

Releve data

Data for 137 releve samples was collected by National Remote Sensing Centre staff in 1996. Data for these sample sites are available in six MS Excel files in the directory \releve data.

coverdat.xls

Data on vegetation cover and image colours for the 137 sample sites

SITE sample number

MAIN LANDSCAPE code and name
code and name

LAND ELEMENT

Aggregated cover values

- TREE: total tree cover ($t1+t2$)
- SHRUB: total shrub cover ($s1+s2+dh$)
- WOODY: T-tot+S-tot
- GRASS: gp+ga
- H+G: grasses+h(herbs)
- ALL VEG: T-tot+S-tot+H+G

COVER OF STRATA (%)

- t1 & t2 - tree strata
- s1 & s2 - shrub strata
- dh - dwarf shrubs
- gp - grasses perennial
- ga - grasses annual
- h - herbs

GROUND COVER VALUES

- basal - % cover of growing vegetation as it emerges from the ground
- bare soil - % cover of open soil
- litter - % cover of litter

HEIGHTS OF STRATA

- t1 - tree stratum 1
- t2 - tree stratum 2
- s1 - shrub stratum 1
- s2 - shrub stratum 2
- dh - dwarf shrubs
- gph - grass perennial
- gah - grass annual
- hh - herb stratum

terrain2.xls

data on lithology, slope features and erosion

SITE - sample number

MAIN LANDFORM - code and name

LAND ELEMENT - code and name

LITHOLOGY - main geological formation, as recorded in the field - recorded categories:

- kalahari sands, alluvial material, alluvial+calcrete

SLOPE TYPE - type of slope:

- straight, convex, irregular, concave

SLOPE LENGTH - length of slope in metres

STEEPNESS - % slope steepness as rated in the field

EXPOSURE - compass orientation of exposed slope

EROSION TYPE - type of erosion:

- none, sheet (whole surface), splash (surface disturbed by rain drops), aeolic (wind), rill (small gully)

AREA (%) - percentage of area affected by erosion

WATER SOURCE - source of water in soil (ponding or flooding), with following types recorded:

- rain, river

soildat.xls

data on soils

SITE- sample number

MAIN LANDSCAPE - code and name

EFFECTIVE DEPTH - effective depth of soil in centimetres - this is the depth to which the soil augur could be turned into the ground. In some cases, underlying rock restricted the augur, or loose sand collapsed causing the hole to cave in and prevent further drilling, or thick clay prevented further turning. In these cases, the effective soil depth would be greater than that recorded. This field is thus of no value in indicating effective soil depth.

GW DEPTH - ground water depth in centimetres

OM TOP - organic material on soil surface, coded as:

- - none
- + - present

presence or absence of organic material should provide an indication of nutrient availability. When organic material is present there should also be surface sealing of sandy soils.

Depth features are given for colour, ph, texture and mottling in decimetre layers up to 100 cm. The thicknesses of the strata are given by changing values for colour, ph, texture and mottling. For example, if strata 1, 2 and 3 share identical values for colour, ph etc, the first stratum would be 30 cm deep. Soil colours, both for surface and strata are of doubtful value. There should be no relation between quality and colour. The colours are given using munsell colour codes

COLOUR/depth

PH/depth

TEXTURE/depth

ph - in ph values, using "Herbige" field list

mottling - no mottling was recorded for most records, so these are not missing data.

Mottling results from

changing water levels. These data should be aggregated for analysis purposes into one field with "0" for those sites with no mottling and the upper depth of 10, 20, 40 etc for the layer where mottling starts for other records. White mottling is an indication of calcrete layers deeper in the profile.

texture given by following codes:

- S - sandy
- L - loamy
- C - clayey
- Si - silt
- g - gravelly
- cc - calcrete
- Om - organic matter

lower case letters in parentheses reflect a minor content

S+SC - reflects 2 layers within the 10 cm band

SURFACE SEAL - percentage of bare surface sealed - most records are OK, but some missing data and for some others only "yes" is reported. Surface sealing is associated with lots of organic matter on sands. Sealing tends to cover large areas, whereas capping is more localised, especially on clays where it appears as cracked blocks. Both sealing and capping lead to water erosion

CAPPING - percentage of surface capped sealed - most records are OK, but some missing data and for some others only "yes" is reported

SALINITY - saline deposits - of no value, since only one record of "light" is given.

SURFACE COLOUR - munsell colour code, of little or no value

REMARKS

plantdat.xls - data on cover percentages for each species

sample.xls - gives the co-ordinate positions for the samples

SITE

SDEG

SMIN

SSEC

EDEG

EMIN

ESEC

erosion.xls - data on erosion features

SITE

EROSION TYPE

AREA

WATER SOURCE