



FAO FIRE MANAGEMENT PROGRAMME

MANAGING LANDSCAPES AND FIRES IN A CHANGING CLIMATE



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It has been estimated that annually vegetation fires burn up to 500 million hectares of woodland, open forests, tropical and sub-tropical savannahs, range lands and agriculture land. A recent assessment of megafires (uncontrolled vegetation fires that exceed the capacities of even the most advanced countries) showed that they are increasing at an alarming rate, influenced by climate change and mismanagement of vegetation in different landuses.

As well as the tragic impact on people, homes and livelihoods, wildfires also affect biodiversity, impact water resources, increase soil degradation and affect air quality and the balance of greenhouse gases in the air. Recent studies claim that over 300,000 deaths are caused annually by vegetation fires.

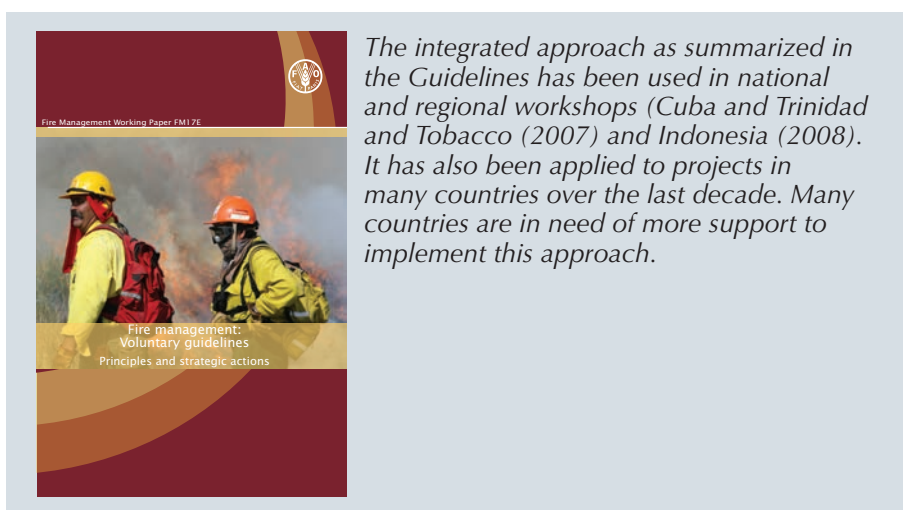
FAO's Fire Management programme has been established at the request of national governments made through COFO and international fora to address the impacts of wildfires and their prevention. The programme makes FAO's technical competence and integrated capacity, in full collaboration with its partners, available to member countries in a coherent, comprehensive and consistent way. This is achieved by: being the global reference point for fire information and knowledge; working with national and local governments, international organizations and networks, and local communities to strengthen fire management capacity at national levels and by providing access to experience and expertise in fire management. The programme has six working areas:

1. HOLISTIC AND INTEGRATED FIRE MANAGEMENT APPROACH APPLIED AT COUNTRY LEVEL

A new, and more integrated and holistic approach is being developed to:

- integrate fire issues as part of Sustainable Forest Management and sustainable development processes;
- reinforce a coherent framework at local, national and international levels;
- ensure a collaborative effort among all the sectors involved at landscape level (forestry, agriculture, livestock, etc);
- address imbalances in fire management, which currently is focused mainly on fire suppression.

The development of the FAO Fire Management Voluntary Guidelines (translated into all official FAO languages) can be considered a first step in promoting the integrated fire management approach; advocating the integration of review, risk reduction, readiness and response to fires and restoration, into one policy at country level.



2. ENHANCED AVAILABILITY OF AND ACCESS TO FIRE INFORMATION AT NATIONAL AND GLOBAL LEVEL



FAO prepared the *Fire Management Global Assessment Study* (2006) and since then global fire data were an integral part of the *Global Forest Resources Assessment* (2010, 2015). FAO is also hosting the *Global Fire Information Management System* (GFIMS). Further steps are being made to develop a new global assessment to obtain more accurate data on areas burned at global level and to characterize the fire regimes at national level.

Although globally the impacts of vegetation fires are increasingly recognized, there is a lack of information regarding their trends and underlying causes, especially at national level. Obtaining information on the occurrence, scope and damage generated by wildfires is one of the key challenges to be addressed, as a basis for designing effective national fire management strategies, especially in the field of prevention. More data are also needed to better understand the relationship between vegetation fires and climate change.

3. IMPROVED UNDERSTANDING OF KEY ELEMENTS OF FIRE MANAGEMENT

A better understanding of fires is needed to improve policies, as well as the decision making of all stakeholders dealing with land management. There is a need for a body of “Smart Fire” expertise that has a good insight into landscapes, communities and ecosystems; as well as agriculture, livestock, non-timber forest products, disaster risk management, remote sensing, and also the legal and policy aspects of wildfires. Furthermore, material for improving capacity development should be produced and made available to member countries in all official FAO languages.

FAO has developed or supported the publication of several handbooks and guidelines, such as: the *Fire Management Voluntary Guidelines*, the *Wildland Fire Management Handbook for trainers*, *The Guide on Forest Fires and the Law for National Policy and Legislation Drafters*, etc.



4. ENHANCED STAKEHOLDERS PARTICIPATION; PARTICULARLY COMMUNITY-BASED FIRE MANAGEMENT (CBFiM) IS PROMOTED AND INSTITUTIONALISED

The failure to develop solutions cooperatively with all stakeholders and implement them jointly, has proven to be a key factor in the repetitive occurrence of fires. All stakeholders, particularly local communities directly managing natural resources, need to be involved in the early stages of planning, taking into account their practices, knowledge and potential contribution. Local communities are the crucial actors who take daily decisions on the use of fire as a land management tool. **Community-Based Fire Management**, which is a manifestation of integrated fire management, is a critical focus for FAO.



Most FAO fire management projects have a strong component on CBFiM. In Tanzania, FAO is collecting information on traditional uses of fire and CBFiM to develop recommendations for implementation.

FAO has developed several publications on CBFiM and has also carried out regional and national training on it - South Africa (2004), Belize (2005), Indonesia (2007), China (2009) and Ethiopia (2009).

FAO was also one of the driving forces behind the sessions on “Community Based Fire Management” and on “Traditional Fire Management Knowledge and Practices” during the International Wildland Fire Conference in South Africa (2012).

5. EMERGING ISSUES SUCH AS CLIMATE CHANGE ARE ADDRESSED

In Tanzania, FAO is developing a study on carbon accounting and vegetation fires, and with UNREDD programme steps are being taken to develop national datasets to characterise fire regimes in order to address the increasing risk of wildfires.

FAO is also implementing "climate smart agriculture" projects based on alternatives for use of fire in agriculture.

Wildfires are a significant source of direct greenhouse gas emissions. Furthermore, they degrade forests and damage carbon stocks; all which will increase as a result of climate change. With the increased risk of wildfires, integrated fire management is a key component of both climate change mitigation and adaptation strategies. Integrated fire management must be a core consideration of the REDD+ programmes in order to address forest degradation, secure permanence and reduce direct fire emissions.

6. BETTER INTERNATIONAL COORDINATION, COMMUNICATION AND INCREASED INTERNATIONAL PROFILE

Many actors are dealing with fires from different angles and on different levels: NGOs supporting community development; forestry companies; remote sensing research centres; governmental organizations responsible for agriculture, forestry, international cooperation and civil protection. Coordination, communication and a better exchange of experiences between all actors is essential.

FAO is hosting the secretariats of the FAO-UNECE Team of Forest Fire Experts and of the Fire Management Actions Alliance. FAO also has a key role in the International Liaison Committee which supported the organization of the International Wildland Fire Conferences in Spain (2007) and South Africa (2012). FAO is also a member of the Fire Management Advisory Group which supports the regional UNISDR networks on fire management.



FIRE MANAGEMENT PROJECTS (2004-2012)

