



Classification of Slope

Slope Element

Quantitative Classification

Genetic Classification

Approaches to Slope Development

Slope
Evolution
Approach

Approach

Approach

Approach

## Models of Slope Evolution

Theory of Slope Decline - Davis

Theory of Slope Replacement - Penck

Theory of Parallel Retreat - King

	Slope Decline Theory (Davis)	Slope Replacement Theory (Penck)	Parallel Retreat Theory (King)
Region of Study	NW Europe & Northeast USA	Slopes of Andes & Alps	Slopes of South Africa
Climate	Humid areas	Tectonic Areas	Semi-arid landscape; sea cliffs with wave-cut platform
Description of Slope	Initially has steepest slope & with time angle decreases	Reduction in maximum angle as gentler lower slopes erode back	Maximum angle remains constant like slope facets apart from lower ones which increases concavity

	Davis	Penck	King			
Process	By stage 4, land turns convex-concave slope	Scree slope B will replace slope A; slope C replaces slope B	Flash floods remove concave debris on slope pediment			
Changes over Time	Intermediate denudation assumes rapid land uplift.	Starts with straight rock slope with equal weathering overall.	Considering two facets of slope viz., gentle concave lower slope, & convex upper slope.			
Stage 3 Stage 2 Stage 1  Stage 3 Stage 2 Stage 1  Convex  Watershed  Worn Down Convex Curve  Peneplain  Stage 3 Stage 2 Stage 1  Convex  Free Face						

Slope Failure – Causes & Process

