



# 5<sup>th</sup> DBO Data Meeting

January 22–23, NOAA/PMEL

---

## Satellite-detected fall phytoplankton blooms in the DBO regions

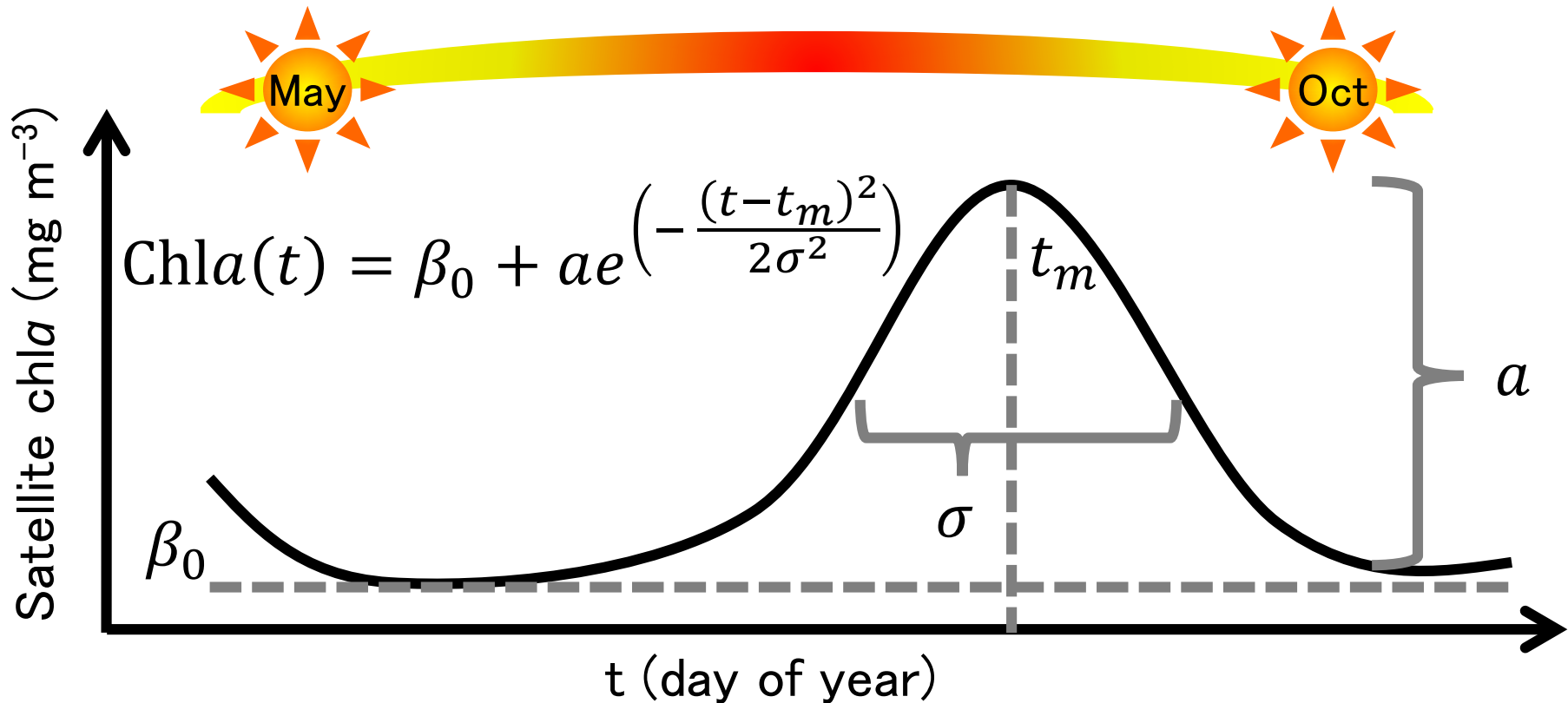
Hisatomo Waga  
(IARC/UAF)



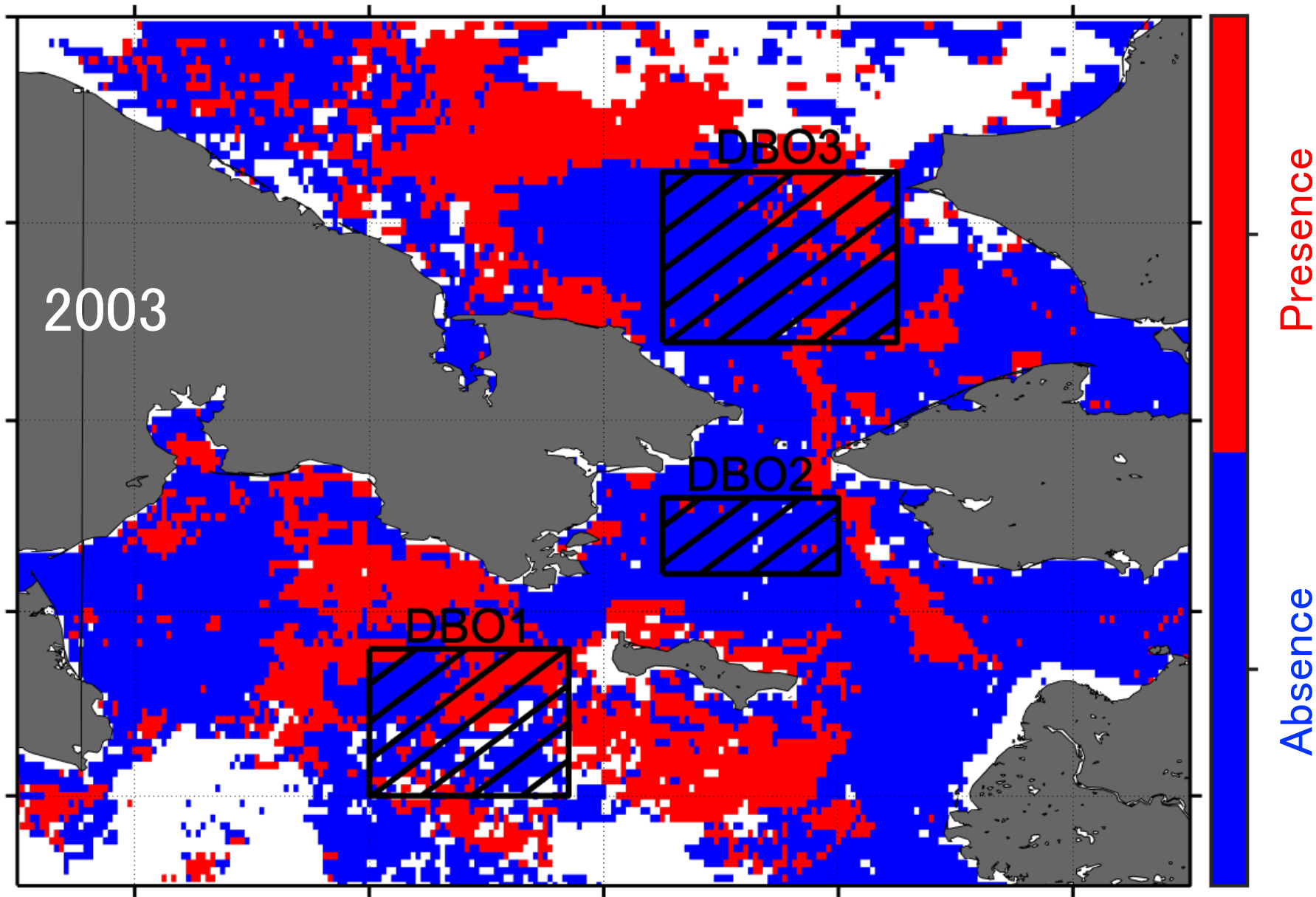
# Objective and Methods

## Interannual variations in fall phytoplankton blooms in the DBO 1–3 regions

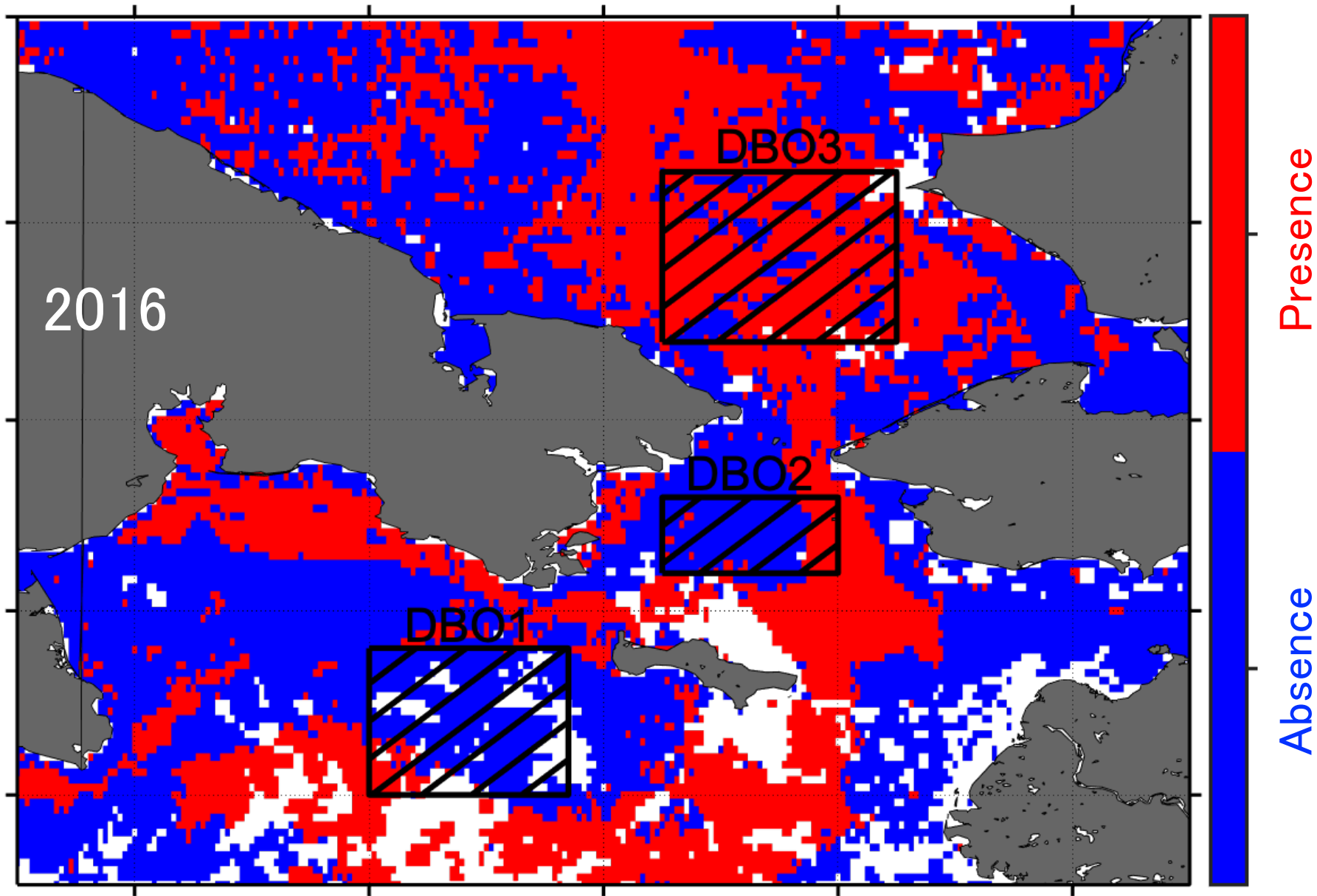
- Daily 9 km MODIS/Aqua chl $a$  (Lewis et al., 2016)
- Fall bloom: presence of chl $a$  peak in fall
- Minimum of one chl $a$  value every 20 days



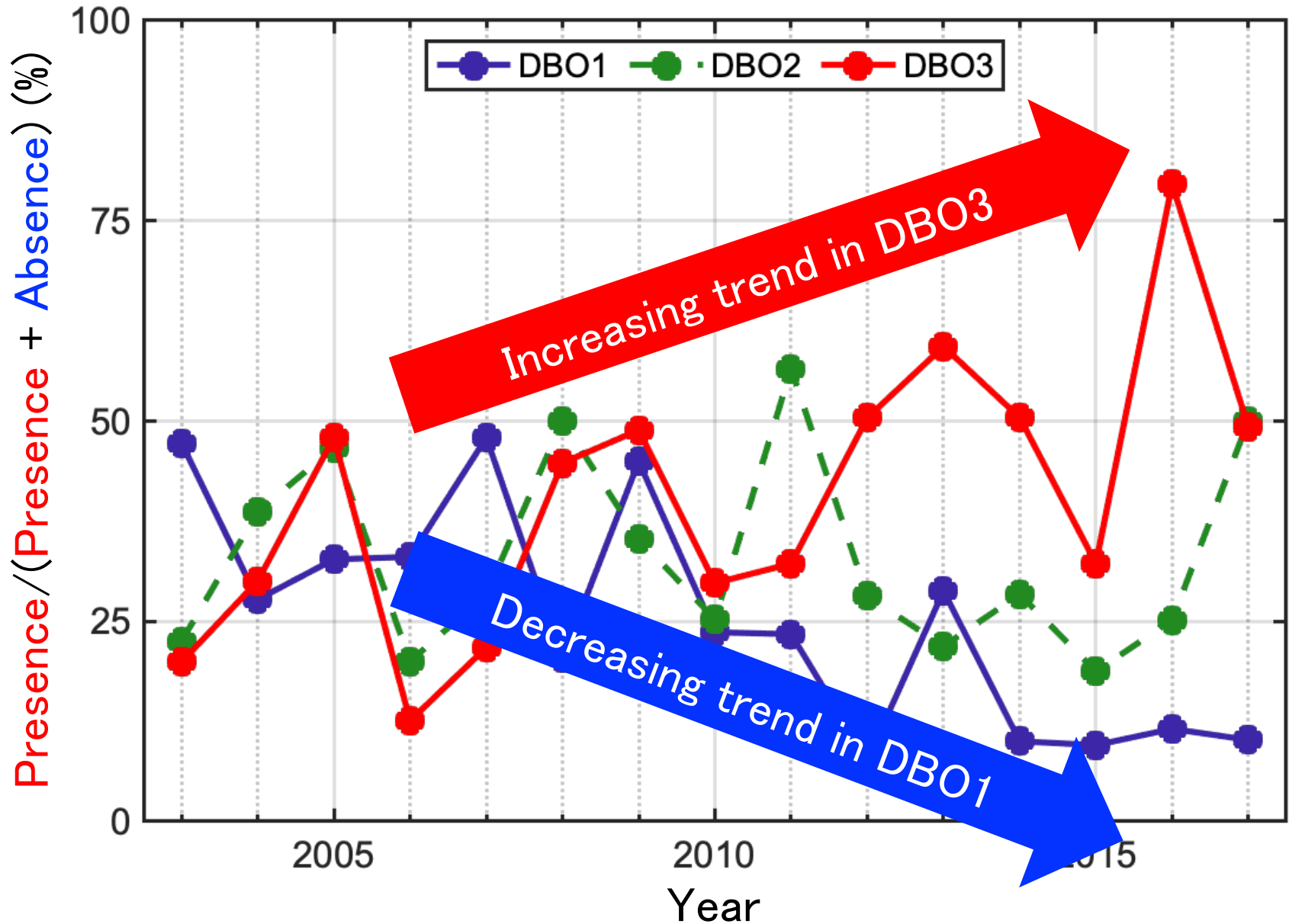
# Presence/Absence of Fall Bloom



# Presence/Absence of Fall Bloom

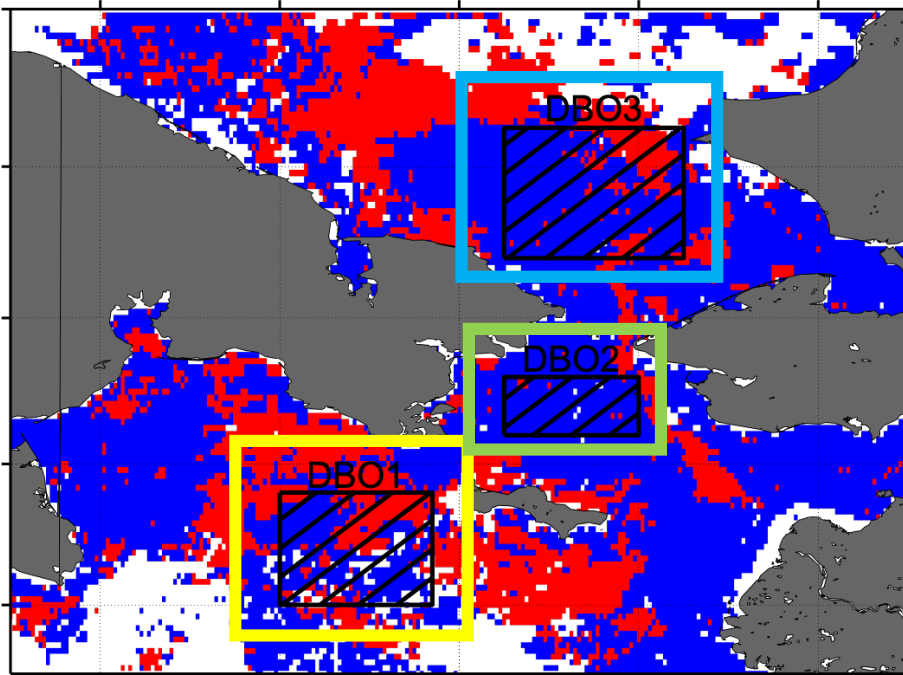


# Inter-annual Variations in Fall Bloom

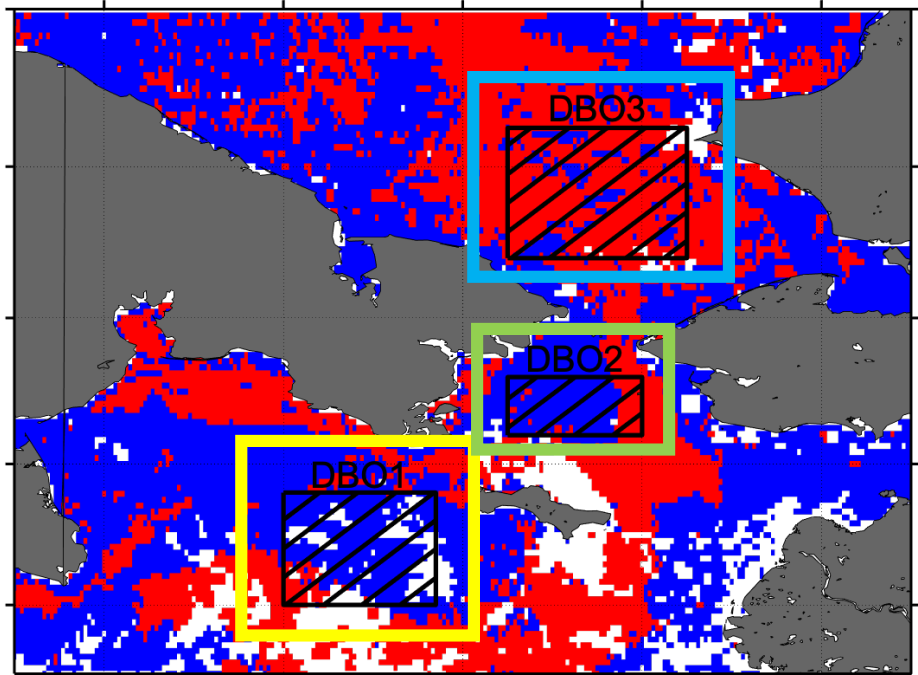


# Summary and Future Work

2003



2016



- DBO1: Less frequent fall bloom region
- DBO3: More frequent fall bloom region
- DBO2: Insignificant temporal variations
  - Boundary region between DBO1 and DBO3?

# Summary and Future Work

- This study found different temporal patterns in occurrence of fall blooms between the DBO regions
- Cascade up to higher trophic levels
  - Decreasing and increasing trends in benthic biomass in the DBO1 and DBO3 regions
- Potential drivers should be investigated
  - CTD, mooring, satellite, etc.

Thank you!