

UNIVERSITY OF MINNESOTA



## The Whole Village Project

### Summary of Engaruka, Migombani, Naitolia, and Selela in Monduli District

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## **INTRODUCTION**

The purpose of this report is to present district officials and local leaders with multi-sectoral data across several villages in this district. We hope these data may be useful in seeing the strengths and weaknesses of different sectors and the variation across villages. These data may be useful in prioritizing future development projects. The villages represented here were selected by our donors for their project purposes and therefore they cannot be seen as representatives of the district. The data however, illustrate the diversity of economic and social development activities occurring across villages in the district.

The Whole Village Project (WVP) is collecting and analyzing comprehensive data at village level over an extended period of time. A collaborative project between Savannas Forever Tanzania (SFTZ), a Tanzanian NGO, and the University of Minnesota, USA, the Whole Village Project has a **vision** to work with people in rural Tanzanian villages to acquire and use knowledge for improving long-term health and well-being while sustaining natural resources. To achieve this goal, quantitative and qualitative data are systematically collected in villages across northern Tanzania by the Savannas Forever team in partnership with staff from the National Institutes of Medical Research (NIMR) and the Tanzanian Wildlife Research Institute (TAWIRI). The data are sent to the University of Minnesota for analysis and then returned to Tanzania. The SFTZ team returns to each village to present the data to villagers for their own use and decision-making. WVP intends to return to each village every two to three years in order to assess the sustainability of development projects over time and identify best practices.

In this report, we present a summary of data collected within a single district. Village-level surveys were conducted in Monduli District in Engaruka, Migombani, Naitolia, and Selela from October to December, 2009.

## **KEY FINDINGS**

The research captured a broad range of information about myriad aspects of four villages in Monduli District. Overarching district strengths, gaps, and opportunities were pulled from the abundance of data collected and analyzed and are presented below. Detailed results and discussion are presented in the full report.

## **District Strengths**

Cow and goat vaccination rates among livestock owners are high in the district. Given that income from livestock sales is the main source of income for a majority of households surveyed, such high vaccination rates contribute to the stability and reliability of household livelihoods.

Civic engagement, specifically as measured through participation in village assemblies, is relatively high with almost 60% of household survey respondents from three of four villages participating in a village assembly in the last 12 months. Villages provide regular opportunities for community members to attend these assemblies with each village survey facilitating at least one village assembly every two months and one village (Naitolia) holding one almost every month.

Children under five are more likely to survive and be healthy if the biological mother is alive. In Monduli District, the biological mother is alive in almost every household surveyed. Furthermore, either both parents or the mother alone are the primary caretakers of the children indicating a strong family structure, which further contributes to the long-term health and well-being of children under five. This also implies that there are relatively few orphans and vulnerable children living in the villages assessed as most children are cared for by one or both of their biological parents.

## **District Gaps**

Access to a quality primary school education is low in Monduli District. District primary schools tend to suffer from poor teacher-to-student and classroom-to-student ratios creating a learning environment in which too many students are crammed into too few classrooms and taught by too few teachers. Limited access and poor quality is reflected in low adult primary school completion rates.

Access to quality health services is also limited in the district. According to men, women, and village leaders assessed issues related to health and health care rank among the top three problems facing their villages. This high ranking stems from the long distances many people have to travel to access services (only two of the four villages assessed have a government dispensary) and the quality of those services once they are reached. In general, male and female respondents feel that the treatment they receive from health facilities for themselves and their children is of low quality.

Malaria is the most prevalent disease affecting households, especially children under five. Even though malaria is rightly considered by men, women, and health officers to be the leading cause of disease in all villages and over 90% of children under five have suffered from fever in Engaruka, Naitolia and Selela, less than one-third of households in these three villages own an insecticide-treated mosquito net to prevent malaria. In Migombani, where two-thirds of households own at least one insecticide-treated mosquito net, the incidence of fever among children under five is still too high at over 80%.

Any level of acute malnourishment among children under five must be considered a gap. Nearly 1 in 10 children under five in Engaruka are acutely malnourished, and almost 1 in 20 children in Engaruka and Selela are severely malnourished. Similarly, in all villages surveyed (except Migombani) over half of households had experienced some level of food insecurity, such as eating fewer meals, no food in the house, or going to bed hungry, in the last four weeks.

Newcastle Disease is the number one cause of chicken mortality in Tanzania. Vaccination rates against Newcastle Disease are low in Monduli District. The highest vaccination rate (40% in Migombani) is still relatively low given the severe consequences of infection with Newcastle Disease.

## **Opportunities**

Although agriculture is the main occupation among households surveyed in Monduli District, income from farming is only significant for households in one village (Migombani). The most common source of income for households in Engaruka, Naitolia, and Selela is livestock sales. This disconnection between main occupation and main income source may be connected to the nature of the farming –small-scale, subsistence agriculture – typically done in the district. In order to increase household income, district leaders have an opportunity to design strategies for matching the primary occupation with primary income source either by expanding opportunities for sale of agricultural produce or scaling up of pastoralism.

In addition to expanding income opportunities related to agriculture and pastoralism, the District also has an opportunity to increase the quality of farming and livestock in the district. Only two of the four villages surveyed – Migombani and Selela – had been visited by an agricultural extension worker in the past year. Farmers participating in programs led by these agricultural extension

workers learned best practices in farming techniques that they could apply to their personal farms. Expanding opportunities for farmers to access quality training such as this would increase the farmers' abilities to produce higher quality crops in higher yield. Similarly, veterinary services are limited – only one village (Migombani) has a local veterinarian and community animal health workers are limited. Increasing animal health services to livestock owners through veterinarians and trained community animal health workers would also increase the reliability of those livestock in producing income for a household.

District leadership also has an opportunity to further protect the children in the district from vaccine-preventable disease. A high percentage of children under five in Monduli District are vaccinated against tuberculosis (BCG), DPT, polio, and measles, as recommended by the World Health Organization (WHO). However, vaccination coverage is not universal. Given the already high level of vaccination, the district has an opportunity to reach universal coverage against vaccine-preventable disease given the proper allocation of resources.

An additional opportunity for protecting children under five, as well as the adult population, from communicable disease exists in the gap between personal hygiene, a fundamental prevention strategy, and the low use of any kind of toilet among households surveyed. The District has an opportunity to educate the community on personal hygiene, proper human waste disposal, and how to construct a simple pit latrine. There may also be an opportunity to provide basic construction materials, if the reason for low toilet use is lack of resources to construct a simple pit latrine.

## APPENDIX B – MONDULI DISTRICT TABLE OF SELECTED INDICATORS BY VILLAGE

| Indicators                       |   | Engaruka | Migombani   | Naitolia | Selela  |
|----------------------------------|---|----------|-------------|----------|---------|
| <b>THE HOUSEHOLD AND HOUSING</b> |   |          |             |          |         |
|                                  | average household size  | 5.0      | 4.2         | 5.2      | 5.5     |
|                                  | % of households headed by women                                   | 28%      | 26%         | 34%      | 29%     |
|                                  | % of households with modern roof                                  | 19%      | 64%         | 11%      | 27%     |
|                                  | % of households using a toilet                                    | 24%      | 99%         | 17%      | 35%     |
|                                  | % households use firewood as primary energy source for cooking    | 99%      | 92%         | 100%     | 95%     |
| <b>EDUCATION</b>                 |   |          |             |          |         |
|                                  | % of all adults without education                                 | 42%      | 12%         | 39%      | 57%     |
|                                  | % of household heads completed primary school                     | 43%      | 66%         | 33%      | 27%     |
|                                  | % of adult men completed primary school                           | 48%      | 60%         | 53%      | 36%     |
|                                  | % of adult women completed primary school                         | 38%      | 67%         | 46%      | 28%     |
|                                  | Average primary school teacher to student ratio                   | 1 : 64   | 1: 58/1: 46 | 1 : 49   | 1 : 100 |
|                                  | Average primary school textbook to student ratio                  | 0 : 1    | 1: 4/1:3    | 1 : 2    | 1 : 2   |
|                                  | Average secondary school teacher to student ratio                 | N/A      | 1:18        | N/A      | 1:25    |
| <b>HEALTH</b>                    |   |          |             |          |         |
|                                  | % of households with at least one mosquito net                    | 27%      | 92%         | 36%      | 45%     |
|                                  | % of households that use traditional medicine often or very often | 72%      | 12%         | 46%      | 46%     |
|                                  | % of households with protected drinking water                     | 60%      | 84%         | 72%      | 51%     |
|                                  | % of households that take measures to make the water safe         | 17%      | 36%         | 25%      | 16%     |
|                                  | # of hospital/dispensary/clinic in the village                    | 1        | 0           | 0        | 1       |
| <b>CHILDREN UNDER 5</b>          |   |          |             |          |         |
|                                  | % of children who are treated in hospital/dispensary when ill     | 84%      | 98%         | 88%      | 87%     |
|                                  | % of children whose birth mother is still alive and inside the HH | 100%     | 93%         | 97%      | 99%     |
|                                  | % of children moderately to severely underweight                  | 12%      | 5%          | 4%       | 6%      |
|                                  | % of children who are vaccinated for BCG                          | 88%      | 93%         | 97%      | 88%     |
|                                  | % of children who are vaccinated for polio                        | 93%      | 93%         | 94%      | 90%     |
|                                  | % of children who are vaccinated for DPT                          | 88%      | 95%         | 94%      | 87%     |
|                                  | % of children who are vaccinated for measles                      | 72%      | 83%         | 84%      | 75%     |
|                                  | % of children received Vitamin A supplement                       | 79%      | 90%         | 85%      | 82%     |
| <b>AIDS KNOWLEDGE</b>            |   |          |             |          |         |

| Indicators                          |   | Engaruka | Migombani | Naitolia | Selela |
|-------------------------------------|---|----------|-----------|----------|--------|
|                                     | % of men with high AIDS knowledge score (5-6 points)  | 33%      | 47%       | 15%      | 18%    |
|                                     | % of women with high AIDS knowledge score (5-6 points)  | 8%       | 32%       | 20%      | 10%    |
|                                     | % of men who have talked with their wife/primary partner about ways to prevent AIDS           | 82%      | 89%       | 60%      | 62%    |
|                                     | % of women who have talked with their husband/primary partner about ways to prevent HIV/ AIDS | 49%      | 78%       | 55%      | 50%    |
| <b>FOOD SECURITY AND NUTRITION</b>  |   |          |           |          |        |
|                                     | % of households worried about food in the past 4 weeks  | 72%      | 45%       | 61%      | 74%    |
|                                     | % of households ate limited variety of food in the past 4 weeks                               | 80%      | 61%       | 88%      | 88%    |
|                                     | % of HHs went one day and night with no food in the past 4 weeks                              | 43%      | 17%       | 16%      | 39%    |
|                                     | % of households that are currently growing kitchen garden                                     | 5%       | 18%       | 0%       | 4%     |
|                                     | Avg # of days/times HHs ate meat protein in past week   | 1.3      | 2.5       | 1.3      | 1.6    |
|                                     | Avg # of days/times HHs ate legumes in past week  | 1.9      | 2.3       | 2.4      | 2.0    |
|                                     | # of different types of food eaten in last week   | 4.6      | 5.9       | 4.1      | 4.0    |
| <b>ECONOMIC ACTIVITY AND INCOME</b> |   |          |           |          |        |
|                                     | % households own any agricultural land  | 67%      | 62%       | 85%      | 77%    |
|                                     | Average acres cultivated per household  | 1.0      | 1.5       | 5.9      | 1.5    |
|                                     | Average # of cattle owned per household   | 5.1      | 0.4       | 12.3     | 6.8    |
|                                     | Average # of goats/sheep owned per household  | 25.8     | 2.4       | 22.4     | 21.3   |
|                                     | Average # of chickens owned per household   | 1.7      | 3.8       | 4.2      | 2.7    |
|                                     | % of HHs whose chickens are vaccinated for Newcastle disease                                  | 32%      | 37%       | 30%      | 25%    |
|                                     | % of cattle lost to disease in the past 12 months   | 29%      | 11%       | 12%      | 22%    |
|                                     | % of cattle lost to drought in the past 12 months   | 43%      | 0%        | 30%      | 24%    |
|                                     | % of cattle lost to wildlife in the past 12 months  | 1%       | 0%        | 2%       | 1%     |
|                                     | % of chickens lost to disease in the past 12 months   | 40%      | 60%       | 55%      | 46%    |
|                                     | % of chickens lost to drought in the past 12 months   | 4%       | 1%        | 0%       | 1%     |
|                                     | % of chickens lost to wildlife in the past 12 months  | 34%      | 11%       | 23%      | 22%    |
|                                     | % of goats/sheep lost to disease in the past 12 months  | 23%      | 17%       | 13%      | 22%    |
|                                     | % of goats/sheep lost to drought in the past 12 months  | 18%      | 0%        | 30%      | 16%    |
|                                     | % of goats/sheep lost to wildlife in the past 12 months                                       | 6%       | 10%       | 4%       | 1%     |
|                                     | % of household heads with the main occupation of farming                                      | 51%      | 80%       | 44%      | 51%    |
|                                     | % of HH heads with the main occupation of livestock keeping                                   | 39%      | 1%        | 40%      | 38%    |
|                                     | % households with bicycle   | 9%       | 54%       | 22%      | 18%    |

| <b>Indicators</b>                        |  | <b>Engaruka</b> | <b>Migombani</b> | <b>Naitolia</b> | <b>Selela</b> |
|--|--|-----------------|------------------|-----------------|---------------|
|  | % households with radio  | 40%             | 72%              | 33%             | 28%           |
|  | % households with cell phone                                     | 8%              | 55%              | 28%             | 20%           |
| <b>CIVIC ENGAGEMENT AND INSTITUTIONS</b> |  |                 |                  |                 |               |
|  | % of HHs that participated in village assembly in past 12 mo     | 43%             | 65%              | 58%             | 64%           |
|  | % of HHs in village gov't or committee in past 12 mo             | 15%             | 16%              | 19%             | 12%           |
|  | % of HHs that asked village leaders for assistance in past 12 mo | 11%             | 17%              | 14%             | 20%           |
|  | # of village committees/groups                                   | 7               | 9                | 10              | 6             |
|  | # of NGOs  | 9               | 8                | 7               | 9             |
|  | # of credit, banking services or VICOBA                          | 2               | 2                | 0               | 2             |