

Accuracy Assessment of Preliminary Index Diagrams (PIDS) From High Resolution Orthoimages in Kenya

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Abstract

In the Maasai Mara ecosystem, nomadic pastoralism remains a dominant form of land tenure where pastoralists align their livelihoods with seasonal climate variations by systematically moving their livestock to different feed locations. In recent past, nomadic pastoralism in the Maasai Mara is challenged by the concept of private property where conventional private property regimes seek to allocate individual rights to land traditionally over a fixed and well-defined areas, including group ranches. Following the period of decolonization in Africa, implementation of these programmes became popular worldwide, even in regions with arid and semi-arid climate. However, pastoralism as a tenure system persisted and conflicts soon ensued with the individual property owners; and contemporary drivers, many underpinned by climate change agenda, further complicate these tenure conflicts.

Despite all the conflicts and the value of pastoralism in ecosystem conservation, spatial information about pastoralist's tracks and migration corridors often remain undocumented. Consequently, the spatial information about pastoralism has not been incorporated in the local land information systems or land use planning. The situation is worsening as land is continuously being surveyed, demarcated and allocated for private purposes. Social and economic welfare among pastoralists has declined as it depends on the freedom to access water and grazing areas. The challenge is therefore to inventory the cattle tracks and migration corridors, and include this information in local land information system, so that it may contribute to better planning, and alleviating the problems resulting from depriving the pastoralists access to the daily and seasonal resources.

This paper therefore set out to look into the changing pastoralist land tenure (and land use) regime in the Maasai Mara conservancy, in Kenya, and proposes innovative geospatial-based methodology for comprehensive documentation of the pastoralist routes as a means of understanding climate change induced migration and thereby plan how pastoralism can be better sustained for better ecological management.

Keywords: Pastoralism, Private Property, Conflicts, Spatial Documentation

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