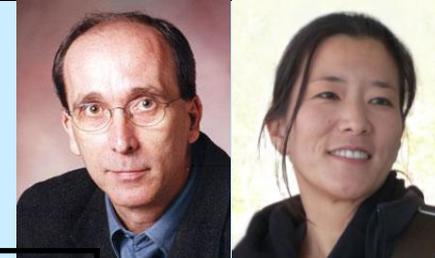




# Atlantis

# Ecosim

# OSMOSE



Currency

Nitrogen

Biomass

Individuals

Spatial structure

Dedicated (polygons)

None

Grid

Time step

12 hr

Monthly

Weekly

Oceanography

Yes (e.g. links to ROMS model)

V5 No, V6 yes (model coupling)

Yes, forcing/coupling (e.g. ROMS)

Trophic Groups

~60: vert., plankton, benthos, prim. producer

<100: vert., plankton, benthos, vert., prim. producer

~10, typically forage and demersal fish

Age structure

Vertebrates: 10 age classes

"Multistanza" age classes

Cohorts

Nitrogen cycling

Nitrogen cycling

None

None

Functional response

Holling Type I,II,III, others

"Foraging Arena": implicit refuges

Size-based predation and max ingestion rate

Reproduction

Ricker, Beverton, fixed #/adult, others

Biomass growth rate w/ compensation in juveniles

Based on fecundity and  $SSB=f(\text{predation efficiency})$

Movement

Foraging and seasonal

Seasonal

Foraging and seasonal

Fishing

Spatial: Fleets' catch, effort, or F

Fleets' catch, effort, or F

Non-spatial fishing mortality rates

In summary

Flexible

Fast, stakeholder game playing

IBM, focused on forage+demersal fish