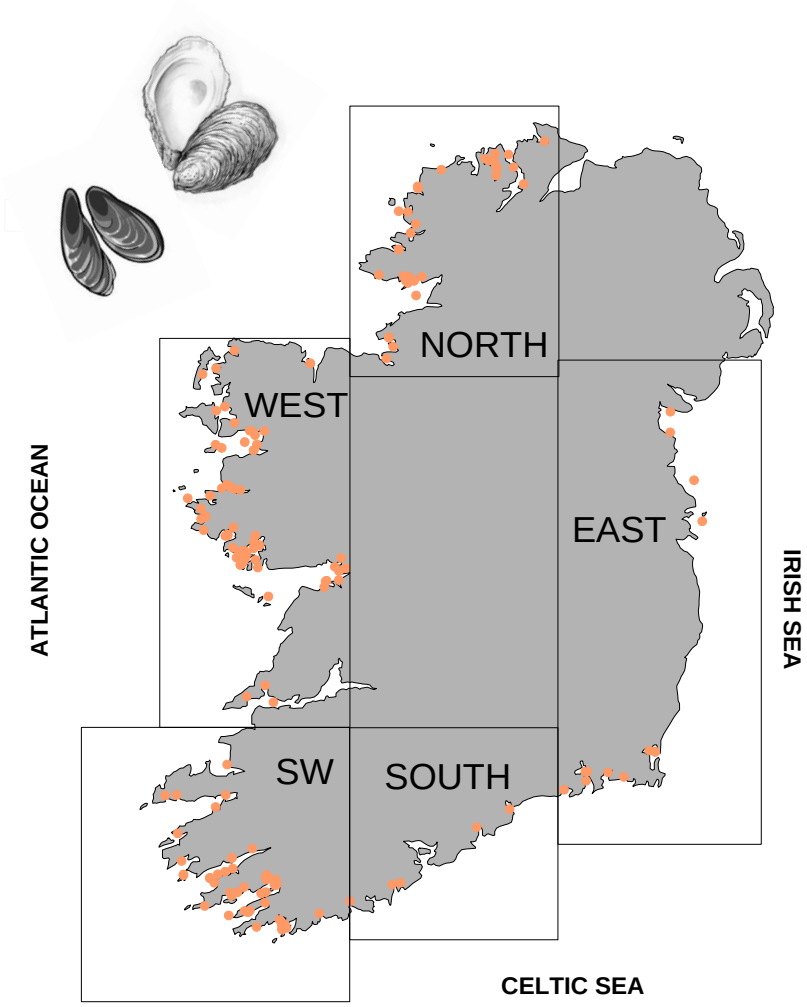
Ireland: **Current Conditions**

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: Low risk with a Medium risk in some areas (see below)
AZP event: Low risk
DSP event: Low risk
PSP event: Low risk

Why do we think this?

ASP : No toxins detected. The "*P.* seriata" group was found at 27 out of 60 sites nationwide. Maximum cell levels range between 19,000 and 31,000 cells/L) in the south and southwest, elsewhere max of 1,500 cells/L. A toxic species, *P. australis* was observed in 6 sites nationwide (southwest, south and east). Populations percentage composition of total phytoplankon ranges from 1 to 45 % with the highest predominance noted in the southwest. There is some risk of DA increase in southwest shellfish because the "*P. seriata*" group represents a larger part of the phytoplankton assemblage at some sites in this region.

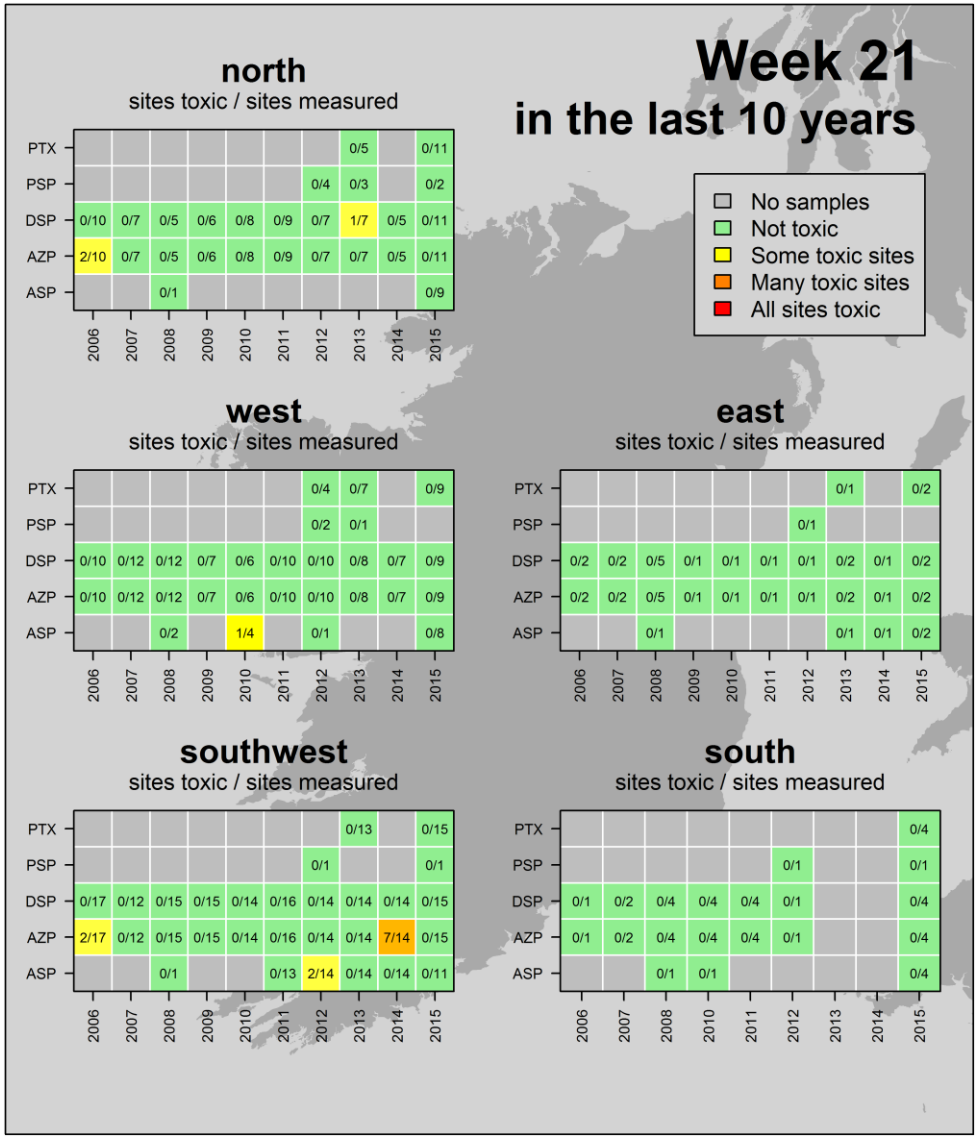
AZP: Very low levels of toxins (i.e. background levels of up to 0.03 µg/g in oysters) picked up at 11 out of 38 sites nationally. *Azadinium*-like species recorded at 26 sites - cell levels range from present to ~ 12,000 cells/L with highest counts in the west and north.

DSP: Background levels of toxins detected nationwide with maximum in the north and southwest (up to 0.05 µg/g). *Dinophysis* specis found at background levels (*D. acuminata* at 40 to 80 cells/L) in 10 sites nationwide (north, west and southwest). Once in June we will be in a higher risk period for DSP.

PSP: No toxins detected. Historically this a low risk period of the year for all sites. *Alexandrium* species present at 6 sites out of 60 sites nationally; maximum cell levels in the west @ 1,440 cells/L.

Ireland: **Historic Conditions**

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



Ireland HISTORIC TRENDS

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

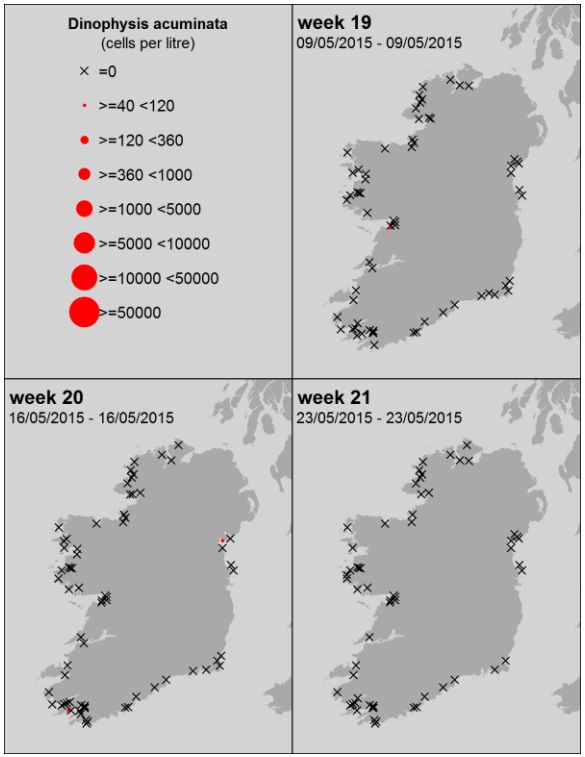
ASP events: mid-March to early May
AZP events: April to December
DSP events: May to December
PSP events: June to mid-July and end September; only in Cork Harbour

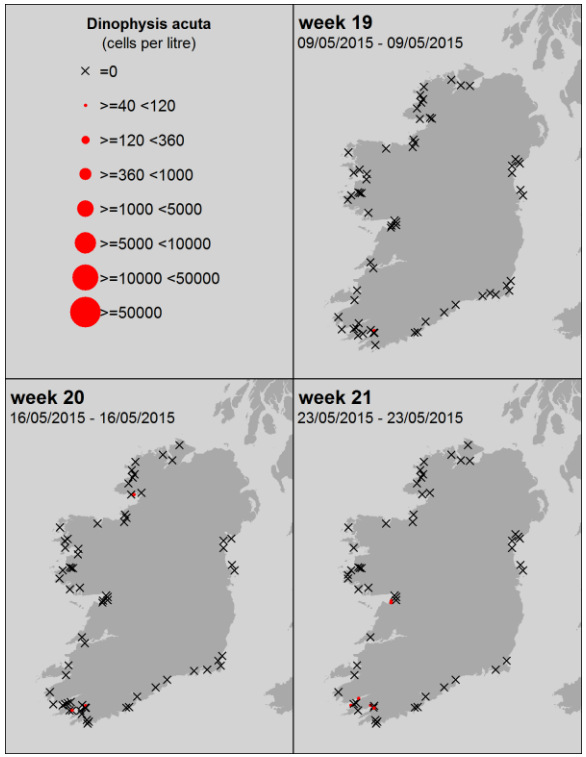
Ireland: **Last 3 weeks of available National Monitoring Programme data**

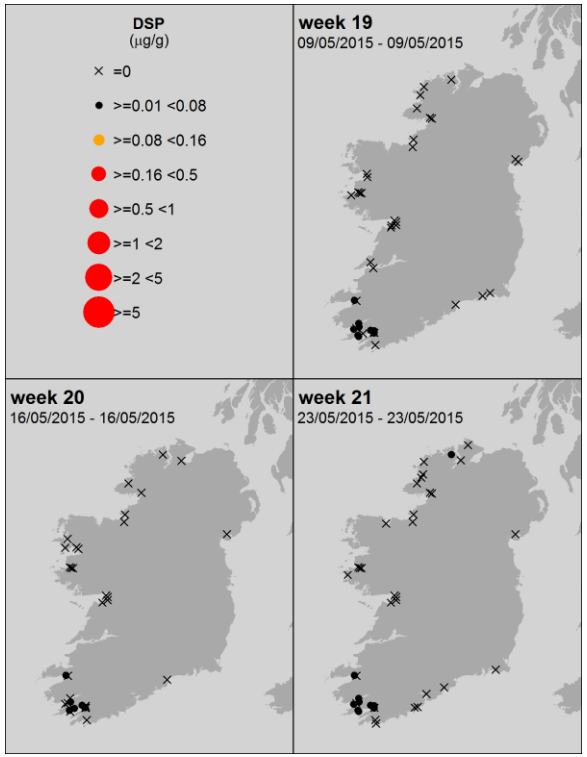
Dinophysis acuminata

Dinophysis acuta

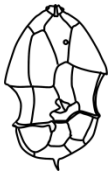
DSP





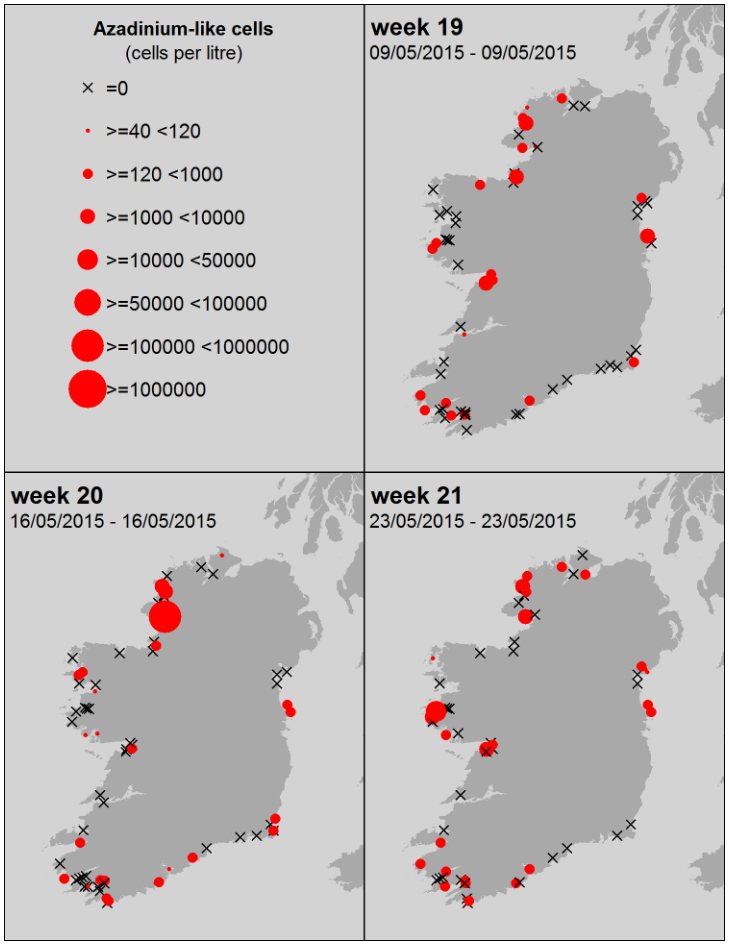


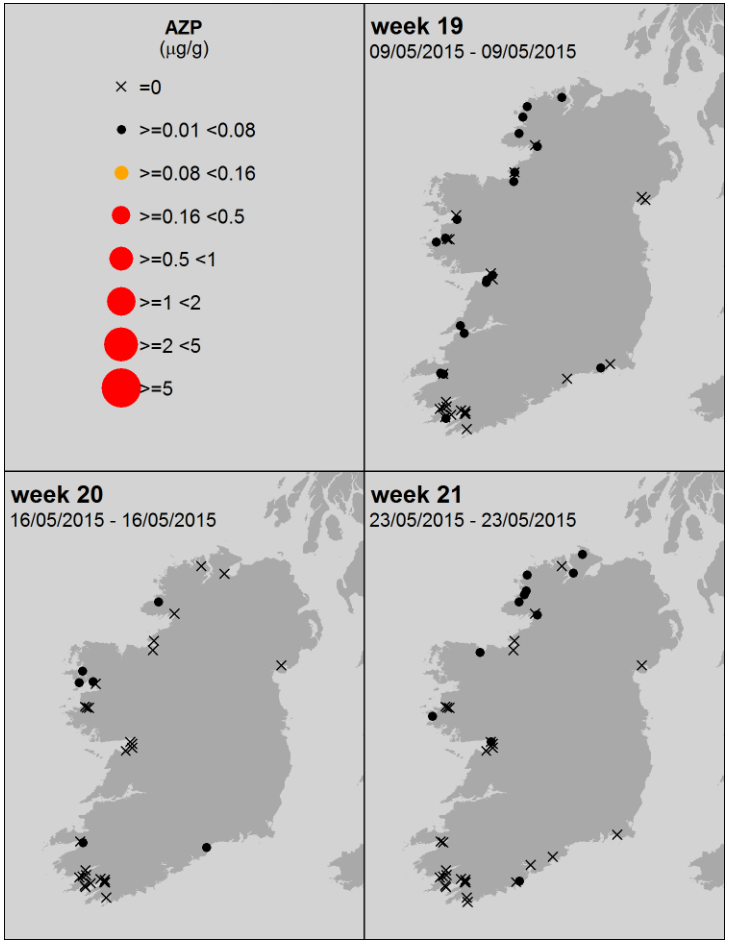
Ireland: **Last 3 weeks of available National Monitoring Programme data**



Azadinium – like spp.

AZP



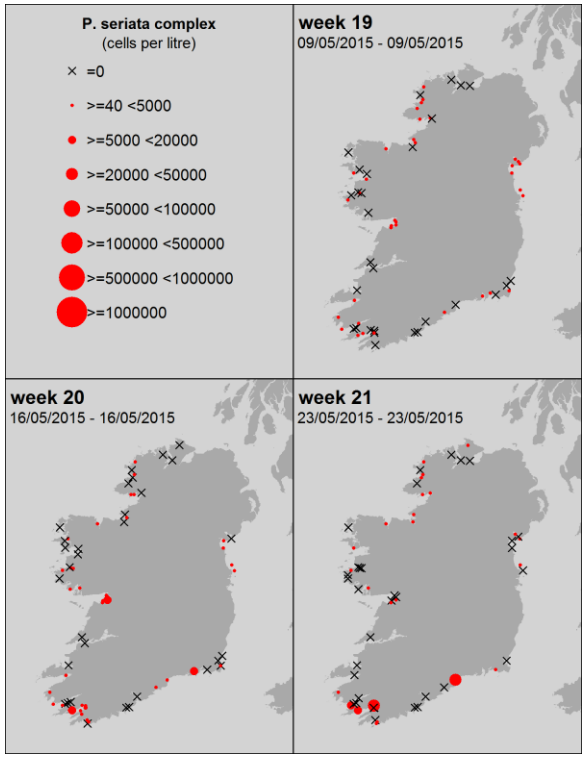


Ireland: **Last 3 weeks of available National Monitoring Programme data**

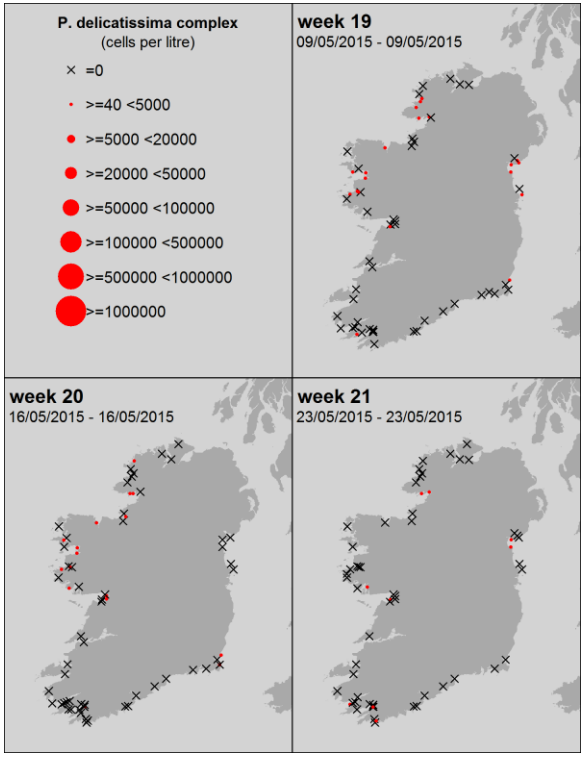
Pseudo-nitzschia spp.

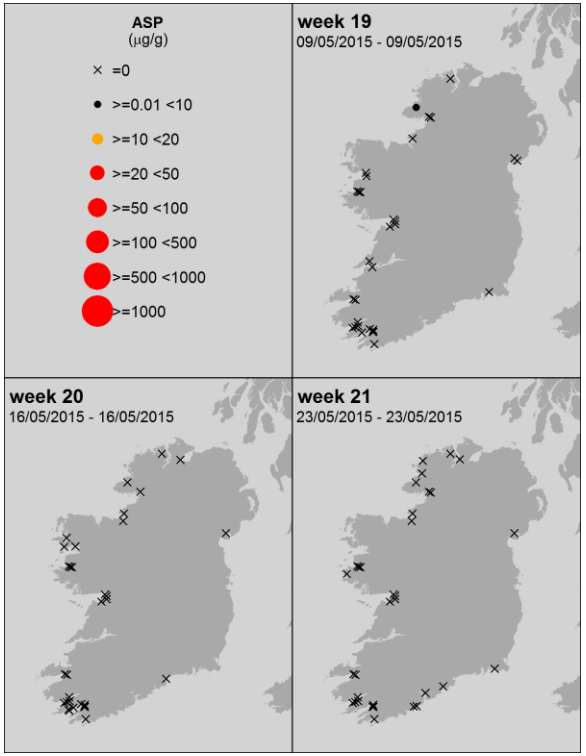
ASP

"*P. delicatissima*" complex = small cells
Taken from the literature:
3 species confirmed in Irish waters



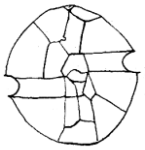
"P. *seriata*" complex = large cells
Taken from the literature:
7 species confirmed in Irish waters





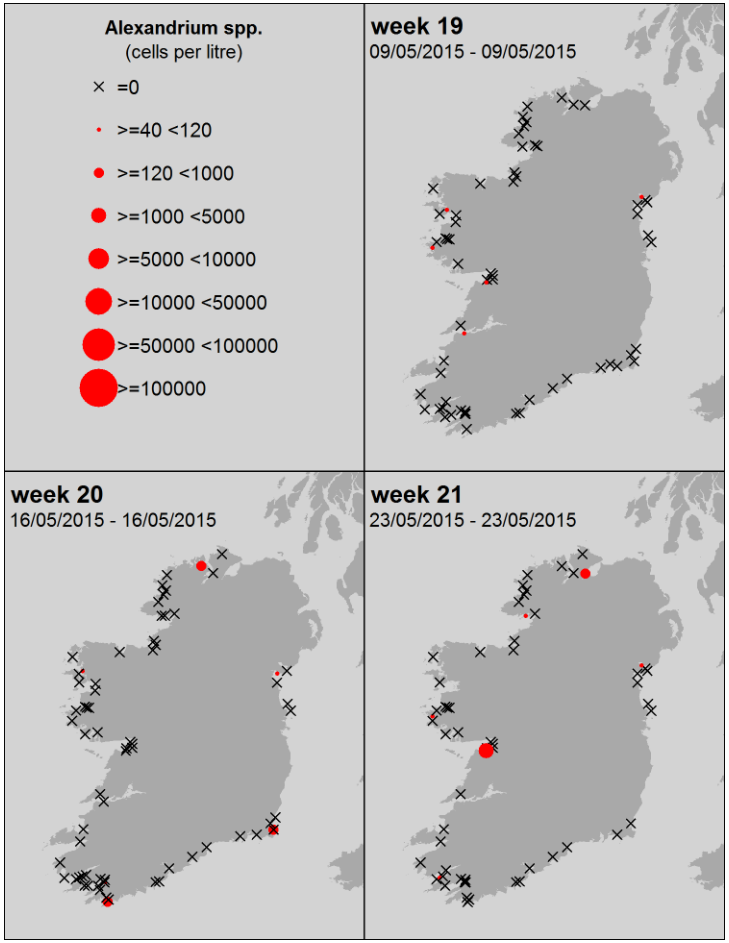
Taken from the literature: Of the 4 species (*P. fraudulenta*, *P. australis*, *P. pungens* and *P. delicatissima*) from Irish waters, tested for ASP toxins in culture work, only one, *P. australis* (from the "*P. seriata*" group) was toxic.

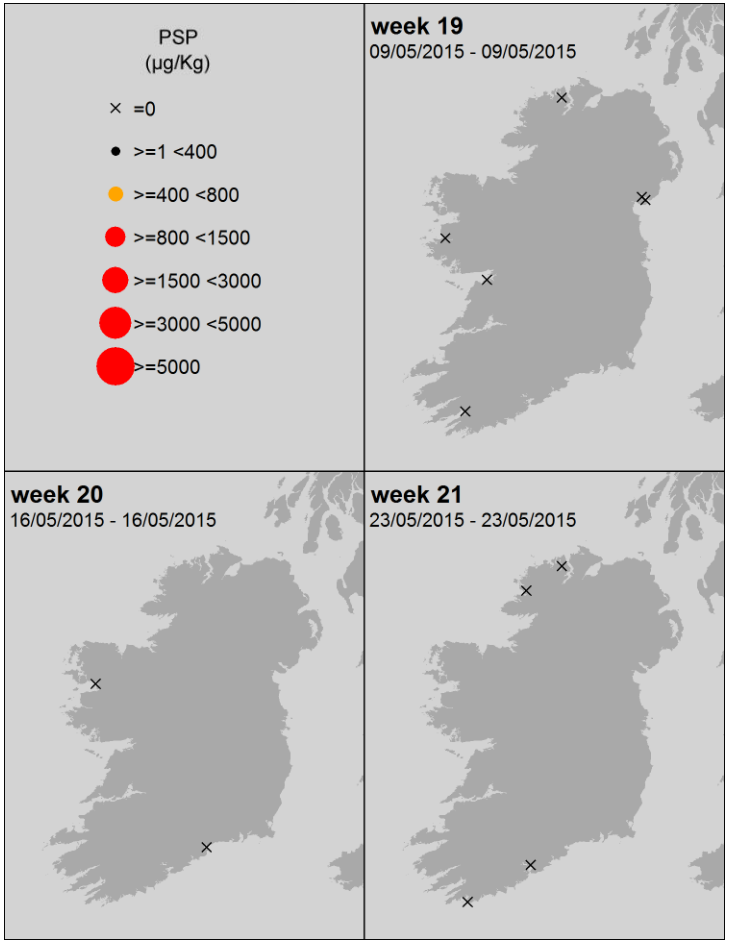
Ireland: **Last 3 weeks of available National Monitoring Programme data**



Alexandrium spp.

PSP





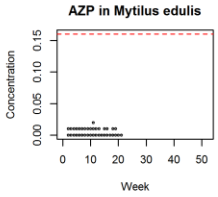
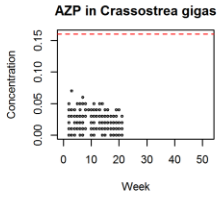
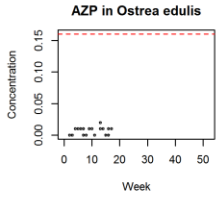
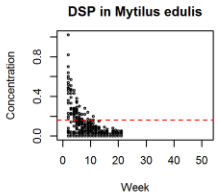
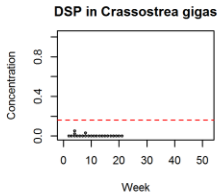
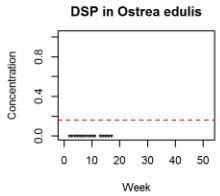
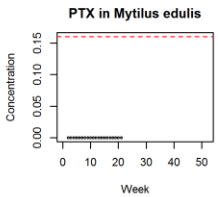
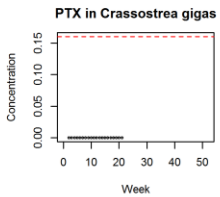
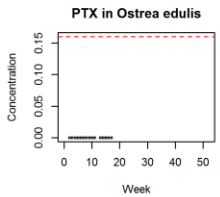
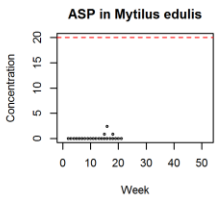
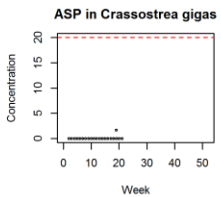
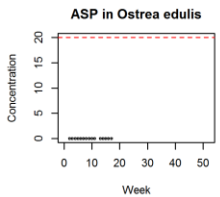
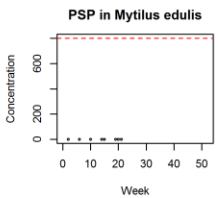
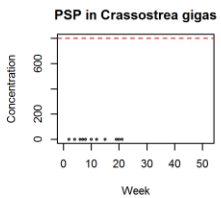
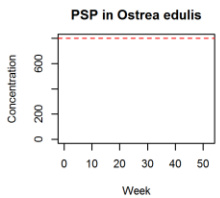
Ireland HAB & Biotoxin temporal trends

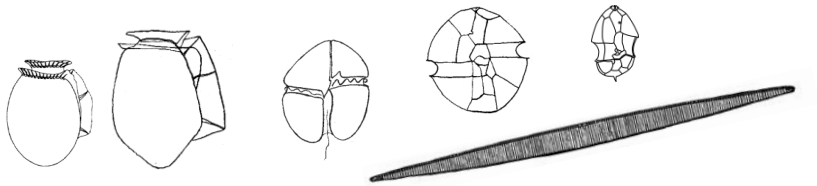
Week 22: 24 – 30 May, 2015
Week runs from Sunday to Saturday

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

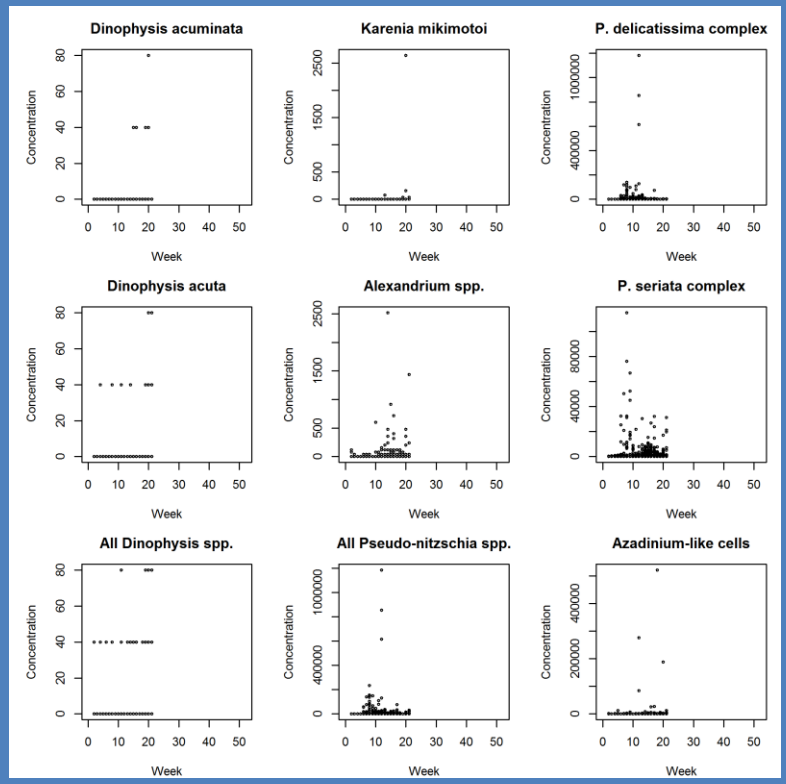
Ireland: **Biotoxins**

Toxin groups

	mussels	oysters	oysters
AZP AZaspiracid Poisoning			
DSP Diarrhetic Shellfish Poisoning			
PTX Pectenotoxin			
ASP Amnesic Shellfish Poisoning			
PSP Paralytic Shellfish Poisoning			



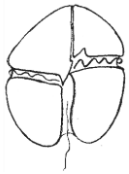
Ireland: **HABs**



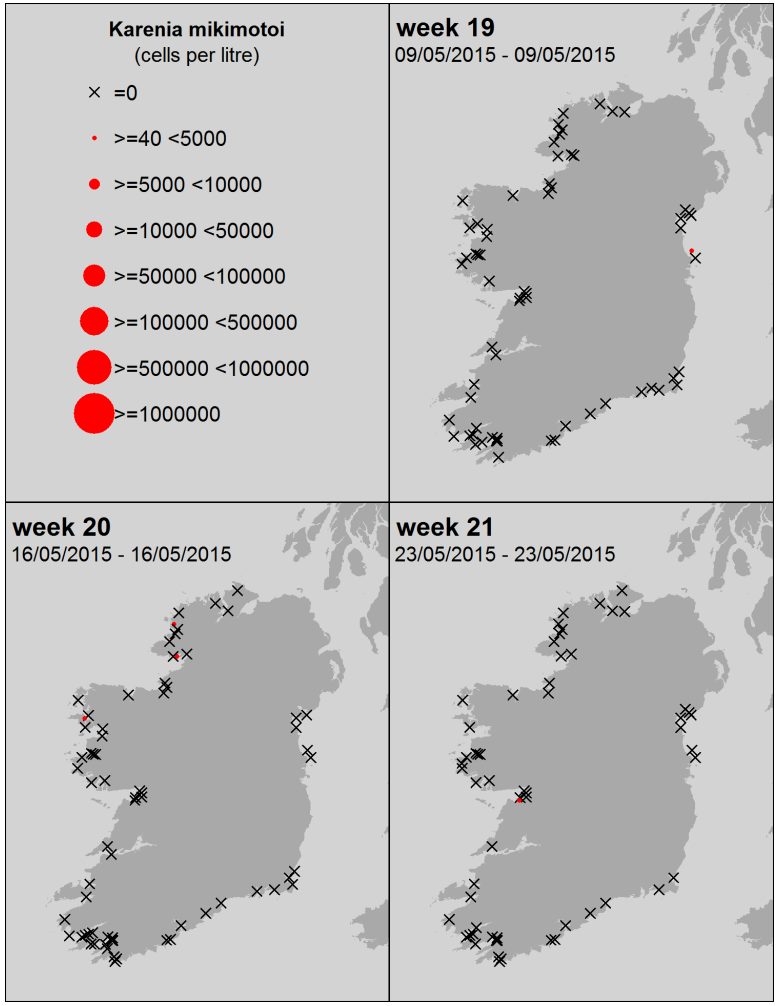
Week number: 1 to 21

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

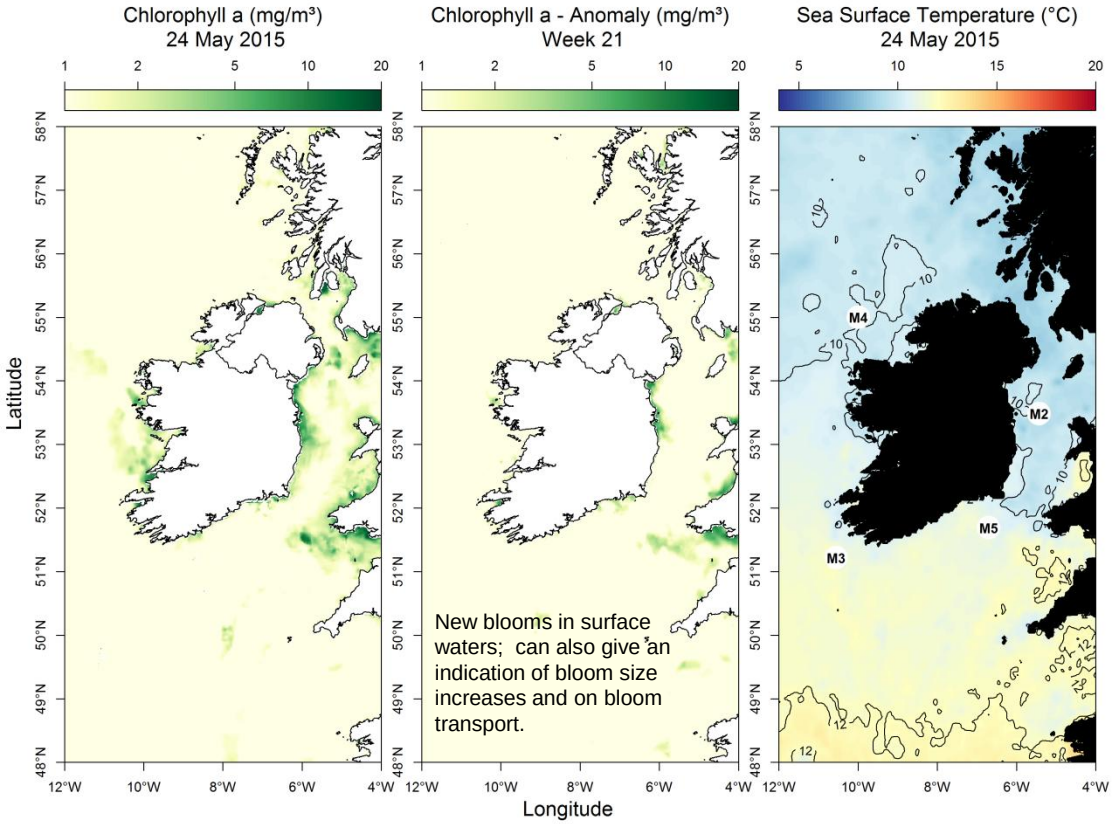
Regulatory limit =



Karenia mikimotoi
(old name: *Gyrodinium aureolum*)



Most up to date available satellite data



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)

NW coast (M4)	below average by 0.88ºC
SW coast (M3)	Offline
SE coast (M5)	below average by 0.76 ºC

What phytoplankton were blooming around the coast last week?

Region	Predominant Phytoplankton	Cells/L (rounded)
north:	**Diatoms:**	
	C. closterium / N. Longissima	126,000
	Chaetoceros (Hyalochaete) spp.	48,000
	Dinobryon spp.	45,000
	Other:	
	Microflagellate spp.	157,000
west:	**Diatoms:**	
	P. delicatissima group	107,000
	Chaetoceros socialis	82,000
	Chaetoceros (Hyalochaete) spp.	52,000
SW:	**Other:**	
	Microflagellate spp.	13,000,000
	Diatoms:	
	Leptocylindrus minimus	3,199,000
	Skeletonema spp.	1,716,000
	Thalassiosira spp. (< 20 µm)	637,000
	Cerataulina pelagica	349,000
south:	**Diatoms:**	
	Thalassiosira spp. (< 20 µm)	1,275,000
	Skeletonema spp.	563,000
	Cerataulina pelagica	77,000
	Other:	
	Euglena / Eutreptiella spp.	77,000
east:	**Diatoms:**	
	Asterionellopsis glacialis	4,289,000
	Skeletonema spp.	578,000
	Centric diatoms < 20 µm	164,000
	Detonula confervacaea	148,000

Bantry Bay

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

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

NW winds dominant 25 May 2015