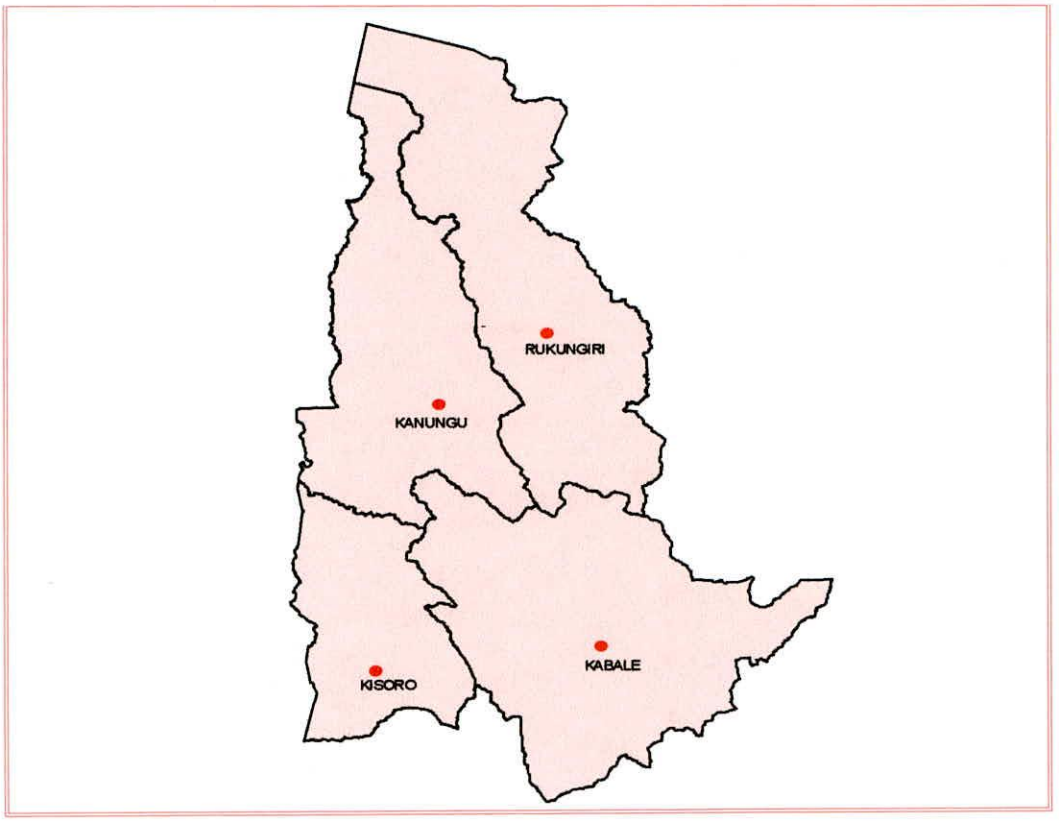
World Agroforestry Centre

TRANSFORMING LIVES AND LANDSCAPES

REPORT ON

MAPPING OF THE SWAEZ FS & LA SURVEY SITES



Submitted to

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MAPPING OF THE SWAEZ FS & LA SURVEY SITES

Introduction

The South Western Agro-ecological Zone Farming Systems and Livelihood Analysis (SWAEZ FS & LA) survey was conducted in 2002 by Kachwekano ARDC to get analytical data on the farming systems and livelihoods in four districts under its mandate in SW Uganda. These districts are Kabale, Kanungu, Kisoro and Rukungiri.

Following the survey, Kachwekano ARDC found it necessary to indicate the spatial extent of the survey area and map out the survey sites. This mapping exercise was done by World Agroforestry Centre (ICRAF)-Uganda. Technicians from Kachwekano ARDC who participated in the survey were responsible for identifying and leading to the survey areas and sites.

Mapping the extent and sites\ villages of the SWAEZ FS & LA survey necessitated revisiting the areas and sites where the survey was done. The survey site locations were then captured using a Global Positioning System (GPS) and some information on biophysical characteristics of the sites also collected. Local informants also provided some information especially about the administrative boundaries of the areas covered by the survey.

Information captured on the sites included administrative locations, altitude, latitude and longitude of each site. This information was integrated and over-layed with other relevant and available layers in the existing GIS database and processed to provide map products that include land use/cover and soil types of the survey districts, the detailed spatial locations of the sites (at village level) and summaries of their biophysical characteristics (elevation, soil types, land use\cover) - at parish level.
To obtain detailed administrative boundaries, 1: 25 000 scale topographic map sheets covering the survey sites were purchased from Uganda Bureau of Statistics (UBOS). These sheets were scanned, geo-referenced and on-screen digitized to obtain the village boundaries.

The content of this document presents the products of the mapping exercise:

- The maps show the sites and areas covered by the survey up to the village level
- The biophysical attributes of the survey areas and sites are also summarized in the tables

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Table 1: Summary of SWAZ FS & LA survey sites

District	Sub-county	Parish	Site\ Village	Relative position (degrees)		Height (m.a.s.l)
				South	East	
Kabale	Kamuganguzi	Kicumbi	Nyamurindira A&B	-1.33162	30.00672	1838
		Kasheregyenyi	Rwamacumu	-1.34293	30.01263	1883
		Buranga	Kabalisa	-1.38622	30.00194	1814
	Rwamucucu	Nyarurambi	Nyakahanga	-1.19155	30.06309	1810
		Noozi	Noozi	-1.12955	29.99606	1920
	Bubare	**Kagarama**	**Kachwekano ARDC**	**-1.25414**	**29.94178**	**2148**
	Muko	Kabere	Nyakatooma	-1.22447	29.88265	2087
		Butare	Mukibungo	-1.19264	29.80685	2244
	Muko	**Karyengyere**	**Karyengyere res. station**	**-1.21803**	**29.79581**	**2444**
	Kabale municality	**Kabale munic. North**	**Bugongi res. station**	**-1.24572**	**29.99224**	**1814**
Kanungu	Rugyeyo	Kashojwa	Nyamakamba	-0.90450	29.83128	1674
	Kirima	Rutugunda	Nkamba	-0.86281	29.75389	1467
			Rutooma	-0.87240	29.75992	1479
	Kihihi	Rwangwa	Rwemisisi, Kinyashohera	-0.76358	29.69367	1186
		Nyakatunguru	Nyakatunguru	-0.78132	29.69830	1213
Kisoro	Nyakabande	Rwingwe	Butuga	-1.23670	29.70653	1803
			Gikoro	-1.23365	29.71594	1809
		Gisorora	Nyakabande	-1.27592	29.75163	1909
	Muramba	Gisozi	Mugwata	-1.33579	29.63554	2136
			Chana	-1.35329	29.61983	2325
	Nyarusiza	Lukonji	Matyazo	-1.32965	29.67360	2074
	Busanza	Buhumbu	Bucurabwengye	-1.20246	29.61676	1745
			Kibale	-1.21606	29.63295	1818
Rukungiri	Nyakajeme	Kitimba	Kanyabushisha	-0.77296	29.89959	1582
			Kyeizoba	-0.78733	29.89638	1629
	Bwambara	Bwambara	Omukagorogoro	-0.61174	29.79549	1032
			Omukikomo	-0.61743	29.80580	1032
	Nyarushanje	Bwanga	Nyakazinga	-0.92505	30.02682	1533

Table 2: Summary of biophysical characteristics of the parishes selected for the SWAEZ FS&LA survey

District	Parish	Approx. area (ha)	Elevation range (m.a.s.l)	Soil types	Land use/cover types
Kabale	Buranga	1265	Relatively steep with elevation ranging from 1800 in north west, to 2300 in central parts	The parish has varied soil types; red and reddish brown clay loams occasionally lateritized in the west, humose loams with dark subsoil horizons in central, peat or peaty sands and clay in the east	About 90% of the parish is under subsistence farming. The rest is under rangelands, grasslands, pastureland and open savannah in the east
	Butare	1984	The parish is steeper in west, high, with elevation ranging from 1900 to 2400	Soil types vary from yellowish red clay loams in the west, brown loams over clay loams in the central and north, humose loams with dark subsoil horizons in south, red and reddish brown clay loams occasionally lateritized in the east	Over 90% is under subsistence farming.
	Kabere	1165	Relatively steep, high, with elevation ranging from 1900 in south to 2500 in central parts	Most of the parish has red and reddish brown clay loams occasionally lateritized in the central and eastern parts, Humose loams with dark subsoil horizons are found in the north	About 90% is subsistence farming, some coniferous forests plantations or woodlots are located in the south west of the parish.
	Kasheregenyi	719	The parish is steeper in east and central parts, elevation ranges from 1800 to 2300	Humose loams with dark subsoil horizons in west, red and reddish brown clay loams occasionally lateritized in central parts, peat or peaty sands and clay in the east	About 70% is subsistence farming, the rest being rangelands, grasslands, pastureland and open savannah covering the north east
	Kicumbi	858	Steeper in the	Humose loams with dark subsoil	About 90% subsistence farming,

			south and west, with medium elevation ranging from 1800 in east to 2300 in south	horizons in south west, red and reddish brown clay loams occasionally lateritized in central, peat or peaty sands and clay in the east	plus Rangelands, grasslands, pastureland and open savannah covering about 10% in east
	Noozi	1483	Relatively steep, elevation ranges from 1800 in the east to 2300 in west	Humose loams with dark subsoil horizons in west and east, red and reddish brown clay loams occasionally lateritized in central parts	About 90% is subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 3% in the north, deciduous plantations about 2% in east and bush land about 5% in southern parts
	Nyarurambi	1257	Steeper in the south and west, elevation ranges from 1700 in north east to 2200 in west	Humose loams with dark subsoil horizons in the south, red and reddish brown clay loams occasionally lateritized in north	About 95% is subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 2% in south east and deciduous plantations about 3% in central parts
Kanungu	Kashojwa	1334	Uniformly steep, elevation ranges from 1600 in north to 2100 in south west	Yellowish red clay loams in the south east and south west, red clay sandy loams and Humose loams with dark subsoil horizons in the central parts, shallow dark brown or black sandy loams often very stony in the north	About 80% is subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 20% in the western parts
	Rutugunda	2020	Steeper in the north , medium elevation ranging from 1400 in	Humose loams with dark subsoil horizons in the west, shallow dark brown or black sandy loams often very stony in the eastern parts	About 85% subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 3% in north west,

			south to 1700 in north		deciduous plantations about 3% in north west, woodland about 5%in central and southern parts, bush land about 4%in central parts
	Rwanga	880	Relatively flat, and low, elevation ranges from 1000 to 1300	Brown sand and sandy loams occasionally graveled cover the whole parish	About 85% subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 4% in north west , woodland about 4% in west, bush land about 2% in west, uniform farmland (like tea plantations) about 5% in southern parts
Kisoro	Buhumbu	1160	Relatively steep and low, elevation ranges from 1700 to 2000	Most of the parish has yellowish red clay loams, with peat or peaty sands and clays in south east	About 95% subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 2% in north, scattered deciduous plantations about 2%, rest swamp is swamp.
	Gisorora	2235	Steeper in the north, elevation ranges from 1800 to 2100	Reddish brown sandy loams and loams on laterite in south, brown loams over clay loams in north	About 98% subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 2% in south
	Gisozi	553	Relatively steep and high, elevation ranges from 2100 to 2400	Dark brown and black humose loams cover most of the parish, with reddish brown sandy loams and loams on laterite in the north	Almost the whole parish is under subsistence farming
	Rukonji	883	Relatively steep and high, elevation ranges from 2000 in	Dark brown and black humose loams for most of the parish, with reddish brown sandy loams and loams on laterite in north west	Almost the whole parish is under subsistence farming

			north east to 2400 in south west		
	Rwingwe	1122	Steeper in the east, elevation ranges from 1700 in central and north to 2000 in east	Much of the parish has reddish brown sandy loams and loams on laterite in the central and southern parts,with brown loams over clay loams in the east, and peat or peaty sands and clays in north west	Almost the whole parish is under subsistence farming
Rukungiri	Bwambara	2646	Relatively flat and low, elevation ranges from 900 in southwest to 1200 in north east	Reddish brown sands and sandy loams cover the south and eastern parts, with a bigger portion in the north and west covered by brown sand and sandy loams occasionally graveled	About 90% is subsistence farming, wood land is about 5% in west, deciduous plantation about 3% in east, and about 2%fully stocked tropical high forest in southern parts
	Bwanga	2190	Relatively high and steeper in the south with elevation ranging from 1400 to 1800	Red sandy clay loams cover the south, a bigger portion in the central and north is covered by shallow dark brown or black sandy loams often very stony soils.	About 60% is covered by rangelands, grasslands, pastureland and open savannah scattered in the parish but mostly in the south. About 40% is under subsistence farming especially in the north and east
	Kitimba	1104	Medium elevation, ranging from 1400 to 1700	Red sandy clay loams cover most of the parish in the south with shallow dark brown or black sandy loams often very stony in the north	About 90% subsistence farming, rangelands, grasslands, pastureland and open savannah cover about 10% in north west

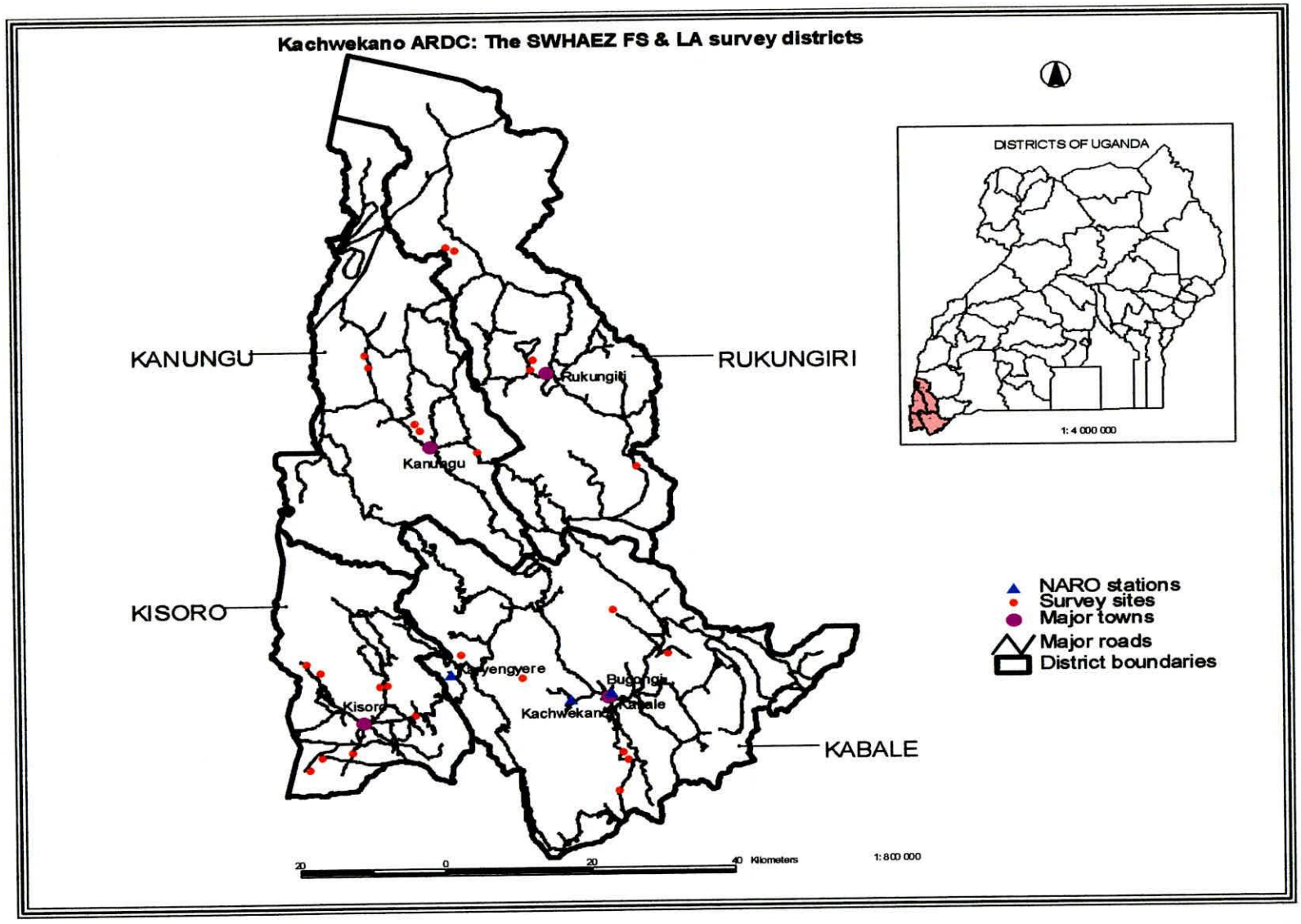

Figure 1: Map showing the districts and sites of the SWAEZ FS & LA survey

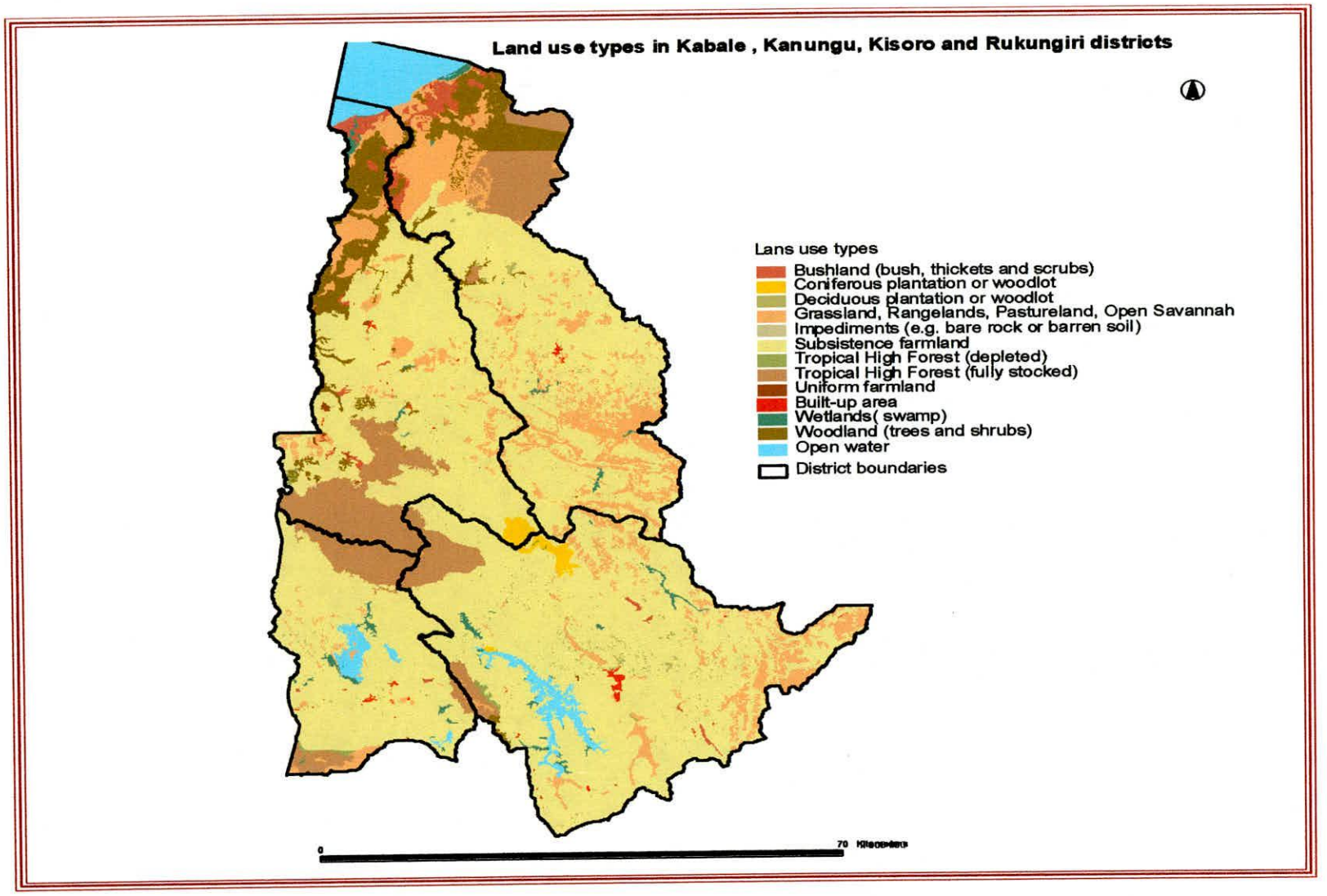

Figure 2: Map showing land use/cover of the districts covered by SWAEZ FS & LA survey

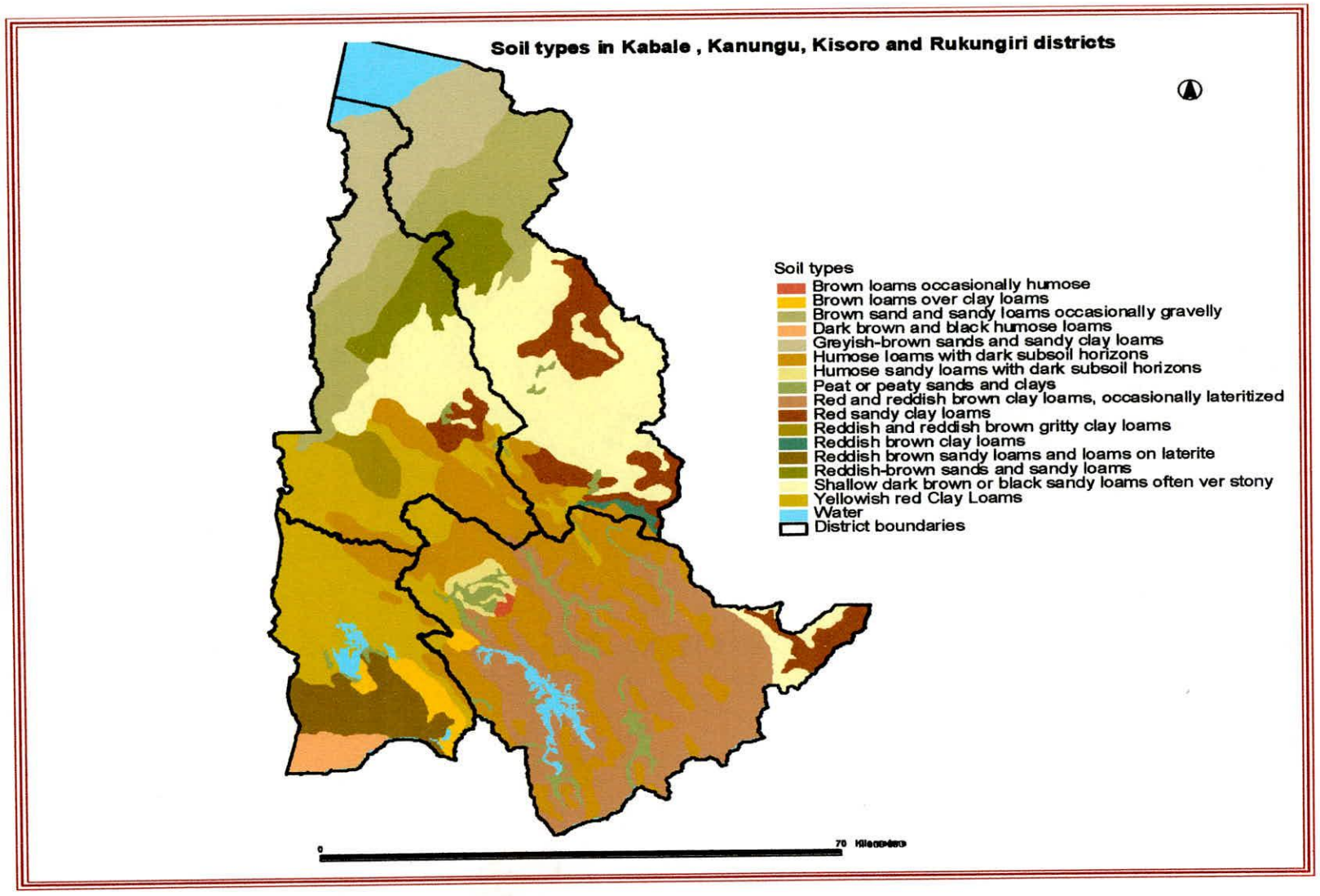

Figure 3: Map showing soil types of the districts covered by SWAEZ FS & LA survey

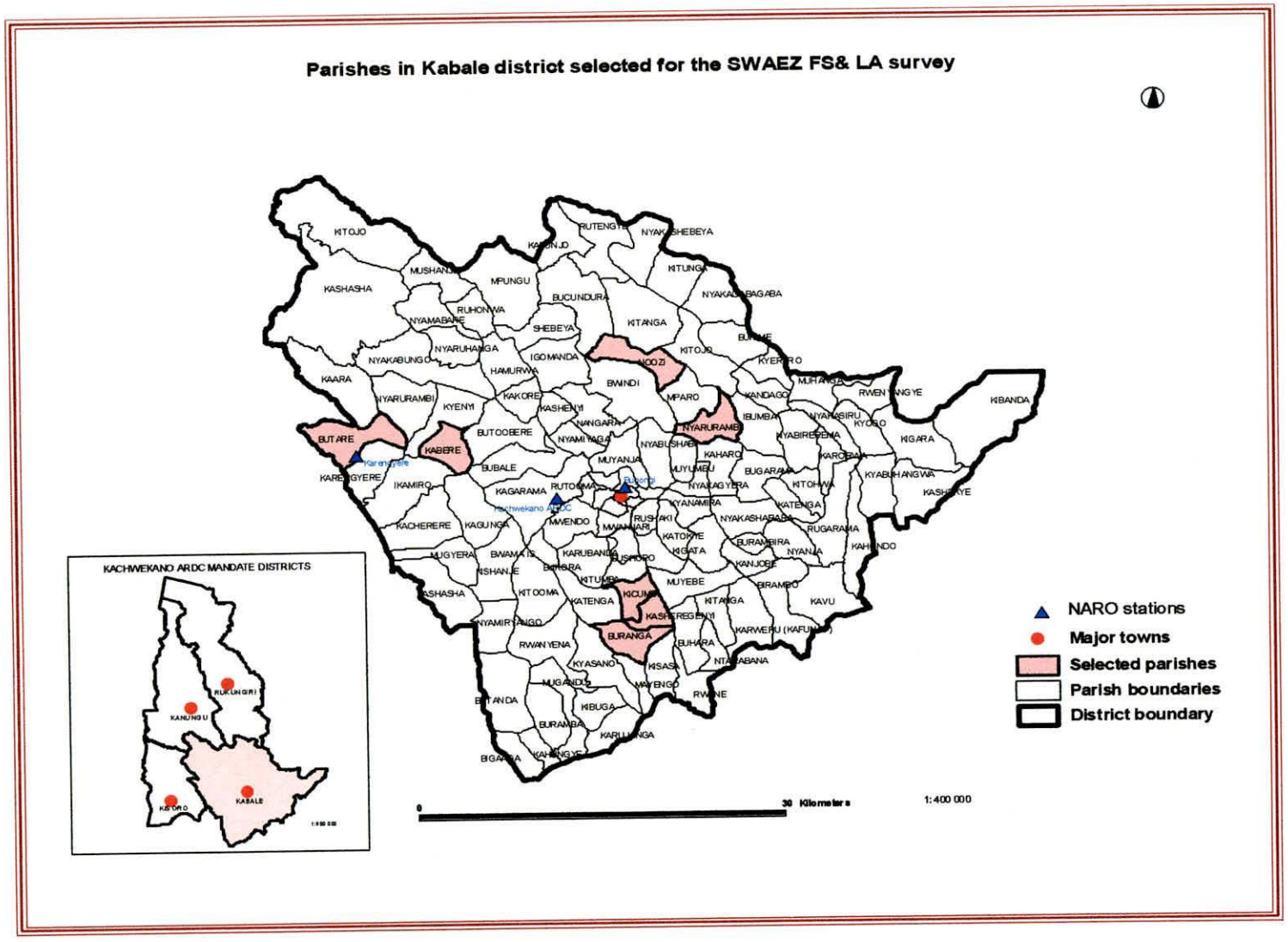

Figure 4: Map showing parishes in Kabale district that were selected for the SWAEZ FS & LA survey

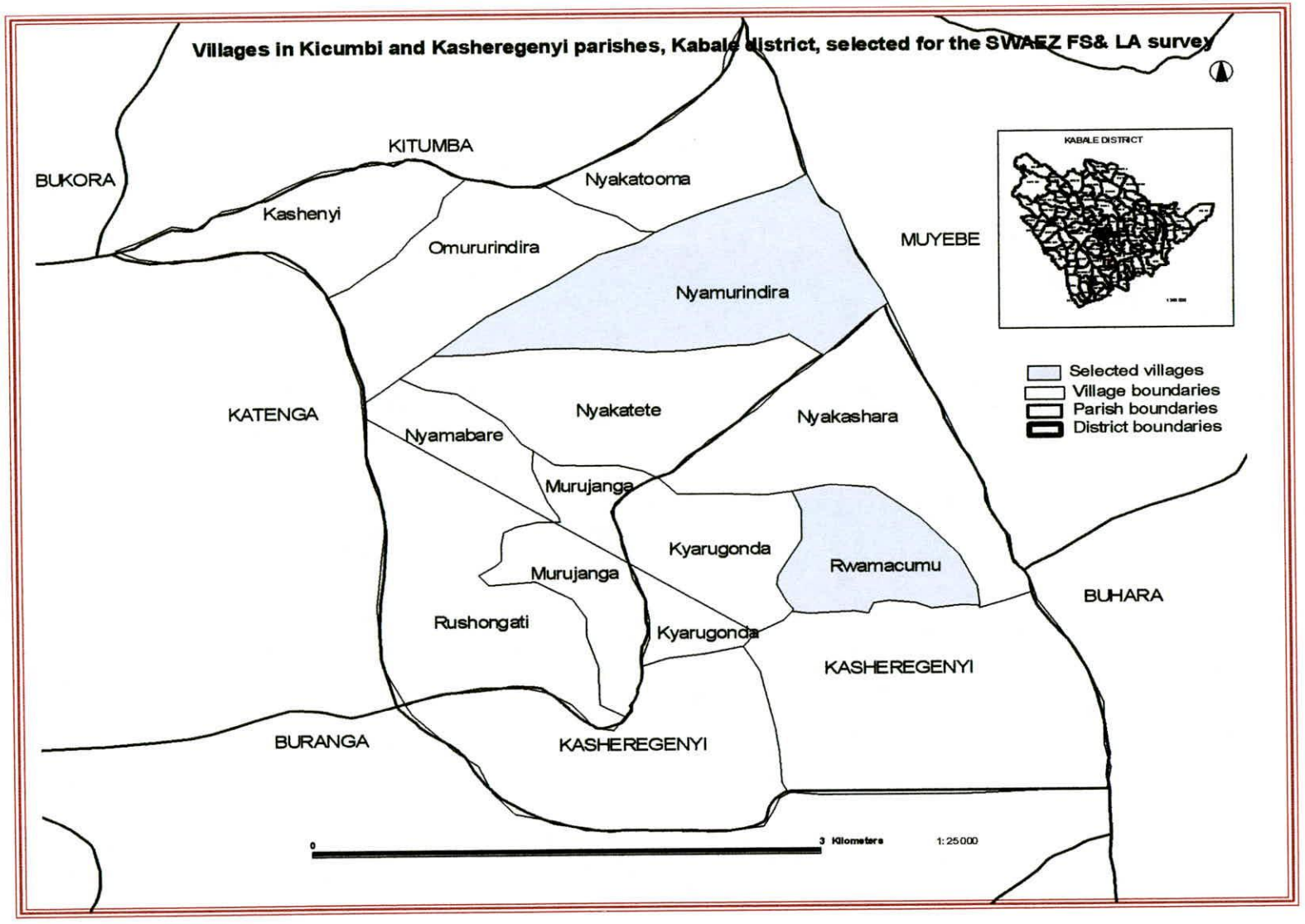

Figure 5: Map showing villages in Kicumbi and Kasheregenyi parishes, Kabale district, that were selected for the SWAEZ FS & LA survey

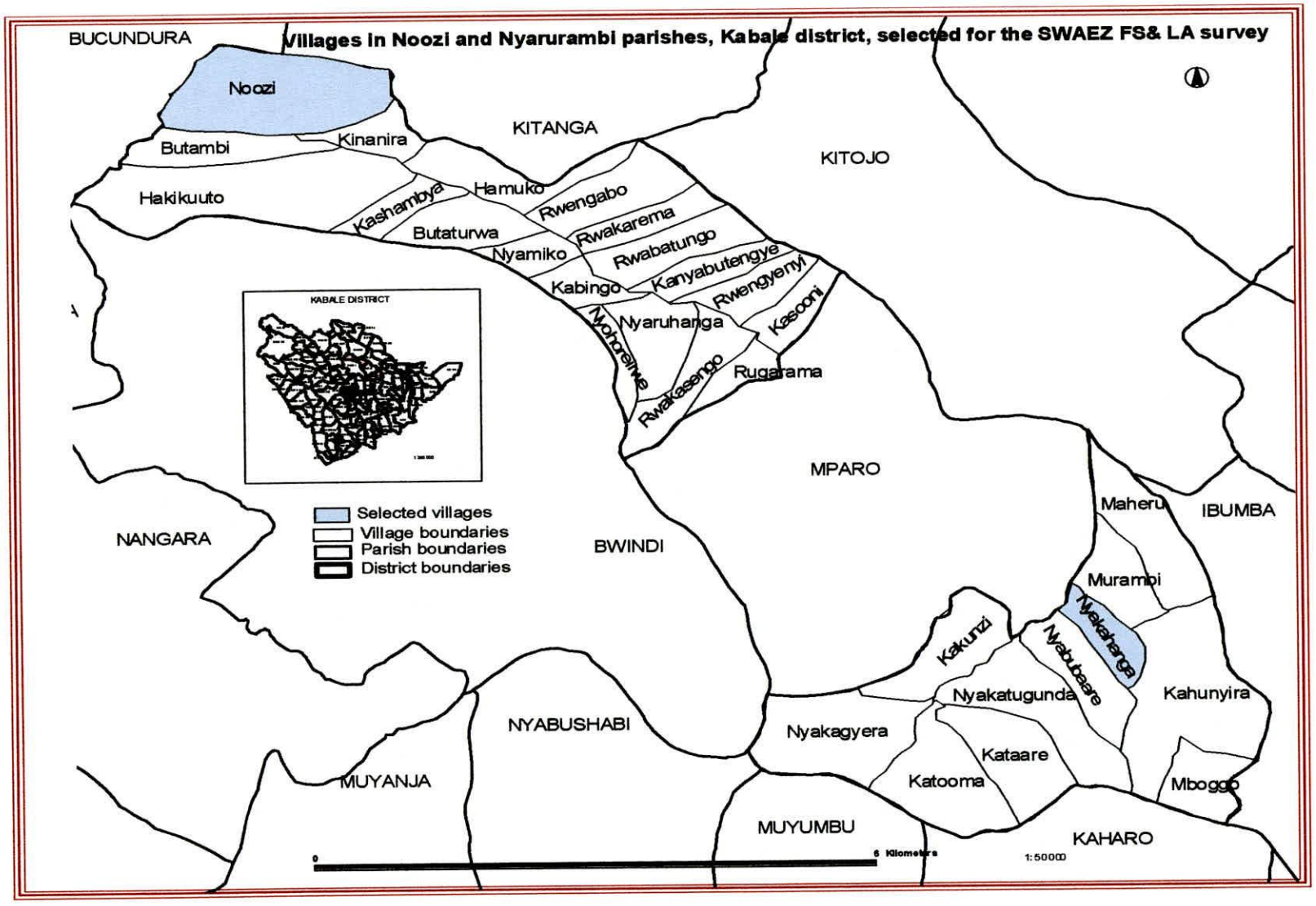

Figure 6: Map showing villages in Noozi and Nyarurambi parishes, Kabale district, that were selected for the SWAEZ FS & LA survey

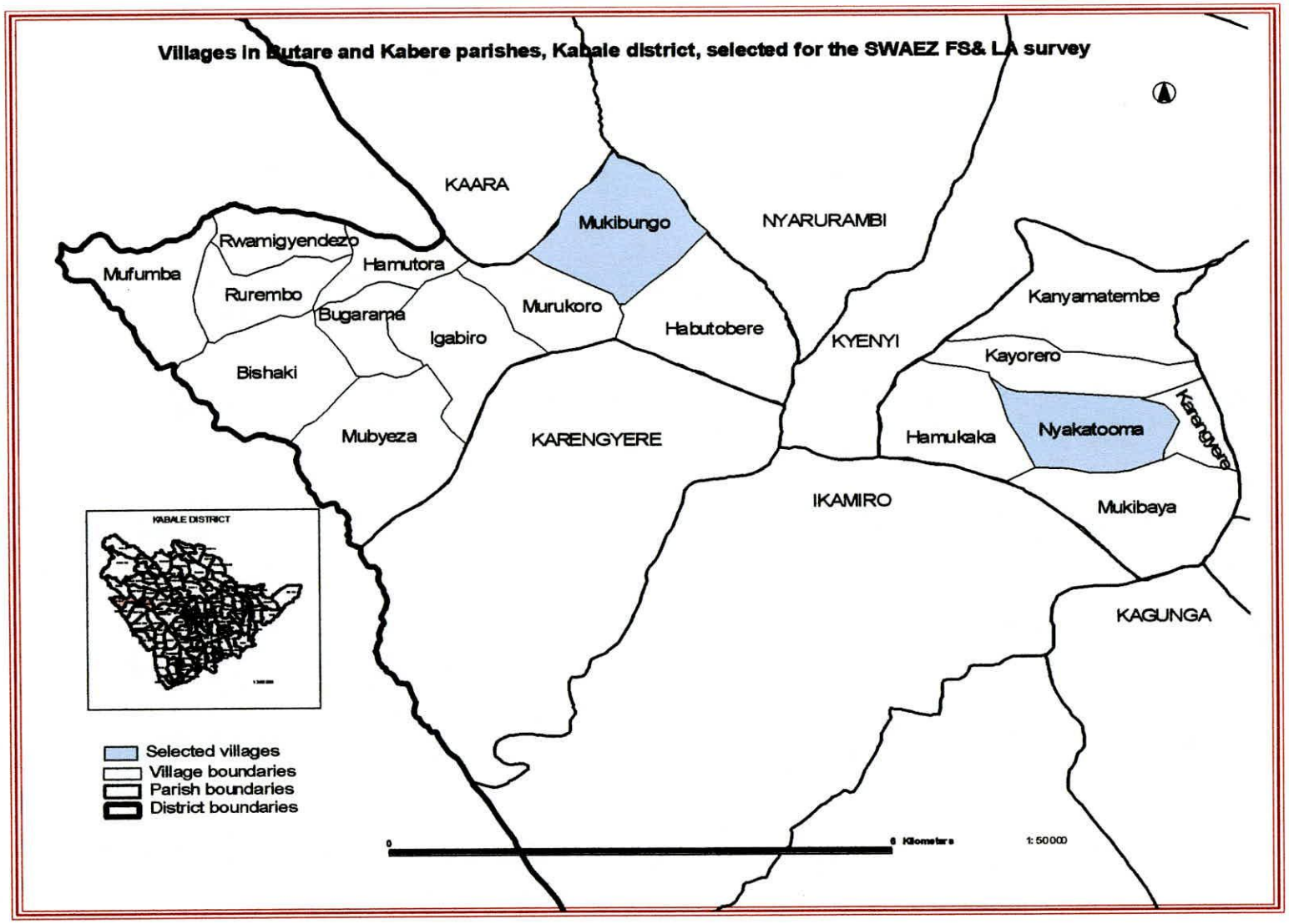

Figure 7: Map showing villages in Butare and Kabere parishes, Kabale district, that were selected for the SWAEZ FS & LA survey

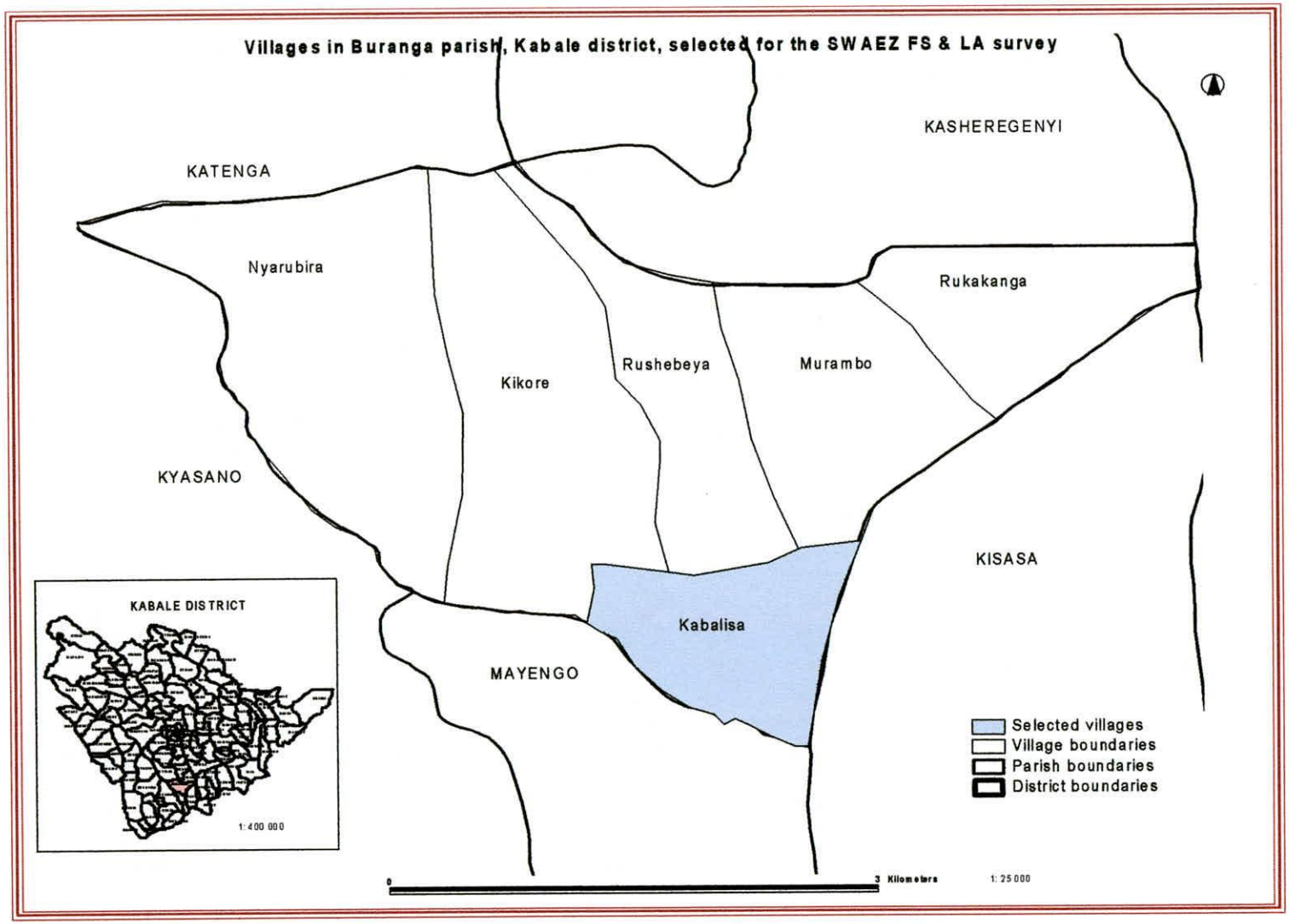

Figure 8: Map showing villages in Buranga parish, Kabale district, that were selected for the SWAEZ FS & LA survey

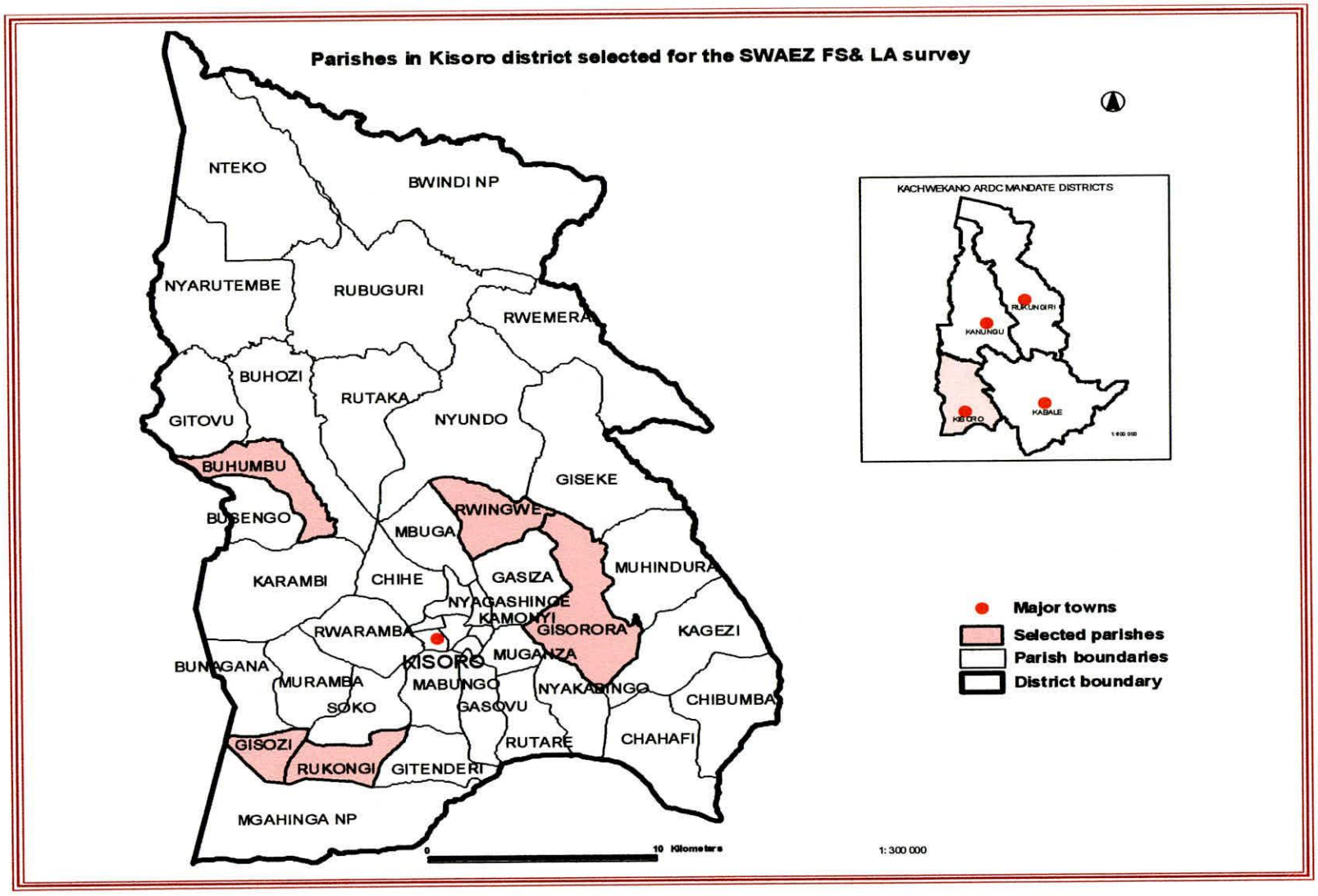

Figure 9: Map showing parishes in Kisoro district that were selected for the SWAEZ FS & LA survey

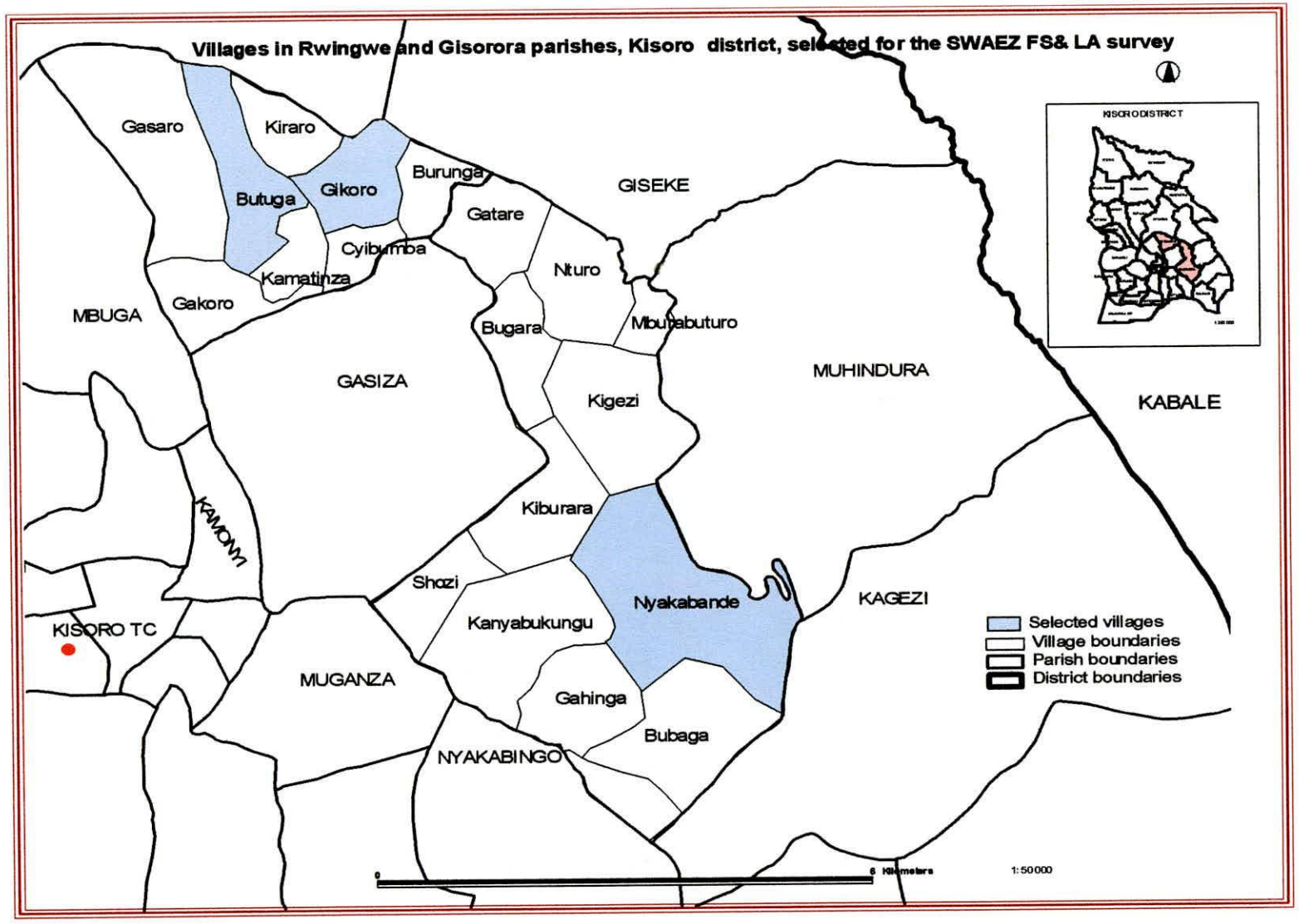

Figure 10: Map showing villages in Rwingwe and Gisorora parishes, Kisoro district, that were selected for the SWAEZ FS & LA survey

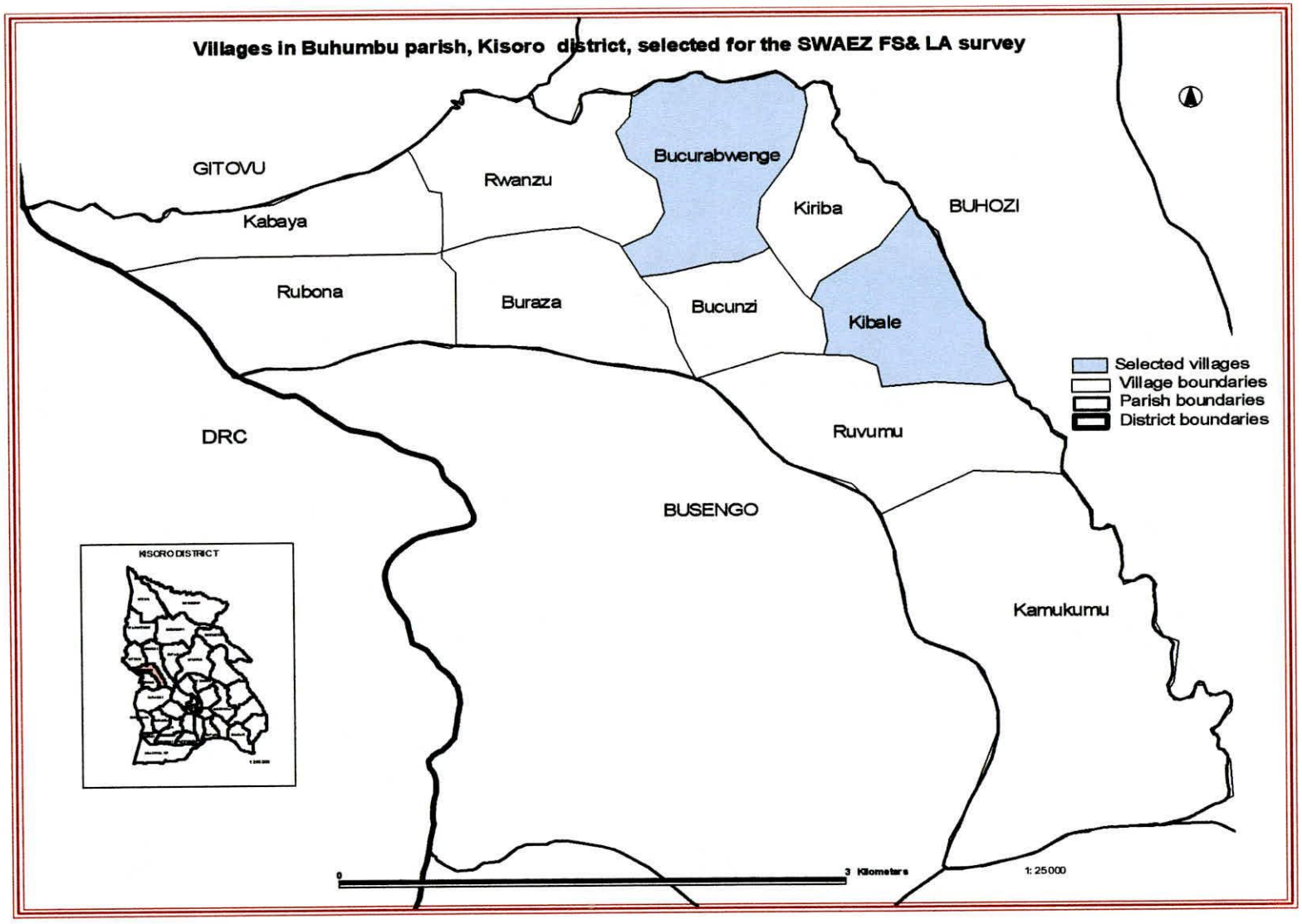

Figure 11: Map showing villages in Buhumbu parish, Kisoro district, that were selected for the SWAEZ FS & LA survey

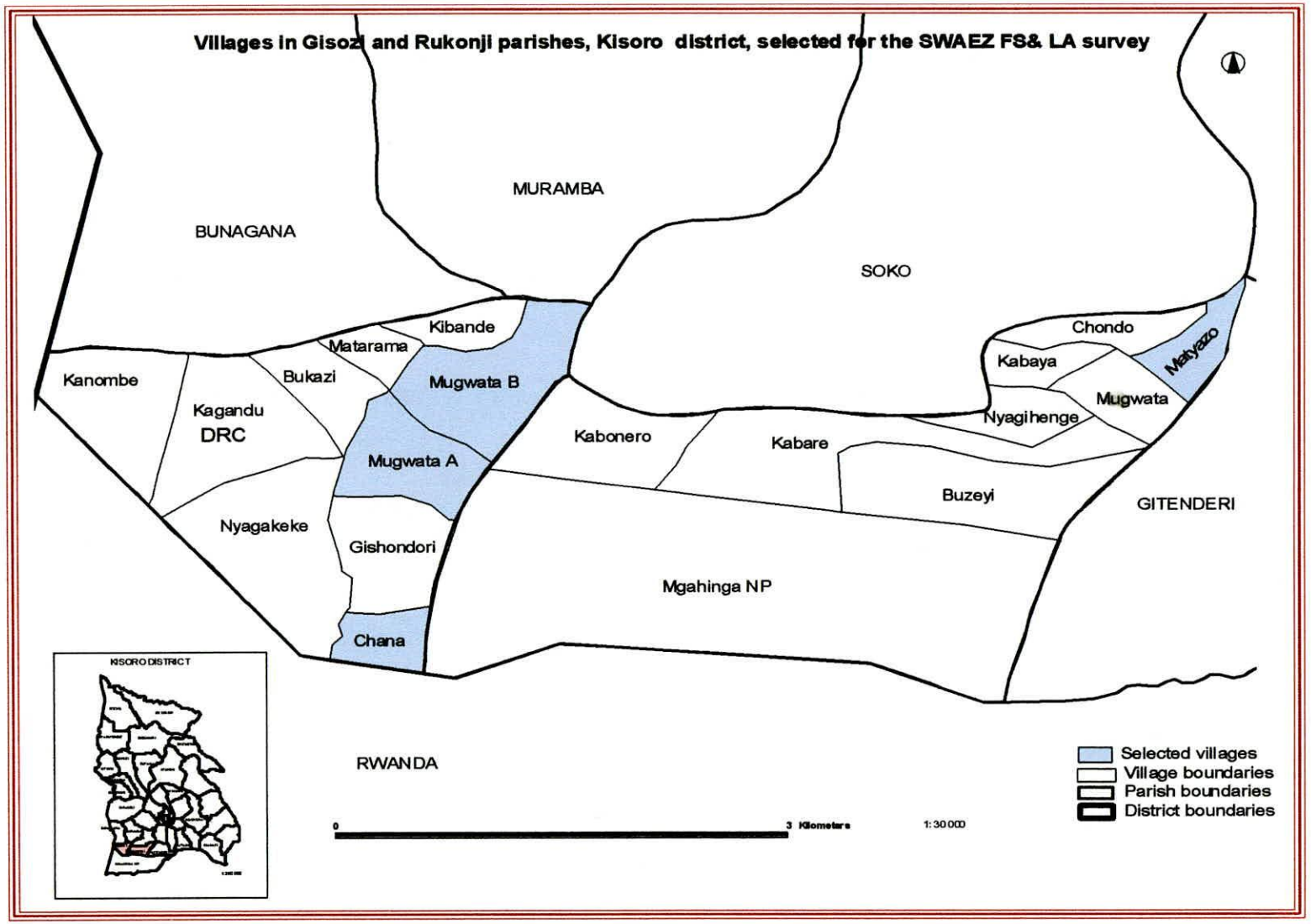

Figure 12: Map showing villages in Gisozi and Rukonji parishes, Kisoro district, that were selected for the SWAEZ FS & LA survey

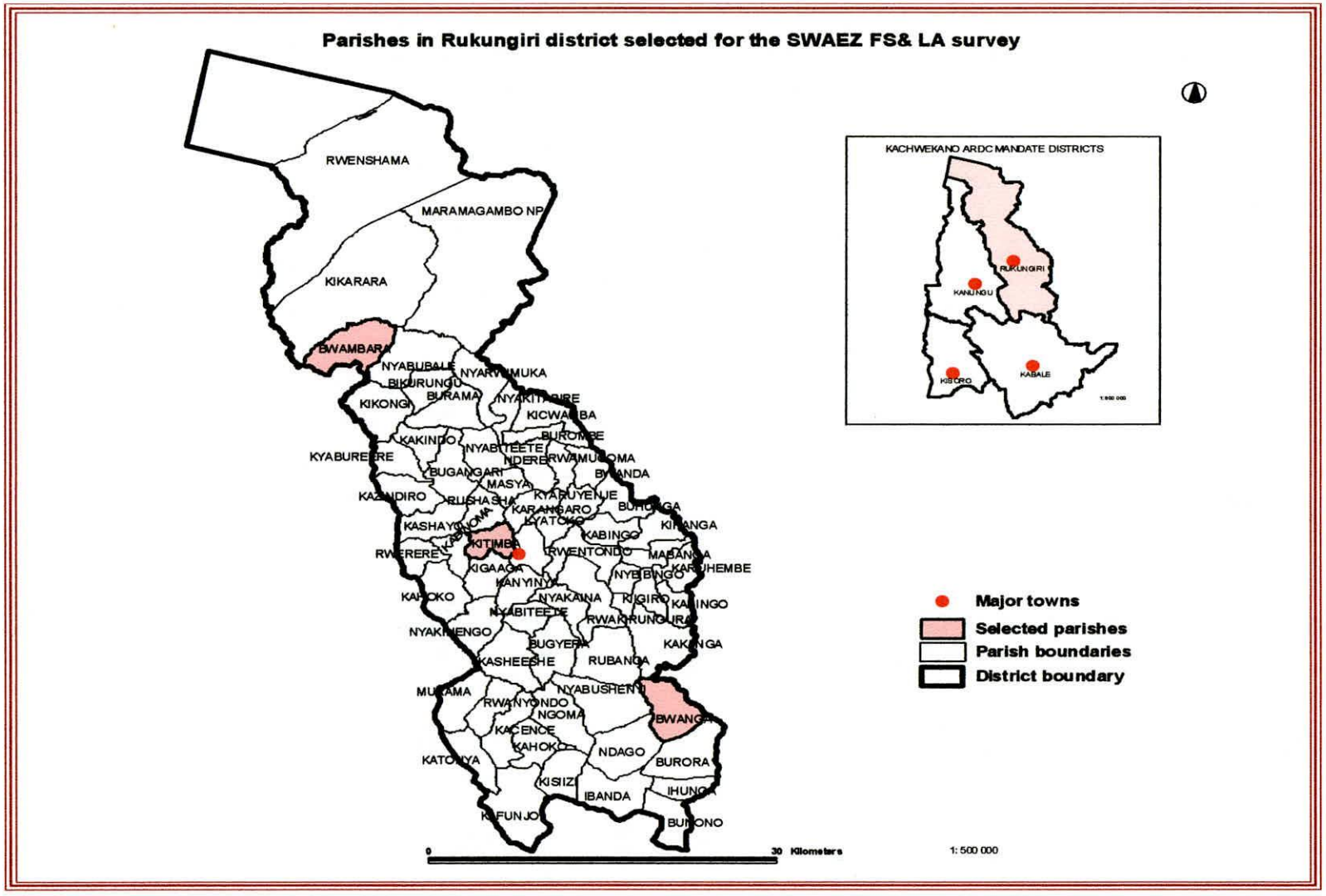

Figure 13: Map showing parishes in Rukungiri district that were selected for the SWAEZ FS & LA survey

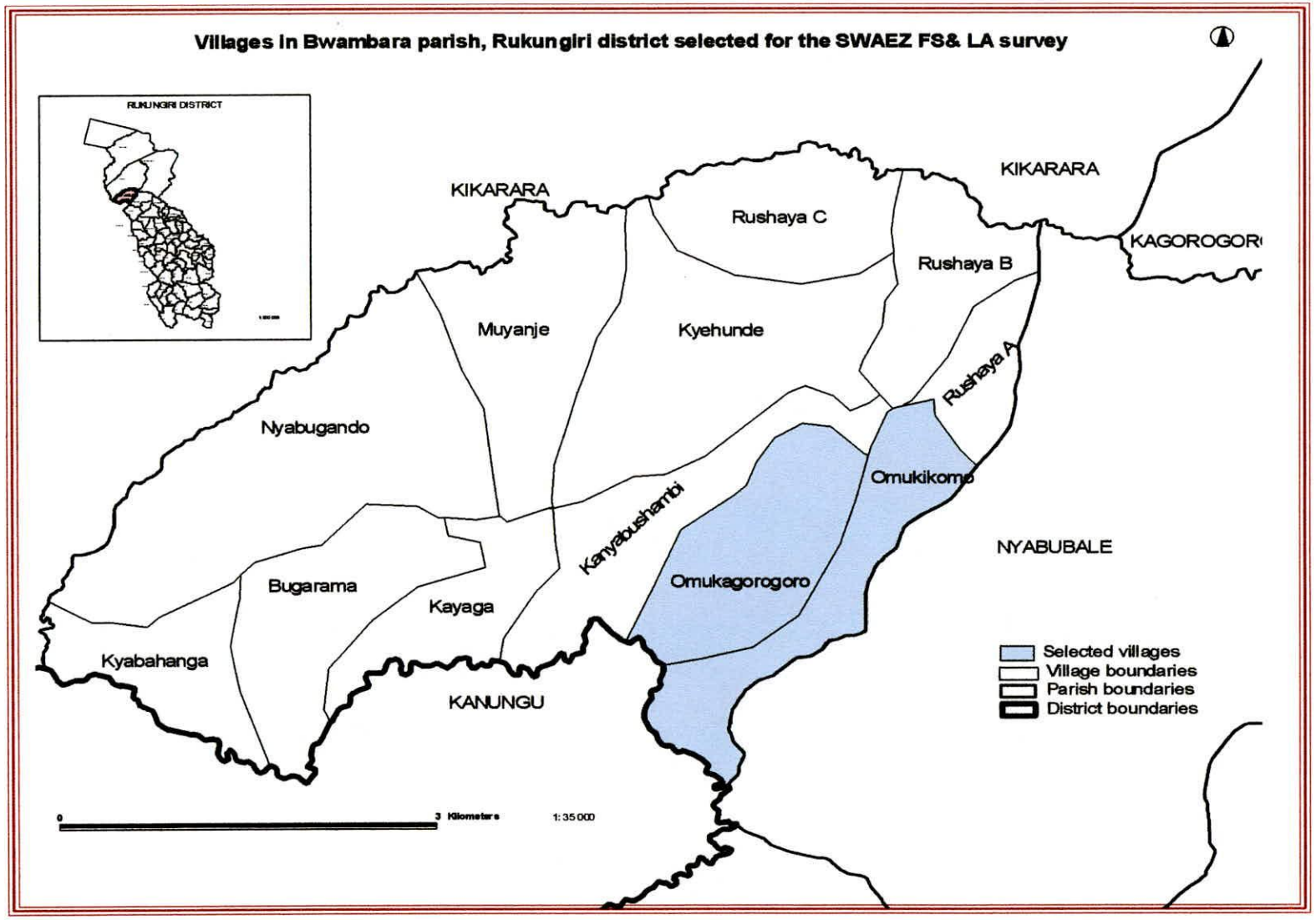

Figure 14: Map showing villages in Bwambara parish, Rukungiri district, that were selected for the SWAEZ FS & LA survey

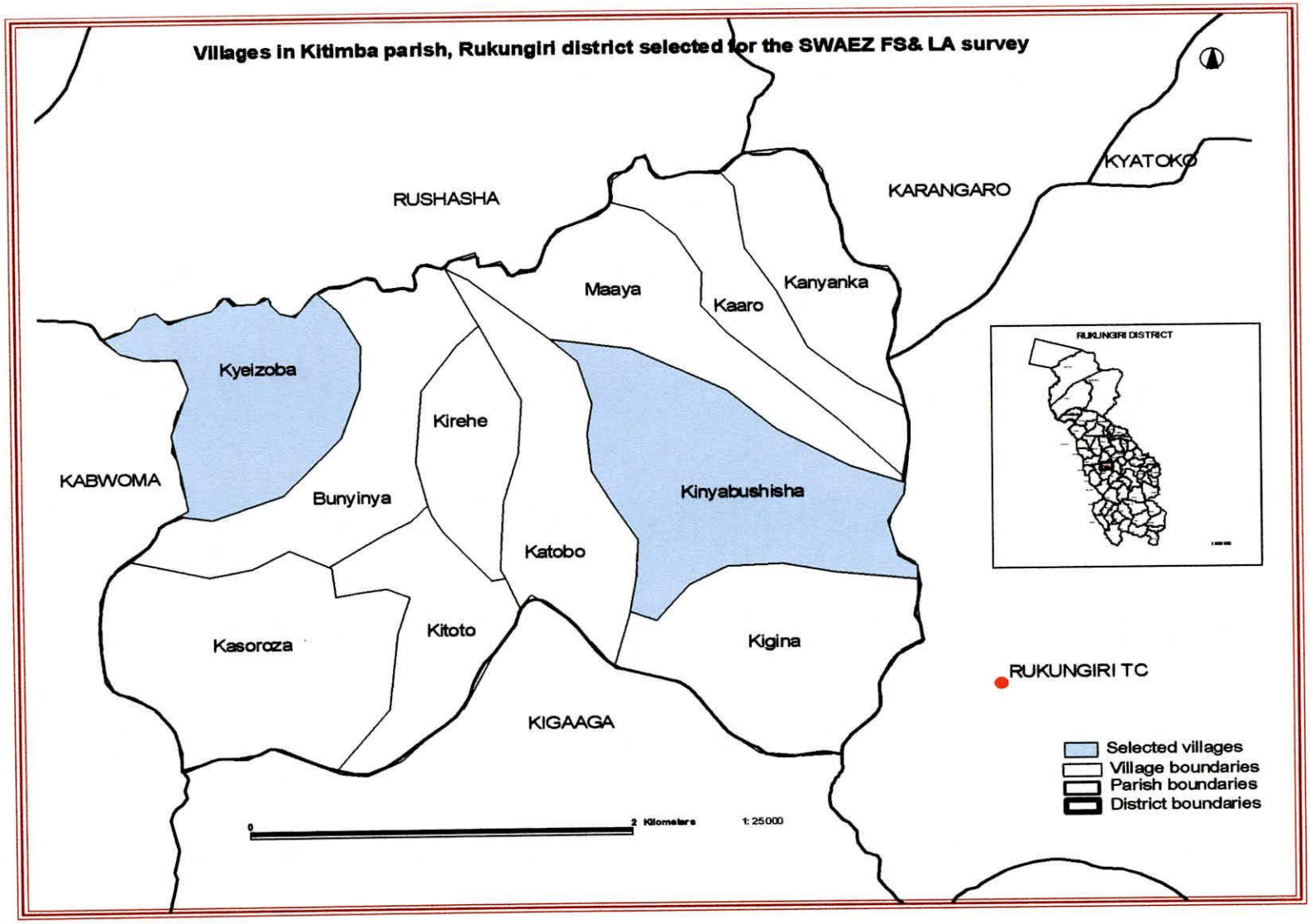

Figure 15: Map showing villages in Kitimba parish, Rukungiri district, that were selected for the SWAEZ FS & LA survey

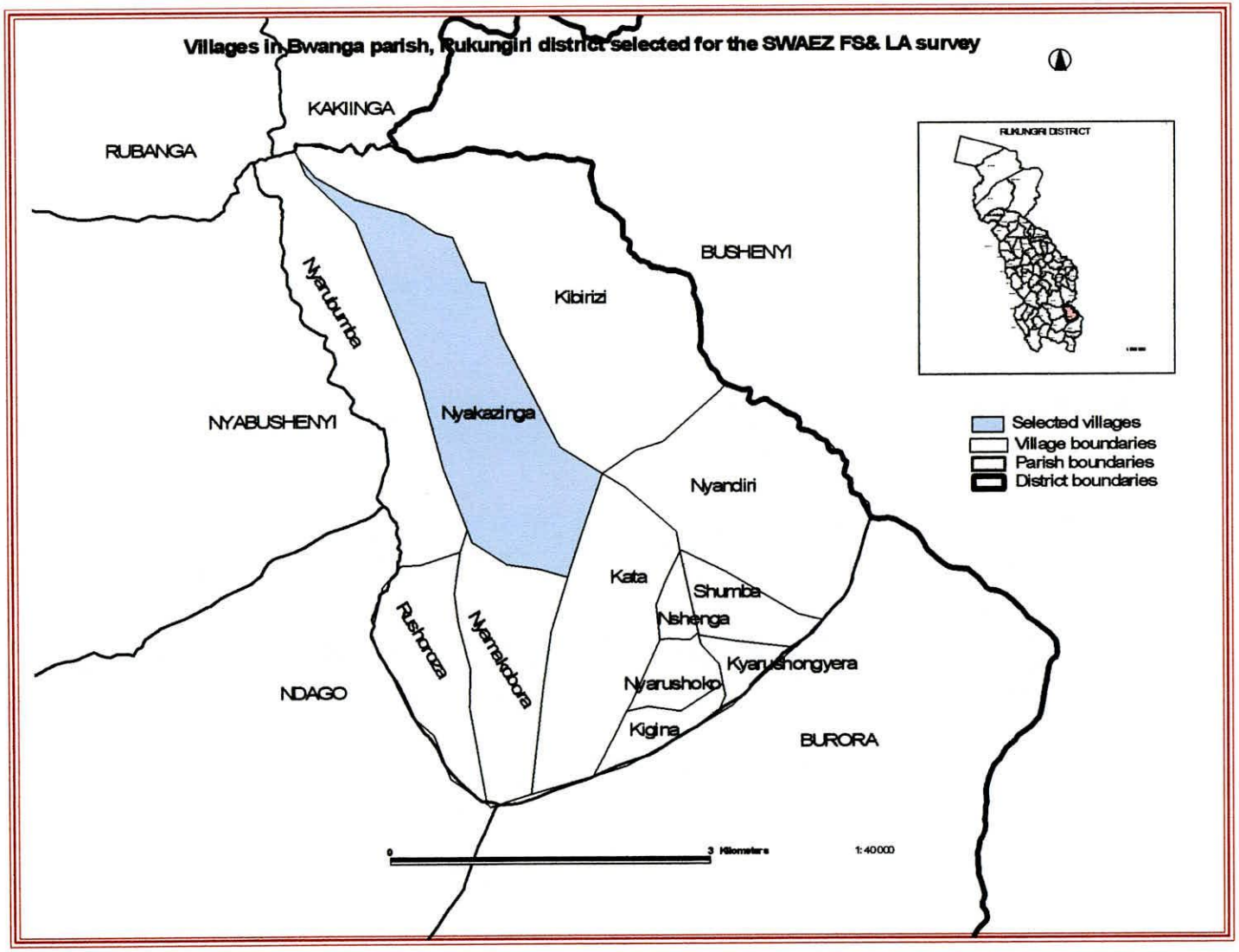

Figure 16: Map showing villages in Bwanga parish, Rukungiri district, that were selected for the SWAEZ FS & LA survey

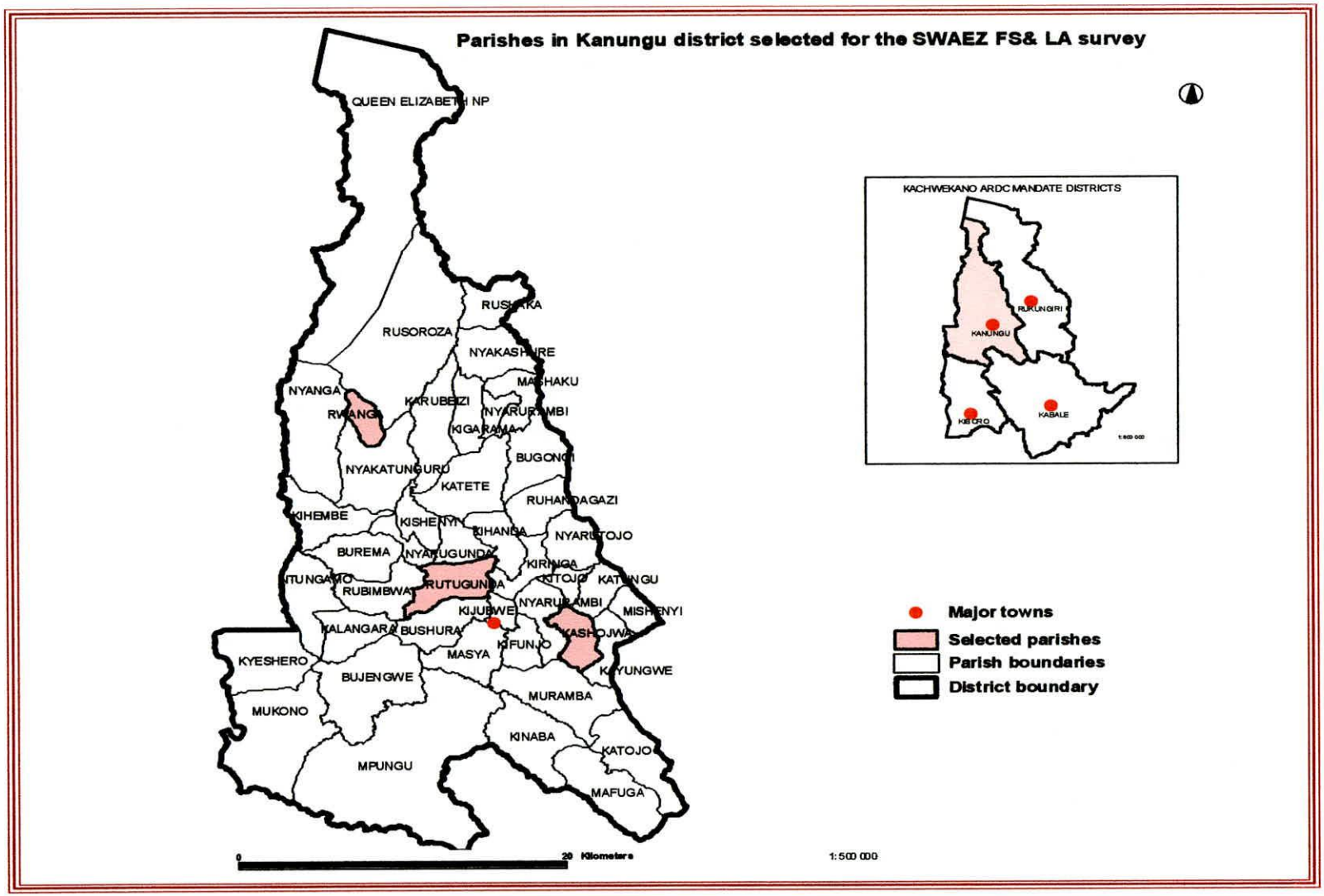

Figure 17: Map showing parishes in Kanungu district that were selected for the SWAEZ FS & LA survey

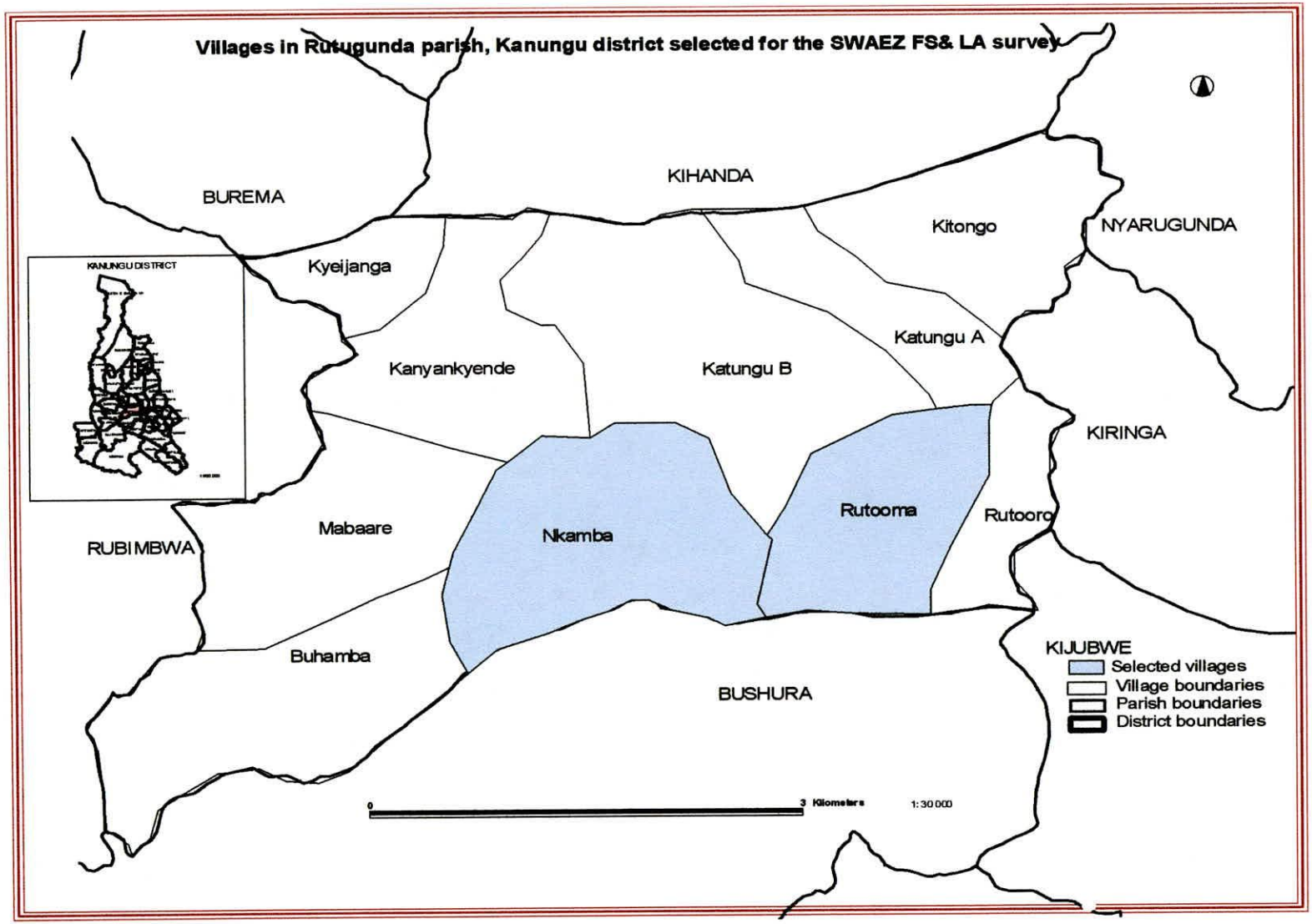

Figure 18: Map showing villages in Rutugunda parish, Kanungu district, that were selected for the SWAEZ FS & LA survey

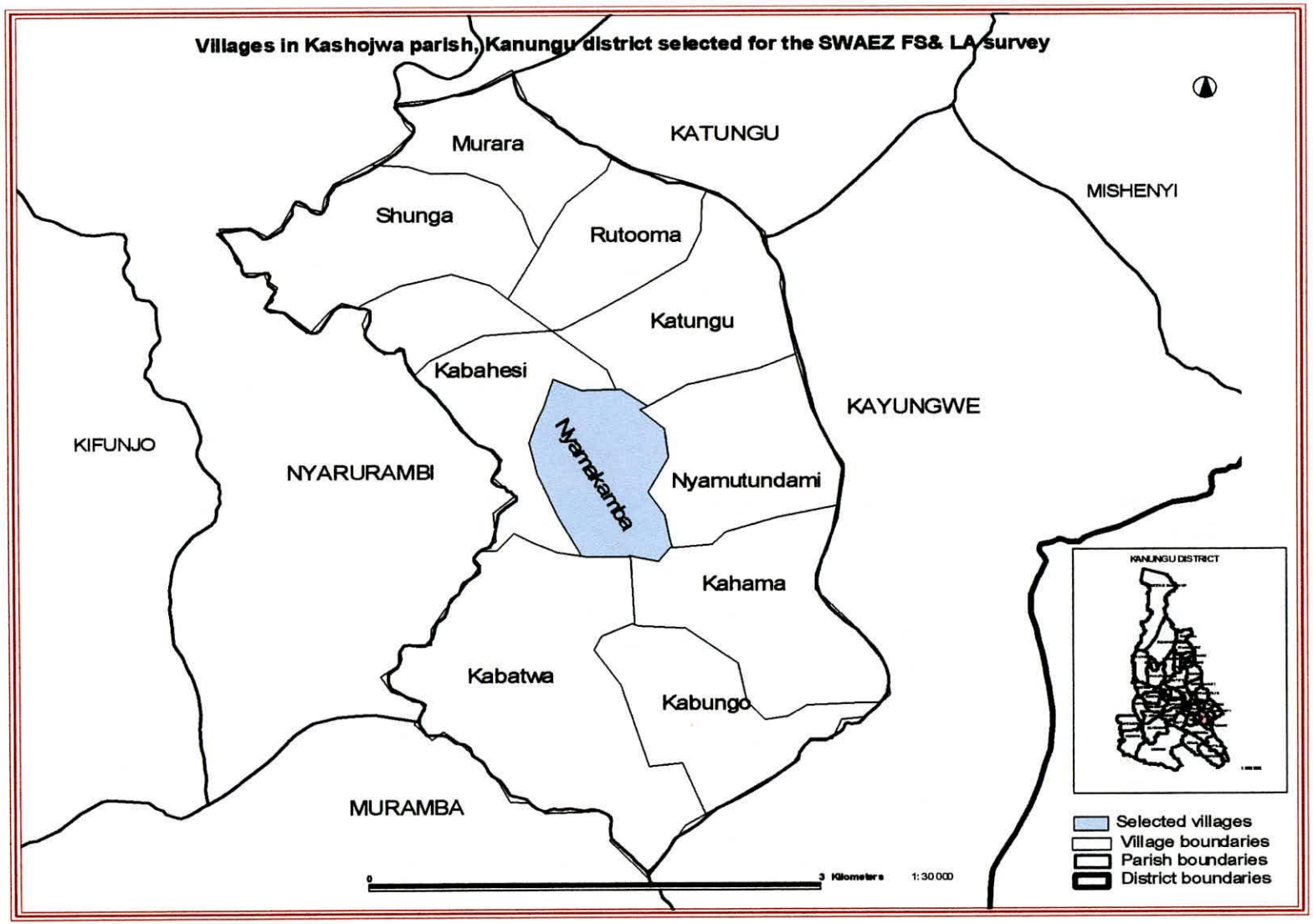

Figure 19: Map showing villages in Kashojwa parish, Kanungu district, that were selected for the SWAEZ FS & LA survey

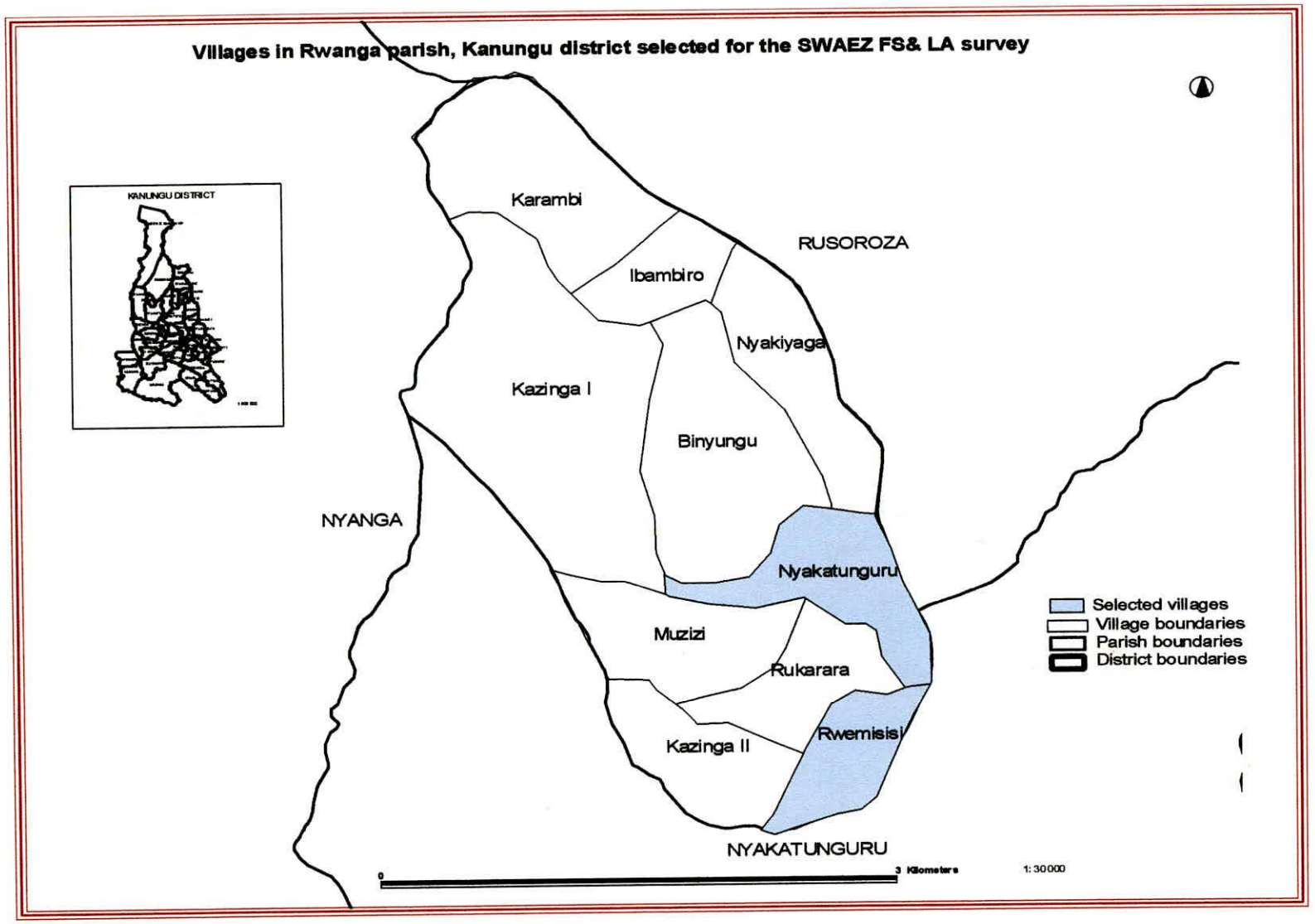

Figure 20: Map showing villages in Rwanga parish, Kanungu district, that were selected for the SWAEZ FS & LA survey