

Differential equation term explanations:

$dN dt^{-1}$: seagrass biomass density ($g m^{-2} t^{-1}$) =
+ SG growth
– SG death by sulfide

$dM dt^{-1}$: organic matter density ($g m^{-2} t^{-1}$) =
+ OM capture by SG
+ external OM input
– OM breakdown

$dS dt^{-1}$: sulfide concentration ($\mu mol L^{-1} m^{-2} t^{-1}$) =
+ OM breakdown into sulfide
– sulfide diffusion out of system
– joint-detoxification by SG
– consumption by Loripes

$dL dt^{-1}$: Loripes density (individuals $m^{-2} t^{-1}$) =
+ Loripes recruitment
– Mutualism breakdown (seagrass loss causes Loripes loss)

List of differential equations:

$dN dt^{-1}$: seagrass biomass density ($g m^{-2} t^{-1}$) =
+ $rN(1 - N / k)$
– $pN(1 - e^{-aS})$

$dM dt^{-1}$: organic matter density ($g m^{-2} t^{-1}$) =
+ dN
+ θ
– bM

$dS dt^{-1}$: sulfide concentration ($\mu mol L^{-1} m^{-2} t^{-1}$) =
+ zbM
– gS
– $S(ye^{iN}/(1+ye^{iN}))$
– $LS(1 - e^{-cN})$

$dL dt^{-1}$: Loripes density (individuals $m^{-2} t^{-1}$) =
+ $uL(1 - e^{-mL})$
– $wL(1 - (xe^{vN}/(1 + xe^{vN})))$