

**Series F – Land Reforms – Globally Competitive and Sustainable Land Management.**

# Managing Fragmentation of Agricultural Land for Livelihood Security in Kenya

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## Key Messages

*Rural agricultural land size is rapidly diminishing due to sub-division among heirs and is a threat to food and livelihood security.*

*Every farming system should have a minimum household land size based on ecological potential, type of enterprise and household needs.*

*Clustered (nucleated) and high-rise human settlements should be encouraged in rural areas to conserve agricultural land and reduce the cost of infrastructure.*

## Context

Agriculture provides the livelihood for 80% of Kenya's rural population. As the population increases, per capita land available for farming reduces as more land is used for homesteads. This threatens the livelihood of those who depend on agriculture. Kenya's population has increased from 10.9 million in 1969 to 47.6 million in 2019 (KNBS, 2019). As a result, arable land per person has reduced by 71.4% from 0.42 ha. (1.04 acres) in 1961 to 0.12 ha (0.30 acres) in 2016, and the trend is continuing (World Bank, 2020). The freehold land tenure system that allows landowners to utilize their land without user and use restriction, sub-division of land for inheritance among heirs, scattered patterns of rural settlement that rests on inefficient utilization of the land resource and unplanned agricultural production are worsening human problems from land fragmentation.

Overall, these are a threat to food and livelihood security. Fragmentation of agricultural land is associated with the decline of production in the sector. This study examined the relationship between the inter-generational subdivision of agricultural land and its impacts on food and livelihood security in fifteen rural farming sub-locations covering eight counties: Kisii, Kiambu, Kirinyaga, Embu, Transzoia, Nyandarua, Machakos and Makueni.

## Approach and Results

A survey was conducted in fifteen rural sub-locations in Kenya in 2018 and 2019. The purpose of the study was to (a) establish the current rural household land size, (b) determine the existing land uses and the impacts they had on food and livelihood security, (c) identify factors contributing to the existing land size and use, (d) determine inter-generational land-size change, and (e) propose planning interventions for sustainable use of agricultural land. The target population was all farmers in the selected sub-locations and the relevant key informants including agricultural officers, physical planners, chiefs, assistant-chiefs, and community leaders. Data was collected through household interviews and focus group discussions. Field observations were also conducted to cross-check data from households and key informants.

The survey revealed that the average rural household land size varied from 0.97 to 6.70 acres with an average of 2.47 acres. The dominant land use was the growing of cash crops with no clear food, livestock and agroforestry strategy. Households with larger land sizes were more food secure and had higher incomes than those with small land sizes. Lack of affordable agricultural inputs and extension services and disorganized markets emerged as the key challenges. The most influential factor on household land size was the number of sons a household had as the land is sub-divided among the sons. Only a small fraction of daughters inherited land from their parents. Unmarried daughters shared the



land allocated to their parents or were only allocated living quarters on their parents' land.

Land use is mainly determined by agro-ecological potential and government policy in the case of irrigated agriculture. Household land size reduction from fathers (generation 1) to sons (generations 2) varied from 60% to 95% with an average rate of 77%. If the current fathers (generation 2) subdivide land among their sons (generation 3) equally, the average household land size shall reduce by 1.90 acres to 0.57 acres, a 70% reduction between generation 2 and 3. This has serious implications in further worsening household food and livelihood security for the rural farming populations.

## Policy Recommendations

### Short-Term

- Each county should, in collaboration with the national government, research institutes and universities, work out a minimum agricultural land size that can sustain an average rural household in different farming systems. The minimum land size should accommodate one key item each of food crop, cash crop, livestock and agroforestry enterprise and further subdivision prohibited.
- The government should initiate a long-term land banking programme in each county to acquire land for long-term leasing to persons 20 years or older with no land to farm, for a maximum of 55 years and farmers should retire from farming at the age of 75 years.
- Agricultural land should be zoned and designated for specific planned production with agro-industries for value addition and local and

external marketing strategies of the farm produce to optimize returns to value chain actors.

- Promote voluntary land pooling where family members can voluntarily agree to work on family land as a single production unit and each family member receives shares of returns based on their initial land sizes.
- Cooperatives should be strengthened to coordinate agricultural production, provision of enterprise-specific extension services for optimal yields, the supply of agricultural inputs, support processing of agricultural produce, provision of credit services and timely payment of the farmers for delivered produce.

### Medium to Long-Term

- Promote voluntary land consolidation where siblings can voluntarily sell land to each other and neighbours to neighbours to promote attaining of the agreed minimum land size in the different farming systems.
- The county governments should purchase land in strategic market centres and promote cluster high-rise housing settlements with adequate social and physical infrastructure to ensure decent living for rural farmers, preservation of agricultural land, and accommodation of the expected rapid urbanization.
- Create a Rural Housing Fund to support farmers to purchase decent affordable houses in clustered high-rise nodal settlements. The repayment to be organized around farming enterprises and agricultural income cycles of the purchasers, be they monthly, seasonally or annually through their cooperatives.
- The government should create a Farmers' Pension Fund for farmers to which they can

contribute, monthly, seasonally or annually for support during retirement.

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