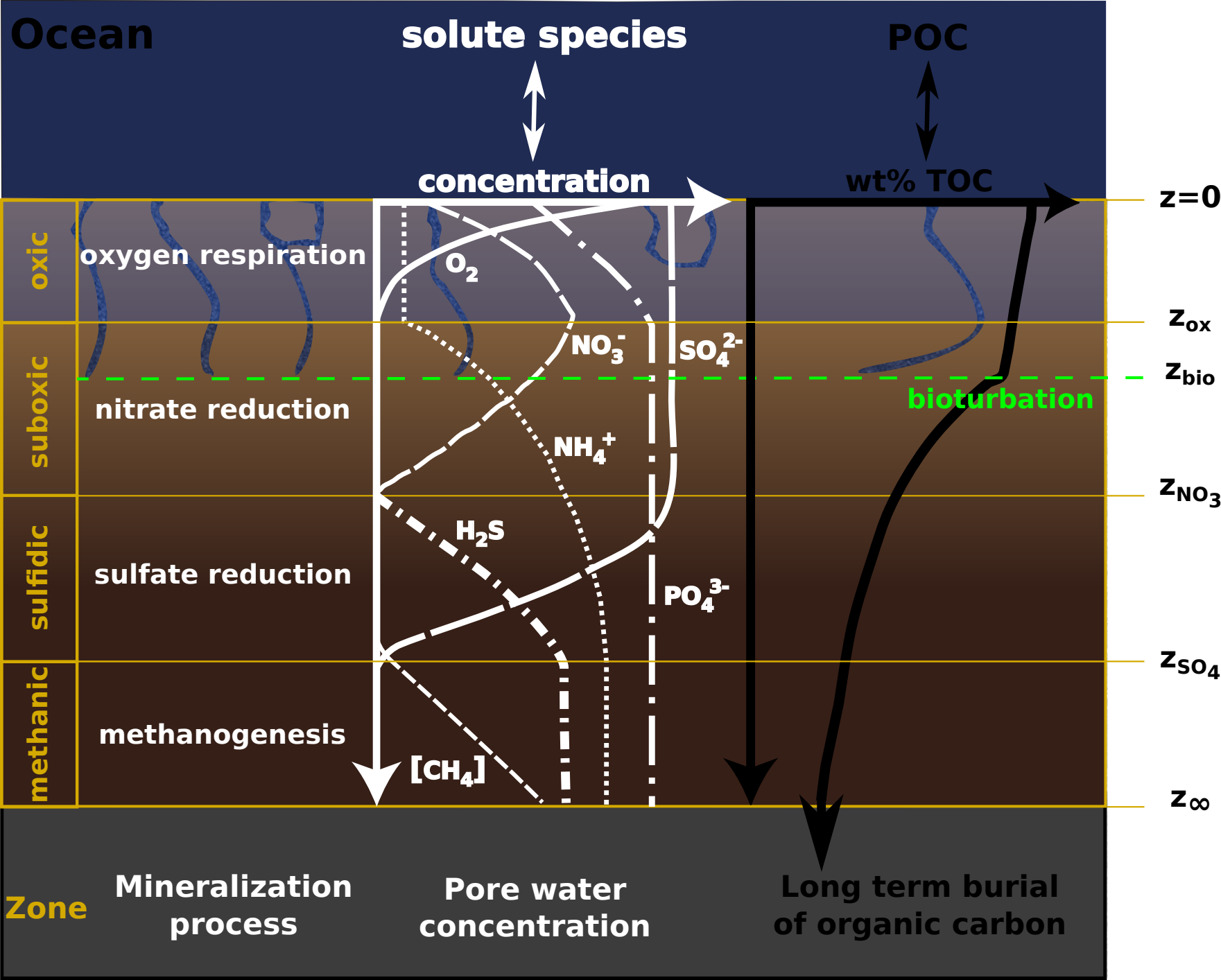
Ocean
solute species
POC
concentration
wt% TOC
z=0
oxic
oxygen respiration
O_2
z_{ox}
suboxic
nitrate reduction
NO_3^-
SO_4^{2-}
z_{bio}
bioturbation
NH_4^+
z_{NO_3}
sulfidic
sulfate reduction
H_2S
PO_4^{3-}
z_{SO_4}
methanic
methanogenesis
$[CH_4]$
z_∞
Zone
Mineralization process
Pore water concentration
Long term burial of organic carbon