

Fire in miombo woodlands: a case study of Bukombe District Shinyanga, Tanzania

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Abstract

Concern about the environmental impact of forest fires in the Bukombe District in Tanzania has been growing in the last two decades. Most in the district are caused by human activities. The protection of the miombo woodlands is hampered by a lack of fire management policies and legal instruments to support fire prevention and suppression. Trained human resources are also limited. Local communities have their own management system and forest fire management that complement local ecology and traditions. It is therefore expedient to involve them in forest management. The HASHI (Soil Conservation and Afforestation) Project together with the Forest and Beekeeping Division have organized joint forest management in selected locations where the villagers are granted use rights to forest resources. The creation of local ownership has been a key to the success of fire management.

1. Introduction

The Bukombe District is located in northern Tanzania, with an area of about 10,500 km². During the last two decades, concern about the environmental impact of forest fires in the district has been growing. The main natural vegetation in the district is composed of woodland and thick forest. More than 90 percent of all fires are caused by human activities such as:

- ◆ agriculture, especially farm preparation and shifting cultivation;
- ◆ logging;
- ◆ charcoal burning;
- ◆ hunting and collection of honey (smoke is used to drive animals from their hideouts and bees from their hives);
- ◆ arson; and
- ◆ traditional tribal fire uses.

Forest fire in the miombo woodland has resulted in significant damage to property and many lives have been lost. Even though fire is important for the regeneration and growth of the miombo woodlands, the uses of fire will always be controversial.

The major problems facing forest fire protection are age-old traditional attitudes, socio-economic activities and, to some extent, past national forest policies that dissociated the local communities from their traditional access and utilisation of the forests. The government used to be the custodian of such forests while local communities were barred from the resources. For example, the local villagers were not allowed to collect even firewood from the forest. Such alienation induces local communities to be detached and indifferent to their environment. Hence they do not care too much about the forest.

Efforts to combat forest fires in Tanzania, in general, are hindered by a lack of fire management policies and legal instruments to support fire prevention and suppression. Furthermore, technical and professional human resources are also inadequate at all levels. It is for that reason that a collective effort involving local communities in fire management should be encouraged.

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The local communities have their own management systems and forest fire management that complement local ecology and traditions. For example, the Sukuma people traditionally construct a Ngitili (a Sukuma term meaning “enclosure”). This area within the village is closed off at the beginning of the wet season and opened during the dry season for grazing cattle. This traditional practise has protected many areas from fires. Therefore, joint forest management (JFM) efforts and strategies need to be implemented, considering that the government does not have sufficient resources to combat forest fires alone.

Due to inadequate funds and staff resources to protect the forests, the HASHI (Soil Conservation and Afforestation) Project and the Forest and Beekeeping Division have established JFM in selected villages where local communities are granted use rights. This provides villagers an incentive to manage and protect the forest against encroachment, illegal harvesting and fires.

2. Methodology

In trying to involve local communities in forest fire management, the project focuses on:

- ◆ Education and publicity through interactive video shows, mobile extension teams, brochures, posters, calendars and radio programmes, to sensitise and empower the communities to prevent fires.
- ◆ Seminars, workshops and meetings at different levels to disseminate information.
- ◆ Formulation of by-laws on fire protection.
- ◆ Collaboration with village committees in management, planning, monitoring and extension services.

3. Conclusions

The creation of local ownership at the village level has been a key to the success of fire management. To a large extent, JFM has changed the attitudes and behaviour of villagers regarding land use and fire management considerably. The number of forest fires is slowly decreasing with time.

The new forest policy encourages private ownership of land and forests through JFM and community-based fire management that increase land tenure security. It is hoped that this will significantly decrease the incidence of wildfires in the miombo woodlands and improve forest and fire management.