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Traditional Soil Groups of Karnataka and their Geographic Distribution

Classification Traditional (soil units)	Taxonamy	Description	Agro-climatic zones	Physiography	Geology	Geographic distribution (Districts)	Area Ha. (%)
RED SOILS:							
Red gravelly loam soils (58,59,60,61,102)	Lithic Ustorthents	Shallow welldrained to excessively drained, reddish brown to yellowish brown, gravelly sandy loam to sandy clay loam, moderately to severely eroded.	2, 3, 4, 5, 6 and 8	Hills and ridges, rolling and undulating lands of plateau and eastern ghats.	Granite Gneiss, quartzite, schist.	Bangalore (Urban), Bangalore(Rural), Belgaum, Chickmagalur, Chamrajanagar, Kolar, Mysore, Raichur, Koppal,Tumkur.	315994 1.66
Red loam soils (15,56,57,66,67)	Lithic Rhodustalfs, Lithic Ustic Torrirthents, Lithic Ustorthents	Shallow, excessively drained to well drained, reddish brown to yellowish red, sandy clay loam to sandy loam soils, moderately to severely eroded.	2, 3, 5 and 6	Ridges, rolling, and undulating lands of plateau	Granite Gneiss, quartzite, schist. sand-stone	Bangalore(Urban & Rural), Bellary, Belgaum, Bijapur, Dharwad, Haveri,Bagalkot,Gadag, Gulbarga, Mysore, Chamrajanagar, Raichur,Koppal	191041 1.00
Red gravelly clay soils (3,6,10,11,12,13,20,21,22,23,27 ,28,29,38,62,63,80,81,87,88,90,91, 94,98,101)	Kandic paleustalfs, Rhodic, Typic Paleustalfs, Typic Rhodustalfs, Typic Kandiustalfs, Kanhaplic Rhodustalfs, Kanhaplic Haplustalfs, Typic camborthids, Typic/Lithic Ustropepts, Lithic Ustorthents	Deep to mod, deep and shallow, welldrained to excessively drained, yello-wish brown dark red to reddish brown, gravelly sandy loam to sandy clay loam and loamy sand surface soils and gravelly sandy clay to clay subsurface soils, moderately to severely eroded.	2, 3, 4, 5, 6, 7, 8, 9.	Hills and ridges, hill ranges, rolling gently and undulating lands, inter-hill basins of plateau, western ghats, eastern ghats.	Granite gneiss, schist, quartzites phyllites, charnockites	Bangalore(Urban & Rural), Bellary Belgaum, Bijapur,Bagalkote, Chickmagalur, Chitradurga,Davangere, D.Kannada, Udupi, Dharwad, Gulbarga Hassan, Kodagu, Kolar, Mandya, Mysore, Chamrajanagar, Raichur, Koppal, Shimoga, Tumkur, Uttara Kannada.	3610976 18.95
Red clay soils. (4,9,14,16,24,31,34,35,36,37,72,78, 85,86,89,92,95,99,111)	Kandic/Thodic Paleustalfs, Typic Thodustalfs, Typic Haplustalfs, Typic Camborthids, Typic, Ustropepts, Lithic Ustorthents	Deep to moderate, deep and shallow, well-drained excessively drained, brown to yellowish red to reddish brown, sandy loam to sandy clay loam and sandy clay surface soils and sandy clay to clay subsurface soils, moderately to severely eroded.	2, 3, 4, 5, 6, 7, 8, 9.	Hills and ridges, high hill ranges, rolling, undulating and gently sloping lands of plateau western and eastern ghats.	Granite gneiss schist, sandstone, quartzite.	Bangalore(Urban & Rural), Bellary, Belgaum, Bijapur, Bagalkote, Chickmagalur, Chitradurtga, Davangere, D.Kannada, Udupi, Dharwad, Haveri,Gadag, Gulbarga Hassan, Kodagu, Kolar, Mandya, Mysore, ChamrajaNagar, Raichur, Koppal, Shimoga, Tumkur, Uttara Kannada.	2990373 15.69
LATERITIC SOILS:							
Lateritic gravelly soils	Rhodic		1, 5, 7,		Granite	Bangalore (Urban &	

Table							
(2,5,105)	kandiustallfs,Rhodic Paleustalfs, Kanhaplic Haplustalfs, Ustic Palehumults	Deep, welldrained to exces-sively drained yellowish red to dark reddish brown, gravelly, sand clay loam to sandy clay and clay surface soils and sandy clay to clay subsurface soils moderatley to severely eroded with surface crusting.	8, 9	Mounds summits and upper slopes of plateau, sloping lands of malnad	gneiss Schist, Phyllites, basalt.	Rural), Bidar, Belgaum, Gulbarga, Chickmagalur, D.Kannada, Udupi,Dharwad, Haveri,Gadag, Kodagu, Kolar, Shimoga, Uttara Kannada.	511593 2.74
Lateritic soils (1,7,83,84,107)	Typic Kandiustalfs, Rhodic/Kandic Paleustalfs,Kanhaplic Haplustalfs, Ustic Palehumults, Kanhaplic Haplustults	Deep welldrained to exces-sively drained, yellowish red to dark reddish brown, sandy loam to sandy clay and clay surface soils and clay subsoils, moderately to severely eroded with surface crusting.	2,5,7,9	Gently sloping plains, summits of plateau, steeply sloping lands of Western ghats and Malnad.	Granite gneiss, Phyllites, Schist	Bangalore (Urban & Rural), Chickmagalur, D.Kannada, Udupi,Hassan, Kodagu, Kolar, Mysore, Chamrajanagar, Shimoga, Uttara Kannada	653440 3.42
BLACK SOILS:							
Deep black soils (40,43,44,45,46,48,49,50,51,53,54,55,71)	Typic chromusterts, Typic Pellusterts, Vertic Ustropepts	Deep, moderately well-drained, dark greyish brown, very dark greyish brown, calcareous cracking clay to silty clay soils, moderately to severely eroded.	1, 2, 3, 4, 6 and 8	Gently sloping plains, plateau, summits, valleys	Basalt, calc- gneiss schist, granite, gneiss, diorite.	Bellary, Koppal, Belgaum, Bidar, Bijapur, Bagalkote,Chitradurga, Davangere, Dharwad, Haveri, Gadag, Gulbarga Mysore, Chamrajanagar, Raichur.	3108704 16.32
Medium deep black soils (17,18,19,26,30,39,41)	Vertic Ustropepts, Ustollic calciorthids, Typic chromusterts, Typic unstropepts	Moderately deep, moderately welldrained, dark brown to very dark greyish brown, noncalcareous cracking clay to silty clay soils, moderately to severely eroded.	1, 2, 3, 4, 6, 7 and 8	Gently sloping lands and plains, summits of plateau, valleys	Granite gneiss, basalt	Bellary, Belgaum, Bidar, Bijapur, Bagalkote, Chitradurga, Davengere, Dharwad,Haveri, Gadag, Gulbarga Hassan, Raichur, Koppal, Shimoga, Tumkur.	598376 3.13
Shallow black soils (65,69,70)	Lithic Ustorthents, Lithic Ustropepts	Shallow, welldrained, grey to dark grey and brown clay loam to silty clay loam soils, severely eroded.	1, 2, 3 and 8	Plateau summits and table lands	Basalt	Belgaum, Bidar, Bijapur, Bagalkote,Gulbarga	1586070 8.32
ALLUVIO-COLLUVIAL SOILS:							
Non-saline (42,64,65,96,1000)	Aquic Ustropepts TYpic Tropaquepts, Aquic/Typic/Vertic Ustifluvents, Lithic Ustorthents	Deep to shallow, moderately welldrained to imperfectly drained and poorly	3, 4, 5, 7, 8 and 9	Valleys, low lands of plateau and malnad.	Alluvium and colluvial sediment	Bangalore (Urban & Rural), Belgaum, Chickamgalur, Dharwad, Haveri, Gadag,Gulbarga Kodagu, Kolar, Shimoga.	361471 1.90

		drained, yellowish brown to strong brown and dark greyish brown nonsaline, clay loam to clay and sandy clay loam surface soils and clay to clay loam and sandy clay loam, sub surface soils.					
Saline and sodic in patches (25,32,33,47,52)	Typic Ustropepts Typic Ustifluvents Typic Chromusterts, Vertic Ustropepts Typic Camborthids Ustic Torrifluvents	Deep , moderately well drained to perfectly drained, dark greyish brown to very dark greyish brown and strong brown, clay to sandy clay and clay loam surface soils and clay to loam subsurface soils with salinity and alkalinity in patches.	1, 2, 3, 4, 5, 6 and 7	Valleys, low lands very gently sloping plains of command areas of plateau.	Alluvium, Colluvial sediments.	Bangalore (Urban & Rural), Bellary, Koppal,Bidar, Bijapur, Bagalkote, Chickamgalur, Chitradurga, Davangere,Dharwad, Haveri, Gadag Gulbarga , Hassan, Kolar, Mandya, Mysore, Chamrajanagar,Raichur, Shimoga, Tumkur.	2636233 13.64
FOREST SOILS:							
Brown forest soils (79,82,93,97,103,104,106,108,109,110)	Typic kanhaplustalfs Kandic/Rhodic Paleustalfs,Kanhaplic Haplustalfs, Ustic Haplohumults, Ustic, Palehumults, Ustic, Kandihumults,Ustoxic Dystropepts, Typic Argiustolls	Deep to moderately deep, well drained to excessively drained, dark brown to dark yellowish brown and black sandy clay to sandy clay loam and sandy loam, humus rich surface soils and clay to sandy clay subsurface soils, slightly eroded.	9	High hill ranges and steeply sloping lands of western ghats.	Gneiss, schist, charnockites Phyllites	Belgaum, Chickmagalur, D.Kannada, Udupi,Dharwad, Haveri, Gadag, Hassan, Kodagu, Mysore, ChamrajaNagar, Shimoga, Uttara Kannada.	1147327 6.00
COASTAL SOILS:							
Coastal Laterite soils (118,119,120,120)	Typic kandiustults, Kanhaplic Haplustults, Petroferric Haplustults,Kanhaplic Haplustalfs	Deep, well drained to exces-sively drained, dark brown to yellowish red and dark reddish brown sandy clay loam to clay loam surface soils and sandy clay to clay subsurface soils, moderately to severely eroded with surface crusting.	10	Coastal uplands and hinter lands	Gneisses, Quilon sediments	Dakshina Kannada, Udupi, Uttara Kannada	563254 2.96
Coastal alluvial soils (114,115,116,117)	Typic and Aquic Ustipsamments, Aquic Ustifluvents	Deep, welldrained and poorly	10	Bars, beaches,	Recent alluvium	Dakshina Kannada,Udupi, Uttara Kannada.	180267 0.94

		drained, pale brown to dark yellowish brown, sand, sandy loam to loam surface soils and sand to loam subsurface soils		beach ridges, valleys			
MISCELLANEOUS LANDS:							
Rock lands (73,74,75,76,77,112,113)	Rock outcrops	Rock land		Hills and ridges rolling lands	granite gneiss quartzite charnockite	All the districts	486402 2.55
Water bodies, Urban area etc.							110514 0.58
Total:						19049836 100.00	