

January 2012

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|  | منظمة الأغذية والزراعة للأمم المتحدة | 联合国 粮食及 农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura |
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| LATIN AMERICAN AND CARIBBEAN FORESTRY COMMISSION |
| TWENTY-SEVENTH SESSION |
| Asuncion, Paraguay, 5 – 9 March, 2012 |
| STATE OF FORESTRY IN THE LATIN AMERICAN AND CARIBBEAN REGION: PERIOD 2010-2011 |
| Secretariat Note |

INTRODUCTION

1. The FAO's Regional Office for Latin America and the Caribbean organizes every two years the Latin American and Caribbean Forestry Commission (LACFC) session, where FAO member countries of the Region are invited to analyze the situation and development of the forest sector since the last session of the Commission. The Session is also a forum to exchange political and technical experiences, to make recommendations to countries and FAO on top priority issues for the Region, with a view to include them in the Organization's work programmes.
2. Over the last years, the Regional Forestry Commissions have become increasingly relevant for the FAO Forestry Department and now they have direct participation in the activities and meetings of the Committee on Forestry (COFO), which is the main statutory body of FAO for the forestry sector, where high authorities of the forest sector of the countries participate.
3. The Secretariat Note is intended to be a reference framework for the forestry sector in the Region that reports on the most important forestry events occurred during the period 2010-2011.
4. The Secretariat Note has been prepared using the statistical data on forest resources of the Region gathered by FAO as well as information from other validated sources. An essential component of the Note is the contribution made by the countries, in response to a request of the FAO's Regional Office asking the forestry authorities to send brief reports on new initiatives, achievements as well as positive and negative changes in the forestry sector of their countries during the period 2010-2011.

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FOREST RESOURCES IN LATIN AMERICA AND THE CARIBBEAN

5. The information on forest resources has been prepared using the FAO study *Global Forest Resources Assessment 2010* (FRA 2010) which provides an exhaustive analysis of the situation of the forests in the Region, including estimates of changes in the forest area for each country during the periods 1990-2000, 2000-2005 and 2005-2010. The study includes information on the extent of forest resources and six other thematic elements of sustainable forest management.

6. Table 1 shows the extent of natural and planted forests in the Region, which represents about 24 per cent of the total forest area worldwide. Planted forests cover an area of 18 million hectares, representing 1.9 per cent of all forests in the Region. The five countries with the largest extent of planted forests are: Brazil, 7 418 000 ha, Mexico 3 203 000 ha, Chile 2 384 000 ha, Peru 993 000 ha and Uruguay 978 000 ha.

Table 1. Extent of natural and planted forests in the Region, year 2010

| Sub-Regions of the Latin American and Caribbean Forestry Commission | Total area of forests (1 000 ha) | Area of planted forests ¹ (1 000 ha) |
|--|---|--|
| Amazon | 799 394 | 9 017 |
| Mesoamerican | 84 301 | 3 787 |
| Southern Cone | 64 957 | 4 804 |
| Caribbean | 6 933 | 546 |
| Total Region | 955 585 | 18 154 |
| Total World | 4 033 060 | |

Source: FAO, 2010. Global Forest Resources Assessment 2010. Main Report, FAO Forestry Paper 163.

¹ Venezuela and some Caribbean countries did not report on the planted forest areas.

7. Table 2 shows the extent of natural and planted forests as a percentage of the total land area in each Sub-Region. At the regional level, forests cover 48 per cent of the total land area, excluding the zones covered by inland waters. At the global level forests cover 31 per cent of the land area. In relation to the Amazon, Mesoamerican, Southern Cone and the Caribbean Sub-Regions, the forests cover 60, 34, 16 and 30 per cent of the land area, respectively. The countries with the largest forest area in relation to the land area are: Suriname 95 per cent, Guyana 77 per cent, Saint Lucia 77 per cent, Brazil 62 per cent, Belize 61 per cent, Dominica 60 per cent and Colombia 55 per cent.

Table 2. Extent of forest as a percentage of the land area in the Region, year 2010

| Sub-Regions of the Latin American and Caribbean Forestry Commission | Land area¹ (1 000 ha) | Forest area (1 000 ha) | Forest area as percentage of the land area (%) |
|--|---|-----------------------------------|---|
| Amazon | 1 339 294 | 799 394 | 60 |
| Mesoamerican | 245 469 | 84 301 | 34 |
| Southern Cone | 405 781 | 64 957 | 16 |
| Caribbean | 22 898 | 6 933 | 30 |
| Total Region | 2 013 442 | 955 585 | 48 |
| Total World | 13 010 509 | 4 033 060 | 31 |

Source: FAO, 2010. Global Forest Resources Assessment 2010. Main Report, FAO Forestry Paper 163.

¹ Total land area excluding zones covered by inland waters.

8. Table 3 shows the annual change in forest area in the Region, during the period 2005-2010 which had a loss of 3.9 million hectares a year. Even though forest loss continues at an alarming rate, changes in the forest area during the period 2005-2010 shows a reduction compared to other periods: 1990-2000, 4.9 million hectares a year and 2000-2005, 4.8 million hectares a year. Main causes of deforestation continue to be related to development policies, forest land conversion to agricultural activities, overexploitation for industrial purposes, fuel-wood extraction and forest fires.

9. The eight countries of the Region with the most significant annual change in terms of the forest area during the period 2005-2010 are: Brazil -2 194 000ha/year, Bolivia -308 000ha/year, Venezuela -288 000ha/year, Argentina -240 000ha/year, Ecuador -198 000ha/year, Paraguay -179 000ha/year, Mexico -155 000ha/year and Peru -150 000ha/year. For the same period, the Caribbean shows a positive forest area change of 41 000ha/year.

Table 3. Annual change in forest area 2005-2010

| Sub-Regions of the Latin American and Caribbean Forestry Commission | Area of natural and planted forests, year 2005 (1 000ha) | Area of natural and planted forests, year 2010 (1 000ha) | Annual change in forest area (1 000ha/year) |
|--|---|---|--|
| Amazon | 815 621 | 799 394 | -3 245 |
| Mesoamerican | 86 323 | 84 301 | -404 |
| Southern Cone | 66 637 | 64 957 | -336 |
| Caribbean | 6 728 | 6 933 | +41 |
| Region | 975 309 | 955 585 | -3 945 |
| World | 4 060 964 | 4 033 060 | -5 581 |

Source: FAO, 2010. Global Forest Resources Assessment 2010. Main Report, FAO Forestry Paper 163.

ECONOMIC ASPECTS OF THE FORESTRY SECTOR

Production and trade of wood products

10. Table 4 includes information of forest production in the Region obtained from the FAO *Yearbook of Forest Products 2009*. The total roundwood production that includes roundwood for industrial purposes and fuel-wood including wood for charcoal was approximately 481 million cubic meters in the Latin American and Caribbean Region that represents 15 per cent of world production of roundwood. The roundwood production in the Amazon, Mesoamerican, Southern Cone and the Caribbean Sub-Regions corresponds to 63, 19, 17, and 1 per cent respectively. Main roundwood producing countries are: Brazil 55 per cent, Chile 11 per cent, Mexico 9 per cent, Guatemala 4 per cent, Argentina 3 per cent and Paraguay 2 per cent. A significant percentage equivalent to 59 per cent of the total roundwood production is used as fuel and for the production of charcoal; the remaining 41 per cent is for industrial use.

11. Despite large extensions and favourable forest growth conditions in the Region, only 14 per cent of the roundwood production for the forest industries in the world takes place in the Region.

12. Sawn wood production in the region is equivalent to 11 per cent of the world production. As regards Sub-Regions, the Amazon contributes with 70 per cent while Mesoamerica, Southern Cone and the Caribbean contribute with 10, 20 and 1 per cent respectively.

Table 4. Production of roundwood, fuel-wood, sawn wood, wood-based panels and recovered paper, year 2009

| Sub-Regions of the Latin American and Caribbean Forestry Commission | Roundwood production ¹ (1 000m ³) | Fuel-wood production ² (1 000m ³) | Sawn wood production (1 000 m ³) | Wood-based panels production ³ (1 000m ³) | Pulp and recovered paper production ⁴ (1 000t) |
|---|---|---|---|---|--|
| Amazon | 301 462 | 169 608 | 28 084 | 10 426 | 14 144 |
| Mesoamerican | 89 619 | 79 975 | 4 093 | 546 | 330 |
| Southern Cone | 83 945 | 28 426 | 7 605 | 4 121 | 7 092 |
| Caribbean | 6 244 | 4 885 | 331 | 151 | - |
| Total Region | 481 270 | 282 894 | 40 113 | 15 244 | 21 566 |
| Total World | 3 275 144 | 1 850 734 | 362 437 | 259 944 | 159 913 |

Source: FAO, 2011. Yearbook of forest products 2009.

¹Corresponds to the sum of fuel-wood, including wood for charcoal, sawlogs and veneer logs, pulpwood, and other industrial roundwood.

²Corresponds to the sum of roundwood, branches, snags and other parts of the tree intended to be used as fuel and charcoal production.

³Corresponds to the sum of veneer sheets, plywood and particle and fibre board.

⁴Corresponds to the sum of mechanical wood pulp, semi-chemical wood pulp, chemical wood pulp, dissolving wood pulp, and scraps of paper and paperboard that have been collected for re-use.

13. The production of wood-based panels including veneer sheets, plywood and fibre and particle boards in the Region correspond only to 6 per cent of the world production.

14. The production of pulp and recovered paper in the Region represents 13 per cent of the world production. The production of these products takes place in Brazil 64 per cent, Chile 24 per cent and Uruguay 5 per cent.

15. In relation to forest trade shown in Table 5, imports of forest products in the Region reached USD 11 000 million approximately in the year 2009, which is equivalent to 6 per cent of total forest products imports worldwide. The Sub-Region with the highest imports of forest products is Mesoamerica 51 per cent, followed by Amazon 30 per cent, Southern Cone 13 per cent and the Caribbean 6 per cent.

16. Exports of forest products in the Region reached USD 12 000 million approximately in the year 2009, which is equivalent to 7 per cent of the total exports of forest products worldwide. Main forest products exporting countries are: Brazil 47 per cent, Chile 30 per cent, Uruguay 7 per cent, Argentina 4 per cent, Mexico 3 per cent and Colombia 2 per cent.

Table 5. Imports and exports of forest products, year 2009

| Sub-Regions of the Latin American and Caribbean Forestry Commission | Imports of forest products (USD 1 000) | Exports of forest products (USD 1 000) |
|--|---|---|
| Amazon | 3 386 833 | 6 432 703 |
| Mesoamerican | 5 664 526 | 604 688 |
| Southern Cone | 1 403 354 | 5 119 521 |
| Caribbean | 673 248 | 30 938 |
| Total Region | 11 127 961 | 12 187 850 |
| Total World | 192 220 364 | 188 805 236 |

Source: FAO, 2011. Yearbook of forest products 2009.

Non-wood forest products

17. All the countries recognise the importance of non-wood forest products (NWFPs), particularly, for the local communities. In general, these products are traded informally so, it is difficult to estimate production and trade quantitatively or monetarily.

18. Peru stated that the total exports of forest products reached almost USD 400 million in the year 2010 of which 38 per cent corresponds to non-wood forest products such as colorants of animal origin, seeds, fruits, gums, resins and palm hearts, among others.

19. Peru has also reported that during the period 2010 to August 2011, forestry concessions have been granted for non-wood purposes, such as: 28 for ecotourism, 22 for conservation, two for wild fauna management, 938 for chestnut harvesting and 24 for rubber extraction.

20. Ecuador recognises the importance of NWFPs and, in particular, their contribution to food security for rural populations.

21. Suriname indicates that almost all NWFPs trade takes place in informal markets and hence, it is very difficult to have statistics of this activity, except wildlife.

22. Argentina also recognises the importance of NWFPs but indicates the need of improving the information concerning these products so that they can be better considered in forest development programmes.

23. Chile also indicates that the national NWFPs statistics are inadequate, except the NWFPs export statistics that amount to nearly USD 53 million a year. Although this value represents only one per cent of annual forest products exports, over the last years, NWFPs exports have experienced a sustainable and significant increase. Chile also indicates that these products provides jobs for 200 000 rural inhabitants.

Participation of the forestry sector in the Gross Domestic Product of the countries

24. It is estimated that the regional average participation of the forestry sector in the Gross Domestic Product (GDP) of the countries is around two to three per cent. However, it is a belief that these percentages do not represent the reality and several countries are developing detailed studies to provide a better estimate.

25. Ecuador reports that timber production in the country contributes with 2.3 per cent to GDP. Honduras indicates that the activity contributes with 6 to 10 per cent and Guatemala informs that the contribution of the forestry sector to GDP is 2.6 per cent and Chile estimates the contribution of the forestry sector to GDP is three per cent.

FOREST POLICIES AND NATIONAL FOREST PROGRAMMES

26. There are different management and public administration approaches in the region as evidenced by differences in policies, laws and the national forest programmes (nfp). However, it is a common feature in the Region to look for the increase of the benefits and the use of forest resources by local communities through the referred policies, laws and programmes.

27. Various countries make reference to the formulation and implementation of their nfp's and point out the importance of the Facility. The Facility was created in the year 2002 to support the countries in the formulation and implementation of their nfp's, and to effectively approach local needs and national priorities, reflecting internationally agreed principles. To achieve this objective, the Facility, having its base in FAO, Rome, supports the development and deployment of a wide range of activities related to the nfp's in the 17 member countries of the Facility in the Region. Five countries are located in Mesoamerica, three in the Caribbean, seven in the Amazon Sub-Region and two in the Southern Cone. Three regional institutions are also members of the Facility and hence, beneficiaries of the same: the Central American Commission on Environment and Development (CCAD), the Central American Agro-forestry Coordinating Association of Indigenous Peoples and Farmers (ACICAFOC) and the Caribbean Natural Resources Institute (CANARI).

28. Table 6 shows some examples of the 75 activities carried out in the Region and supported by the Facility.

29. In relation to climate change, in the year 2009 the FAO Forestry Department and the Facility put forward a joint initiative to assist countries to include climate change issues into their national forest programmes. The project consists of three stages: 1. National processes in selected countries to identify challenges and opportunities and political issues related to climate change; 2. Development of guidelines for the integration of climate change considerations into national forest policies; and 3. Dissemination and use of said guidelines. As a result of this project, in the year 2011 the Facility

published the document: *Climate change for forest policy-makers: An approach for integrating climate change in forest programmes in support of sustainable forest management*. Published in English, French and Spanish.

Table 6. Examples of nfp activities in the Region supported by the Facility

| Countries | Supporting activities |
|---------------------------|---|
| Belize | Formulation of a forest policy. |
| Bolivia | Community forestry building. |
| Colombia | Preparation of better curricula for forest technicians. Improvement of competitiveness of forest companies. |
| Cuba | Support for the implementation of the national forest programme with a special focus towards socialization and training for the dissemination of forest laws and regulations. |
| Dominican Republic | Facilitate the dialogue process for the formulation of a new forest law. |
| Ecuador | Support of forest policy objectives. Consolidation of forest information centres. Design of public policies for the development of the national forest industry. |
| El Salvador | Strengthen the marketing chain of forest products and services. Carry out a training programme for union associations and cooperatives. Support the capacity of women community associations. |
| Guatemala | Facilitate the implementation of the National Forest Programme. Support to community management of mangrove forests. Strengthen the administrative and management capabilities of the communes. |
| Guiana | Facilitate the process of the national forest programme, facilitating the dialogue and the training of small loggers associations. |
| Honduras | Support strategic actions and activities of the national forest programme. Promote the application of the new forest, protected areas and wildlife legislation. |
| Jamaica | Facilitate the national forest programme process with a focus on creating and supporting local forest management committees. |
| Paraguay | Optimize the implementation of the national forest programme. Preparation of a strategic forestry plan for cooperatives. |
| Peru | Design mechanisms to improve the funding of the forestry sector. |

Source: National forest programme Facility, FAO, Rome.

30. In 2011 the government of Trinidad and Tobago approved the new forest and protected areas policy after a dialogue process with the involved actors. Dominica informs about the ongoing process of ratifying a new forest policy for the country with a special focus on community forest management. In the formulation of the policy they have had the support of the European Union.

31. Argentina informs that the national policy on forest resources management depends on two different ministries. Native forests are under the umbrella of the Ministry of the Environment and

Sustainable Development and plantations are under the Ministry of Agriculture, Livestock, Fishing and Food.

32. Suriname indicates that the National Forest Programme prepared in the country constitutes a strategic action plan that is in the process of being approved by the authorities.

33. The National Forest Programme of Honduras comprises the 2010-2030 period and is a guideline for the planning, development and management of the national forest policy. It is also stated that the forest policy, updated in the year 2011 and the Forest, Protected Areas and Wildlife Law have permitted incursions in new forest product markets such as: carbon emissions reduction certificates, environmental services, bio-fuels, forest management and co-management agreements and use of national forests, among others. The country continues to promote the Social Forest System made up by 226 community organizations living in forest areas and which have an allocated area of State Forests of approximately 400 000 ha.

34. Peru points out that in a process parallel to the development of the new Forest and Wildlife Law, a new National Forest and Wildlife Policy was drawn up. Its objectives include the consolidation of forest governance and effective management of public forests and wildlife administration, and the consolidation of community forest management and stimulation of social inclusion and equity around the forests.

FORESTRY LEGISLATION

35. During the period 2010-2011 there was a strengthening of legislation and regulations concerning the forests, sustainable forest management, protected areas and wildlife in addition to other important issues to promote the development of the public and private forestry sectors.

36. Ecuador informs that the new Constitution of the country includes, under the rights guaranteed to local communities, the participation in the use, management and conservation of renewable natural resources located in the country. The country also reports that a new forestry law is being drawn up.

37. In 2011 Peru passed the Forest and Wildlife Law which introduces important changes to forest management. The formulation process was very participatory and decentralized and, for the first time, indigenous people were called on for consultation before the process, and their recommendations received a preferential treatment in the law. One of the main objectives of the law is to build up fair and equitable relationships between the State, the private sector and indigenous and rural communities. The law incorporates several incentives for the benefit of local communities such as: guaranteed respect for the ownership of communal lands, full participation in coordination and implementation activities, recognition of traditional knowledge, exclusive use of goods and services from natural resources located in communal land, capacity building and participation in the forest and wildlife control system. This new law established the National Forest and Wildlife Service (SERFOR), a specialized technical public body under the Ministry of Agriculture.

FORESTS AND CLIMATE CHANGE (REDD+)

38. For several years, at the request of member countries, FAO has attached special importance to the problems of mitigation and adaptation to climate change, being therefore, and top priority in the work program of the Forestry Department. In countries of the region, the issue is also of high priority and has therefore been included in the agenda of the last two Sessions of the Commission.

Climate change is, without question, a major challenge for the forestry sector in the Region, mainly due to deforestation and forest fires that are causing significant emissions of greenhouse gases.

39. Countries recognize the need to adopt strategies and actions to reduce emissions from the forest sector and have taken steps in that direction.

40. During the period, at the request of some countries of the Region, a significant support to national actions for implementing the instrument Reducing Emissions from Deforestation and Forest Degradation (REDD), closely linked to the United Nations Framework Convention on Climate Change (UNFCCC), has been realized through International Organizations and Cooperation Agencies of the countries and the United Nations.

41. The evolution of the Collaborative Programme of the United Nations for Reducing Emissions from Deforestation and Forest Degradation (UN-REDD), with contributions from Denmark, Spain, Japan and Norway, has experienced a considerable increase in requests for support from countries. Currently, the program has 35 partner countries, including the 13 pilot countries that receive direct support for the quick start phase, of their national programs to prepare the implementation of REDD+ and be better prepared to face the complexities that the mechanism may have.

42. In the Region four countries participate in the quick start phase: Bolivia USD 4.4 million, Ecuador USD 4 million, Panama USD 5.3 million and Paraguay USD 4.7 million. The programmes currently executed in these countries include two main activities: provision of capacity for effective implementation and coordination of the program and strengthening the technical capacity to monitor, measure, report and verify the reduction of greenhouse gases emissions. In addition Argentina, Colombia, Costa Rica, Guatemala, Guyana, Honduras, Peru, and Mexico are associated to the UN-REDD.

43. In 2010 Chile sent a request to participate as an observer in the initiative UN-REDD to be acquainted with possible sources of external funding for the country in terms of sustainable forest management and to know the experiences of other countries in relation to REDD +.

44. The Regional Program REDD was established in Central America with headquarters in El Salvador, under the direction of the Central American Commission on Environment and Development (CCAD) and the German Society for International Cooperation (GIZ). The program that lasts six years, has a contribution of 12 million Euros from the Government of the Federal Republic of Germany. The eight countries of Central America and the Dominican Republic, associated to CCAD, take part in the program. The program supports processes between countries to develop joint positions and approaches to REDD. Nationally, the Program supports the cross sector dialogue and the development of compensatory mechanisms to reduce CO₂ emissions from deforestation and forest degradation, which have been adapted to the specific situation of each country as well as to the specific needs of local communities of small farmers.

45. At the end of 2010, Mexico signed a cooperation agreement with Norway for approximately USD 15 million to consolidate its preparation process for REDD+. The funding comes from the International Initiative on Forests and Climate of the Government of Norway. The initiative also provides funding for the UN-REDD Programme. Guyana also has a bilateral agreement with Norway for financial support to REDD+ in the country.

46. The REDD Group in Peru is the main national participation forum for REDD in the country, and brings together actors from the civil society and the State related to the topic. The

country has ratified the voluntary target of reducing the net deforestation rate of natural primary forests, to zero percent through 2021. A recent study in that country found a list of 25 projects under the REDD+ scheme, with some accreditation from the authorities. Most of these projects are in the design stage. REDD + projects are also mentioned in natural protected areas.

47. Uruguay developed a national strategy for climate change where the forest sector plays a key role.

48. Dominica has initiated activities designed to enable full participation of the country in the global REDD + mechanism.

49. Honduras states that in 2010 the National Institute of Forest Conservation and Development, Protected Areas and Wildlife (ICF) created the Department of Forests and Climate Change in order to develop national, institutional and follow-up capacities to the actions and activities identified in the National Forest Program (PRONAFOR). The Department works in coordination with the Ministry of Natural Resources and Environment (SERNA) and also supports the development of the national strategy of forest adaptation to climate change.

50. Suriname is participating in a capacity building program for REDD+ within the Forest Carbon Partnership Facility (FCPF) of the World Bank. Other countries in the region participating in the activities of this fund are: Argentina, Bolivia, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, and Peru.

PROTECTED AREAS AND ENVIRONMENTAL SERVICES

51. In recent years, protected areas in Latin America and the Caribbean have increased in number and areas covered. While there is increasing awareness of the environmental services they provide to society, there is often a lack of long-term financial support to these areas, making it difficult to manage them and threatening the ecosystems to be protected. One cause of this situation is the inadequate valuation and payment for the environmental services provided by these areas.

52. Another aspect of concern to several countries in the Region is the pressure that these areas have for the extraction of wood resources and the change in land use for agricultural purposes.

53. One aspect that is also seen with great concern in the Region and, in general, in the global sphere, is the impact of climate change on protected areas, which is a new threat to these areas due to the loss of species and habitats that the phenomenon may cause.

54. In response to this concern, an International Symposium on Climate Change and Protected Areas in Latin America was organized in November 2010, in Lima, Peru, with a general objective to analyze and evaluate the role of protected areas in Latin America as a strategy for mitigation and adaptation to climate change impacts. The main organizers of the symposium were the National Service of Protected Natural Areas of Peru (SERNANP) and the Latin American Technical Cooperation Network of National Parks, other Protected Areas and Wildlife (REDPARQUES), whose Secretariat is exercised by FAO's Regional Office. One of the main achievements of the event was the draw up of a Regional Agenda for Protected Areas and Climate Change.

55. Following the symposium, the REDPARQUES, the National Commission of Natural Protected Areas of Mexico (CONANP) and the FAO / Spanish Autonomous Authority for National Parks (OAPN) Programme, held the Seminar / Workshop on Mitigation and Adaptation

of Protected Areas to Climate Change in Mexico from 17 to 21 October 2011. The Seminar/Workshop was attended by focal points of REDPARQUES from 16 countries, and other specialists of the Region.

56. One of the main recommendations of the Seminar / Workshop for REDPARQUES was to prepare an action plan to promote the exchange of specialists, to develop a training program for managers of protected areas and produce information on climate change to support decision making at different levels. Another important recommendation was to use the REDPARQUES as a platform to strengthen cooperation and create strategies at international forums. LACFC was also requested to include a report on the activities of the REDPARQUES during the period between sessions.

57. On the other hand, the issue on recognition / payment for environmental services of forests and protected areas remains a priority in the countries of the Region. There is ongoing research and development of mechanisms to estimate the value of environmental services and payment procedures for such services. Compensation for environmental services provided in protected areas could generate significant resources to finance the administration of the same, facilitating the achievement of social and economic development goals, mainly in rural environments.

58. Another major challenge for the management of national systems of protected areas is the administrative decentralization, which involves placing management beyond the administration by centralized government institutions. The decentralization has also considered and implemented, in some cases, management of protected areas by the private sector. For example, the National System of the Protected Natural Areas by the State of Peru (SINAMPE) presents 12 categories of protected natural areas, within which one category considers private conservation areas. Of the 32 areas under this system half of them were established during the years 2010 and 2011.

59. The management of protected areas inhabited by indigenous populations is also a major challenge. It is estimated that about 80 percent of protected areas in the region include indigenous peoples, which often creates conflict between these peoples and the management of the areas. Although there have been problems, significant progress can also be seen in relation to the management models of protected areas, and efforts of the countries to establish standards and mechanisms to optimize the relationship between governments and indigenous communities.

FOREST DISTURBANCES

60. The forests of the region are subject to many disturbances that can cause serious damage to the survival, growth, and vigour of the forests, which reduces the yield and quality of wood and non-wood products. These disturbances can be fires, invasive undesirable species, severe droughts, hurricanes, storms, frost, floods, insect pests and diseases, among others. To reduce the risks and effects of these disturbances, it will be necessary to introduce specific management measures and incorporate them into the comprehensive sustainable forest management plan in areas that may be affected by these disturbances.

Forest pests and diseases

61. FAO has attached great importance to this issue. During the period 2005-2008 there was a comprehensive global review of forest pests in natural forests and plantations. This review included eight countries in Latin America and the Caribbean, and has provided valuable information. The review was published under the name: *Global Review of Forest Pests and Diseases, FAO Forestry Paper 156*. (FAO, 2009).

62. To prepare the review, sources of information, such as, data, exchange of opinions with experts in the countries, Internet, and review of literature on the subject was used. Information provided in National Reports for the *Global Forest Resources Assessment*, FRA 2005 was also used. However, in many cases this information and that provided in National Reports for the FRA 2010, shows gaps, which suggests that the availability and quality of information on pests and diseases of the forests is still inadequate. This has prevented an adequate further action in the Region and the development of consolidated statistics showing the importance or the economic and social impact of forest pests and diseases.

63. The eight countries included in the study for Latin America and the Caribbean were: Argentina, Belize, Brazil, Chile, Colombia, Honduras, Mexico and Uruguay. This set of countries constitutes a sample of the Region.

64. The total number of pests reported for the eight countries was 113. Of these, the insect pests corresponds to 77 per cent, pathogens 11 per cent and other pests 11 per cent, including mammals (goats, rabbits, beavers, among others), a nematode, and a mite.

65. More pest species in planted forests than in naturally regenerated forests were recorded. In terms of broad-leaved forests, coniferous and native and introduced species, the number of pests recorded was similar.

66. One of the most widespread pests in the region is aphids, which is a major pest in conifers. Fifteen species of aphids were reported, five of them in more than one country.

67. A very common pest in Honduras, Mexico and Belize is the mountain pine beetle, *Dendroctonus frontalis* which causes extensive damage to forests in these countries. There are studies that suggest a relationship between climate change and climate anomalies and the occurrence and spread of pests caused by the aforementioned beetle. Climate change could then lead to new scenarios for the development of pests and diseases of forests in the Region.

68. The mahogany pest, produced by the borer of the Meliaceae, *Hypsipyla grandella*, is indigenous to the Region where it is the most widespread pest.

69. Another pest that causes great concern in Argentina, Brazil, Chile and Uruguay is the pine borer wasp, *Sirex noctilio*. For several years, Southern Cone countries have promoted a program of cooperation in the area of forest health that includes fighting *Sirex noctilio*.

70. Honduras reports that pine forests in the country have been heavily exposed to pests during the period 2010-2011, which are difficult to control due to the lack of State resources.

Fires

71. One issue that continues to receive increasing attention in the Region and has also been discussed at recent sessions of the Commission is that of forest fires, because of its implications for humans and the environment. There is a growing awareness of the risks from droughts, high temperatures, winds, conflicts in relation to land management, and the extreme behaviour of society, for the occurrence of forest fires.

72. In recent years there has been an increase in the so-called mega-fires in several countries of the world and the Region, which has increased concern about these events because of the release

of large amounts of greenhouse gases and relevant economic losses. For this reason, the countries of the Region are making significant efforts in preventing and fighting forest fires.

73. Table 7 presents information on forest fires that were reported by the countries of the Region for the study *Global Forest Resources Assessment* (FRA 2010). Not all countries reported on this issue that reveals a lack of appropriate statistical systems in some of the countries. The countries reporting the largest areas of forest affected by fires in 2005 were: Argentina, 305 000 ha, Nicaragua 63 000 ha, Mexico 38 000 ha, Honduras 33 000 ha and Chile 16 000 ha.

Table 7. Area of forests affected by fire, year 2005

| Sub-Regions of the Latin America and Caribbean Forestry Commission | Natural and planted forest area affected by fire, year 2005 (1 000ha) |
|---|--|
| Amazon | 12 |
| Mesoamerican | 144 |
| Southern Cone | 321 |
| Caribbean | 15 |
| Total Region | 492 |

Source: FAO, 2010. Global Forest Resources Assessment 2010. Main Report, FAO Forestry Paper 163.

74. To improve the information on forest fires, beyond compiling the information of the affected area, some countries are making efforts to improve their systems for recording and monitoring such events. For example, within the Programme for the Improvement of Forestry Statistics, Argentina is working so that the basic forest fires statistical system also includes the compilation of new variables, such human fatalities, more detailed information about the reasons for the fire, the fire fighting means used, meteorological information and other variables for the economic valuation of the fires. The new system aims to incorporate variables that allow a more effective diagnosis and prevention.

URBAN AND PERI-URBAN FORESTRY

75. Due to the increasing urbanization in the Region, the quality of the environment in the cities deserves increasing attention, in parallel to the recognition of the negative implications this development may have on human populations and the environment in general.

76. As a result of this situation, the role of trees in urban and peri-urban areas is receiving increasing attention by the countries. It has been widely recognized that, in addition to embellishment, an appropriate afforestation of urban and peri-urban areas can fulfil the following functions: absorption, retention and precipitation of suspended particles in the air, regulation of extreme temperatures, improvement of recreational and outdoors areas, protection against strong winds and flooding, noise reduction, increased wildlife; improved value of land, and carbon sequestration to mitigate and adapt to climate change effects.

77. In keeping with the above, countries reported that during the period 2010-2011 there was an increase in the execution of studies, proposals, programmes, and formulation of policies, legal regulations, municipal regulations, and new initiatives to promote afforestation in urban and peri-urban zones and improved management of existing resources in these areas. For example, Chile has formulated an action programme for urban forestry which consists of planting a tree for each

Chilean over the period 2010-2018, with special emphasis on the poorest urban and peri-urban areas in the country.

78. In support of these efforts, FAO is assisting countries in developing guidelines for those who are responsible for developing policies and taking decisions on urban and peri-urban forestry, with the aim of promoting sound policies and stress best practices.

SUB-REGIONAL FOREST FORUMS

79. The South American Forests Dialogue was officially constituted during the XIII World Forestry Congress, held in Buenos Aires, Argentina, in October 2009. South American countries participate in this forum. The first dialogue took place in Brazil 2010 and the second in Santiago, Chile in October 2011. With the creation of this forum, all the countries in the region are integrated into sub-regional forums, where forestry issues relevant to the sub-region are discussed.

80. The seven countries of Central America as Member States, Dominican Republic as Associated State and Mexico as Observer State, participate since 20 years in forest forums organized within the framework of the Central American Commission on Environment and Development (CCAD).

81. The eight member countries of the Amazon Cooperation Treaty (ACT) participate in forest forums coordinated by the Amazon Cooperation Treaty Organization (ACTO) which streamlines the implementation of decisions stemming from the Treaty as an important mechanism for strengthening technical cooperation and forestry development in the Amazon Region.

82. Since 1982, more than 20 Caribbean countries have participated in forums of the association called *Caribbean Foresters*, held every two years and sponsored and organized from Puerto Rico by the *International Institute of Tropical Forestry* (IITF) of the United States Forest Service.

REGIONAL FOREST CONGRESSES

83. Over the period, particularly during 2011, major forestry events have taken place in the Region: The V Cuban Forestry Congress carried out in April 2011; the IX Guatemalan Forestry Congress held in August 2011; the VII Central American Forestry Congress held in Managua, Nicaragua in July 2011 and the V Latin American Forestry Congress (CONFLAT) held in Lima, Peru in October 2011.

ORGANIZATIONS THAT COOPERATE IN THE REGION

84. As for international technical and financial cooperation, most countries have programs or projects supported by one or more of the following international bodies or agencies of bilateral and multilateral technical cooperation: European Union (EU), International Tropical Timber Organization (ITTO), World Bank (WB), Inter-American Development Bank (IDB), Global Environment Facility (GEF), Food and Agriculture Organization of the United Nations (FAO), United Nations Development Program (UNDP), Amazon Cooperation Treaty Organization (ACTO), Tropical Agricultural Research and Higher Education Center (CATIE), Inter-American Institute for Cooperation on Agriculture (IICA), International Union for Conservation of Nature (IUCN), International Cooperation Agencies of Germany, Canada, Denmark, Spain, USA, Finland, France, Japan, Norway, Netherlands, Sweden and Switzerland, among other international bodies and agencies for technical cooperation.