Oceanography Model

fish610.080 EAFM Tools: Atlantis

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February 12, 2025

The model domain

The modeled area is divide up in spatial boxes. Factors considered when the area is split into boxes are e.g. bathymetry, hydrography, and species distribution. Each box is then further split into vertical layers. In the Icelandic Atlantis model the 1,600,000 km2 area was split into 53 boxes: 2 land boxes (Iceland and Faroe Islands), 36 active boxes (where the biology model is active) and 15 boundary boxes (to buffer water fluxes to and from the modeled area). Each box had one sediment layer and up to six water column layer (0-50m, 50-150m, 150-300m, 300-600m, 600-1000m, 1000m+), depending on the depth of the box.

```
ERROR: HTTP Error 404: Not Found
Traceback (most recent call last):
  File "/srv/sites/tutor-web-2/src/tutorweb.content/tutorweb/
    data.setData(self._urlConvert(orig))
  File "/srv/sites/tutor-web-2/src/tutorweb.content/tutorweb/
    resp = urllib2.urlopen(urllib2.Request(script))
  File "/usr/lib/python2.7/urllib2.py", line 154, in urlopen
```

Oceanography

Water fluxes, salinity and temperature need to be calculated for each box and layer for each day for the whole simulated period. A full model run for the Icelandic model is from 1948-2012, i.e. 65 years. The oceanographic data were taken from a hydrodynamic model (Logemann 2013), water fluxes were calculated for each box and layer and a forcing time-series created to imitate the water currents in the area from 1948-2012. The same was done for salinity and temperature. The water fluxes control the distribution of nutrient and plankton groups in the system.