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**8.1, 8.1.1, 8.1.2 Forests and climate change moving towards the 25th
Session of the Conference of the Parties (COP 25) to the UNFCCC**

Secretariat Note

I. Introduction

1. The results of the 24th Conference of the Parties (COP24) of the Framework Convention on Climate Change (UNFCCC) in Katowice revealed the urgent need to raise the ambition substantially to meet the goals of the Paris Agreement. The 195 nations agreed to strengthen the global response to the threat of climate change by "holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels." However, current Nationally Determined Contributions (NDC) under the Paris Agreement would result in a global increase in temperature of about 3.0° C, twice the agreed limit of 1.5° C.

2. Forests and land use are part of the solution. The Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C examines the various available trajectories for limiting global warming to 1.5°C and 2° C, and land use changes globally and regionally can be found in all projections. Modeled trajectories vary from predicting a reduction in forests from 2 million km² to an increase of 9.5 million km² by 2050 relative to 2010; the scale of change in forest cover depends on the rest of the portfolio of climate actions for emissions mitigation as well as other factors on land use changes. The options for the land use, land-use change and forestry (LULUCF) sector include reducing deforestation and forest degradation, afforestation, reforestation, ecosystem-based adaptation, ecosystem restoration, and biodiversity management that use local and indigenous knowledge. These changes represent major challenges for the sustainable management of forest resources, considering the many demands for land use, including human settlements, food production, fibers, carbon storage, biodiversity and other ecosystem services.

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3. The 24th session of the Committee on Forestry (COFO 24) requested FAO to support countries in developing national strategies and planning documents, including NDCs, to address forest related emissions reduction and adaptation actions; continue working in close collaboration with governments to facilitate intersectoral dialogues among ministries and relevant stakeholders to address the vulnerabilities and mitigation potential of forests and to promote more holistic landscape-based approaches; and assist countries in strengthening the role of forests and trees in achieving multiple SDGs and in accelerating progress in this regard in accordance with their national priorities. In this regard, the thirty-first session of the Forestry Commission for Latin America and the Caribbean (COFLAC) will hold the proposed seminar in Session 7: Forests and climate change towards COP25.

4. In this note, the Secretariat presents a brief overview of the situation of forests in the global climate change agenda and the 2030 Agenda, the overall context and challenges of forests and climate change in Latin America and the Caribbean (LAC), as well as developments in the implementation of policy approaches for promoting climate change mitigation and adaptation actions in the forest sector. Finally, recommendations for additional actions on the matter and opportunities for FAO cooperation in the region are presented together with other matters submitted for consideration by the Committee.

II. Forests in the Global Climate Agenda and 2030 Agenda

5. Forests have played a key role in UNFCCC negotiations for more than a decade, particularly in terms of their climate change mitigation potential through the implementation of measures for reducing emissions from deforestation and forest degradation and for fostering the role of conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+). As noted in the Decisions of the Conference of the Parties in Cancun¹, developing countries are requested to adopt these measures and prepare: a) a national strategy (NS) or action plan (AP); b) a national or regional forest reference emission level and/or forest reference level; c) a robust and transparent national forest monitoring system for monitoring and reporting of proposed measures; and d) a system for providing information on the way environmental and social safeguards are being addressed and respected.

6. The Paris Agreement, adopted at COP21 in 2015, sent a clear message that forests play a critical and prominent role in achieving the new global climate goal, dedicating Article 5 of the Agreement to forests, in which the Parties are encouraged to take results-based payments actions that foster REDD+ strategies, as well as alternative policy approaches, such as joint mitigation and adaptation approaches for integral and sustainable forest management, while reaffirming the importance of incentivizing non-carbon benefits. Furthermore, the Paris Agreement establishes guidelines for carrying out and communicating the ambitious efforts defined in the NDCs, and the characteristics of the progression, in other words, each country's successive NDC will represent a progression beyond the country's current NDC and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in light of the different national circumstances.

7. The 2030 Agenda for Sustainable Development is a commitment made by countries to tackle the complex challenges humanity is facing, from ending poverty and hunger and responding to climate change to building resilient communities, achieving inclusive growth and sustainably managing the Earth's natural resources. The 17 Sustainable Development Goals (SDGs), 169 targets and 230 indicators establish specific objectives. The Committee on Forestry, at its 24th session, recognized the importance of forests for the implementation of the 2030 Agenda and the Sustainable Development Goals (SDGs). The State of the World's Forests 2018² provides a detailed analysis aimed at capturing

¹ Decision 1/COP16, 2010. UNFCCC.

² FAO. 2018. The State of the World's Forests 2018 - Forest pathways to sustainable development. Rome. License: CC BY-NC-SA 3.0 IGO

the contribution of forests and trees to 28 targets relating to ten SDGs. The FO:LACFC/2019/2 document makes special reference to the region.

8. More recently, the United Nations Decade on Ecosystem Restoration 2021-2030 was declared on 1 March this year by the United Nations General Assembly. It aims to massively scale up restoration of degraded and destroyed ecosystems as a proven measure to fight the climate crisis and enhance food security, water supply and biodiversity. The Decade, a global call of action, will draw together political support, scientific research and financial muscle to massively scale up restoration from successful pilot initiatives to areas of millions of hectares. Research shows that more than two billion hectares of the world's deforested and degraded landscapes have restoration potential. The Decade will accelerate existing global restoration goals, for example the Bonn Challenge, which aims to restore 350 million hectares of degraded ecosystems by 2030 – an area almost the size of India. A total of 57 countries, subnational governments and private organizations have committed to restore over 170 million hectares. This endeavor builds on regional efforts such as the Initiative 20x20 in Latin America that aims to restore 20 million hectares of degraded land by 2020.

III. Context and Challenges

9. Forests play a vital role in climate change mitigation and adaptation (SDG 13). On the one hand, deforestation and forest degradation account for 12 percent of gross global greenhouse gas (GHG) emissions^{3,4}. On the other hand, terrestrial ecosystems, mainly forests, contribute significantly to the climate change mitigation since they remove about one-third of the current anthropogenic CO₂⁵. In LAC, land use change is the second most important agent of anthropogenic climate change; total GHG emissions in LAC⁶ between 2011 and 2014 varied from 3.8 to 3.9 gigatonnes of CO₂ equivalent per year, of which emissions associated with forests and other land uses accounted for between 19 percent and 21 percent. Furthermore, deforestation, caused primarily by the conversion of forest lands to agriculture - often large-scale, threatens not only the livelihoods of forest and indigenous communities, but also the variety of life on our planet given that such land-use changes result in a loss of valuable habitats, land degradation, soil erosion and a decrease in clean water.⁷

10. The rate of deforestation in the region is still high despite the downward trend this past decade⁸. Countries in Central America (CA)⁹ and South America (SA) lost a total of 36 490 km² of forests per year between 2005 and 2010, and 22 681 km² between 2010 and 2015. The highest rates of forest loss have been recorded in Argentina, Brazil, Bolivia and Paraguay (FAO, 2015). Net forest area losses in CA are considerably lower than in SA, owing to the smaller size of countries in CA. However, when

³ IPCC (2014). *Climate Change 2014: Mitigation of Climate Change*. Intergovernmental Panel on Climate Change, AR-5, Working Group III. <http://ipcc.ch/report/ar5/wg3/>

⁴ IPCC (2014), WG3 – AR5

⁵ Grassi, Giacomo & House, (2017) *The key role of forests in meeting climate targets requires science for credible mitigation*

⁶ CAIT Climate Data Explorer. 2017. *Country Greenhouse Gas Emissions*. Washington, DC: World Resources Institute; FAO 2016, FAOSTAT Emissions Database.

⁷ FAO. 2018. *The State of the World's Forests 2018 - Forest pathways to sustainable development*. Rome

⁸ Central and South America. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability*. Fifth Assessment Report of the IPCC

⁹ Includes Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.

considering forest area net change rates¹⁰, Honduras, El Salvador and Guatemala register the highest values in Central and South America between 2010 and 2015, with -2.43 percent, -1.58 percent and -1 percent, respectively (FAO, 2015).

11. Recent analyses in Guatemala¹¹, Nicaragua¹² and Paraguay¹³ identify the main direct causes of deforestation as the expansion of the agricultural frontier and extensive animal husbandry. Other causes in Guatemala include urbanization, fires, invasions in protected areas, pests and natural disasters, while suggesting that gains in forest cover are a consequence of forest plantations, where forest incentive programmes have had a bearing on the expansion of forest area.

12. In the Amazon Biome, where deforestation marked a downward trend between 2005 and 2015, there are certain signs of an increase starting in 2016, with different causes and agents in each country. For example, in Ecuador's Amazon Region¹⁴ deforestation increased from 0.13 percent per annum in 2015 to 0.28 percent in 2016 and 0.30 percent in 2017. In the case of Colombia¹⁵, deforestation increased 14 percent between 2015 and 2016, and doubled between 2016 and 2017, following the signing of the peace agreement that generated government investment in highway construction, a reduced presence of guerrilla operations in the region, and suspension of aerial fumigation of illegal crops. Other causes included the expansion of the agricultural frontier, including coca crops and livestock farming in lands previously occupied by the Revolutionary Armed Forces of Colombia (FARC, Spanish acronym). In Brazil's Legal Amazon, deforestation increased 8.5 percent between 2017 and 2018¹⁶, confirming an upward trend since 2012, the year when the all-time low was recorded.¹⁷

13. At the same time, forest area registers a positive trend in a few countries: between 2010 and 2015, a positive annual forest area net change rate was reported for Costa Rica, Uruguay, Cuba, Dominican Republic and Chile with 1.13 percent, 1.28 percent, 1.76 percent, 1.76 percent and 1.79 percent increase per annum, respectively (FAO, 2015). According to the fifth IPCC report¹⁸ these forest transitions are the result of: (1) economies less dependent on agriculture; (2) international migration processes and associated remittances; (3) greater emphasis on the recognition of the environmental services provided by forest ecosystems, and (4) growing number of forest plantations.

¹⁰ Idem IPCC

¹¹ GIMBUT, 2018. *Niveles de Referencia de Emisiones GEI Forestales de Guatemala*. Document under review. Updated 24 January 2018.

¹² Niveles de Referencia de las Emisiones Forestales República de Nicaragua, 2019

¹³ Nivel de Referencia de las Emisiones Forestales por Deforestación en la República del Paraguay para pago por resultados de REDD+ bajo la CMNUCC, 2016

¹⁴ Ministerio del Ambiente del Ecuador y Organización de las Naciones Unidas para la Alimentación y la Agricultura. 2019. Plan estratégico de intervención territorial para la reducción de la deforestación en la región amazónica del Ecuador. Quito, Ecuador

¹⁵ IDEAM, Technical Annex of outcomes for Colombia after reducing emissions from deforestation in the Amazon Biome for payments based on REDD+ results, 2018.

¹⁶ INPE, Observación de la tierra, <http://www.obt.inpe.br/OBT/noticias/inpe-consolida-7-536-km2-de-desmatamento-na-amazonia-em-2018>

¹⁷ Brenda Brito et al 2019 Environ. Res. Lett. 14 064018

¹⁸ G.O., J.A. Marengo, J.-P. Boulanger, M.S. Buckeridge, E. Castellanos, G. Poveda, F.R. Scarano, and S. Vicuña, 2014: Central and South America. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability*.

14. LAC countries host a wealth of biological diversity and high levels of endemism. Changes in land use have created critical points for biodiversity, i.e., locations with a great variety of species that have lost a significant amount of their habitat: Mesoamerica, Chocó-Darién, western Ecuador, Central Chile's Tropical Andes, Brazil's Atlantic Forest and Brazilian Cerrado. Conversion of natural ecosystems, including forests, is the main direct cause of biodiversity loss in the region. For example, the risk of plant species extinction in the Amazon region is estimated at between 5 and 9 percent by 2050, with habitat loss at an estimated 12 to 33 percent by 2030.¹⁹

15. With respect to the water-forest relationship, according to the Report of the Millennium Ecosystem Assessment (2005), over 75 percent of the world's accessible freshwater comes from forest watersheds and more than half of the Earth's population depends on these areas for water for domestic, agricultural, industrial and environmental purposes. Recent studies suggest that tropical and subtropical forests act as large carriers of atmospheric humidity, providing a global circulation system that influences cloud cover and rainfall in the region.

16. As follows from the above, generating transparent, accurate and consistent information for decision-making on sustainable forest management is one of the challenges countries are facing in the region. In the case of Brazil²⁰, one of the core themes of the Action Plan for Deforestation Prevention and Control in the Legal Amazon, launched in 2004, is environmental monitoring and control; the findings that have emerged from the monitoring system on land use change dynamics have been a key element in halting deforestation in the Amazon region. The FAO Voluntary Guidelines on National Forest Monitoring²¹, indicate that country ownership and responsibility are important principles to keep in mind when developing monitoring systems. This is why the REDD+ preparation process in the region has provided significant funding and technical assistance for capacity development and for designing and implementing national forest monitoring systems. Brazil, Chile, Colombia, Honduras, Ecuador and Paraguay currently have legal frameworks in place that define institutional roles and responsibilities, and this has become the key element to ensuring the technical and financial sustainability of these systems.

17. There are a number of climate related measures linked to the forest and other land use sectors that can be taken, such as the restoration of natural ecosystems and carbon sequestration in the soil, which could provide benefits and help build resilience to climate change. However, they require governance systems that enable sustainable land management since they can compete with other types of land use and have a major impact on agriculture and food systems, biodiversity, and other ecosystem functions and services if applied at the very large scale foreseen in some scenarios.²²

IV. Developments in the implementation of policy approaches for promoting climate change mitigation and adaptation actions in the forest sector.

18. Eighty-eight percent of countries that have submitted their NDCs to UNFCCC included the land use, land use change and forestry (LULUCF) sector among their commitments and underscored the importance of the forest sector in particular in achieving their climate change adaptation and mitigation goals. For example, action undertaken in Bolivia focuses on achieving zero illegal deforestation by 2020 and increasing afforested and reforested areas by 4.5 million hectares by 2030. Chile has made a commitment to sustainably manage and recover 100 000 hectares of native forests, and the

¹⁹ IPCC (2014), WG3 – AR5

²⁰ Brazil, Technical Annex of outcomes after reducing emissions from deforestation in the Amazon Biome for payments based on REDD+ results, 2019

²¹ FAO. 2017. Voluntary Guidelines on National Forest Monitoring. Rome. <http://www.fao.org/3/a-i6767s.pdf>

²² IPCC, IPCC, 2018: SFP, Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C

afforestation of 100 000 hectares, primarily with native species, by 2030. Ecuador established an unconditional GHG emissions reduction target of 4 percent by 2025 with respect to the reference level for forest emissions from deforestation (2000-2008) and, contingent upon support from international cooperation agencies for the development of lines of action of the conditional scenario for this sector, could deliver an additional mitigation potential of 16 percent, i.e. a total GHG emissions reduction of 20 percent by 2025, in comparison to the reference level.

19. Other countries do not mention quantifiable objectives for their NDCs for the sector since they are expressed through policies and actions that will be promoted and which respond to aspects linked to climate change adaptation. Peru will, for example, further a comprehensive landscape-based approach aimed at increasing the resilience of forests and engaging indigenous organizations in actions on climate change. Uruguay will include, by 2025, climate change and variability considerations in the management plans for at least six protected areas and will protect all its native forest area, seeking to reverse the degradation processes.

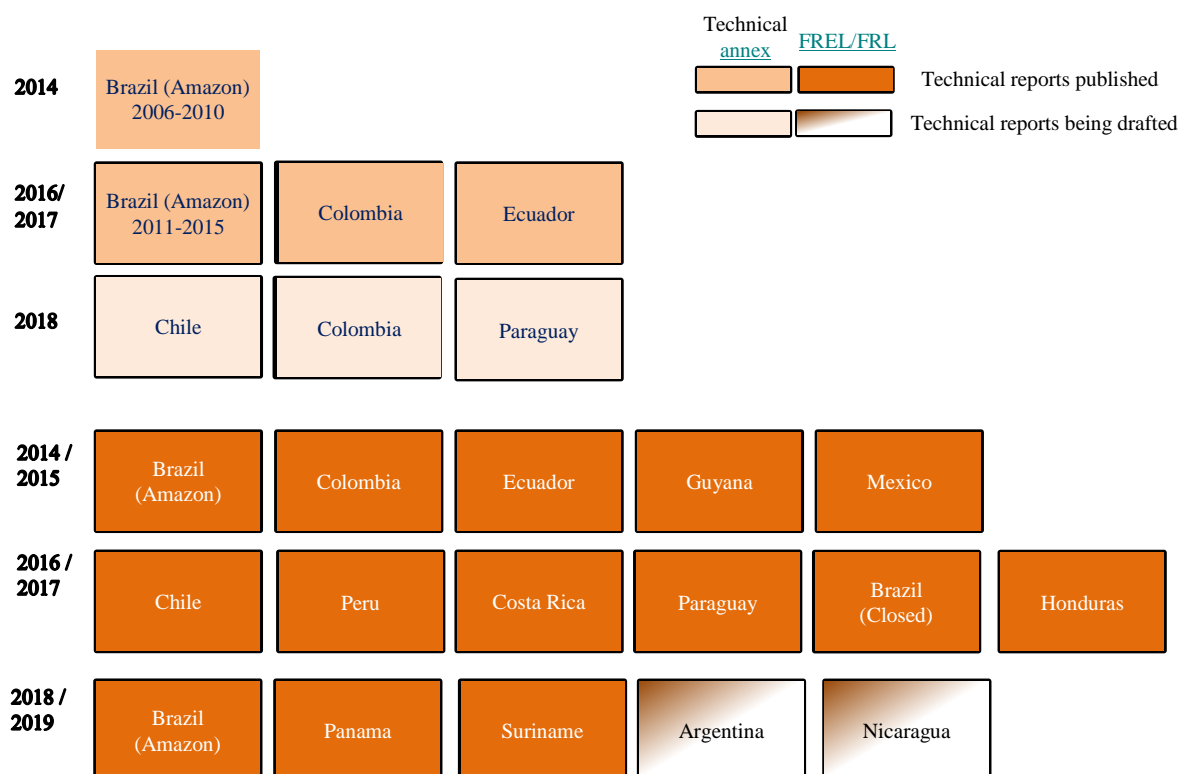
20. All Central American countries that have submitted their NDCs include land use / forest sector action for mitigation, adaptation or both. Given the potential contribution of forests to reducing emissions in the region, it is crucial that these forest sector objectives be achieved. Proposed country measures in NDCs include: implementation of REDD+ strategy; restoration and reforestation; conservation activities; integrated landscape management, and agroforestry.

21. Most NDCs do not provide complete information on assumptions and methods that involve the LULUCF sector. Each country has calculated LULUCF sector emissions differently. In some cases, countries clearly establish the percentage that corresponds to the LULUCF sector of the NDC target. On the other hand, many countries do not specify the accounting methods that will be used by the land use sector nor the forest-related actions they intend to carry out to contribute to achieving the NDC goals.

22. The Paris Agreement transparency framework establishes the modalities, procedures and guidelines (MPGs) for providing the data needed for monitoring progress in the application and accomplishment of NDCs, for which countries must submit biennial transparency reports (BTR). These reports will also include required and delivered data on GHG inventories and information on support in the form of funding, technology transfer and capacity building efforts. Great progress has been made in LAC with respect to efforts to establish National Forest Monitoring Systems (NFMS) and measurement, reporting and verification (MRV) procedures under the REDD+ preparation process, which represents substantial progress in laying the foundations for the MRV of NDCs.

23. As of July 2019, 14 countries (see figure 1) in Latin America and the Caribbean had submitted 16 forest reference emissions levels and/or forest reference levels (FREL/FRLSs) to UNFCCC. Brazil extended the geographical scope, adding the Cerrado biome and an additional results reporting period ("Amazon C" for 2016–2020 results). Of the 16 FREL/FRLS submissions, 14 Technical Analysis Reports have been published as of July 2019.²³

²³ Data updated from FAO. 2018. From reference levels to results reporting: REDD+ under the UNFCCC. 2018 update. Rome, Food and Agriculture Organization of the United Nations (FAO).



*Countries that have not submitted reports to the UNFCCC: Antigua and Barbuda, Bahamas, Barbados, Belize, Bolivia, Cuba, Dominica, Dominican Republic, El Salvador, Granada, Guatemala, Haiti, Jamaica, Trinidad and Tobago, Saint Vincent and the Grenadines, Saint Lucia, Uruguay y Venezuela

Figure 1. Overview of REDD+ results with technical analysis completed and of FREL / FRL with technical assessments being drafted or completed for submission, as of July

24. With respect to the implementation of actions and forest climate change mitigation outcomes, countries included nine REDD+ results submissions in the technical annexes of the Biennial Update Reports (BUR) of five countries: Brazil (3 results reports for the Amazon, 1 for the Cerrado region), Chile (Sub-national for 5 regions), Colombia (2 results reports for the Amazon), Ecuador (National) and Paraguay (National). All 5 countries have registered an emissions reduction of 8 305 million tonnes of CO₂e, of which 98.4 percent correspond to reductions in Brazil in the Amazon and Cerrado regions between 2006 and 2017, and between 2011 and 2017, respectively. These results have been measured against the FREL/FRLs submitted by countries to the UNFCCC (see table 1) using National Forest Monitoring Systems (NFMS) developed and implemented following UNFCCC guidelines.²⁴

²⁴ Idem

Table 1: Overview of REDD+ results submitted to the United Nations Framework Convention on Climate Change.

	Brazil (Amazon A)	Brazil (Amazon B)	Brazil (Amazon C)	Brazil (Cerrado)	Colombia (Amazon A)	Colombia (Amazon A)	Chile	Ecuador	Paraguay
Results period	2006– 2010	2011–2015	2016– 2017	2011– 2017	2013– 2014	2015– 2016	2014 – 2016	2009– 2014	2016– 2017
Results period (years)	5	5	2	7	2	2	3	6	2
Results (MtCO ₂)	2 971	3 155	769	1 275	28.9	31,5	19.36	29	26.8
Average annual results (MtCO ₂ /yr)	594	631	384.5	182.1	14.5	15.7	6.45	4.8	13.4
Area (millions of ha) covered by the FREL/FRL	419.7	419.7	419.7		45.9	45.9	16.5	24.9	40.6

25. To date, the NSs / APs for Brazil, Chile, Colombia, Ecuador and Mexico have been published in the Framework Convention information hub (REDD+ Info Hub)²⁵, a web platform developed to increase the transparency of data on results-based measures and corresponding funding received by countries. The REDD+ Info Hub also provides information on: a) mitigation results for each relevant period expressed in tonnes of carbon dioxide equivalent per year, b) FREL/FRLS that have been established; c) an overview of how all safeguards are being addressed and respected; and e) information on NFMSs.

V. FAO Cooperation in the region

26. FAO's input on climate change and forests falls within the scope of the Paris Agreement, in particular the "Building global capacity to increase transparency in the forest sector" project of the FAO/GEF CBIT-Forest initiative²⁶, headed by the Forestry Department. The project's objective is to build institutional and technical capacities in developing countries in data collection, analysis and dissemination processes related to forests to meet the enhanced transparency requirements of the Paris Agreement. To ensure the greatest possible impact, the project is aimed at the Global Network of National Correspondents for the Global Forest Resources Assessment 2020 (FRA 2020) from at least 186 countries and territories. Furthermore, to date FAO has had 7 national projects approved for strengthening the enhanced transparency framework under the Paris Agreement, including Cuba and Nicaragua in the region, and numerous Technical Cooperation Programme resources to support NDCs and REDD+, also including Cuba and Ecuador.

²⁵ <https://redd.unfccc.int/info-hub.html>

²⁶ <https://www.cbitplatform.org/index.php/projects/building-global-capacity-increase-transparency-forest-sector-cbit-forest>

27. In this sense, a great opportunity exists for cooperating on a range of matters of great relevance for the region, namely to:

- Strengthen and update NDCs, including accounting methods
- Build country capacities to measure, monitor and assess the outcomes of mitigation/adaptation policies in the forest sector that impinge on their NDCs
- Implement policies and measures included in the NDCs and REDD+ NSs/APs
- Address challenges and opportunities for aligning cross- sector policies, primarily those linked to farming
- Strengthen synergies across mitigation and adaptation efforts in the agriculture sector, forestry and other land uses (AFOLU) supporting climate-smart production practices and facilitating cross-sector dialogue among ministries.
- Continue supporting resource mobilization from GEF, GCF and other funding sources for developing enabling actions and implementing the actions plans established in the NDCs and REDD+ strategies.

28. South-South and triangular cooperation approaches have proven to be of great value for stepping up the adoption of better practices and in seeking solutions to common problems through technical exchange mechanisms, political dialogue and documentation on lessons learned and better practices. The experience developed, with FAO support, by the Centro de Excelencia Virtual en Monitoreo Forestal para la región de Mesoamérica²⁷ is an example of the value of South-South cooperation.

VI. Points for consideration by the Commission

29. The Commission may wish to:

- Analyze the mechanisms to hasten the implementation of mitigation/adaptation actions related to forests and land use in NDCs being submitted by countries, as well as the strategies to remove policy, governance and funding barriers. This includes institutional coordination mechanisms, transparency systems, and access to and management of funding to implement the required actions.
- Exchange views on options to raise the level de ambition of climate action to promote the sustainable management of all types of forests, halt deforestation, restore degraded forests, and increase afforestation and reforestation to meet the SDGs.
- Discuss potential actions to improve the complementarity of the data collected globally (e.g. the Global Remote Sensing Survey of the Global Forest Resources Assessment) with the information generated by national forest monitoring systems and ways to strengthen the alignment of both data-generating approaches.

30. The Commission may wish to request that FAO:

- Continue the work initiated for national capacity development to strengthen, update, implement and monitor NDCs, and promote cross-sector policies to ensure their compliance.
- Support countries in designing and consolidating REDD+ processes in the region.
- Strengthen South-South and bilateral cooperation mechanisms for the application of good practices, governance and policies to make further progress in achieving NDC targets.

²⁷ <http://www.monitoreoforestal.gob.mx/>