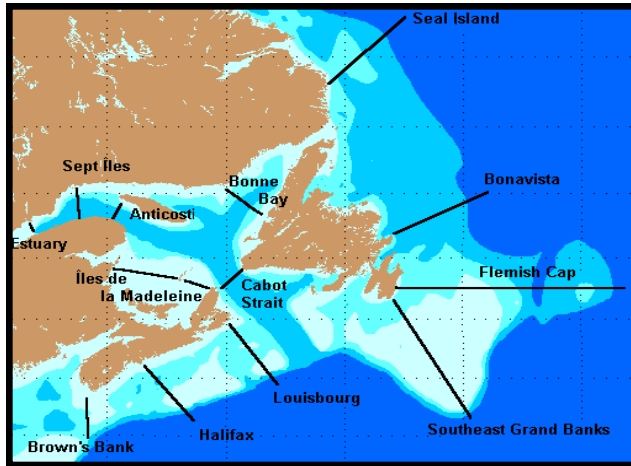


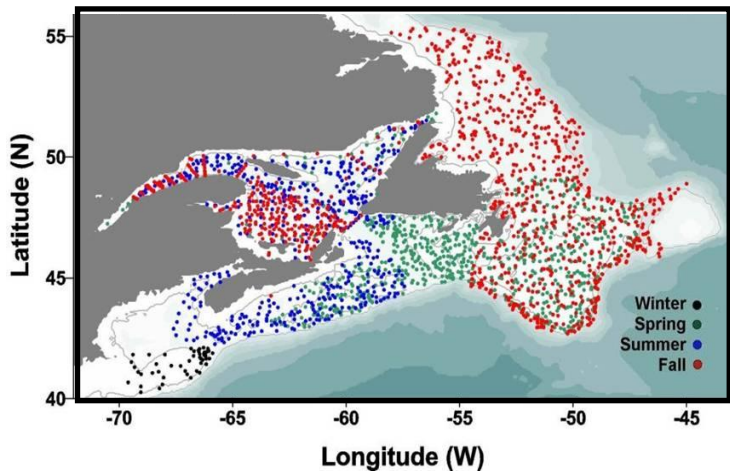
Canadian observational programmes in the NW Atlantic

1) The Atlantic Zonal Monitoring Programme (AZMP)

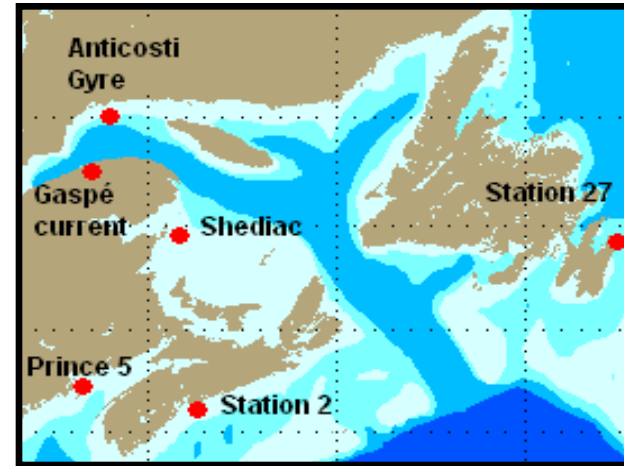
Transects – Spring, summer, fall



Groundfish survey cruises
Selected stations



Fixed stations – Every two weeks



Measurements since 1999 -

Depth resolved T, S, O₂, nutrients, chl, CO₂, bacteria, CDOM (last 3, SS only)

Integrated values for composition/abundance of phytoplankton/mesozooplankton

Depth resolved sampling of *Calanus* (May and Oct. SS slope waters only)

See - <http://www.meds-sdmm.dfo-mpo.gc.ca/isdm-gdsi/azmp-pmza/index-eng.html>

Canadian observational programmes in the Northwest Atlantic

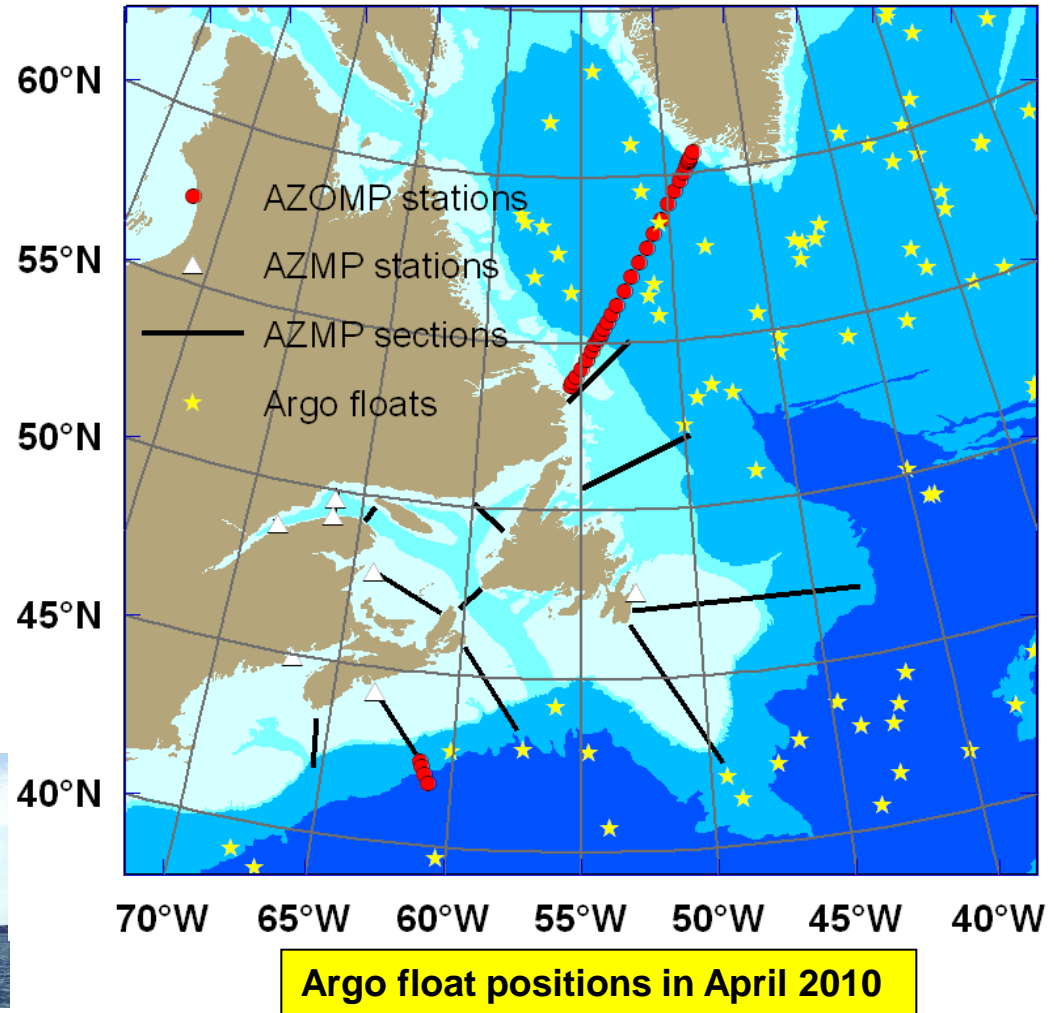
2) The Atlantic Zonal Offshore Monitoring Programme (AZOMP)

Annual sampling along the AR7W Line across the Labrador Sea since 1994 (generally in May)

Annual “Extended Halifax Line” since 2007 (includes recoveries and deployments of moorings for UK RAPID programme)

Argo float deployments and data interpretation

Shipboard measurements – as for AZMP plus CFCs, alkalinity, pH, CO₂



Canadian observational programmes in the Northwest Atlantic

3) Remote sensing

1) Ocean colour

- **SeaWiFS** – BIO produces 4km GAC images + 4km and 9km resolution stats (mean and std dev + spring bloom parameters) for “BIO boxes”; data available 1997-2009 (SeaWiFS now unreliable)
- **MODIS** - BIO produces images and stats (for BIO boxes) since 2002 (ongoing)
- **MERIS** – BIO produces 300m resolution images since 2008 (date of CSA, ESA agreement) used for coastal areas (ongoing)

2) SST

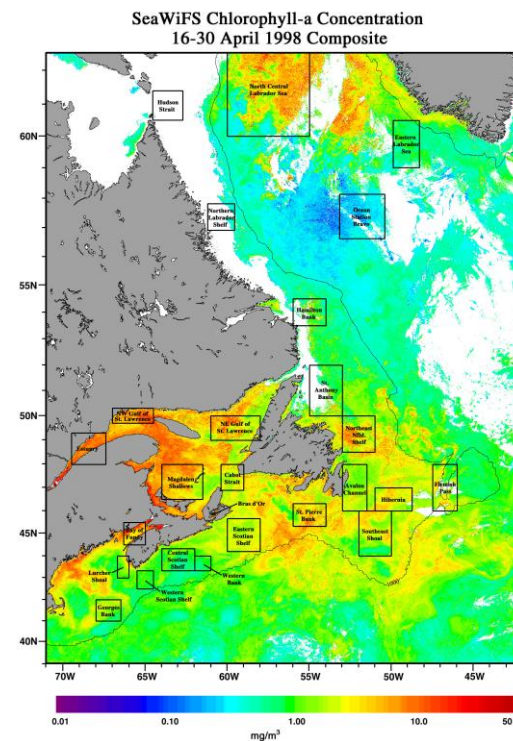
- **MODIS** – since 2002 BIO produces images and stats for BIO boxes (ongoing)
- **NOAA** - since 1997 BIO has produced images and stats for BIO boxes using from data received at BIO (ongoing)

3) Primary production

BIO produces maps using SeaWiFS ocean colour and NOAA SST combined with shipboard data, also stats for BIO boxes

4) New products

Fall bloom parameters
Calcite index
Case 2 classification



See - http://www.mar.dfo-mpo.gc.ca/science/ocean/ias/seawifs/seawifs_1.html

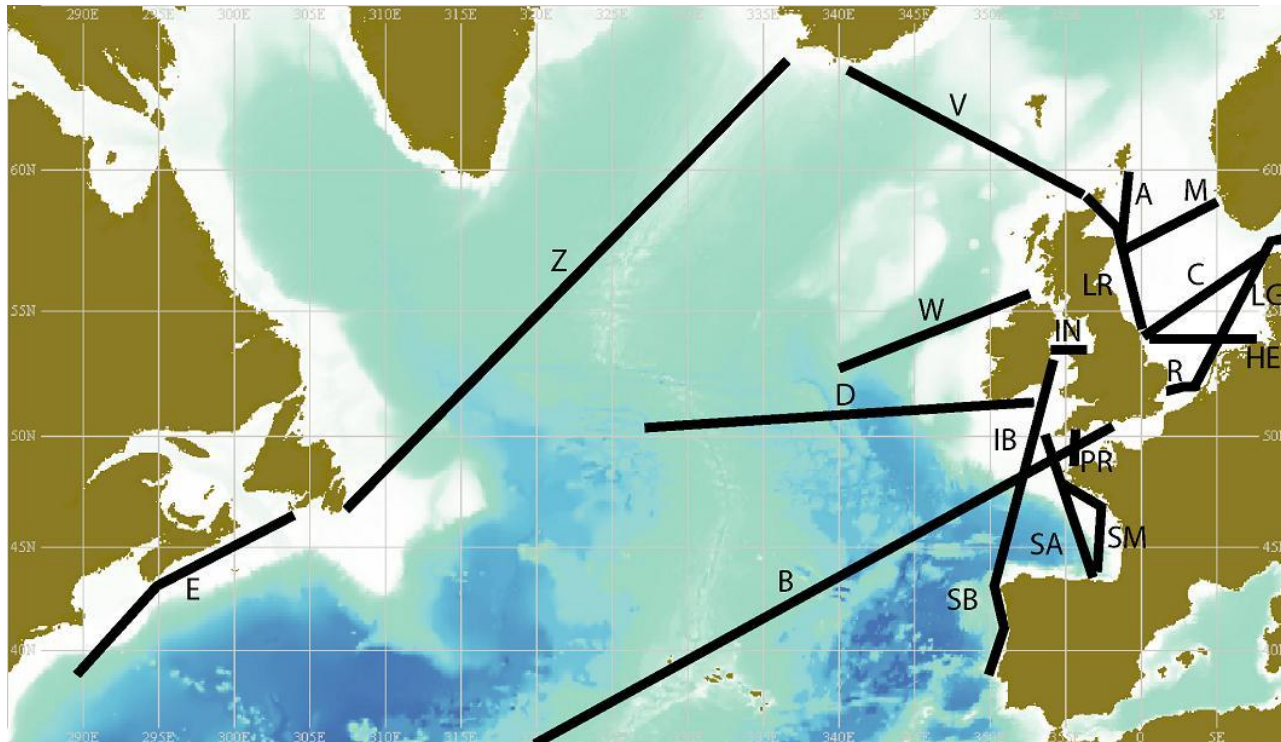
Continuous Plankton Recorder (CPR) sampling in the North Atlantic

Survey run by the Sir Alister Hardy Foundation for Ocean Science (SAHFOS)

Routes towed since the 1940s in NE Atlantic and since 1957 in the NW Atlantic (off and on)

New routes started between northern Norway and Svalbaard in 2008

Data available for >450 plankton taxa (phytoplankton and zooplankton)



O-SNAP (Observing the Subpolar North Atlantic)

Objective: To assess the predictability of the Atlantic Meridional Overturning Circulation (AMOC) and to determine its influence on climate, the carbon cycle, the cryosphere and related variables.

Requirement: A continuous record of the zonally integrated, full-water column, trans-basin fluxes of heat, mass and fresh water in the sub-polar North Atlantic.

NOTE: Ocean biology and biogeochemistry are identified as key interdisciplinary linkages.

