

UNIVERSITY OF MINNESOTA



The Whole Village Project

Summary of Mwabomba, Mwang'halanga and Runele in Kwimba 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 representative 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. Household surveys, interviews and focus groups were conducted in Mwang'halanga and Runele villages, Kwimba District during the month of September 2010.

METHODOLOGY

The Whole Village Project's survey tools and methodology has been reviewed and approved by multiple Tanzanian research authorities (COSTECH, NIMR and TAWIRI) and the University of Minnesota institutional review board for the ethical conduct of human subjects research. Further, permissions are sought by the respective regional, district and village leadership before beginning data collection.

Village selection is based on the funding agency priorities and permission of government leaders. After permissions are received the Savannas Forever Tanzania (SFTZ) staff arrange dates for data collection with district officials and village leaders. A Tanzanian survey team of 6-7 personnel work in each village for 5-6 days. The team begins with a sensitization session with leaders and community members to introduce the project and staff. Village leaders provide a roster list of heads of households and the research team uses a computer generated randomization program to select 60-75 households from this list. A standardized quantitative survey is conducted in each selected household.

Data collection tools include both quantitative and qualitative instruments. All interviews and focus groups are conducted in Kiswahili whenever possible. If respondents are not fluent in Kiswahili, a bi-lingual villager is identified by the leadership to translate from the local language to Kiswahili. The core household survey asks questions about livelihood, earnings, educational status of all household members, assets, health and natural resource use. From the household members, two brief individual level surveys are conducted: (1) a HIV/AIDS knowledge, attitude and practice (KAP) survey and (2) an anthropometric assessment of children under-five and nutrition questions. For the KAP survey, up to 4 adults (15 years or older) within the household are asked to complete the survey. All interviews are conducted in a private space where no one else may listen. All children in the household under-five are weighed and measured and the primary caretaker is asked to answer the accompanying survey.

In order to obtain more contextual data about each village, a number of focus group and key informant interview tools are used. Focus groups are conducted with men and women, village leaders, and a special group of agriculturalists and livestock holders. Village leaders invite villagers to participate and try to obtain diversity of representation by sub-village, age and gender. The research team also conducts an institutional assessment of village organizations with a mixed group of 10-15 villagers to identify the different NGOs, religious organizations, and government services working in the village and their respective strengths, weaknesses and contributions to the community. In addition, key informant interviews are conducted with school headmasters and clinic officers. A detailed list of survey instruments and focus group guides can be found in Appendix A.

KEY FINDINGS

The research captured a broad range of information from three villages in Kwimba District: Mwabomba, Mwang'halanga, and Runele. 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 Section 4.

District Strengths

There are a number of common strengths observed between the three villages. In particular, there is relatively high mosquito net ownership, high rates of child vaccinations for BCG, DPT and polio, widespread latrine usage, and a moderately high HIV knowledge score.

In Mwabomba, 97% of households own at least one net, 93% in Runele, and 90% in Mwang'halanga. Further adding to these high percentages, 78% of nets in Mwabomba, 82% in Runele and 69% in Mwang'halanga had recently had their nets dipped in insecticide treatment. Given the high rates of malaria in the area increasing bed net coverage to 100% and regular dipping of nets should be encouraged.

Infant and young child vaccination rates for BCG, DPT and polio were over 90% in both villages. However, vaccination rates for measles were about 78%; given the virulence of this disease, clinic officers and health committee members should identify strategies to meet the gaps in measles vaccination. Although approximately 75% of infants and children took Vitamin A supplements, again the community should strive for 100% coverage given the low Vitamin A intake in local diets and the significant impact that Vitamin A deficiency has on child development.

Among two of the villages surveyed, Mwabomba (85%) and Mwang'halanga (80%), there was a high percent of households with latrines. Runele, however, had significantly reduced latrine rates at 50% of households. Access to latrines and appropriate waste disposal reduce opportunities for communicable disease transmission and water borne diseases.

General AIDS knowledge is relatively good among the three villages surveyed in Kwimba district. The average AIDS knowledge scores ranged from 3.6 to 4.3 among males and 3.8 to 4.1 among females (on a scale of 6). On average, three in ten respondents in the three villages reported no HIV/AIDS prevention knowledge. Again, although there is an overall strength here, all three

communities should strive to increase both men's and women's HIV knowledge in order to better protect themselves and their families.

District Gaps

The level of one's education is often a predictor of other quality of life factors such as economic productivity, food security, and overall health. In all three villages, the quality of schools is a concern and the significantly lower percent of girls attending secondary school. Of the three villages, Mwabomba is the only one to have a secondary school. Enrollment rates reveal twice as many boys as girls (female to male enrollment ratio 108:230). Girls' education often is a predictor of family health in future; further Tanzania has set increasing girls participation rate in secondary school as a Millennium Development Goal. Other quality factors include a low teacher to student ratio, poor student exam results, and limited food available at school. Only Runele provides any school meals, consisting of maize and beans for a fee. Children are the future. However, if they are not able to access quality education their chances for improved quality of life as adults are greatly reduced.

Access to health services and quality care is also limited in the district. Mwabomba reports no hospital, dispensary, or clinic. Most respondents in the other two villages felt the treatment at local dispensaries was not helpful. According to men's and women's focus group discussions, malaria is the number one problem followed by tuberculosis and sexual health. In addition, maternal and child health services are offered only in Runele.

Any level of acute malnourishment among children under-five must be considered a gap. We observed that 4% of children in Runele and 6-7% in Mwabomba and Mwang'halanga had children suffering from under nutrition. Of greater concern is the large percentage of children who are stunted for their age and weight ranging from 27% in Runele to 40% in the other villages. In all villages, the main source of food for children under-five is ugali, which itself cannot meet a child's nutrition needs. The consumption of other starches (rice and potatoes) was also high. Although there was a moderate amount of greens and fish in their diet they generally lacked adequate amount of fruit, vegetables and other proteins in their diet which are clearly affecting their physical development.

Farming, as the main source of income, is vulnerable to the problem of soil erosion. In the villages surveyed, 50% of households in Mwabomba, 40% in Mwang'halanga, and 10% of households in Runele considered soil erosion to be a serious problem, which is harmful to the sustainability and reliability of farming. Further, there is little to no irrigation of plots and very limited use of fertilizers. Only one of the villages indicated that they had received a visit from an agricultural extension officer in the past year and of the NGOs working in the three villages, only one in Mwang'halanga focusing on the issue of farming and agriculture.

Newcastle Disease is the number one cause of chicken mortality in Tanzania. Vaccination rates against Newcastle Disease are low in Kwimba District. Only 1 in every 6 households owning chickens vaccinate those chickens against Newcastle Disease. The highest vaccination rates (15% in Mwang'halanga and Runele) are still low given the severe consequences of infection with Newcastle Disease. Household surveys revealed that in Mwabomba and Mwang'halanga nearly one-quarter of their chicken populations were lost to disease.

Despite multiple village assemblies held in the past 12 months in each of the villages only 8-10% of households participated. This factor emerged in both the household surveys and in the qualitative institutional analysis – the reason for poor participation is not clear. It creates a poor environment however, for generating any community development projects and suggests that few projects will be sustainable since there is so little shared community engagement. Until civic engagement is addressed in the villages in Kwimba, the district is unlikely to see any positive significant changes in social or economic indicators.

Opportunities

Girls' participation in secondary school is quite low. The education committee in Mwabomba has an opportunity to work with district leaders to identify opportunities for solutions to this and improving the quality of schools in the district overall. As education creates a foundation for overall family health and economic opportunities, prioritizing education is critical for the future development of this district.

Farmers in Mwang'halanga and Runele reported that they did not receive a visit by an agricultural extension worker in the past year. Mwabomba was the only one of the three villages to receive a visit. These agricultural extension workers typically train a small group of local farmers in

agricultural best practices and established model farms (growing maize, sunflowers, etc.) as demonstration plots. The trained farmers are expected to transfer knowledge and skills learned to their own farms. Given that the most common complaints of farmers was lack of knowledge of improved farming techniques and other measures, there appears to be an opportunity to further spread agricultural knowledge from model farmers to others and improve the productivity of farming. The district should monitor the impact of the work done by agricultural extension workers.

Increasing livestock vaccination rates will reduce the rate of cattle and goats lost to disease, which is still relatively high. In addition, although many households have heard of Newcastle disease, only a small proportion of chickens are vaccinated. Therefore, villages have an opportunity to reallocate resources to increase livestock vaccination rates, which is effective in reducing livestock lost to diseases.

A trend among the 45 villages surveyed by WVP to date has been that households with kitchen gardens tend to have less serious food insecurity problems. Specifically, villages with higher coverage of kitchen gardens tend to have a lower percentage of households that went to bed hungry, ate limited variety of food, and fewer underweight children. Though the trend was not observed in these three villages, the most probable explanation for the discrepancy is the severely limited pool of respondents with kitchen gardens. Kitchen garden training remains very limited in the villages surveyed in Kwimba district. Village leaders have the opportunity to convey knowledge about kitchen gardens as a means to alleviate food insecurity and improve child nutrition.

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 Kwimba 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.

		Kwimba District		
		Mwang'halanga	Runele	Mwabomba
THE HOUSEHOLD AND HOUSING				
	Number of households surveyed	60	60	60
	Average household size	6.85	6.9	6.7
	% households in polygamous marriage (more than 1 wife)	23.3%	18.3%	18.3%
	% of households headed by women	31.7%	23.7%	20%
	% of households with corrugated roof	26.7%	31.7%	36.7%
	% of households using a toilet	80%	50%	85%
	Avg time (minutes) required to collect water	39.9	177.9	38.1
	% households use firewood as primary energy source for cooking	100%	95%	100%
EDUCATION				
	% of all adults without education	26.9%	26.1%	20.9%
	% of household heads completed primary school	45%	52.5%	61.7%
	% of adult men completed primary school	65.6%	66%	67.7%
	% of adult women completed primary school	42%	52.1%	57.9%
	Average primary school teacher to student ratio	7:472	7:492	6:555
	Average primary school textbook to student ratio	5:1	1:3	1:3
	Average secondary school teacher to student ratio	--	--	9:338
	Average # of years teachers stay at primary school	3 years	6 years	8 years
	Average # of years teachers stay at secondary school	--	--	1 year
	Ratio of female to male gross enrollment rates (primary school)	239:233	251:241	287:268
	Ratio of female to male gross enrollment rates (secondary school)	--	--	108:230
HEALTH				
	% of households with at least one mosquito net	90%	93.3%	96.7%
	% of households with access to protected drinking water	90%	48.3%	70%
	% of households that take measures to make the water safe	25%	18.3%	33.3%
	# of hospital/dispensary/clinic in the village	1	1	0
CHILDREN UNDER 5				
	% of infants exclusively breast fed through 6 months of age	13.2%	7.9%	10%
	Average age in months at introduction of complementary feeding	4.7	4.3	5.2
	% of children whose birth mother is still alive and inside the HH	91.4%	89.5%	0%
	% of children moderately to severely underweight	5.3%	2.2%	5.1%
	% of children who are vaccinated for BCG	100%	99%	97.7%
	% of children who are vaccinated for polio	98.6%	96.8%	97.7%
	% of children who are vaccinated for DPT	90%	93.7%	96.5%
	% of children who are vaccinated for measles	78.6%	74.7%	80%
	% of children received Vitamin A supplement	77.1%	75.8%	74.1%
	% children with fever	55.7%	54.7%	56.5%
AIDS KNOWLEDGE				

		Mwang'halanga	Runele	Mwabomba
	% of men with high AIDS knowledge score (5-6 points)	52%	46%	30%
	% of women with high AIDS knowledge score (5-6 points)	51%	41%	37%
	% of men who have talked with their wife/primary partner about ways to prevent AIDS	52.3%	47.7%	47.5%
	% of women who have talked with their husband/primary partner about ways to prevent HIV/ AIDS	36.6%	39.4%	35.8%
FOOD SECURITY AND NUTRITION				
	Food Security Index	2.7	2.5	3.3
	% of HHs went one day and night with no food in the past 4 weeks	0%	3.3%	1.7%
	% of households that are currently growing kitchen garden	3.3%	0%	15%
	Avg # of days/times HHs ate meat protein in past week	3.7	4.9	5.8
	Avg # of days/times HHs ate legumes in past week	3.8	2.8	1.4
	Avg # of days/times HH ate poultry or eggs in past week	0.4	0.5	0.6
	Avg # of days/times in last week HH ate foods with Vitamin A	2.7	2.2	2.9
	# of different types of food eaten in last week	6.4	6.3	6.7
ECONOMIC ACTIVITY, AGRICULTURE AND INCOME				
	% households own any agricultural land	95%	86.7%	85%
	Average acres cultivated per household	3.4	6.8	3
	Average # of cattle owned per household	6.3	14	8.2
	Average # of goats/sheep owned per household	5.9	9.4	5.4
	Average # of chickens owned per household	9.6	12.1	6.5
	% of HHs whose chicken are vaccinated for Newcastle disease	15%	15%	13.8%
	% of cattle lost to disease in the past 12 months	4%	10%	8%
	% of cattle lost to drought in the past 12 months	0%	0%	0%
	% of cattle lost to wildlife in the past 12 months	0%	0%	1%
	% of chickens lost to disease in the past 12 months	6%	28%	44%
	% of chickens lost to drought in the past 12 months	0%	0%	0%
	% of chickens lost to wildlife in the past 12 months	4%	18%	14%
	% of goats/sheep lost to disease in the past 12 months	15%	8%	19%
	% of goats/sheep lost to drought in the past 12 months	0%	0%	0%
	% of goats/sheep lost to wildlife in the past 12 months	8%	3%	5%
	% of household heads with the main occupation of farming	95%	91.5%	88.3%
	% of HH heads with the main occupation of livestock keeping	0%	1.7%	0%
	% of HHs that irrigate the plots in village (from focus group data)	15%	0%	20%
	% households with bicycle	75%	88.3%	80%
	% households with radio	50%	38.3%	48.3%
	% households with cell phone	40%	50%	30%
KEY INSTITUTIONS AND CIVIC ENGAGEMENT				
	Distance to major weekly market	7 km	6 km	10 km
	# of village committees/groups	2	6	4
		Mwang'halanga	Runele	Mwabomba

	# of NGOs	5	1	1
	# of credit, banking services or VICOBA	1	1	1
	% of HHs that participated in village assembly in past 12 mo	8%	10%	8%
	% of HHs in village government or committee in past 12 mo	10%	20%	13%
	% of HHs that asked village leaders for assistance in past 12 mo	70%	68%	65%
DEMOGRAPHICS				
	Religion (% Christian; % Muslim; % Traditional)	70; 0; 0	45; 1.7; 1.7	68%; 0%; 2%
	Dependency Ratio (# of child (0-14 years) and aged (65+) population per 100 intermediate age (15-64 years)	122	118	125
	Child-Woman Ratio (# of children aged 0-4 years per 1,000 women in the age group 15-44 years)	0.46	0.54	0.56
	Sex Ratio (# of males per 100 females)	0.91	0.97	0.92