Bukoba District Rural Development Programme

Bukoba District Council

Landforms and Soils of Bukoba District

LEGEND

Geological Formation; Rock Type	Major Landform	Map Unit	Extent (km²) (%)	Parent Material	Local Relief; Slope %	Soils	Soil Class (FAO-UNESCO, 1988)
Karagwe- Ankolean System: Quartzites, Conglomerates	Plateaus	K1 -	27 0.4	Quartzites, Con- glomerates	(Gently) Undulating Summit level; slopes 2- 15%	Well drained, moderately deep, friable, reddish brown sandy clay loams; locally with a thick, dark topsoil. Very shallow stony and bouldery soils on sloping land	haplic Ferralsols and lithic Leptosols
	Hills	K2	180	Quartzites, Con- glomerates	Long, steep hill slopes; 20-40%	Well drained, very shallow, very friable, (very) dark (greyish) brown, very gravelly, stony and bouldery sandy clay to sandy loam	lithic and mollic Leptosols
	Footslopes	КЗ	64	Colluvium from Quartzites	Straight to concave slopes of 5-10%, at the foot of hills	Well drained, very deep, friable to firm, dark red to yellowish red sandy clay loams with a (thick, dark,) loamy sand to sandy loam topsoil	(Anthri-) luvic Phaeozems
Karagwe- Ankolean System: Shales	Hills and associated Footslopes	K4	239 4.3	1: Shales; and 2: Colluvium from shales	1: Steep hills, slopes 20-30%; and 2: lower concave valley slopes	Association of: 1: Well drained, extr. shallow, very friable, very dark greyish brown, very gravelly clay loam, and 2: Well drained, very deep, friable, strong brown silty clay to clay loam	1: lithic Leptosols 2: Alumi-humic Ferralsols*
		K 5	354 6.4	Shales	1: Low hills, slopes 10-30%; and 2: gentle Pediments, 5-7%	Association of: 1: Well drained, very shallow, very friable, dark greyish brown gravelly silty clay loam, and 2: well drained, moderately deep to shallow, friable, yellowish brown silty clay (loam), over ironstone/shale gravel	1: lithic Leptosols 2: Ferralsols* skeletic phase
Karagwe- Ankolean System: Undifferen- tiated rocks	Minor Hills; Plateau remnants	K6	32 0.6	Shales, Ironstone	(Short steep) slopes 15-25%; minor flat summits	Well drained, very shallow, very gravelly, stony and rocky soils	lithic Leptosols
	Hills	K7	53 0.9	Silt- /Sandstone, Shales	Moderately long slopes, 20-30%	Well drained, very shallow, dark red to reddish brown, gravelly and stony clay to fine sandy clay loam; and rock outcrops	lithic and mollic Leptosols
	Footslopes	K8	14	Colluvium	Straight to concave slopes of 8-10%, at the foot of hills	Wel to moderately well drained, deep to very deep, friable to firm, brown to yellowish red clay to fine sandy clay, with a thick, dark, fine sandy (clay) loam topsoil. Less deep soils over ironstone gravel	Anthri-luvic Phaeozems
	Upland Complex; Erosional Plains	К9	521 9.4	Quartzites, Shales	flat ironstone crests; very long gentle slopes of 3-5%	complex of well drained, friable, yellowish red to strong brown clay loam to silty clay, of varying depth, over rock and ironstone gravel. Common outcrops of ironstone at crests and in downslope position	Alumi-humic Acrisols and dystric Leptosols
		K10	405	Shales, Ironstone, Quartzites	complex of small hills and gently undulating uplands	Complex of well drained, friable, strong brown to reddish brown silty clays and clay loams, very shallow to deep, over rock and ironstone gravel; common rock outcrops at small hills	Alumi-humic Acrisols*and - Ferralsols*, skeletic phase
	Piedmont	K11	183 3.3	Quartzites, Shales, Ironstone	Almost flat to very gentle, very long slopes, 1-3%	Complex of: 1: Moderately well drained, shallow to deep, friable, yellowish brown to yellowish red fine sandy clay loam to silty clay over ironstone gravel; and 2: frequent, extensive outcrops of ironstone	ferric Lixisols, skeletic and lithic phase
	Valley	K12	472 8.5	Silty, clayey Alluvium	Flat to almost flat, slopes <1%	Imperfectly drained, very deep, firm, brownish gray, mottled, silty clay, with a friable silty clay loam top soil	Plani-haplic Acrisols and eutric Planosols
Bukoban System: Sandstones and Shales	(dissected) Plateaus, High Level Uplands	B1	144	Shales, Sandstone	Complex of: 1: almost flat 2: g. undulating 3: dissected	Complex of: 1: Well drained, very deep, yellowish red to (strong) brown (fine) sandy clay to clay loam, with a thick, dark, slightly lighter topsoil; 2: -do-, but moderately to very deep, and a distinctly sandier topsoil; 3: -do-, but very deep to shallow sandy clay (loam), with sandy loam topsoil	Anthri-humic Ferralsols
	Major Escarp- ments, Ridges	B2	190 3.4	Sandstone, Shales	Very steep to mod steep; very long to mod long complex slopes	Complex of rock outcrops and pockets of well drained, bouldery, sandy loams to sandy clays of various colour and depth	umbric Lepto- sols; humic Acrisols, lithic phase
	Slope Complexes: Dip slopes	B3	126 2.3	Sandstone, Colluvium	very long slopes, >1km, 8-12%	1: Well drained, very deep, very friable, strong brown to dark red sandy clay Toam with a sandy loam top- and upper subsoil 2: -do-, but yellowish red to dark red sandy clay (loam), with distinctly sandier textured topsoil	Acri-haplic Ferralsols; Alumi-humic Ferralsols
		В4	22	Sandstone	long to very long slopes, 10-15%	Complex of: 1: Well drained, very deep to moderately deep, friable to firm, dark red sandy clay, with a sandy loam topsoil and 2: Rock outcrops (sandstone, ironstone)	Anthri-humic Ferralsols; - do-, lithic phase
		B5	73 1.3	Sandstone	complex slopes of variable length and steepness	Complex of: 1: Rock Outcrops (sandstone) and 2: Well drained, very friable, dark (reddish) brown, rocky, bouldery and stony sandy clay loam to sandy loam of varying depth	Rocks; Lepto- sols; ferra- lic Acrisols, lithic phase
	Slope Complexes: Face slopes	B 6	75 1.3	(Colluvium from) Sand- stone, shale, dolerite	long, concave slopes under escarpments, 10- 17%	1: Well drained, very deep, friable to firm, dark red sandy clay, with a thick, dark, sandy clay loam to sandy loam topsoil and 2: Well drained, very deep, friable to firm, dark red to dark reddish brown clay, with a thick, dark, clay loam topsoil	Anthri-luvic Phaeozems; Niti-haplic Phaeozemss
		В7	50 0.9	Sandy Colluvium	Long, concave lower footslopes 4-8%	Somewhat excessively to moderately well drained, very deep, very friable, brown to yellowish red sandy loam to sandy clay loam, with a loamy sand top-and upper subsoil	Areni-haplic Acrisols
	Undifferen- tiated Uplands	B8	299 5.4	Shales, Sandstone	Undifferentiated Uplands; incl. short, convex slopes, 5-15%	Complex of: 1: Well drained, very deep to moderately deep, friable, strong brown to yellowish red (silty) clay to clay loam, with a loam topsoil and 2: Well drained, very deep yellowish red to strong brown sandy clay (loam), with a thick, dark, distinctly sandier topsoil	Alumi-haplic Acrisols; Anthri-humic Acrisols
	Piedmont	В9	88 1.6	Sandy Colluvium, Shales	Almost flat to very gentle lower slopes, <1-5%	Complex of: 1: Well drained, deep, friable, strong brown to yellowish red (fine sandy) clay (loam), with a slightly lighter textured topsoil and 2: Somewhat excess. drained, very deep, very friable, dark brown to light brownish grey sand(y loam), with a sand topsoil	Alumi-humic Ferralsols; Alumi-ferralic Arenosols
	Valley	B10	6 0.1	Peat, Sandy Alluvium	Flat to almost flat, slopes <1%	Complex of: 1: Waterlogged peat soils and 2: Very poorly drained, very deep, very friable, light brown to light grey sandy loam, with a black, peaty topsoil	fibric Histosols; Areni-umbric Gleysols
Quaternary Deposits: Unconsolida- ted sediments	River	S1	146	Sandy, Silty Alluvium	Almost flat, slopes <1%	Well to somewhat excessively drained, very deep, friable, (dark) brown loamy sand to sandy (clay) loam	Areni-dystric Cambisols
	River terrace: Delta Complex	S2	360 6.5	Sandy, Silty, Clayey Alluvium	Almost flat; short, very gentle slopes, <1%	Association of: 1: mod. well drained, very deep, friable to firm, brown, stratified sandy loam to silty clay, with a lighter topsoil; 2: Somewhat excessively drained, very deep, pale brown (loamy) sand; 3: Soils as in map unit S4	1: Fluvisols 2: Arenosols 3: Gleysols
	Lacustrine	s3	201	Silty, Clayey Alluvium	Flat	Imperfectly to poorly drained, very deep, firm, (dark greyish) brown, mottled silty clay to clay, with a silty loam to silty clay loam topsoil	Plani-ferric
		S4	550 9.9	Clayey	Flat	Seasonally ponded, poorly drained, very deep, very firm, (dark greyish) brown, mottled, heavy clay, cracking in the deeper subsoil; with a silty clay to silty clay loam topsoil	Verti-gleyic Cambisols to Verti-eutric Gleysols
	Present Floodplain Complex	S5	148	Sandy to Clayey Alluvium; Peat	Flat	Association of permanently flooded/ponded swamps, and seasonally flooded, very deep, stratified sandy and silty soils	fibric Histosols; Gleyi-umbric Fluvisols
	Coastal Plain	S6	22	Sandy Alluvium	Beach ridges: flat, and short, very gentle slopes	Association of: somewhat excessively drained and poorly drained to seasonally ponded, very deep, very friable to loose, pale brown, stratified sand	cambic (?) and gleyic Arenosols
	Swamps	87	524 9.5	Peat	Flat plain, at lake level	Ponded, very deep, poorly humified peat	fibric Histosols

Air photo interpretation, map- and legend compilation:

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Field survey Feb/Mar'94:

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Aerial Photography 1987 and 1962/4

ANNEX to:
Touber, L. and J.R. Kanani, 1994 - Landforms and Soils of Bukoba District (scale 1:250,000). Bukoba District Rural Development Programme, Bukoba, Tanzania

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