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COMMUNITY-BASED FIRE MANAGEMENT

A review

Cover photo:
Community-based fire management in Zimbabwe, P. Vuorinen, 2009

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Foreword

For more than 60 years, FAO has made dedicated efforts to strengthen the capacities of member countries in forest fire management. Over the years, many fire management projects have been implemented in member countries. Building on the experiences of FAO and others, two complementary approaches to fire management have been developed.

The first is an integrated approach. Integrated fire management combines science and fire management with socio-economic elements, at multiple levels. Environmental, cultural, social, economic and political interactions are considered. An integrated approach also looks at all types of vegetation fires, as fires do not stop at the border between one land-use or vegetation type and another. Integrated fire management requires a balance of many different fire-related activities; rather than being limited to actions involving fire suppression and provision of equipment, it extends to such activities as prevention, awareness-raising, preparedness and restoration. The integrated approach is reflected in the Fire Management Voluntary Guidelines published by FAO in 2006. Ideally, this approach would lead to integrated landscape fire management or integrated natural resource fire management.

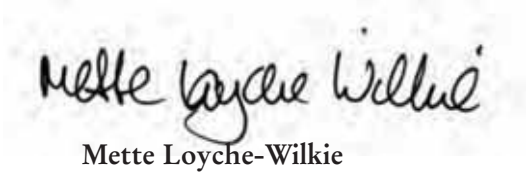
The second approach is a participatory approach known as community-based fire management. Globally, people cause most fires. Involving the population in all aspects of relevant policy development and fire management practices is, therefore, a logical approach. Rural communities, especially in developing countries, are often closest to and most affected by vegetation fires. Often they cannot call on distant national agencies to prevent or to fight fires. As a consequence, they have to deal with these fires themselves. Most fire management projects of FAO focus on this approach. Like integrated fire management, community-based fire management also promotes activities that extend beyond suppression and provision of equipment to emphasize prevention and preparedness in a landscape perspective.

Community-based fire management can take different forms. The present publication highlights the state of the art in community-based fire management and provides updated information that complements the approach published previously in the Fire Management Voluntary Guidelines.

The document redefines the concept, reviews some implementation and training case studies, reflects on related policy and legal frameworks and considers the climate change concept. It draws attention to limitations in: policy and law, capacity, training opportunities, incentives, concept promotion and funding. It concludes with current challenges for community-based fire management, such as:

- how to make the approach an integral component in natural resource and landscape management, and in rural development;
- the development of partnerships with communities, the private sector, NGOs, governments and their agencies to provide knowledge and resources necessary for effective implementation; and
- the need to direct existing information about this approach to resource managers and end users.

As a next step in community-based fire management, and based on this publication, the Forestry Department hopes to produce a tool for practitioners in this field. To this end we encourage you to provide us with feedback on this publication.



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Acronyms

CBFiM	community-based fire management
CBFM	community-based forest management
CBNRM	community-based natural resource management
CLC	Central Land Council (Australia)
CONAFOR	National Forestry Commission (Mexico)
CONANP	National Protected Areas Commission (Mexico)
CWPP	Community Wildfire Protection Plan
FMCN	Mexican Conservation Fund
GFMC	Global Fire Monitoring Center
GHG	greenhouse gas
IFM	integrated fire management
IPA	Indigenous Protected Area (Australia)
NGO	non-governmental organization
NIFC	National Interagency Fire Center (United States of America)
NTFP	non-timber forest product
PRA	participatory rapid appraisal
REDD	reducing emissions from deforestation and forest degradation
TNC	The Nature Conservancy
VER	verified emission reductions
WUI	wildland urban interface

Executive summary

Fire is a natural disturbance event that has also been used by humans for millennia as a tool to manipulate their environment. Fire still plays an essential role in many societies today; however, fire is not always used appropriately and can often be damaging. The danger is exacerbated by issues such as changes in land use, increasing population in rural areas, inadequate or inappropriate policy, and climate change. Traditional fire management practices and contemporary approaches used in developed countries – and increasingly being adopted in developing countries – often do not adequately address the complex issues of fire management. Through its integrated approach, community-based fire management (CBFiM) has the potential to address many of these challenges effectively.

Numerous natural resource management projects are being implemented globally that directly involve or collaborate with communities. The majority of these projects include a forest-management component with a focus on procurement, conservation, rural livelihoods and, more recently, carbon sequestration and storage. There are examples, particularly in the tropics, where communities involved in natural resource management projects have traditionally used fire as a tool for a variety of livelihood activities such as clearing land, hunting and agriculture, and they continue to do so. Many community-based natural resource management (CBNRM) projects, in which fire has been identified as a threat, do not recognize the essential role that communities play in effective fire management. In many instances, these projects fail to include communities in the fire management process, resulting in less effective management of fire and increased risk of damaging fire events that threaten the long-term success of the project. An integrated approach to fire management that includes communities in decision-making and implementation, CBFiM is a positive, perhaps essential, element of project implementation where fire has been identified as a threat.

To implement CBFiM successfully, a number of pre-existing conditions need to be present. Good governance and relevant policy and legislation that support integrated fire management approaches are the minimum equirements for the sustainable implementation of CBFiM. To implement CBFiM, existing governance and policy in that location should be examined from an integrated fire management perspective to determine strengths and shortfalls and to formulate potential modifications that will enable a feasible and long-term CBFiM strategy to be developed and implemented.

CBFiM training workshops designed to increase the expertise of practitioners should be conducted at the national and sub-national levels and should be followed up with an adequate level of technical support.

It is often necessary to collect field data rapidly and efficiently to support CBFiM project design and implementation. There are a number of ways of doing this. A notable methodology used by natural resource professionals is known as

participatory rapid appraisal (PRA). A number of PRA tools have been adapted and adopted by CBFiM practitioners to identify the strengths and weaknesses of existing CBFiM programmes and, in some cases, to assess the feasibility of initial CBFiM implementation. A methodology based on the Fire Management Voluntary Guidelines (FAO, 2006) may be used to design or review fire management circumstances, action plans or policies, using a participatory approach that includes all stakeholders and that is a good fit for CBFiM.

With an increasing amount of attention being focused on anthropogenic fire and its linkages to climate change, CBFiM should be considered as a viable approach to both effective fire management and climate change mitigation. Specifically, CBFiM can be more frequently employed to reduce carbon emissions and the threat of fire to carbon sequestration through active community involvement in fire management. Carbon sequestration projects, including approaches based on reduced emissions from deforestation and forest degradation (REDD), need to recognize the importance of community involvement in fire management to ensure the long-term success of the project.

The effective implementation of CBFiM is not without its challenges. Some of these challenges include: lack of institutional support in terms of appropriate policy, limited capacity, minimal training opportunities, lack of incentives for locals to engage and lack of resources, including funding and technical support. It is important that each of these challenges be examined within its individual context and that solutions be developed to meet each unique situation. Tools and resources need to be developed that are culturally appropriate, that are easily accessible to CBFiM practitioners and other end users and that support the effective long-term implementation of CBFiM. CBFiM is not a "one size fits all" approach, but rather must be tailored to meet specific needs and circumstances to be an effective and sustainable approach to fire management.