

## 7.26 Yalong land system

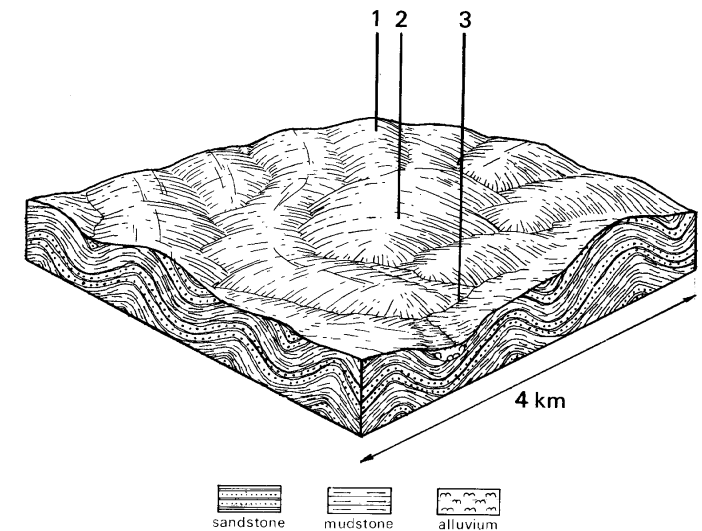
Steep hills on Ordovician sandstones and shales to the south of Amphitheatre originally carried open forests dominated by *Eucalyptus macrorhyncha*. These have mostly been replaced by native pastures, although more productive introduced species have been established to a limited extent.

The steep slopes present a severe sheet erosion hazard. Although the moister drainage lines support better ground cover, high dispersibility of the soils, increased run-on and raised saline water tables usually result in severe gully erosion.

Mobilisation of salts resulting from increased seasonal infiltration of water on the cleared slopes is a major deleterious process affecting lower slopes, drainage lines and adjacent low-lying lands.



*Most of these steep hills have been cleared for grazing.*



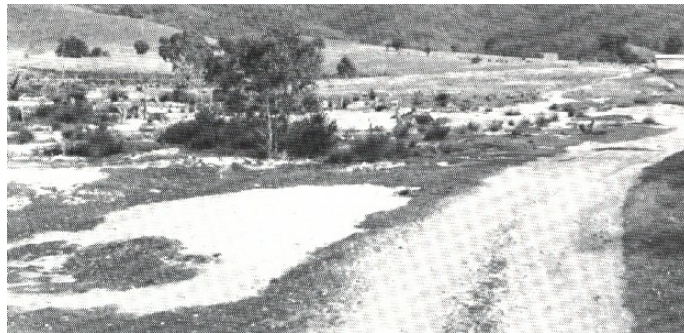
*Improved pastures occur throughout the landscape; however, some red stringybark (*E. macrorhyncha*), red box (*E. polyanthemos*) and native grasses remain on the upper slopes.*

**YALONG LAND SYSTEM Area 65 sq. km**

<b>CLIMATE</b> Rainfall (mm) Temperature (°C) Seasonal growth limitations	Annual, 550--625; lowest January (32), highest August (70) Annual, 14; lowest July (8), highest February (20) Temperature: less than 10 <sup>0</sup> C (av.) June-August Rainfall: less than potential evapotranspiration September-April		
<b>GEOLOGY</b> Age, lithology	Ordovician sandstone and mudstone		
<b>PHYSIOGRAPHY</b> Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/ sq. km) Land form	340-400 20 Dendritic 0.9 Steep hill		
<b>LAND COMPONENT</b> Percentage of land system	1 80%	2 15%	3 5%
<b>PHYSIOGRAPHY</b> Position on land form Slope (typical) and range (%) Slope shape	Upper and middle slope 10,5-20 Convex	Lower slope 4,1-5 Linear	Drainage floor 2,1-3 Concave
<b>NATIVE VEGETATION</b> Structure Dominant species	Open forest <i>E. macrorhyncha</i> <i>E. goniocalyx</i> <i>E. polyanthemos</i>	Woodland <i>E. macrorhyncha</i> <i>E. polyanthemos</i> <i>E. microcarpa</i> <i>E. leucoxyton</i>	Woodland <i>E. microcarpa</i> <i>E. melliodora</i>
<b>SOIL</b> Parent material Description Classification Surface texture Surface consistence (dry) Depth (m) Nutrient status Available soil water capacity Perviousness to water Drainage Exposed stone Dispersibility Slaking tendency	Sandstone and mudstone Stony red gradational soils Gn 4.11 – 3/1/008 Gravelly loam Slightly hard 0.1-0.5 Low throughout Low throughout Moderate-rapid Somewhat excessively drained Common (rock) Nil Low	Site 904 Sandstone and mudstone Stony red duplex soils Dr 3.41 – 2/1/020 Gravelly loam Slightly hard 0-5-1 Low throughout Low surface, moderate subsoil Moderate Well drained Slight Low Moderate	Alluvium Yellow gradational soils Gn 4.81 – 2/1/030 Loam Slightly hard 1-1.5 Moderate surface, low subsoil Low surface, moderate subsoil Moderate Somewhat poorly drained Nil High Moderate
<b>PRESENT LAND USE</b>	Protection forestry, grazing	Grazing	Grazing

**Land deterioration hazards - Yalong land system**

Disturbance	Component	Affected process and trend	Primary resultant deterioration		Primary resultant off-site process
			Form	Susceptibility	
Altered vegetation -reduced leaf area, rooting depth, perenniality	1,2	Reduced transpiration, increased leaching	Nutrient decline	Low	Increased movement of water and salts to groundwaters
Reduced soil cove	1,2	Increased soil detachment	Sheet erosion	High	Increased flash flows and sediment loads
Cultivation, increased trafficking, trafficking	1,2,3	Increased soil compaction	Structure decline	Low	Increased flash flows and sediment loads
Increased soil disruption and run-on	3	Increased subsoil detachment	Gully erosion	High	Increased flash flows and sediment loads
Raised water table	3	Increased evaporation	Soil salting	Moderate	Increased salinity of surface waters



*Salted areas on the lower slopes and drainage floors have almost zero productivity.*



*Gully erosion is common along the drainage floors.*