

ABSTRACT

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Title: Technology to Realize a People Centered Land and Food security for the Rural Communities

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Abstract

To realize food security there must be a system that also ensures land tenure security. Many rural communities have remained outside the production grid and investment in agriculture in large scale and stagnated at the level of production for domestic consumption. The sector directly contributes 24% of the Gross Domestic Product (GDP) and 27% of GDP indirectly through linkages with manufacturing, distribution and other service related sectors. Approximately 45% of Government revenue is derived from agriculture, the sector contributes over 75% of industrial raw materials and more than 50% of the export earnings. The sector is the largest employer in the economy, accounting for 60 per cent of the total employment. Over 80% of the population, especially living in rural areas, derive their livelihoods mainly from agricultural related activities. Information to define proper intervention require data that presents that social and spatial dynamics. Kenya has embraced technology to ensure efficiency in various areas. In 2016, a County Spatial Plan Guidelines that would help map and secure rural resources including water, pasture grazing areas, forestry and agricultural production areas. This paper presents a case of practical application of the Social Tenure Domain Model (STDM) as participatory technology oriented approach to secure communal resources the case of Bomet, Kirinyaga and Embu Counties in Kenya.

Impact of mapping and documenting common resources has been important in the sector of livestock production where the rural communities depend on small dairy production system. Applying GIS technology in mapping common resources in Bomet helped the ministry of Agriculture; Fisheries and Livestock development define the intervention with certainty in term of coverage and location and density of livestock. The impact of this is the available statistics of the production of milk in the area such as; an average milk production per household per day was 6.66 liters and 3.8 liters in wet and dry seasons respectively. Out of the total milk production, 62.7% sold while, 30.2% consumed at home.

In using the technology, communities engage not as beneficiaries but as experts designing the process and actual participatory mapping using a range of tools to produce spatial and non-spatial data allowing them to do a 3-dimensional modelling. The use of STDM (*see framework below*) also enhanced communities' access to information, and improved their ability to use information by themselves. Equally important was the active promotion of the roles of women

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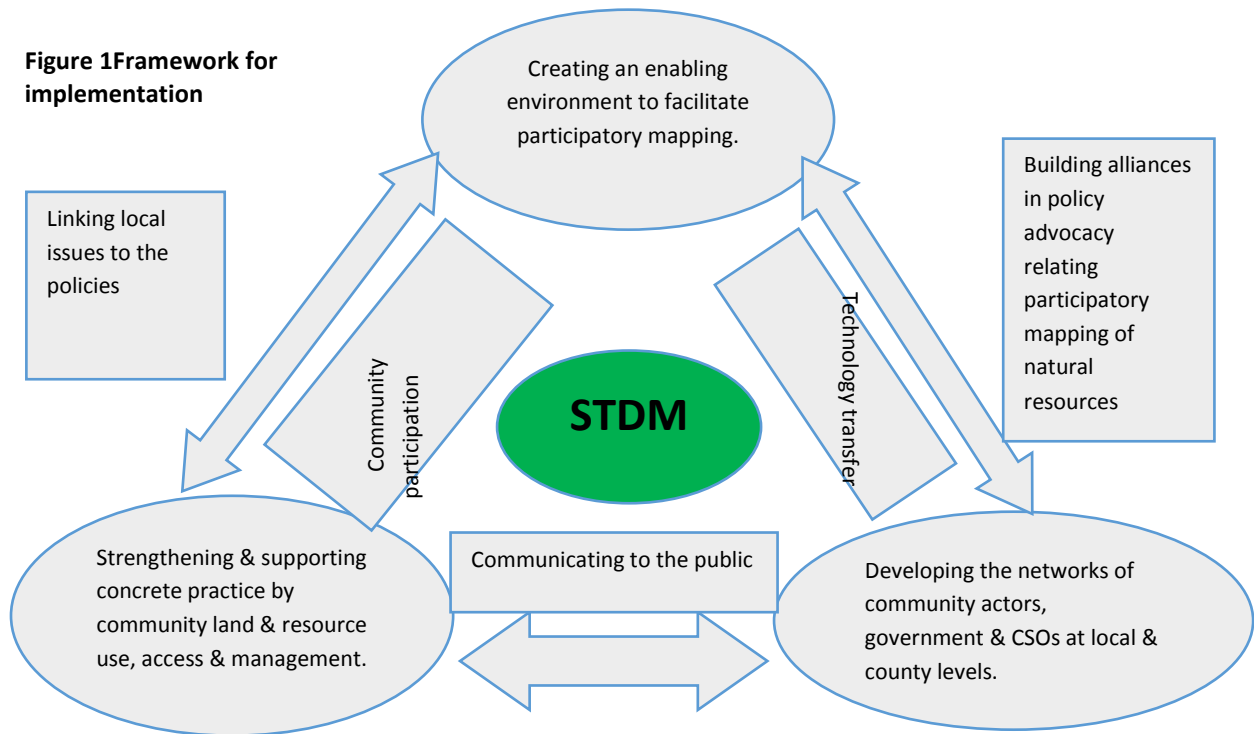
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and youths, and the encouragement of their active participation in mapping of land and common resources in both Bomet and Mwea.

Furthermore, the interactions of these communities and other stakeholders and institutions also was important to strengthening a foundation that acknowledges the importance of developing knowledge in a holistic and integrated manner, and to this end supports collaboration between different stakeholders from society and civil society both national and county governments. The participatory mapping of different resources and land in the project areas promoted a sense confidence and transparency with regards public, private and communal resources, policy, and good governance generally, focusing on livelihood, land and natural resources.



Key Words: Land tenure security, technology, common resources

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