Fire Management in Mount Kenya: A Case Study of Gathiuru Forest Station

Kevin W. Nyongesa * and Harald Vacik[1]

ABSTRACT – This paper proposes an Integrated Fire Management (IFM) framework that can be used to support communities and resource managers in finding effective and efficient approaches to prevent damaging fires, as well as to maintain desirable fire regimes in Kenya. Designing and implementing an IFM approach in Kenya calls for a systematic understanding of the various uses of fire and the underlying perceptions and traditional ecological knowledge of the local people. The proposed IFM framework allows different stakeholders to evaluate the risks posed by fires and balance them with their beneficial ecological and economic effects making it easier for them to develop effective fire management approaches. A case study of the proposed IFM framework was conducted in Gathiuru Forest, which that is part of the larger Mt. Kenya Forest Ecosystem. Focus group discussions were held with key resource persons, primary and secondary data on socio-economic activities was studied, fire and weather records were analyzed and the current fire management plans were consulted. Questionnaires were used to assess how the IFM is implemented in the Gathiuru Forest Station. The results show that the proposed IFM framework is scalable and can be applied in places with fire-dependent ecosystems as well as in places with fire-sensitive ecosystems in Kenya. The effectiveness of the proposed IFM framework depends on the active participation, formulation and implementation of the IFM activities by the main stakeholder groups (Kenya Forest Service (KFS), Kenya Wildlife Service (KWS), and the Community Forest Associations (CFA). The proposed IFM framework helps in implementing cost-effective approaches to prevent damaging fires and maintain desirable fire regimes in Kenya.

Keywords: Integrated fire management; human activities; fire regimes; ecosystems

[1]University of Natural Resources and Life Sciences, Vienna (BOKU), the Institute of Silviculture; Peter-Jordan-Strasse 82, A-1190 Vienna, Austria; Email: kevin.nyongesa@boku.ac.at or kevisson2005@yahoo.com and , harald.vacik@boku.ac.at, ✱ Corresponding author: kevisson2005@yahoo.com