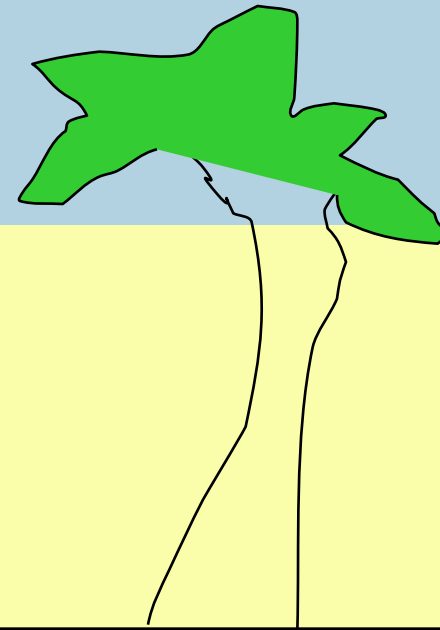# Gravity-capillary equilibrium

Atmospheric conditions, P$_{atm}$ (cst)
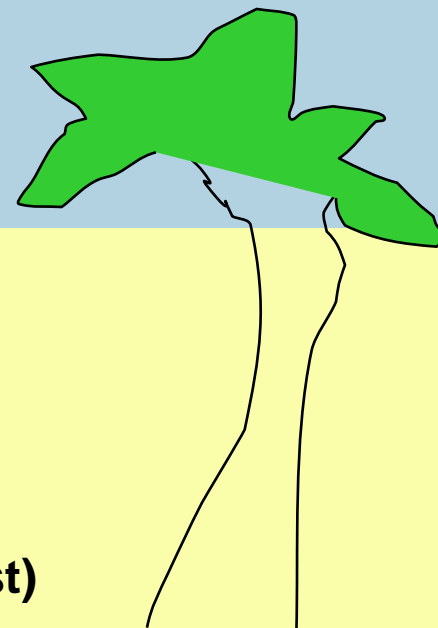
Unsaturated zone

Groundwater table ▽

Capillary fringe

Saturated zone
Unconfined aquifer

Gravity-capillary equilibrium

No capillary pressure
All phases perfectly mobile

Atmospheric conditions, P_{atm} (cst)

Additional boundary
Infinite volume

P_{atm} (constant);

2-phase (e.g.
$S_l = 0.5$)

Connected at height of desired water table

Initialize soil domain as
2-phase (e.g. $S_l = 0.90$)

Or

P_{depth} (constant);
1-phase
($S_l = 1.0$)

No capillary pressure
All phases perfectly mobile

Gravity-capillary equilibrium