

Ireland: Predictions

ASP event: Low in general (Mod to High in few specific sites)*

AZP event: Moderate

DSP event: Medium to high – site specific

PSP event: low

NMP Current closures

ASP	AZP	DSP	PSP
0	0	0	0

Why do we think this?

ASP: In general most sites showing a steady decrease in cells and related toxins. However a small number of sites still maintain moderate cell levels .While this is the case additional caution is advised in these sites and the adjacent areas.

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) . Suitable environmental conditions continue to fluctuate widely . Issues with this toxin can occur suddenly and acutely .Caution is advised.

DSP: This is currently the beginning of the historical season of occurrence. Phalacroma and Dinophysis spp have been observed in only a few specific sites are already, currently at low levels. This species now needs to be watched more closely as levels of 400cells/l to 800cells/l have in the past caused issues.

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

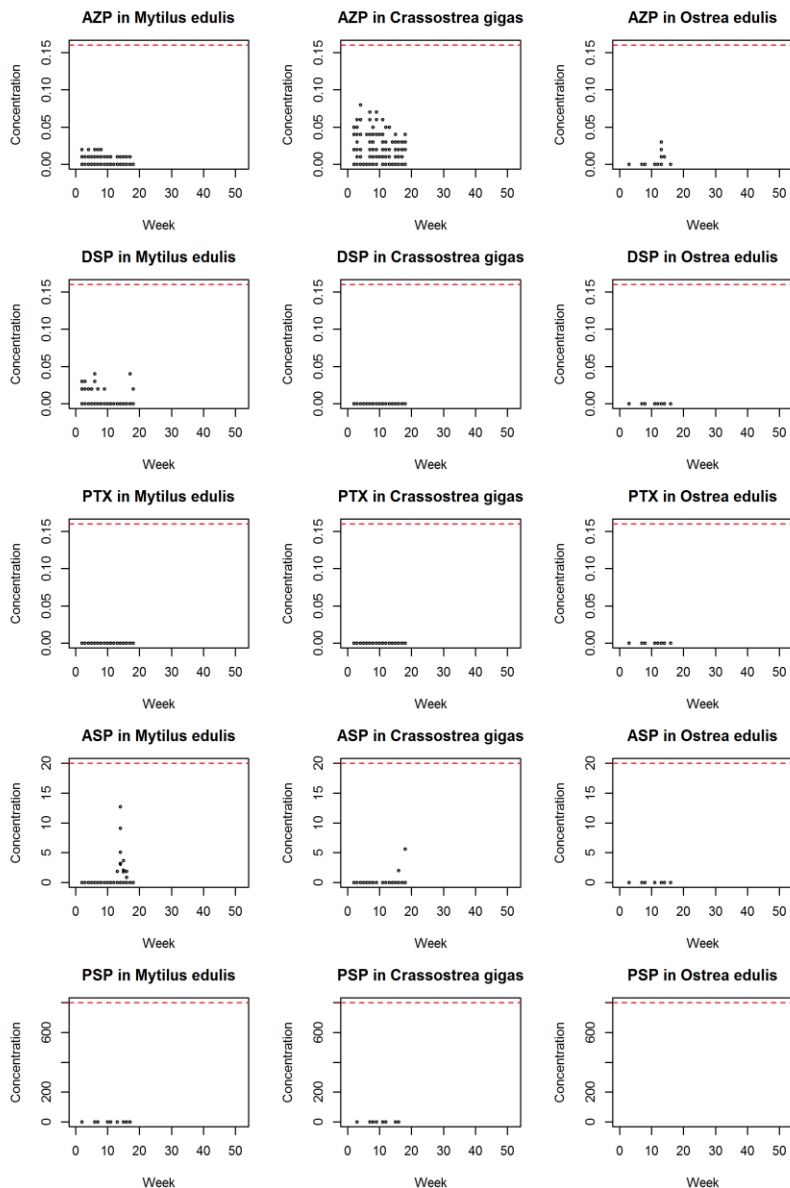
AZP

DSP

PTX

ASP

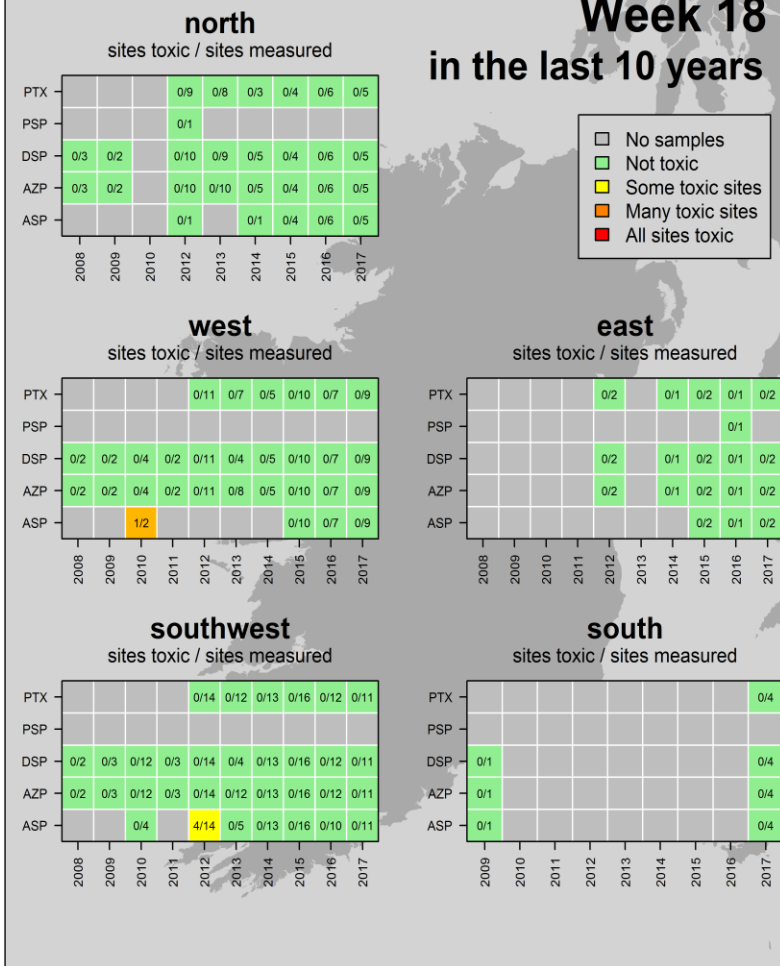
PSP



HISTORIC TRENDS



Week 18
in the last 10 years



ASP events: mid-March to early May

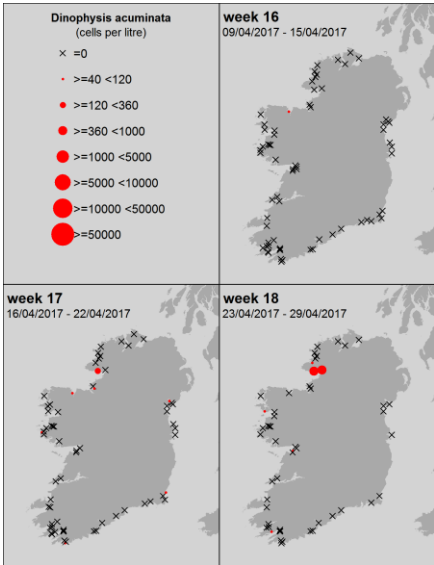
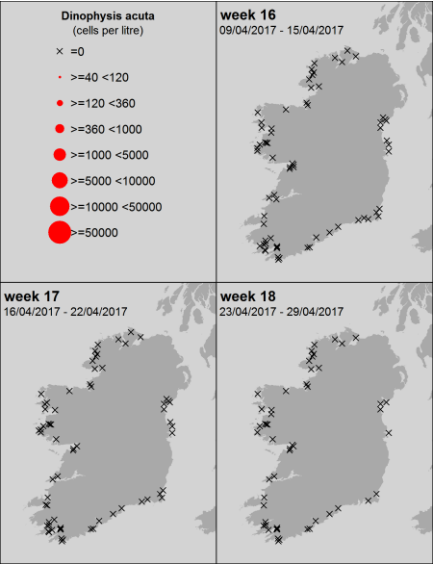
AZP events: April to December

DSP events: May to December

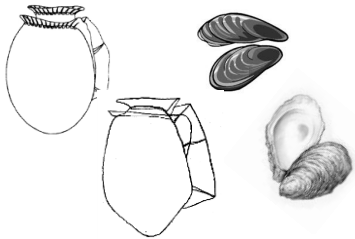
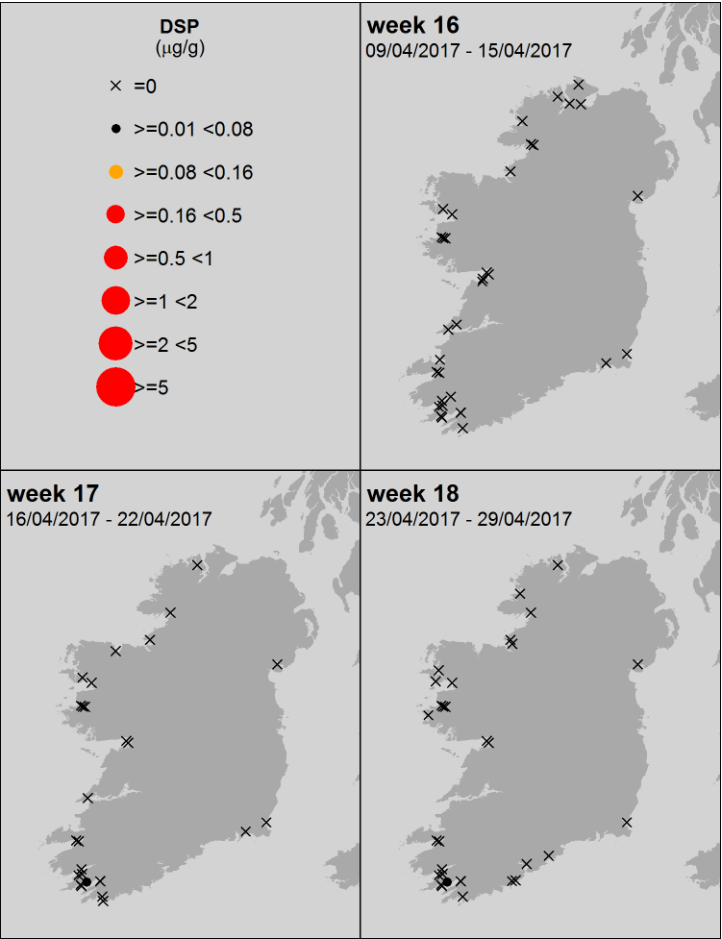
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks.

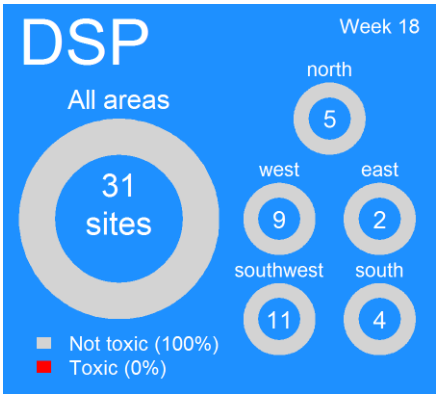


All levels of DSP biotoxin recorded- 3 wks.



Current closures levels

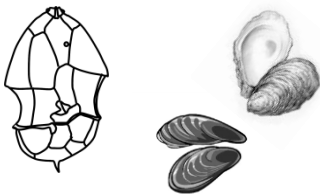
≥ DSP 0.16 µg/g



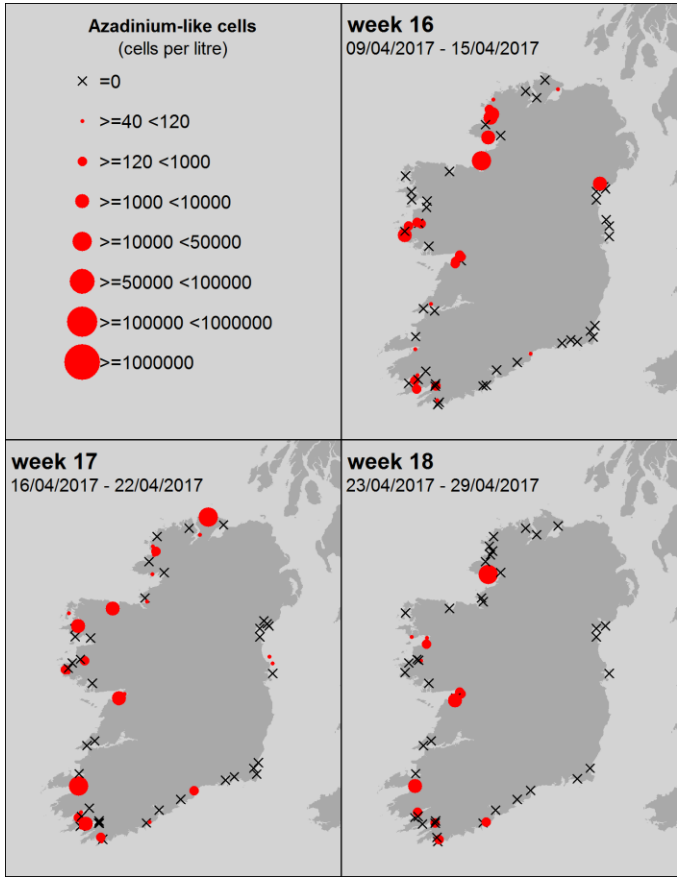
Comments

DSP levels and Dinophysis group cells beginning to creep up as would be normal for this time of year. Caution is advised as the causative species within this group do not have to reach 'high' levels to cause a potential issue.

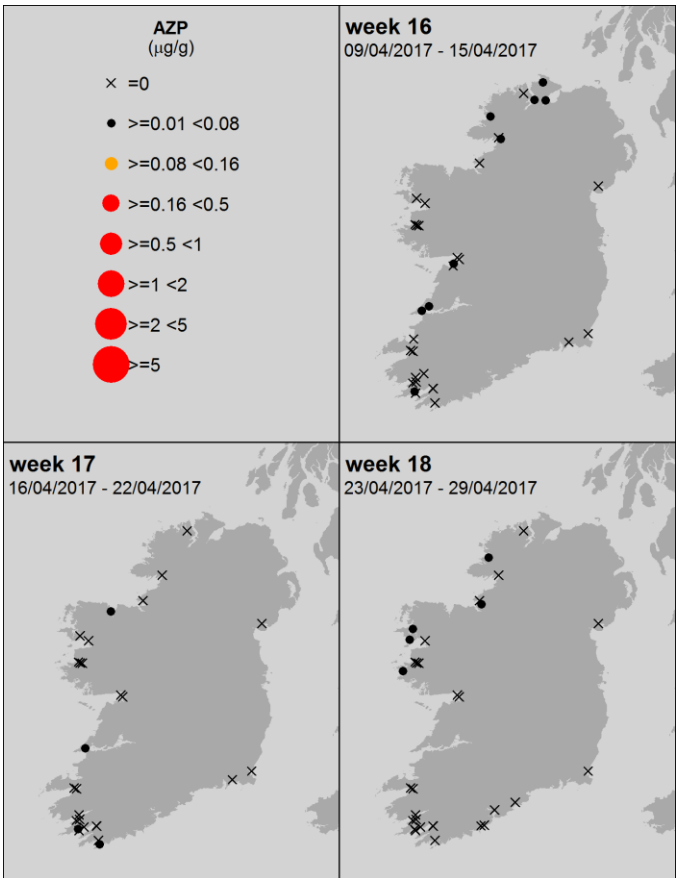
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

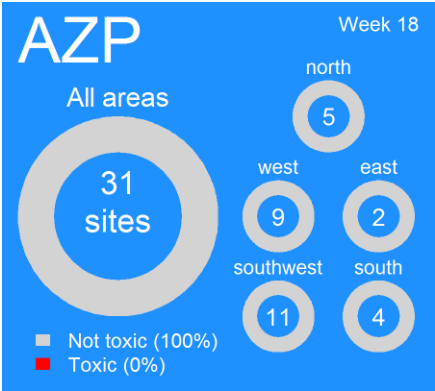


All levels of AZP biotoxin recorded - 3 wks.



Current closures levels

≥ AZP 0.16 µg/g

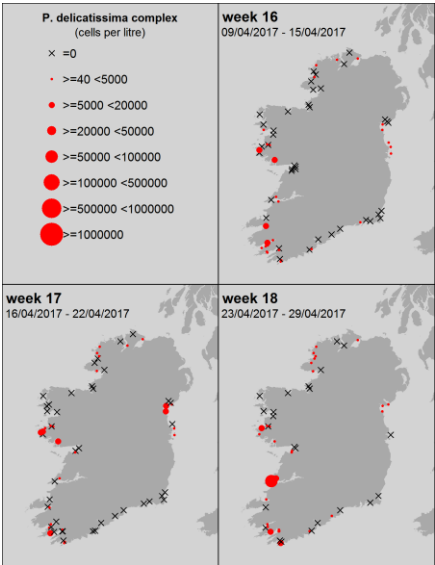
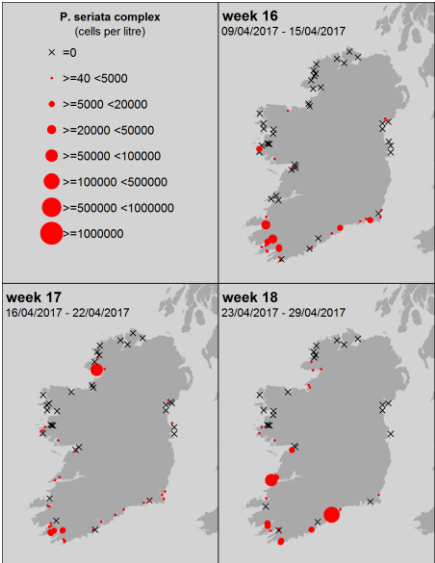


Comments

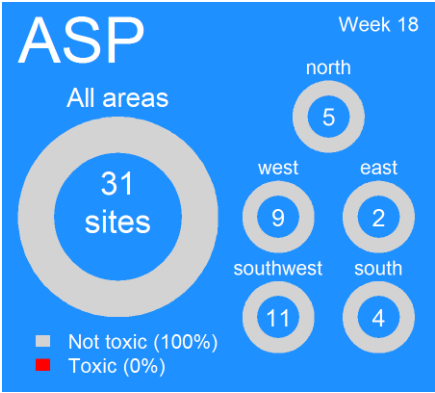
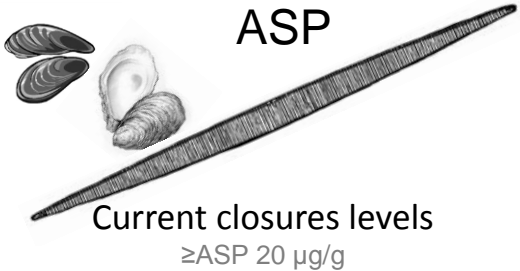
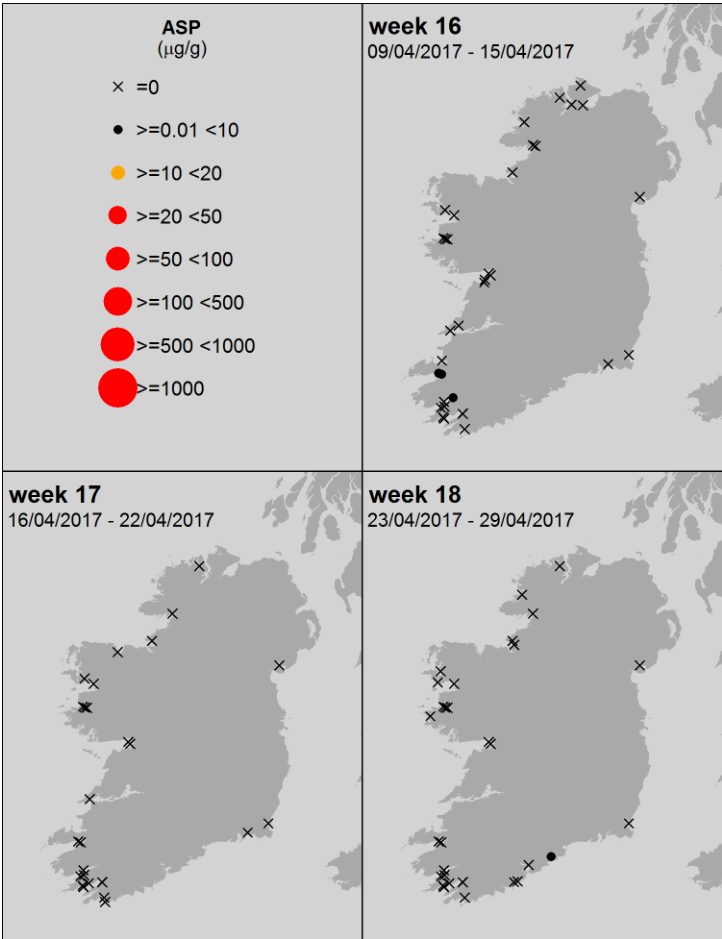
Additional caution is still advised. There is a potential current trend of an increase in number of sites with potential cells observed and related toxins. All sites remain well below closure limits currently.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



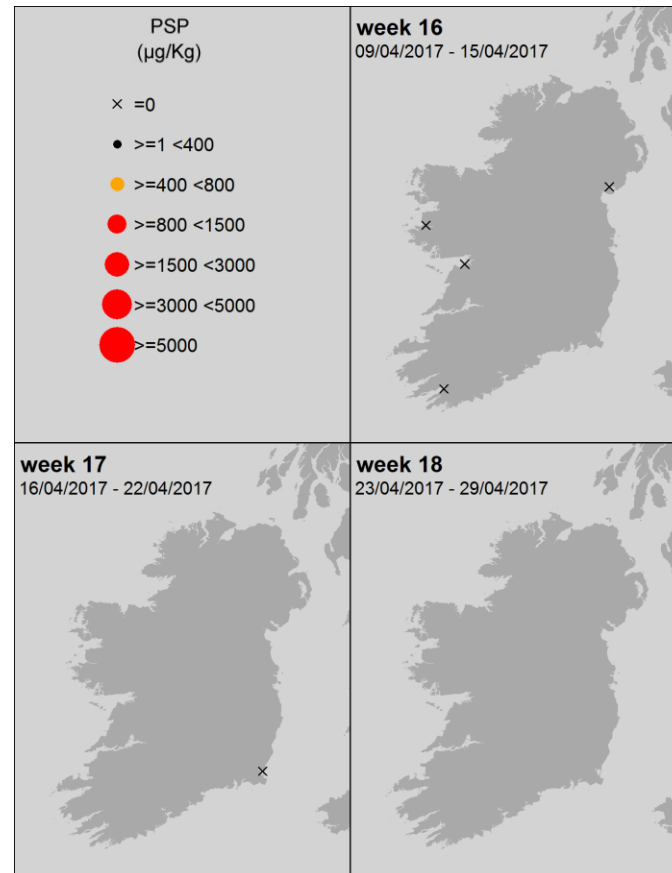
All levels of ASP biotoxin recorded - 3 wks.



Comments

Pseudo nitzschia species in general appear to be decreasing in cell levels and associated toxins. There are however 1 or 2 specific areas with isolated higher levels of caution advisory.

All levels of PSP biotoxin recorded - 3 wks.

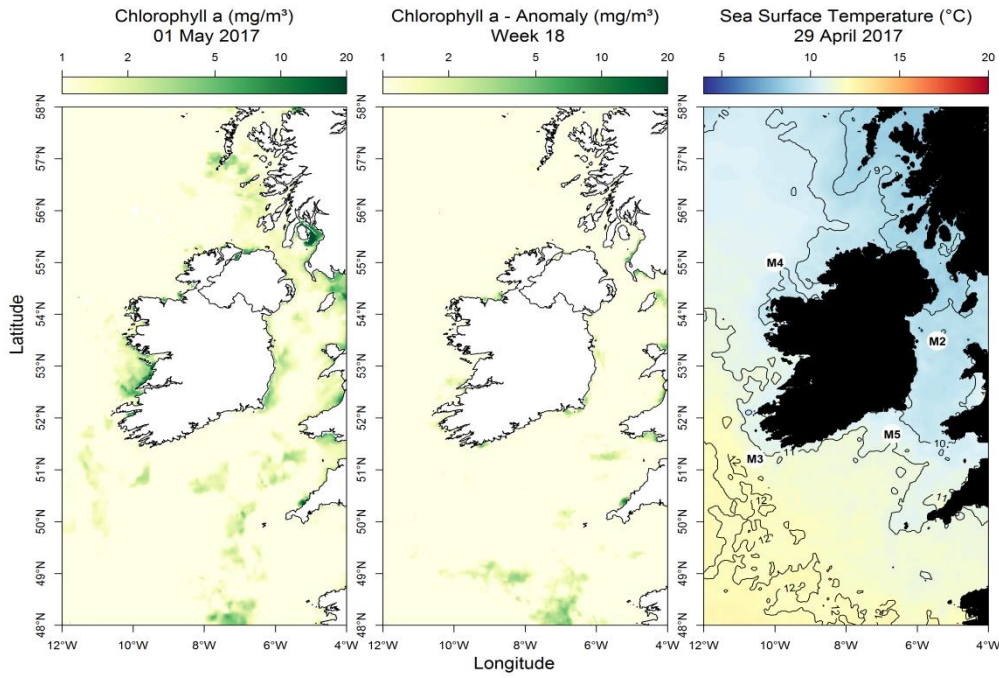


≥ PSP 800 µg/Kg



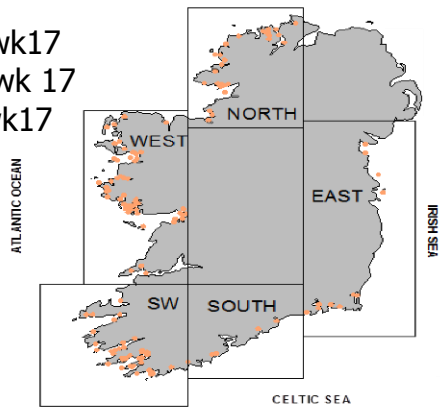
- No current changes although levels observed to be potentially fluctuating in specific sites
- No closures and low likelihood of bloom at this time.

Most up to date available satellite data



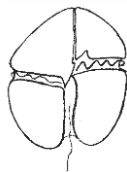
Continued increase in phytoplankton potential growth in some inner bay areas.

- NW coast (M4) Above average by 0.12°C wk17
- SW coast (M3) Above average by 0.51°C wk 17
- SE coast (M5) Above average by 0.43°C wk17



What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Cryptophyte	455000
2	east	Euglena/Eutreptiella spp.	439000
3	east	Cylindrotheca closterium/ Nitzschia longissima	26000
4	east	Amphidinium carterae	10000
5	east	Chaetoceros (Hyalochaete) spp.	3000
1	north	Microflagellate spp. <10um	2406000
2	north	Chaetoceros (Hyalochaete) spp.	1141000
3	north	Skeletonema spp.	769000
4	north	Scrippsiella spp.	194000
5	north	Gonyaulax spinifera	99000
1	south	Pseudo-nitzschia seriata complex	264000
2	south	Chaetoceros (Hyalochaete) spp.	174000
3	south	Chaetoceros curvisetus/debilis	82000
4	south	Thalassiosira rotula/gravida	78000
5	south	Pennate diatom <20um	76000
1	southwest	Chaetoceros socialis	431000
2	southwest	Thalassiosira polycorda	376000
3	southwest	Asterionellopsis glacialis	198000
4	southwest	Cylindrotheca closterium/ Nitzschia longissima	192000
5	southwest	Cerataulina spp.	123000
1	west	Licmophora spp.	325000
2	west	Chaetoceros (Hyalochaete) spp.	138000
3	west	Cylindrotheca closterium/ Nitzschia longissima	99000
4	west	Pseudo-nitzschia delicatissima complex	80000
5	west	Skeletonema spp.	66000

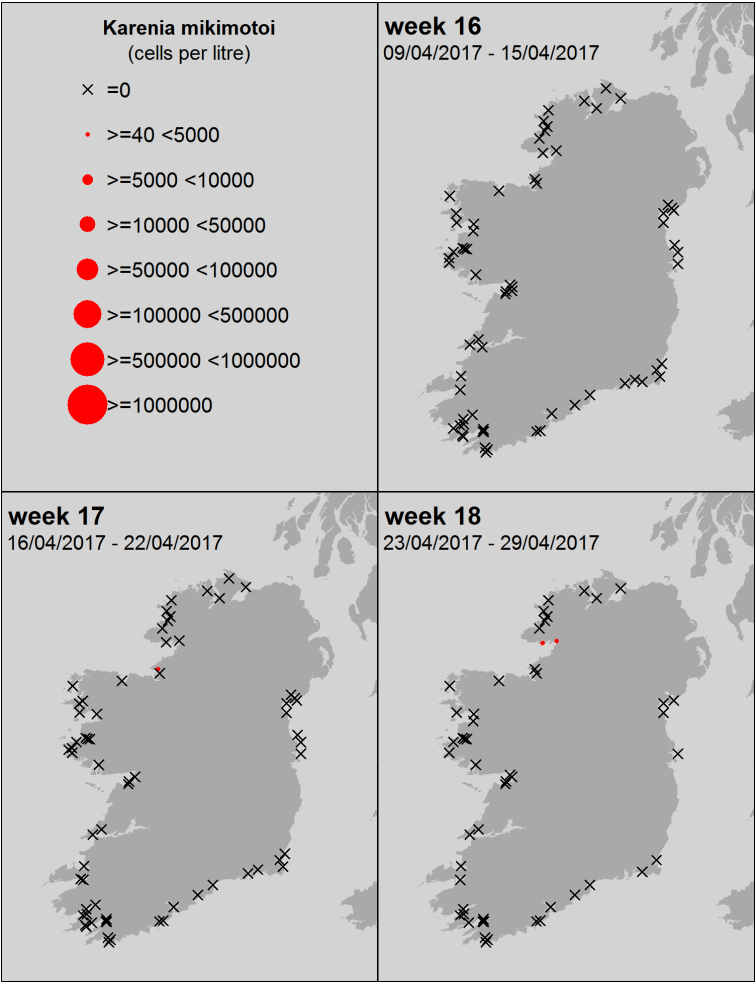


Karenia mikimotoi
(old name: *Gyrodinium aureolum*)

A *Karenia mikimotoi* bloom
is NOT expected this week

Other bloom species news

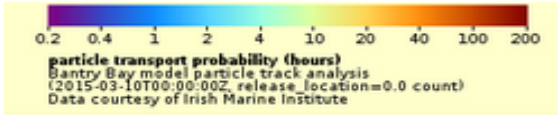
Each geographical sector
appears to be dominated
by its unique species or
group. Currently no major
treats evident but please
use the dominant species
table to see specific
localised areas of interest.



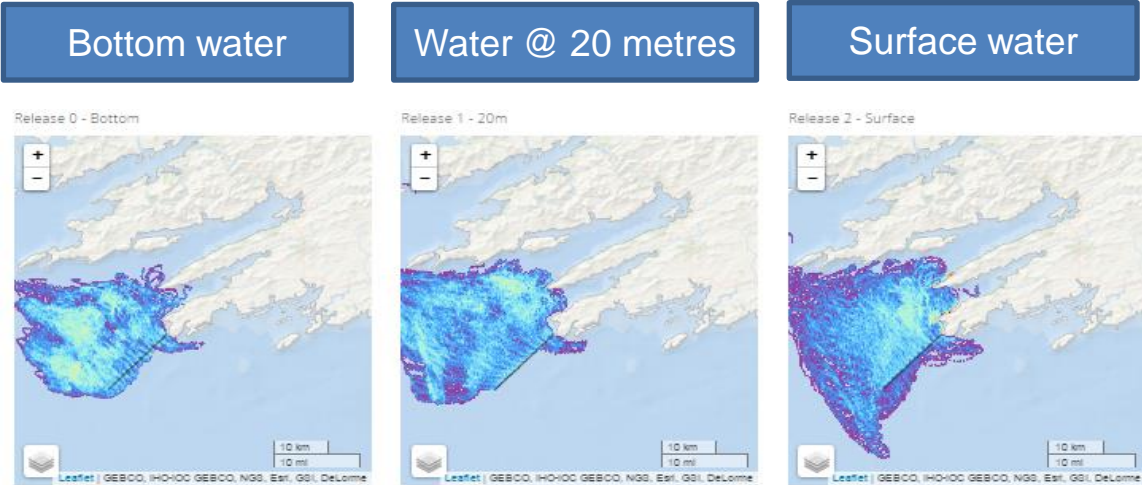
SOUTHWEST: Bantry Bay

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)

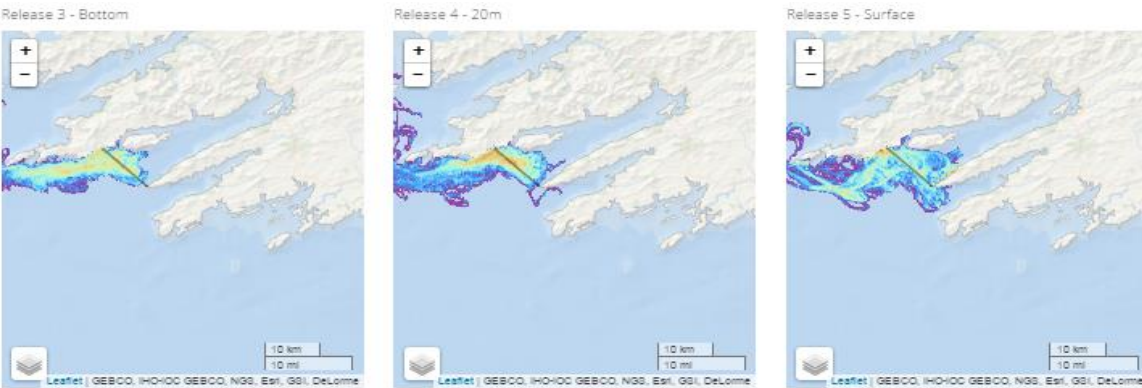
Reddish colours represent areas where phytoplankton remain longest
Cooler colours represent areas where phytoplankton remain for shorter periods



Forecast for the next 3 days



Predominantly water movement in a northerly direction at bottom and deeper depths , with increasing force in northerly directional movement in surface zones.



Similar movements predicted at all depths with predominant westerly movement of waters out of inner bay areas.

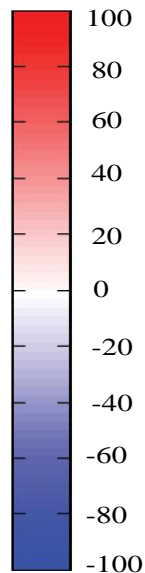
Bantry Bay

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



Forecast for next 3 days

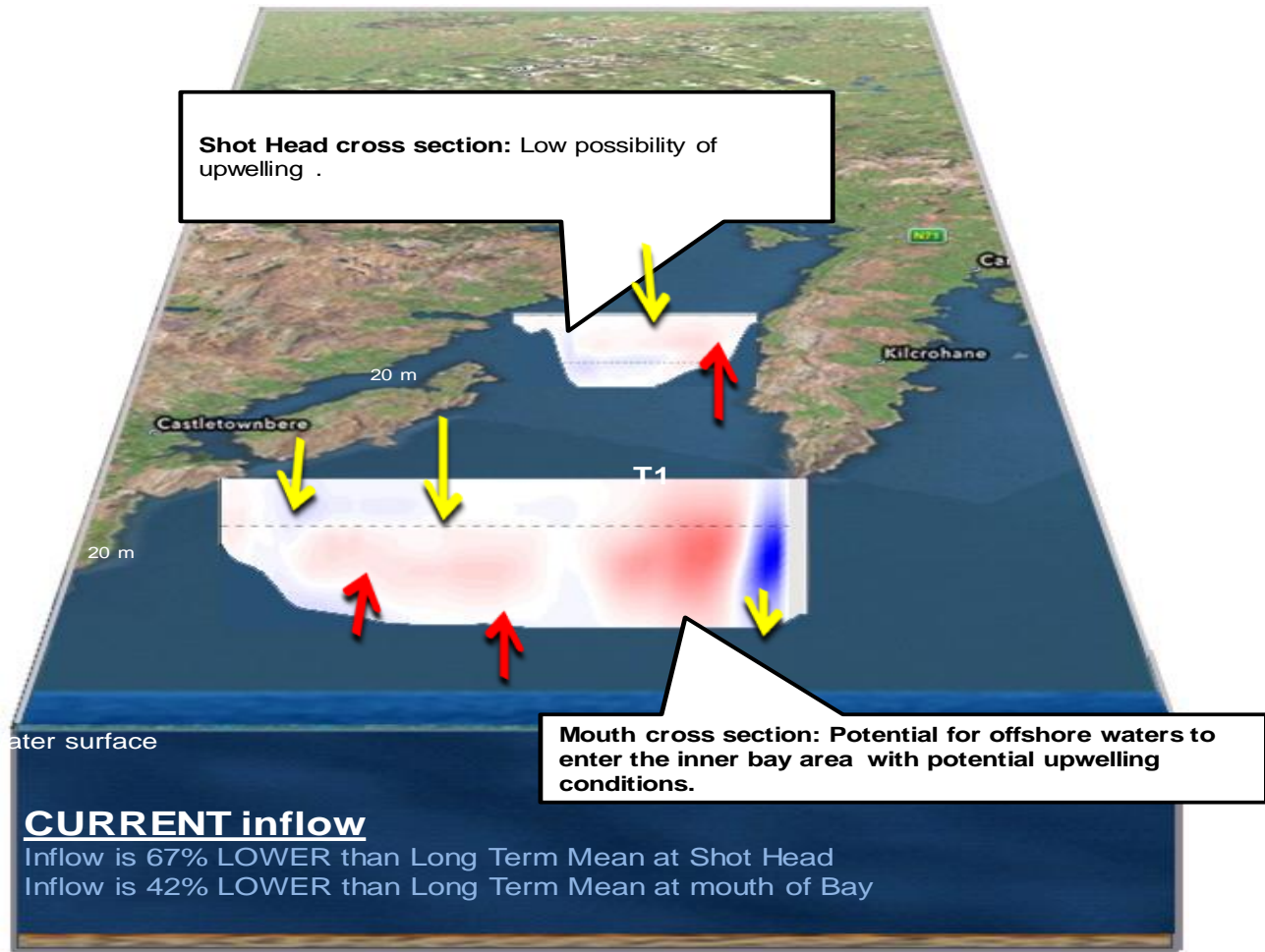
Flow ($\text{m}^3 \text{s}^{-1}$)



IN

OUT

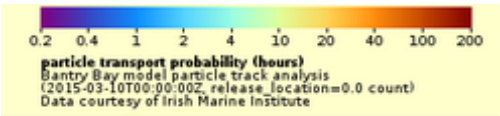
Depth
↓



WEST: Killary Harbour

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)

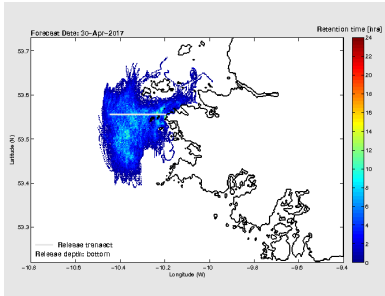
Reddish colours represent areas where phytoplankton remain longest
Cooler colours represent areas where phytoplankton remain for shorter periods



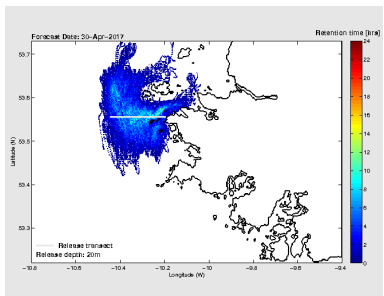
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

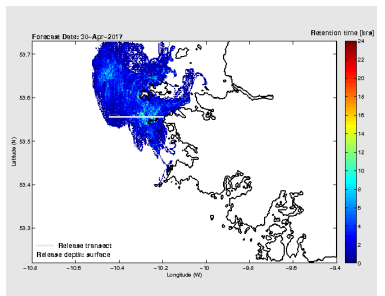
Bottom water



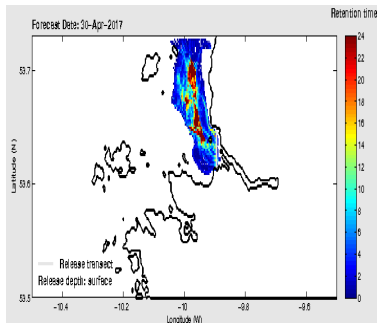
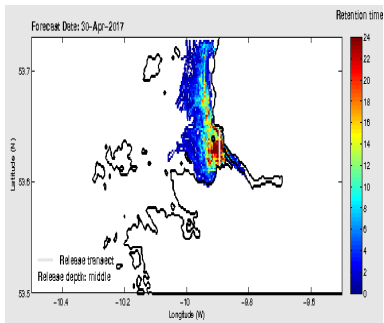
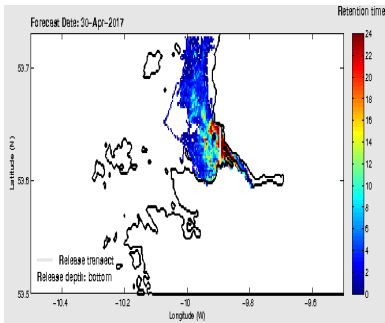
Water @ 20 metres



Surface water



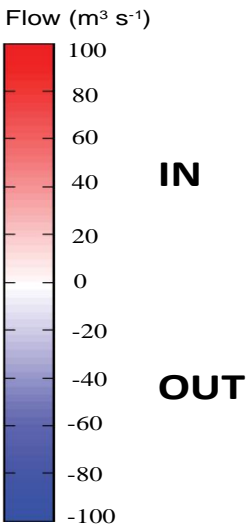
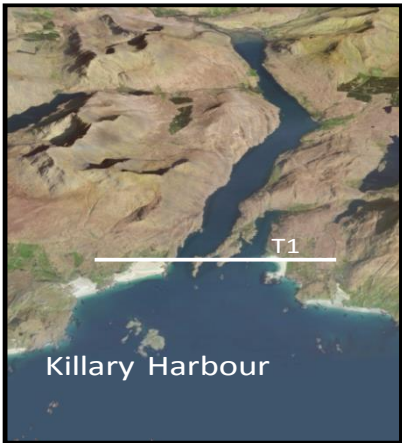
Cleggan
Strong mixing and water movements in both southerly (deeper waters offshore) and northerly (surface waters offshore) directions with potential for transport of offshore waters into inshore areas.



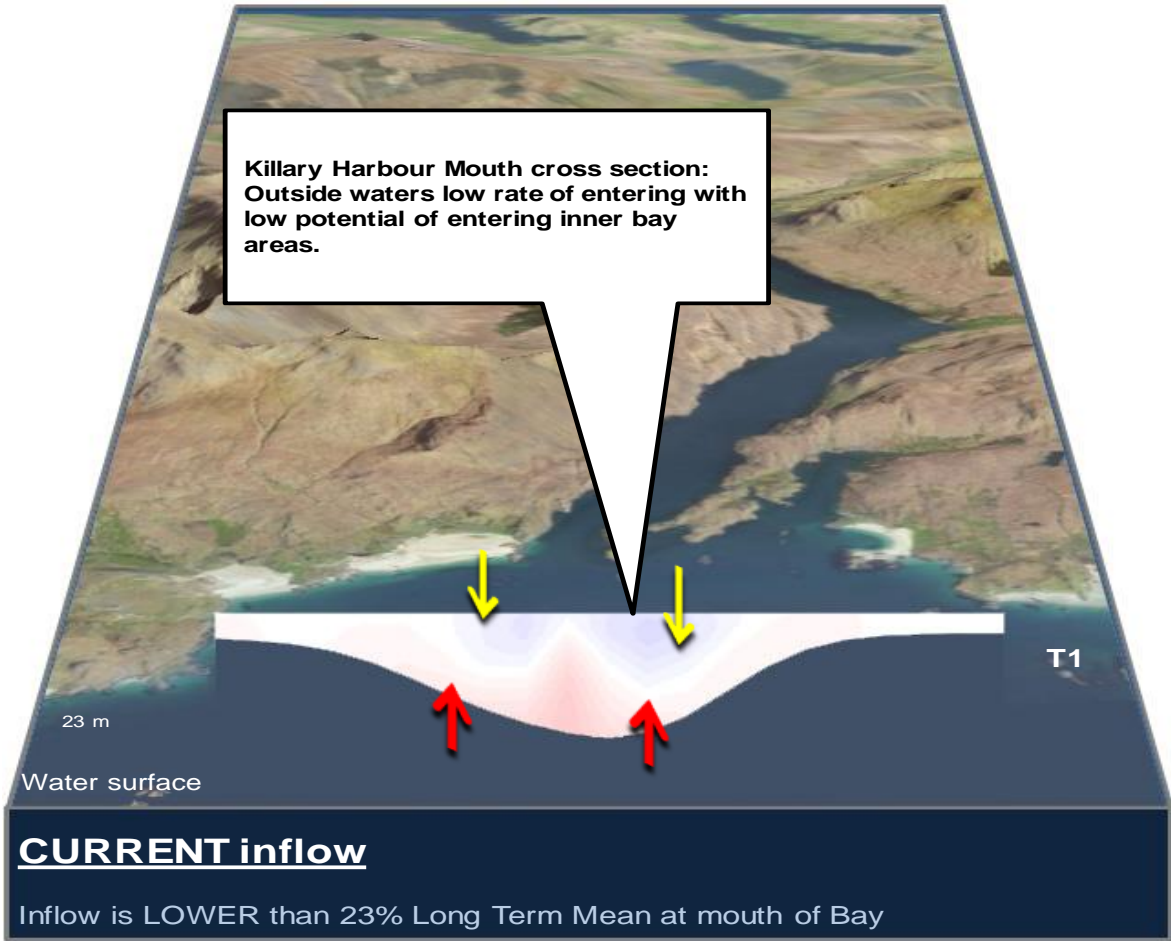
Killary
Predominantly northern offshore water transport with localised inshore areas of low movement and mixing.

Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days



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

Forecast for next 3 days

