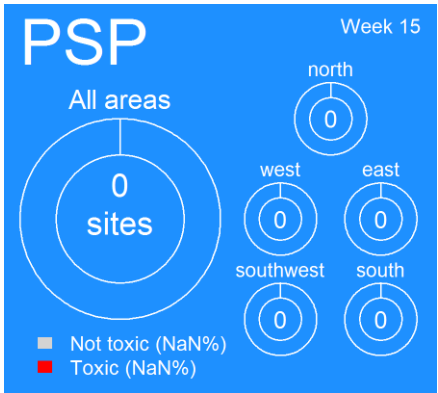
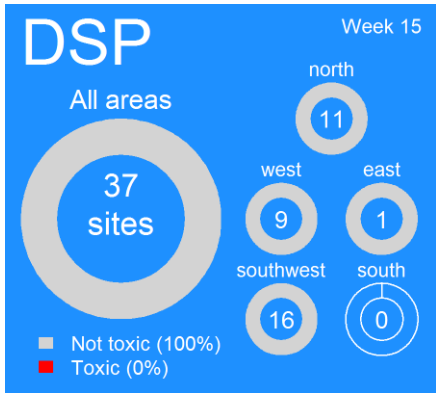
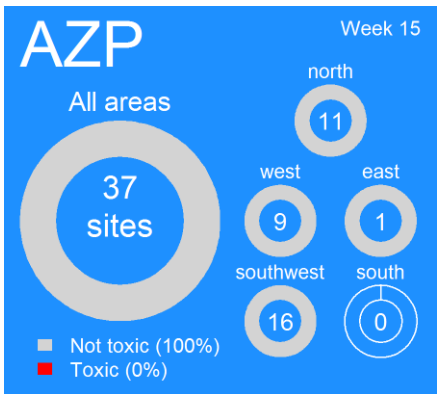
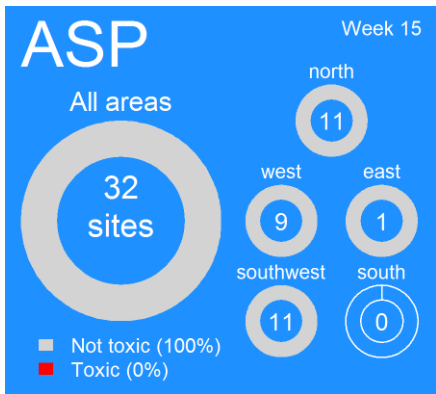


# Ireland: Current Conditions

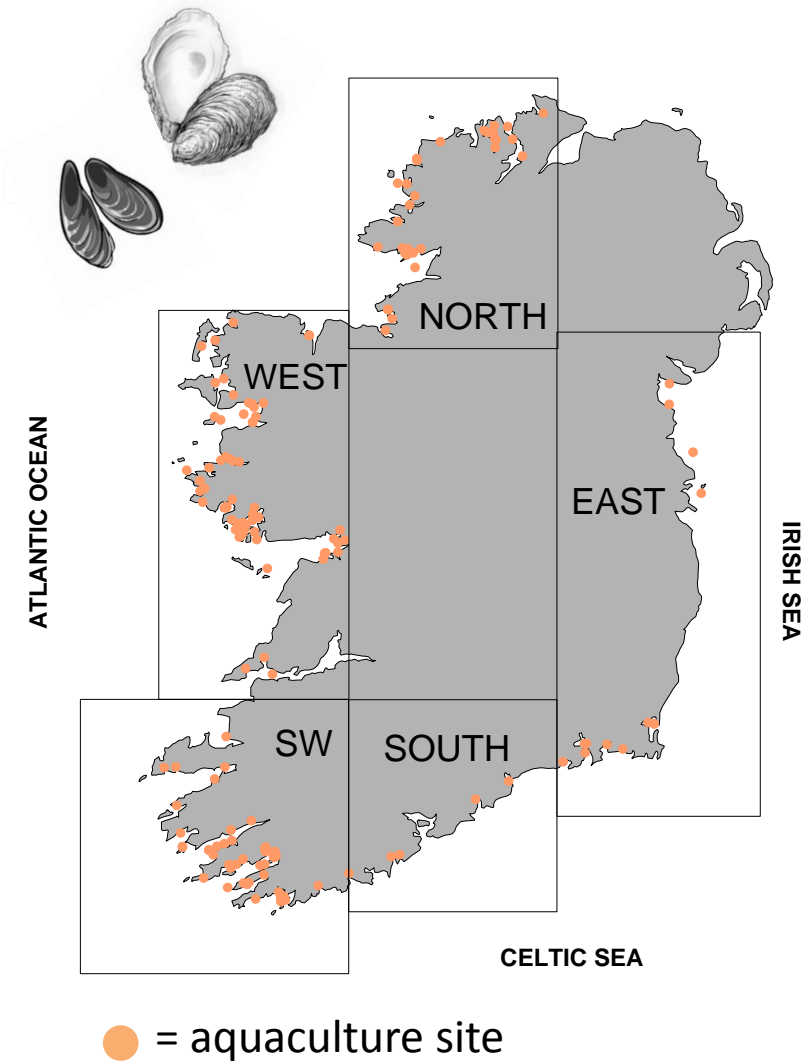
## Shellfish biotoxin report (last week)



**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

### National Monitoring Programme Designated Sampling Sites



# Ireland: Predictions

## Prediction for this week:

ASP event: Low risk

AZP event: Low risk

DSP event: Low risk

PSP event: Low risk

## Why do we think this?

ASP event: Over the last week, *Pseudo-nitzschia* cell levels have increased slightly (maximum ~ 21,000 cells/L in SW). While no toxic species have been detected in the majority of the National samples, a toxic species, *P. australis*, was detected in 7 samples from the SW coast.

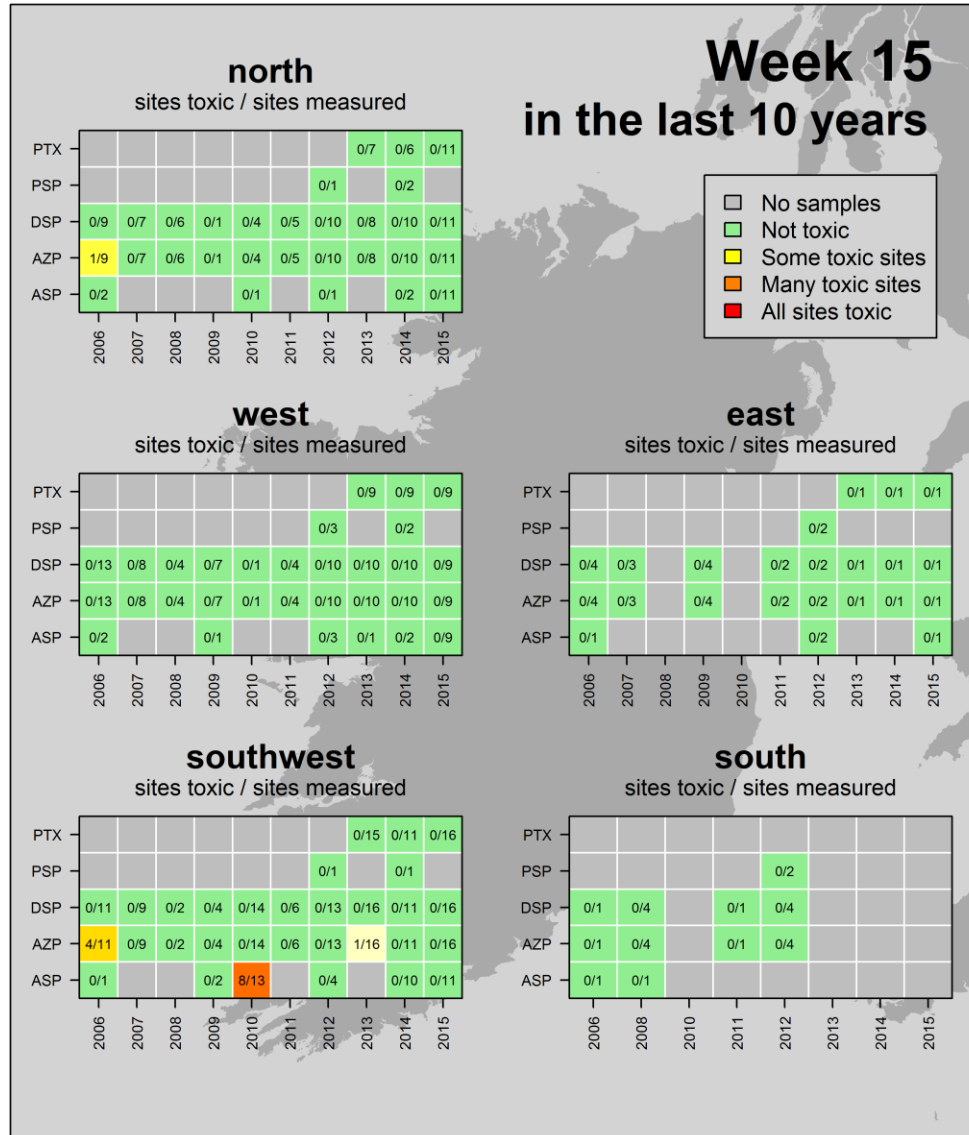
Currently *Pseudo-nitzschia* represents 1 – 3 % of the total phytoplankton abundance in the SW, which is dominated by nontoxic diatoms. This low abundance percentage reduces the possibility of it dominating the food source for bivalves and therefore for ASP to become an issue. Historical data tells us that toxic events (mussel and oyster culture) usually only occur in SW long-line mussels. In terms of the time of year, we are now in a high risk period; ASP events in the past have occurred between March to early May, with one exception in early June.

AZP: *Azadinium*-like species picked up at 17 sites nationally; maximum cell levels in the west @ ~ 5,000 cells/L. The toxic nature of the species present is not fully known. 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 acuta* not detected in the water. *Dinophysis acuminata* found at background levels (40 cells/L) at 1 site on east coast. Biotxin levels in mussels remain below the EU regulatory limit (maximum = 0.09 µg/g).

PSP: Historically this a low risk period of the year for all sites. *Alexandrium* species present at 6 sites nationally; maximum cell levels in the south @ ~ 900 cells/L. No biotoxins recorded.

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



**Likely times for Shellfish Toxicity:** does not include winter carry over of biotoxins

PSP events: June to mid-July and end September; only in Cork Harbour



Ireland: Last 3 weeks of available National Monitoring Programme data



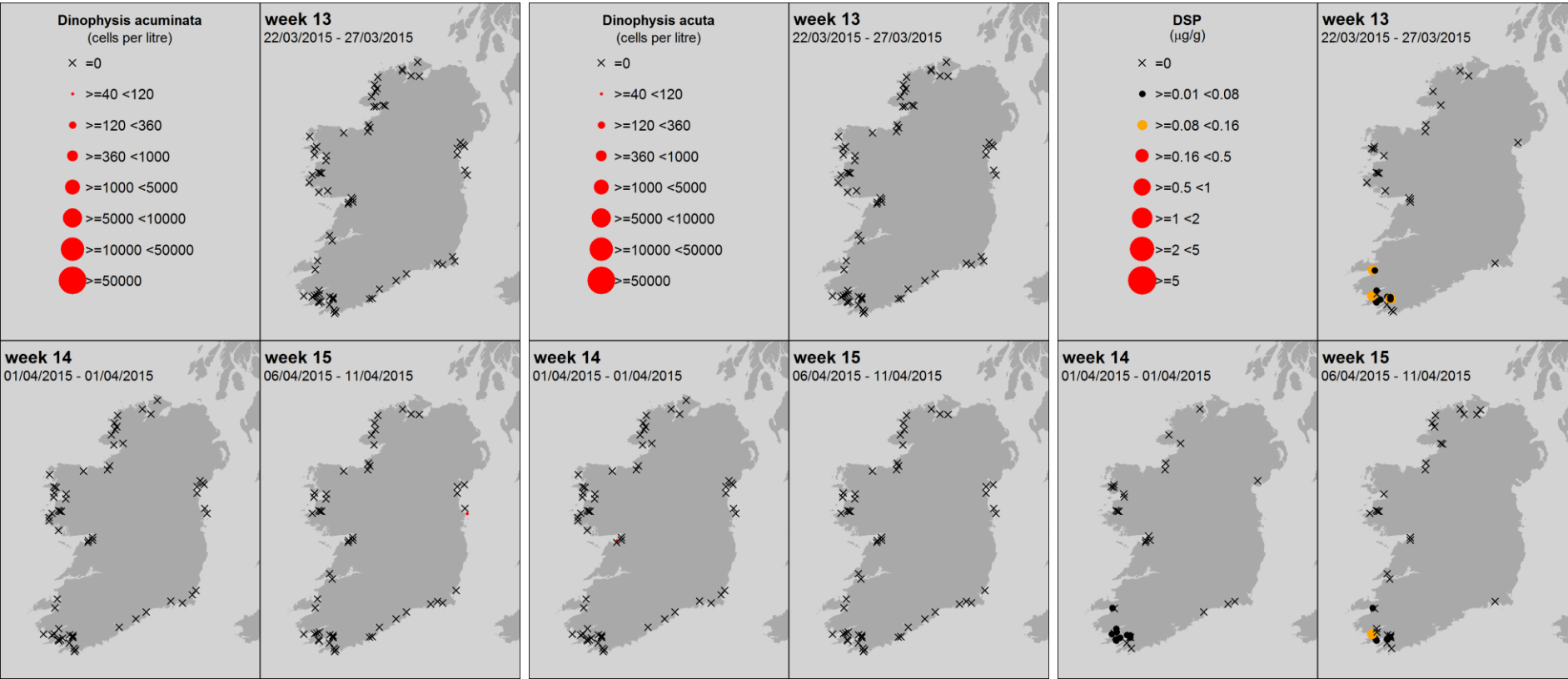
*Dinophysis acuminata*



*Dinophysis acuta*



DSP



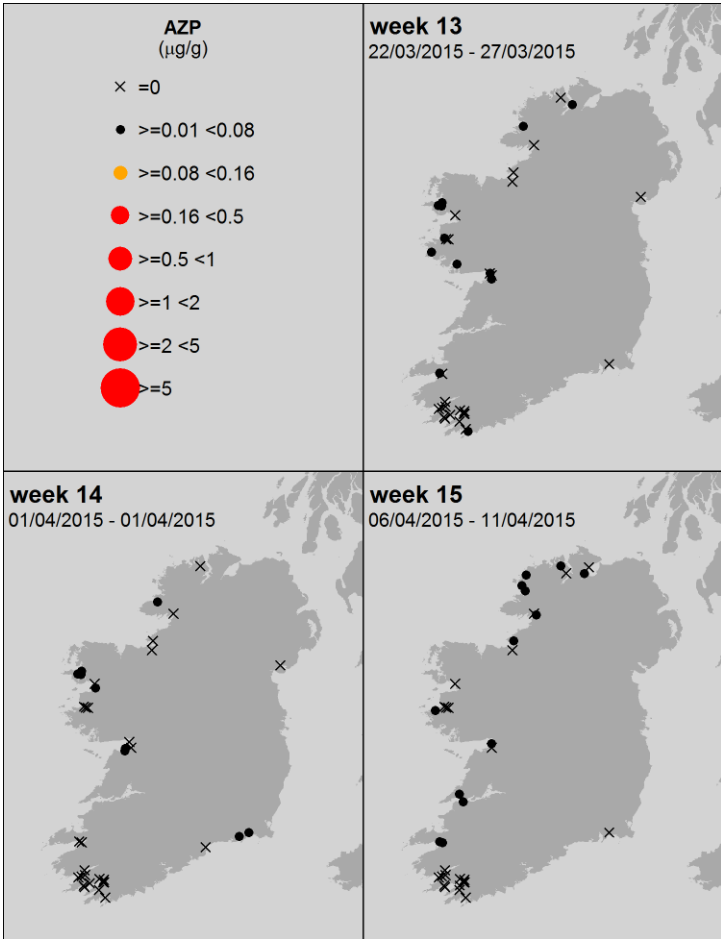
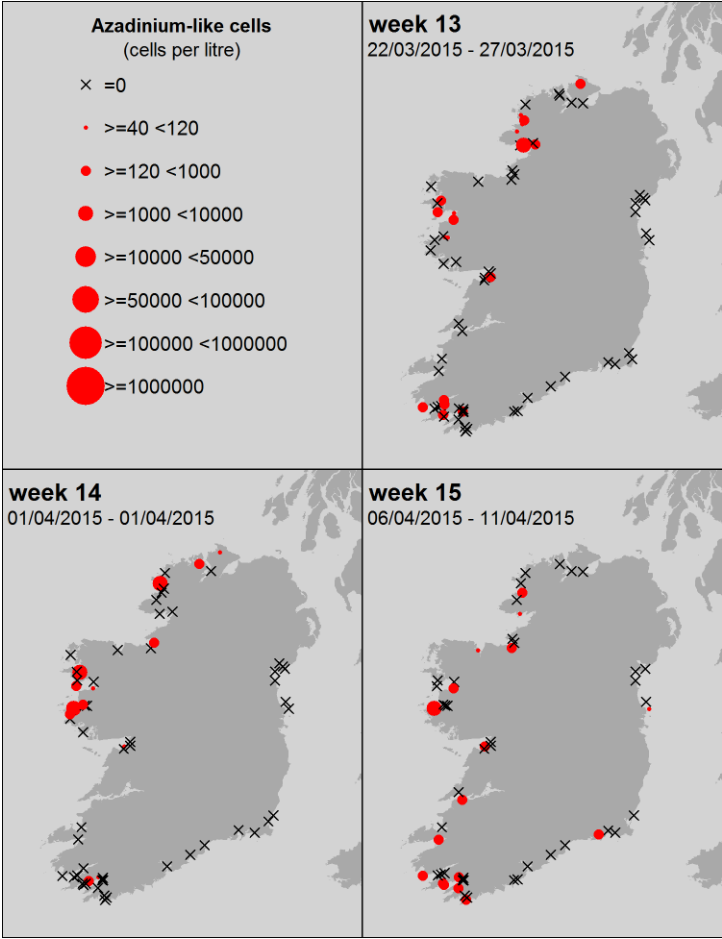
Ireland: Last 3 weeks of available National Monitoring Programme data



*Azadinium* – like spp.



AZP



Ireland: Last 3 weeks of available National Monitoring Programme data

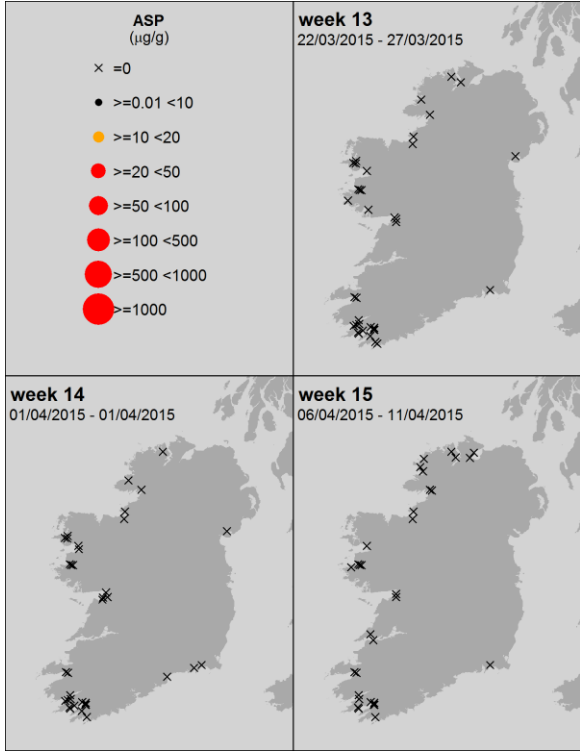
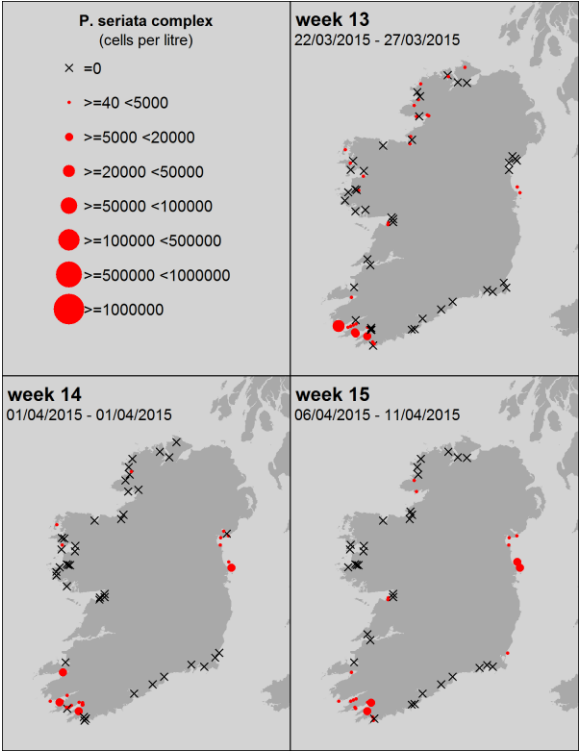
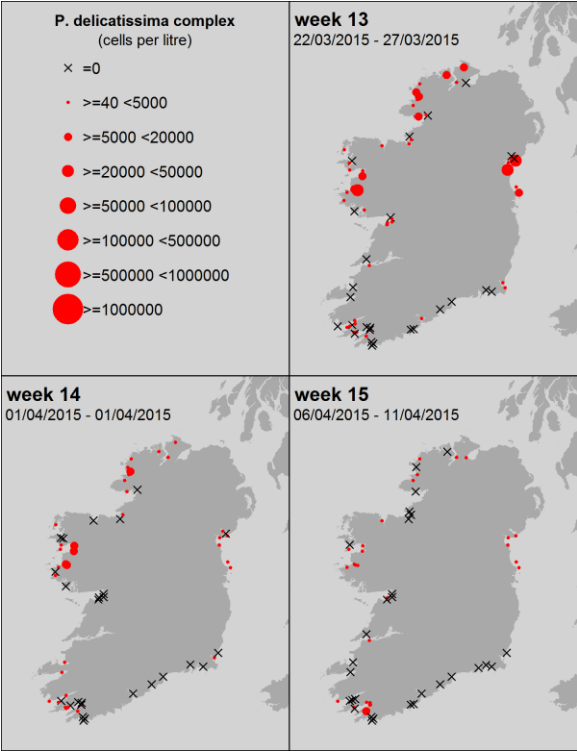
*Pseudo-nitzschia* spp.



ASP

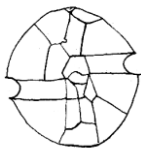
“*P. delicatissima*” complex = small cells  
3 species confirmed in Irish waters

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.

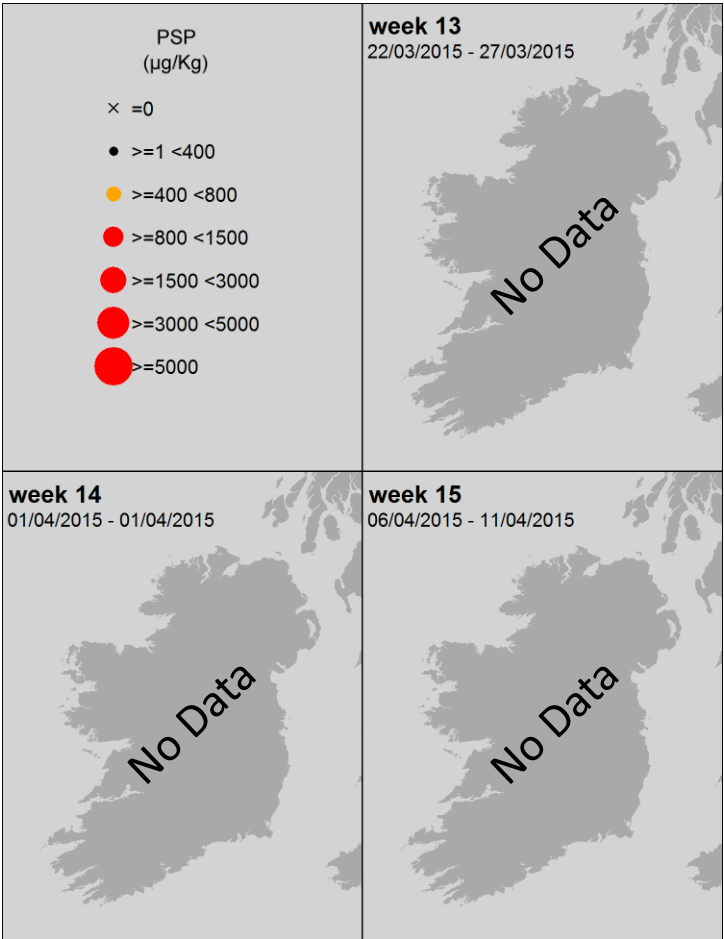
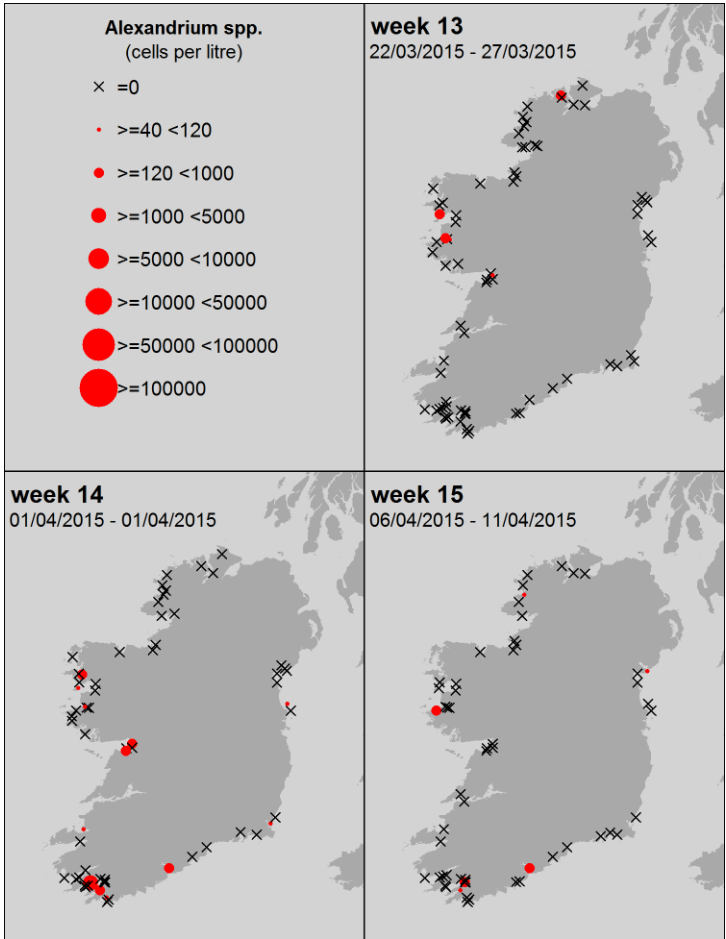
Ireland: Last 3 weeks of available National Monitoring Programme data



*Alexandrium* spp.

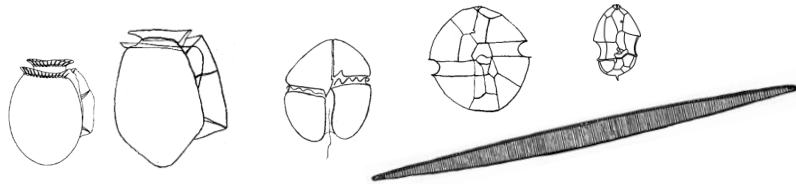


PSP



Ireland: **HABs and biotoxins** Levels from week 1 to present

Ireland: **Biotoxins**



Toxin groups

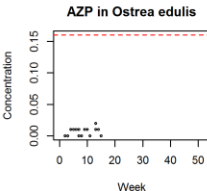
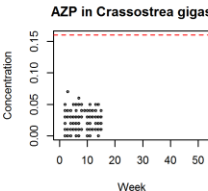
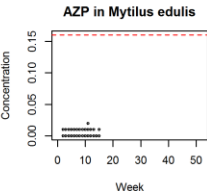
mussels

oysters

oysters

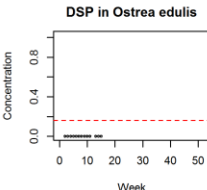
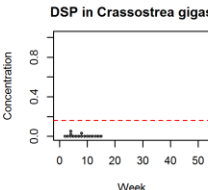
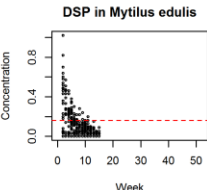
**AZP**

AZaspiracid  
Poisoning



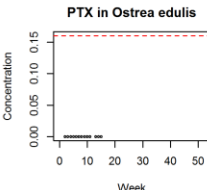
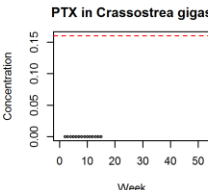
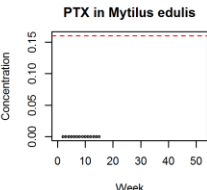
**DSP**

Diarrhetic  
Shellfish  
Poisoning



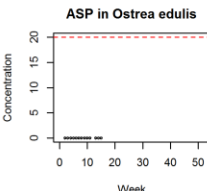
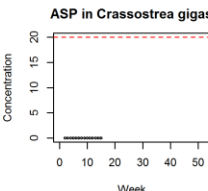
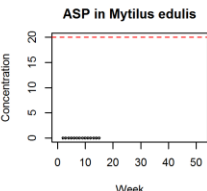
**PTX**

Pectenotoxin



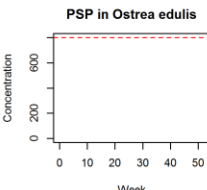
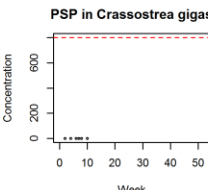
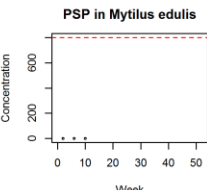
**ASP**

Amnesic  
Shellfish  
Poisoning

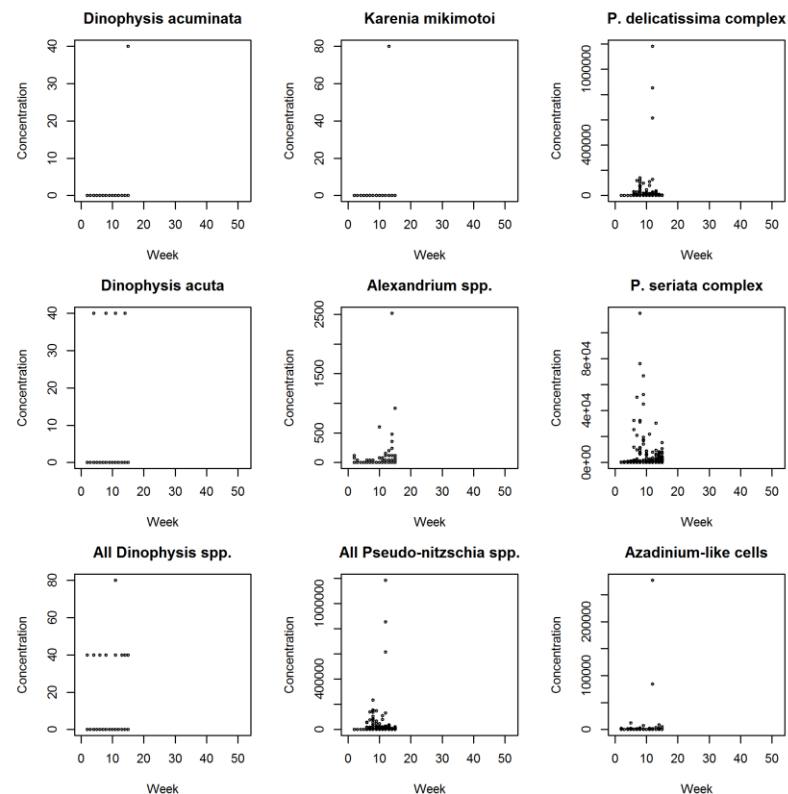


**PSP**

Paralytic  
Shellfish  
Poisoning



Ireland: **HABs**



Week number: 1 to 15

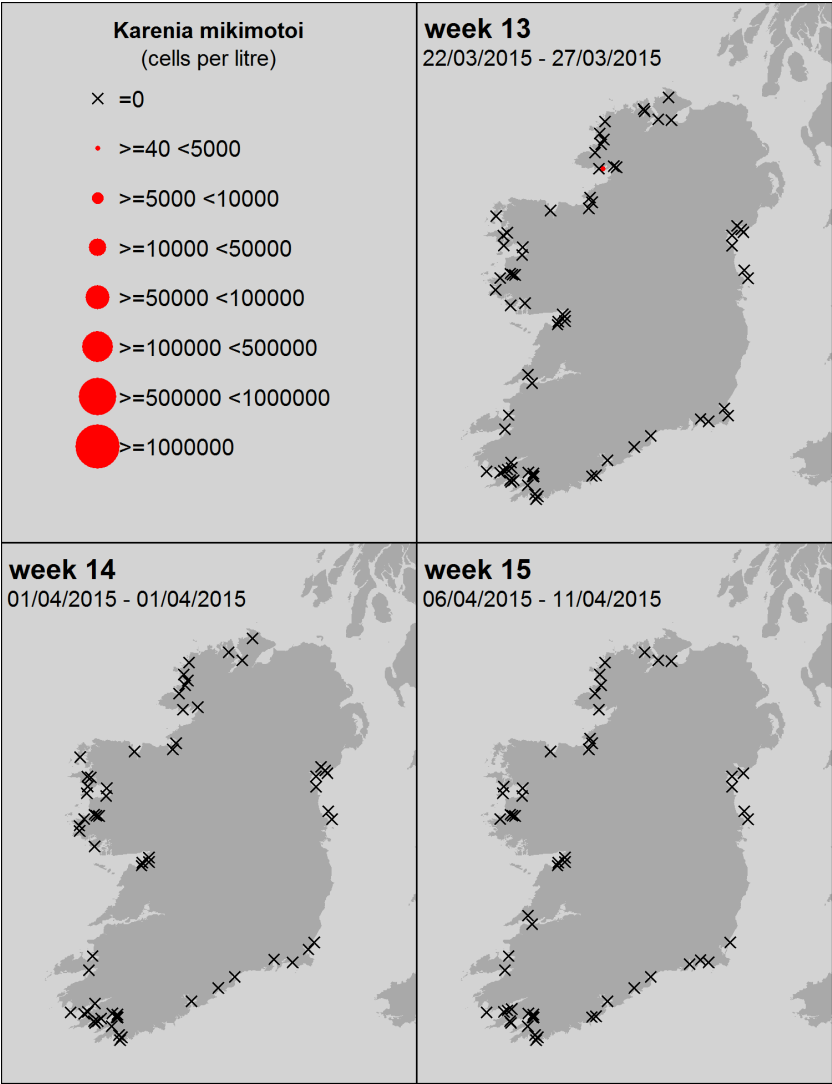
EU Regulatory Limit: ASP 20 µg/g; AZP 0.16 µg/g; DSP 0.16 µg/g; PSP 800 µg/kg

Regulatory limit = ■■■■■





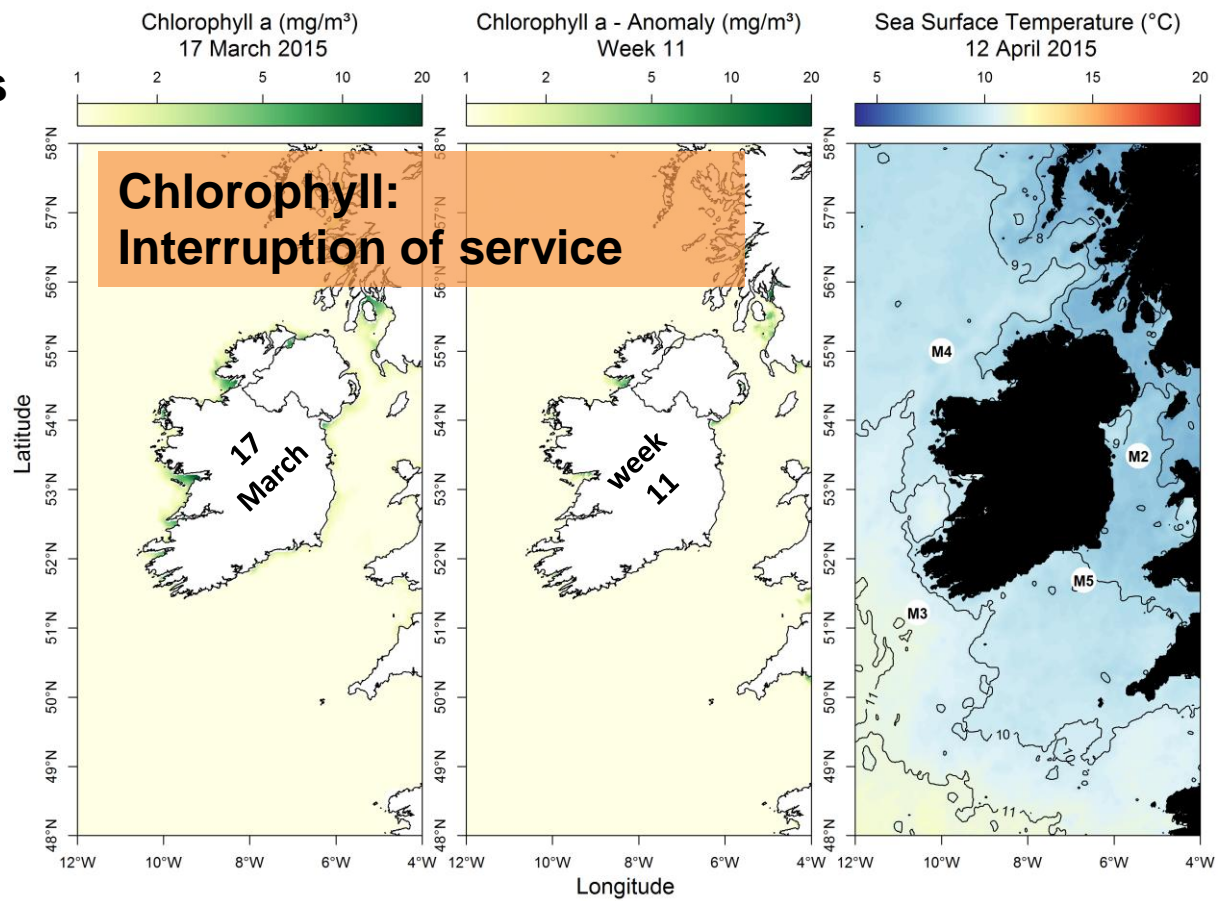
*Karenia mikimotoi*  
(old name: *Gyrodinium aureolum*)



Ireland: Most up to date available satellite data

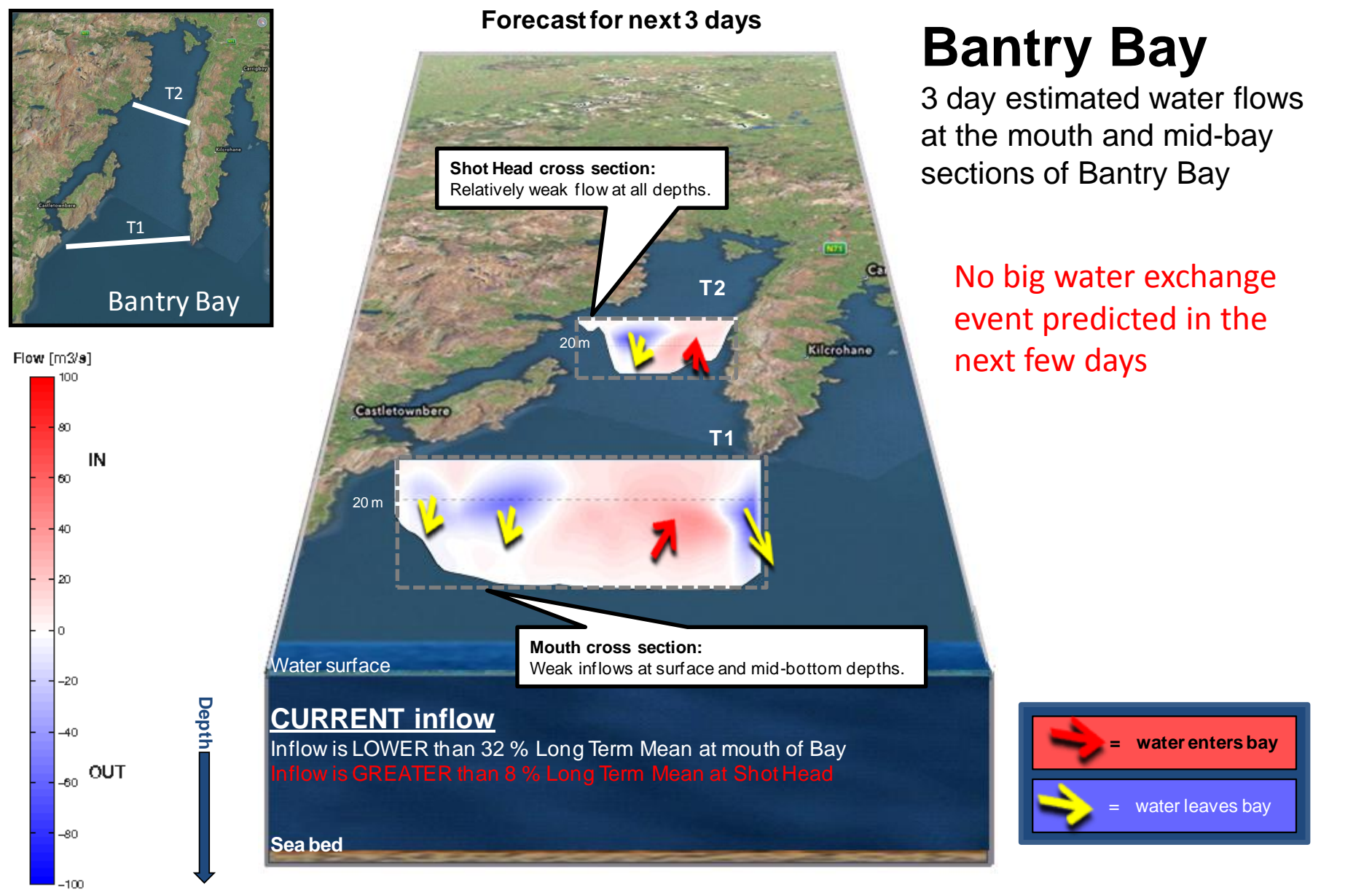
last week – maximum counts

Region	Predominant Phytoplankton
north:	<b>Coccolithophorids</b> (> 2 million cells/L) and others
west:	<b>Coccolithophorids</b> (~35,000 cells/L) and others
SW:	<b>Diatoms:</b> <i>Skeletonema</i> spp. (~ 600,300 cells/L) and others
south:	<b>Diatoms:</b> <i>Navicula</i> spp. < 25 µm (~ 8,500 cells/L) and others
east:	<b>Diatoms:</b> <i>Chaetoceros</i> (Hyalochaete) spp. (~ 200,000 cells/L) and others



**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)	Zero difference
Southwest coast (M3)	above average by 0.37 °C
Southeast coast (M5)	below average by 0.26 °C



13 – 16 April, 2015 (forecast ends at 00:00 hrs)

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

