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FOREST HEALTH IN THE CONTEXT OF THE SOUTHERN CONE OF LATIN AMERICA

Secretariat Note

Introduction

1. The forestry sector plays a fundamental role in the economies of Latin American countries, and in the well-being of millions of people. Forestry management is the key to improving means of subsistence and relieving poverty. In the last ten years, the sector has achieved important goals and technological innovation which have led to positive results in forest management and in the sustainability of forest resources.
2. This panorama, however, also represents a significant challenge. One of the risk factors is the occurrence of diseases and pests which can lead to a fall in expected performance, and in the quality of forest products. Exotic pests often pass into the category of quarantine pests for other countries that maintain commercial relations with the country where the pest was introduced. In these cases, phytosanitary barriers are imposed, impeding commerce or destroying it altogether. Phytosanitary treatments also increase production costs. Non-commercialised wood paralyzes exploitation activities and causes surplus in wood stocks, bringing with it social problems such as unemployment, and an increase in the risk of attack from other pests or an increase in the effect of the introduced pest.
3. Considering the lack of up-to-date regional data and information on the issue, it is necessary to continue compiling data and information on insect pests and forest diseases, invasive species, pest outbreaks and measures of control. FAO has been assisting countries in recent years to respond to pest and disease outbreaks, and to establish strategies for prevention and protection of forests over the long term, and to strengthen forest health as a basic strategy to ensuring sustained productivity and conservation of both native and planted forests.

Relevance of the issue to Latin America and the Caribbean

4. Considering that Latin America and the Caribbean is a region that could be strongly affected by the effects of climate change, it is expected that the increase in temperature, levels of carbon dioxide in the atmosphere, and changes in the frequency and severity of extreme climate events will affect the forestry sector in many ways, including the proliferation of forest pests and diseases. Several studies have been

carried out in different countries which conclude that there is a high risk of significant ecological, sanitary and economic damage caused by these pests and diseases.

5. In accordance with the FAO publication (2009) “*Global review of forest pests and diseases*”, a study of eight Latin American countries (Argentina, Belize, Brazil, Chile, Colombia, Honduras, Mexico and Uruguay), shows that 113 is the total number of pests in the Region. Insects occupy the first place with 77% of reported cases, pathogens with 11% and other types of pests account for another 11%.

Information on pests and diseases in Latin America and the Caribbean

Type	Number of species (pests and diseases)						
	Total	In naturally regenerated forests	In planted forests	In both types of forest	On broadleaf	On conifer	On both host types
Native species							
Insects	47	21	25	1	25	17	5
Diseases	2	0	2	0	1	1	0
Other	8	6	2	0	4	2	2
Introduced species							
Insects	40	1	33	6	13	25	2
Diseases	11	0	11	0	7	3	1
Other	5	4	1	0	2	0	3
Total	113	32	74	7	52	48	13

Source: FAO (2009), “*Global review of forest pests and diseases*”

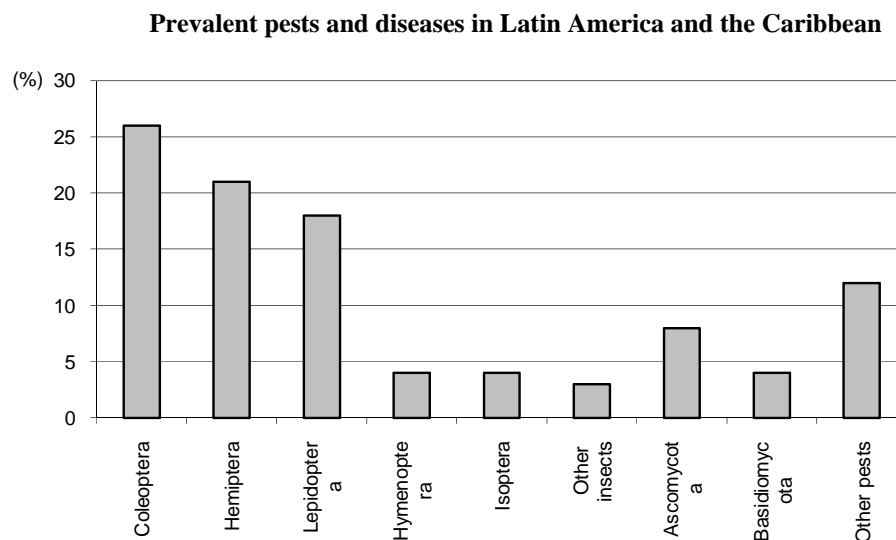
6. According to this study, in several countries, monitoring and detection are limited to informal processes, and frequently focus on only planted forests. Most of the information collected is qualitative, and quantitative information, when it exists, is not available and is based on arbitrary estimates or has no easily accessible format.

7. Some data that has been obtained, though not sufficiently up-to-date, does show the importance of the problem to the Region. Brazil published a report in 2000 indicating that 30 000 ha were affected by insects and 20 000 ha by diseases. In Chile, in a report issued the same year, the figures reported were 531 000 ha affected by insects and 810 000 ha by diseases. Mexico reported that 7800 ha of forest were damaged by insects in 2000, and in the same year more than 2000 ha were affected by diseased.

8. The Southern Pine Beetle (*Dendroctonus frontales*) affects approximately 70% of forests in the Mountain Pine Ridge Forest Reserve in Belize, and 500 ha in Honduras. In Central America and Mexico native species of *Dendroctonus* have been the cause of the loss of *Pinus* forests for the past 40 years. A regional strategy against the Southern Pine Beetle has been prepared to combat the pest.

9. The Mahogany Shoot Borer (*Hypsipyla grandella*) is still one of the biggest problems in the Region, particularly in plantations of *Swietenia macrophylla*. In Belize, Dominica, Grenada, Santa Lucia and San Vicente, the Borer has caused the failure of attempts to establish plantations of *Swietenia macrophylla*, *Cedrela odorata* and *Carapa guianensis*. The Hibiscus Mealybug (*Maconellicoccus hirsutus*) is a pest that was introduced to Grenada after spreading from other islands in the east Caribbean, and is capable of feeding on around 150 plant species, making it a severe threat to natural tropical forests, as well as to agricultural and ornamental plants in the sub-region.

10. The European Woodwasp (*Sirex noctilio*) is another serious pest discovered in Uruguay in 1986 which has spread to Argentina, Brazil and Chile, affecting trade in the sub-region and forcing the countries to work jointly to combat it.



Source: FAO (2009), "Global review of forest pests and diseases"

11. Due to the nature of plantations, a higher number of pests and diseases have been found more in planted forests than in natural forests. This number of pests has been reported on both broadleaved and conifer forests. Similarly, pests and diseases have been found on both native and exotic species.

12. Management of information on phytosanitary issues is currently under development in some LAC countries. In Peru, for example, the implementation stage is already under way on the Plant Health Information Network, which aims to integrate different institutions and people from the forestry and farming sectors in one information network which comprises the greatest amount of information on forest pests and their hosts over the internet, making it available to the different users that may need it. The FAO study indicates that national database for most economically significant pests developed in Uruguay may serve as a model for the Region.

Relevance of the issue on a sub-regional level

13. In response to the need to improve the situation on phytosanitary issues on a sub-regional level, in 1989 a Plant Health Committee (COSAVE) was created as a Regional Plant Protection Organisation (RPPO) created through an agreement between the governments of Argentina, Brazil, Chile, Paraguay and Uruguay, as part of the International Plant Protection Convention (IPPC/FAO). Recently, Bolivia joined the COSAVE Constitutional Agreement as a member state. The Committee was created to strengthen regional phytosanitary integration and to develop integrated actions which would resolve the phytosanitary problems of interest to all members of the group.

14. In the framework of COSAVE, considering the economic importance of forest species and the possible damage caused by pests and diseases, a Permanent Working Group on Agricultural and Forestry Health (GTPSSA) was created in 1991. The priority objectives of GTPSSA are the discussion, analysis and coordination of action and exchange of experiences on the most important pests present in and outside the Region, which are potentially dangerous to commercial planted forests in the countries covered by COSAVE. In 2002, the Committee established standards with the aim of defining a monitoring procedure to enable early detection of *Sirex noctilio* (European Woodwasp) in plantations of *Pinus sp.* to guarantee the declaration that a COSAVE area is free of pests.

15. Another forum for collaboration is the Southern Agricultural Council (CAS), established in 2003, which is the regional forum for consultation and coordination of regional action for the Ministries of Agriculture of Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay. It has a Technical Secretariat administered by the Inter-American Institute for Cooperation on Agriculture (IICA), with offices in Montevideo. CAS is made up of the Agricultural Policy Coordination Network (REDPA), the Cooperative Programme for the Agro-alimentary and Agro-industrial Technological Development of the Southern Cone (PROCISUR), the Informal Agricultural Negotiators Group (GINA-Sur), the Southern Cone Plant Health Committee (COSAVE) and the Permanent Veterinary Committee (CVP). The work of CAS is mainly focused on achieving better competitiveness and insertion for the agricultural sectors of the Region in the global market, through technical organisms.

16. The Regional Forum on Private Sector Agriculture Livestock comprises private and other organisations of the agricultural and agro-industrial sectors of the CAS member states, which are recommended by the respective Ministries of Agriculture. This institution is a forum of dialogue and discussion with the Council which enables ministers to access the vision and proposals of the private sector on the more relevant issues in the Region's agricultural sectors.

17. Another forum of dialogue among countries is the Regional Forum of Schools of Agriculture of MERCOSUR, Bolivia and Chile, which has the objective of giving incentives to the academic field in order to promote regional integration and international competitive insertion into the agricultural sector.

Principal developments on a sub-regional level

18. In Argentina, activities related to forest health are spread over different institutions; firstly the Ministry of Agriculture, Livestock and Fisheries (MAGyP) is the institution responsible for the design and implementation of policies linked to planted forests; the SENASA (National Service of Agro-alimentary Health and Quality) is a dependency of the MAGyP and is in charge of certifying products and sub-products of animal or plant origin, as well as their raw materials and agrochemical waste products, and is also in charge of the prevention, eradication and control of plant pests that affect agricultural and forestry production in the country; the National Institute for Agricultural Technology (INTA) together with some universities and specific research institutes carries out research into forest health.

19. SENASA aims to control damage-causing pests present in both planted and native forests to avoid the spread of pests throughout the national territory and into other countries, as well as controlling the entry of quarantine forest pests associated with timber shipments. As part of their work, *Sirex noctilio* was declared an "agricultural pest" in 1993 and, in response, the MERACS Version 1.0 *Sirex noctilio* Risk Assessment and Control Actions Model was created to use simulations to establish possible scenarios of damage caused on a forest-wide scale, and to recommend specific actions to be taken.

20. In Brazil, *Sirex noctilio* is also one of the main pests that affect adult planted forests of *Pinus*. The Brazilian Agricultural Research Corporation (EMBRAPA), in association with the National Fund for Woodwasp Control (FUNCEMA) have developed technology for monitoring, detection and control of the pest, and by means of the adoption of this technology by producers, the spread of the pest has been reduced. The technology used has become a world reference in monitoring and control of the pest on planted pines, being transferred to Argentina, Chile and Uruguay.

21. The main Brazilian institutions related to forest health are the Ministry of the Environment (SISNAMA and the Brazilian Forest Service) and the Brazilian Agricultural Research Corporation (EMBRAPA). In addition, the Plant Health Direction (DSV), a dependency of the Ministry of Agriculture, Livestock and Food Supply (MAPA), is the National Plant Protection Organisation (NPPO) designated by SDA Regulation N° 9, in accordance with Art. IV of the International Plant Protection Convention (IPPC).

22. Chile has formed the National Forest Health Committee, which groups together some of the stakeholders and organisations related to managing the forestry sector. As part of the work of the Committee strategies are defined to face phytosanitary problems and programmes are created for early detection of pests. Chile has taken up a series of measures against possible entry of forest pests and diseases into the country, taking into account the potential damage they may cause. These actions consist of training and informing

technical workers on pests and giving them indications on the correct forestry techniques, as well as establishing the appropriate phytosanitary controls at the country's ports and airports, with exhaustive control of organic products.

23. In Uruguay, with the development of a State Policy, a valuable productive base has been established on plantations of eucalyptus and pine, sustainably managed and certified according to international standards. The forestry sector has experienced rapid growth in the country due to Forestry Law N° 15 939 approved in 1988. Thus the issue of forest health was not, until a few years ago, a problem in Uruguay. Forest pests and diseases have acquired increasing importance with the rise in the surface area of planted forests over a period of no more than ten years.

24. The Forestry General Direction of the Ministry of Agriculture, Livestock and Fisheries in Uruguay (DGF – MAGyP) has an integrated information system, as a result of TCP/FAO Project "Support for the defence and protection of planted forests". With the support of this project a National Forest Health Monitoring System was designed, along with a field manual for forest pests and diseases in pine and eucalyptus, a proposal for a National Strategy on Forest Management for the Health and Vitality of Forests, and the Forestry Direction of the MAGyP was strengthened.

25. The issue of forest health is still in the development stages in the public sector in Paraguay, even though the country has not been immune to pests. In 2009 there was an outbreak of eucalyptus bug (*Thaumastocoris peregrinus*) which affected plantations of clones of *Eucalyptus sp.* This same pest, which of course also affected neighbouring countries, brought to light the need, at least in Paraguay, for tighter links and experience exchange on the issue of forest health.

26. The National Service for Seed and Plant Health and Quality (SENAVE) is the organism responsible for plant health. The working theme of forest pests and diseases has still to be substantially improved, normally in reaction to certain issues appearing from processes related to exports and imports. Early warning structures are in place in the Plant Protection Direction (DPV), part of SENAVE, through the Phytosanitary Monitoring Department (DVF) and the Plant Quarantine Department (DCV).

27. As part of the policy to create a hierarchy of forestry institutes, the National Forestry Institute (INFONA) was created, formerly known as the National Forest Service. This institution has the general objective of administering, promoting and developing sustainable development of forest resources in the country, in terms of their defence, improvement, expansion and rational utilization. In 2008, Paraguay hosted the Meeting of Experts on the Integrated Management of Forest Pests, part of which involved the creation of the *Southern Cone Countries Network on Invasive Forest Species*, including: Argentina, Brazil, Chile, Bolivia, Paraguay and Uruguay. As part of this network preliminary lists were made available of invasive species, diseases, invasive non-forestry plant species and forest environment invasive fauna species.

28. Though Bolivia is not part of the Southern Cone sub-group, it shares efforts with these countries on the issue of forest health. The Bolivian National Service for Agricultural Health and Food Safety (SENASAG) was created in 2000 through Law 2061. The mission of SENASAG is to improve and protect the health of forestry and agricultural production, as well as guaranteeing food safety. SENASAG has several different programmes for eradication and control of pests and diseases, with special focus on animal and agricultural health. Forest health is still in the development stage.

29. As part of the Economic Complementation Agreement N° 22, signed between the Government of the Republic of Bolivia and the Government of the Republic of Chile in 1994, a Technical Coordination and Cooperation Agreement was established on issues of forest and agricultural quarantine, quarantine pests, phytosanitary products and transgenic material. This agreement also expresses the terms and conditions for coordinating actions to establish technical and administrative procedures that allow exchange of plants, products and sub-products of plant origin between both countries, under the due control of the corresponding phytosanitary authorities.

30. On a sub-regional level, with technical assistance from FAO, the project "Forest Health in the Countries of the Southern Cone" is being carried out with the objective of analysing the political, legal, technical and institutional framework of the countries in the sub-region, and of identifying areas for the

horizontal cooperation on forest health. FAO also collaborated with the Southern Cone countries on the sub-regional project “Health Framework for Countries of the Southern Cone”, which was approved at the beginning of this year for financing from the Inter-American Development Bank, and whose objective is to develop a system for detection, early warning and control of invasive species in forests environments in the countries of the Southern Cone.

Principal challenges and aspects to be considered (technical, institutional, political, legal and financial aspects)

31. On a national level, it is important to improve inter-institutional coordination to establish guidelines for action and responsibilities on the control of pests and diseases, making public and private organisations work as elements of a single national system. It will also be important, with the participation of society in general and the private sector, to identify areas of applied research of national interest, in order to respond to practical needs. This must be performed jointly with universities in order that the academic world also responds to the nation’s research needs.

32. Another important aspect on a national level is to improve the coordination between projects developed by national public organizations, to which it is recommended to agree to a Forest Health Plan established jointly with the institutions that are involved in the issue (all stakeholders). As part of this forest health plan it will be possible to develop lines of action coordinated by a jointly chosen institution or by a public institution with the necessary capabilities on the issue.

33. It is also important to strengthen the capabilities for rural expansion of competent organisms. It will therefore be important to establish national networks which have information connected to sub-national networks. It is considered advisable to publish electronic bulletins to disseminate research, consultancy work, and development of current issues in forest health at the national and regional levels which can be managed through the national network.

Proposals for discussion by the LACFC and recommendations for future action

34. With regard to “forest health”, apart from the aforementioned issues, it is recommended at national level to analyse and discuss proposals oriented towards:

- Establishing a programme for technological publication and transference on international practices and standards of forest health.
- Establishing a virtual platform for research and development on forest health in the Region.
- In face of the lack of consolidated regional information on this issue to adequately face the common problems of forest health, it is proposed the creation of a regional database on phytosanitary issues.
- Considering the meeting held in Paraguay in 2008 when several common interests and problems came to light and in order to assist the countries of the Region and propose strategies and regional policy advice, it is proposed the creation of a regional mechanism to coordinate the different international stakeholders active in the theme of forest health.