

# PLAN FISH model of the Baltic open sea food-web

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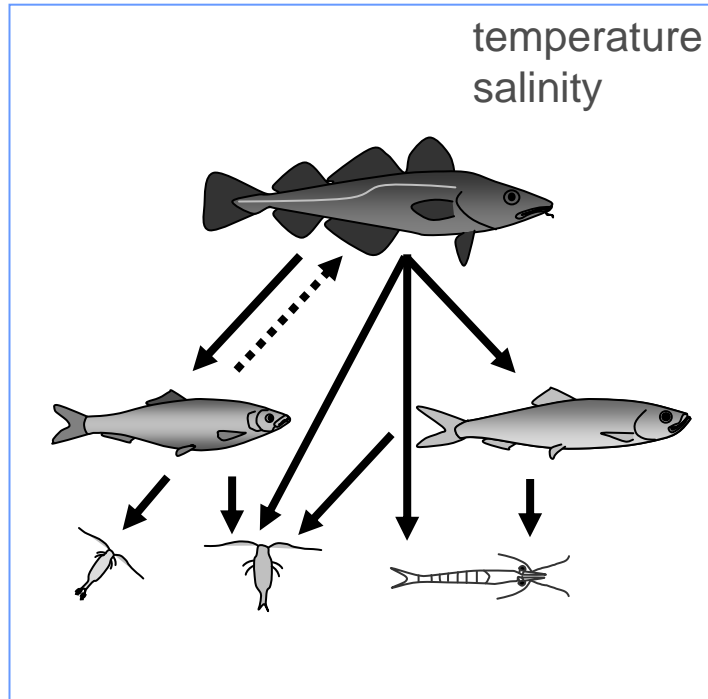
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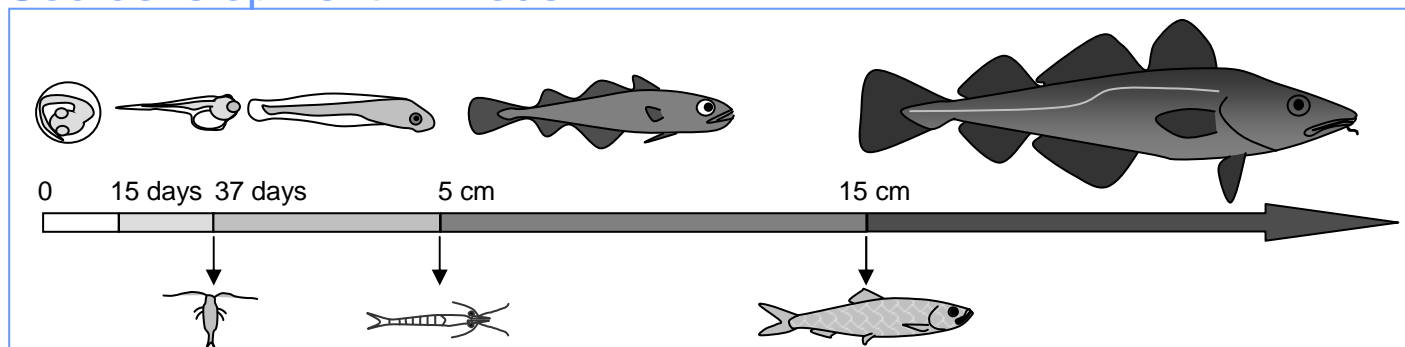
# Modelled species and interactions



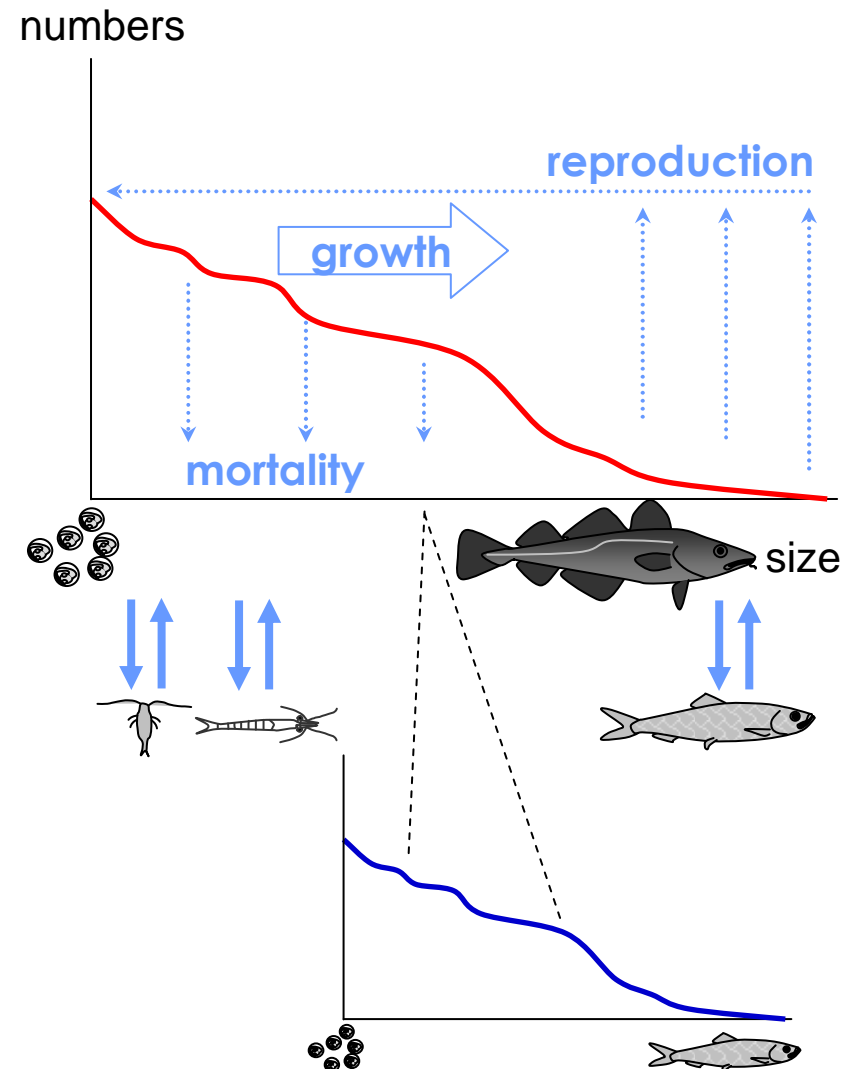
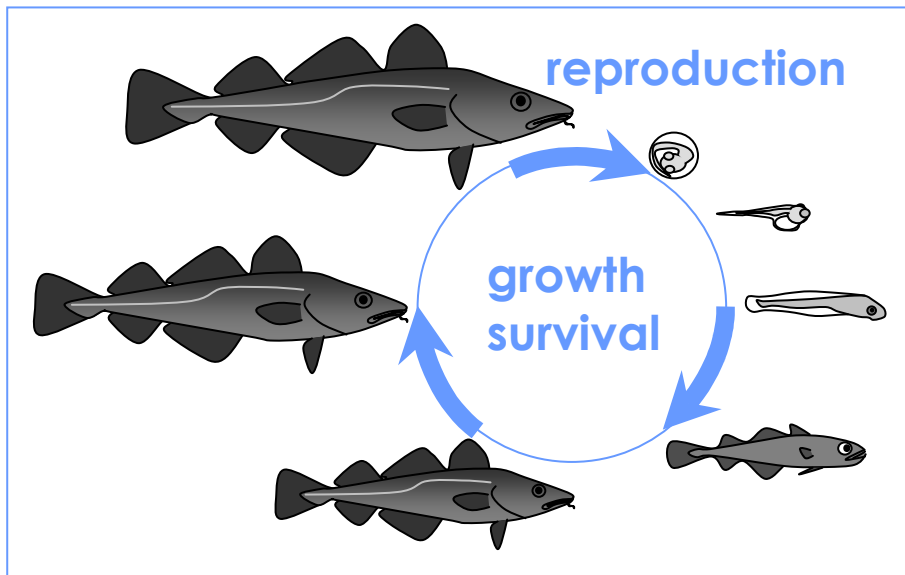
## Food-web dynamics from individual level processes

- full life history of all fish species
- ingestion, assimilation & energy allocation of fish individuals, depend on their size & resources
- size-dependent species interactions arise from size-specific food preferences and resource-dependent growth

## Cod development in model



# From individuals to food-web dynamics



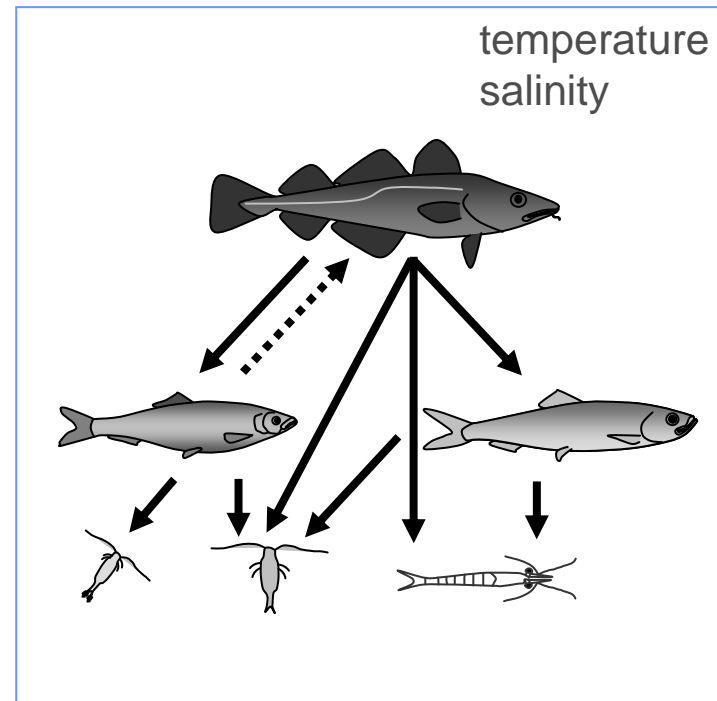
## Based on empirical research

- laboratory experiments
- cod stomach sampling
- sprat & herring individual sampling at sea
- zooplankton survey
- ...

# Climate forcing: under development

## Directly on individual processes in relevant life stages

- Fish vital rates depend on temperature (maintenance, maximum ingestion rate)
- Cod: egg mortality rate depend on salinity
- Sprat & herring processes, zooplankton & zoobenthos productivities under development



## Resolution

- No explicit space, spatial extent: Central Baltic Sea (incl. Bornholm & Gotland basins)
- Temporal: daily during growing season (250 days)