



# Forestry Department

Food and Agriculture Organization of the United Nations

## Fire Management Working Papers

**Implementing the Fire Management Voluntary Guidelines**

**Report of the Trinidad and  
Tobago regional workshop  
20-23 November 2007**

*by*  
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July 2008

Forest Resources Development Service  
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Working Paper FM/20/E  
FAO, Rome, Italy

## Disclaimer

The Fire Management Working Papers report on issues addressed in the work programme of FAO. These working papers do not reflect any official position of FAO. Please refer to the FAO website ([www.fao.org/forestry](http://www.fao.org/forestry)) for official information.

The purpose of these papers is to provide early information on on-going activities and programmes, and to stimulate discussion.

Comments and feedback are welcome.

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For quotation:

FAO (2008). Implementing the Fire Management Voluntary Guidelines – Report of the Trinidad and Tobago regional workshop, 20-23 November 2007. Fire Management Working Paper 20. [www.fao.org/forestry/firemanagement/en/](http://www.fao.org/forestry/firemanagement/en/)

## FOREWORD

Fires impact upon livelihoods, ecosystems and landscapes. Despite incomplete and inconsistent data, it is estimated that 350 million hectares burn each year; however, the nature of fires determines whether their social, cultural, environmental and economic impacts are negative or positive. Up to 90 percent of wildland fires are caused by human activities primarily through uncontrolled use of fire for clearing forest and woodland for agriculture, maintaining grasslands for livestock management, extraction of non-wood forest products, industrial development, resettlement, hunting and arson - thus any proactive fire management needs to adopt integrated, inter-sectoral, multi-stakeholder and holistic approaches. The situation varies markedly in different regions of the world.

In accordance with recommendations of the International Wildland Fire Summit in October 2003, the Ministerial Meeting on Sustainable Forest Management in March 2005 and the FAO Committee on Forestry (COFO), also in March 2005, FAO has been coordinating a multi stakeholder process to prepare the Fire Management Voluntary Guidelines as part of a global strategy for international cooperation in fire management.

The voluntary guidelines set out a framework of legally non-binding principles and internationally accepted strategic actions. They address the cultural, social, environmental and economic dimensions of fire management at all levels.

The Fire Management Voluntary Guidelines can be viewed on the following FAO websites:

Voluntary Guidelines Document: <http://www.fao.org/docrep/009/j9255e/j9255e00.htm>

The purpose of this Working Paper is to report on the experiences of Trinidad meeting to translate the Fire Management Voluntary Guidelines into policy, plans and practices. The methodology can be viewed on the following FAO websites: [www.fao.org/forestry/firemanagement/en/](http://www.fao.org/forestry/firemanagement/en/).



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## **1. Background**

The voluntary guidelines set out a framework of principles strategic actions in fire management. They address the cultural, social, environmental and economic dimensions of fire management at all levels. In accordance with recommendations of the International Wildland Fire Summit in October 2003, the Ministerial Meeting on Sustainable Forest Management in March 2005 and the FAO Committee on Forestry (COFO), also in March 2005, FAO has been coordinating a multistakeholder process to prepare the principles and actions as part of a global strategy for international cooperation in fire management. The guidelines were prepared to COFO 2007 and Seville 2007, who commended the process and recommended that guidelines be implemented.

The voluntary guidelines 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. This framework supports achievement of the Millennium Development Goals: particularly Goal 1 to eradicate extreme poverty and hunger; Goal 7 to ensure environmental sustainability; and Goal 8 to develop a global partnership for development.

In the introduction of the guidelines it is said that the principles and strategic actions can serve as a checklist to strengthen policies, legal and regulatory frameworks, plans and procedures and, where these do not exist, will be a useful basis for their development and implementation. For this purpose a methodology for a multi-stakeholder process to identify priority actions had been developed, based on the guidelines.

## **2. Objectives**

The main objectives of the regional workshop was to present and discuss the voluntary guidelines on fire management and to test a methodology on how to develop action proposals to integrate the international guidelines into the national plans and strategies in forest fire management in the Caribbean.

## **3. Participants**

The workshop was participated by 15 senior and mid level forestry officers with the responsibility for forest fire management from the Forestry Department of the Ministry of Agriculture of Trinidad and Tobago and 6 participants from Dominica, St. Vincent, St. Lucia, Jamaica, Guyana and Belize (See Annex 2).

The above countries represent a cross section of countries in the Caribbean, with a mix of smaller and medium size island states and two continental countries. The countries represent a wide ranging diversity of different socioeconomic and cultural conditions. In all of the countries, forest and wildfires are important issues and all of the countries have experiences with national forest fire programmes at various levels. The complexity of small island developing states provide an ideal testing ground to gather experiences on how best to integrate the international guidelines in national forest fire management programmes. All of the above countries are member of the Caribbean Subgroup of the Latin American and Caribbean Forestry Commission and the implementation of the regional forest fire strategy is a key element of the work programme of the Caribbean Subgroup.

## **4. Action**

Four day Regional meeting on Fire Management Voluntary Guidelines to develop or strengthen national action plans 20- 23 November, Trinidad, was organized to present and discuss the voluntary guidelines on fire management and to develop and test the methodology on how to integrate the generic guidelines into the national plans and strategies in fire management (see Annex 1.).

The workshop was carried out by FAO HQ/Forestry Department (FOMR) in collaboration with FAO Caribbean Regional office.

## **5. Results**

Countries analysed the weaknesses in their national fire management policy/strategy using the Voluntary Guideline as a check list, and listed and prioritised the needed actions for their countries. Participants gave also comments and proposals for improvement to Guidelines and to methodology to implement the Guidelines.

Action plan for Trinidad and Tobago was developed (see Annex 3) as well as for the other small islands (see Annex 4.).

Some ideas were also developed for the TCP- Facility project to get regional consultants to Trinidad and Tobago to do training for the foresters on fire fighting.

## **6. Follow up**

It is anticipated that the participants on their return to their countries would work on achieving:

- Greater stakeholder participation in fire management activities;
- More clear and consistent fire management policy, legal and regulatory frameworks;
- More balanced planning to take into account all dimensions of fire management;
- Improved field practices;
- Enhanced contribution of fire management on the wider concepts

FOMR Officers will follow up with the Regional FAO Officer countries' activities and help them in drafting more detailed project proposals, training programs and terms of references for consultants to implement the training programs.

## **7. Conclusions & Lessons learned**

The workshop was successful, although there were some issues to be considered in the methodology.

The double objective of presenting and exploring the guidelines and developing project proposals, action plans etc is very ambitious for one week especially if participants are not familiar with the Guidelines beforehand, which was unfortunately the case with most of the participants in the workshop.

Higher officials should also participate in these workshops, so that they would be introduced to the Guidelines. Technical people are needed to evaluate the situation in the countries, but the organizers were left with feeling that in some of the countries represented in the meeting

were not very hopeful of their organizations willingness to implement the proposed activities – some sort of briefing of higher official should be introduced to the program.

Some participants indicated that the workshop, even if very interesting and educative, was more of an academic exercise than a workshop with concrete end product. This is related to the fact that many countries don't have resources for implementing the action plans developed during the workshop and FAO doesn't have direct resources for this work either.

The multi-stakeholder nature of the workshop has to be highlighted to the country focal point assisting in organizing the workshop. In case of Trinidad and Tobacco the participation was limited to forestry sector even if covering the different regions of the country very well.

## **8. Feedback from the participants**

Participants completed an evaluation form to analyse the usefulness of the Guidelines, methodology of the workshop and facilitators skills. In general the feedback was good or very good and suggestions for improvement were to have:

- better meeting facilities
- better field trip
- higher official participating in the workshop
- wider group of stakeholders participating in the workshop
- simplified questionnaire (break down the multiple questions)

Additionally the participants wanted information on suppression techniques and advice on building fire information databases.

## **Annex 1. Workshop Program**

### **Day 1**

Time	
09.00-09.30	Opening of Workshop
09.30-10.00	Presentation of programme
10.00-10.30	Presentation of the guidelines <ul style="list-style-type: none"> <li>• Structure</li> <li>• Stakeholder benefits of implementing the Voluntary Guidelines,</li> <li>• Why a Multi-stakeholder dialogue</li> <li>• Terminology</li> </ul>
10.30-11.00	Break
11.00-12.30	Presentation of national guidelines/policies and synthesis of the results of the questionnaires by country representatives
12.30-13.30	Lunch break
13.30-14.00	Explanation of policy analysis group work/methodology
14.00-15.00	Policy analysis by country representatives in groups: questionnaire
15.00-15.30	Break
15.30-17.00	Policy Analysis by country representatives in groups: questionnaire

### **Day 2**

Time	Activity
08.30-09.30	Overview of the policy analysis for the region
9.30-10.30	Policy analysis by country: in depth reflection
10.30-10.50	Break
10.50-12.10	Presentation by country
12.10-12.30	Discussion on the results and on policy analysis table
12.30-13.30	Lunch
13.30-14.00	Explanation of the Actions and Support needs group work/methodology
14.00-15.00	Actions and support needs analysis in groups of Country representatives: questionnaire
15.00-15.30	Break
15.30-17.00	Actions and Support needs analysis in groups of Country representatives: questionnaire

### **Day 3**

Time	Activity
08.30-9.30	Overview of the actions and need analysis for the region
9.30-10.30	Actions and Support needs analysis in groups of Country representatives: in depth analysis
10.30-10.50	Break
10.50-12.10	Presentation by country
12.10-12.30	Discussion on the results and on performance analysis table
12.30-13.30	Lunch
13.30-14.00	Explanation of the Building the log frame group work /methodology
14.00-15.00	Building the log frame by groups of country representatives
15.00-15.30	Break
15.30-17.00	Building the log frame group work continues

### **Day 4: Field trip**

### **Day 5**

Time	Activity
08.30-10.00	Finishing group work on log frames and preparing presentation
10.00-10.30	Break
10.30-11.30	Group presentation
11.30-12.30	Discussion on the results
12.30-13.30	Lunch
13.30-14.00	Explanation of the Next steps group work
14.00-15.00	Next steps group work
15.00-15.30	Break
15.30-16.00	Group presentations in plenary
16.00-17.00	Discussion, summary and wrap up
17.00-17.30	Closing ceremony of the Workshop

## Annex 2. List of participants

### Regional Workshop on Voluntary Forest Fire Guidelines (Trinidad, November 19-23, 2007)

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### Annex 3. Results of the Groups 1 and 2

#### GROUP 1.

“Principle/Strategic actions“	Outputs	<u>Activities</u>	<u>Responsible</u>
<b>Principle 2.</b>  <b>Human Health and Security</b>	2.1 Safety measures including OSHA implemented.	2.1.1 Assign Health and Safety Officers 2.1.2 Training of Health and Safety Officers 2.1.3 OSHA officer will evaluate and recommend safety standards in Fire Management 2.1.4 Training of Forest Officers responsible for Fire Detection and Suppression in Health and Safety procedures 2.1.5 Training of Forestry Division Daily-rated workers in Fire Safety 2.1.6 Provide Fire Tools and Equipment to the Fire suppression crews 2.1.7 First Aid training to crew officers and at least 2 crew members. 2.1.8 Conduct annual medical / physical fitness tests to all personnel in Fire Management 2.1.9 Conduct physical training with all personnel on a regular basis	2.1.1-4 Ministry of Labour  2.1.4-5 Forestry Division / Fire Services / U.S. Forest Fire Service / FAO / Red Cross  2.1.6 Forestry Division  2.1.7-8 Ministry of Health  2.1.9 Forestry Division
	2.2 An early detection system developed.	2.2.1 Establish fire watch groups in communities near hot spot areas 2.2.2 Establish and promote an efficient fire hotline system 2.2.3 Monitoring fire on a regular basis using FIRM system 2.2.4 Developing a criteria for and establishing a fire rating system 2.2.5 Establishing better communication with Meteorological services on the weather conditions on a daily basis	2.2.1-2 Forestry Division/ village councils/ National reforestation and watershed rehabilitation programme 2.2.3 Forestry Division/ I.T. department (MIS Unit) 2.2.4 FAO/Met Services/Forestry Division/ Fire services 2.2.5 Met Services/Forestry Division
	2.3 Communities in Fire Management empowered.	2.3.1 Assist and develop community groups in fire detection and suppression 2.3.2 Training of community groups in Fire Safety 2.3.3 Assist in sourcing Fire Tools and Equipment to the community groups	2.3.1-3 Forestry Division

<p><b>Principle 9.</b></p> <p><b>Multi stakeholder approach</b></p>	<p>9.1 Coordination with all stakeholders with respect to Fire Management established.</p>	<p>9.1.1 Inventory of all stakeholder groups with respect to forest fires  9.1.2 Organization of workshops with all stakeholder groups to define existing problems and needs  9.1.3 Generating a plan from the workshops conducted to strengthen co- ordination amongst the stakeholders  9.1.4 Training and implementation among the stakeholders in the Incident Command System  9.1.5 Schedule and realize meetings amongst the stakeholders before the fire season in order to ensure proper coordination in the case of fires.  9.1.6 Plan visits to sites with the stakeholders during the fire season to discuss current problems  9.1.7 Schedule and realize meetings amongst the stakeholders after the fire season to evaluate fire incidents and responses to fire incidents to improve for subsequent fire season  9.1.8 Provide stakeholders with equipment and information for the next fire season  9.1.9 Establish a Public Sector Investment Program (PSIP) to train local community groups  9.1.10 Develop and train local community groups (Fire watch groups, principle 2) in fire suppression techniques to assist throughout the fire season</p>	<p>9.1.1,2,9 Forestry Division  9.1.3,5,6,7 All Stakeholders  9.1.4 U.S. Forest Fire Services, FAO, Forestry Division, T&amp;T Fire Services  9.1.8 Forestry Division, FAO, Private Organizations, U.S. Forest Fire Services  9.1.10 FAO, Forestry Division, U.S. Forest Fire Services</p>
<p><b>Strategic action 1.</b></p> <p><b>Fire Resource Management and Planning</b></p>	<p>1.1 Current Forest Policy with respect to Forest Fire Management amended.</p> <p>1.2 Coordination with all stakeholders with respect to Fire Resource Management and Planning established.</p>	<p>1.1.1 Submit Present Amended Forest Policy to the appropriate Minister  1.1.2 To Solicit and ensure comments regarding Fire Management from all stakeholders on the Amended Forest Policy  1.1.3 Re-Submit the Policy to the Parliament for ratification</p> <p>(See Principle 9)</p>	<p>1.1.1 Appropriate/Responsible Ministry and Tobago House of Assembly  1.1.2,3 Appropriate/Responsible Ministry</p>

<p><b>Principle 7.</b></p> <p><b>Fire Effects on Ecosystem</b></p>	<p>7.1 Sensitive ecosystems, archaeological, historical, cultural and traditional heritage values protected.</p> <p>7.2 Protection against pests, diseases and the spread of invasive species conducted.</p> <p>7.3 Controlled burning as a management tool used.</p>	<p>7.3.1 Conduct control burns before the fire season</p> <p>7.3.2 Use control burning to remove fuel from known hot spots to protect established plantations</p> <p>7.3.4 Train crews on methods of control burning as a means to manage fires</p>	
<p><b>Strategic action 3.</b></p> <p><b>Fire Awareness and Education</b></p>	<p>3.1 A comprehensive public awareness program on Forest Fires developed.</p>	<p>schools, communities, media and the general public</p>	
<p><b>Strategic action 6.</b></p> <p><b>Fire preparedness, including technical training</b></p>	<p>6.1 Fire workshops/seminars/training before and after the fire season conducted.</p>		
	<p>6.2 Monitoring and Evaluation committee for fire developed.</p>		

**GROUP 2.**

“Principle/Strategic actions“	Outputs	<u>Activities</u>	<u>Responsible</u>
<b>Principle 2.</b>  <b>Human health and security</b>	2.1 Safety for fire fighters, fire managers and public in all fire activities provided.	2.1.1 Protective gears must be made available to ALL personnel 2.1.2 First Aid equipment must be available on site 2.1.3 All personnel must be trained to administer FIRST AID 2.1.4 Air evacuation should be accessible if needed	Forestry Division Forestry Division Forestry Division Ministry of National Security
	2.3 Fire danger rating system, in conjunction with reliable weather forecasting, to provide hazard and risk assessments to agencies, landowners and communities developed.	2.3.1 Research existing models to adapt to local system 2.3.2 Develop daily reporting link with Meteorological Office 2.3.3 Develop fire danger rating index and broadcast via media	
	2.4 Early detection and warning systems to reduce the health and security impacts of wildfire utilized.	2.4.1 Revamp and increase use of fire towers 2.4.2 Institute dedicated fire hotlines for public reporting 2.4.3 Institute mobile public address systems 2.4.4 Central command link to electronic media for warning systems	
	2.6 Community-based risk-reduction activities during all stages of fire-management activity: pre-fire, during fire events and post-fire conducted.	2.6.1 Advise community about methods of fuel/risk reduction 2.6.2 Fire trace communities adjacent to high risk areas 2.6.3 Empower community groups to assist with risk reduction 2.6.4 Evacuate communities at risk during fires 2.6.5 Ensure no chance of re-ignition	
	2.8 Communities empowered to accept responsibility for the management of fire and its effects on their health, safety and welfare.	2.8.1 Educate and train community groups to manage fires in district 2.8.2 Provide access to necessary tools and equipment 2.8.3 Develop command hierarchy within community for fire management	
<b>Strategic action 15.</b>  <b>Monitoring and assessment</b>	15.1 Comprehensive plan for monitoring and assessing all aspects of the fire-management programme implemented.	15.1.1 Establish periodic review of management plans 15.1.2 Develop comprehensive check list of critical and other resources 15.1.3 Develop real time feed back capabilities, that measures the effectiveness of efforts and are capable of causing change	

	15.2 Safety programme, including analysis of near-miss incidents, accident reports and a review of lessons learned, to reduce the risk to firefighters, fire managers and the public implemented and monitored.	15.2.1 Analyze reports of near misses and accidents, categorize them 15.2.2 Adjust safety programme to reflect changes needed 15.2.3 Adjust safety programme to reflect new technology and procedures	
	15.3 Information and data from the fire prevention programme used to develop a monitoring system that measures the effectiveness of fire prevention efforts.	Same as 15.1.3	
	15.4 A programme to monitor the ecological effects of fire and of suppression methods including cooperation with universities, other research organizations and local communities implemented.	15.4.1 Establish links with local, regional and international research entities. 15.4.2 Organize for knowledge transfer	
Strategic Actions 9.	9.1 The initial-attack organization trained, equipped, supported and staffed to meet local requirements.	9.1.1 Ensure personnel properly trained, equipped etc 9.1.2 Conduct periodic updates	
Initial attack/action			
	9.2 All initial-attack actions based on the resource, cultural, economic and ecological objectives and policies for the area, including the appropriate use of tactics and equipment.	9.2.1 Train personnel to identify relevant parameters and incorporate them into attack.	
	9.4 The initial-attack organization has access to communications systems to receive timely information on fire starts, locations and status from official sources and from the public.	9.4.1 Institute a dedicated communication system 9.4.2 Institute dedicated hotline for public access 9.4.3 Periodically review both systems 9.4.4 Ensure communication systems reflect as much as possible, current technology	
	9.5 The initial-attack organization trained and prepared for the transition	9.5.1 Train personnel to recognize when transition state is achieved 9.5.2 Train personnel to adopt required response	

	activities required when fires escape and become larger, requiring large-fire suppression strategies and tactics to be formulated and applied across the incident.	9.5.3 Ensure support is readily available for larger fire response 9.5.4 Ensure command protocol is in place for command shift to larger fire	
	9.6 Based on the requirements of the legislative framework, the initial-attack organization is prepared for non-fire activities, such as protecting private citizens and directing evacuation, and is trained in rescue and emergency medical procedures.	9.6.1 Train all personnel in rescue and emergency procedures, in keeping with accepted international standards 9.6.2 Conduct periodic drills to hone skills of all personnel	
	9.7 The initial-attack organization trained to collect data and prepare evaluations and reports in order to improve organizational effectiveness and to work with the media in keeping citizens informed.	9.7.1 Train all personnel in data collection, evaluation and report preparation 9.7.2 Ensure system is implemented to evaluate proposals to improve effectiveness 9.7.3 Ensure appropriate personnel are informed of analysis to keep citizens informed	

### Annex 4. Results of the International group 3.

Principles	Outputs	Activities	Responsible
<b>Principle 8. Legislation and Governance</b>			
<b>All fire-management activities should be based on a legal framework and supported by clear policy and procedures</b>			
	8.1 The principles and strategic actions are used as a basis for developing and implementing national or local legislation	8.1.1 Review existing policies and legislation and formulate new ones	FD/Legal Consultant(s)
		8.1.2 Stakeholders consultation	FD/Legal Consultant(s)
		8.1.3 Country wide assessment of fire situation	FD/Legal Consultant(s)
		8.1.4 Prepare draft legislation	FD/Legal Consultant(s)
		8.1.5 Stakeholders consultation	FD/Legal Consultant(s)
		8.1.6 Finalize legislation; presented and endorsed by government	FD/Legal Consultant(s)
		8.1.7 Training and Public awareness	FD/Legal Consultant(s)
		8.1.8 Enforcement	FD
		8.1.9 Periodic review and dissemination of info	FD

<b>Principle 1.Sustainable livelihoods</b>			
<b>The appropriate use and management of fire will promote sustainable livelihoods.</b>			
	1.4 Planned fire across broad landscapes promoted to restore or maintain natural fire regimes, facilitate land management and reduce the risk of large-scale, destructive wildfires	1.4.1 Assessment of the impacts of forest fires on ecosystems, livelihoods	FD/ Consultant (s)(sociologist, ecologist)
		1.4.2 Stakeholders consultation	FD/ Consultant (s)
		1.4.3 Training/Capacity building in suppression and use of fire	FD/Consultant (Fire Mgnt expert)
		1.4.4 Development of fire management plans	FD/Stakeholders
		1.4.5 Implementation of fire management plans	FD/Stakeholders
		1.4.6 Assessment of the impacts of planned fires	FD/Stakeholders

<b>Principle 6. Interactions between climate change and fire</b>			
<b>The interactions of climate change with vegetation cover and fire regimes should be understood and appropriately considered in the planning and implementation of fire use.</b>			
	6.5 Minimized Greenhouse gas emissions that occur as a result of large-scale, unwanted fire by restoring and maintaining ecologically appropriate fire regimes.	6.5.1 Assessment of the impacts of climate change on the forestry, agricultural, tourism sectors	FD/Climate Change Center, Met Service, Agric. Dept.
		6.5.2 Incorporation of mitigation practices into forestry, agricultural, other practices,	FD/Climate Change Center, Met Service, Agric. Dept.
<b>Strategic action 6. Fire preparedness, including technical training</b>			
	6.8 . Training is appropriate to local ecological, social and political conditions and delivered to the same standard for full-time, paid, volunteer or other rural workers for the expected fire characteristics.	6.8.1 Assessment of land management/conservation objectives	FD/Consultant (s)
		6.8.2 Assessment of the capabilities/training level of FD/Stakeholders to conduct fire management actions to achieve desired goals	FD/Consultant (s)
		6.8.3 Conduct training in all aspects of fire management	FD/Consultant (s) (fire mgnt. experts)
		6.8.4 Develop national, regional, site-specific fire management plans	
		6.8.5 Implement forest fire management plans	FD/Stakeholders

<b>Strategic action 1. Fire and resource management planning</b>			
	1.6 Plans are based on the types of ecosystems, potential fire effects, fire regimes, and social, economic and environmental values.	1.6.1 Preparation/assessment of resource management plans for the incorporation of social values	FD/ Rural development Dept./ Gender affairs/Consultant(s)
		1.6.2 Preparation/Assessment of resource management plans for the incorporation of environmental values	FD/ Rural development Dept./ Environmental agencies/Consultant(s)
		1.6.3 Preparation/Assessment of resource management plans for the incorporation of economic values	FD/ Rural development Dept./Consultant(s)
		1.6.4 Community and stakeholder consultation in the preparation of resource management plans	FD/Stakeholders/consultant(s)
		1.6.5 Assess fire risks/hazards across landscape, ecosystems	FD/ Fire Service/Health/Environmental Agencies/Agric. Dept./consultants
		1.6.6 Establish weather forecasting and early warning systems	FD/Met. Service
		1.6.7 Establish the role of agencies in fire management actions	FD/ Fire Service/Health/Environmental Agencies/Agric. Dept.
		1.6.8 Incorporate fire management plans into overall resource management plans	FD/Stakeholders/consultant(s)

<b>Strategic action 3. Fire Awareness and education</b>			
	3.1 Fire awareness and educational programs that target specific audiences and communities develop.	3.1.1 Review existing programs	FD/consultant(s)
		3.1.2 Assess the traditional uses and causes of fire	FD/consultant(s)
		3.1.3 Develop training programs (school presentations, courses, brochures, radio, tv talk shows)	FD/consultant(s)
		3.1.3 Conduct training programs	FD/consultant(s)

Country	Future actions		
	Short term	medium term	Long term
Dominica	Review existing legislation; stakeholder consultations.	Develop fire mgnt. Plan; public awareness and research.	Put and overall/ and site specific plan together.
Guyana	Develop a strategic forest fire management plan (3 years).	Review and develop appropriate legislation to address areas in the plan	Develop specific forest fire management plan for area/s (eg.region, zone, parks, etc)
St. Lucia	National Wildfire plan approved by cabinet; site specific planning; education; fire response planning.	Fire response planning; site specific plans; building capacity; revise legislation.	Monitoring and assessment, fuel mgnt. (planned fires); develop model fire mgnt. Plan.
Jamaica	Review existing legislation; develop forest fire mgnt. plan and incorporate into national forest mgnt program.	Enforce legislation and train foresters in fire management.	Ensure national fire mgnt. Plan is an integral part of overall national fire mgnt. strategy.
Belize	Attract funding, review existing legislation and formulate new ones, assessment of fire situation.	Have revised legislation endorsed by Govt.; training in fire prevention and use of fire; develop a national fire management strategy and site specific fire management plans; public awareness; research and monitoring.	Develop and promote model fire management plans; reduce incidence of unwanted fires by 50 %.
St. Vincent	Assess in house capacity, review existing legislation collect data.	Bring key stakeholders together, develop capacity where weakness exist; strengthen legislation.	Put and overall/ and site specific plan together.

## **Publications available on Fire Management**

### ***Fire Management Working Papers: Thematic Paper Series***

Note:

In Code “Working Paper FFM/xx”, “x” indicates the WP series number and a suffix E, F, R or S indicates: E = English, F = French, R= Russian, S = Spanish. No suffix indicates E only.

**Available at the Fire Management web site:**

Working Paper FPF/1	<i>Guidelines on Fire Management in Temperate and Boreal Forests.</i> November 2002.
Working Paper FM/2	<i>International Wildland Fire Management Agreements Template.</i> Tom Frey, Ricardo Vélez Muñoz. January 2004.
Working Paper FM/3	<i>Legal Frameworks for Forest Fire Management: International Agreements and National Legislation.</i> Fernando Fernández Arriaga, Frédéric St-Martin, Tom Frey, Ricardo Vélez Muñoz. March 2004.
Working Paper FM/4	<i>Community-Based Fire Management in Spain.</i> Ricardo Vélez Muñoz. April 2005.
Working Paper FM/5	<i>Report on Fires in the South American Region.</i> María Isabel Manta Nolasco. March 2006.
Working Paper FM/6	<i>Report on Fires in the North East Asian Region.</i> Leonid Kondrashov. March 2006.
Working Paper FM/7	<i>Report on Fires in the Baltic Region and adjacent countries.</i> Ilkka Vanha-Majamaa. March 2006.
Working Paper FM/8	<i>Report on Fires in the Mediterranean Region.</i> A.P. Dimitrakopoulos and I.D. Mitsopoulos. March 2006.
Working Paper FM/9	<i>Report on Fires in the Sub-Saharan Africa (SSA) Region.</i> Alexander Held. March 2006.
Working Paper FM/10	<i>Report on Fires in the South East Asian Region.</i> B.J. Shields, R.W. Smith and D. Ganz. March 2006.
Working Paper FM/11	<i>Report on Fires in the Balkan Region.</i> N. Nikolov. March 2006.
Working Paper FM/12	<i>Report on Fires in the Caribbean and Mesoamerican Regions.</i> A.M.J. Robbins. March 2006.
Working Paper FM/13	<i>Report on Fires in the Australasian Region.</i> P.F. Moore. March 2006.
Working Paper FM/14	<i>Report on Fires in the South Asian Region.</i> A.M. Benndorf and J.G. Goldammer. March 2006.
Working Paper FM/15	<i>Report on Fires in the North American Region.</i> R. Martínez, B.J. Stocks and D. Truesdale. March 2006.
Working Paper FM/16	<i>Report on Fires in the Central Asian Region and adjacent countries.</i> Johann G. Goldammer. March 2006.
Working Paper FM/17	Fire management: voluntary guidelines. Principles and strategic actions. 2006. FAO, Rome, December, 2006 (E, F, R, S)
Working Paper FM/18	Fire management: Review of international cooperation. FAO, Rome, December 2006
Working Paper FM/19	Fire management voluntary guidelines - Preparing for action - country and regional level methodology. Vuorinen A. P., Rosengren, L.M. 2008
Working Paper FM/20	Implementing the Fire Management Voluntary Guidelines - Report of the Trinidad and Tobago regional workshop, 20-23 November 2007. Vuorinen A.P. 2008

