Catchment

Bedrock weathering, Φ_w

Ms: mass of solid residues from weathering (soil/sediment)
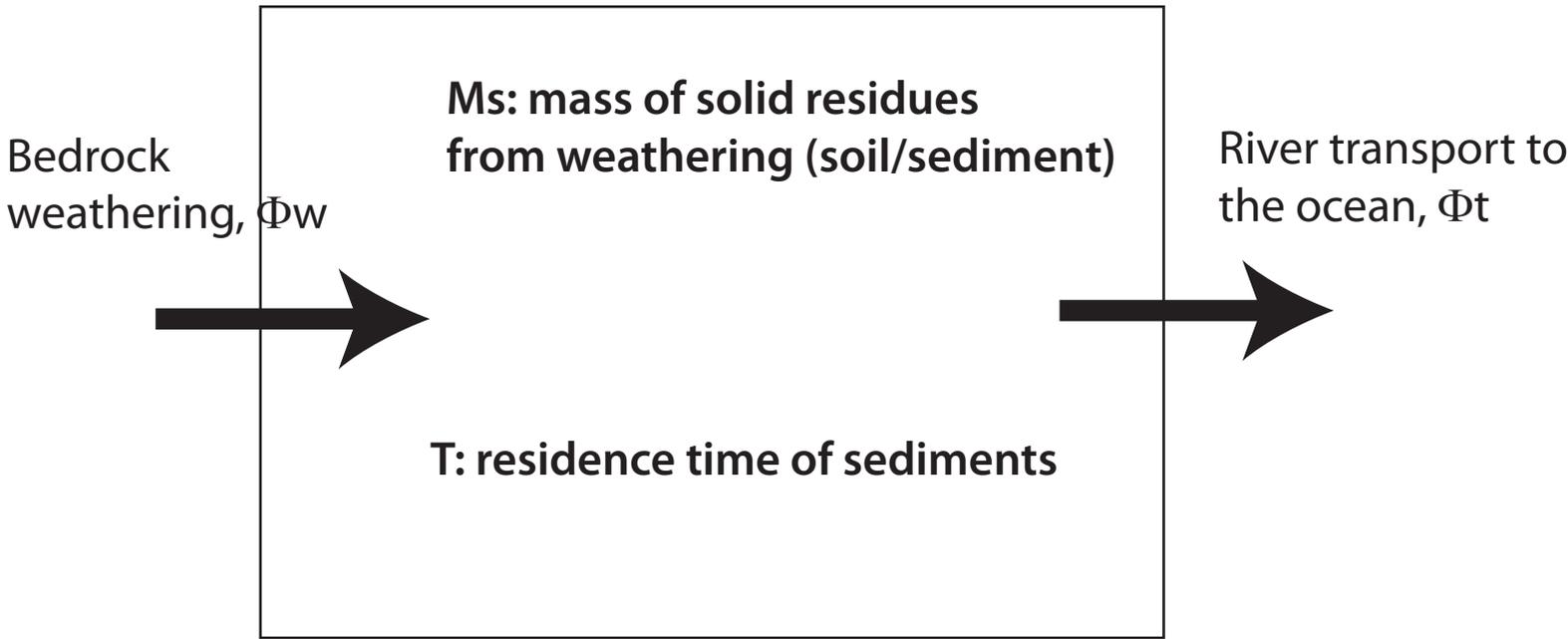
T: residence time of sediments

River transport to the ocean, Φ_t

$$\Phi_w = \Phi_t = M_s/T$$