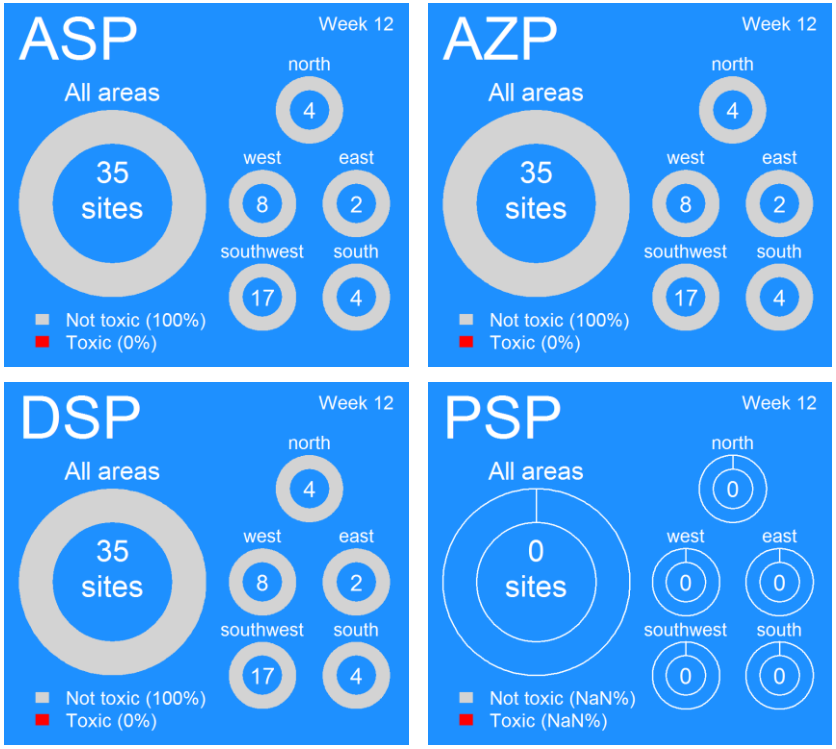
Ireland: **Current Conditions**

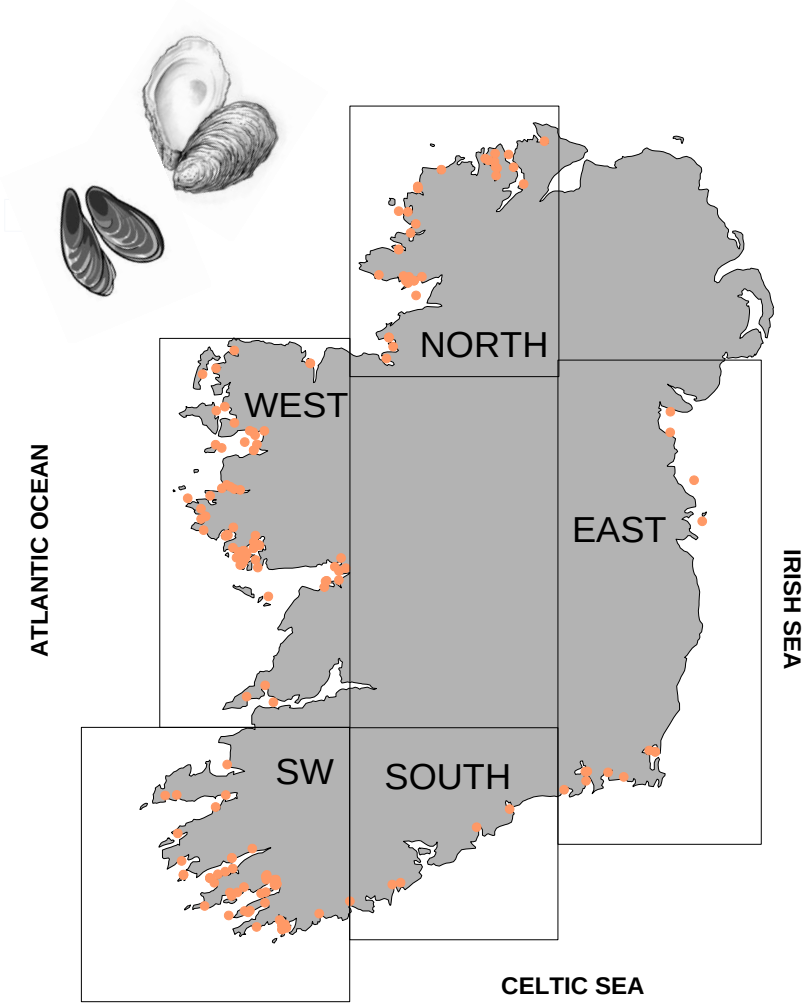
Shellfish biotoxin report (last week)



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**mnesic **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



● = aquaculture site

Ireland: **Predictions**

Prediction for this week:

ASP event: Some risk (based on historical data) remains in the SW
AZP event: Potential risk in northern sites where Azadinium-like cells are at high cell densities
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: To date, toxic events 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. Currently, *Pseudo-nitzschia* cell levels are low in the SW and no toxic species have been detected in any of the National samples analysed. However, off the SW coast, an "upwelling" is expected based on forecasted marine physical and meteorological conditions. This could bring offshore water into the bays and with it a potential increase in toxic and non-toxic cell levels.

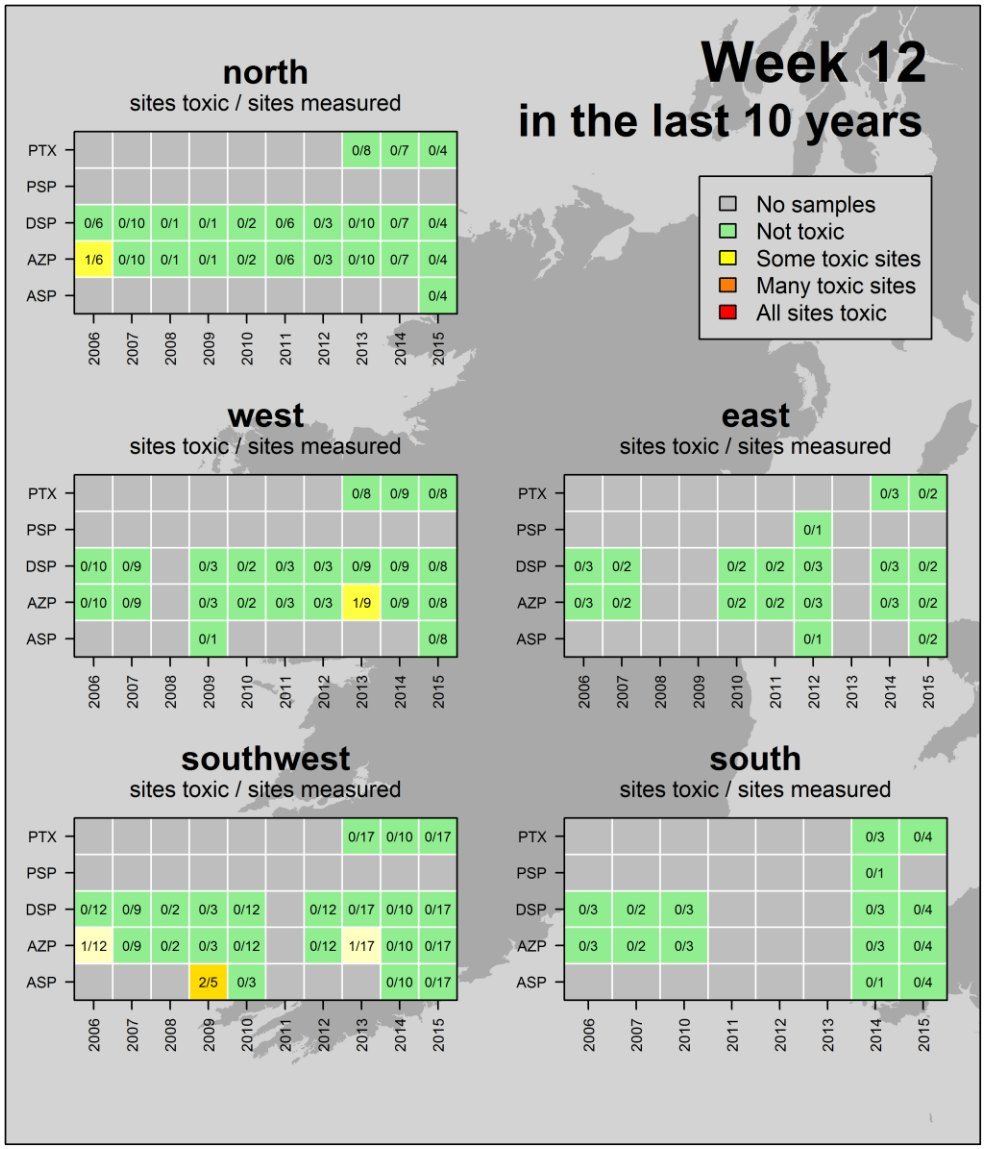
AZP: High counts of *Azadinium*-like species have been recorded in the north coast. However, we do not know the toxic nature of the species present. Historically, periods of toxicity begin in a few weeks time.

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 three sites on the west and north coasts. Maximum concentrations at 160 cells/L . No biotoxins recorded.

Ireland: **Historic Conditions**

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

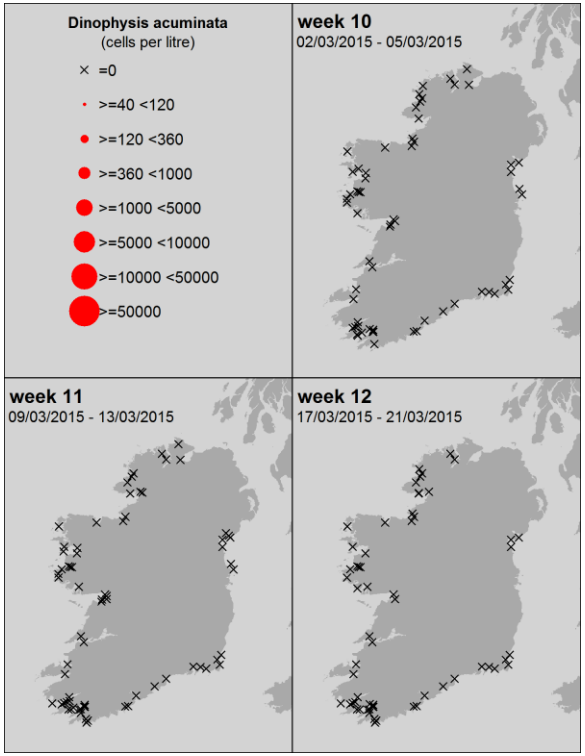


Ireland HISTORIC TRENDS

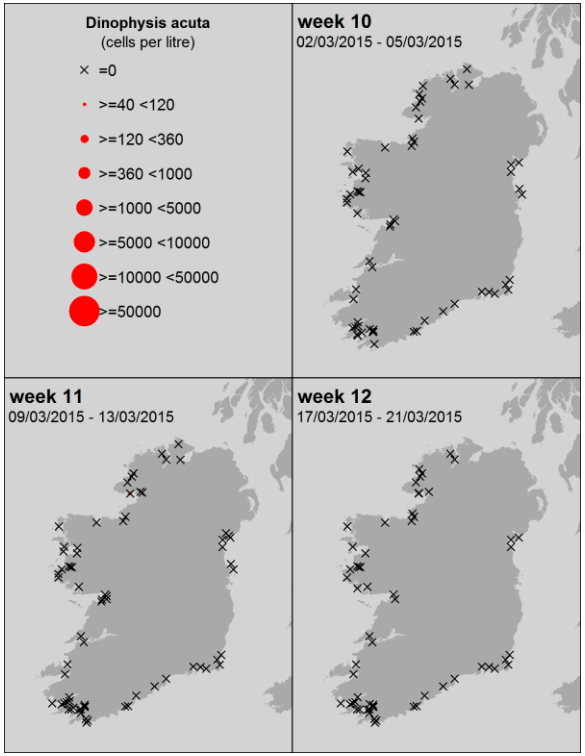
2003-2012 Shellfish Toxicity: does not include winter carry over of biotoxins
ASP events: weeks 11 to 18 (mid-March to early May)
AZP events: weeks 17 to 51 (April to December)
DSP events: weeks 19 to 51 (May to December)
PSP events: weeks 23, 25-28 (June to mid-July) and 38-39 (end September); only in Cork Harbour

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

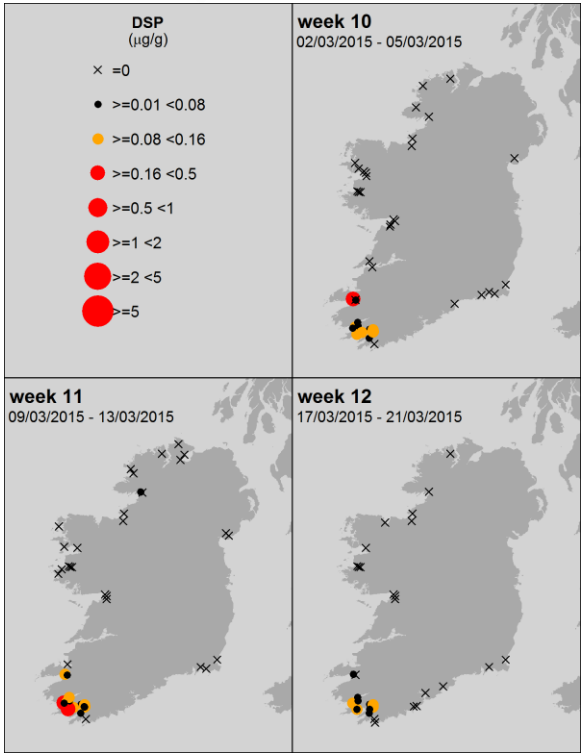
Dinophysis acuminata



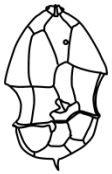
Dinophysis acuta



DSP

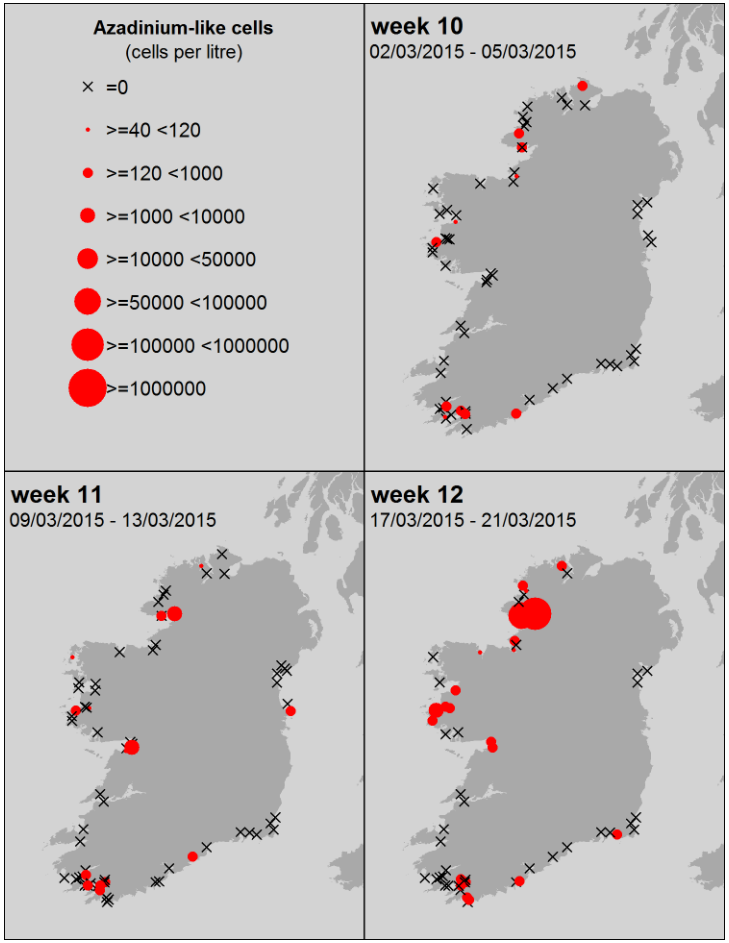


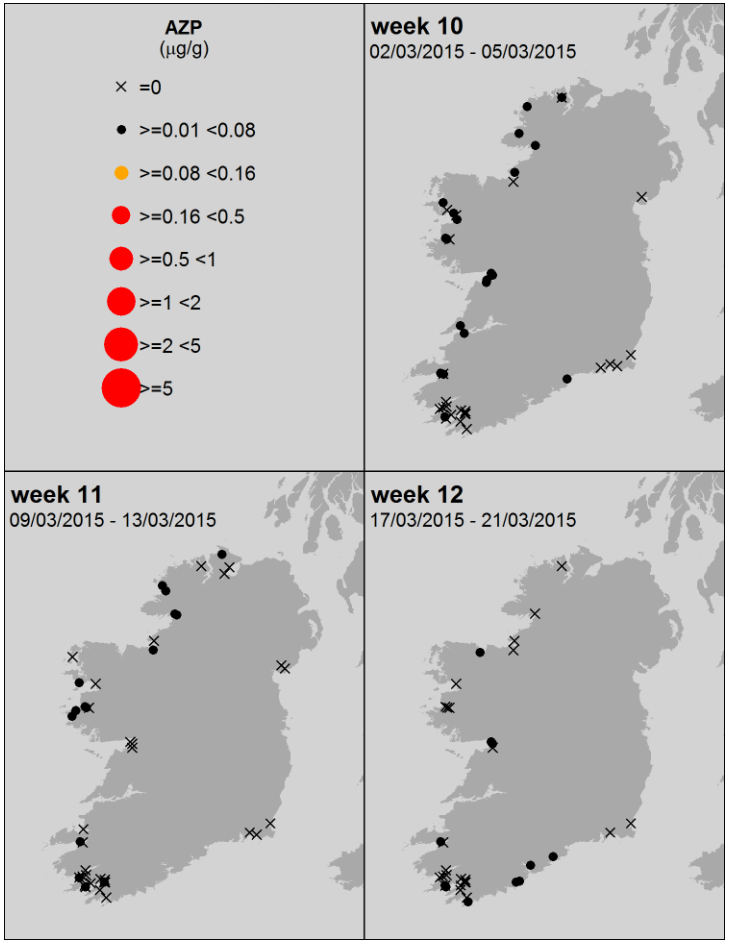
Ireland: **Last 3 weeks of available National Monitoring Programme data**



Azadinium – like spp.

AZP



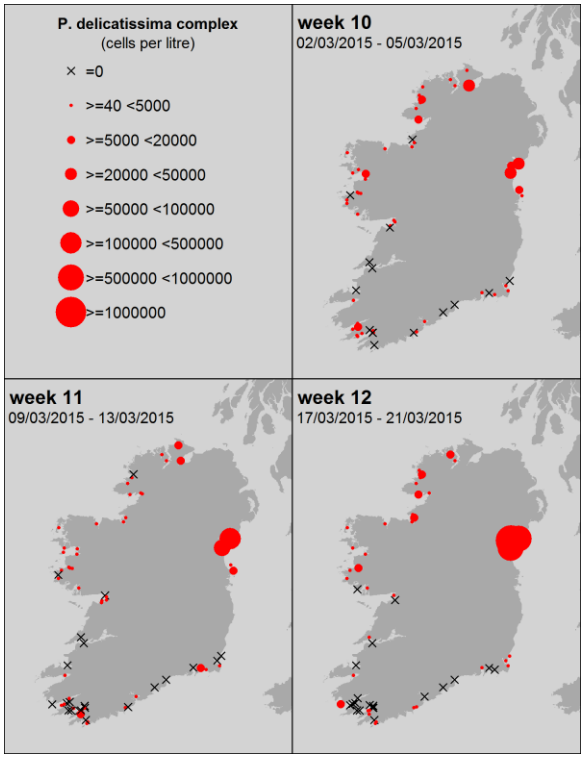


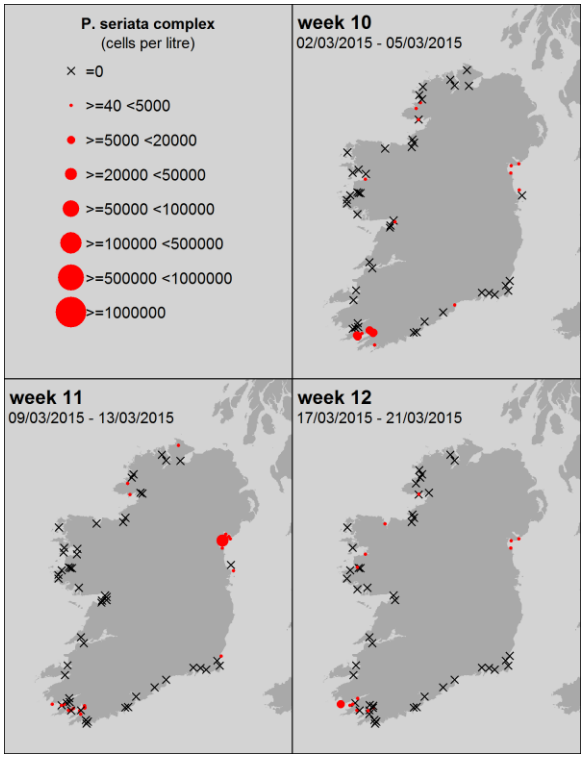
Ireland: **Last 3 weeks of available National Monitoring Programme data**

Pseudo-nitzschia spp.

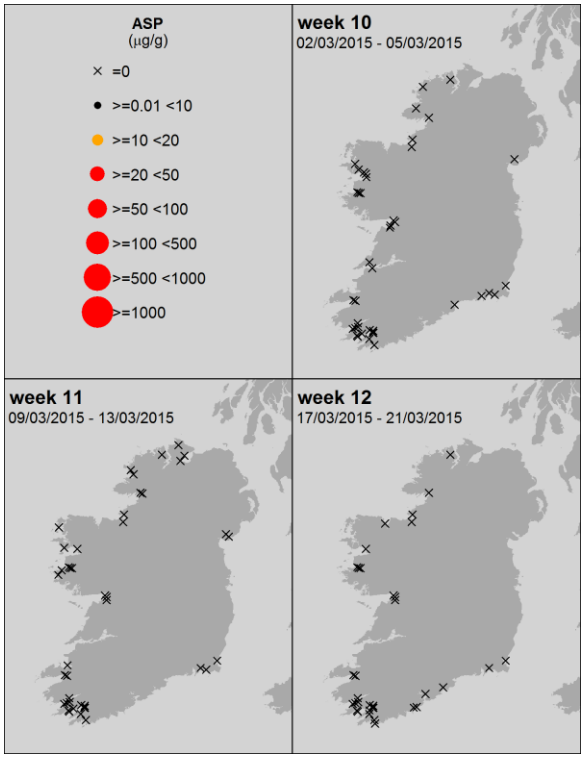
"*P. delicatissima*" complex = small cells
3 species confirmed in Irish waters

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



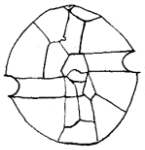


ASP

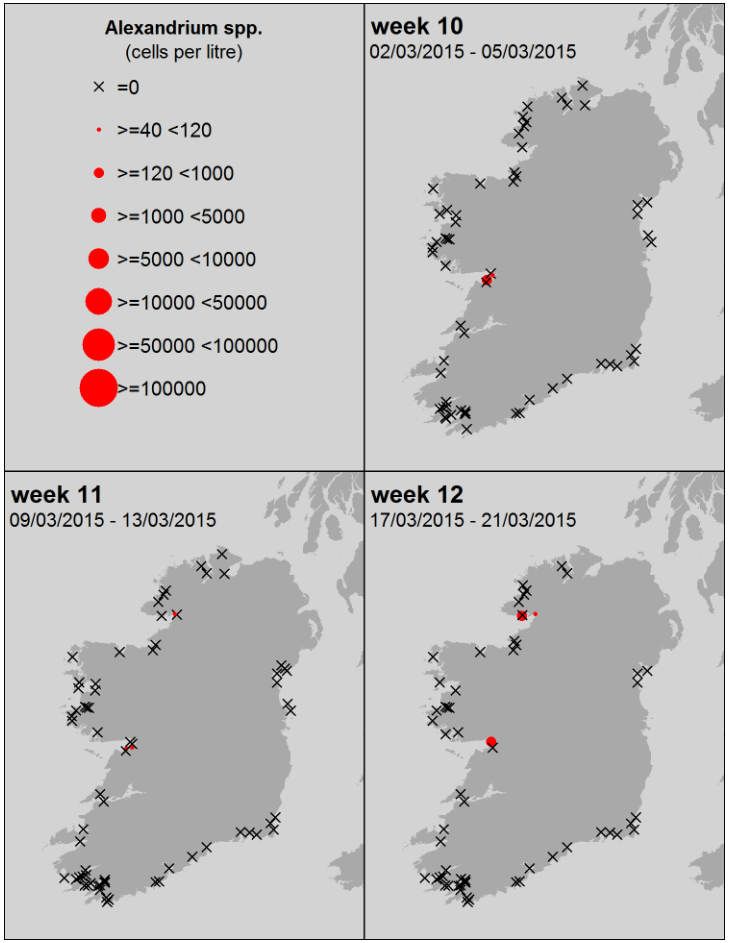


Of the 4 species (*P. fraudulenta*, *P. australis*, *P. pungens* and *P. delicatissima*) from Irish waters, tested for ASP toxins in culture work, only one, *P. australis* (from the "*P. seriata*" group) was toxic.

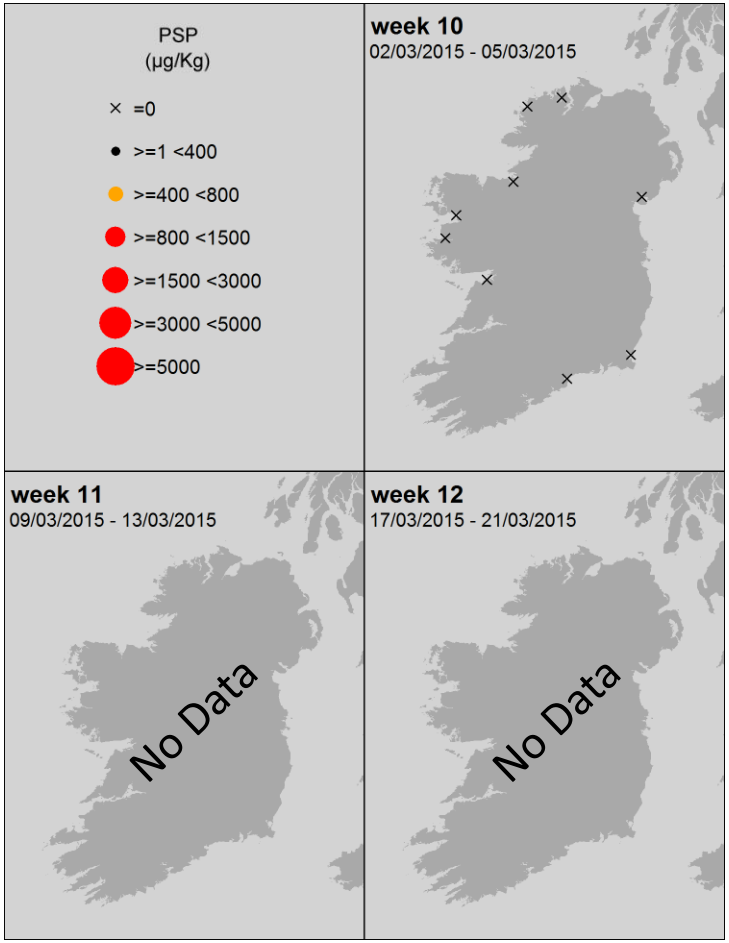
Ireland: **Last 3 weeks of available National Monitoring Programme data**



Alexandrium spp.



PSP



Ireland HAB & Biotoxin temporal trends

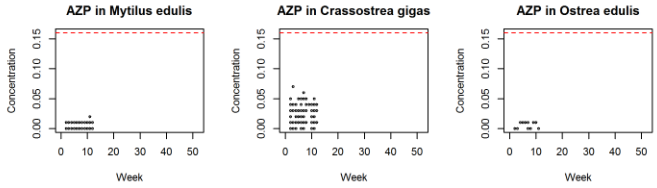
Week 13: 22 – 28 Mar, 2015
Week runs from Sunday to Saturday

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

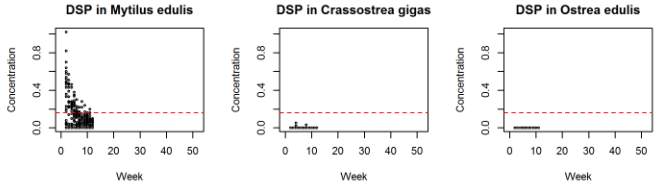
Ireland: **Biotoxins**

Toxin groups | mussels | oysters | oysters

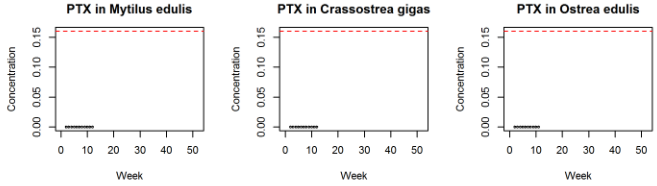
AZP
AZaspiracid Poisoning



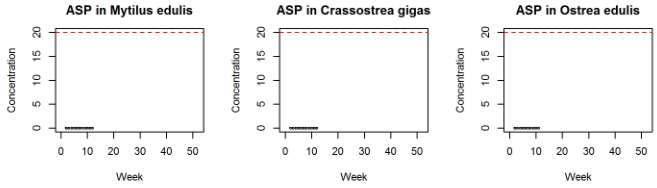
DSP
Diarrhetic Shellfish Poisoning



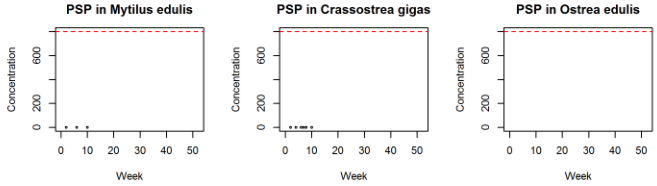
PTX
Pectenotoxin

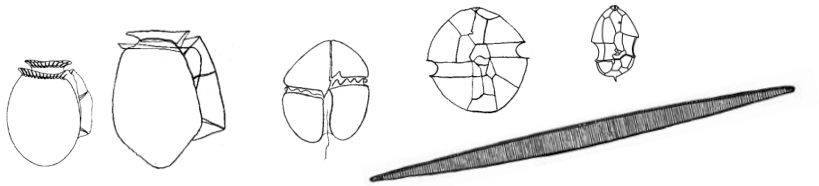


ASP
Amnesic Shellfish Poisoning

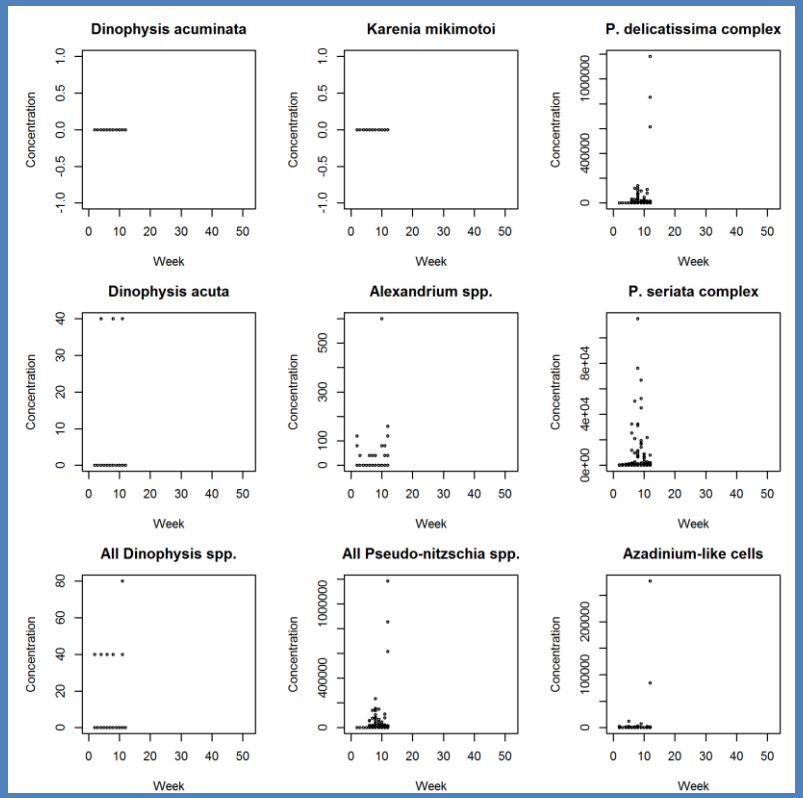


PSP
Paralytic Shellfish Poisoning





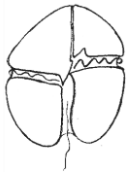
Ireland: **HABs**



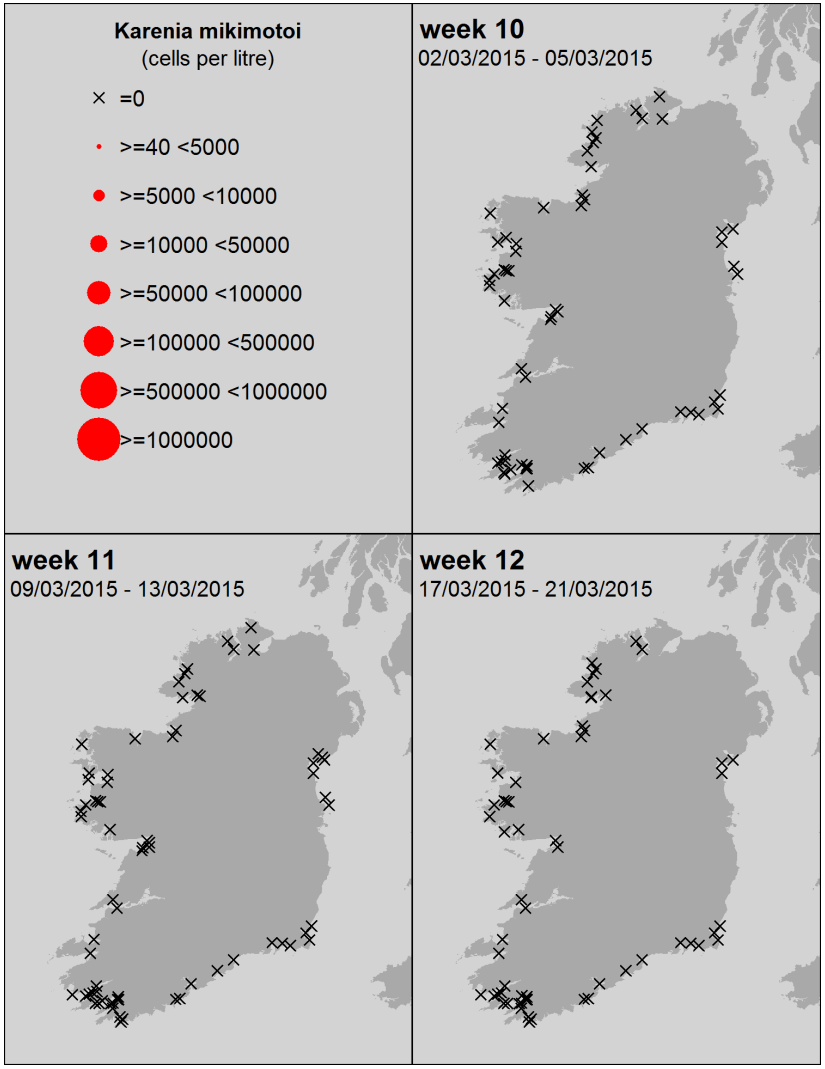
Week number: 1 to 12

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**

Phytoplankton abundance Week 12
Based on available data

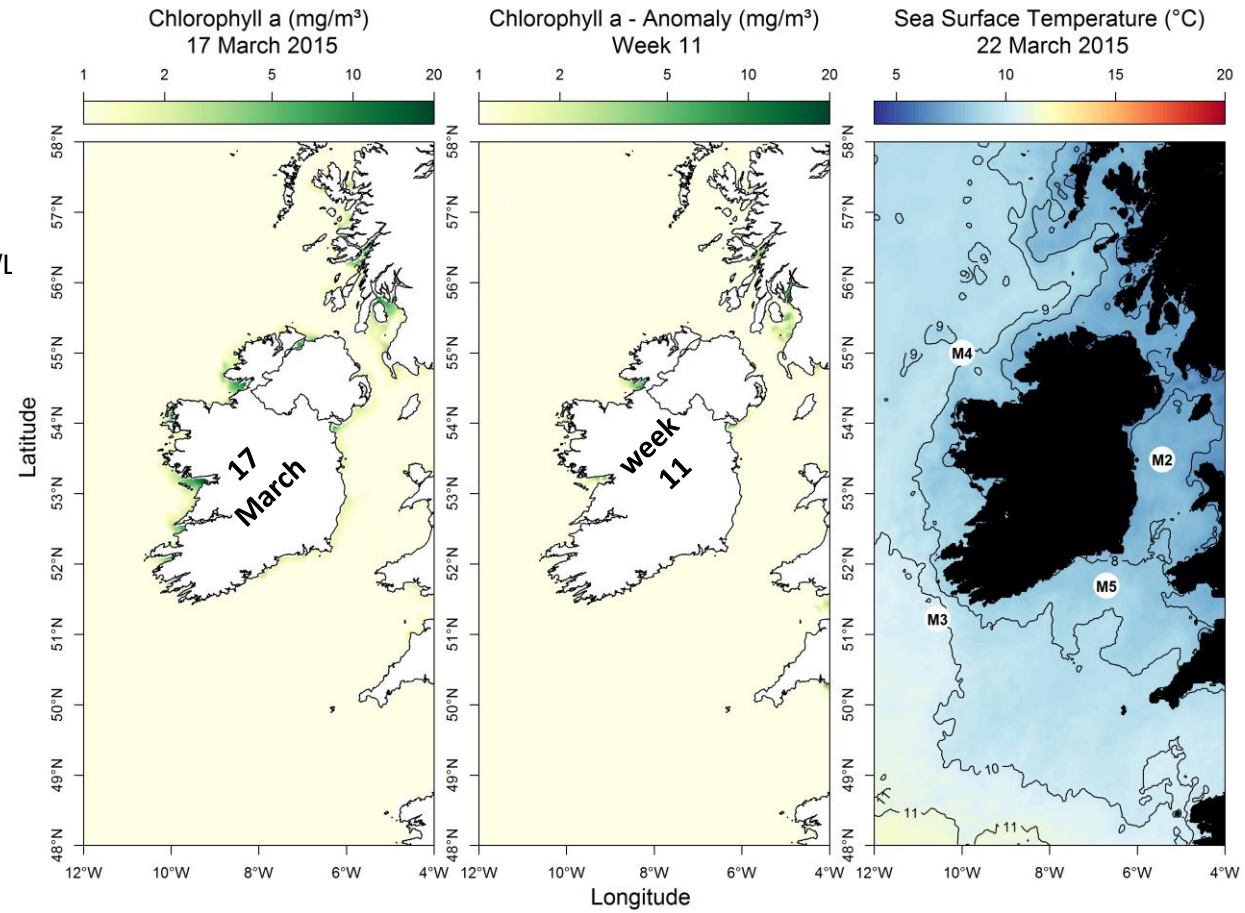
NW coast
max. diatoms ~ 978,000 cells/L
e.g. *Skeletonema* spp. ~ 600,000 cells/L
max. dinoflagellates ~ 281,000 cells/L
e.g. *Azadinium* / *Heterocapsa* spp. ~ 277,000 cells/L

West coast
max. diatoms ~ 124,000 cells/L
e.g. *Skeletonema* spp. ~ 60,000 cells/L
max. dinoflagellates ~ 160 cells/L

SW coast
max. diatoms ~ 4.7 million cells/L
pennate diatoms 20 – 50 µm
other e.g. *Skeletonema* spp. ~ 204,000 cells/L
max. dinoflagellates ~ 880 cells/L

South coast
max. diatoms ~ 123,000 cells/L
e.g. *Thalassiosira* < 20 µm ~ 109,000 cells/L
max. dinoflagellates ~ 360 cells/L

East coast
max. diatoms ~ 1.8 million cells/L
e.g. *P. delicatissima* complex ~ 1.2 million cells/L
& *Skeletonema* spp. ~ 0.5 million cells/L
max. dinoflagellates ~ 120 cells/L

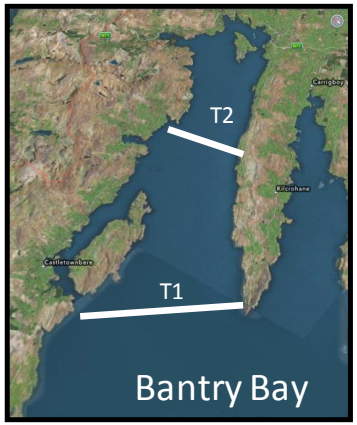


SST (ºC) anomaly for last week:
Data taken from the Irish data buoy network where the anomaly is the weekly difference in SST compared to the long term mean (~ 10 yrs)

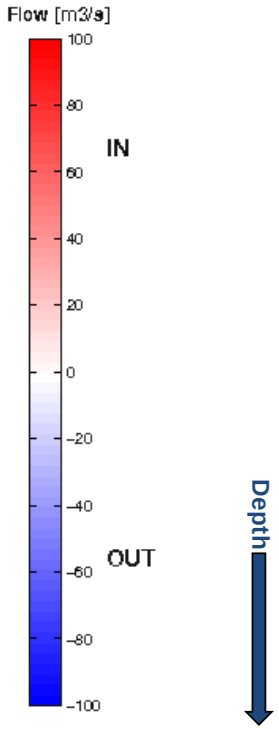
Northwest coast (M4)	below average by 0.10 ºC
Southwest coast (M3)	above average by 0.62 ºC
Southeast coast (M5)	below average by 0.44 ºC

Ireland modelled data: Estimated Water Pathway

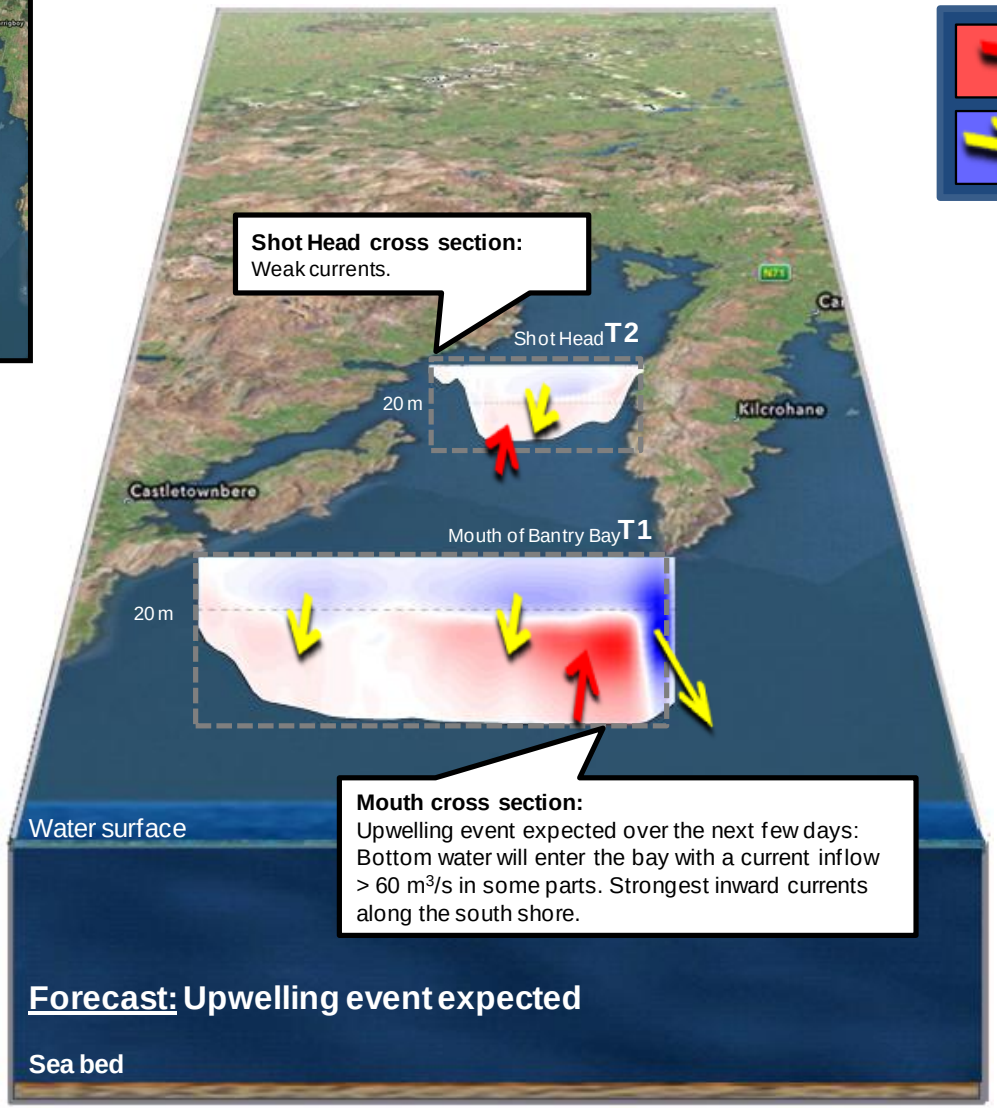
Week 13: 22 – 28 Mar, 2015
Week runs from Sunday to Saturday



Forecast for next 3 days



Depth



23 – 26 March, 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