

6th International Wildland Fire Conference

Regional Statement of the South America Region – An Input Paper to the Conference Statement

13 October 2015

General Fire Assessment

South America has a land area of 17.8 million km², which are equivalent to 12% of the Earth's surface. It is home to an extraordinary diversity of ecosystems, climates and topography, including the largest area of tropical rainforest (885 million ha in the Amazon basin and 85 million ha in the basins of Orinoco and Paraná rivers), representing 95% of the forest area of the continent. Around a quarter of the tropical forests of the planet is located in the region and protected under different conservation schemes. Natural and planted temperate forests along with the Andes mountain range are also important landscapes of South America.

Wildfires represent a severe problem in South America, because of their serious consequences and hazards to renewable natural resources and their economic, social and environmental impacts. The frequency, severity and magnitude of wildfires have increased due to climate, land-use and global changes. The causes of wildfires in the region vary from country to country due to diverse climatic conditions, vegetation, topographical features, land use and management, cultural conditions and behavior of human populations.

The increase of interface and cross-boundary fires, wildfires affecting protected areas, smoke problems and their impacts on human health and safety, severe and extended damages to the local communities and their properties has become one of the main concerns and challenges of most countries in the region.

Between 2005 and 2014, the total amount of active fires depicted by spaceborne sensors, i.e. high-temperature events detected by the reference satellites (NOAA 12 until August, 2007, and Aqua MT since then) reached more than 2.8 million. Of these, ca. 60% were detected in Brazil, 10% in Argentina, 10% in Bolivia and 20% in the other nine countries. As the land areas of the countries are highly diverse, an analysis of satellite data related to the land area of each country shows another distribution in the continent, 28.9% in Paraguay, 17.1% in Bolivia and 13.7% in Brazil.

Brazil, in face of huge wildfire challenges, is developing an approach of integrated fire management (IFM) considering community/indigenous people involvement, prescribed burning of low intensity for conservation of protected areas, and addressing prevention of wildfires and decreasing greenhouse gas (GHG) emissions. A National Policy on IFM is being developed as a Federal Decree. The achievements of Brazil are being shared with other countries and it is expected that they will permeate all regional cooperations. The methods and effectiveness of fire management also vary greatly among South American countries. The different views and political determinations, linked to the economic capabilities of each country, lead to diverse needs to develop fire management programs and their respective implementations.

In the last years, many cooperative actions have been developed in order to improve the capability of South American countries in dealing with wildfires:

- **Program for Reduction of Wildfires and Promotion of Alternatives to Fire-Use in the Amazon:** this project started as a bilateral agreement between Italy and Brazil (1999 to 2008). In 2010, it became a trilateral agreement among Italy, Brazil and Bolivia. This year the Program is extended to Ecuador.
- **2nd. Meeting of the Regional Wildland Fire Networks of South America, Caribbean and Central America:** Brasília, Brazil, in 2012 hosted this meeting that aimed to exchange information, evaluate cooperative actions and strengthen cooperation among the countries of Latin America and the Caribbean.

- **Cross-boundary assistance (I):** Torres del Paine National Park fire emergency. From 27 December 2011 to 23 February 2012, firefighters from Argentina, Brazil and Uruguay supported Chile in the suppression of the wildfires that affected various provinces of the country. As a result of this operational action, Chile organized the International workshop for the regional assistance reinforcement in forest fires, Santiago, Chile, in May of 2013.
- **Cross-boundary assistance (II):** Loja and Cuenca Fire Emergency. From 26 September to mid October of 2012, a Chilean CONAF Fire Response Strike Team supported Ecuador in wildfire suppression.
- **Cross-boundary assistance (III):** Brazilian Air Force – C-130 aircraft equipped with a Modular Airborne Fire Fighting System (MAFFS) supported wildfire suppression activities in Ecuador (2012) and Chile (2014).
- **Cross-boundary assistance (IV):** 2014: In April Argentina assisted with Single Engine Air Tankers (SEAT) and fire crews to the Chilean Forest Service and the National Emergency Office (ONEMI) to control the Valparaiso interface fire, the most devastating fire emergency to ever occur in the country. More than 950 ha burned and 2,900 homes, structures and other facilities were lost and 16 people were killed.
- **Cross-boundary assistance (V):** 2015: Extended air and ground support from Argentina with Single Engine Air Tankers (SEAT), engines and fire crews helped the Chilean Forest Service to control various wildfires and interface fires which threatened many cities in the country. This task force, reinforced with crews of *Bomberos* from Uruguay, is becoming an important means of international cooperation in the Region.
- **Cooperation among the eight countries of the Amazon Basin:** Under the auspices of the Amazon Cooperation Treaty Organization (*Organización del Tratado de Cooperación Amazónica* – OTCA), a framework agreement was developed in 2013 and 2014. It includes Operating Regulations and a Glossary. It was also developed as a Memorandum of Understanding. However, these cooperation agreements remain to be confirmed at Ministerial level.
- **Fire Management Cooperation Agreement:** A long-term cooperation in the Andes Community was initiated between CONAF (Chile) and the City Fire Department of *Distrito Metropolitano de Quito* (Ecuador).
- **International meetings:** The South American network was represented in three international meetings since the last International Wildland Fire Conference in South Africa:
 - **UNISDR Global Wildland Fire Network / Wildland Fire Advisory Group**, Global Fire Monitoring Center (GFMC) (June/July 2012)
 - **UNECE / FAO Regional Forum on Cross-boundary Fire Management**, United Nations, Geneva, Palais des Nations (November 2013)
 - **UNISDR Global Wildland Fire Network / Wildland Fire Advisory Group**, Global Fire Monitoring Center (GFMC) (June 2014)
- **Community Adapted to Wildfires Project, a bilateral agreement between California State-USA and CONAF-Chile in 2015**, aimed at enhancing local activities to fight wildland-urban interface fires.
- **Development of a project between Mexico and Chile:** “Strengthening technical capacities of forest fire protection” (2015)
- **Cooperation Agreement** between the Pau Costa Foundation (Spain) and CONAF (Chile).
- **RedLaTIF – The Remote Sensing and Forest Fires Network of Latin America** was established in 2002 as a participant of the GTOS panel of GOFC-GOLD.¹ The main current activities include a website to assist users in their access to different international sources of near-real time satellite

¹ <http://www.redlatif.org>

fire monitoring data, with a unique regional option to define customized products and reports operationally provided by the “Queimadas” program of the Brazilian Space Research Institute (INPE).²

- **Support of National and Regional Competency in Integrated Fire Management to Secure Sustainable Forest Management in Uruguay and through Cross-border Cooperation with Brazil, Chile and other Neighboring countries of South America:** This project is an initiative of GFMC in partnership with Uruguay, Brazil and Chile and in synergy with the GIZ-supported project “Prevention, Control and Monitoring of Fires in the Cerrado” in Brazil. It aims at taking advantage of expertise of the South American and German partners in developing systematic approaches in integrated fire management at the landscape level, including capacity building, institutional strengthening and the development of policies through the application of international training standards, voluntary guidelines for aerial firefighting operations, exchange of expertise and streamlined transboundary cooperation.

Conclusions

- In spite of the advances achieved in cross-boundary cooperation, bilateral and multilateral agreements, as well as at national level in the last years, there still remain some areas to be improved.
- Reliable statistics and cartographic data are not available for all countries and many times are not easily accessible; there is not a database for the region;
- The issues of GhG emissions and food and water security, which are threatened by wildfires, are not generally considered in fire management strategies;
- The lack of a more formalized approach for the Network weakens its activities, since the participation of the focal points is voluntary in the region;
- At the last meeting of the South American Network, the importance of a review to the Cooperation Strategy (not finalized) and the internal strategy of each country was pointed out;
- Most parts of the countries do not have a national policy/program for fire management;
- A few countries still remain without a focal point in the Network;
- Common standards for joint cross-boundary wildfire emergency response operations in the Region do not yet exist.

Recommendations

- Establishment of a Regional Center for compilation, distribution and housing of information and data of all the countries of the Regional South America Wildland Fire Network, and to serve as the secretariat / coordinator of the network;
- Standardization of protocols for all activities and development of common procedures and language to enhance interoperability and efficiency of South American countries to cooperate in fire management;³
- Application of the Incident Command System (ICS) as the common approach in South America for the command, control, and coordination of bilateral or multilateral emergency responses to wildfires;
- Scientific research should be encouraged in the region and the countries must try to seek funding and projects to be developed in cooperation.

² <http://www.redlatif.org/pt/datos>

³ See also voluntary training standards and guidelines for creating interoperability by utilizing products available on the platform of the International Wildfire Preparedness Mechanism (IWPM) – an outcome of the UNECE/FAO Regional Forum on Cross-boundary Fire Management (2013): <http://www.fire.uni-freiburg.de/iwpm/index.htm>