Community-based fire management in southern Africa

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Ensuring the participation of local people in forest fire management planning can help reduce the number and spread of wildfires.

The number and severity of wildfires – fires on wildlands, including forests, burning without control and for no intended purpose – are growing in many parts of the world. Some 95 percent of these fires are caused by human activities. One of the central questions in national and international efforts to develop mitigation strategies for wildfires is how to address the human causes of fire, i.e. by changing human behaviour. Ensuring the participation of local people in fire management planning has been increasingly identified over the past decade as necessary for reducing the number and spread of wildfires.

Since 1996, some countries in southern Africa have achieved encouraging results through the introduction of participatory fire management schemes involving government agencies, non-governmental organizations (NGOs), local communities, women's groups and farmers' organizations in forest fire prevention, detection and control (Jurvélius, 2003). Pilot approaches in participatory fire management have been implemented over a few million hectares of savannah forests, woodlands and flood plains in several countries.

Historically, the use of fire by local people in southern Africa required permission from the traditional authorities and was restricted to certain occasions. Lands in this geographic zone were affected by wildfire about every 12 years. During colonial times new fire legislation and no-burn policies modelled on those in Europe were introduced, and local control mechanisms were revoked. Only government officials, not local people, were allowed to set fires. However, from the beginning of the twentieth century, lack of supervision, particularly in remote areas, led to increasingly indiscriminate use of fire by local populations. In the mid-1990s, 50 to 85 percent of the forests, woodlands and savannah in Angola, Botswana, Namibia, Zambia and Zimbabwe burned each year.

In 1995, when 300 head of cattle died in the Caprivi region of Namibia because of loss of grazing lands to widespread fires, traditional authorities recognized that a new approach was needed to curb the burning. They proposed a community-based approach to fire management, which after field testing and refinement was subsequently adopted by the government. The approach involves:

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Survey of people's attitudes on fire and burning in Katima Mulilo, Namibia (a town whose name means "quench the fire" in the Lozi language, since the Zambezi River quenches the savannah woodland fires at Katima Mulilo), 1998

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Controlling prescribed burning using locally produced fire swatters, Katima Mulilo, Namibia, 1998

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- exchange of information and experiences on a national level and involvement of community-based resource management organizations in developing policy and legislation that will enable the participation of all stakeholders in forest fire management;
- collection of baseline data (including gender-aggregated data) to determine values, perceptions, beliefs, expectations and behaviour of local people in regard to forest fires and burning;
- involvement of local communities and other stakeholders in income-generating forest and pasture management activities;
- preparation of integrated forest fire management plans assigning responsibilities to various ministries and traditional authorities;
- development of locally viable approaches with participation of traditional authorities and local stakeholders;
- training of government officials, traditional authorities and local people on the role of forests and trees in the environment, the links between fire and availability of locally used products (e.g. non-wood forest products), and principles of forest fire management;
- training of local fire management units in prescribed burning and in fire control techniques such as the preparation of fuelbreaks or fire lines at strategic points or encouragement of overgrazing to reduce fuel loads in critical fire areas;
- provision by government of the necessary firefighting tools to local fire management units;
- assessing the efficiency and effectiveness of fuelbreak systems cleared by local communities or stakeholders;
- production and dissemination of fire awareness materials and introduction of fire awareness programmes at local schools;
- where appropriate, introduction of compensation or incentive schemes for the benefit of participating stakeholders.

Community-based fire management helped reduce wildfires in Namibia's Caprivi region by more than 50 percent (from 840 000 to 400 000 ha per year) over the following five years. After this success, FAO helped disseminate the approach to other countries in Africa. Since 1996, tens of thousands of local people and government staff have been trained in forest fire management and related activities in Namibia, Burkina Faso (Wright and Byring, 2003) and most recently Mozambique. The approach, adapted to local cultures and conditions, is now being extended to other developing countries in Africa, Asia, the Near East and Latin America (FAO, 2003) as well as to countries with economies in transition.

All communities have some degree of heterogeneity in terms of economic interests, decision-making, power, traditions and resource use patterns. These differences often have important consequences in fire management, as fires that negatively affect some may benefit others. In community-based fire management, the community identifies a group of people who need to cooperate to achieve agreed objectives. The approach helps ensure that communities have genuine input in making decisions and that these decisions will be implemented effectively. For the concept to work, communities must:

- have sufficient land tenure (formal

"Be careful of fire – it can hurt", an educational poster drawn by an artist from a local arts association in Katima Mulilo, Namibia

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and informal) to ensure their rights are considered along with broader (e.g. national, provincial and district) production and environmental protection aims and objectives;

- be convinced that involvement in land and fire management decision-making and activities will improve their livelihood, health and security (Abberger and Marbyanto, 2003).

In addition, it is essential that fire awareness programmes target women and not only men. Studies in Namibia (NFFP, 2000) and Mozambique (Virtanen, Hämäläinen and Ntela, 2002) showed that although the clearing of new land in shifting cultivation was usually carried out by men, 80 percent of the number of fires were lit by women, who commonly carried out agricultural burning following the harvesting of crops and spot-burning to remove stumps from clearings. ◆

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