

MOHID BIVALVE COUPLED TO THE SWEDISH COASTAL ZONE MODEL

Sofia Saraiva **MOHIDING, July 2025**

Bivalves

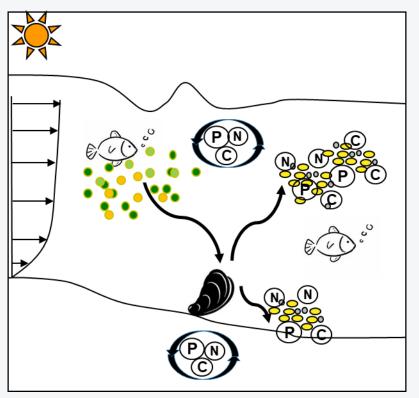












Ecological questions

- . How important are they?
- . Can we explain features seen in the field?
- . Can we predict the impact of environmental changes on the organisms performance?

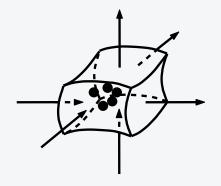
'Resource use' questions

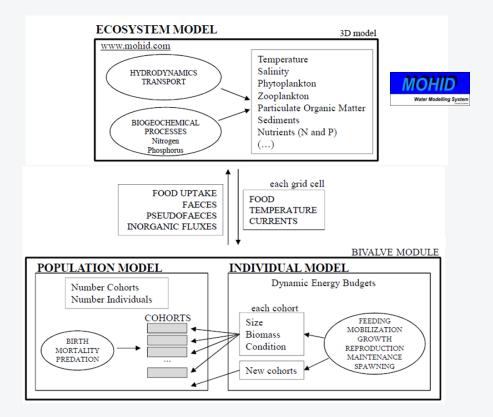
- . How much can we produce?
- . Where are the best places? Best species?
- . Can we do it without disturbing the ecosystem?

Module Bivalve



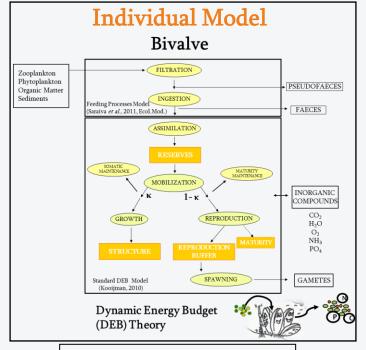


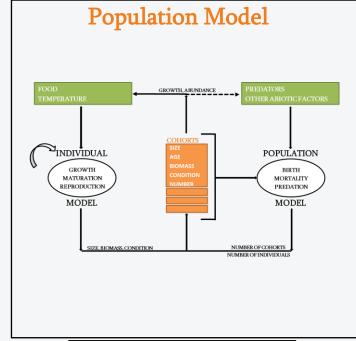




Bivalve Model







Bivalve condition in each cohort

MOHID

TECNICO

Module Bivave

www.mohid.com

MARETEC

Number of organisms in cohort Number of cohorts



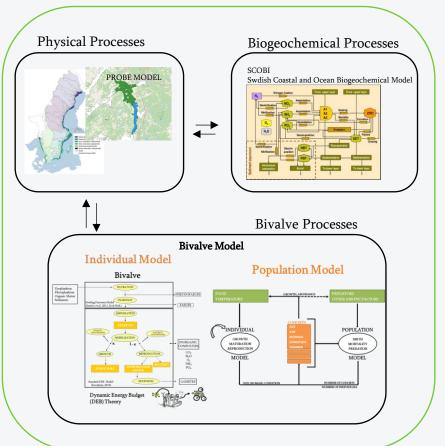
Coastal Zone Model

Saraiva et al., EcoMod (2011) Saraiva et al., EcoMod (2017) Saraiva et al., Aquaculture (2020)

Conceptual approach

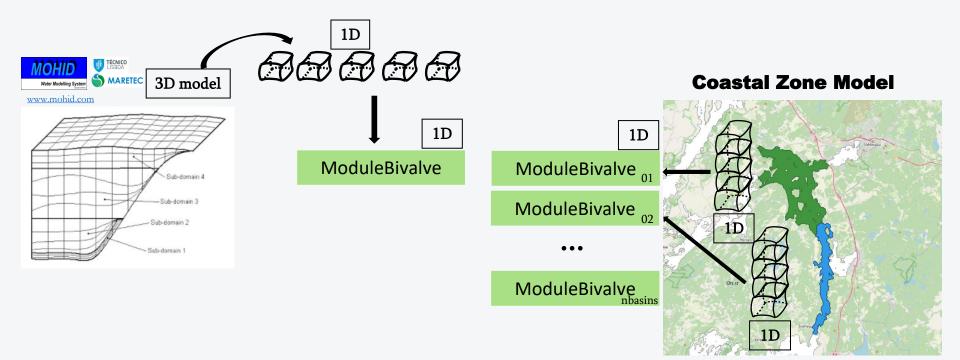
Coastal Zone Model





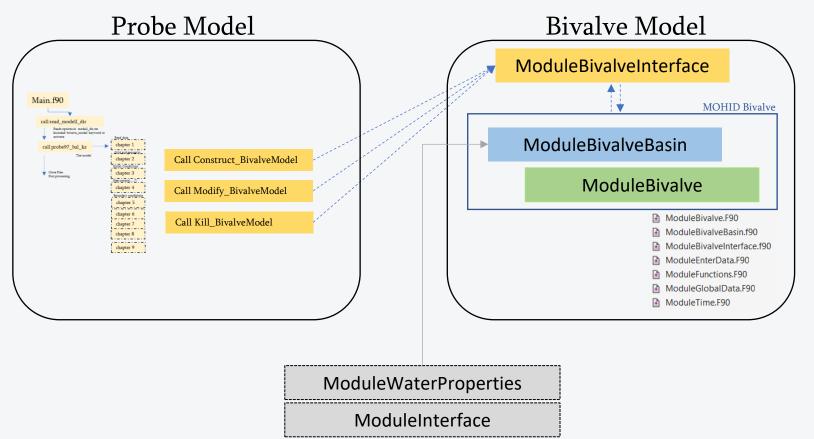
Conceptual approach





Code approach





First Model Results



Consistency tests: change number of basins, number of cohorts

Individual model results:

- Cohorts growing from birth and from adult stage
- Effect on the water column variables

Population model results:

- Spawing events per cell
- New cohorts creation and kill





Future work

- Include the salinity effect on growth
- Check parameter values for mussels in the area
- Build a more realistic scenario for one particular fjord

Ultimate aim

Build a high resolution model for the 8-fjord system





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THANK YOU!!

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