

17. El Salvador reported in its first BUR the following information on its national circumstances: a description of national and regional development priorities, objectives and circumstances, including information on features of geography (relating to surface area, geology, geomorphology, climate and watersheds), demography, society (population, education and poverty), economy and the environment (water, waste, air, deforestation and soil degradation) that might affect the ability to deal with mitigating and adapting to climate change.

18. In addition, El Salvador provided a summary of relevant economic information regarding its national circumstances in tabular format.

19. El Salvador's BUR stated that the Ministry of Environment and Natural Resources is responsible for the preparation of all national reports on climate change to be submitted to the secretariat. El Salvador described in its BUR the existing institutional arrangements relevant to the preparation of its GHG inventory only. The description covers 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 and several mechanisms for information and data exchange.

20. The TTE noted that in the Party's first BUR information was not reported on the institutional arrangements for the preparation and submission of NCs on a continuous basis. During the technical analysis, El Salvador indicated that there is no permanent, official institutional arrangement for the preparation and reporting of NCs, but this is to be resolved with the proposed Climate Change Framework Law.

21. The TTE noted that the transparency of the information reported on institutional arrangements could be enhanced by addressing the area noted in paragraph 20 above.

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

22. As indicated in table 1 in annex I, El Salvador reported information on its GHG inventory in its BUR mostly in accordance with paragraphs 3–10 of the UNFCCC reporting guidelines on BURs and paragraphs 8–24 of the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties, contained in the annex to decision 17/CP.8.

23. El Salvador submitted its first BUR in 2018, and the GHG inventory reported is for 2014, which is consistent with the requirements for the reporting time frame.

24. GHG emissions and removals for the BUR covering 2014 were estimated using mainly a tier 1 methodology from the 2006 IPCC Guidelines for all categories. The TTE commends El Salvador on its use of the 2006 IPCC Guidelines for the preparation of its GHG inventory.

25. With regard to the methodologies used, information was clearly reported, including tier levels, EFs used and the use of the 2006 IPCC Guidelines. El Salvador used tier 1 default values for the EFs and national AD for all categories and subcategories in all sectors. Information on the AD values used for the estimation of emissions and removals for 2014 was mostly not reported, except for the AFOLU sector. During the technical analysis, El Salvador clarified that the information is available and would be provided in future reports.

26. Information on the Party's total GHG emissions by gas for 2014 is outlined in table 1 in Gg CO₂ eq. Information on PFCs and SF₆ was not reported. During the technical analysis, the Party clarified that emissions of those gases were not reported because they are not considered to be significant sources of emissions.

Table 1
Greenhouse gas emissions by gas of El Salvador for 2014

<i>Gas</i>	<i>GHG emissions (Gg CO₂ eq^a)</i>
CO ₂ (net)	15 978.7
CH ₄	3 577.6
N ₂ O	753.3
HFCs	85.3
PFCs	–
SF ₆	–
Other	–
Total	20 394.9

^a Using GWPs from the IPCC Fourth Assessment Report.

27. Other emissions reported include 38.8 Gg NO_x, 355.8 Gg CO, 111.3 Gg NMVOCs and 277.6 Gg SO₂.

28. El Salvador applied notation keys in tables where numerical data were not provided. The use of notation keys was consistent with the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties in all cases. The Party clearly reported on the use of notation keys, which enabled the TTE to have a better understanding of the information reported.

29. El Salvador did not report comparable information addressing the tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF. The tables included in annex 3A.2 contain a more detailed level of disaggregation of sectors and subsectors compared with the information reported in the BUR. They also include information on the annual change in carbon stocks per carbon pool and other variables, which was not reported in the BUR. The TTE noted that the Party providing information comparable to the tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF could facilitate a better understanding of the information reported.

30. The shares of emissions that different sectors contributed to the total GHG emissions including AFOLU as reported by the Party in 2014 are reflected in table 2.

Table 2
Shares of greenhouse gas emissions by sector of El Salvador in 2014

<i>Sector</i>	<i>Net GHG emissions (Gg CO₂ eq^a)</i>	<i>Share (%)</i>
Energy	6 268.5	30.7
AFOLU	11 793.6	57.8
Industrial processes and product use	461.6	2.3
Waste	1 871.2	9.2

^a Using GWPs from the IPCC Fourth Assessment Report.

31. El Salvador reported information on its use of GWP values consistent with those provided by the IPCC in its Fourth Assessment Report based on the effects over a 100-year time-horizon of GHGs.

32. For the energy sector, the Party indicated in its BUR that the ground transportation subsector accounts for the largest share of emissions from the energy sector at 47.0 per cent, and accounts for 11.7 per cent of the total emissions across all sectors. However, information was not clearly reported on the types of fuel used in the country and corresponding AD were not provided. During the technical analysis, the Party clarified that the types of fuel used included gasoline, petrol and jet fuel. The TTE noted that the Party clarifying the types of fuel used and providing information on their consumption in the BUR could facilitate a better understanding of the information reported.

33. For industrial processes and other product use, the source categories reported were mineral industry (2.A) and use of fluorinated substitutes for ozone-depleting substances (2.F). For other categories, emissions were reported as “NO” or “NE”. During the technical analysis, El Salvador clarified that there is no significant production of iron, steel, copper, paper or glass in the country and that emissions from the chemical and metal industries were not reported owing to a lack of AD. El Salvador reports that 81.5 per cent of the emissions in this sector come from the mineral industry, particularly from cement production, which produces 94.1 per cent of the emissions in this category. The emissions from the fluorinated substitutes for ozone-depleting substances were reported by subtypes of HFCs. The TTE commends the Party for reporting emissions from HFCs. However, the emissions from HFCs, PFCs and SF₆ were reported as “NO” or “NE” for some subcategories in the BUR. The TTE noted that the Party providing clear explanations of why some emissions are not estimated in this sector could facilitate a better understanding of the information reported.

34. For the agriculture sector, CH₄ emissions from enteric fermentation and manure management were identified as key categories and the most relevant emissions sources in the sector. El Salvador used EFs from the 2006 IPCC Guidelines. The Party provided information on the number of livestock for 2014. However, the amount of fertilizer, natural or synthetic, used in the agriculture sector was not provided. The TTE noted that the Party providing the AD for the amount of fertilizer and its subcategories in the BUR could facilitate a better understanding of the information reported.

35. For the land categories of the AFOLU sector, El Salvador reported GHG emissions and removals for 2014. Overall, the net removals from the land categories were 9,518.5 Gg CO₂ eq in 2014. Of the land categories, the forest land subcategory accounts for the largest share at 3,775.4 kt CO₂ (39.7 per cent), followed by the grassland subcategory at 3,446.5 kt CO₂ (36.1 per cent). The Party reported that AD for the land categories are derived from a comparison of land-use maps from 2005, 2011 and 2016.

36. In the waste sector, CH₄ emissions from solid waste disposal sites and from wastewater handling are the key categories. El Salvador reported emissions of 1,096.5 Gg CO₂ eq from solid waste disposal sites and emissions of 771.4 Gg CO₂ eq from wastewater handling. Information was not reported on the category incineration and open burning of waste (4.C). During the technical analysis, El Salvador explained that incineration and open burning of waste is a significant category, but the Party does not currently have the capacity to quantify the emissions from this category. The TTE noted that the Party reporting emissions from the incineration and open burning of waste in the BUR could facilitate a better understanding of the information reported and of the potential total emissions from the waste sector.

37. Emissions for 2014, which were reported in the NC3 using the 2006 IPCC Guidelines, were reported in the BUR. El Salvador did not report the emissions for 1994, which were included in the NC1, or the emissions for 2000 and 2005, which were included in the NC2. During the technical analysis, El Salvador indicated that it encountered constraints in terms of data unavailability, particularly for the AFOLU sector, when attempting to provide a consistent time series of emissions and removals back to the years reported in the previous NCs. The TTE noted that the Party reporting a time series back to the years reported in previous NCs in the BUR could facilitate a better understanding of the information reported.

38. El Salvador described in its BUR the institutional framework for the preparation of its 2014 GHG inventory. The Ministry of Environment and Natural Resources is the governmental body responsible for climate change policies and is responsible for El Salvador’s GHG inventory, which was prepared with the support of the United Nations Development Programme, which assisted El Salvador in designing its GHG inventory system. During the technical analysis, El Salvador clarified that there are informal arrangements, both verbal and written, for the collection of information. The Ministry of Environment and Natural Resources requests and receives data from participating institutions. Although there are currently no permanent agreements between the institutions that participate in the preparation of the GHG inventory, El Salvador indicated that formal agreements will be made in the near future. El Salvador also noted that it is making continuous improvements to current arrangements with a view to implementing formal procedures with institutions and

key players and organizing frequent meetings with stakeholders during the collection, preparation and validation of the national GHG inventory.

39. El Salvador reported that a key category analysis was performed for the level of emissions for 2014. El Salvador found that 17 of the 31 categories measured represented 95.8 per cent of the emissions from the GHGs inventoried in 2014, of which 49.3 per cent from the categories forest remaining forest (23.2 per cent; 3.B.1.a), land converted to grassland (14.4 per cent; 3.B.3.b) and ground transportation (11.7 per cent; 1.A.3.b). Forest remaining forest also includes the anthropogenic perturbation of primary forests to secondary forests and is therefore a source of GHG emissions. Also, El Salvador noted that land converted to forest land (3.B.1.b) is the largest remover of GHGs but would be ranked fourth according to the absolute value of emissions and removals measured by the Party.

40. The BUR provides information on QA/QC measures for all sectors in the BUR. El Salvador indicated that it used the IPCC good practice guidance for QC measures. To ensure QA, the Party had technical experts that have worked with Parties included in Annex I to the Convention and non-Annex I Parties in the past review the national GHG inventory. The TTE commends El Salvador for providing information in accordance with the IPCC good practice guidance.

41. El Salvador reported information on CO₂ fuel combustion using both the sectoral and the reference approach. The Party reported that the difference in the results between the two approaches is relatively small at 1.5 per cent in terms of energy and 2 per cent in terms of emissions.

42. Information was reported on international aviation, but not marine bunker fuels. During the technical analysis, El Salvador clarified that this information was available and that it would be included in subsequent BURs. The TTE noted that the Party providing information on emissions from marine bunker fuels could facilitate a better understanding of the information reported.

43. El Salvador reported information on the uncertainty assessment (level) of its national GHG inventory. The uncertainty analysis was based on the qualitative approach and covers all source categories and all direct GHGs. However, a quantitative uncertainty assessment was not performed. In the BUR, the Party clarified that, owing to limited information, it was not possible to estimate a quantitative uncertainty value and, therefore, a qualitative analysis was carried out. The TTE noted that the Party reporting the quantitative uncertainty assessment in accordance with the IPCC guidelines could facilitate a better understanding of the information reported.

44. The TTE noted that the transparency of the information reported on GHG inventories could be further enhanced by addressing the areas noted in paragraphs 29, 32, 33, 34, 36, 37, 42 and 43 above.

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

45. As indicated in table 2 in annex I, El Salvador reported in its BUR, partially in accordance with paragraphs 11–13 of the UNFCCC reporting guidelines on BURs, information on mitigation actions and their effects, to the extent possible.

46. The information reported provides an overview of the Party's mitigation actions and their effects. In its BUR, which includes information on the national and international context, El Salvador frames its national mitigation planning and actions in the context of the principal policies and strategies related to climate change, which are listed in table 54 of the BUR. El Salvador submitted its nationally determined contribution to the secretariat in December 2015, with the goal of reducing emissions in the energy sector by 46 per cent by 2025 and presenting its commitment regarding implementing mitigation efforts and promoting mitigation benefits of adaptation measures, if appropriate. The mitigation policies reported in the BUR follow the same approach. Some of these are not directly related to emission reductions; however, the potential mitigation co-benefits are not clearly identified in the document. During the technical analysis, El Salvador clarified that it had experienced

difficulties in identifying specific actions from its national policies that could contribute to the mitigation of GHG emissions.

47. The Party reported a summary of its national policies considered relevant to mitigation in tabular format in accordance with decision 2/CP.17, annex III, paragraph 11. Table 54 of the BUR presents the name of the policy, the geographical coverage and the sector. For the actions listed in this table, El Salvador included a description of the main objectives of each policy. During the technical analysis, El Salvador explained that it had made considerable efforts to design instruments that could mainstream the consideration of climate change challenges into the work of public institutions. Policies such as the Five-Year Development Plan (2014–2019) and the National Environmental Policy and Climate Change National Strategy aim to promote sustainable development with potential mitigation co-benefits. Additionally, El Salvador provided a description of other sectoral actions and policies in the energy, transport and AFOLU sectors. The TTE noted that the Party providing a clear list of actions with an indication of how they contribute to the mitigation of GHG emissions could facilitate a better understanding of its mitigation efforts.

48. Consistently with decision 2/CP.17, annex III, paragraph 12(a), El Salvador reported the names of actions that have mitigation effects and groups of actions. However, information on coverage (sector and gases) and progress indicators was not consistently presented through the document. For most of the policies and actions a description was provided; however, information on quantitative goals was not clearly reported in the BUR. During the technical analysis, El Salvador clarified that it had experienced difficulties in establishing quantitative progress indicators and identifying specific actions within the national policies that could contribute to emission reductions. The Party explained that it needs to improve its capacities to implement the reporting provisions in order to ensure comparability of information for each mitigation action reported and to strengthen the capacities of sectoral institutions to assess the potential mitigation and adaptation components in their sectoral policies. The TTE noted that the Party providing the information on coverage, progress indicators and the quantitative goals of mitigation actions could facilitate a better understanding of its mitigation efforts.

49. The information reported for the energy sector demonstrates the Party's progress towards implementing the planned actions framed by the 2010–2024 National Energy Policy. The mitigation actions are mainly in the area of promoting renewable energy sources. For example, El Salvador reported a solar photovoltaics project under construction that is expected to reduce GHG emissions by 175,000 t CO₂ per year. The methodologies used for estimating the impacts of the energy-related actions and details of the underlying assumptions were not clearly reported in the BUR. The general objectives of the mitigation actions were reported and some information on the steps taken to implement them was also provided. The Party reported that its mitigation measures were derived from projects that have been implemented or are ongoing or planned. The Party also reported information on the results achieved from the implementation of its mitigation efforts in this sector, which includes an increase in energy produced by renewable sources from 24.8 per cent in 2014 to 83 per cent in early 2018. During the technical analysis, the Party clarified that sectoral technical capacities need to be strengthened to generate this kind of information on a continuous basis and that a better understanding of the reporting provisions and requirements is required.

50. With regard to the transport sector, El Salvador reported on its main policy, the Integrated Transportation System of the Metropolitan Area of San Salvador. This project started in 2013 and is still under implementation. The Party reported the objectives and some results achieved, but these were not provided together with methodologies and assumptions. During the technical analysis, the Party stated that it is working on standard guidelines and methodologies to estimate the mitigation potential of this kind of activity. The TTE noted that the Party reporting information on methodologies and assumptions for all actions could facilitate a better understanding of its mitigation efforts.

51. The Party reported on actions in the AFOLU sector in its BUR. With regard to forestry, El Salvador provided quantitative information on the progress and indicators of its National Program for the Restoration of Ecosystems and Landscapes. For other forestry and livestock activities, the Party provided only a description and the general objectives. Information on methodologies and assumptions, together with the results achieved and progress made, was

not provided. The TTE noted that the Party providing information on methodologies and assumptions together with the results achieved and progress made in this sector could facilitate a better understanding of its mitigation efforts.

52. Two NAMA projects were reported in the BUR, one of which, targeting energy efficiency in public buildings, was submitted to the NAMA Facility but was not successful in obtaining financial support for its implementation. The second proposal, targeting the sugar cane sector, is in the formulation stage.

53. El Salvador did not provide information on its involvement in international market mechanisms as a Party to the Kyoto Protocol. During the technical analysis, the Party clarified that there had been no additional information in this regard since its NC2. The TTE noted that the Party providing such a clarification in the BUR could facilitate a better understanding of the information reported.

54. El Salvador reported information on its domestic MRV arrangements in accordance with decision 2/CP.17, annex III, paragraph 13. Specifically, the Party provided information on its MRV system for REDD+ and forestry activities. During the technical analysis, El Salvador explained that it needs to improve its MRV arrangements and capacities for other sectoral mitigation actions and to monitor the aggregated mitigation efforts.

55. The TTE noted that the transparency of the information reported on mitigation actions and their effects could be enhanced by addressing the areas noted in paragraphs 47, 48, 50, 51 and 53 above.

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

56. As indicated in table 3 in annex I, El Salvador reported in its BUR, partially in accordance with paragraphs 14–16 of the UNFCCC reporting guidelines on BURs, information on finance, technology and capacity-building needs and support received.

57. El Salvador reported dispersed information on constraints and gaps regarding inventory and mitigation actions and some initiatives for identifying sectoral financing needs (climate public expenditure and institutional review; sustainable El Salvador plan; identification of financial mechanisms for climatically sustainable and smart investments for El Salvador; follow-up report of the national climate change plan; national inventory of critical investment in climate change; and priority infrastructure risk analysis).

58. During the technical analysis, El Salvador clarified that the climate public expenditure and institutional review identified some limitations and gaps. For example, there are no budgetary items related to spending and investment in climate change in any of the projects carried out; the country does not have a consolidated record of climate financing needs on the basis of standardized criteria, by sector and territory; and the country needs to work on mainstreaming the topic of climate change within institutions.

59. Information on related financial, technical and capacity-building needs was not reported in the BUR. During the technical analysis, El Salvador clarified that, in spite of having a first estimate of financial needs established in the national climate change plan and analysis of critical investments, it needs support in determining these amounts of financing and achieving the capacities for their use. The TTE noted that the Party clarifying and reporting these gaps and needs in the BUR could facilitate a better understanding of the information reported.

60. El Salvador did not report information on financial resources, technology transfer, capacity-building and technical support received in accordance with decision 2/CP.17, annex III, paragraph 15. During the technical analysis, El Salvador clarified that the development of the BUR was financed using funds from the Global Environment Facility through the United Nations Development Programme. The Party further confirmed that, according to a report on support received for climate action, financial support received from international cooperation represents 4.82 per cent of the total amount invested in El Salvador in relation to climate change. The TTE noted that the Party clarifying and reporting the support received in the BUR could facilitate a better understanding of the information reported.

61. El Salvador did not report information on nationally determined technology needs with regard to the development and transfer of technology in accordance with decision 2/CP.17, annex III, paragraph 16. During the technical analysis, El Salvador clarified that no systematic procedures had been established for the evaluation of technological needs, which are required to identify whether there is a technological deficiency in addressing climate change. The TTE noted that the Party reporting these gaps and needs in the BUR could facilitate a better understanding of the information reported.

62. The TTE noted that the transparency of the information reported on gaps, needs and support received could be enhanced by addressing the areas noted in paragraphs 59, 60 and 61 above.

5. Any other information

63. El Salvador reported some information on climate change initiatives that include adaptation components, such as the sustainable livestock development programme and the national climate change and agroclimatic risk management programme for the agriculture, forestry, fisheries and aquaculture sectors.

D. Identification of capacity-building needs

64. In consultation with El Salvador, the TTE identified the following needs for capacity-building that could facilitate the preparation of subsequent BURs and participation in ICA:

(a) Establishing a permanent and official institutional arrangement for the preparation and reporting of NCs and BURs on a continuous basis, allowing the identification of lessons learned from the process and strengthening the capacities of the institutions involved;

(b) Designing and implementing the MRV system for the Party's climate change related actions and contributions;

(c) Identifying constraints and gaps and associated financial, technical and capacity-building needs for all climate change activities carried out by the Party;

(d) Collecting and systematizing information on financial resources, technology transfer, capacity-building and technical support received from the Global Environment Facility, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the BUR;

(e) Identifying technology support received as part of the Party's initiatives involving international cooperation;

(f) Identifying nationally determined technology needs;

(g) Strengthening institutional and procedural arrangements for evaluating existing technologies and identifying technology needs;

(h) Developing the methodology for evaluating potential projects with available technologies;

(i) Using splicing techniques for filling in data gaps in order to provide a consistent time series back to the years reported in previous NCs, especially for the AFOLU sector (e.g. 2000 and 2005);

(j) Estimating and reporting summary information tables of inventories for previous submission years, especially for the AFOLU sector (e.g. 2000 and 2005);

(k) Estimating emissions from the categories of incineration and open burning of waste and wetlands;

(l) Selecting a methodology and quantifying the uncertainty level of AFOLU using the IPCC guidelines;

(m) Estimating the underlying uncertainty levels of AD and EFs for AFOLU;

- (n) Identifying and reporting the mitigation co-benefits and mitigation impacts for policies that do not focus on reducing GHG emissions;
- (o) Better understanding the requirements of the UNFCCC reporting guidelines on BURs;
- (p) Quantifying the actual and expected GHG impacts of mitigation actions and policies;
- (q) Collecting and reporting relevant information on methodologies and assumptions for emission reduction calculations;
- (r) Reporting progress and expected outcomes and generating relevant information in line with the UNFCCC reporting guidelines on BURs across all public institutions in charge of implementing mitigation actions;
- (s) Identifying and implementing best practices to archive data and develop a continuous process;
- (t) Developing methodologies to quantify the GHG emissions from the transport sector and estimating data on vehicle fleet and fuel use efficiency;
- (u) Identifying, initiating and implementing specific mitigation actions;
- (v) Developing a methodology to establish emission targets by sector (energy, AFOLU, IPPU, waste, etc.).

65. The TTE noted that, in addition to those identified during the technical analysis, El Salvador reported a specific capacity-building need in chapter IV of its BUR covering the generation of institutional capacities to manage statistical climate information and risks, which would enable the country to identify, prioritize and update its financial needs on a regular basis.

III. Conclusions

66. The TTE conducted a technical analysis of the information reported in the first BUR of El Salvador in accordance with the UNFCCC reporting guidelines on BURs. The TTE concludes that the reported information is partially consistent with the UNFCCC reporting guidelines on BURs and provides an overview of national circumstances and institutional arrangements relevant to the preparation of the national GHG inventory; the national inventory of anthropogenic emissions by sources and removal by sinks of all GHGs not controlled by the Montreal Protocol; actions considered relevant to mitigation; and some constraints and gaps. The TTE concluded that the information analysed is partially transparent.

67. El Salvador identified the Ministry of Environment and Natural Resources as the body responsible for preparing all national reports on climate change to be submitted to the secretariat. However, the BUR does not include the institutional arrangements relevant to the preparation of NCs on a continuous basis. El Salvador reported information on the institutional arrangements relevant to the preparation of its GHG inventory only. The description covers 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, and some mechanisms for information and data exchange.

68. In its first BUR, submitted in 2018, El Salvador reported information on its national GHG inventory for 2014. This included GHG emissions and removals of CO₂, CH₄ and N₂O for all relevant sources and sinks as well as the precursor gases. Estimates of fluorinated gases, particularly HFCs, were provided. However, information on PFCs and SF₆ was reported as “NE” in some categories and “NO” in others; the Party explained that “NE” was used as those are not significant sources of emissions. The inventory was developed using the 2006 IPCC Guidelines for all categories. The total GHG emissions for 2014 were reported as 20,394.9 Gg CO₂ eq. Seventeen key categories were identified, with CO₂ and forest land remaining forest land in the AFOLU sector identified as the main gas and key category, respectively.

69. El Salvador reported information on mitigation actions and their effects, including a list of relevant policies and national programmes that could have mitigation co-benefits. The Party described its approach of considering mitigation co-benefits of adaptation measures in the assessment of its policies and national climate change commitments. Besides its national policies, El Salvador reported progress made in specific mitigation efforts for sectors such as the energy sector, where measures were taken to increase the share of renewable energy sources in the electricity supply to up to 83 per cent. For the transport sector, a public integrated system is under implementation, and for the AFOLU sector, initiatives have been launched such as the national programme for the restoration of ecosystems and landscapes, which has restored land covering 12.6 per cent of the national territory.

70. El Salvador reported information on some constraints and gaps and initiatives for identifying financial needs, but specific gaps and needs were not clearly reported. During the technical analysis, El Salvador clarified that the climate public expenditure and institutional review identified some limitations and gaps. For example, there are no budgetary items related to spending and investment in climate change in any of the projects carried out; the country does not have a consolidated record of its climate financing needs on the basis of standardized criteria, by sector and territory; and the Party needs to work on mainstreaming the topic of climate change within institutions. Information on needs and support received was not reported in the BUR.

71. The TTE, in consultation with El Salvador, identified 20 capacity-building needs listed in chapter II.D above that aim to facilitate reporting in accordance with the UNFCCC reporting guidelines on BURs and participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention. The Party identified the capacity-building needs listed in paragraph 64(a–r) above as priorities to be addressed as soon as possible and the capacity-building need set out in paragraph 64(s) above as a long-term priority.

Annex I

Extent of the information reported by El Salvador in its first biennial update report

Table 1

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

<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, and subsequent BURs shall cover a calendar year that does not precede the submission date by more than four years.	Yes	El Salvador submitted its first BUR in September 2018; the GHG inventory reported is for 2014.
Decision 2/CP.17, annex III, paragraph 4	Non-Annex I Parties should use the methodologies established in the latest UNFCCC guidelines for the preparation of NCs from non-Annex I Parties approved by the COP or those determined by any future decision of the COP on this matter.	Yes	El Salvador used the 2006 IPCC Guidelines.
Decision 2/CP.17, annex III, paragraph 5	The updates of the section on 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 EF may be made in the subsequent full NC.	Yes	
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) The tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF;	No	Comparable information was not reported.
	(b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines.	No	Comparable information was not reported.
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 its previous NCs.	No	The time series reported in the BUR did not include 1994, 2000 or 2005, which were included in the NC1 and NC2.
Decision 2/CP.17, annex III, paragraph 8	Non-Annex I Parties that have previously reported on their national GHG inventories contained in their NCs are encouraged to submit summary information tables of inventories for previous submission years (e.g. for 1994 and 2000).	No	This information was not reported for 1994, 2000 or 2005, which were included in the NC1 and NC2.
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	
	(a) Table 1 (National greenhouse gas inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not	Yes	Comparable information was reported in table 6 of the BUR.

<i>Decision</i>	<i>Provision of the reporting guidelines</i>		<i>Comments on the extent of the Yes/partly/no/NA information provided</i>
	controlled by the Montreal Protocol and greenhouse gas precursors);		
	(b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF ₆).	Yes	Comparable information was reported in table 6. Table 27 gives information on HFCs by type of gas.
Decision 2/CP.17, annex III, paragraph 10	Additional or supporting information, including sector-specific information, may be supplied in a technical annex.	NA	
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	
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:		
	(a) CO ₂ ;	Yes	
	(b) CH ₄ ;	Yes	
	(c) N ₂ O.	Yes	
Decision 17/CP.8, annex, paragraph 15	Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of:	Yes	
	(a) HFCs;	Yes	
	(b) PFCs;	No	Information on PFC emissions was not reported as they are not considered to be significant in terms of quantity in the country.
	(c) SF ₆ .	No	Information on SF ₆ emissions was not reported as they are not considered to be significant in terms of quantity in the country.
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;	Yes	
	(b) NO _x ;	Yes	
	(c) NMVOCs.	Yes	
Decision 17/CP.8, annex, paragraph 17	Other gases not controlled by the Montreal Protocol, such as sulfur oxides, and included in the Revised 1996 IPCC Guidelines may be included at the discretion of Parties.	Yes	The Party reported on SO ₂ .
Decision 17/CP.8, annex, paragraph 18	Non-Annex I Parties are encouraged, to the extent possible, and if disaggregated data are available, to estimate and report CO ₂ fuel combustion emissions using both the sectoral and the reference approach and to explain any large differences between the two approaches.	Yes	The information was reported for both the sectoral and the reference approach and the Party explained the difference.

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Comments on the extent of the Yes/partly/no/NA information provided</i>	
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 No	
Decision 17/CP.8, annex, paragraph 20	Non-Annex I Parties wishing to report on aggregated GHG emissions and removals expressed in CO ₂ eq should use the GWP provided by the IPCC in its Second Assessment Report based on the effects of GHGs over a 100-year time-horizon.	NA	The Party used the GWP provided in the IPCC Fourth Assessment Report.
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 EFs and AD. 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, EFs and AD 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: (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; (b) Explanation of the sources of EFs; (c) Explanation of the sources of AD; (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: (i) Source and/or sink categories; (ii) Methodologies; (iii) EFs; (iv) AD; (e) Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building.	Yes Yes Yes NA Yes	El Salvador used the 2006 IPCC Guidelines. A tier 1 methodology was used for all sectors.
Decision 17/CP.8, annex, paragraph 22	Each non-Annex I Party is encouraged to use tables 1 and 2 of the guidelines annexed to decision 17/CP.8 in reporting its national GHG inventory, taking into account the provisions established in paragraphs 14–17. In preparing those tables, Parties should strive to present information that is as complete as possible. Where numerical data are not provided, Parties should use the notation keys as indicated.	Yes	Notation keys were used.

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Comments on the extent of the Yes/partly/no/NA information provided</i>	
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;	Partly	Only a qualitative assessment was performed.
	(b) Underlying assumptions;	Partly	Only some assumptions were provided.
	(c) Methodologies used, if any, for estimating these uncertainties.	No	

Note: 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, paragraphs 3–10 and 41(g). 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 UNFCCC guidelines for the preparation of NCs from non-Annex I Parties, 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 country Parties for biennial update reporting.

Table 2
Identification of the extent to which the elements of information on mitigation actions are included in the first biennial update report of El Salvador

<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 11	Non-Annex I Parties should provide information, in tabular format, on actions to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol.	Yes	
Decision 2/CP.17, annex III, paragraph 12	For each mitigation action or group 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	Information on the name and description is provided for the actions reported; however, information on the nature of the action, coverage, quantitative goals and progress indicators is not consistently provided.
	(b) Information on:		
	(i) Methodologies;	No	
	(ii) Assumptions;	No	Information on methodologies and assumptions was not reported for most of the mitigation actions.
	(c) Information on:		
	(i) Objectives of the action;	Yes	
	(ii) Steps taken or envisaged to achieve that action;	Partly	Information on steps taken or envisaged to achieve that action is not provided for most of the actions reported in the BUR.

<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>
	(d) Information on:		
	(i) Progress of implementation of the mitigation actions;	Partly	The Party reported mitigation actions but did not indicate the status of implementation for most of them.
	(ii) Progress of implementation of the underlying steps taken or envisaged;	Partly	Information on progress of implementation of underlying steps taken or envisaged is not provided for most of the actions reported in the BUR.
	(iii) Results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible;	Partly	The Party reported the results achieved for some of the sectoral actions. Information on emission reductions was not provided.
	(e) Information on international market mechanisms.	No	Information on international market mechanisms was not provided in the BUR.
Decision 2/CP.17, annex III, paragraph 13	Parties should provide information on domestic MRV arrangements.	Yes	

Note: 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.

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 El Salvador

<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:		
	(a) Constraints and gaps;	Partly	The BUR includes some dispersed references to gaps and constraints in the chapters on the GHG inventory and mitigation actions.
	(b) Related financial, technical and capacity-building needs.	Partly	Only qualitative information on financial needs is provided. In the chapters on the GHG inventory and mitigation actions, some references are made to technical and capacity-building needs.
Decision 2/CP.17, annex III, paragraph 15	Non-Annex I Parties should provide:		
	(a) Information on financial resources received, technology transfer and capacity-building received;	No	
	(b) Information on technical support received from the Global Environment Facility, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR.	No	

<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 16	With regard to the development and transfer of technology, non-Annex I Parties should provide information on:		
	(a) Nationally determined technology needs;	No	
	(b) Technology support received.	No	

Note: 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.

Annex II

Documents and information used during the technical analysis

Reference documents

First BUR of El Salvador. Available at <http://unfccc.int/8722.php>.

IPCC. 1997. *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*. JL Houghton, LG Meira Filho, B Lim, et al. (eds.). Paris: IPCC/Organisation for Economic Co-operation and Development/International Energy Agency. Available at <https://www.ipcc-nggip.iges.or.jp/public/gl/invs1.html>.

IPCC. 2000. *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. J Penman, D Kruger, I Galbally, et al. (eds.). Hayama, Japan: IPCC/Organisation for Economic Co-operation and Development/International Energy Agency/Institute for Global Environmental Strategies. Available at <http://www.ipcc-nggip.iges.or.jp/public/gp/english/>.

IPCC. 2003. *Good Practice Guidance for Land Use, Land-Use Change and Forestry*. J Penman, M Gytarsky, T Hiraishi, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at <http://www.ipcc-nggip.iges.or.jp/public/gp/lulucf/gp/lulucf.html>.

IPCC. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. S Eggleston, L Buendia, K Miwa, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at <http://www.ipcc-nggip.iges.or.jp/public/2006gl>.

NC3 of El Salvador. Available at <https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/national-communications-and-biennial-update-reports-non-annex-i-parties/national-communication-submissions-from-non-annex-i-parties>.