

Ireland: Predictions

ASP event: Low

AZP event: Moderate

DSP event: Low

PSP event: Very low

NMP Current closures

ASP	AZP	DSP	PSP
0	0	0	0

Why do we think this?

ASP: Continuing steadily and slowly to increase . The weekly potential pattern of *Psuedo nitzschia* species slowly increasing (5 plus consecutive weeks in some sites) continued in distribution and cell concentrations around the coastline. All sites remain clear of toxins. Low risk at the moment but this risk factor would typically be expected to rise within the next few weeks with favourable environmental factors.

AZP: Again an increase in potential cells but no high toxin levels yet. Risk levels moderate are due to the potential pattern of slow increase in cell levels in some sites with low levels of toxins present (all currently below closure levels) . While environmental conditions may be fluctuating widely , this species has previously caused issues at this time of yr. (in the North and S.West). Issues with this toxin can occur suddenly and acutely .Caution is advised.

DSP: This is currently a low risk period for early DSP events and environmental conditions may not yet be ideal. All sites are currently below regulatory limits .

PSP: A toxic event is not expected at this time of year.

Please note: We will be updating the format of this bulletin throughout the year in an active effort to increase end user applicability and incorporate developing technologies. All feedback is welcome at Joe.Silke@Marine.ie .

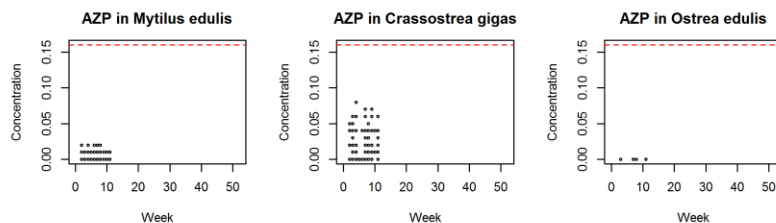
National Monitoring Programme



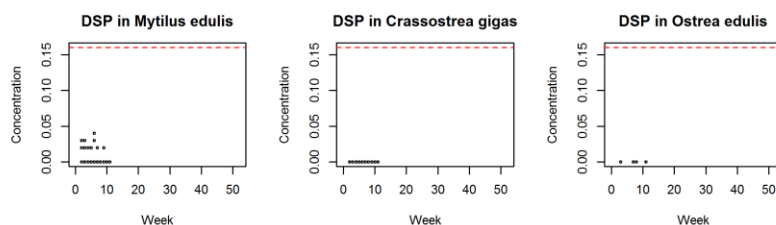
HISTORIC TRENDS



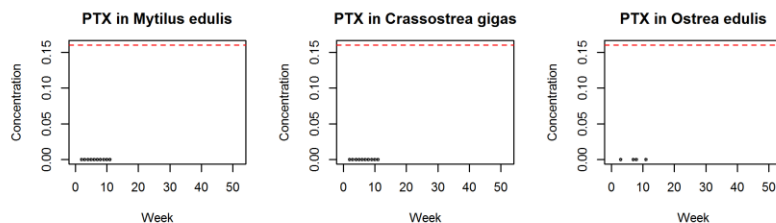
AZP



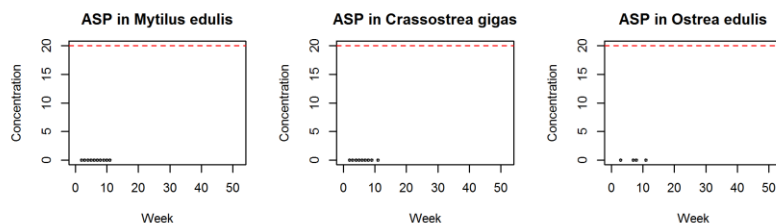
DSP



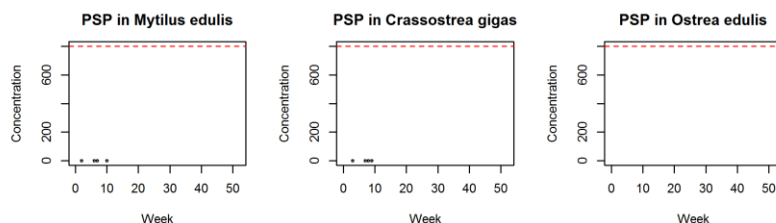
PTX



ASP

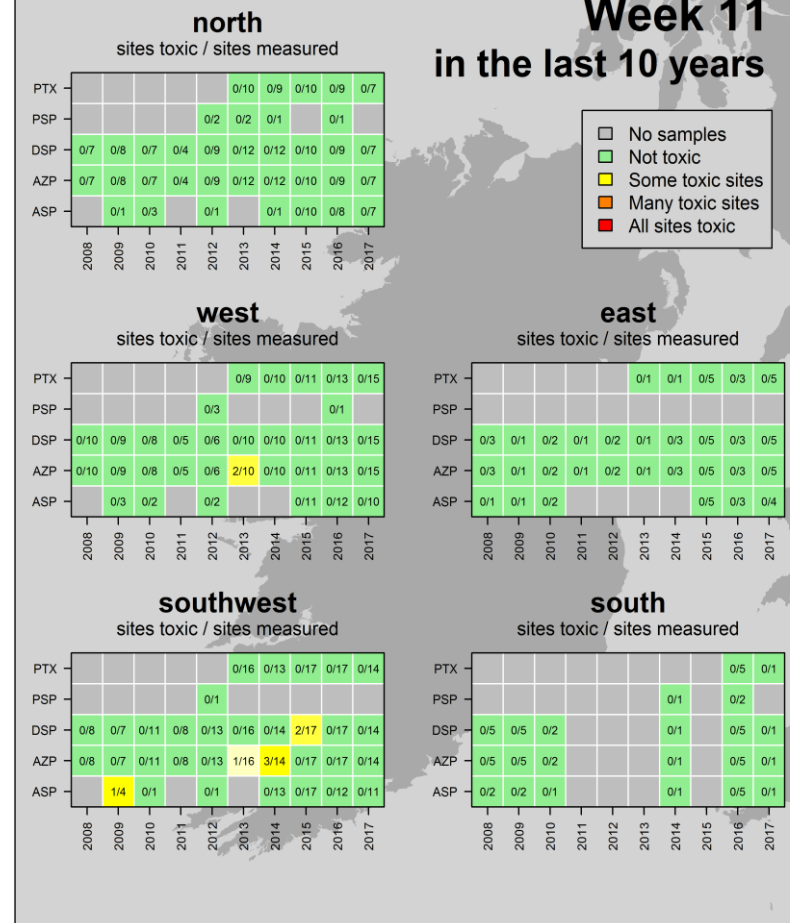


PSP



Levels from week 1 to present week. Regulatory limit - - - - -

Week 11 in the last 10 years



ASP events: mid-March to early May

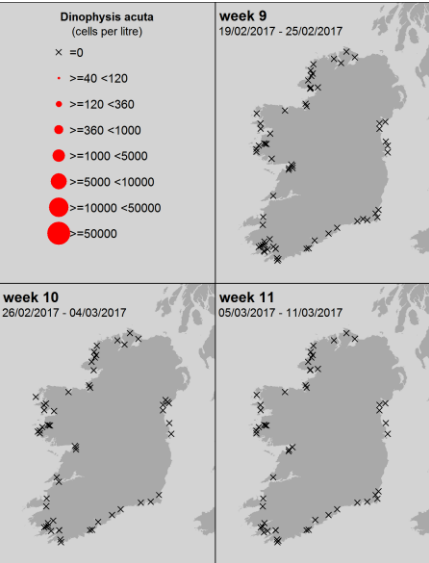
AZP events: April to December

DSP events: May to December

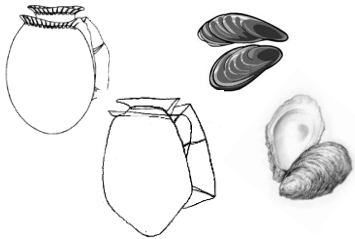
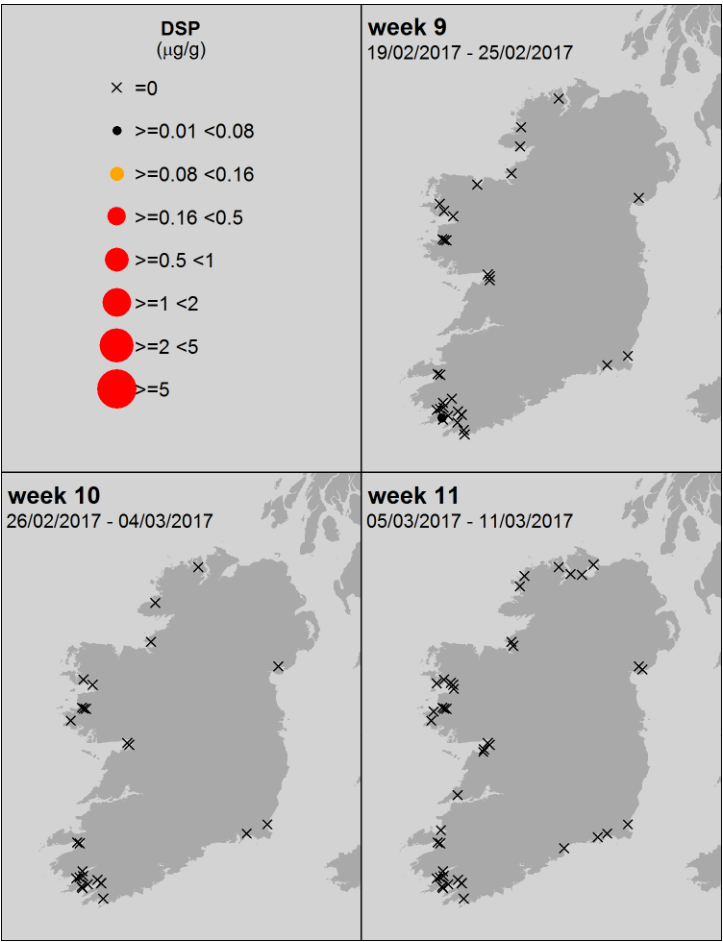
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

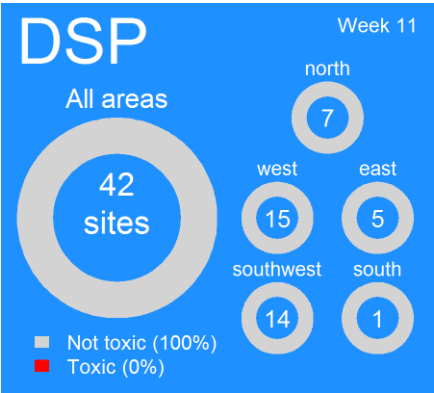
Phytoplankton species – 3 wks



All levels of DSP biotoxin recorded- 3 wks



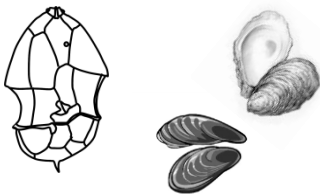
Current closures levels
≥ DSP 0.16 µg/g



Comments

Same as the last few weeks- Very low cell levels and DSP well below closure limits in all sites.

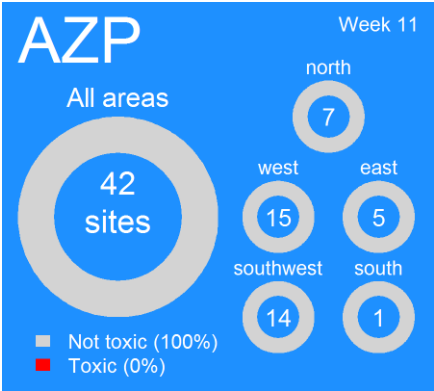
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

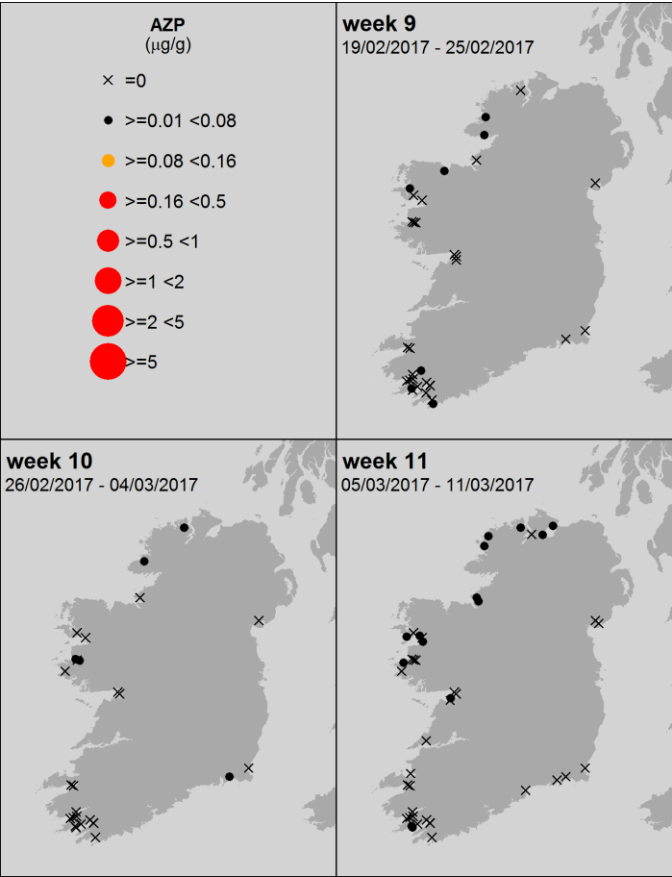
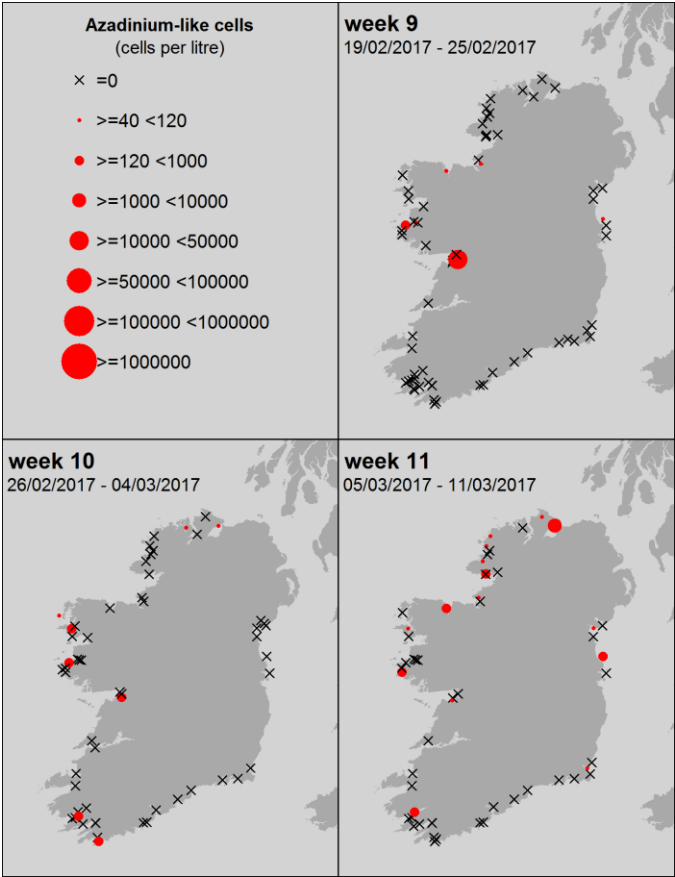
All levels of AZP biotoxin recorded - 3 wks

Current closures levels
≥ AZP 0.16 µg/g



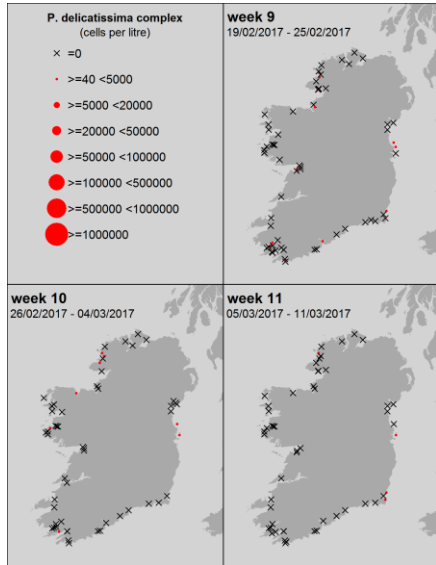
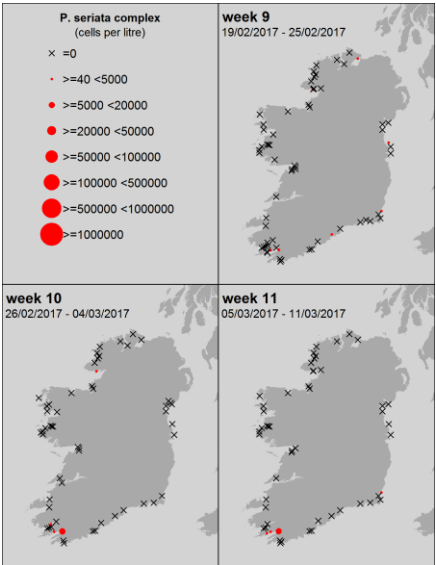
Comments

There is a potential trend of increasing cell levels and geographical spread combined with toxin detection levels in sites. This is a difficult species to predict so additional caution is advised.

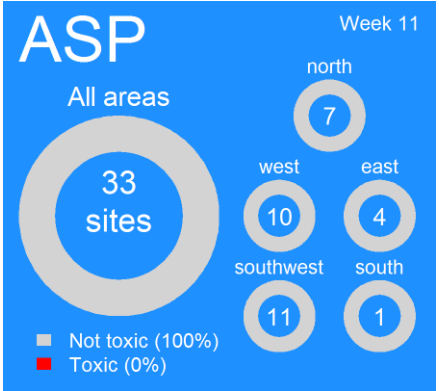
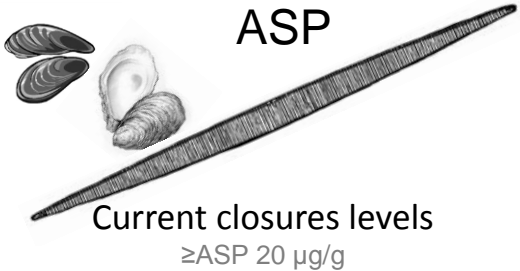
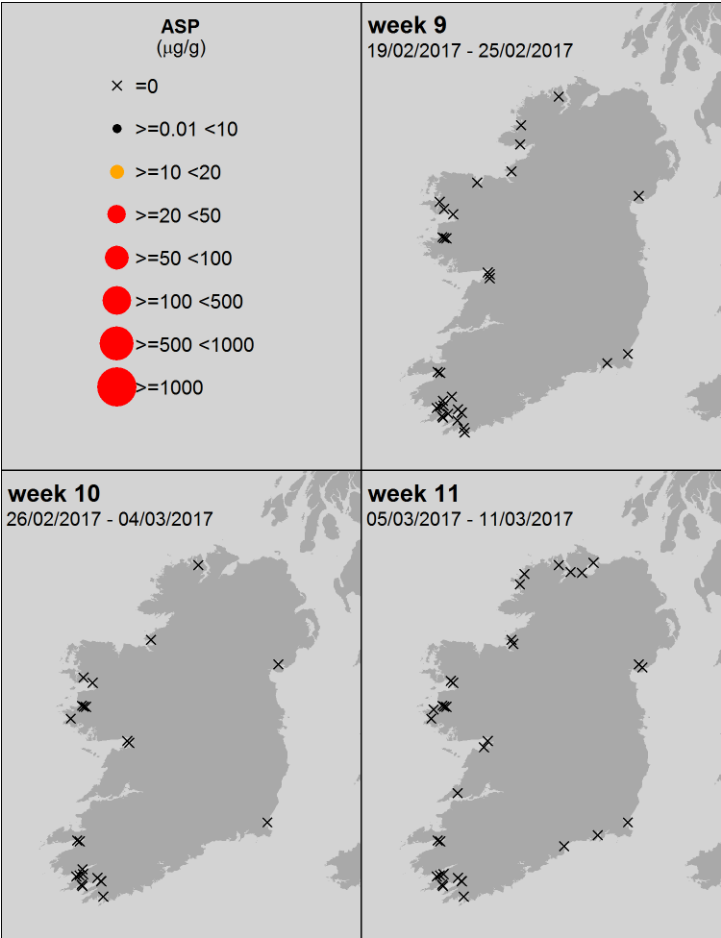


ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



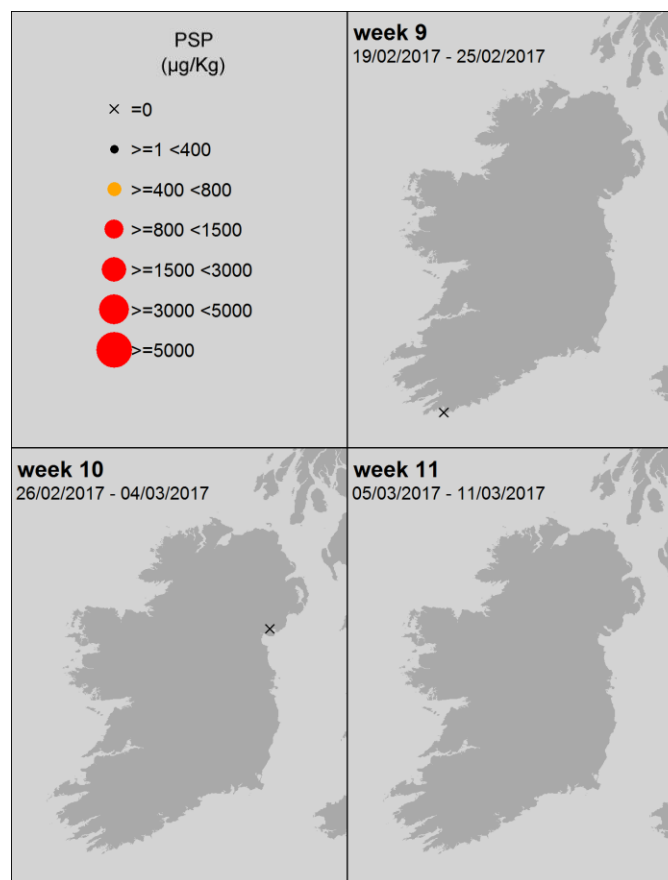
All levels of ASP biotoxin recorded - 3 wks.



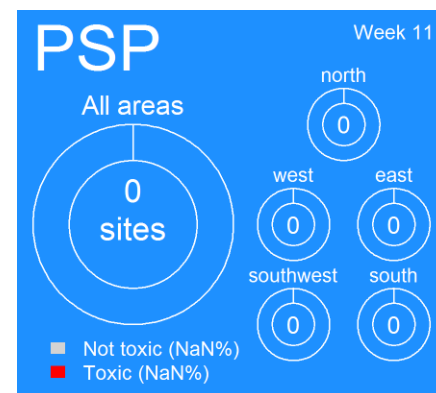
Comments

Continuing slow spread and increase in phytoplankton cells but all sites tested still well below biotoxin limits.

All levels of PSP biotoxin recorded - 3 wks.

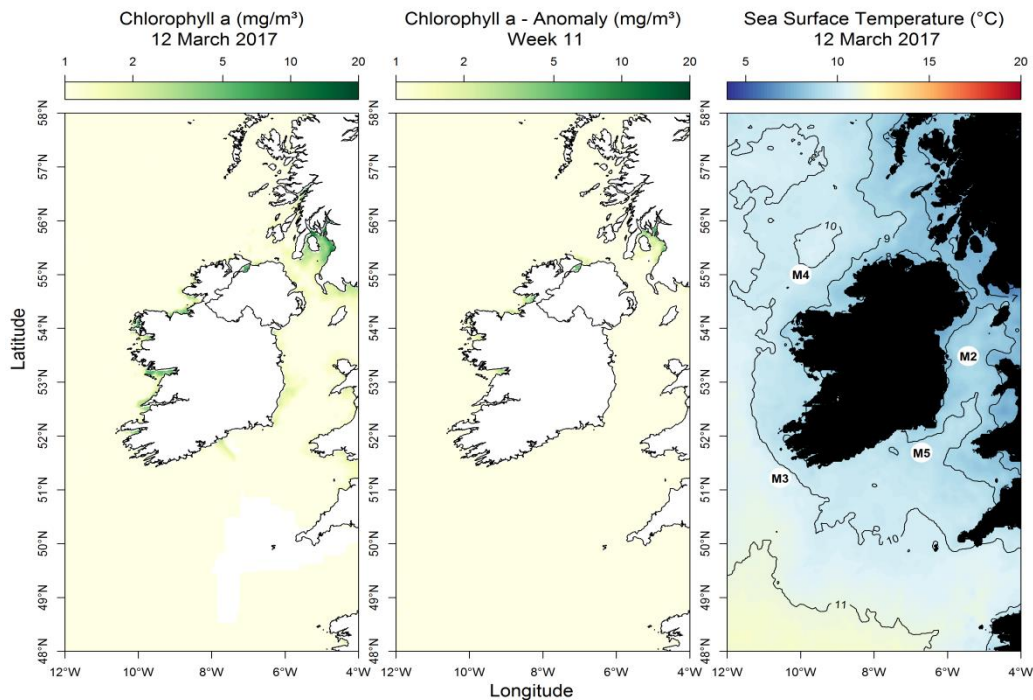


≥ PSP 800 µg/Kg

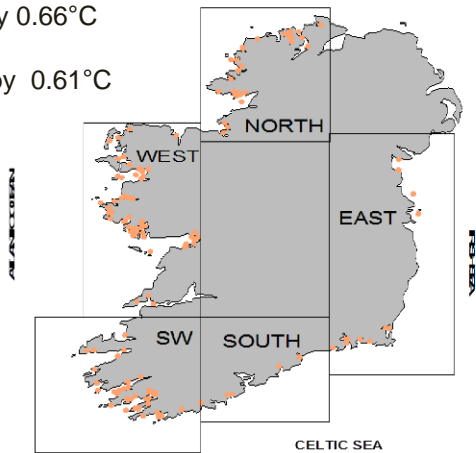


- No current changes - No closures and negligible likelihood of bloom at this time.

Most up to date available satellite data

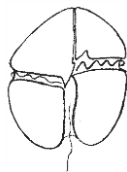


NW coast (M4) Above average by 0.66°C
SW coast (M3) Data unavailable
SE coast (M5) Above average by 0.61°C



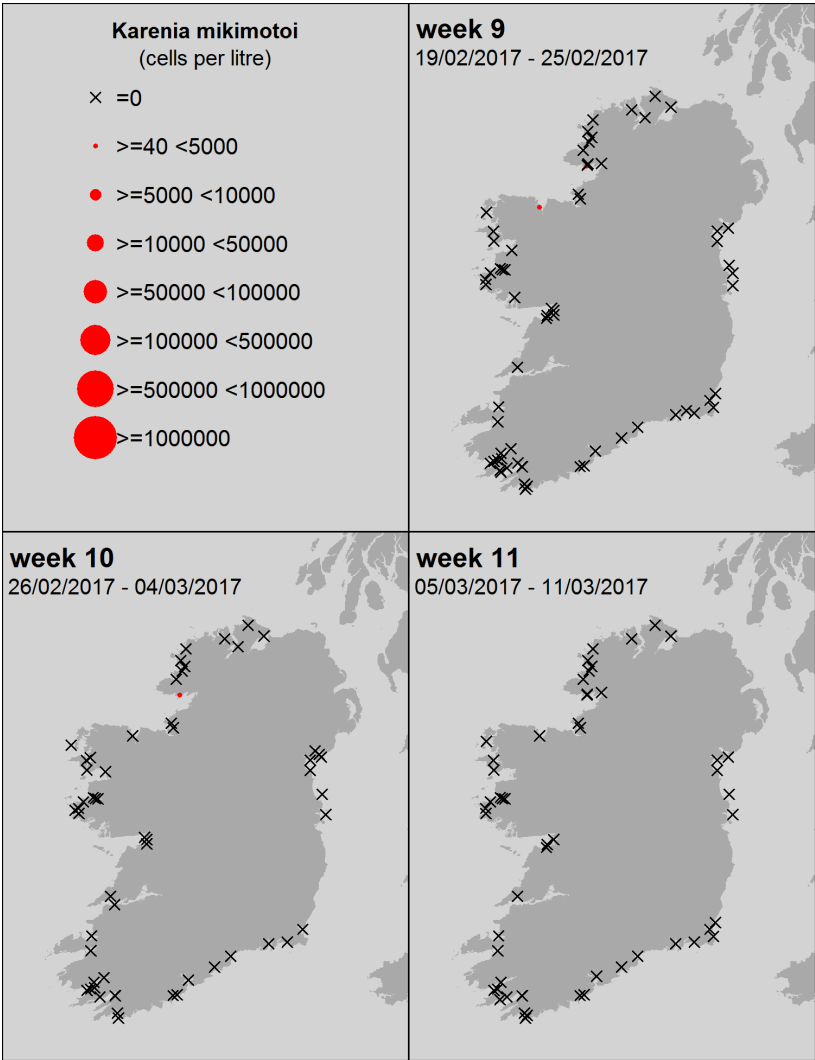
What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Pennate diatom	15000
2	east	Skeletonema spp.	6000
3	east	Centric Diatom	3000
4	east	Paralia sp.	3000
5	east	Asterionellopsis spp.	3000
1	north	Pennate diatom	224000
2	north	Thalassionema nitzschioides	29000
3	north	Skeletonema spp.	22000
4	north	Cylindrotheca closterium/ Nitzschia longissima	14000
5	north	Microflagellate sp.	4000
1	south	Odontella spp.	95000
2	south	Cylindrotheca closterium/ Nitzschia longissima	76000
3	south	Centric diatoms <20um	22000
4	south	Navicula spp. 20-50 um	21000
5	south	Paralia sulcata	11000
1	southwest	Cylindrotheca closterium/ Nitzschia longissima	131000
1	southwest	Skeletonema costatum	131000
3	southwest	Nitzschia spp. (small)	103000
4	southwest	Skeletonema spp.	51000
5	southwest	Navicula spp. <25um	26000
1	west	Skeletonema spp.	9000
2	west	Pennate diatom	5000
3	west	Cylindrotheca closterium/ Nitzschia longissima	3000
4	west	Paralia sp.	2000
5	west	Fragilaria spp.	1000



Karenia mikimotoi
(old name: *Gyrodinium aureolum*)

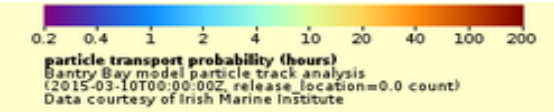
A *Karenia mikimotoi* bloom
is NOT expected this week



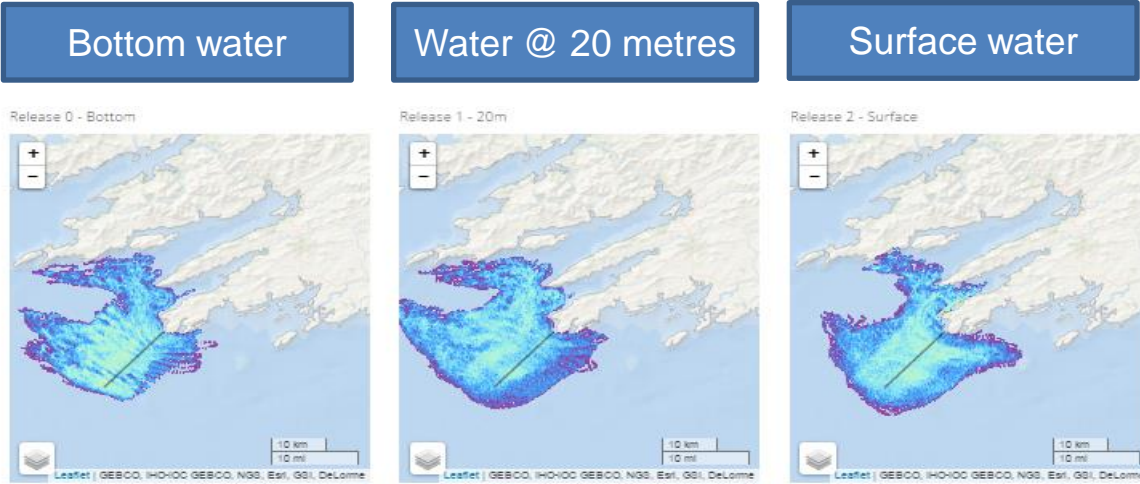
SOUTHWEST: Bantry Bay

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



Forecast for the next 3 days



A change from last week , with this week predicted offshore water movements at all depth moving in a predominantly mixed northerly direction.

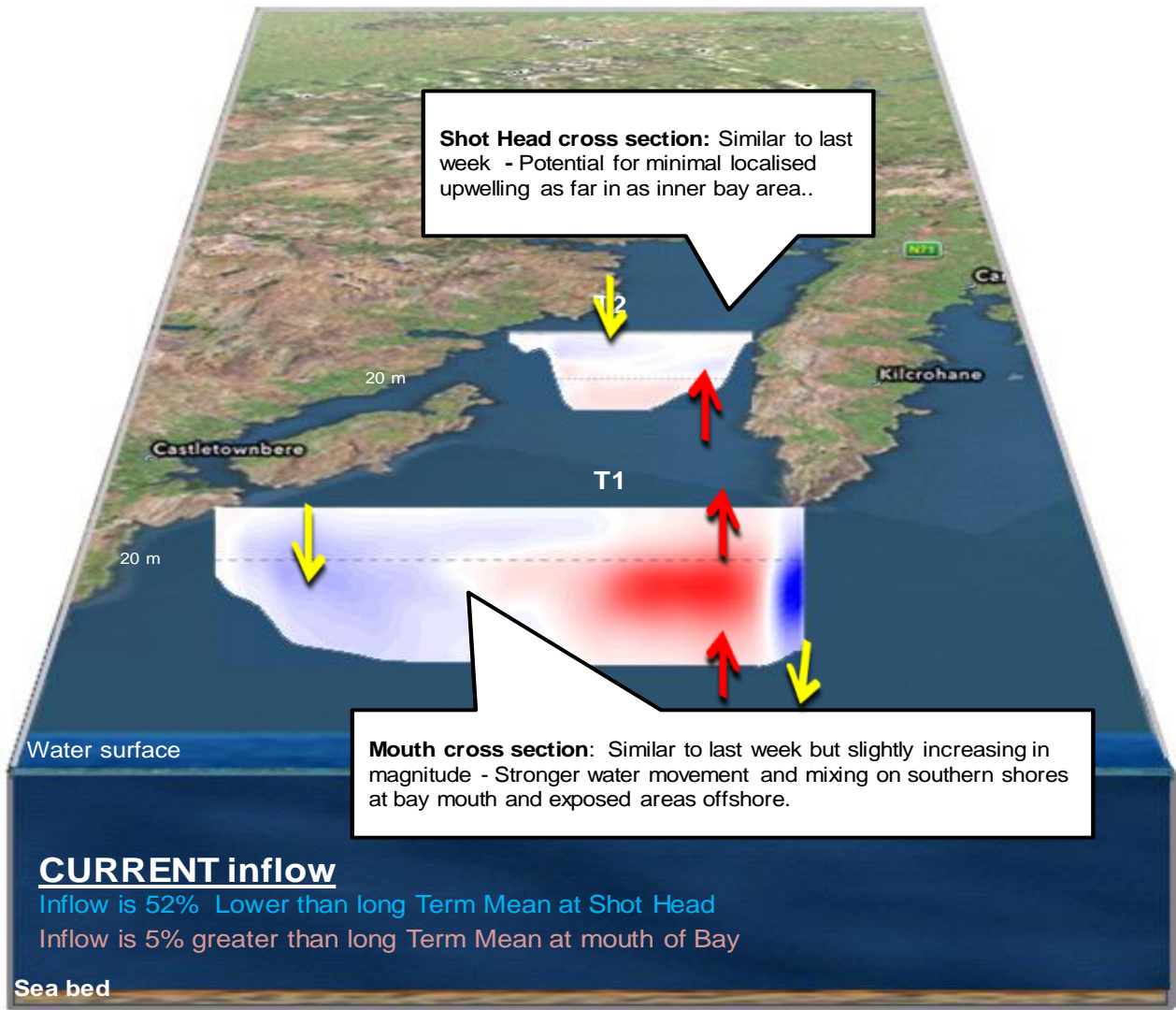
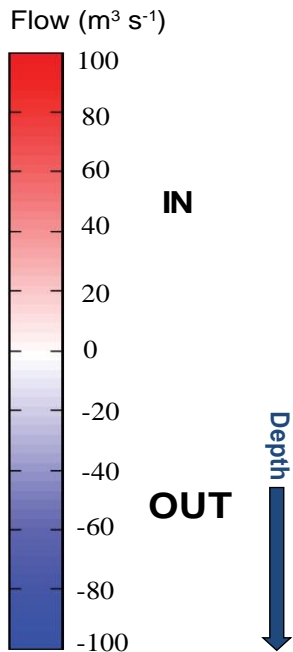


Sheltered inner bay areas also predicted to have movement predominately in mixed northerly directions , particularly at deeper depths.

Bantry Bay

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

Forecast for next 3 days



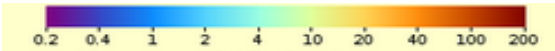
WEST: Killary Harbour

Forecast for the next 3 days

The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** i.e. white lines off Aughrus Point and the Mouth of Killary Harbour, and **water depths** (bottom, 20 metres and surface)

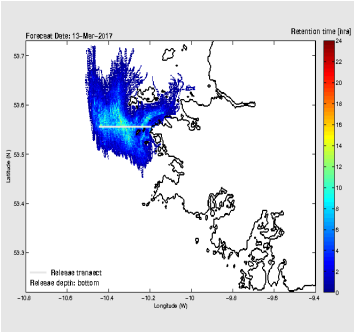
Reddish colours represent areas where phytoplankton remain longest

Cooler colours represent areas where phytoplankton remain for shorter periods

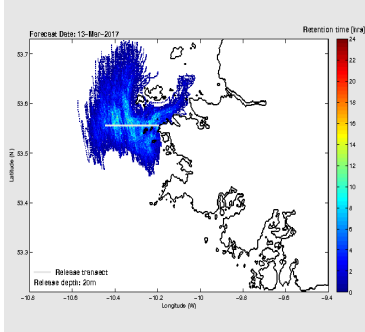


particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

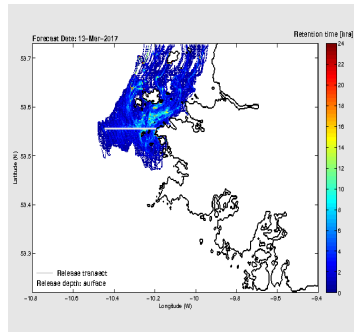
Bottom water



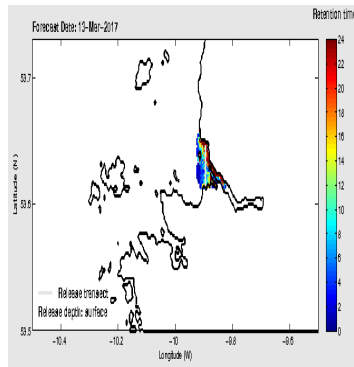
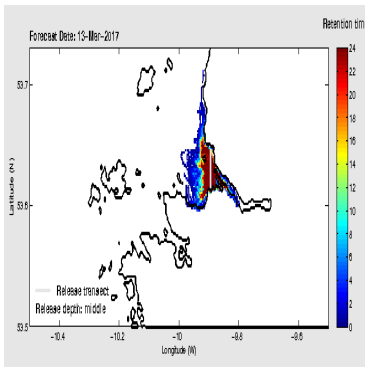
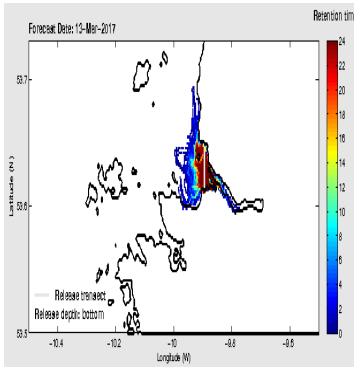
Water @ 20 metres



Surface water



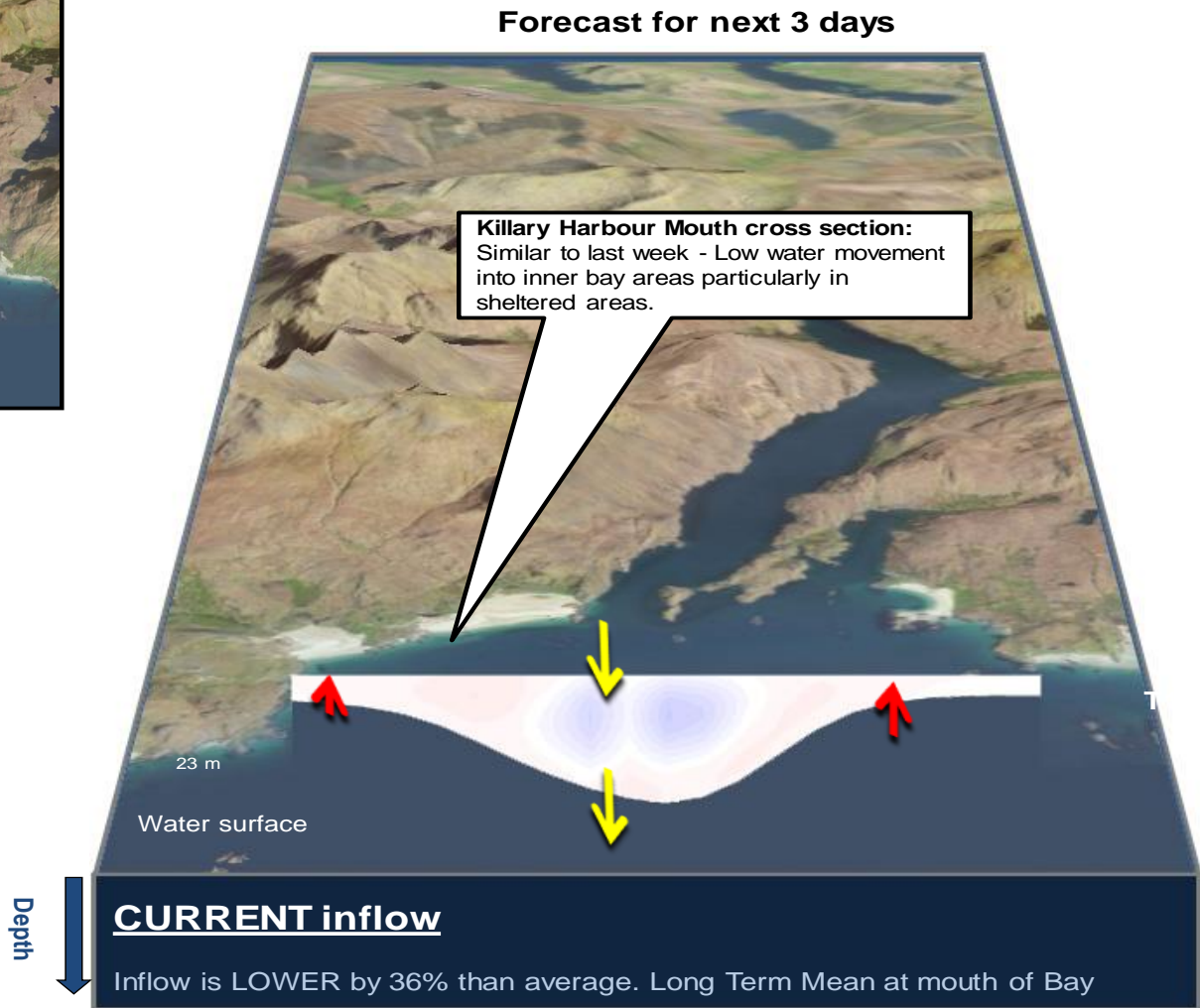
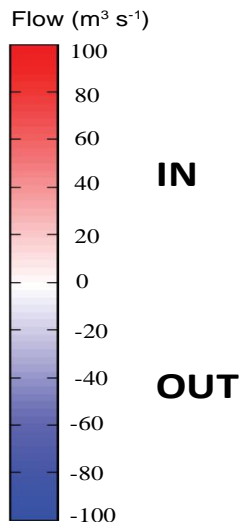
Strong mixed water movements in opposing directions in offshore areas with potential of northerly directional movement being more dominant in surface areas .



Outer bay areas tending to show more water body movements in deeper depths ,moving in a northerly direction. Inner bay waters indicating less movement at all depths. Moderate potential for upwelling and inner bay transport from outer bay areas.

Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



West Coast - 3 day estimated water flows along a transect off Aughrus Point

