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# Technical report on the technical analysis of the technical annex to the first biennial update report of Colombia submitted in accordance with decision 14/CP.19, paragraph 7, on 11 December 2015/17 February 2016

#### Summary

This technical report covers the technical analysis of the technical annex submitted on a voluntary basis by Colombia on 17 February 2016 following the submission of its first biennial update report on 11 December 2015, in accordance with decision 14/CP.19. The technical annex covers data and information on the activity "reducing emissions from deforestation", which is one of the activities included in decision 1/CP.16, paragraph 70, and the same subnational territorial forest area as the assessed forest reference emission level proposed by Colombia for the Amazon biome, with the aim of transitioning to national implementation in the future.

The technical analysis concluded that the data and information provided by Colombia in the technical annex are transparent and overall consistent with the assessed forest reference emission level that was established in accordance with decision 1/CP.16, paragraph 71(b), and decision 12/CP.17, chapter II.

The data and information provided in the technical annex are in overall accordance with the guidelines contained in the annex to decision 14/CP.19. This report contains the findings of the technical analysis and a few areas identified for capacity-building and further technical improvement, according to decision 14/CP.19, paragraph 14.





#### FCCC/SBI/ICA/2016/TATR.1/COL

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# I. Introduction, overview and summary

#### A. Introduction

1. This technical report covers the technical analysis (TA) of the technical annex provided by Colombia on 17 February 2016 in accordance with decision 14/CP.19,<sup>1</sup> included in the first biennial update report (BUR) of Colombia that was submitted on 11 December 2015 in accordance with decision 2/CP.17.<sup>2</sup> In the technical annex, Colombia provided data and information used in the estimation of anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest-area changes resulting from the implementation of the activities referred to in decision 1/CP.16, paragraph 70 (hereinafter referred to as REDD-plus<sup>3</sup> activities) The submission of the technical annex is voluntary and in the context of results-based payments.<sup>4</sup>

2. In this context, Colombia underlined that the submission of the technical annex through the BUR is made voluntarily in the context of results-based payments in line with the Warsaw Framework for REDD-plus,<sup>5</sup> and that it does not modify, revise or adjust the intended nationally determined contribution of Colombia, nor any other legal instrument of national character or binding agreement under the Convention.

3. The TA of the technical annex is part of the international consultation and analysis (ICA) of BURs referred to in decision 2/CP.17, annex IV, paragraph 4. The objective of the ICA is to increase the transparency of mitigation actions and their effects through analysis by a team of technical experts (TTE) in consultation with the Party and through a facilitative sharing of views, and will result in a separate summary report.<sup>6</sup>

4. Colombia submitted a proposed forest reference emission level (FREL), in accordance with decision 13/CP.19, on 8 December 2014, which was subject to a technical assessment. The assessed FREL<sup>7</sup> was included in the technical annex to the first BUR in accordance with the guidelines contained in the annex to decision 14/CP.19. The findings of the technical assessment of the FREL are included in a separate report.<sup>8</sup>

#### **B.** Process overview

5. The TA of the first BUR took place from 29 February to 4 March 2016 in Bonn, Germany, and was undertaken by the following TTE drawn from the UNFCCC roster of experts on the basis of the criteria defined in decision 20/CP.19, annex, paragraphs 2–6:

<sup>&</sup>lt;sup>1</sup> Decision 14/CP.19, paragraph 7.

<sup>&</sup>lt;sup>2</sup> Decision 2/CP.17, paragraph 41(a), and annex III, paragraph 19.

<sup>&</sup>lt;sup>3</sup> In decision 1/CP.16, paragraph 70, the Conference of the Parties encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks.

<sup>&</sup>lt;sup>4</sup> Decision 14/CP.19, paragraph 8.

<sup>&</sup>lt;sup>5</sup> FCCC/CP/2013/10, paragraph 44.

<sup>&</sup>lt;sup>6</sup> FCCC/SBI/ICA/2016/TASR.1/COL.

<sup>&</sup>lt;sup>7</sup> The Party's technical annex contained a FREL value which was slightly different from the assessed FREL, because Colombia strived to correct a previous calculation error. In response to discussions with the technical experts for land use, land-use change and forestry, Colombia included the assessed FREL value and a transparent explanation of the change in a revised technical annex (see para. 23 below).

<sup>&</sup>lt;sup>8</sup> FCCC/TAR/2015/COL, published on 20 October 2015.

Ms. Leticia Guimarães (Brazil), Mr. Doru Leonard Irimie (Romania), Mr. Carlos Mansilla (former member of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) from Guatemala), Ms. Julia Martínez (former member of the CGE from Mexico), Ms. Inês de Sousa Mourão (Cabo Verde), Mr. Raúl Salas (Mexico), Ms. Beatriz Sánchez Jiménez (Spain) and Ms. Sina Wartmann (Germany). Ms. Martínez and Ms. Sánchez Jiménez were the co-leads. Ms. Guimarães and Mr. Irimie were the land use, land-use change and forestry (LULUCF) experts that undertook the TA of the technical annex in accordance with decision 14/CP.19, paragraphs 10–13.

6. The TA of the technical annex provided by Colombia was undertaken in accordance with the procedures contained in decisions 2/CP.17, 14/CP.19 and 20/CP.19. This technical report on the TA was prepared by the LULUCF experts of the TTE following decision 14/CP.19, paragraph 14.

7. During the course of the TA and subsequent exchanges, the LULUCF experts and Colombia engaged in technical discussions, and Colombia provided clarification to the questions raised by the LULUCF experts, in order to reach a common understanding on the identification of the capacity-building needs of the Party and the areas for technical improvement. Following the TA of the technical annex, the LULUCF experts prepared and shared the draft technical report with Colombia for its review and comment. The latest feedback of Colombia was also accompanied by the submission of a modified technical annex. This technical report on the TA of the technical annex was prepared based on the context of the modified technical annex submission.

8. The LULUCF experts responded to and incorporated the comments referred to in paragraph 7 above from Colombia and finalized this technical report in consultation with Colombia.

#### C. Summary of results

9. In decision 1/CP.16, paragraph 70, the Conference of the Parties encourages developing country Parties to contribute to mitigation actions in the forest sector by undertaking a number of activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances. In the context of results-based payments and in line with decision 12/CP.17, Colombia, on a voluntary basis, proposed a subnational FREL covering the activity "reducing emissions from deforestation" for the purpose of a technical assessment in accordance with decision 13/CP.19 and its annex. The activity is being implemented in Colombia's Amazon biome which covers an area of 458,961 km<sup>2</sup>, making up to 40 per cent of the national territory and 67 per cent of the country's total forest land. The FREL is to be applied for the years 2013–2017, with updates anticipated every five years thereafter.

10. The FREL is based on the mean of historical carbon dioxide (CO<sub>2</sub>) emissions from above- and below-ground biomass carbon pools associated with gross deforestation (defined as the direct and/or induced conversion of forest cover to another type of land cover in a given time frame) for the period 2000–2012. Under the provisions contained in decision 12/CP.17, paragraph 9, Colombia has adjusted its proposed FREL upwards by 10 per cent compared with the historical average emissions for the period 2000–2012, with the intention to take into consideration the assessment of national circumstances that affect deforestation trends, particularly the prospect of a successful outcome of negotiations to end the armed conflict. Colombia reported the results from the implementation of activities to reduce emissions from deforestation for the period 2013–2014, calculated against the

FREL, which amount to emission reductions of 13,544,112.3 tonnes of carbon dioxide equivalent (t  $CO_2$  eq) for 2013 and 15,439,415.1 t  $CO_2$  eq for 2014, respectively.

# II. Technical analysis of information reported in the technical annex to the biennial update report

#### A. Technical annex

11. For the technical annex to the BUR submitted by Colombia, see the annex to this report.<sup>9</sup>

#### B. Technical analysis

12. The scope of the TA is outlined in decision 14/CP.19, paragraph 11, according to which the TTE shall analyse the extent to which:

(a) There is consistency in methodologies, definitions, comprehensiveness and the information provided between the assessed FREL and the results of the implementation of the REDD-plus activities;

(b) The data and information provided in the technical annex are transparent, consistent, complete and accurate;

(c) The data and information provided in the technical annex are consistent with the guidelines referred to in decision 14/CP.19, paragraph 9;

(d) The results are accurate, to the extent possible.

13. The remainder of this chapter presents the results of the TA of the technical annex to the BUR according to the scope outlined in paragraph 12 above.

# 1. Consistency in methodologies, definitions, comprehensiveness and the information provided between the assessed reference level and the results in the technical annex

14. In accordance with paragraph 3 of decision 14/CP.19, the data and information used by Parties in the estimation of anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest-area changes related to REDD-plus activities undertaken by Parties should be transparent and consistent over time and with the established FRELs and/or forest reference levels in accordance with decision 1/CP.16, paragraph 71(b) and (c), and decision 12/CP.17, chapter II.

15. The LULUCF experts note that Colombia has ensured overall consistency between the FREL and the estimation of results from the implementation of activities to reduce emissions from deforestation during the period 2013–2014. This includes:

(a) Using consistent methodologies and data to generate activity data on reducing gross emissions from deforestation, based on Colombia's Forest and Carbon Monitoring System (SMByC) and a consistent minimum mapping unit of 1 ha;

(b) Using overall consistent methodologies and data to generate emission factors, including the same bioclimatic classification for stratification into the three forest types used for the FREL;<sup>10</sup>

<sup>&</sup>lt;sup>9</sup> Decision 14/CP.19, paragraph 14(a).

<sup>&</sup>lt;sup>10</sup> Holdridge LR et al. 1971. Forest Environments in Tropical Life Zones: A Pilot Study. The three forest

(c) Including the same two carbon pools: above-ground biomass and below-ground biomass;

- (d) Including the same gases: CO<sub>2</sub> only;
- (e) Covering the same area: the Colombian Amazon biome;

(f) Using the assumption that all carbon from the two carbon pools is lost in the year of the deforestation event;

(g) Using a forest definition that is fully consistent with the forest definition used for the construction of the FREL.

The LULUCF experts note that Colombia has adjusted its proposed FREL upwards 16. by 10 per cent compared with the historical average emissions for 2000–2012. This is intended to take into account national circumstances that affect deforestation trends, and the prospect of the successful outcome of the negotiations to end the armed conflict. As these negotiations had not been concluded at the time the centralized TA was conducted, the LULUCF experts questioned Colombia as to whether the same adjustment should be applied to the results estimated for the years 2013 and 2014 (i.e. plus 10 per cent relative to the reported estimates). In response, Colombia presented a recount of relevant milestones of the peace process and explained that the social and environmental effects of that process began before the actual signing of the peace agreement, which took place on 24 November 2016. These effects are based on the expectations of all stakeholders involved in the peace process, including the Government of Colombia, the Fuerzas Armadas Revolucionarias de Colombia (FARC), the international community, non-governmental organizations, the private sector and civil society. Numerous factors, such as the magnitude of State and private investment during the peace talks and the implementation of post-conflict policies, create the enabling conditions for the increase in emissions above the historical average and the adjustment upwards by 10 per cent, referred to above.

17. The LULUCF experts understand that the information provided in the technical annex is not sufficient evidence to support the assessment of the application of the adjustment to take into account the national circumstances during the years for which the results were reported. Paragraph 50 of the technical assessment of the FREL concluded that "the need and magnitude of the adjustment will depend on the rate at which conditions change following cessation of conflict and should be reviewed as part of the TA of any new FREL submitted by Colombia in the future. The assessment team for the FREL understands that the application of the adjustment for the current FREL would not apply in the case where an agreement to end the conflict is not reached under the current process". The LULUCF experts take into consideration the thorough nature of the process of reaching and implementing the peace agreement referred to above and, acknowledging the above-cited conclusion of the technical assessment team for the FREL, are of the view that the changes to the national circumstances justifying the adjustment upwards by 10 per cent should not apply to the results reported for 2013–2014, and information to support the application of the adjustment should be provided and updated in the next submission of the technical annex to the BUR containing REDD-plus results.

18. In view of the above, the LULUCF experts conclude that the presentation of the results from the implementation of the activity on reducing emissions from deforestation is consistent with the assessed FREL for Colombia's Amazon biome.

types are: tropical rainforest (99.2 per cent of the area); wet tropical forest (0.7 per cent); and wet premontane forest (0.1 per cent).

# 2. Transparency, consistency, completeness and accuracy of the data and information provided in the technical annex

19. The LULUCF experts note that, as part of the TA process, Colombia provided additional information, in particular on activity data and examples of estimations of emission reductions. The LULUCF experts commend Colombia for its efforts to increase the transparency and ensure the completeness<sup>11</sup> of the data and information provided, allowing for the reconstruction of the results.

20. Referring to decision 12/CP.17, paragraph 8, the FREL shall be established by taking into account decision 4/CP.15, paragraph 7, and maintaining consistency with anthropogenic forest-related greenhouse gas (GHG) emissions by sources and removals by sinks as contained in each country's GHG inventory. The assessment team for the FREL noted that Colombia's FREL is not consistent with the GHG inventory included in Colombia's second national communication; and at the same time considered the forthcoming update of the Party's GHG inventories to be published with the first BUR and third national communication. The summary report on the "Technical analysis of the first biennial update report of Colombia submitted on 11 December 2015" contains further information on the Party's GHG inventory.<sup>12</sup>

21. Colombia is currently developing a national forest inventory (NFI) that is expected to provide data that will improve the accuracy of estimates. The LULUCF experts commend Colombia for continuing to improve the accuracy of estimates.

22. The LULUCF experts conclude that Colombia provided the necessary information allowing for the reconstruction of the results from the implementation of the activity on reducing emissions from deforestation. The data and information provided in the technical annex are considered to be transparent, consistent, complete and accurate, to the extent possible.

#### 3. Consistency with the guidelines for elements to be included in the technical annex

23. Colombia provided data and information on all the elements according to the guidelines contained in the annex to decision 14/CP.19, namely: summary information from the final report containing the assessed FREL; results in t  $CO_2$  eq per year, consistent with the assessed FREL; a demonstration that the methodologies used to produce the results are consistent with those used to establish the assessed FREL (as outlined in chapter II.B.1 above); a description of forest monitoring systems and the institutional roles and responsibilities for measuring, reporting and verifying the results; necessary information that allows for the reconstruction of the results (as outlined in chapter II.B.2 above); and a description of how the elements contained in decision 4/CP.15, paragraph 1(c) and (d), have been taken into account.

24. In its submission, Colombia provided a summary table with results from the implementation of the activity on reducing emissions from deforestation for the years 2013–2014, consistent with the assessed FREL and allowing for the reconstruction of the results. The emission reduction results achieved are listed in table 1 of the modified technical annex and amount to a total of 28,983,527.5 t CO<sub>2</sub> eq (13,544,112.3 t CO<sub>2</sub> eq for 2013 and 15,439,415.1 t CO<sub>2</sub> eq for 2014). These values correspond to the revised deforestation areas of 67,246 ha for 2013 and 63,898 ha for 2014, respectively. The results have been calculated in relation to the corrected FREL, 51,612,072.9 t CO<sub>2</sub> eq (instead of 51,599,618.7 t CO<sub>2</sub> eq which resulted from an error in the calculation of the FREL), for the two years covered.

<sup>&</sup>lt;sup>11</sup> Complete here means the provision of information that allows for the reconstruction of the results.

<sup>&</sup>lt;sup>12</sup> FCCC/SBI/ICA/2016/TASR.1/COL.

25. During the consultation process, Colombia provided additional information regarding the digital database used for the construction of both the FREL and the emission reduction results. The LULUCF experts commend Colombia for sharing this information.

26. The LULUCF experts noted that Colombia provided a description of the forest monitoring system and a summary of the institutional roles and responsibility for the measurement, reporting and verification (MRV) of the results in the technical annex, together with the weblinks for accessing further information. The roles and responsibilities of the agencies and institutions involved in the MRV activities are transparently provided. There are two public institutions sharing the responsibilities regarding the monitoring and reporting under REDD-plus: the Ministry of Environment and Sustainable Development and the Institute of Hydrology, Meteorology and Environmental Studies, respectively.

27. Colombia's SMByC is a national system covering the national forest area. The system assesses activity data for Colombia's FREL and the results on reducing emissions from deforestation. Activity data are estimated using Landsat images and emission factors corresponding to carbon densities in above- and below-ground biomass carbon pools estimated from forest sampling plots. Digitally pre-processed Landsat image pairs covering successive two-year periods are compared semi-automatically to directly produce a change map. The minimum mapping unit used for this work is 1 ha. The emission factors used to produce the results of the 2013–2014 estimates are the same as those used for the construction of the FREL. These were estimated by the SMByC using data from 721 sampling forest plots of various sizes established between 1990 and 2014 (the total sample area was approximately 142 ha, out of a total area of 45.9 million ha). As also noted in paragraph 32 of the FREL technical assessment report, the transition from the current non-randomized sampling to randomized sampling through the NFI feeding into the SMByC remains an area for further development.

28. According to decision 11/CP.19, paragraph 4(b), the national forest monitoring system (NFMS) should enable the assessment of different types of forest in the country, including natural forest. In response to a question from the LULUCF experts, Colombia explained that the results area includes natural forests in the Amazon biome, and that all plantations and other wooded lands that do not fall under the forest definition are excluded from the results of the implementation of activities to reduce emissions from deforestation for the period 2013–2014.

29. Referring to decision 1/CP.16, paragraph 71(c), footnote 7, the subnational monitoring and reporting include: monitoring and reporting of emissions displacement at the national level, if appropriate, and reporting on how displacement of emissions is being addressed; and on the means to integrate subnational monitoring systems into a national monitoring system. In response to the questions raised by the LULUCF experts on the possible displacement of emissions, Colombia explained that the annual deforestation monitoring is conducted by the SMByC at the national level and acknowledged the importance of developing procedures to monitor the drivers and underlying causes of deforestation in order to identify regional displacement of emissions. The LULUCF experts commend Colombia for its efforts to address this issue by building upon the SMByC and developing a module to detect the displacement of emissions. The LULUCF experts also note that, so far, there is no evidence of displacement of emissions. However, they reiterate the encouragement from the assessment team for the FREL, contained in the FREL technical assessment report, that Colombia continues investigating, as a priority, work that would make monitoring of displacement possible, or enable the introduction of a national FREL.

30. Colombia provided a description of how the Intergovernmental Panel on Climate Change (IPCC) guidance and guidelines were taken into account, in accordance with paragraph 1(c) of decision 4/CP.15. For the estimation of emission reduction results in the

Amazon biome, Colombia used the methodology provided in the IPCC *Good Practice Guidance for Land Use, Land-Use Change and Forestry* and used the 2006 IPCC *Guidelines for National Greenhouse Gas Inventories* for the estimation of carbon stocks in forest land converted to other land-use categories. Accordingly, the gross emissions from deforestation were estimated for the years 2013–2014 by combining activity data (i.e. areas of annual gross deforestation) with the appropriate emission factors (i.e. emissions associated with the corresponding forest type).

#### 4. Accuracy of the results in the technical annex

31. The LULUCF experts note that the estimation of results from the implementation of the activity on reducing emissions from deforestation in the subnational Amazon biome of Colombia has been undertaken using a transparent and overall consistent approach. The LULUCF experts commend Colombia for its significant long-term efforts in building up a robust NFMS that is capable of providing transparent estimates of emissions from deforestation.

32. Both the established FREL and the results obtained in the period 2013-2014 from the implementation of the activity on reducing emissions from deforestation are based on the assumption that the reference area where deforestation activities are monitored (activity data) and the living biomass stock of 566.1 t CO<sub>2</sub> eq/ha do not change, and are also based on the assumption that the methodology of sampling in the plots on the ground and the definition of deforestation in the Amazon biome are also consistent between the time periods of the FREL and the results.

33. The LULUCF experts also note the conclusion in paragraph 50 of the FREL technical assessment, which states "that application of the adjustment for the current FREL would not apply in the case where an agreement to end the conflict is not reached under the current peace process". Thus, the LULUCF experts agree that the results for 2013–2014 should be considered relative to this conclusion.

34. The LULUCF experts noted that the FREL was based on activity data consisting of estimated deforested areas in six successive periods in two-year intervals. In response to a question by the LULUCF experts regarding consistency with the FREL, Colombia confirmed that the 2013 and 2014 estimates are based on annual collection of activity data for deforestation, which are meant to enhance accuracy. Colombia also stated that secondary forest is not considered in the estimations of both the FREL and the technical annex, to maintain consistency with the forest definition. The LULUCF experts noted that, since there is no single base map, this could mean that there is double counting of emissions from areas that were previously deforested and subsequently regenerated. In response to the experts' question on this point, Colombia explained that, consistent with the definition used for gross deforestation, a time-series consistency analysis is applied after the generation of a deforestation period. This largely prevents any deforestation events occurring before 2006 from being marked as deforested in 2013 and 2014 (these events represent less than 0.0005 per cent of the total deforestation estimates).

35. As mentioned in paragraphs 24 and 25 above and in order to allow for the reconstruction of results, Colombia provided information related to the satellite imagery database and the generation of activity results for deforestation. Although this information could not be used for assessing the uncertainties of the emission estimates, such as those associated with the estimation of carbon densities in the plots that are not statistically representative, Colombia explained that no methodological changes or changes in the emission factor data between the FREL and the technical annex occurred. Thus, the uncertainties of the emission factors reported in the technical annex are the same as those reported for the emission factors of the FREL and included in the submission. Regarding this point, Colombia provided a clear road map for the implementation of improvements in

this area. The effect of the uncertainties on the accuracy of the results from the implementation of the activity on reducing emissions from deforestation could not be assessed. Despite this, and based on the assumptions used, the LULUCF experts conclude that the results are accurate, to the extent possible.

#### C. Areas identified for technical improvement

36. The LULUCF experts conclude that the areas for technical improvement identified in the final report on the technical assessment of Colombia's FREL<sup>13</sup> also apply to the provision of information on results from the implementation of the activity on reducing emissions from deforestation, and that a few more have been identified herewith. They refer on the whole to the following:

(a) Implement and strengthen quality assurance and quality control procedures to reduce errors in the submitted technical annex;

- (b) Ensure consistency between the FREL and GHG inventories;
- (c) Expand the coverage of carbon pools;
- (d) Consider the treatment of non-CO<sub>2</sub> emissions;

(e) Monitor displacement of emissions and/or move from subnational to national coverage;

(f) Expand activities to include forest degradation;

(g) Use the NFI for statistical sampling of above-ground and below-ground biomass and for the eventual inclusion of additional pools and reduce the uncertainties associated with using one average for the whole biome;

(h) Conduct more in-depth research and analysis to justify the adjustment for national circumstances, owing to economic and social trends following a peace agreement, depending on the actual developments;

(i) Use the uncertainty analysis for the estimates provided, as encouraged by decision 17/CP.8, paragraph 24.

#### D. Comments and/or responses by the Party concerned

37. During the consultation process, Colombia noted a number of areas with capacitybuilding needs. Addressing these needs could enable Colombia to potentially improve its data and methodologies, move from subnational to national coverage, and include additional activities and gases in future FREL submissions. After exchanges with the LULUCF experts, Colombia identified capacity-building needs for the further improvement of activity data and the estimation of emission factors, as follows:

(a) Identify the feasibility for adopting a land-use definition of forest and deforestation; and their implications in an operational forest monitoring system at the national level;

(b) Technical support for the implementation of the NFI and the incorporation of new technologies for measuring and monitoring carbon stocks and their changes over time;

(c) Strengthen the technical capacities to monitor displacement of emissions or to move from subnational to national coverage;

<sup>&</sup>lt;sup>13</sup> FCCC/TAR/2015/COL.

(d) Technical support for the incorporation of forest degradation monitoring, sustainable forest management, carbon stocks conservation and enhancement;

(e) Identify the feasibility for including non- $CO_2$  gases in the FREL, based on the methods developed in the BUR and the third national communication;

(f) Technical support to improve the methods used to quantify the adjustment for national circumstances.

### **III.** Conclusions

38. The LULUCF experts conclude that Colombia has reported results from the implementation of one activity, "reducing emissions from deforestation", which is defined as gross deforestation (the direct and/or induced conversion of forest cover to another type of land cover in a given time frame). Forest is defined as land with tree cover with a minimum canopy density of 30 per cent, a minimum canopy height (in situ) of 5 m at the time of identification and a minimum area of 1.0 ha. The technical annex covers the same area of the FREL, namely Colombia's Amazon biome representing about 40 per cent of the national territory, following a subnational approach. The results include estimates of emissions of  $CO_2$  from two carbon pools: above-ground biomass and below-ground biomass for the period 2013–2014. The results of the activity were reported using the same methodology for the activity data and emission factors as for the FREL, but with a different assumption regarding the application of an adjustment for national circumstances.

39. The LULUCF experts consider that the data and information provided in the technical annex and additional documentation provided by Colombia are transparent, complete and accurate.

40. The LULUCF experts further found that the data and information provided in the technical annex are overall consistent with the guidelines referred to in decision 14/CP.19, paragraph 11.

41. The results are accurate to the extent possible, based on the assumptions used. The LULUCF experts note that Colombia has indicated its plans to implement an NFMS, an important step towards assessing the possible displacement of emissions and/or the move to a national FREL.

42. In conclusion, the LULUCF experts commend Colombia for showing a strong commitment to the continuous improvement of its data and information used for producing results, in line with a stepwise approach. Some areas for future technical improvements have been identified in this report, including building national capacities for the further improvement of activity data and the estimation of emission factors. At the same time, the LULUCF experts acknowledge that these improvements are subject to national capabilities and circumstances, and note the importance of adequate and predictable support.<sup>14</sup> The LULUCF experts also acknowledge that the TA process was an opportunity for a facilitative and constructive technical exchange of views and information with Colombia.<sup>15</sup>

<sup>&</sup>lt;sup>14</sup> Decision 2/CP.17, paragraph 57.

<sup>&</sup>lt;sup>15</sup> Decision 14/CP.19, paragraph 13.

#### Annex

# Technical annex to the biennial update report

Owing to the complexity and length of the submitted technical annex to the biennial update report and in order to maintain the original formatting, the technical annex is not reproduced here. It can be downloaded from the UNFCCC website at <a href="http://unfccc.int/8722">http://unfccc.int/8722</a>>.