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## LATIN AMERICAN AND CARIBBEAN FORESTRY COMMISSION

### THIRTIETH SESSION

Tegucigalpa - Honduras, 25 -29 September 2017

The state of the Forest Sector in the Region

Secretariat note

#### I. Introduction

1. Forests in Latin America and the Caribbean cover just under half of the land area of the region. Forests provide products and services that contribute to socio-economic development and environmental protection as well. They are essential for the lives of millions of people, mainly in rural areas and in poverty, providing food and other non-wood products, energy, medicine, important ecosystem services, which are irreplaceable elements for the sustainability of their means of subsistence and livelihoods. Sustainable forest management and forest conservation are essential for the achievement of SDGs in the Region.

2. Sustainable forest management is an explicit objective of the 2030 Agenda through the incorporation of Goal 15. Due to the multiple functions of forests, sustainable forest management and forest conservation contribute to achieving several other SDGs, especially those related to poverty alleviation, food security, health and well-being, water availability, renewable energy and resilient infrastructure.

3. The forest sector is considered a contributor to climate change due to the emissions related to changes in land use but, in turn, it is also affected by climate change as regards forest productivity and the quality of forest assets. Furthermore, the forest sector offers important mitigation opportunities at a relatively low cost. Reforestation and forest management are particularly important to adapt to climate change and its effects and to enhance resilience of livelihoods of rural populations and mitigation of climate change by capturing greenhouse gases.

4. Globally, millions of people depend on forests to generate and sustain their livelihoods, either directly for the consumption of forest food or from the income generated by the commercialization of forest products. In Latin America and the Caribbean, annual per capita consumption of edible forest products is estimated at 9.4 kg, what corresponds to 15.7 Kcal/person/day. While this figure seems modest, it is important to consider that consumption is not homogenous at the national level, and is mainly concentrated in rural areas and in low-income populations. Deforestation therefore, in addition

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to be an environmental problem, is a socioeconomic problem that affects vulnerable populations in rural areas.

## II. The State of Forests

5. Latin America and the Caribbean (LAC) has abundant forest resources. The total forest area in the region amounts to 935.5 million hectares, which corresponds to 46.4% of the total land area in the region. This is equivalent to 23.4% of the total forest area in the world.

Sub-region	Forest		Surface Other wooded land		Other lands		Total land area	Inland waters	Country area
	1,000 ha	% of surface	1,000 ha	% of surface	1,000 ha	% of surface	1,000 ha	1,000 ha	1,000 ha
Southern Cone	62,015	15.3	79,025	19.4	265,432	65.3	406,471	6,692	413,164
Amazonia	779,996	58.2	77,405	5.8	482,728	36.0	1,340,128	27,121	1,367,249
Mesoamerica	86,290	35.2	25,831	10.5	133,105	54.3	245,227	3,439	248,666
Caribbean	7,195	31.9	1,065	4.7	14,267	63.3	22,528	815	23,343
<b>Latin America and the Caribbean</b>	<b>935,496</b>	<b>46.4</b>	<b>183,326</b>	<b>9.1</b>	<b>895,532</b>	<b>44.5</b>	<b>2,014,354</b>	<b>38,068</b>	<b>2,052,422</b>

Source: FRA, 2015

6. 83% of the forest area is located in countries that share the Amazonian sub-region, while only 1% is located in the Caribbean. Mesoamerica has 9% and the Southern Cone 7% of the total forest area in the Region. Five countries in the Region account for 80% of the total forest area, while Brazil accounts for more than half of the forest area of Latin America and the Caribbean (53%).

Country	1,000 ha	% of forest area in LAC
Brazil	493,538	53
Peru	73,973	8
Mexico	66,040	7
Colombia	58,502	6
Plurinational State of Bolivia	54,764	6

Source: FRA, 2015

7. About 46% of the forest area in the region is considered primary forest and 2% corresponds to planted forest, while the remaining 52% is naturally regenerated forest. This can be compared to global averages where about 32% is primary forest, 7% is planted forest and the remaining 61% is naturally regenerated forest. Therefore, the LAC region has more primary forest and less planted forest than the global average.

8. The region continues to lose forest area, but the rate of loss is decreasing, from 4.45 million hectares per year between 1990-2000 to 2.18 million per year between 2010 and 2015. This corresponds to a net loss reduction from 0.44% per year in the period 2000-2010 to 0.23% per year in the period 2010-2015. The net changes in the forest area are the cumulative effect of processes of change that increase the forest area (afforestation/reforestation and expansion of natural forest) and deforestation, the latter implying a change of forest lands to another land use.

9. The deceleration is mainly because Brazil reduced the annual forest loss rate from 2.54 million hectares in the period 1990-2000 to 0.98 million hectares in the period 2010-2015. However, the Mesoamerican and Southern Cone sub-regions also show a reduction in annual forest loss.

10. Although the deforestation rate in Brazil is three times the rate of the country that follows it in order of magnitude (period 2010 – 2015), it has shown the most important drop in deforestation rate in the region. In terms of deforestation magnitude Brazil is followed by Argentina, Plurinational State of Bolivia, Peru and Mexico - all with an annual deforestation well over 100,000 hectares.

Country	Forest surface (1.000 ha)					Annual change rate							
	1990	2000	2005	2010	2015	1990-2000		2000-2010		2010-2015		1990-2015	
						1.000 ha/year	%	1.000 ha/year	%	1.000 ha/year	%	1.000 ha/year	%
Brazil	546705	521274	506734	498458	493538	-2543,1	-0,5	-2281,6	-0,4	-984,0	-0,2	-2126,7	-0,4
Argentina	34793	31860	30186	28596	27112	-293,3	-0,9	-326,4	-1,1	-296,8	-1,1	-307,2	-1,0
P.S. of Bolivia	62796	60091	58734	56209	54764	-270,4	-0,4	-388,2	-0,7	-289,0	-0,5	-321,2	-0,5
Peru	77921	76147	75528	74811	73973	-177,4	-0,2	-133,6	-0,2	-167,6	-0,2	-157,9	-0,2
Mexico	69760	67856	67083	66498	66040	-190,4	-0,3	-135,8	-0,2	-91,6	-0,1	-148,8	-0,2

Source: FRA, 2015

11. The Caribbean sub-region shows a net increase in forest area, mainly due to the abandonment of sugar cane plantations and other agricultural lands. This increase of the forest area is particularly evident in Cuba, the Dominican Republic, Puerto Rico and Trinidad and Tobago. Outside the Caribbean sub-region, Chile, Costa Rica and Uruguay are the only countries showing an increase in the forest area during the period 2010-2015.

12. In relation to planted forests, it is estimated that by 2015 the Region has about 15.6 million hectares, corresponding to a significant increase since 1990, when 8.8 million hectares were recorded (the average increase corresponds to 280,000 hectares of forest planted in the region per year).

13. Five countries are particularly important in terms of annually afforested areas (more than 1 million hectares): Brazil, Chile, Argentina, Peru and Uruguay. Although the planted forest regional area increased in the period 1990 – 2015 as mentioned, during the period 2010 – 2015, a reduction of the annual deforestation rate was verified in the countries with the largest planted forest area. Among these countries, only the Chile and Peru´s annual afforestation rates showed increments in relation to previous periods, and only the Brazil and Chile´s annual afforestation rates of the 2010-2015 period were higher than their annual average rates for the period 1990-2015. In this sense, a general increase in the forest planted area in the region was found in the 1990-2015 period, with a decrease in the afforestation effort towards the end of the period.

Country	Planted forest surface (1.000 ha)					Annual change rate of planted forest							
	1990	2000	2005	2010	2015	1990-2000		2000-2010		2010-2015		1990-2015	
						1.000 ha/year	%	1.000 ha/year	%	1.000 ha/year	%	1.000 ha/year	%
Brazil	4984	5176	5620	6973	7736	19,2	0,4	179,7	3,0	152,6	2,1	110,1	1,8
Chile	1707	1936	2063	2384	3044	22,9	1,3	44,8	2,1	132,0	5,0	53,5	2,3
Argentina	766	1076	1173	1187	1202	31,0	3,5	11,1	1,0	3,0	0,3	17,4	1,8
Peru	263	715	754	993	1157	45,2	10,5	27,8	3,3	32,8	3,1	35,8	6,1
Uruguay	201	629	782	979	1062	42,8	12,1	35,0	4,5	16,6	1,6	34,4	6,9

Source: FRA, 2015

14. It is worth mentioning that there is also a strong increase in afforestation in Nicaragua, due to the national reforestation programme (National Reforestation Crusade), as well as in the Dominican Republic, where important areas have been afforested through its Quisqueya Verde Programme, since its inception in 1997.

15. The importance of forests for the conservation of various ecosystem services and in sustainable development is proven, in part, by the actions undertaken by countries to promote forests' conservation and sustainable use, which is reflected in the percentage of forests that have been preserved in protected areas, the forest area under management plans and by forest certification.

16. In this sense, 32.8% of the total forest area is located in protected areas. In the countries of the Amazon sub-region almost 36% of the forests are located in protected areas, while in the Caribbean and Mesoamerica this figure corresponds to almost 20%. Countries in the Southern Cone report that only 12.2% of forests are located in protected areas. It is estimated that in LAC, about 147 million hectares of forest are under a management plan, as reported by 28 countries. Most of the forest area under

management plan is located in the Amazon sub-region (almost 123 million hectares), followed by Mesoamerica (19 million hectares – mostly in Mexico), the Caribbean (2.7 million hectares - mostly In Cuba) and the Southern Cone (2.1 million hectares).

17. The predominant forest certification scheme in the Region is the Forest Stewardship Council (FSC) with 12.8 million hectares certified in 2014, followed by the Programme for the Endorsement of Forest Certification (PEFC) with 3.5 million hectares, and national certification processes of about 0.3 million hectares. In the region, 18 countries have certified forests under the FSC, four in the Southern Cone, seven in the Amazon, and seven in the Mesoamerican sub-region.

Sub-region	FSC (2014)		PEFC (2014)		National (2012)	
	1,000 ha	#	1,000 ha	#	1,000 ha	#
Southern Cone	3,569	4	1,905	1	0	0
Amazonia	7,785	7	1,637	1	0	0
Mesoamerica	1,451	7	0	0	207	1
Caribbean	0	0	0	0	98	2
<b>Latin America and the Caribbean</b>	<b>12,805</b>	<b>18</b>	<b>3,542</b>	<b>2</b>	<b>306</b>	<b>3</b>

Source: FRA, 2015

### III. The Forest Sector and the Sustainable Development Goals

18. Forests and sustainable forest management are important for most of the Sustainable Development Goals (SDGs) as they provide a range of social, economic and environmental benefits that contribute to sustainable livelihoods, income generation and employment, food production, as well as the development of more resilient and sustainable production and consumption systems to face climate change and reduce its impact.

#### Increase of the importance of forests through the implementation of the 2030 Agenda

19. The SDGs recognize the broad functions of forests, especially under GOAL 15 “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”. Goal 15 focuses specifically on managing forests sustainably.

20. Forests account for over 80% of the global biodiversity. 17% of the world's forests are in legally protected areas, equivalent to 651 million ha. The region has the greatest biological diversity on the planet (the Amazon is one of the most important global ecosystems in terms of biodiversity and climate system), and is home to several megadiverse countries in the world. The percentage of forests in protected areas in the Region is almost twice the global figure, where 32.8% of the total forest area is located in protected areas of native forests. In addition, about 18% of the forests in the Region have the main function of biodiversity conservation, corresponding to 168.46 million ha. This value increased significantly since 1990, when only 48.67 million hectares of forests had this function.

21. There are 2,000 million hectares of deforested and degraded landscapes that can and must be restored in the world. For restoration of degraded lands, afforestation and reforestation are cost-effective alternatives; the restoration process could help reduce poverty, improve food security, mitigate the effects of climate change, conserve biodiversity, increase soil and water protection, and increase forest area from 31% to 47%. The Region concentrates 12% of the world's arable land. During the last 50 years (1961 - 2011), the agricultural surface in the region increased significantly, from 561 to 741 million ha, with the largest expansion in South America from 441 to 607 million ha. The expansion of production has generally been accompanied by the intensive use of inputs, degradation of soils and water, reduction of biodiversity and deforestation. 14% of global land degradation occurs in LAC (four LAC countries have more than 40% degraded territory 14 countries have between 20% and 40% degraded territories).

The situation is even worse in Mesoamerica, where 26% of the land is degraded, while in South America 14% of the land is degraded.

22. In addition to Goal 15, forests and related goods and services from sustainably managed forests contribute to the achievement of the following goals: Goal 1 ‘End poverty in all its forms everywhere’, Goal 2 ‘End hunger, achieve food security and improved nutrition and promote sustainable agriculture’, Goal 3 ‘Ensure healthy lives and promote well-being for all at all ages’, Goal 6 ‘Ensure availability and sustainable management of water and sanitation for all’, Goal 7 ‘Ensure access to affordable, reliable, sustainable and modern energy for all’, Goal 11 ‘Make cities and human settlements inclusive, safe, resilient and sustainable’, Goal 13 ‘Take urgent action to combat climate change and its impacts’.

#### Forests offer diversified income for rural populations

23. It is not always possible to quantify the contributions of forests to meeting the SDGs, given the lack of data and the difficulty compiling comparable socio-economic and environmental information at the regional level. Regarding Goal 1, FAO in its report on the State of the World's Forests (SOFO, 2014) estimated that the formal contribution of the forest<sup>1</sup> sector to the regional economy amounted to USD 49 billion (at 2011 prices), from a global contribution of USD 606 billion. Each value corresponds to 0.9% of gross value added in total GDP, at regional and global level.

Region	Gross value added of forest sector (in billion USD at 2011 prices)				Percentage of the gross value added in the total GDP corresponding to the forest sector (%)			
	Forests	SWP	PP	Total	Forests	SWP	PP	Total
Latin America and the Caribbean	14	12	24	49	0.3	0.2	0.4	0.9
World	169	170	266	606	0.3	0.3	0.4	0.9

Note: Forests= forestry and logging; SWP = sawn wood and wood-based panels; PP = pulp and paper  
Source: SOFO, 2014

24. To some extent, this regional value relative to income generation is slightly misleading. This is because they are weighted according to the total size of the economy (i.e., GDP). If the information is presented according to the population that benefits from the income generated by the activities of the formal forest sector, the contribution of the sector to an average person income would be almost doubled.

25. In addition to the revenue generated by the sale of timber, some forest owners may also receive income from payments for ecosystem services (PES). These payments consist of compensation to the owners or managers of resources for the provision of ecosystem services, such as watershed protection, carbon storage or habitat conservation.

26. Income from PES varies according to the year, schedule and duration of the programmes, but in general it shows an upward trend. For example, in the period 2005-2010, global PES revenues slightly exceeded USD 1.9 billion per year, but the figure for 2011 was USD 2.5 billion. In Latin America and the Caribbean, the annual figure for the period from 2005 to 2010 was USD 91 million and in 2011 was USD 164 million. This corresponds to a fraction of the total PES at the global level.

Region	Annual income average from PES (in USD million)	
	2005 - 2010	2011
Latin America and the Caribbean	91	164
World	1,863	2,535

Source: SOFO, 2014

<sup>1</sup>Forestry and logging activities; sawn wood production and wood-based panels; and pulp and paper production

27. In many cases, the use, exchange and trade of wood and non-wood forest products, which constitute significant income for a large part of the rural population in some countries, are not recorded and therefore not reflected in the national accounts. Some estimates of revenues from 'informal' timber production suggest that the total amount is relatively high. In 2011, it was estimated that at the global level, the informal timber production amounted to USD 33 billion, of which about one third came from the production of woodfuel and the other two thirds from charcoal. A very small amount of income derives from the informal production of building materials, but this estimate is uncertain and the actual figures could be higher. For non-timber forest products, the total revenue could be USD 88 billion, which is higher than the revenue from informal timber production. In Latin America and the Caribbean there is an inverse situation. Revenue from informal timber production is in the order of USD 8.97 billion, higher than the USD 3.64 billion from non-wood forest products.

Region	Informal production – revenue (in USD million at 2011 price)							
	Wood				Non-wood forest products			
	Woodfuel	Charcoal	Construct.	Total	Medicinal plants	Animal origin	Plant origin	Total
Latin America and the Caribbean	3,909	5,067	0	8,976	29	646	2,963	3,638
World	12,060	21,055	159	33,274	697	10,596	76,810	88,013

Source: SOFO, 2014 of FAOSTAT and FRA 2010

28. The estimated revenue from environmental services (USD 164 million), informal timber products (USD 8,976 million) and non-wood forest products (USD 3,638 million) correspond to 26% of the gross value added of the forest sector to the regional economy (USD 49,000 million).

29. On the other hand, the forest sector in the Region employs around 1.3 million people, corresponding to 0.5% of the total workforce employed. This figure is slightly higher than the global average of 0.4%, which is equivalent to an estimated 13.2 million people employed.

Region	Employment in the forest sector (in millions)				Percentage of total workforce employed in the sector (%)			
	Forests	SWP	PP	Total	Forests	SWP	PP	Total
Latin America and the Caribbean	0.4	0.6	0.4	1.3	0.1	0.2	0.1	0.5
World	3.5	5.4	4.3	13.2	0.1	0.2	0.1	0.4

Note: Forests= forestry and logging; SWP = sawn wood and wood-based panels; PP = pulp and paper

Source: SOFO, 2014

30. Informal employment in the forest sector covers timber production that is not reflected in official statistics (e.g., unregistered production of woodfuel and charcoal, housing materials, small craft enterprises, other artisanal products), in addition to workers employed in the commercial production of non-timber forest products (NTFP). There is little information available on employment in these activities, which, as is known, play an important role in the least developed countries.

Region	Estimation of the number of persons required to produce woodfuel and charcoal (full time and in millions)					Percentage of total workforce employed in woodfuel and charcoal production (%)
	For urban use		For rural use		Total	
	Woodfuel	Charcoal	Woodfuel	Charcoal		
Latin America and the Caribbean	6.3	2.3	5.7	1.8	16.0	3.6
World	18.3	16.1	74.5	6.4	115.3	1.2

Source: SOFI, 2015

31. However, some data from the Region suggest that the contribution of the forest sector to the generation of informal employment for woodfuel and charcoal production for urban and rural use is higher than the contribution of formal employment generated in forestry activities and forest industry.

The forest industry has shown a strong positive development during the last 25 years

32. Trends in the sector can be better understood by analysing some key product groups. In the Caribbean and Central America, the production of industrial roundwood was fairly constant from 1990 to 2005. After the international financial crisis from 2007, the production turned down and has not yet fully recovered. In South America on the contrary, the production of industrial roundwood grew constantly over the same period, driven by the increased output from forest plantations.

33. The production of the sawnwood demonstrates a similar development. Also here, the Caribbean and Central America have had a fairly level production 1990-2015, including difficulties in fully returning to pre-2007 levels. Sawnwood output in South America demonstrates a solid growth, but weaker than for industrial roundwood. A main reason for this is that a growing share of the harvested wood is used to make other products.

34. Pulp for paper production is the largest product of the South American forest sector. In total 26.6 million tonnes were produced in 2015 and this product has shown continuous growth during the period 1990-2015. In the Caribbean and Central America, the pulp production plays a much smaller role, and the production has decreased during the same period. In the period 1990 - 2015, the Latin American production of paper and paperboard almost doubled. Increased use of recycled paper has kept up the Caribbean and Central American production, although the pulp production from virgin fibre fell from 1990 – 2015.

35. Wood-based panels have developed very strongly since 1990. The production has doubled in the Caribbean and Central America, but it has increased with as much as 341 per cent in South America and with 302 % in Latin America as a whole. A similar development can be noticed in several regions of the world and this is for several reasons a positive development. Whereas sawnwood production inherently means that a large share of the wood is not turned into the main product, the degree of wood utilisation is much higher for most panel production. Also, sawmill residues of different kinds are often used in panel production, e.g. for production of particle board or MDF. Just as in the case of sawnwood, panels are often used in products with a relatively long life-time such as buildings and furniture, meaning that the carbon bound in the wood can be expected to on average remain there for a long period of time.

36. In summary, the forest industry in general is showing a strong development, particularly on products based wood from planted forests, which releases the pressure on natural forests.

Wood-based products	Annual production (in 1000 m <sup>3</sup> )						
	1990	1995	2000	2005	2010	2015	1990-2015, %
Industrial roundwood	121,538	145,559	159,834	186,862	207,347	225,390	+85%
Sawnwood	25,429	31,585	36,498	41,830	34,081	34,710	+36%
Pulp for paper	7,335	9,958	11,899	15,418	20,989	26,644	+263%
Paper, paperboard	10,829	12,488	14,828	18,535	19,907	21,157	+95%
Wood-based panels	4,924	6,534	10,160	16,461	17,905	19,785	+302%

Source: FAOSTAT

Non-wood forest products contribute to the nutrition and health of local populations

37. Regarding Goal 2, it is important to mention that, at the global level, millions of people depend on forests to generate and sustain their livelihoods, either directly through the consumption and sale of forests food, or indirectly through jobs and income related to forest products, forest ecosystem services and forest biodiversity. Forest foods, such as leaves, seeds, tree nuts, honey, fruits, mushrooms, insects and other forest animals, have been important components of the rural diet for millennia.

38. In Latin America and the Caribbean, about 5.6 million tonnes of food from forest are consumed annually, of which 95% is of plant origin (2011 figure). This figure implies an annual per capita consumption of 9.4 kg NTFP, second in value after the per capita consumption of Asia and Oceania,

which is 14.6 kg NTFP per year. The NTFP consumption in the region is just 7.4% of global consumption.

Region	Total consumption of food from forest (in thousand tonnes)			Per capita consumption (in Kilograms)		
	NTFP of animal origin	NTFP of animal origin	Total	NTFP of animal origin	NTFP of animal origin	Total
Latin America and the Caribbean	271	5,360	5,631	0.5	9.0	9.4
World	3,578	72,560	76,138	0.5	10.4	10.9

Source: SOFO, 2014

39. The contribution of forests food to overall food supply is relatively low, accounting for only 0.6% of total global food consumption. In Latin America and the Caribbean this figure is 0.5% of the regional food consumption and corresponds to a contribution of 15.7 Kcal/person/day.

Region	Food supply from edible NTFP (in Kcal/person/day)			Contribution to total food supply (as per FAO food balance) (%)		
	NTFP of animal origin	NTFP of plant origin	Total	NTFP of animal origin	NTFP of plant origin	Total
Latin America and the Caribbean	3.3	12.4	15.7	0.5	0.5	0.6
World	2.8	13.7	16.5	0.6	0.6	0.6

Source: SOFO, 2014

40. The figures presented are likely to underestimate the total consumption of forests food as the information about production (and consumption) of these products is quite incomplete. Nevertheless, it is important to consider that the actual consumption may be several times higher than the figures provided and, on the other hand, consumption is not uniform within the entire population of a country and is generally concentrated in low income population of rural areas.

41. Forest use and forest products' consumption can provide health benefits in a number of ways, contributing to Goal 3 'Ensure healthy lives and promote well-being for all at all ages'. The most obvious are the use of medicinal plants as a source of traditional medicines and in this context the use of herbal home remedies and the use of woodfuel to boil and sterilize water. A high-quality living environment and access to forests for recreational purposes can also have positive effects on health, both physically and mentally.

42. As indicated above, income from medicinal plants in the region can be estimated at USD 29 million at 2011 prices. However, this value would appear to be substantially low given the daily use of medicinal plants without any record, often in small forest production areas.

43. On the other hand, demographic health surveys ask a series of questions, one of which refers to the treatment of children with diarrhoea and one of the possible answers refers to the use of home remedies or phytotherapy. In general terms, the conclusion of these surveys is that in Latin America and the Caribbean, the percentage of households that used home remedies or herbal medicines was 28%. This is a significant value and it shows the importance that forests would also have in the provision of medicine to the population.

#### The provision of water, a continuous ecosystem service of forests

44. Latin American and the Caribbean has abundant water resources. It covers 15% of the global territory, houses 10% of the world population and receives 29% of the precipitations of the planet. In the last three decades water extraction has doubled, at a rate well above the world average. In this region, the agricultural sector and, especially, irrigated agriculture, uses about 70% of the available water.

45. Forests stem the dispersion of water and favour the infiltration of rainwater, which replenishes soil and underground water tables. This function is essential for the supply of clean drinking water, for

agricultural and other uses. Severe deforestation causes soil erosion and alters the quality of water. Forests, mainly native forests, regulate the water regime, and the more natural the ecosystem is, the better it functions. In this sense, forests contribute to Goal 6 ‘Ensure availability and sustainable management of water and sanitation for all’.

46. About one-third of the global forest area has been devoted to soil and water conservation. In 1990, Latin America and the Caribbean had 74.48 million ha of forests which main function was soil conservation. This number did not increase significantly in 15 years, until 2005, when the area of forests for soil and water conservation was estimated at only 74.80 million ha. By 2015, this figure was 81.96 million ha, equivalent to 8.76% of the Region's forest cover, still below the global value.

#### Wood energy, renewable energy for populations with limited resources

47. An important contribution of forests to food security is the provision of woodfuel for cooking and to sterilize water. It is estimated that 2.4 billion people, or about 40 percent of the population in the least developed countries, use woodfuel for cooking. Forests contribute directly to Goal 7 ‘Ensure access to affordable, reliable, sustainable and modern energy for all’, when wood energy comes from sustainably managed forests. Wood energy is often the only energy source available in rural areas in the least developed countries and particularly important for the poor.

48. At the global level, woodfuel from forests provides 496 million tonnes of oil equivalent (toe) of energy and the forest products processing sector another 277 million toe, representing a total of 773 million toe. This represents about 6% of the total primary energy supply. In Latin America and the Caribbean, wood energy accounts for 109 million toe, and its contribution to the regional energy grid is in the order of 13%, above the overall percentage of 6%. Also, 16% of households use wood as the main fuel for cooking in the region, what benefits about 95 million people.

Region	Percentage of households using firewood for cooking (%)			Estimation of the population using firewood for cooking (thousand people)		
	Firewood	Charcoal	Woodfuel	Firewood	Charcoal	Woodfuel
Latin America and the Caribbean	15	1	16	89.569	5.383	94.952
World	32	2	34	2.234.890	169.108	2.403.998

Source: SOFO, 2014

#### Wood is an important option for resilient civil construction

49. Forest products also contribute to meeting basic housing needs as they are used as building materials. This is particularly important in rural areas, especially if these materials are more affordable than others or if they are collected by the families for their own use. In this regard, forests contribute to achieving Goal 11 ‘Make cities and human settlements inclusive, safe, resilient and sustainable’.

50. In civil construction, forest products are mostly used on walls (15% of houses), followed by roofs (7%) and floors (4%). At the global level, forest products are used in some way in the construction of houses for 18% of households and help provide housing to about 1.3 billion people. At the regional level, it has been estimated that 73.4 million people live in houses that use forest products as the main building material, accounting for 12% of the total number of households.

#### Forests are important elements for climate change adaptation and mitigation

51. Regarding Goal 13 ‘Take urgent action to combat climate change and its impacts’, it is necessary to mention that forests are related to climate change and its impacts in several ways: (i) sustainable forest management and agroforestry systems are important elements of the agricultural production which in specific situations can promote the adaptation of livelihoods to climate change, reducing the vulnerability of farmers, while promoting mitigation; (ii) when managed in a sustainable manner, forests

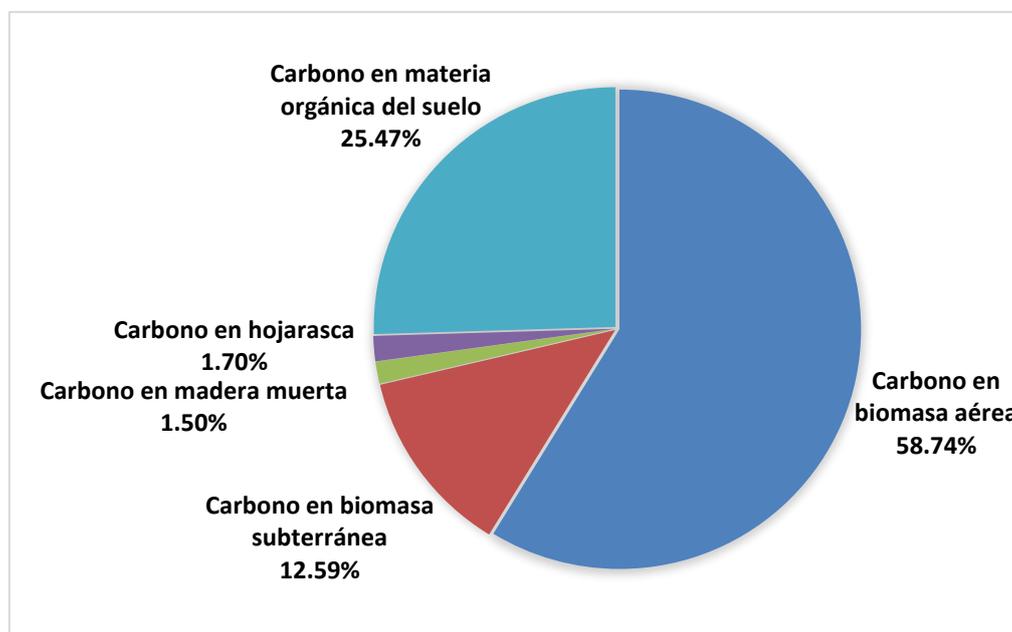
produce renewable energy as a more harmless alternative to fossil fuels; (iii) at present, forests account for almost one-sixth of the world's carbon emissions from deforestation and forest degradation caused by human action; (iv) some forests and forest species react to climate change, affecting their productivity and quality of forest products and services; and (v) forests have the potential to absorb about one-tenth of the world's carbon emissions projected for the first half of this century in their biomass, soils, and products.

52. On this last point, the LAC region has an estimated total carbon stock in living forest biomass of 107.3 billion tonnes (year 2015), what represents 36% of the world's carbon stocks in forest biomass. This corresponds to 114.6 tonnes of CO<sub>2</sub>eq per hectare of forest. Total carbon stocks in living forest biomass have declined since 1990, from 116.1 billion tonnes to 107.3 billion tonnes, due to the loss of forest area. However, stocks per hectare in the region have increased slightly from 112.4 t/ha to 114.6 t/ha.

Sub-region	Carbon stock in living biomass (million tonnes)			Change in carbon stock (million tonnes/year)		Carbon stock in living biomass (t/ha)	
	1990	2005	2015	1990-2005	2005-2015	1990	2015
Southern Cone	6,936	6,587	6,230	-23.3	-35.7	96.3	100.5
Amazonia	104,171	98,525	96,551	-376.4	-197.4	121.3	123.8
Mesoamerica	4,545	4,085	3,907	-30.7	-17.8	47.0	45.3
Caribbean	462	649	636	12.4	-1.3	92.1	88.4
<b>Latin America and the Caribbean</b>	<b>116,114</b>	<b>109,846</b>	<b>107,324</b>	<b>-417.9</b>	<b>-252.2</b>	<b>112.4</b>	<b>114.6</b>

Source: FRA, 2015

53. The most significant storage site for carbon is the above-ground biomass, which accounts for almost 59% of total forest carbon, followed by carbon in soil organic matter (25%) and carbon in underground biomass (13%). Litter and dead wood are less important carbon storage sites (less than 2% each).



Source: FRA, 2015

54. Although reforestation and the establishment of agroforestry systems have potential for mitigation in Latin America and the Caribbean, the main short-term mitigation potential is reducing deforestation.

#### **IV. Aspects to be considered**

55. The Regional Forestry Commission may wish to:

- Identify key challenges to reduce deforestation and improve reforestation and sustainable forest management in the region, and promote joint actions to address the identified challenges.
- Identify issues to foster cooperation among countries to enhance the relevance of the forest sector and collaborate in sharing experiences and good practices in establishing national goals for sustainable forest sector development.
- Discuss main actions to be undertaken at the regional level, to highlight the importance of forests in the implementation of the 2030 Agenda, and to use resources for the implementation of actions leading to the fulfilment of the sustainable development goals involving forest resources.