

ITTO'S ROLE IN TROPICAL FOREST FIRE MANAGEMENT

Report on a side-event held in conjunction with the 32nd Session of the International Tropical Timber Council

The moist tropical forests of Asia/Pacific, Africa, Latin America and the Caribbean are all facing an increasing fire threat. The impacts of uncontrolled forest fire can be devastating: tropical forest fires destroy homes, livelihoods and wildlife and pollute river systems. Smoke haze events create health and navigation hazards on a regional scale, and the carbon emitted contributes significantly to the build-up of greenhouse gases in the atmosphere.

In this context, a side-event was organized during the 32nd Session of the International Tropical Timber Council held in Bali, Indonesia on 13–18 May 2002 to:

- increase awareness among Council delegates of ITTO's work on forest fire management and on the fire management capability of members; and
- suggest ways of increasing the effectiveness of the work of ITTO and others in forest fire management.

The side-event was chaired by **Mr. Suhariyanto**, Director General of Forest Protection and Nature Conservation, Indonesian Ministry of Forestry and attended by about 50 delegates. Six fire management experts gave presentations to the workshop.

Mr. James Dunlop, Former Head of the Forest Protection Branch, British Columbia (Canada), outlined the fire-fighting capability in Brazil and Ghana. He made of a number of suggestions for improving Brazil's already impressive fire-fighting capability. In particular he said that clearly delineating the major phases of fire-fighting – prevention, preparedness, detection and suppression – within the fire-fighting program would assist program managers in achieving the key outcomes in each phase.

Mr. Dunlop said that the Forestry Department and the National Fire Service In Ghana had made great strides in improving its bushfire management capability with the important assistance of ITTO and others. He stressed that the attitude of village-level fire-fighting teams was "upbeat and proud" and will underpin the development of a strong and effective national fire management capability, particularly given a high level of commitment from government. He noted new work being undertaken with the assistance of the Government of the Netherlands and suggested that ITTO could complement this work in a number of ways, including by: supporting local fire-fighting volunteers through the supply of basic equipment (eg boots, mountain bikes and safety gear); facilitating coordination of fire management and fire-fighting at the national level; supporting the development of a locally adapted fire communications network; supporting the construction and operation of a low-cost national early warning fire system using fire lookouts; continuing the effective training of fire-fighting crews initiated under an ITTO project; assisting in adapting the Keech-Byram Drought Index to Ghanaian conditions; and encouraging forestry educators to include the practical participation of forestry students in specially trained fast-response and extended attack crews.

Dr Joao Antonio Raposo Pereira, Fire Monitoring Coordinator, PROARCO, MMA/IBAMA, Brazil outlined his country's program to prevent and combat forest fires in the 'arc of deforestation' in the Amazon region. He said that the fire detection, monitoring and response activities were coordinated by IBAMA (the Brazilian Institute for Environmental and Natural Renewable Resources) but relied on a high level of cooperation between several relevant agencies – the Army, Air Force, IBAMA, Bombeiros (an urban fire-fighting corps) and Civil Defence – which was facilitated by a permanent taskforce. He outlined Brazil's satellite fire location system (using NOAA, GOES, MODIS and DMSP), the use of aircraft-mounted infrared sensors, and an alert system based on the locality of the fire (eg its tenure status) and its persistence. He also talked about a system of permits for prescribed burning through the use of a card similar to an Automated Teller Machine card. Landholders would use the card at local banking facilities to obtain permission to burn and to get information on appropriate burning and about other landholders who may be burning in the same area to facilitate local coordination.

Dr. Pereira suggested some ways in which ITTO could support Brazil's program, including by assisting in decreasing the response time between fire detection and action, and the organization of a rapid response fire suppression team. He also mentioned efforts to cooperate with other countries in the region to implement a regional fire-monitoring network.

Mr. James Sorenson said that a lack of fire management know-how in tropical countries could be traced partly to the historic lack of fire in moist tropical forests. He also said that nations such as the USA, Canada, Australia, South Africa and Brazil, with more experience in fire management, should be able to pass on the lessons learned so as to shorten the process of developing their fire management capability. He mentioned the ITTO Guidelines on Fire Management in Tropical Forests, which can facilitate the development of national and sub-national fire management programs, and he cited Indonesia's national guidelines as an example. He stressed that a 'one size fits all' approach won't work; each country needs to tailor its program for its specific social, economic, cultural and environmental needs and conditions.

Dr. Dicky Simorangkir said that fires are increasing in their frequency and severity in moist tropical forests. He introduced Project FireFight South East Asia, a joint project by the World Wide Fund for Nature and IUCN to support current national and international efforts to develop more effective and efficient fire management systems. The project has three focus areas: review and analysis of the legal and institutional framework of fire management; community-based fire management; and analysis of the economics of fire and fire use. He said that all countries in the region have some elements of fire-related legislation that were positive, but none has a comprehensive legal framework. He said that in some cases good policies were not supported by the necessary regulatory framework, roles and responsibilities were not clearly defined between agencies, there were inadequate resources to enforce laws and there was a lack of political will to address fire management issues. He pointed out that many communities own knowledge on fire use but could not provide the complete solution to harmful forest fires. He recommended support for research and analysis that improves the understanding of forest fires; the building of awareness among stakeholders; and the mandating and equipping of forest managers to prepare and implement forest management plans.

Mr. Ross Smith described the fire situation in Indonesia; he said that in 1997 70% of all smoke came from peat beds and 20% from land-clearing fires. He described the existing fire management capability in the Province of West Kalimantan and introduced a newly developed ITTO project proposal to establish a forest fire management agency within the forest police force (POLHUT) in the province. This agency would be the lead agency for the management of forest fires, it would coordinate the activities of all agencies involved in fire management and it would give priority to fire prevention. Fire suppression would be done using professional methods and a system of burn permits would be developed. Community education and participation would be key elements of the project. Under the proposal, the Province would appoint a Provincial Fire Officer, who would coordinate district fire officers and would act as executive officer of the Provincial Forest Fire Advisory Committee, which would be created under the project. He highlighted some key messages: a simple approach should be taken – the best solutions are rarely the most technologically advanced; fire prevention is equally important to suppression; community education and awareness programs are essential; a single fire management or coordinating agency was critical – if multiple agencies have joint management rights it is almost inevitable that turf wars will ensue, with deleterious effects; fire management projects should be considered as part of the whole suite of activities aimed at sustainable forest management – synergies between other fire and forest/land management projects should be sought; and fire projects should be built from basic principles that match identified needs.

Dr Daddy Ruhiyat spoke about a study conducted within an ITTO project to research and field-test a training model for forest fire management based on indigenous knowledge. The study collected information from five villages in East Kalimantan, four of which were populated by local ethnic groups and one by immigrant Javanese. He said that local communities have used fire for many centuries as an effective management tool. He reported that some community groups are still using traditional fire management technology, others have combined traditional and new technologies, and the immigrant population has not adopted traditional methodologies to a significant extent. Indigenous communities have developed their own fire management 'rules', which may be written or conveyed orally. Recently, communities have begun to organize fire control activities in response to major fire events; organization is done by community leaders such as traditional chiefs, village heads and community elders. He suggested that traditional fire management systems could be used as the basis of modern fire management programs that blend traditional and modern approaches and in which new equipment and technologies eliminate the weaknesses of the traditional fire control system. Moreover, traditional knowledge has the potential to greatly assist the development of new fire management technologies; therefore, the loss of traditional knowledge would be to the detriment of efforts to improve fire management practice. There is an urgent need for more efforts to ensure that this knowledge is retained in the communities and disseminated more widely.

The presentations were followed by a discussion facilitated by **Dr Efransjah** of the ITTO Secretariat and by informal discussions after the meeting. Delegates showed interest in Brazil's experience, suggesting the potential for further south-south technology transfer that might be facilitated by ITTO. Questions were raised and addressed about the best focus for ITTO's fire work. It was suggested, for example, that ITTO should concentrate on fire management in the permanent forest estate; the purposeful burning for land-use change was outside its scope. However, others expressed the view that while ITTO's comparative advantage was in fire management in the permanent forest estate, the full spectrum of fire causes – across all land uses – had to be tackled in an integrated way and it would therefore be ineffective to focus fire management efforts solely on the permanent forest estate. ITTO policy work should look at the issue more broadly. Its efforts in capacity building should also be seen in a broad sense and should include the strengthening of community and traditional approaches to fire management. One delegate noted that in severe drought conditions major forest fires were inevitable; fire management plans should recognize that extreme years are going to happen and need to be prepared for.

Next steps

ITTO should evaluate the fire management situation at the request of member countries to identify pragmatic, useful actions that will lead to clear improvements in that situation. Already, evaluations in a small number of countries have indicated areas where ITTO assistance would be useful. ITTO project proposals can now be formulated to activate such assistance.

ITTO has a number of fire-related field projects and has carried out some important policy work on forest fire. The side-event proved valuable in bringing out some of the lessons of this work, although more time was needed for an adequate discussion. Similar events if staged regularly under the auspices of the ITTO Committee on Reforestation and Forest Management will help in the development of ITTO's fire management policies and in building a robust approach to ITTO's fire management efforts.