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## Sub-catchment Management Plans – A Contribution to Sustainable Natural Resources Management

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### Abstract

The relevance of Sustainable Natural Resources Management in rural areas of developing countries is increasing due to ongoing and non-reversible anthropogenic degradation and local as well as global induced climate change. The MDGs for poverty reduction request consequent change of natural resource management in order to meet the needs of rural populations. Moreover, sustainable natural resources management is closely linked to integrated watershed management (IWM) - as IWM emphasises a holistic approach with focus on catchment conservation and stakeholder participation. Thus IWM is also seen as one major basis for enhancing food security. Water Sector Reform Programmes in Eastern Africa are addressing the need for setting up institutional frameworks for the development of Catchment Management Strategies (CMSs) and Sub-catchment Management Plans (SCMPs). New laws, such as the Kenyan Water Act 2002, emphasise long-term sustainable utilisation of natural resources.

In Kenya, SCMPs were drafted in cooperation with German and East African Universities, the Water Resources Management Authority (WRMA) and Water Resources User Associations (WRUAs). Participatory approaches, practical field and seminar work as well as the interaction of human capacity at different educational levels, such as from universities, ministries and local stakeholders led to successful drafts of SCMPs in several sub-catchments in Kenya. SCMPs were developed within ‘on-the-spot’ seminars that incorporated all major aspects of IWM. Challenges of a changing environment, of population growth, biomass change, soil degradation, water pollution and increased water and energy scarcity were addressed in the SCMP. Focus was set on field mapping within the given watersheds (70 to 150 km<sup>2</sup>) and the perceptions of the local stakeholders.

Annual monitoring and evaluation reflected that the successful implementation of a SCMP is strongly linked to the active support and level of education of local stakeholders, financial means of the WRMA as well as the overall understanding of the relevance and benefits of IWM. Thus, the seminars for drafting the SCMPs not only addressed the management challenges of the institutional and local frameworks, but also emphasised a common understanding of sustainable integrated watershed management.

**Keywords:** East africa, integrated watershed management, natural resources management, sub-catchment management plan, water sector reform