

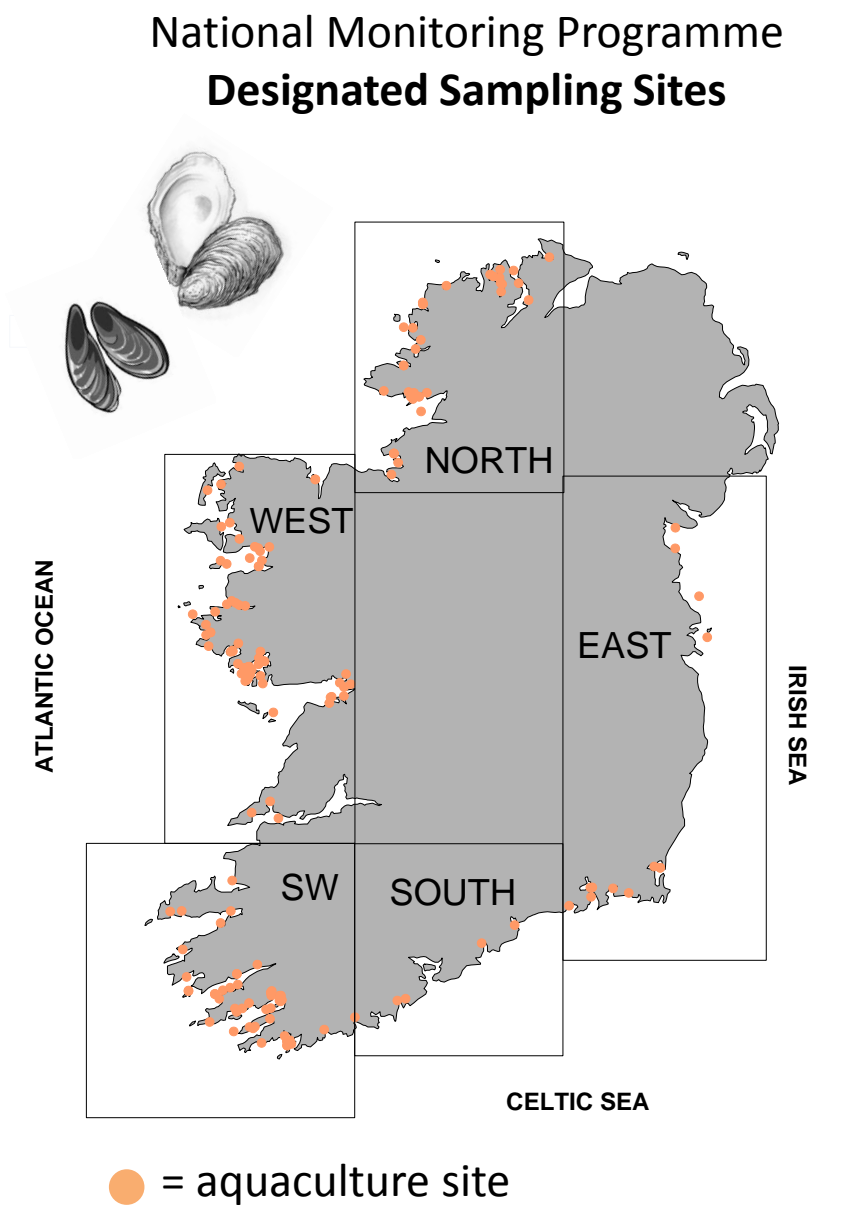
# Ireland: Current Conditions

## Shellfish biotoxin report (last week)



**EU Regulatory Limit:**  
ASP 20 µg/g; AZP 0.16 µg/g; DSP 0.16 µg/g; PSP 800 µg/kg

**Toxin groups**  
ASP = **A**mnestic **S**hellfish **P**oisoning; AZP = **AZ**aspiracid **P**oisoning;  
DSP = **D**iarrhetic **S**hellfish **P**oisoning; PSP = **P**aralytic **S**hellfish **P**oisoning



# Ireland: Predictions

## Prediction for this week:

ASP event: Some risk remains in the SW

AZP event: Low risk

DSP event: DSP biotoxins will continue to decrease (site to site variability will occur)

PSP event: Very low risk

## Why do we think this?

ASP event: Over the last week, *Pseudo-nitzschia* cell levels have increased slightly at some sites in the SW (maximum ~ 30,000 cells/L). While no toxic species have been detected in the majority of the National samples, a toxic species, *P. australis*, was detected in samples from Kenmare and Roaring Water Bays. *Pseudo-nitzschia* (represents 1-4 % of the phytoplankton) are part of a larger developing phytoplankton community in these bays including several non toxic diatoms and dinoflagellates. This reduces the possibility of it dominating the food source for bivalves and therefore for ASP to become an issue. To date, toxic events (mussel and oyster culture) have only occurred in SW long-line mussels. Historical data shows that this is a high risk period. Past ASP events have occurred between March to early May, with one exception in early June.

AZP: *Azadinium*-like species are now at low levels at all sites (maximum = 520 cells/L) and so this reduces the risk of a toxic event. Historic data shows events in the past have occurred as early as end of April (this does not take into account winter carry over).

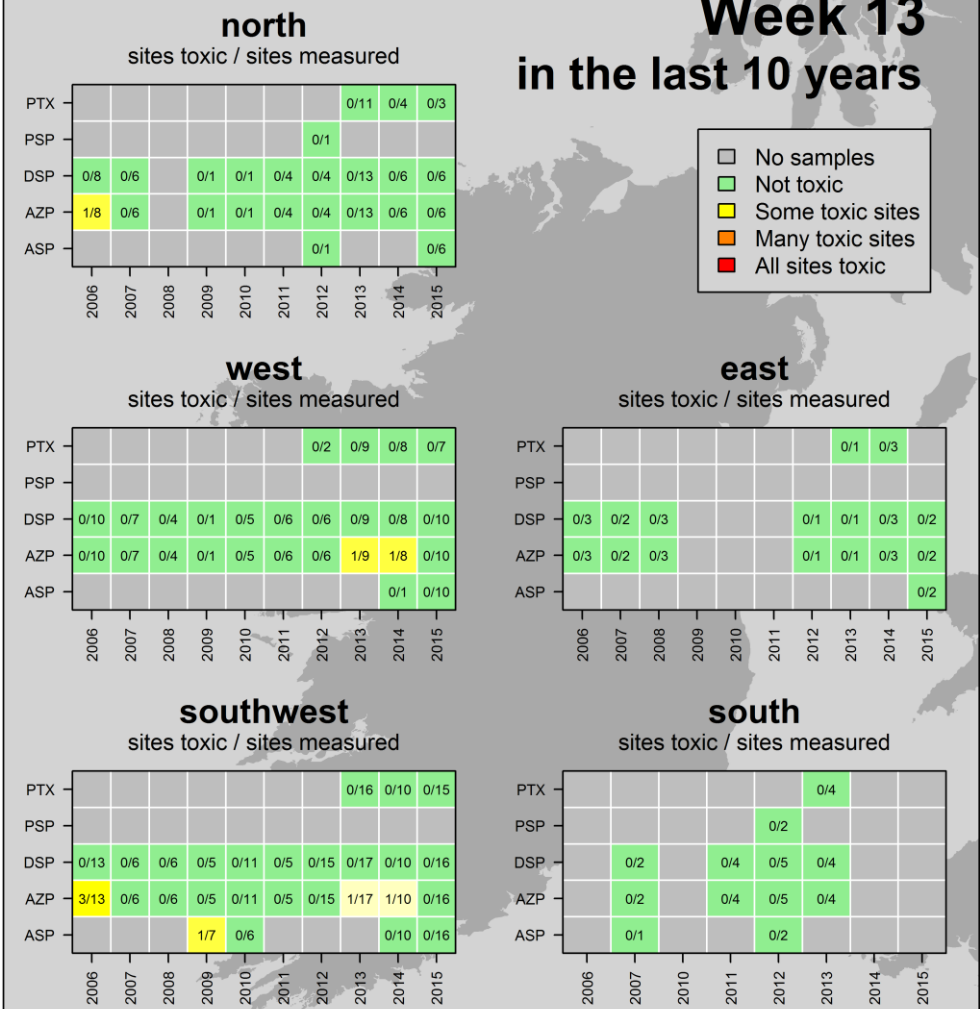
DSP: *Dinophysis acuminata* and *D. acuta* not detected in the water. Biotoxins continue to decrease with temporal variability noticeable at some sites.

PSP: Historically this a low risk period of the year for all sites. *Alexandrium* species present at five sites on the west and north coasts. Maximum concentrations at 200 cells/L. No biotoxins recorded.

# Ireland: Historic Conditions

A look back at how last weeks biotoxin results compares to other years

## Week 13 in the last 10 years



## Ireland HISTORIC TRENDS

**2003-2012 Shellfish Toxicity:** does not include winter carry over of biotoxins

ASP events: weeks 11 to 18 (mid-March to early May)

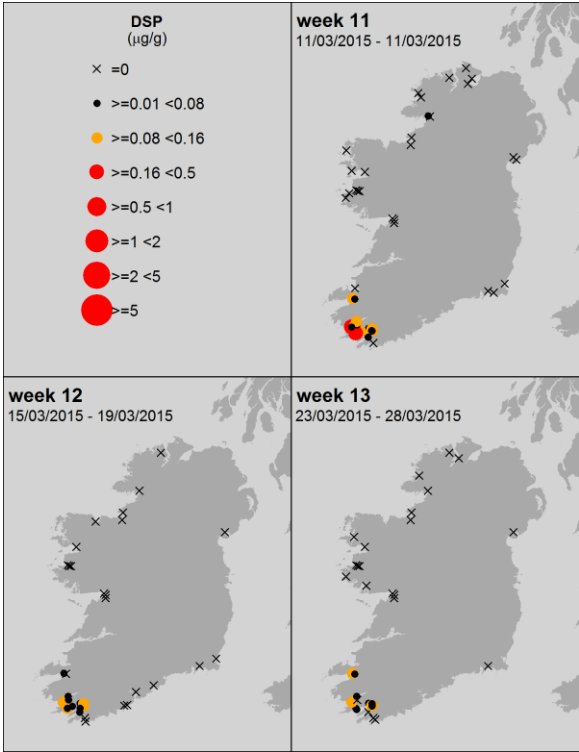
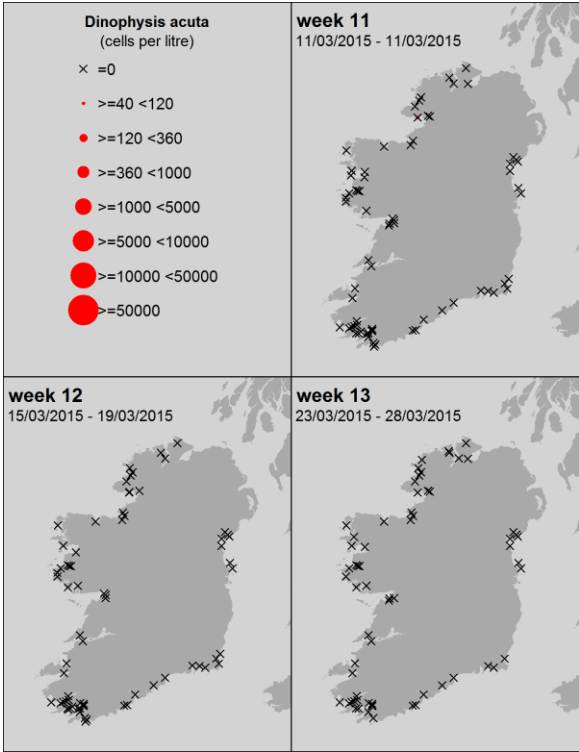
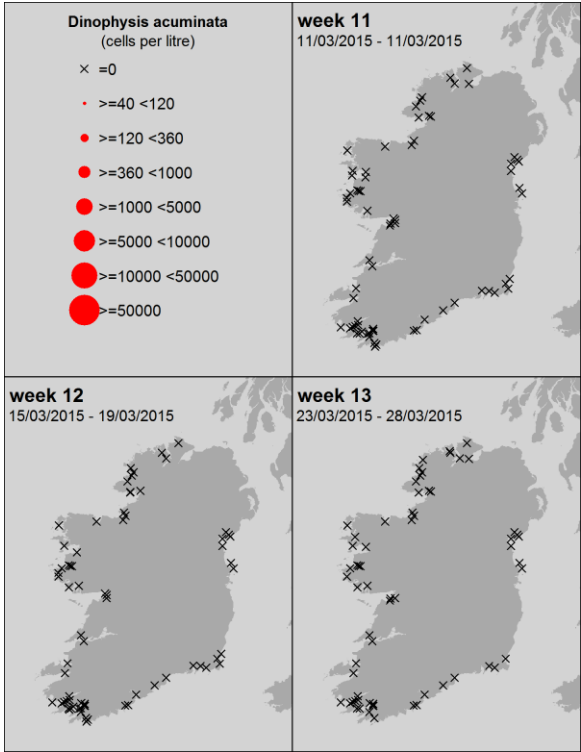
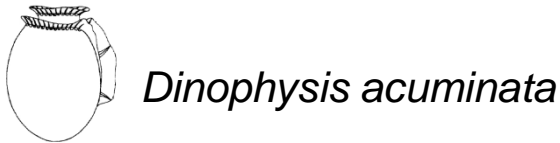
AZP events: weeks 17 to 51 (April to December)

DSP events: weeks 19 to 51 (May to December)

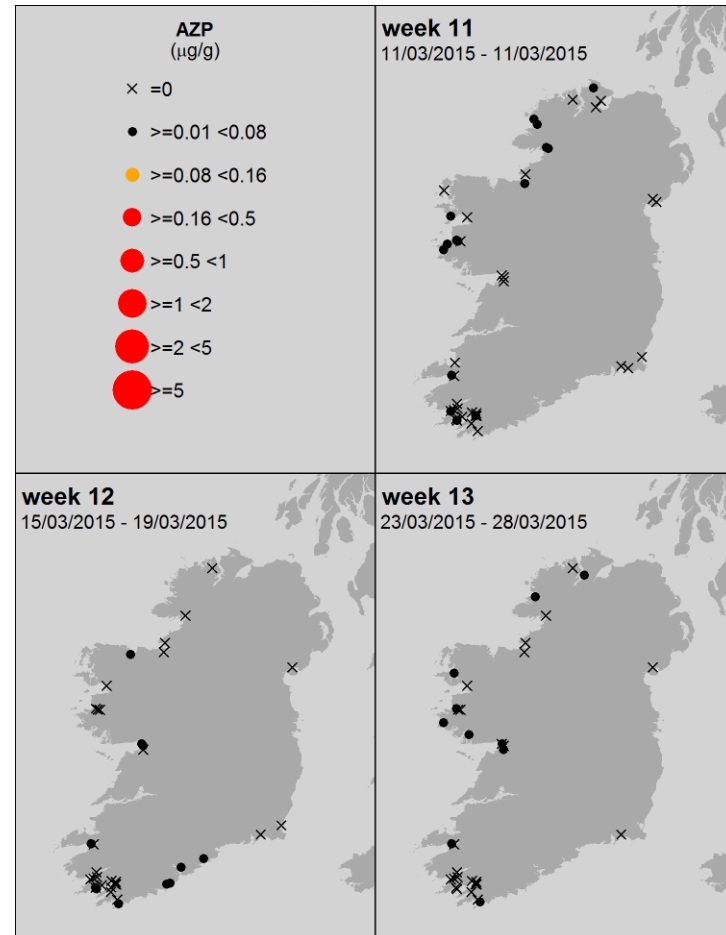
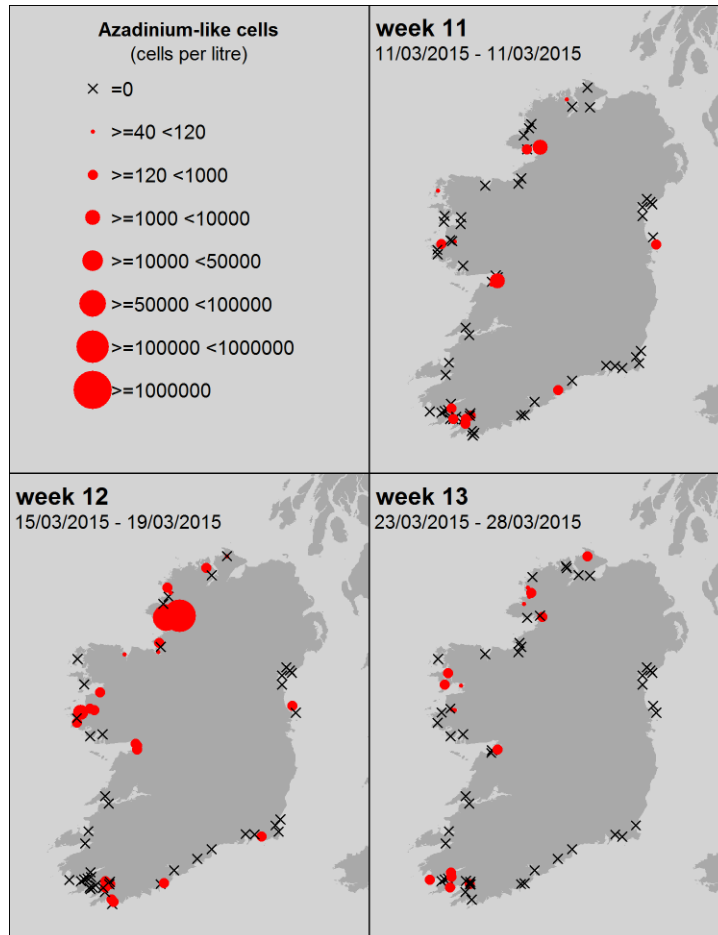
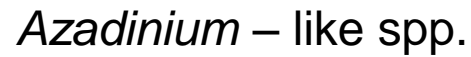
PSP events: weeks 23, 25-28 (June to mid-July) and 38-39 (end September); only in Cork Harbour



Ireland: Last 3 weeks of available National Monitoring Programme data



**Ireland: Last 3 weeks of available National Monitoring Programme data**



Ireland: Last 3 weeks of available National Monitoring Programme data

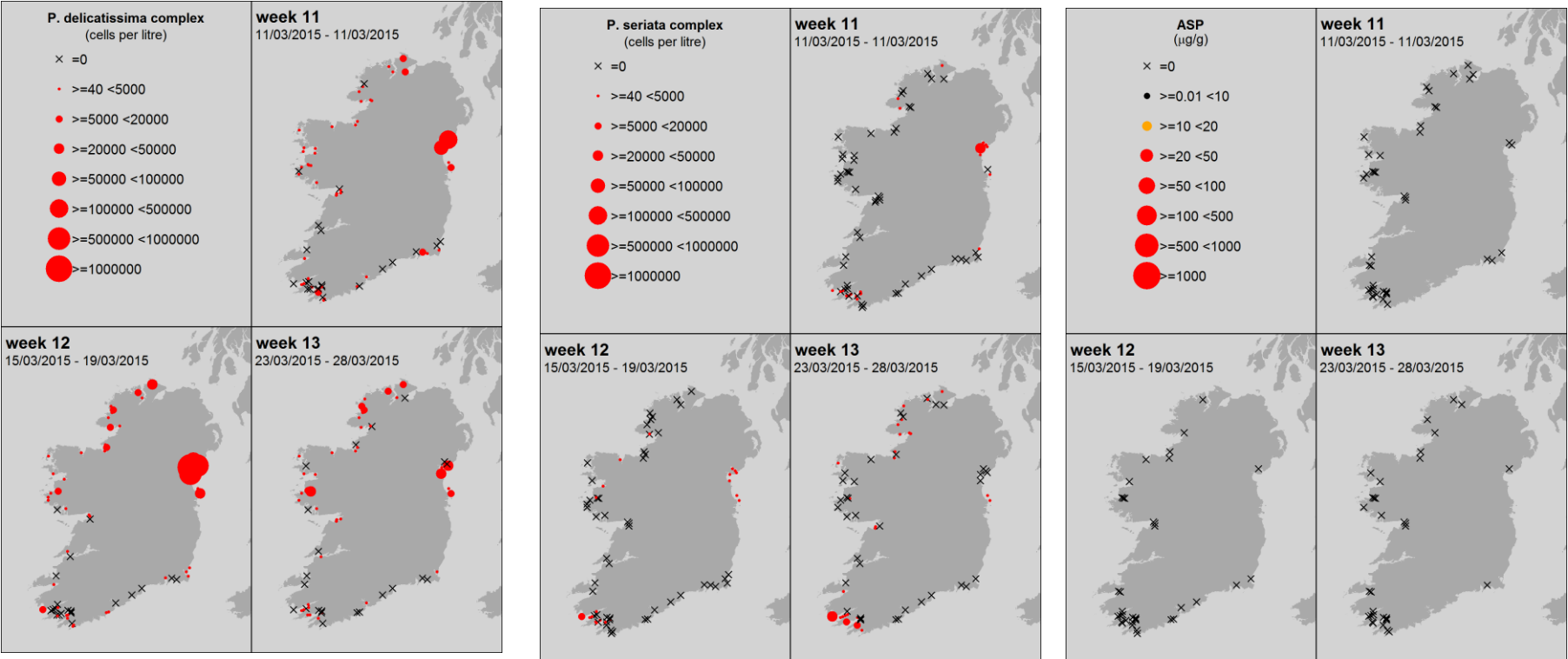
*Pseudo-nitzschia* spp.



ASP

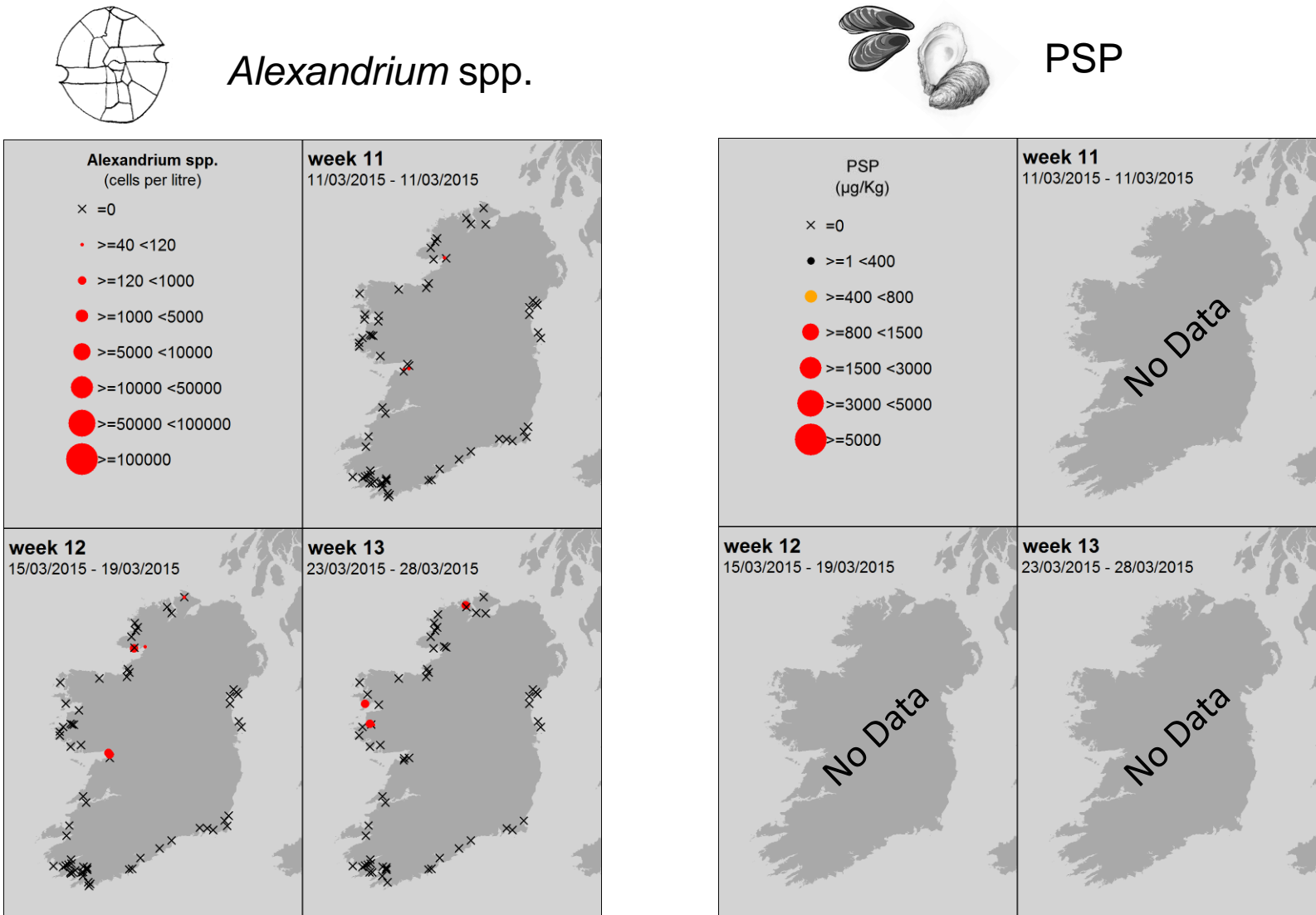
“*P. delicatissima*” complex = small cells  
3 species confirmed in Irish waters

The “*P. seriata*” complex = large cells  
7 species confirmed in Irish waters



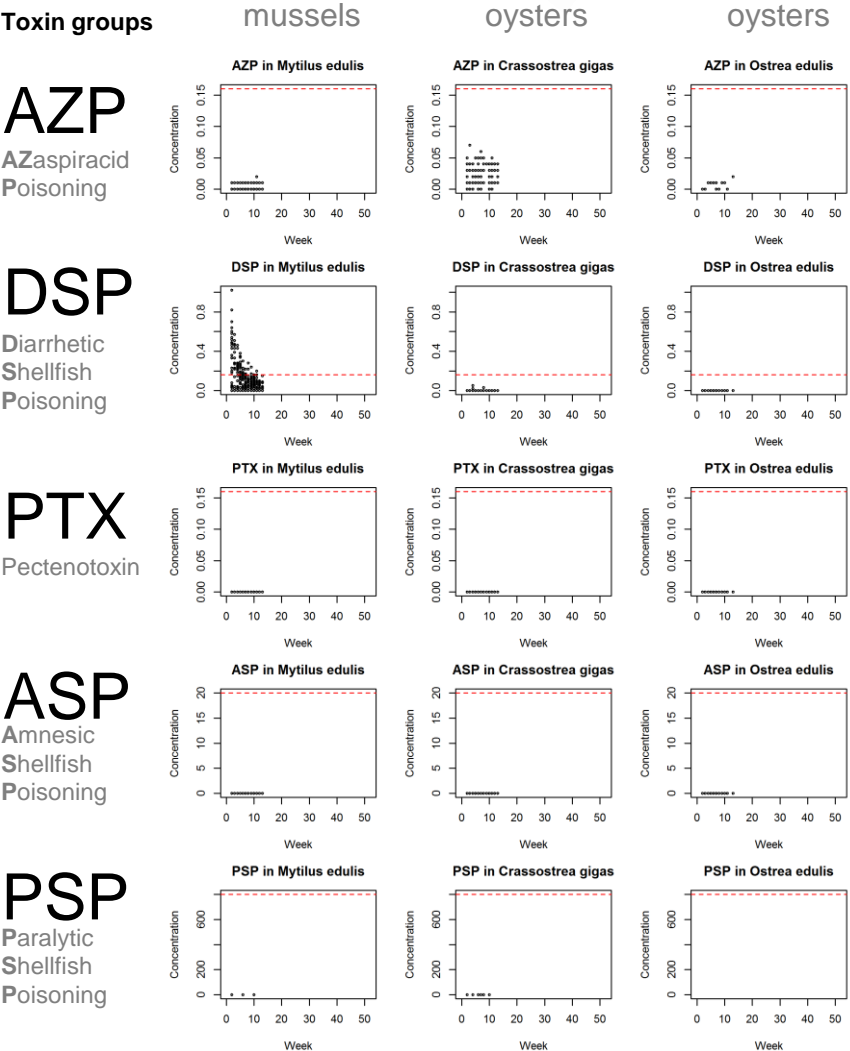
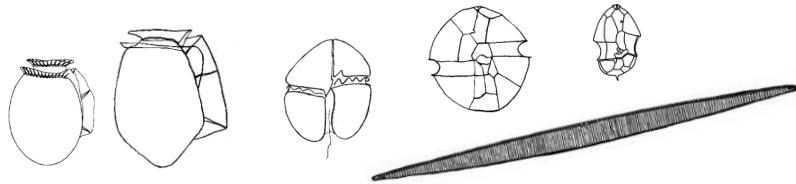
Of the 4 species (*P. fraudulenta*, *P. australis*, *P. pungens* and *P. delicatissima*) from Irish waters, tested for ASP toxins in culture work, only one, *P. australis* (from the “*P. seriata*” group) was toxic.

Ireland: Last 3 weeks of available National Monitoring Programme data

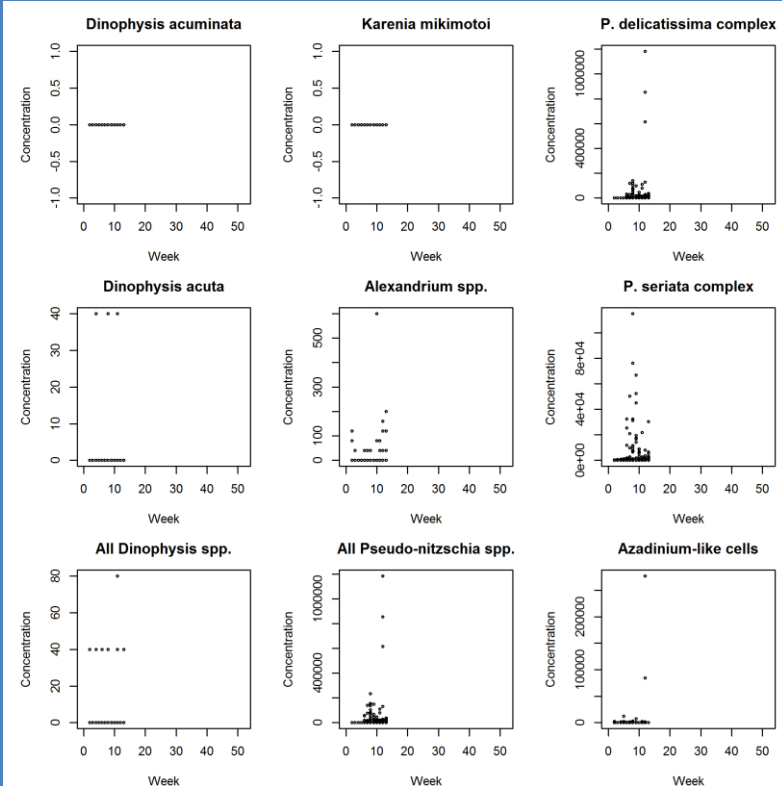


Ireland: HABs and biotoxins Levels from week 1 to present

Ireland: Biotoxins



Ireland: HABs



Week number: 1 to 13

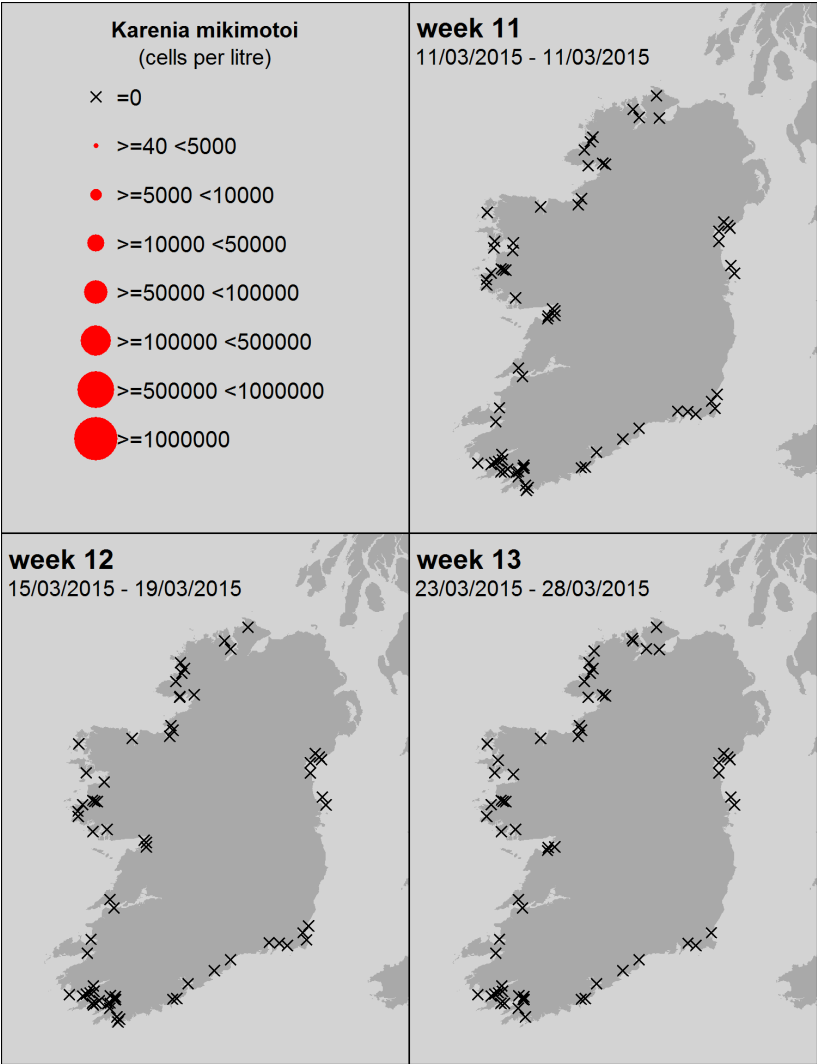
EU Regulatory Limit: ASP 20 µg/g; AZP 0.16 µg/g; DSP 0.16 µg/g; PSP 800 µg/kg

Regulatory limit = ■■■■■

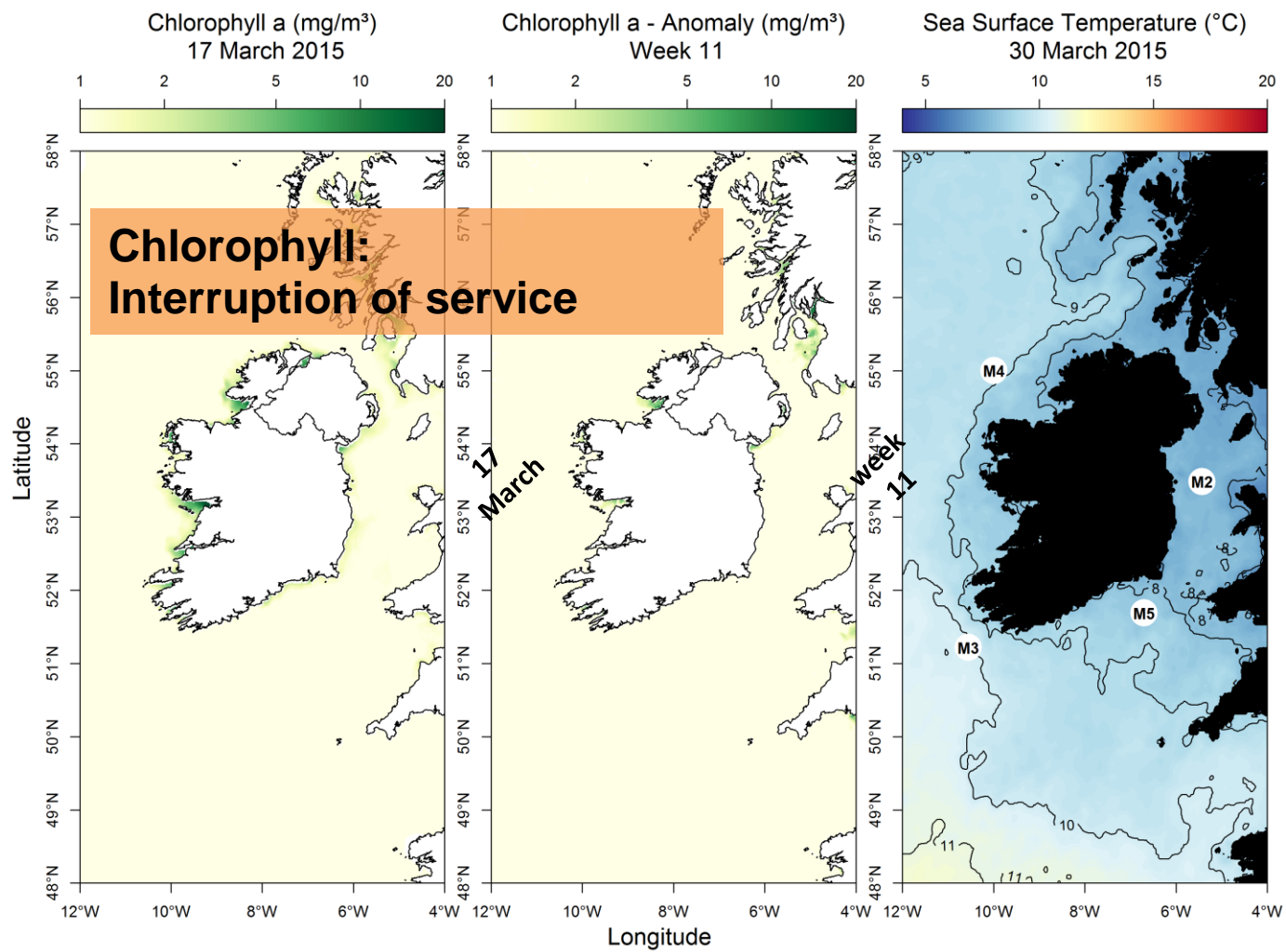




*Karenia mikimotoi*  
(old name: *Gyrodinium aureolum*)

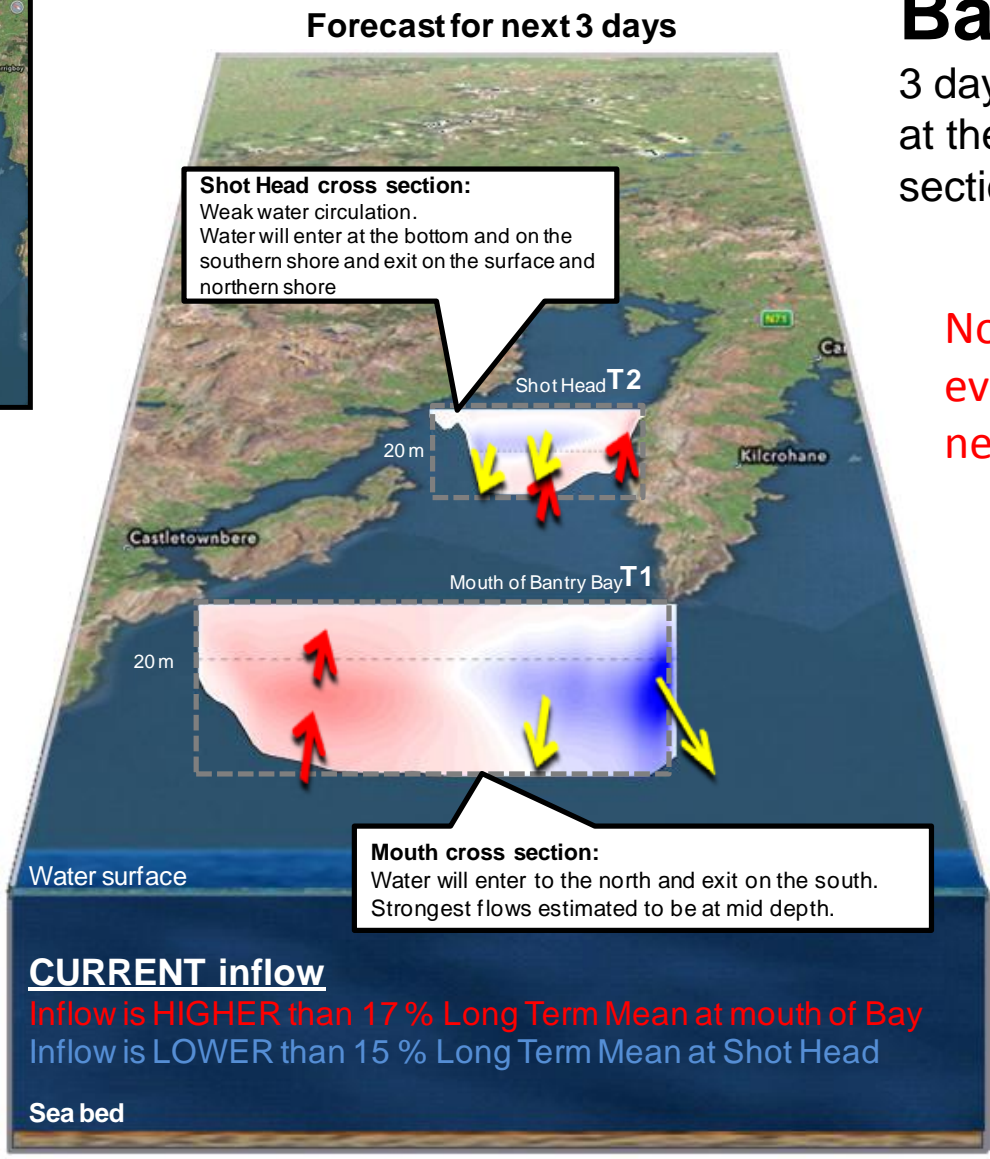
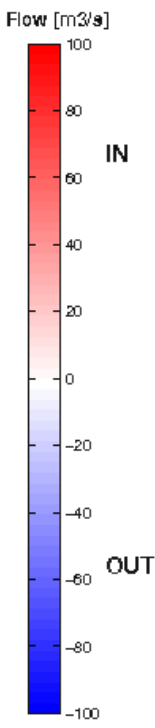


Ireland: Most up to date available satellite data



**SST (°C) anomaly for last week:**  
Data taken from the Irish data buoy network where the anomaly is the weekly difference in SST compared to the long term mean (~ 10 yrs)

|                      |                                 |
|----------------------|---------------------------------|
| Northwest coast (M4) | <u>below average by 0.06 °C</u> |
| Southwest coast (M3) | <u>above average by 0.49 °C</u> |
| Southeast coast (M5) | <u>below average by 0.49 °C</u> |



# Bantry Bay

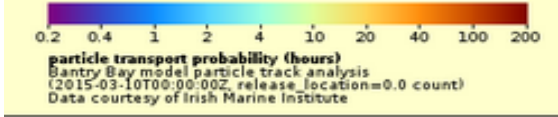
3 day estimated water flows at the mouth and mid-bay sections of Bantry Bay

No big water exchange event predicted in the next few days

Please go to <http://vis.marine.ie/particles/> to view daily forecasts in more detail

The maps show the **most likely transport pathways** for the next 3 days of **phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

Reddish colours represent areas where phytoplankton remain longest  
Cooler colours represent areas where phytoplankton remain for shorter periods



0.2 0.4 1 2 4 10 20 40 100 200  
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

