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LATIN AMERICAN AND CARIBBEAN FORESTRY COMMISSION

THIRTIETH SESSION

Tegucigalpa - Honduras, 25 -29 September 2017

**Forest protection: i) Integrated fire management, ii) Forest health, iii)
Preventive approach to avoiding illegal logging**

Secretariat note

I. Introduction

1. Forests in Latin America and the Caribbean are affected by forest fires, pests and diseases, and the illegal logging and trade in forest products. The protection of forests against these threats beyond the control and combat actions requires the implementation of preventive approaches, policies and strategies, such as integrated fire management, forest health management and preventing illegal logging.
2. Significant developments have taken place in the region, which are expressed in policies, strategies and plans at the national, sub-regional and regional level through agreements between countries at different cooperation levels and joint actions. Despite the recognition of the importance of this progress, there is still a need to strengthen the national and regional information systems enabling countries to monitor and assess the scope of the problem and at the same time improving the decision-making capacity on public investment for prevention and mitigation. This will also strengthen national and international plans, and programmes with concrete actions to promote and implement integrated fire management in forest environments, management of forest health and significantly reduce illegal logging.

II. Integrated fire management

3. Most forest fires in the region have anthropogenic causes¹. Forest fires are often the result of social inequality, lack of land tenure, lack of information and understanding about the environmental, social and economic relevance of the forest, poorly oriented government policies or ignorance thereof, as well as laws and policies outside the context of the reality. Growing population and growing poverty rates, as well as the expansion of urban areas, increase pressure on forests and with it the risk of increasing the occurrence and negative consequences of forest fires.

¹ http://www.minambiente.gov.co/images/BosquesBiodiversidadyServiciosEcosistemicos/pdf/Los-Incendios-Forestales/250414_causas_incendios_forestales.pdf

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4. According to the Regional South America Wildland Fire Management Network², “fire problems are multi-faceted: the equatorial rain forests of the Amazon Basin, the mountain ranges along the Brazilian coast, the remaining Araucaria forests in Brazil, Chile and Argentina as well as the Andean-Patagonian Nothofagus forests are highly susceptible to fire use and wildfires, especially during droughts related to the El Niño phenomenon. Other vegetation types such as the savannas of the Venezuelan Llanos or the Brazilian Cerrados show remarkable adaptations to fire”.

5. The Regional Mesoamerica Wildland Fire Network³ considers that “the Mesoamerica region has suffered excessive land-use fires and wildfires in the lowlands and the mountain forests”. Because of the severe fire episode during the El Niño drought of 1998 a series of cooperative efforts in wildland fire management were initiated within Mesoamerica. International support has facilitated a number of national and multinational fire management projects in the region. A Mesoamerica Regional Forest Fire Meeting in 2002 provided the foundation for regional cooperation in fire management. In March 2006, the Comisión Centroamericana de Ambiente y Desarrollo (CCAD) officially released the regional “Central American Strategy for Wildland Fire Management”. With support of FAO, the US Forest Services, the US Office for Foreign Disaster Assistance and the German Agency for International Cooperation (GIZ), this strategy was recently updated and approved for the period 2016 to 2025.

6. While there is a “general lack of available statistical data on forest fires in the Caribbean, a few general observations can be made. Forest fires occur mainly in dry forest types (500 to 1000 mm of mean annual rainfall). These are also the areas where most human settlements are located. Lowland high forests and montane forests with higher rainfall (1000 and more mm per year) are less susceptible to forest fire, but they can burn in exceptionally dry years. Most of the dry forest ecosystems in the Caribbean can be considered fire-sensitive ecosystems, while the pine forests in the Caribbean (Cuba, Dominican Republic, and the Bahamas) are maintained by wildfires. In fire-sensitive ecosystems, uncontrolled burning often encourages the spread of alien invasive species”⁴.

7. Between 2003 and 2012, it was estimated that an average of 72 million hectares of land area of South America burned each year, of which 35 million hectares were forestland. Nearly all of the land burned in North and Central America (total 5 million hectares) was forestland. For the same period South America showed a definite decreasing trend in forest area burned⁵, but new data could evidence a shift due to the increase of temperature and the decline of precipitation in some areas promoting conditions for forest fires.

8. Cooperative efforts between countries of the Region include common monitoring of wildland fires from space and mutual support during fire emergencies. To strengthen the national capacities of integrated management of forest fire, and also the collaborative action among countries on the matter, FAO coordinated a multi-stakeholder process to prepare a global strategy to enhance international cooperation in fire management, including: voluntary guidelines; global assessment of fire management; and review of international cooperation in fire management. FAO launched in 2006, the “Fire management: voluntary guidelines, principles and strategic actions”, that provide an international framework, outline cross-sectoral issues, detail the principles and attributes needed to balance the social, cultural, environmental and economic dimensions of fire management and to prescribe key actions for the planning and management of fires. For the Region, it is expected that the guidelines, are useful to update its’ comprehensive fire management programme that could contribute positively to achieving specific features regarding the protection from unwanted, damaging fires and the management of fire to benefit society.

² <http://www.fire.uni-freiburg.de/GlobalNetworks/SouthAmerica/SouthAmerica.html>

³ <http://www.fire.uni-freiburg.de/GlobalNetworks/MesoAmerica/MesoAmerica.html>

⁴ <https://www.ncbi.nlm.nih.gov/pubmed/19205174>

⁵ <http://www.sciencedirect.com/science/article/pii/S0378112715003369>

III. Forest health

9. Institutional and legal frameworks for agricultural pest management are well developed and in some cases also for forest pests in the Region. Institutional and legal frameworks are available at national and regional levels to articulate plant protection actions and cooperation among countries. Research centers exist in the region with good technical capacity and human resources. Countries such as Mexico, Costa Rica, Brazil, Chile and Argentina have developed advanced capacities for the control of pests and diseases and can be adopted as a model for others.

10. However, in most of the LAC countries information on pests and diseases is not integrated into geographic information systems or is not part of well established decision-making systems. Most of the information regarding forest health at the national level, if existing, is of a qualitative nature. Very few quantitative data are available for many countries and if they exist, they are commonly unavailable in accessible formats. Information is mostly only collected once the damage has occurred. Consistent data on the impact of forest pests over time are not available in the region. The Guatemalan information system (SIFGUA) is an example of an integrated information system that has been maintained for several years with information of pests and diseases in several forest scenarios and with updated statistics.

11. In Mesoamerica, by their nature and extent, pine forests are most important from an economic and sanitary point of view. Due to climate change, this native forest is becoming more susceptible to insects, especially to the pine bark beetle *Dendroctonus frontalis*. After the attacks, there is high risk for affected forests to be converted in agriculture or grazing lands, by the local population. In this way, the impact of the bark beetle becomes an additional factor that contributes to the loss of natural vegetation surface. Despite the regional experience in the control of pine bark beetle, there is no evaluation or validation of the different control methods used.

12. The Southern Cone countries, in response to the need to improve the plant health conditions, established in 1989 the Plant Health Committee (COSAVE) as a Regional Organization of Phytosanitary Protection through an agreement between the governments of Argentina, Brazil, Chile, Paraguay and Uruguay. Bolivia subsequently joined the Committee as member country. The agency has had several meetings and worked together on several fronts to inform, coordinate and jointly address the exotic pests affecting the subregion's forest plantations. Like in Mesoamerica, in the Southern Cone there is a minimal attention to tropical hardwood species, and existing information is of a predominantly agronomic nature where lists of insect species and diseases are presented (native and exotic) associated with various species of trees that grow mainly under plantation conditions. However, the most important insects in the Southern Cone forest plantations are the exotic insects that have come from different parts, especially from the places where the species of trees are originated. In the Andean countries and the Caribbean countries the statistics data and information is very limited as the planted forests are not broadly established and the pest and diseases of native forest have hardly been studied.

13. Several developments may positively influence the promotion of forest health: i) a growing demand for sustainably produced wood-products ii) non-tariff barriers, such as certification, becoming more important to access certain markets as a consequence of the increasing importance of economic integration agreements at the regional level; and iii) growing technological development and research focused on both planted and native forests.

14. There are also a number of serious challenges and barriers to strengthen forest health services in the LAC region; amongst them:

- Forest health is often understood and developed in technical-scientific terms as if it deals with agricultural crops, not considering the ecosystem services and non-wood products provided by forests.

- The different organizations and forums where different stakeholders address different components of forest health should be consolidated in one at national level, to work on all types of forest scenarios.
- At the level of the entire LAC region, there is a lack of homogeneous governance of the issue in the countries that hinders the articulation between national plant protection organizations (eminently agricultural) and forest services.
- Pest and diseases of planted forest are well known, not only because of their economic importance, but also because most of them use exotic species of trees widely used in the world and whose pests are also well known. Comparatively, the native forest health threats are much less known, both by their extension, complex nature, and by the lack of resources for research. Due to climate change, it is expected that pests and diseases will become more important also for indigenous forest species.
- During 2015-2016, the pine bark beetle (*Dendroctonus frontalis*) affected pine forests in El Salvador, Honduras, Guatemala, Belize and Nicaragua. Although the problem has a natural origin, the pest outbreak affected a very large area of forests due to the lack of effective early warning and a lack of forest maintenance.

15. Finally, it is important to mention that FAO, at the request of its member countries, is preparing a “Regional programme for the strengthening of agricultural health systems in the region”, to strengthen national and regional, institutional and technical capacities, including closer collaboration between agricultural health services and the forestry sector. This means to evaluate capacities and gaps of existing forest health services and propose actions where possible based on lessons learned by countries in the region.

IV. Preventive approach to avoiding illegal logging

16. The concept of "illegal logging" is summarized in “illegal forestry activities⁶ which includes non-compliance with laws and forest management, actions of corruption and infringements of property rights, among others”. Forest governance as a basis for sustainable forest management is the main tool for preventing illegal logging of forest ecosystems. Taking into consideration that a badly organized forest governance promotes illegal logging, it is appropriate for the government, the private sector and civil society to work together (including communities and indigenous peoples) in order to find concerted measures in different levels and scales to fight against this problem.

17. In the region, Guatemala has a plan for the prevention and reduction of illegal logging; Honduras has a national strategy against illegal logging and Brazil implements a programme to control and combat illegal logging. There are also binational actions to curb illegal logging and to increase legal cross-border trade, as is the case of Colombia and Peru, Colombia and Ecuador, and Ecuador and Peru. In addition, there is an initiative by the countries of the Central American Commission for Environment and Development (CCAD) of the Center-American Integration System (SICA) to advance in dialogues to generate legal instruments to help decrease trade of illegal forest products in the region of species such as *Dalbergia spp.*, *Tectona grandis*, *Swietenia macrophylla* and *Cedrela odorata*.

18. FAO supports this initiative through the Working Group of Forests of the CCAD to generate a sub-regional agreement for Mesoamerica between the member countries with the goal of controlling the illegal trade of forest products. In October 2017, a sub-regional workshop will take place that aims at finding joint measures to curb illegal trade in the sub-region. It is expected that representatives from the Ministries of the Environment, Trade and other national entities will attend.

V. Points for consideration

19. The Commission may wish to:

⁶ IUFRO, 2017. Illegal Logging and Related Timber Trade - Dimensions, Drivers, Impacts and Responses. World Series Volume 35. Vienna. 148 p

- Identify opportunities for more effective cooperation between countries to strengthen capacities in prevention, detection and control of forest fires and subsequent impacts assessment, taking as main roadmap for planning the FAO's Fire management voluntary guidelines.
- Establish recommendations and provide orientations to the Regional programme for the strengthening of agricultural health systems in the region, and define a roadmap of consultations and agreements for the political validation and subsequent implementation of the programme elements on forest health.
- Dialogue on the importance to promote binational and/or regional initiatives between countries to address illegal cross-border logging and associated trade, supporting the design of an agreement for Mesoamerica among the member countries of the CCAD in order to control illegal trade of forest products, which could be expanded to the entire region to achieve "zero illegal deforestation".