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## **Technical analysis of the first biennial update report of Serbia submitted on 28 March 2016**

### **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 Serbia 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 Serbia 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. Serbia submitted its first BUR on 28 March 2016. During the technical analysis, Serbia highlighted that its first BUR was submitted after December 2014 owing to national elections. This resulted in the reallocation of the environment portfolio from the Ministry for Energy to the Ministry for Agriculture as well as internal restructuring within the latter.

4. The technical analysis of the BUR took place from 19 to 23 September 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: Mr. Sin Liang Cheah (member of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) from Singapore), Ms. Patience Dampsey (former member of the CGE from Ghana), Ms. Yu'e Li (China), Ms. Helen Plume (New Zealand), Mr. Marcelo Rocha (Brazil) and Mr. Daniel Tutu Benefoh (Ghana). Ms. Dampsey and Ms. Plume were the co-leads. The technical analysis was coordinated by Mr. Daniel Hooper and Ms. Alma Jean (secretariat).

5. 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 Serbia engaged in discussion 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 Serbia on 19 December 2017 for its review and comment. Serbia, in turn, provided its feedback on the draft summary report on 10 March 2017.

6. The TTE responded to and incorporated the Party's comments referred to in paragraph 5 above and finalized the summary report in consultation with Serbia on 15 March 2017.

## **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 Serbia’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 country 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 Serbia 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 Serbia**

<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	The years 1990 and 2010–2013 are reported
Decision 2/CP.17, annex III, paragraph 4	Non-Annex I Parties should use the methodologies established by the latest UNFCCC guidelines for the preparation of national communications from non-Annex I Parties approved by COP or those determined by any future decision of the COP on this matter	Yes	The more recent 2006 IPCC Guidelines are used
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	Partly	The information for the year 1998, which the Party had reported in its first national communication, has not been updated
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)	Partly	Some comparable information is reported in the BUR through tables 4.1–4.6
	(b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF <sub>6</sub> )	Partly	Some comparable information is reported in the BUR in tables 4.2 and 4.4

<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, 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	The 2006 IPCC Guidelines were used but comparable information is not reported
	(b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines	No	The 2006 IPCC Guidelines were used but comparable information is 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 the previous national communications	Partly	The years reported in the first national communication are 1990 and 1998; however, the time series reported in the BUR is from 2010 to 2013, with 1990 as the reference year
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	The years 1990 and 1998 were reported in the first national communication; however, information for the year 1998 is not reported in the BUR
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	Partly	Information on the collection of data is provided, but information is not reported on the arrangements for archiving
Decision 17/CP.8, annex, paragraph 14	Each non-Annex I Party shall, as appropriate and to the extent possible, provide in its national inventory, on a gas-by-gas basis and in units of mass, estimates of anthropogenic emissions of the following gases by sources and removals by sinks:		
	(a) CO <sub>2</sub>	Yes	
	(b) CH <sub>4</sub>	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>
	(c) N <sub>2</sub> 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 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	No	
	(b) Marine bunker fuels	No	
Decision 17/CP.8, annex, paragraph 16	Non-Annex I Parties are encouraged, as appropriate, to report on anthropogenic emission by sources of other GHGs, such as:		
	(a) CO	No	
	(b) NO <sub>x</sub>	No	
	(c) NMVOCs	No	
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	No	
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 <sub>2</sub> fuel combustion emissions using both the sectoral and the reference approaches, and to explain any large differences between the two approaches	Partly	CO <sub>2</sub> emissions from fuel combustion are reported using the reference and sectoral approaches, but the difference between them is not explained
Decision 17/CP.8, annex, paragraph 20	Non-Annex I Parties wishing to report on aggregated GHG emissions and removals expressed in CO <sub>2</sub> equivalents should use the global warming potentials provided by the IPCC in its Second Assessment Report based on the effects of GHGs over a 100-year time horizon	Yes	GWPs from the Fourth Assessment Report of the IPCC were used
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-		

<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>
	specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe the source and/or sink categories, methodologies, emission factors and activity data used in their estimation of emissions, as appropriate. Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building:		
	(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	No	
	(b) Explanation of the sources of emission factors	No	
	(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	
	(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 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 to 17 of the same decision. In preparing those tables, Parties should strive to present information which is as complete as possible. Where numerical data are not provided, Parties should use the notation keys as indicated	Partly	Summary information is provided in tabular format, but not all the information requested by tables 1 and 2 is included; for example, at the subcategory level, information is not included on a gas-by-gas basis in the BUR
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		

<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>
	used, if any, for estimating these uncertainties:		
	(a) Level of uncertainty associated with inventory data	Yes	
	(b) Underlying assumptions	No	
	(c) Methodologies used, if any, for estimating these uncertainties	Yes	

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

## 2. Mitigation actions and their effects

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

14. In its first BUR, Serbia provided information on various planned mitigation actions relating to renewable energy, energy efficiency, and infrastructure projects in the energy sector, industrial processes and the waste management sector aimed at reducing GHG emissions. However, the BUR does not include information on Serbia's previous mitigation actions leading up to 2013. Most of the information on Serbia's mitigation actions is 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 Serbia 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 Serbia

<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 a tabular format, on actions to mitigate climate change, by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol	Partly	Apart from the information on greenhouse gas emission reductions, further details on mitigation actions relating to the waste management sector, were not reported in tabular format
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	Partly	Information is not reported on the gases covered and

<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 action, coverage (i.e. sectors and gases), quantitative goals and progress indicators		progress indicators for the mitigation actions relating to renewable energy, energy efficiency, and infrastructure projects in the energy sector and the waste management sector
	(b) Information on:		
	(i) Methodologies	Yes	
	(ii) Assumptions	Yes	
	(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 the mitigation actions	Yes	
	(ii) Progress of implementation of the underlying steps taken or envisaged	Yes	The information provided indicates that the mitigation actions highlighted are at the stage of seeking support for implementation and have not been implemented
	(iii) Results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible	Yes	The mitigation actions and estimated emission reductions are reported within three scenarios: 'basic', 'with measures' and 'with additional measures'
	(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	Yes	

### 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 Serbia 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 Serbia**

<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 (b) Related financial, technical and capacity-building needs	Yes Yes	
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 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	Partly	The biennial update report includes information on financial resources for the preparation of the first BUR and assistance from the European Union in establishing a measurement, reporting and verification system; however, information on financial, technical and capacity-building support received from other sources is not reported in the BUR
Decision 2/CP.17, annex III, paragraph 16	With regard to the development and transfer of technology, non-Annex I Parties should provide information on technology needs, which must be nationally determined, and technology support received: (a) Technology needs, which must be nationally determined (b) Technology support received	Yes 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.

20. 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**

21. 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.

22. Serbia reported on its national circumstances in its BUR in accordance with decision 2/CP.17, annex III, paragraph 2(a). Serbia reported on its geographical profile, climate, sociopolitical system, population, economy, energy, industry, transportation, agriculture, land-use change and forestry and waste management. Economic and political reforms in Serbia began in 2001. Since 2006, the Serbia has been an independent democratic state with a multiparty parliamentary system. In March 2012, the European Union (EU) granted Serbia candidate status.

23. Manufacturing accounts for the largest share of the Serbian economy, including manufacturing of motor vehicles, electrical and electronic equipment, machinery, textiles and metallurgy. The recent global recession strongly affected the Serbian economy, as it is heavily dependent on trade partners. This resulted in Serbia going into a recession at the end of 2012. However, macroeconomic trends show that in 2013 there was an increase in economic activity and imports, leading to an annual growth in gross domestic product of 2.6 per cent. From 2002 to 2011, the population of Serbia decreased by approximately 4.3 per cent, resulting from low birth rates and continued emigration owing to the economic recession and a lack of employment opportunities.

24. Serbia reported that the Climate Change Department within the Ministry of Agriculture and Environmental Protection (MAEP) is responsible for the fulfilment of obligations under the Convention, including the preparation of its first BUR, with technical support from the United Nations Development Programme. In order to strengthen cooperation and exchange of information between relevant government and scientific institutions, and local communities, Serbia established a Climate Change Committee in November 2014. Specific functions of the Climate Change Committee include, but are not limited to: monitoring the development and implementation of climate change policies; monitoring the fulfilment of international climate change obligations; reviewing reports for submission under the Convention; and proposing mitigation and adaptation climate change measures. Members of the Climate Change Committee are representatives of all relevant ministries and other governmental institutions, as well as representatives of universities and scientific institutions. Information on the roles and responsibilities of the institutions involved in the Climate Change Committee, as well as the relevant coordination, is not reported in the BURs. The TTE notes that the transparency of information reported on institutional arrangements would be further enhanced if such information were to be included in the BUR.

25. Serbia reported that it has begun the process of harmonizing its national legislation with the EU legislative framework, which will contribute to the improvement of fulfilling its obligations under the Convention. Consequently, the preparation of the institutional and legislative structure for monitoring, reporting and verification of data was initiated, as well as for information relevant to climate change, including the EU Emissions Trading System. As part of this harmonization, Serbia is in the initial phase of preparing its National Climate Change Strategy, which is designed to provide a clear framework of activities in the fight against climate change during the period 2020 and 2030, as well as the framework for 2050. However, in its BUR, Serbia did not report information on the institutional

arrangements for the preparation of its national communications and BURs on a continuous basis. The TTE notes that including such information on national circumstances in the BUR would further enhance transparency.

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

26. As indicated in table 1 above, Serbia reported information on its GHG inventory in its BUR, partially in accordance with paragraphs 3–10 of the UNFCCC reporting guidelines on BURs and 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.

27. Serbia reported information on its national GHG inventory covering GHG emissions and removals for the year 1990 and the period 2010–2013, using the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines). The emissions for 1990 are an update of previously reported data in Serbia’s first national communication; however, GHG emissions and removals for the year 1998, which were reported in Serbia’s first national communication, have not been included in the BUR. As per decision 2/CP.17, annex III, paragraph 5, the TTE notes that including in the BUR the updated GHG emissions and removals for all years reported in its national communication, such as 1998, would further enhance transparency.

28. Serbia reported information on data collection but did not include information on its arrangements for data archiving. During the technical analysis, Serbia clarified that after the preparation of its first national GHG inventory in 2014, the Serbian Environmental Protection Agency initiated action to improve procedures and arrangements to collect and archive data. The TTE notes that including the information regarding national arrangements in the BUR would further enhance transparency.

29. Serbia reported its total GHG emissions for 2013 (excluding net removals from forestry) as 62,520.88 kt of carbon dioxide equivalent (CO<sub>2</sub> eq), which is a decrease of 25.1 per cent compared with the 1990 level (83,519.50 kt CO<sub>2</sub> eq). The total GHG emissions including net removals from forestry in 2013 were reported as 46,783.83 kt CO<sub>2</sub> eq, which is a decrease of 29.8 per cent compared with the 1990 level (66,664.14 kt CO<sub>2</sub> eq). In 2013, GHG emissions from the energy sector accounted for 79.4 per cent of total GHG emissions (excluding removals from forestry), followed by agriculture and other land use (10.6 per cent), waste (5.1 per cent) and industrial processes (4.8 per cent). Compared with 1990, the distribution of GHG emissions across these sectors is approximately the same, with a slight increase in the proportion of GHG emissions from the waste sector and a slight decrease from industrial processes. Serbia also highlighted in its BUR that total GHG emissions (excluding forestry) in 2013 decreased by 3.5 per cent compared with emissions in 2010 owing to lower utilization of production capacities in the cement and iron and steel industries.

30. Consistent with decision 17/CP.8, annex, paragraph 24, Serbia reported information on uncertainties in its GHG inventory in the BUR. However, it did not include information on the underlying assumptions. The TTE notes that including in the BUR information regarding GHG inventory uncertainties would further enhance transparency.

31. Decision 2/CP.17, annex III, paragraph 6, encourages non-Annex I Parties to include, as appropriate and to the extent that capacities permit, in the inventory section of the BUR, land use, land-use change and forestry and sectoral background tables as set out in annex 3A.2 to chapter 3 of the *IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry*, and the tables annexed to the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the Revised 1996 IPCC Guidelines). The TTE noted that, although Serbia used the 2006 IPCC Guidelines, it did not

provide the equivalent land use, land-use change and forestry and sectoral background tables in its BUR. The TTE notes that including in the BUR the information for the sectoral level in the GHG inventory would further enhance transparency.

32. Decision 17/CP.8, annex, paragraph 12, encourages non-Annex I Parties to undertake, to the extent possible, any key source analysis as indicated in the IPCC *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. Serbia did not report any key source analysis, nor did it report any comparable information using the 2006 IPCC Guidelines. During the technical analysis, in response to a question raised by the TTE, Serbia clarified that the national GHG inventory key categories for sources and sinks were identified using the IPCC approach 1 level (2014) and trend assessment (1990–2014). The TTE notes that including such information on any key source analysis in the BUR would further enhance transparency.

33. Decision 17/CP.8, annex, paragraph 21, encourages non-Annex I Parties to provide information on methodologies, activity data and emission factors used in the estimation of GHG emissions; however, such information is not reported in Serbia's BUR. During the technical analysis, in response to a question raised by the TTE, Serbia clarified that it encountered challenges in reporting additional information on methodologies, emission factors and activity data. Therefore, Serbia used the IPCC inventory software that implements tier 1 methods, and applied default emission factors from the 2006 IPCC Guidelines. Serbia further indicated that information on methodologies, activity data and emissions factors will be presented in future BURs. The TTE notes that including this information in the BUR would enhance transparency.

34. Decision 17/CP.8, annex, paragraph 22, encourages non-Annex I Parties to use tables 1 and 2 of the guidelines annexed to decision 17/CP.8 in reporting its national GHG inventory. In tables 4.3–4.6 of its BUR, Serbia reports both total and sectoral GHG emissions, which is partly comparable to the information requested in tables 1 and 2 of the guidelines annexed to decision 17/CP.8. However, Serbia did not include emissions of GHG precursors, emissions from international bunkers and disaggregated information on emissions of fluorinated gases. In addition, Serbia only provides total GHG emissions for each sector category, with no break-down on a gas-by-gas basis (as required by tables 1 and 2).

35. Decision 17/CP.8, annex, paragraph 22, also states that non-Annex I Parties should use notation keys where numerical data are not provided. In its BUR, Serbia reported some of the sectoral GHG emissions as “zero” (i.e. 0.00). Therefore, the TTE was not able to ascertain whether the GHG emissions in these sectors were in fact zero, or if they have not been estimated (“NE”), are not occurring (“NO”), are not applicable (“NA”) or are included elsewhere (“IE”). During the technical analysis, in response to a question raised by the TTE, Serbia clarified that the information will be provided in future BURs. The TTE notes that the transparency of the information reported in the BUR would be further enhanced if Serbia were to use appropriate notation keys where numerical data are not provided.

36. Serbia reported GHG emissions from the energy sector, including GHG emissions from fuel combustion, fugitive emissions from fuels and CO<sub>2</sub> transport and storage. In 2013, GHG emissions from the energy sector were 49,661.06 kt CO<sub>2</sub> eq, which is a 24.5 per cent decrease compared with the 1990 level and a 2.6 per cent decrease compared with the 2010 levels. Serbia highlighted that the decrease in energy sector GHG emissions was due to a reduction in economic activities and other activities, resulting from specific national circumstances that are characteristics of the period from 1990 to 2000. For 2013, Serbia reported that 94.5 per cent of GHG emissions from the energy sector are from fuel combustion, with the remaining 5.5 per cent resulting from fugitive emissions. For the total GHG emissions from fuel combustion, energy industries accounted for 69.1 per cent, followed by transport (11.7 per cent), manufacturing industry and construction (7.7 per

cent) and other sectors (5.9 per cent). For fugitive emissions from fuels, 60.7 per cent of emissions were from oil and natural gas and 39.3 per cent were from solid fuels.

37. Consistent with the encouragement in decision 17/CP.8, annex, paragraph 18, Serbia reported CO<sub>2</sub> emissions from fuel combustion using the reference and sectoral approaches. In addition, it reported the resulting differences in CO<sub>2</sub> emissions between these approaches for solid fuels (4 per cent), liquid fuels (11 per cent) and gaseous fuels (20 per cent). However, Serbia did not report any information relating to the large differences between these approaches, in particular for liquid and gaseous fuels. During the technical analysis, in response to a question raised by the TTE, Serbia clarified that its national capacity needs to be enhanced to facilitate the reporting of CO<sub>2</sub> emissions using the reference and sectoral approaches and to enable it to further explain these differences. The TTE notes that including in the BUR explanations on any large differences between the reference and sectoral approaches observed would further enhance transparency.

38. Serbia did not report estimates of CO<sub>2</sub> emissions from international aviation and marine bunker fuels. During the technical analysis, in response to a question raised by the TTE, Serbia clarified that it does not include data on international aviation and marine bunker fuels in its national energy balance that it submits to the International Energy Agency. Therefore, additional work on collecting such data, as well as interpreting it, is needed. The TTE notes that including CO<sub>2</sub> emissions from international aviation and marine bunker fuels in the next BUR would enhance transparency.

39. In its BUR, Serbia reported that GHG emissions from the industrial processes sector in 2013 were 3,031.42 kt CO<sub>2</sub> eq, which represents a 38 per cent decrease and a 28 per cent decrease compared with emissions levels in 1990 and 2010, respectively. The main driver for the decrease in emissions was the lower utilization of production capacities in the cement and iron and steel industries. Within the industrial processes sector, the most significant source of emissions is the mineral industry (35 per cent), followed by the chemical industry (34 per cent), the metal industry (22 per cent), products used as substitutes for ozone depleting substances (5 per cent), non-energy products from fuel and solvent use (2 per cent) and other products manufacture and use (2 per cent).

40. Serbia reported GHG emissions from agriculture and other land use, and net removals from forestry. Across all reported years, the main sources of emissions from this sector are enteric fermentation, manure management and emissions from managed soils. GHG emissions from agriculture and other land use in 2013 were 6,620.95 kt CO<sub>2</sub> eq, which is a decrease of 27.1 per cent compared with the 1990 level (9,078.22 kt CO<sub>2</sub> eq). However, GHG emissions from agriculture and other land use increased by 2.7 per cent between 2010 and 2013, which is attributed to the increased use of nitrogen-based synthetic fertilizer on managed land. In 2013, net removals from forestry, including forest land, cropland, grassland, wetlands and settlements, amounted to 15,737.06 kt CO<sub>2</sub> eq, which is a decrease of 5.0 per cent compared with the 1990 level (removals of 16,560.97 kt CO<sub>2</sub> eq). The main cause of this decrease in removals was a drought in 2012, which resulted in a significant drop in the forest mass increment. In total, the agriculture, forestry and other land use sector is a net sink of 9,116.10 kt CO<sub>2</sub> eq in 2013, which is an increase of 17.2 per cent compared to the 1990 level (a net sink of 7,777.13 kt CO<sub>2</sub> eq).

41. In 2013, GHG emissions from the waste management sector were 3,207.45 kt CO<sub>2</sub> eq, which is a 16.5 per cent decrease compared with the 1990 level (3,839.77 kt CO<sub>2</sub> eq). However, GHG emissions from the waste management sector increased by 2.1 per cent between 2010 and 2013. Within the waste management sector, the majority of the emissions are from solid waste disposal (62 per cent), with the remaining 38 per cent from the wastewater treatment.

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

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

43. Serbia reported on the estimated GHG emission reductions of its planned mitigation actions and its nationally appropriate mitigation actions (NAMAs) seeking support for implementation under three scenarios: the ‘basic’ scenario, the ‘with measures’ scenario and the ‘with additional measures’ scenario. The ‘basic scenario’ assumes the implementation of mitigation actions that were in effect in 2010; the ‘with measures’ scenario assumes that the implementation of existing mitigation actions is improved to better facilitate the objectives and obligations of Serbia related to climate mitigation; and the ‘with additional measures’ scenario assumes that a further reduction in final energy consumption is achieved. The three scenarios include four sectors (energy, industrial processes, agriculture and waste), as appropriate, and provide the total estimated GHG emissions from 2010 to 2020.

44. Serbia reported that the LEAP<sup>1</sup> system was used to develop the three scenarios. In addition, a number of methodologies were used to estimate the impact of specific mitigation actions, including: COPERT IV for the mitigation action “Rehabilitation of arterial roads in Serbia”; general IPCC calculation methods for the mitigation actions “Use of solar energy for domestic hot water production in the heat plant ‘Cerak’ in Belgrade” and “Expansion of existing heating network in Valjevo”; and the methodology contained in the Revised 1996 IPCC Guidelines for the mitigation action “Introduction of metering system and billing on the basis of measured consumption in district heating systems in Serbia”.

45. Under the ‘basic’ scenario, the ‘with measures’ scenario and the ‘with additional measures’ scenario, the estimated total GHG emissions in 2020 are 79,442.37 kt CO<sub>2</sub> eq, 70,966.54 kt CO<sub>2</sub> eq and 65,164.09 kt CO<sub>2</sub> eq, respectively. When compared with the ‘basic’ scenario, GHG emissions will be reduced by 10.7 per cent under the ‘with measures’ scenario and by 18.0 per cent under the ‘with additional measures’ scenario. Under all three scenarios, the energy sector accounted for more than 80 per cent of total GHG emissions in 2020, and the waste sector accounted for the smallest share, at around 3–4 per cent. As the energy sector is the most significant source of GHG emissions, Serbia stated in its BUR that it focused on that sector in developing its estimated future GHG emission reduction scenarios.

46. The ‘with measures’ scenario and the ‘with additional measures’ scenario included planned mitigation actions and NAMAs seeking support for implementation relating to renewable energy sources, energy efficiency in the residential building sector, the public and commercial services sector, the industrial sector and the transport sector, as well as planned legislative and infrastructure measures that will lead to the reduction of energy consumption. Regarding the planned mitigation actions relating to renewable energy sources under the ‘with measures’ scenario, and infrastructure projects in the energy sector and enhancing energy efficiency under the ‘with additional measures’ scenario, Serbia provided details on the name and description of the actions, the national implementing entities, status, methodologies, assumptions and estimated emission reductions. However, Serbia did not report information on the gases covered or on progress indicators. The TTE notes that including such information in the BUR would further enhance transparency.

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<sup>1</sup> Long-range Energy Alternatives Planning.

47. In its BUR, Serbia did not report information on the gases covered and progress indicators for the waste management sector under all three scenarios. In addition, apart from GHG emission reductions, Serbia did not provide information on its waste management sector mitigation actions in tabular format. The TTE notes that including such information in the BUR would further enhance transparency.

48. Under the 'with measures' scenario and the 'with additional measures' scenario, Serbia projects that it will increase the share of renewable energy in its gross final energy consumption from 19.1 per cent in 2013 to 27 per cent in 2020. This includes renewable energy sources in the electricity, transport and heating sectors from various sources such as hydro, wind, solar, biomass, geothermal and biofuels. Key renewable energy NAMA projects that are seeking support for implementation to achieve GHG emission reductions are: the use of solar energy for domestic hot water production; the revitalization and construction of new small hydropower plants; and the introduction of small biomass boilers in Serbia. The NAMA with the largest potential GHG emission reductions is the introduction of small biomass boilers, which has an estimated annual emission reduction impact of 414.40 kt CO<sub>2</sub> eq by 2020.

49. In its BUR, Serbia also reported information on its NAMAs relating to infrastructure projects in the energy sector, including: the construction of a new natural gas cogeneration plant (estimated annual GHG emission reductions of 1,028.57 kt CO<sub>2</sub> eq); the construction of a lignite power plant (estimated annual GHG emission reductions of 1,400 kt CO<sub>2</sub> eq); and a thermal power project (estimated annual GHG emission reductions of 353.33 kt CO<sub>2</sub> eq).

50. Under the 'with additional measures' scenario, key planned mitigation actions and NAMAs seeking support for implementation are assumed to achieve a 9 per cent reduction in final energy consumption compared with the 'with measures' scenario. These include the mitigation actions outlined in Serbia's Second National Energy Efficiency Action Plan relating to activities in the residential building sector, the public and commercial services sector, the industrial sector and the transport sector. Energy efficiency mitigation actions relating to infrastructure activities identified in Serbia's NAMA projects include improvements to residential and public buildings, as well as repairs to roads. The NAMA with the largest potential GHG emission reductions is the improvement of residential buildings, which has an estimated annual emission reduction impact of 504.97 kt CO<sub>2</sub> eq.

51. Regarding the planned mitigation actions relating to the waste management sector, key planned mitigation actions based on the scenario 'with measures' are the construction of 26 regional centres with recycle waste separation plans and more recycling centres with the aim of doubling the level of recycling by 2020, as well as the construction of plants for the mechanical-biological treatment of municipal waste. The scenario 'with additional measures' is to be achieved by building facilities for the anaerobic digestion of municipal waste, plants for the thermal treatment of waste in Belgrade (Novi Sad and Nis) and increasing the capacity of recycling centres to a new level of recycling (15 per cent) in 2020.

52. Key planned mitigation actions in the industrial processes sector focus on the implementation of best available control technologies and techniques across various industries, including cement production, lime production, ceramic industry, ferrous metallurgy (iron and steel production) and the chemical industry. In addition, Serbia highlights that the key policy documents which outline policies and measures that directly or indirectly contribute to GHG emission reductions in the industrial processes and product use sector are: the Strategy and Policy of Industrial Development of the Republic of Serbia from 2011 to 2020; and the Draft of the Energy Development Strategy of the Republic of Serbia.

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

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

54. Serbia reported that its first BUR was funded by the Global Environmental Facility, with a total budget of USD 352,000. In addition, financial and technical assistance was received from the EU for the establishment of an MRV system. However, Serbia did not report on any support received from other sources for activities relating to climate change. During the technical analysis, in response to a question raised by the TTE, Serbia clarified that it has encountered challenges in reporting information on the financial, technical and capacity-building support it has received to enable the preparation of its BURs on a regular basis, and identified this as a capacity-building need. The TTE notes that including such information in the BUR would further enhance transparency.

55. Serbia identified the following gaps in its GHG inventory preparation and reporting: defining the roles and responsibilities of relevant institutions for collecting data; establishing procedures for data reporting and submission; improving data quality and its quality assurance/quality control procedures; archiving data; and the assessment of uncertainty. To ensure the timely preparation and submission of its BURs and national communications, Serbia stated that the following gaps need to be addressed: legally defining the modalities and procedures; identifying the entities responsible for the preparation and reporting of GHG projections and mitigation measures; and establishing the related institutional arrangements.

56. Serbia reported the need to strengthen the capacities of the Agency for Environmental Protection in order to successfully prepare the GHG inventory and the GHG inventory report for the purposes of the BUR, including the need to increase the number of employees and enhance their respective capacities through training. Serbia has reported that the related financial support needed to implement these activities is estimated to be EUR 50,000 to EUR 60,000 per year to establish a well-functioning inventory system. In addition, Serbia highlighted the need for technical and financial assistance from the international community and the EU to accomplish systematic and continuous efforts to raise public awareness about the issue of climate change.

57. Serbia also reported the need to strengthen the capacity of the Climate Change Department within MAEP, which is the organizational unit responsible for the fulfilment of obligations under the Convention, as well as for the preparation and implementation of legislation in the area of climate change. Serbia reported the need for additional human resources with significant experience in engineering to fulfil these obligations.

58. Serbia stated that, in addition to legislative frameworks, infrastructure projects are also needed to reduce its GHG emissions. As such, Serbia identified 32 priority GHG mitigation infrastructure projects, namely, in the energy, waste and forestry sectors, and outlined its financial needs regarding the implementation of these activities in table 8.1 of its BUR. To implement such projects, Serbia also reported the need for technological and financial assistance from the international community, such as developed country Parties.

59. Serbia did not report any information on the technology support received; however, during the technical analysis week, Serbia confirmed that challenges exist in reporting such information, and therefore capacity-building in this area is needed. The TTE notes that including such information in the BUR would further enhance transparency.

## 5. Domestic measurement, reporting and verification

60. As indicated in table 2 above, Serbia reported in its BUR information on the description of domestic measurement, reporting and verification arrangements, in accordance with paragraph 13 of the UNFCCC reporting guidelines on BURs.

61. Consistent with decision 2/CP.17, annex III, paragraph 12(e), Serbia reported information on its participation in international market mechanisms. Serbia's first clean development mechanism project was registered by the secretariat in November 2011 and seven clean development mechanism projects were registered by June 2013, including four wind energy projects. Serbia also informed the TTE during the technical analysis, that as a country with EU candidate status, it has started preparations to participate in the EU Emissions Trading System (EU ETS). The necessary national legislation for implementation of the MRV requirements of the EU ETS has been drafted, and its approval is anticipated by 2017. However, Serbia's implementation of the trading aspects of the EU ETS will commence only after Serbia has become a full EU member State. Depending of the development of the international market mechanisms, Serbia may explore other possibilities. The TTE notes that including such information in the BUR would further enhance transparency.

62. Serbia reported that it is in the process of establishing a complete MRV system with EU financial and technical assistance through the Instrument for Pre-Accession Assistance project "Establishment of a mechanism for implementation of MMR", programming for 2013. MAEP, which coordinates environmental issues and climate change, is responsible for the implementation of these activities. Once completed, this MRV system will include: the monitoring and reporting of GHG emissions; policies and measures; projections of GHG emissions; and adaptation planning. The completion of these activities is planned for 2018, with an anticipated start date in 2019. However, Serbia did not provide detailed information on the institutions involved, their responsibilities, and inter-institutional coordination regarding the MRV system. The TTE notes that including such information in the BUR would enhance transparency.

## D. Identification of capacity-building needs

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

- (a) Enhancing the national capacity for reporting on GHG inventories, in accordance with the relevant provisions of the UNFCCC reporting guidelines on BURs, including:
  - (i) Activity data collection, processing and interpretation on international aviation and marine bunkers in the energy balance for estimation of CO<sub>2</sub> emissions;
  - (ii) Estimating and reporting CO<sub>2</sub> emissions from fuel combustion using both the sectoral and the reference approaches, and to explain any large differences between the two approaches;
- (b) Enhancing the national capacity to improve data collection to facilitate the use of higher methodological tiers in the following GHG inventory categories:
  - (i) 3.A Livestock (including the need to establish detailed survey for the category);
  - (ii) "1.A.3e Off-road machinery" and 1.A.1a Energy industry;

(c) Enhancing the national capacity to improve national procedures and arrangements for continuous data collection and archiving for the preparation of the national GHG inventory;

(d) Enhancing the national capacity for reporting on finance, technology and capacity-building needs and support received, in accordance with the relevant provisions of the UNFCCC reporting guidelines on BURs;

(e) Enhancing the national capacity to report constraints and gaps;

(f) Improving the understanding of the importance of the national communication and BUR processes and increasing the involvement of all relevant stakeholders;

(g) Enhancing the national capacity to report on the progress of implementation of mitigation actions in accordance with decision 2/CP.17, annex III, paragraph 12, in particular, on reporting on the coverage, steps taken or envisaged to achieve the action, results achieved and progress indicators of mitigation actions.

64. The TTE notes that, in addition to those identified during the technical analysis, Serbia reported the following capacity-building needs in its BUR:

(a) Strengthening the national capacity to prepare the GHG inventory and the inventory report for the purposes of the BUR;

(b) Strengthening of institutional and human capacities for the fulfilment of obligations under the Convention;

(c) Enhancing the national capacity to establish a systematic and continuous approach to raise public awareness on climate change.

### III. Conclusions

65. The TTE concludes that:

(a) Most of the elements of information listed in paragraph 3(a) of the ICA modalities and guidelines have been included in the first BUR of Serbia. During the technical analysis Serbia provided additional information and clarification regarding elements that were not provided in the BUR;

(b) Serbia reported on its national circumstances in its BUR in mostly in accordance with decision 2/CP.17, annex III, paragraph 2(a). Detailed information on the functions of the Climate Change Committee and its members is reported in the BUR, which include: monitoring the development and implementation of climate change policies; monitoring the fulfilment of international climate change obligations; reviewing reports for submission under the Convention; and proposing mitigation and adaptation climate change measures. The BUR also included information on the process of harmonizing national legislation with the EU legislation framework and the preparation of Serbia's National Climate Change Strategy. The TTE notes that the transparency of information reported on institutional arrangements would be further enhanced in its next BUR if Serbia included more information on the roles and responsibilities of the institutions involved in the Climate Change Committee, relevant inter-institutional coordination, and its institutional arrangements for the preparation of national communications and BURs on a continuous basis;

(c) Serbia reported information on its GHG inventory in its BUR, partially in accordance with paragraphs 3–10 of the UNFCCC reporting guidelines on BURs and 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. Serbia used the 2006 IPCC Guidelines to estimate its GHG emissions and removals for the years 1990 and 2010–2013. In 2013, Serbia’s total GHG emissions (excluding net removals from forestry) were estimated to be 62,520.88 kt CO<sub>2</sub> eq, which is a decrease of 25.1 per cent compared with the 1990 level (83,519.50 kt CO<sub>2</sub> eq). Including net removals from forestry, Serbia’s total GHG emissions in 2013 decreased by 29.8 per cent compared with the 1990 level. There are several areas where Serbia could improve the transparency in its reporting, including by reporting information on the methodologies, activity data and emission factors used across all sectors of the inventory; using appropriate notation keys where numerical data are not provided, and reporting more details on its national arrangements;

(d) Serbia reported in its BUR, mostly in accordance with paragraphs 11–13 of the UNFCCC reporting guidelines on BURs, information on mitigation actions and their effects, to the extent possible. Serbia reported on the estimated GHG emission reductions of its planned mitigation actions and its NAMAs seeking support for implementation under three scenarios: the ‘basic’ scenario, the ‘with measures’ scenario and the ‘with additional measures’ scenario. The three scenarios include four sectors (energy, industrial processes, agriculture and waste), as appropriate, and provide the total estimated GHG emissions from 2010 to 2020. The TTE noted that the transparency of Serbia’s BUR could be further enhanced with the reporting of information on the coverage of gases and progress indicators, as well as the reporting of information on mitigation actions relating to the waste management sector in tabular format;

(e) Serbia reported in its BUR, information on finance, technology and capacity-building needs and support received, partially in accordance with paragraphs 14–16 of the UNFCCC reporting guidelines on BURs. Serbia reported on: its institutional and infrastructural needs; financial support received for the preparation of its first BUR; and the financial and technical support it received for the establishment of an MRV system. Serbia also highlighted that, in addition to legislative frameworks, infrastructure projects are needed to reduce its GHG emissions. Serbia identified 32 priority GHG mitigation infrastructure projects, namely, in the energy, waste and forestry sectors, and outlined its financial needs regarding the implementation of these activities in table 8.1 of its BUR. In its BUR, Serbia did not report information on financial resources, technology transfer, capacity-building and technical support it received from various channels. In addition, Serbia did not report any information on the technology support received. During the technical analysis, Serbia confirmed that challenges exist in reporting such information, and therefore capacity-building in this area is needed. The TTE notes that including such information in the BUR could further enhance transparency.

66. The TTE, in consultation with Serbia, identified seven<sup>2</sup> 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 (para. 63 above). Serbia identified all seven as priority capacity-building needs, as well as the three capacity-building needs the Party identified in its BUR (para. 64 above).

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<sup>2</sup> This refers to the number of capacity-building needs listed in chapter II.D.

## Annex

### Documents and information used during the technical analysis

#### Reference documents

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

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

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

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

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

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

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