



Can a Transfluthrin Passive Spatial repellent prevent transmission of *Plasmodium falciparum* malaria? A cluster-randomised double blind placebo controlled trial in children under 5 in rural Tanzania.



Project Leader: Dr. Sarah J Moore, Research Entomologist, Swiss Tropical and Public Health Institute and Ifakara Health Institute

- Collaborators:**
- Bernadette Huho, IHI
 - Daniel Msellemu IHI and STPH
 - Yeromin Mlacha, IHI
 - Saumu Ahmed, IH

Expected impact:

- To demonstrate and quantify the protective efficacy (PE) of transfluthrin passive spatial repellent product in reducing the incidence of Plasmodium falciparum malaria infection among children under 5 years in the Tanzania study site.

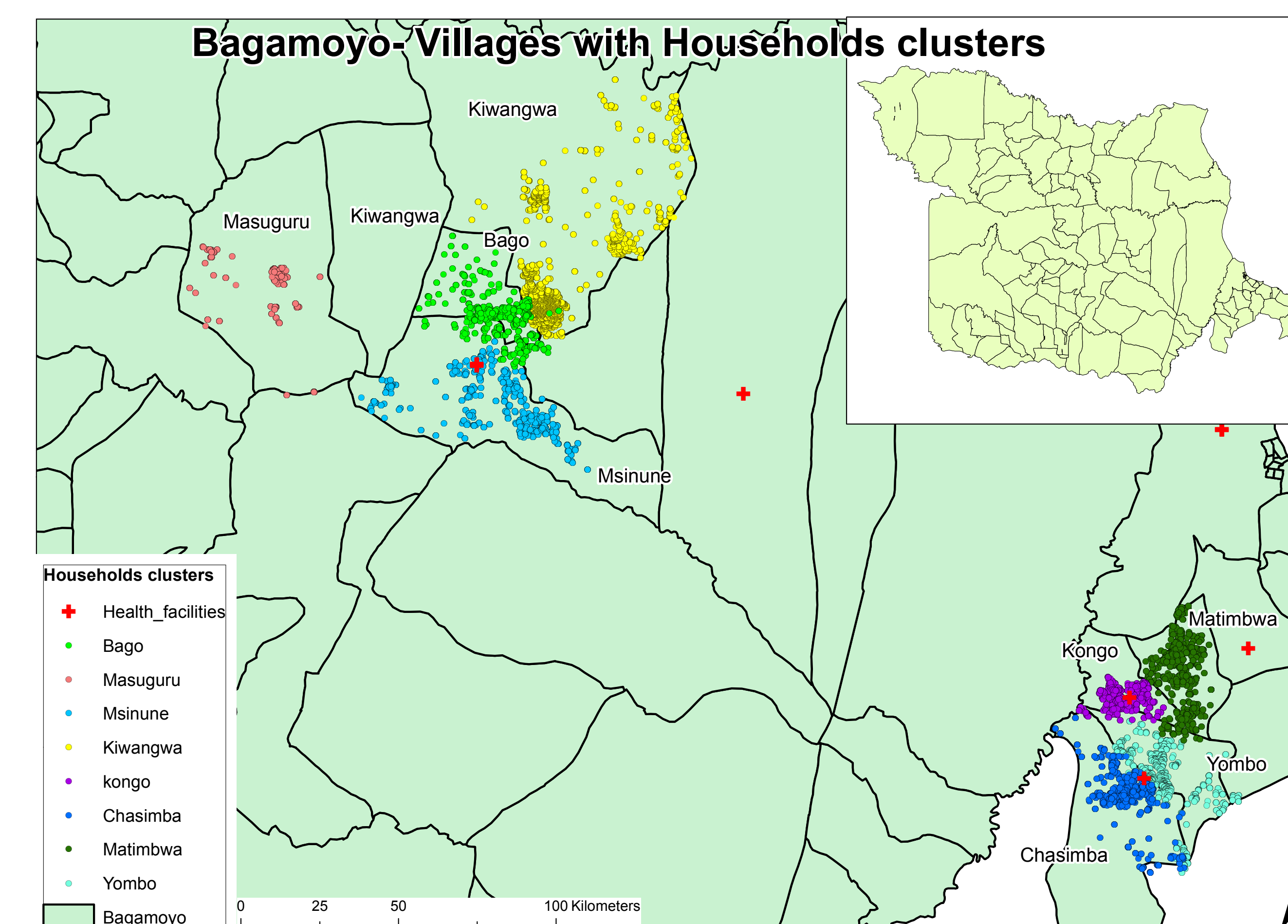
Study Cohort: Needed to recruit 99 children per cluster.

Total cohort 3088 with 30% loss to follow up

Recruitment is complete as 4,110 under 4s have been recruited

All houses have been measured and characterised

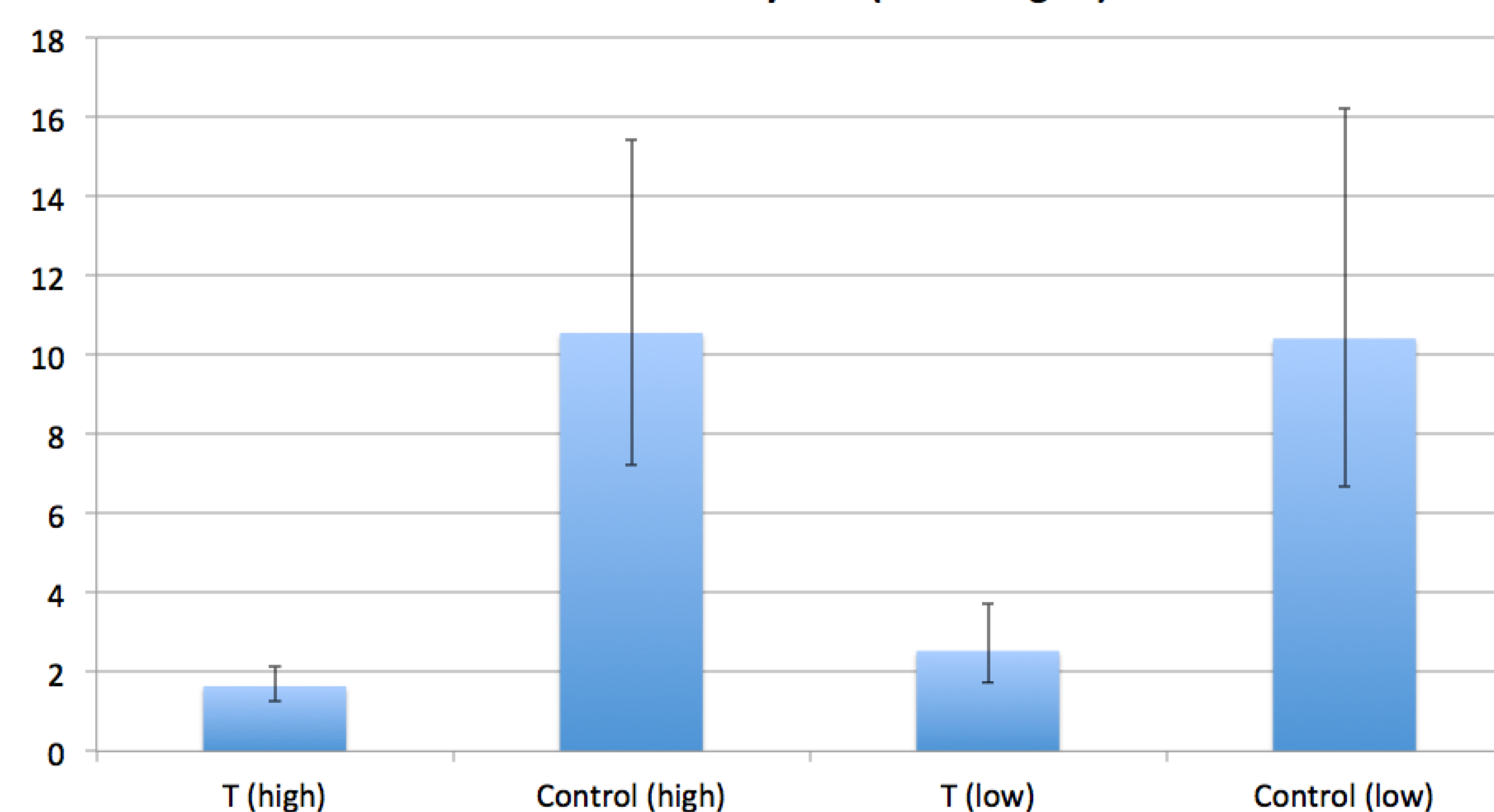
Total repellent requirements have been calculated



Status/Progress Update

- Ethical approval and importation permits in place
- Site readiness visit and tablet training completed
- Mini trials of the Shield product ongoing in the semi-field system
- Mini trials of the product in the field to begin in January
- Resistance profile completed – 10% 20% pyrethroid resistance
- Site Initiation visit in early December
- Baseline parasitology and Entomology to begin in January

Hourly average *Anopheles arabiensis* landings by human landing catch in the Ifakara Semi Field System (n= two nights)



Village Name	Double entry	No of h/holds	No of people	Male	Female	No of Under 5	No of Under 4	No of Shield units needed
Matimbwa	Y	586	2,462	1,160	1,302	508	445	2,529
Yombo	Y	484	1,975	995	980	323	293	2,032
Chasimba	Y	483	1,919	922	997	308	253	1,967
Kongo	Y	594	2,512	1,232	1,280	390	337	2,493
Masuguru	Y	210	1,031	608	577	202	172	981
Msinune	Y	495	2,361	1,228	1,133	422	360	1,748
Bago	Y	530	2,537	1,270	1,266	438	363	2,336
Kiwangwa	Y	2,666	11,976	5,936	6,040	2,290	1,887	14,058
		6,048	26,773	13,35	1,01	4,88	4,11	28,144