

Ireland: Predictions

ASP event: Low

AZP event: Moderate

DSP event: Low

PSP event: Very low

Why do we think this?

NMP Current closures			
ASP	AZP	DSP	PSP
0	0	0	0

ASP: Currently there appears to be a very slow weekly potential pattern of *Psuedo nitzschia* species slowly increasing (3 consecutive weeks in some sites) 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: Risk levels of low to 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 2013 and 2014 in the West and S.West). Issues with this toxin can occur suddenly and acutely. Caution is advised.

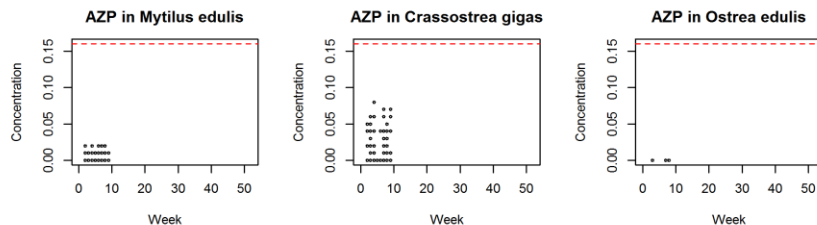
DSP: This is currently a low risk period for early DSP events. All sites are currently below regulatory limits.

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

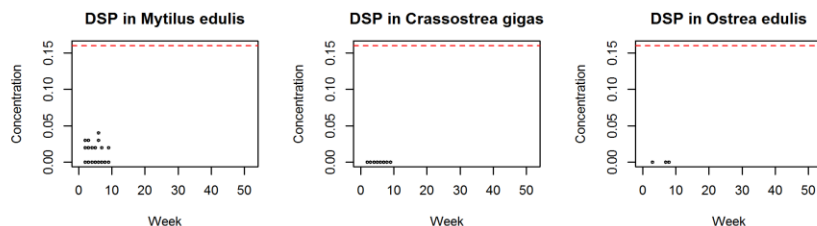
Please note: We will be updating the format of this bulletin throughout the year in an active effort to increase end user applicability and incorporate developing technologies. All feedback is welcome at Joe.Silke@Marine.ie.

National Monitoring Programme

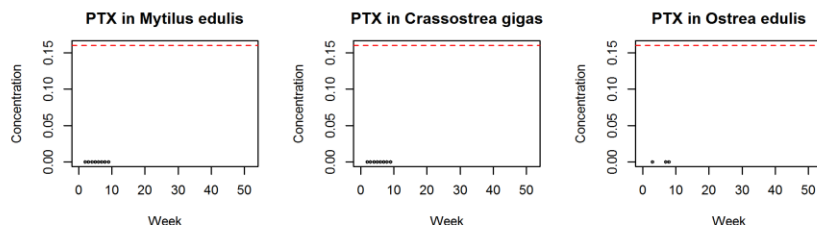
AZP



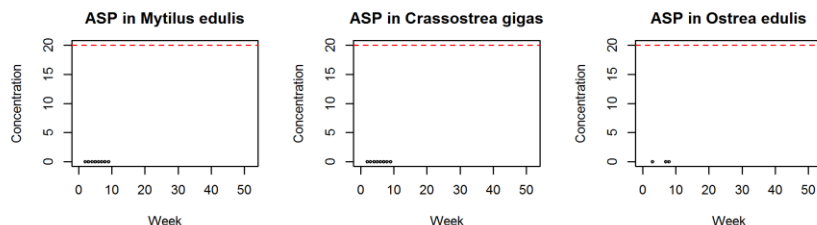
DSP



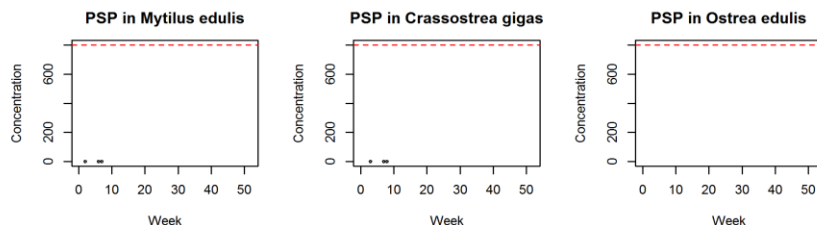
PTX



ASP



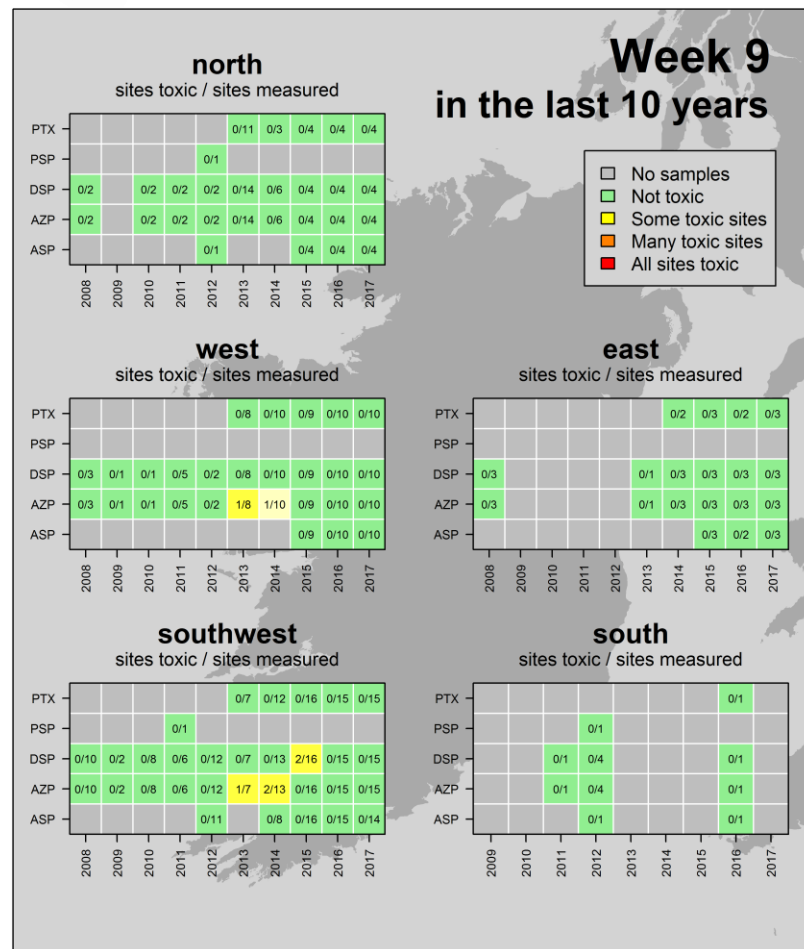
PSP



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



HISTORIC TRENDS



ASP events: mid-March to early May

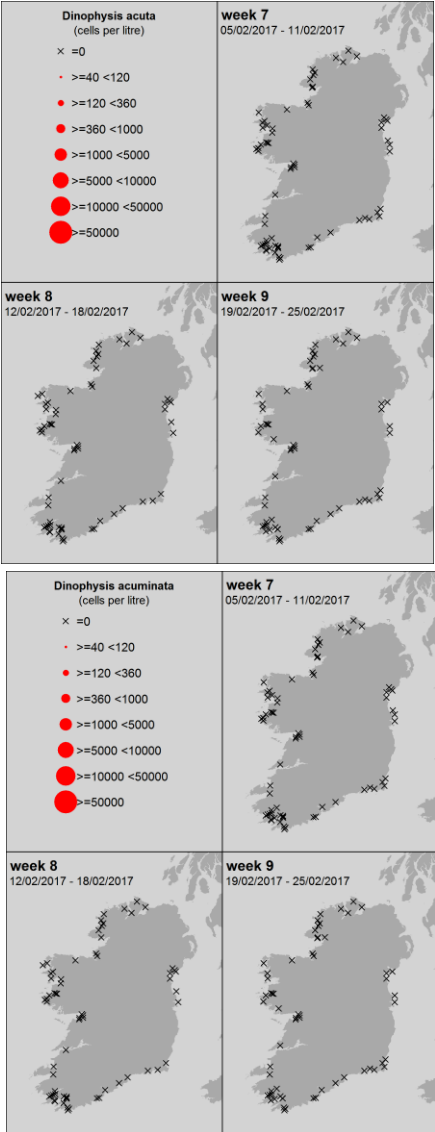
AZP events: April to December

DSP events: May to December

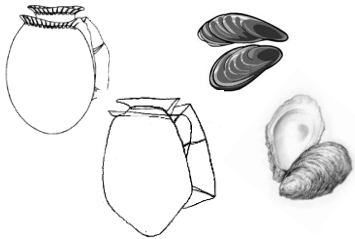
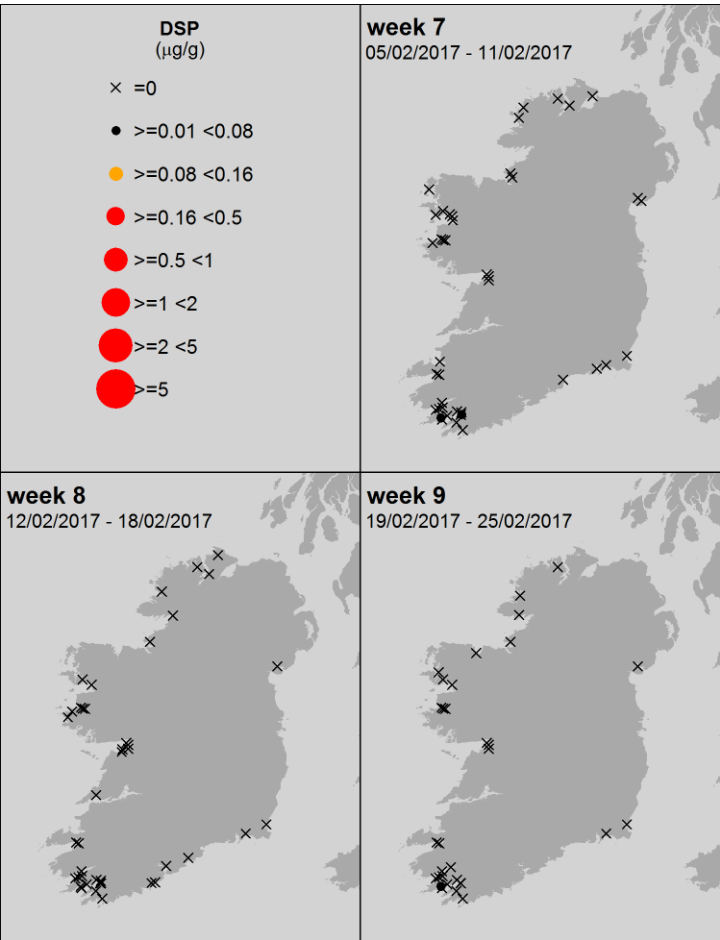
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks

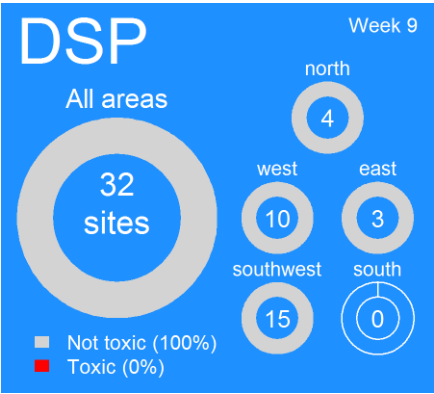


All levels of DSP biotoxin recorded- 3 wks



Current closures levels

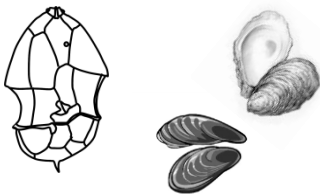
≥ DSP 0.16 µg/g



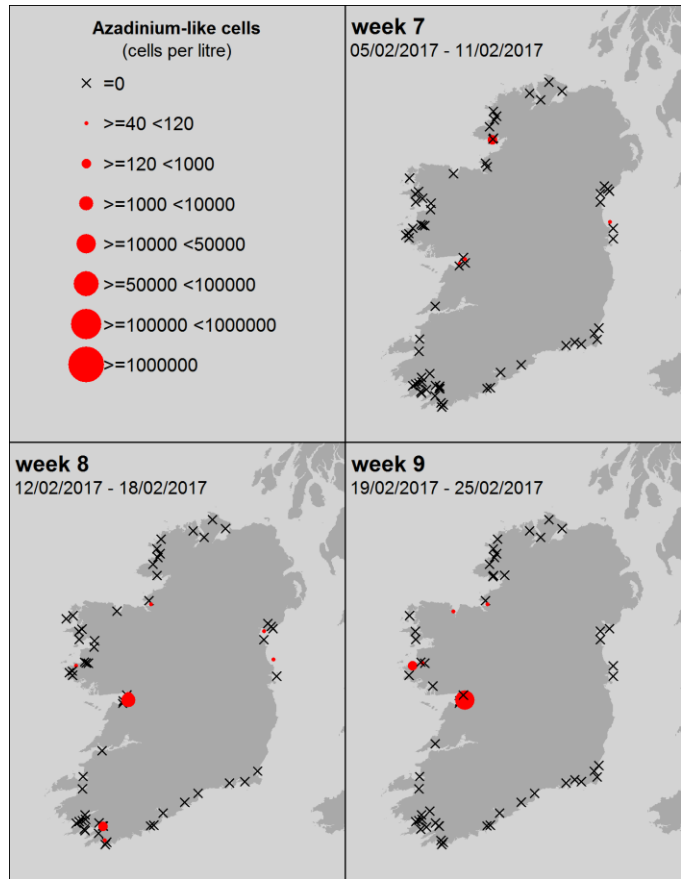
Comments

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

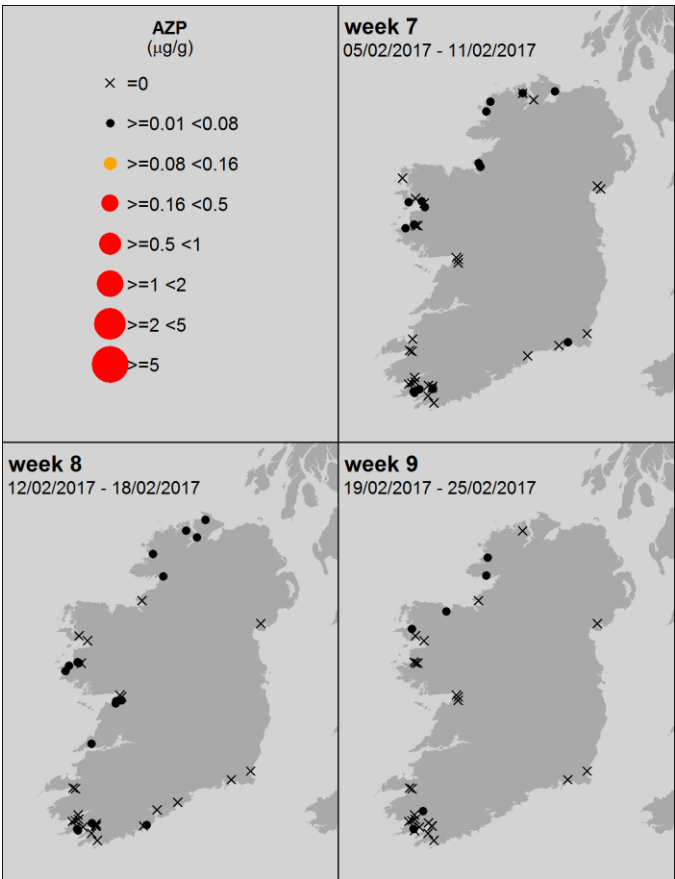
AZP and Azadinium like species current trends



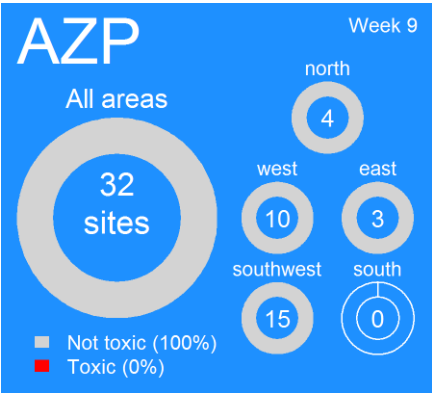
Phytoplankton species – 3 wks.



All levels of AZP biotoxin recorded - 3 wks



Current closures levels
≥ AZP 0.16 µg/g

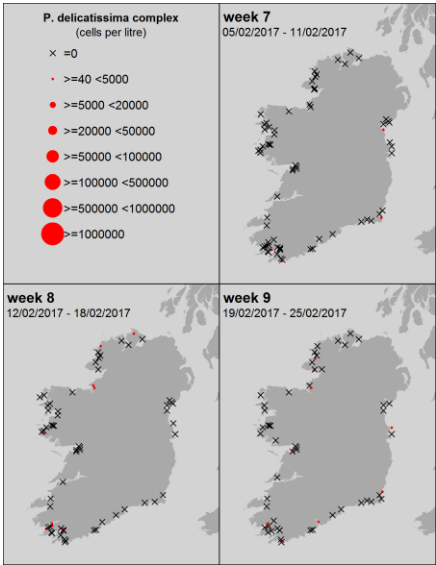
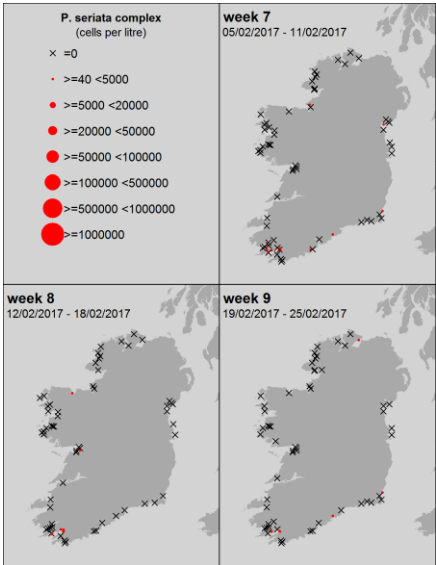


Comments

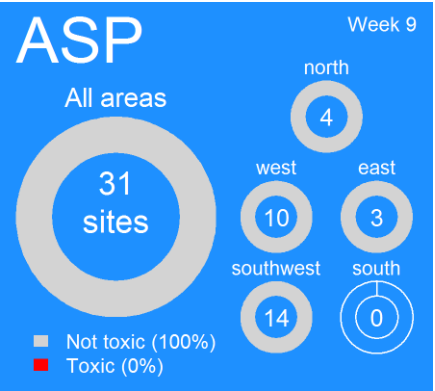
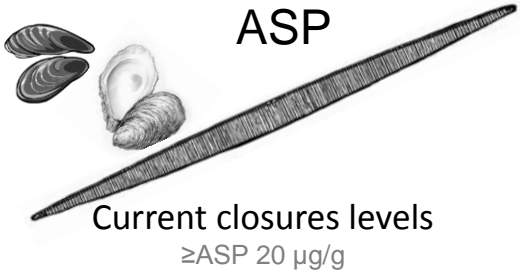
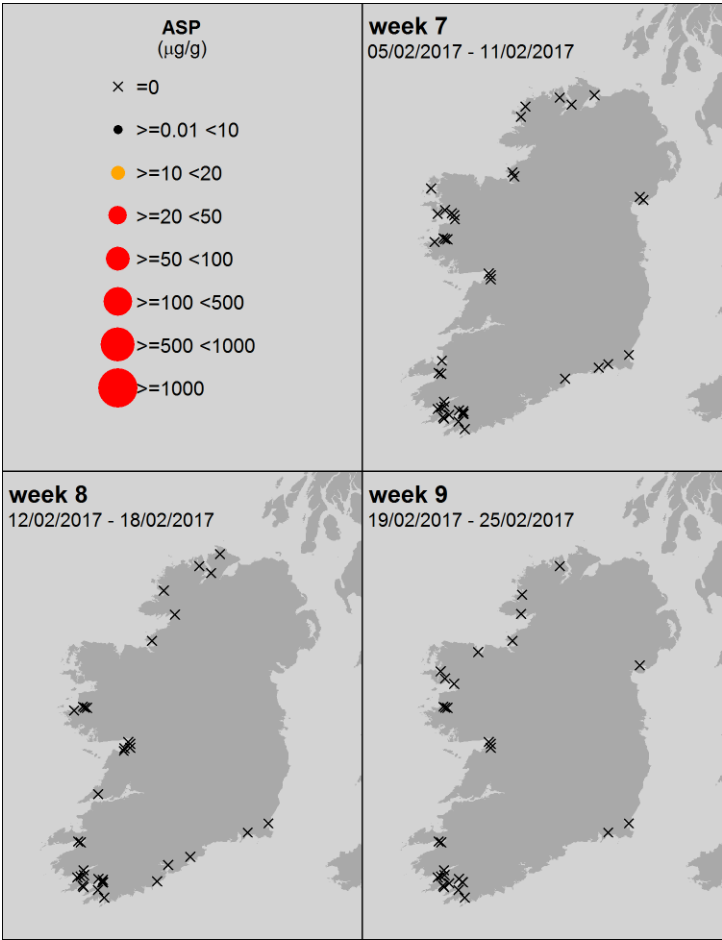
Again a slight increase in presence of potential cell levels in some sites toxins but all sites still below biotoxin limits.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



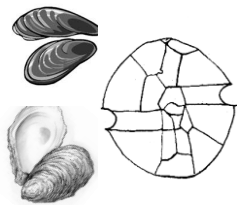
All levels of ASP biotoxin recorded - 3 wks.



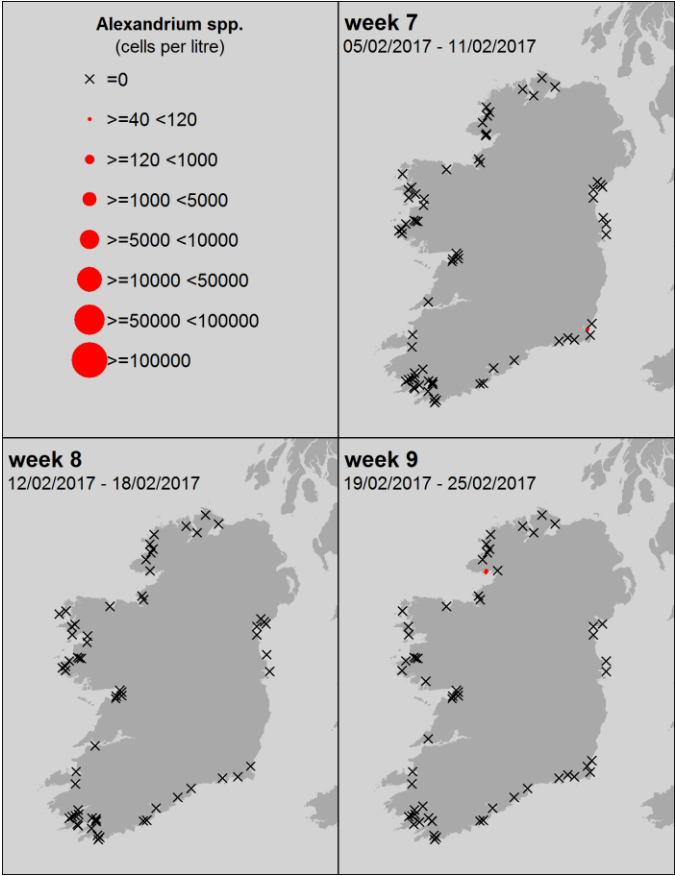
Comments

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

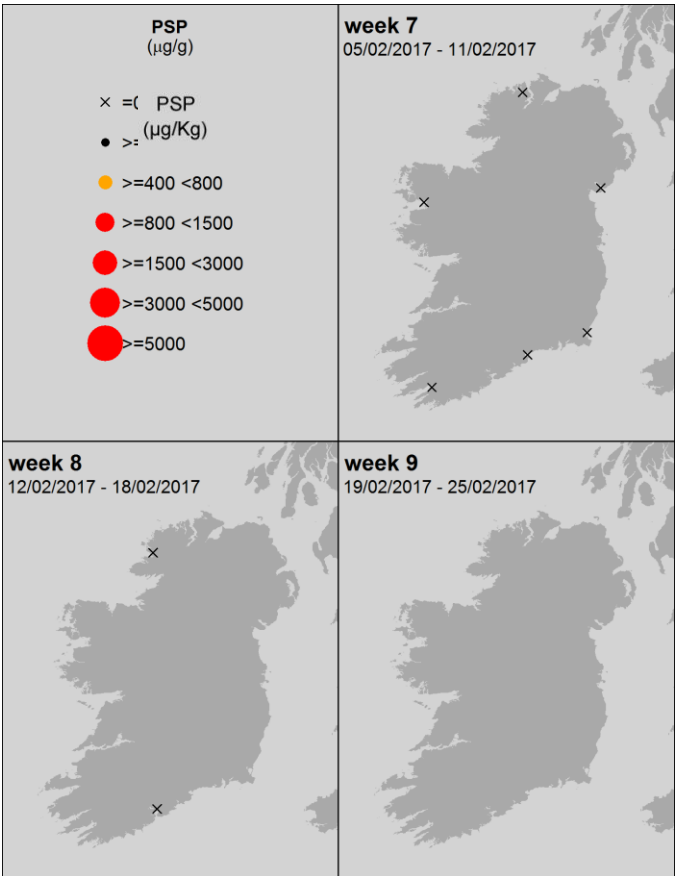
PSP and Alexandrium sp. current trends



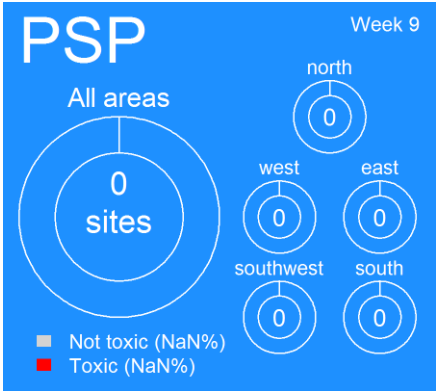
Phytoplankton species – 3 wks.



All levels of PSP biotoxin recorded - 3 wks.



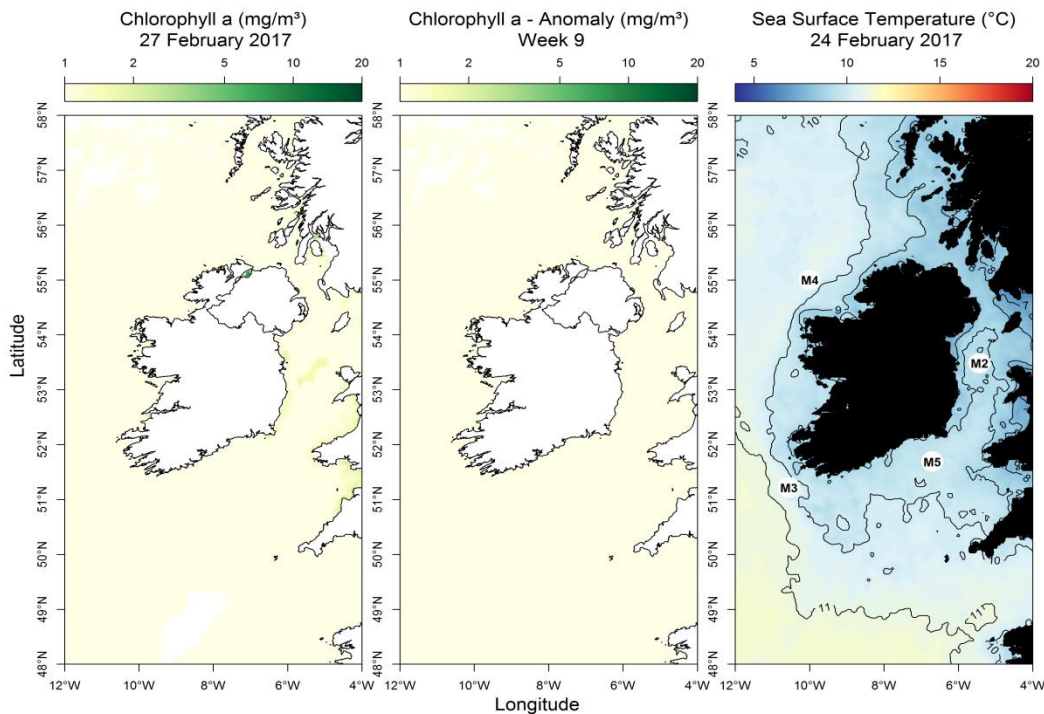
Current closures levels
≥ PSP 800 µg/Kg



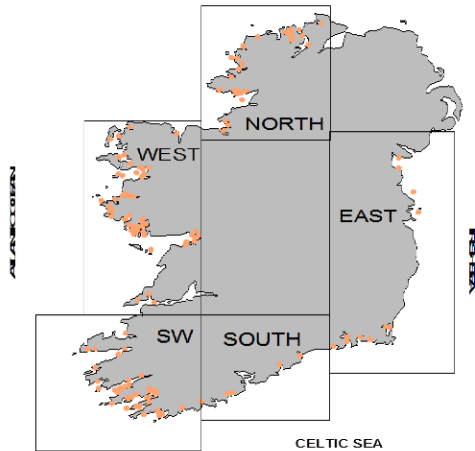
Comments

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

Most up to date available satellite data

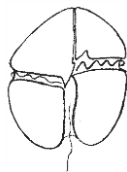


NW coast (M4) Data unavailable
SW coast (M3) Data unavailable
SE coast (M5) Data unavailable



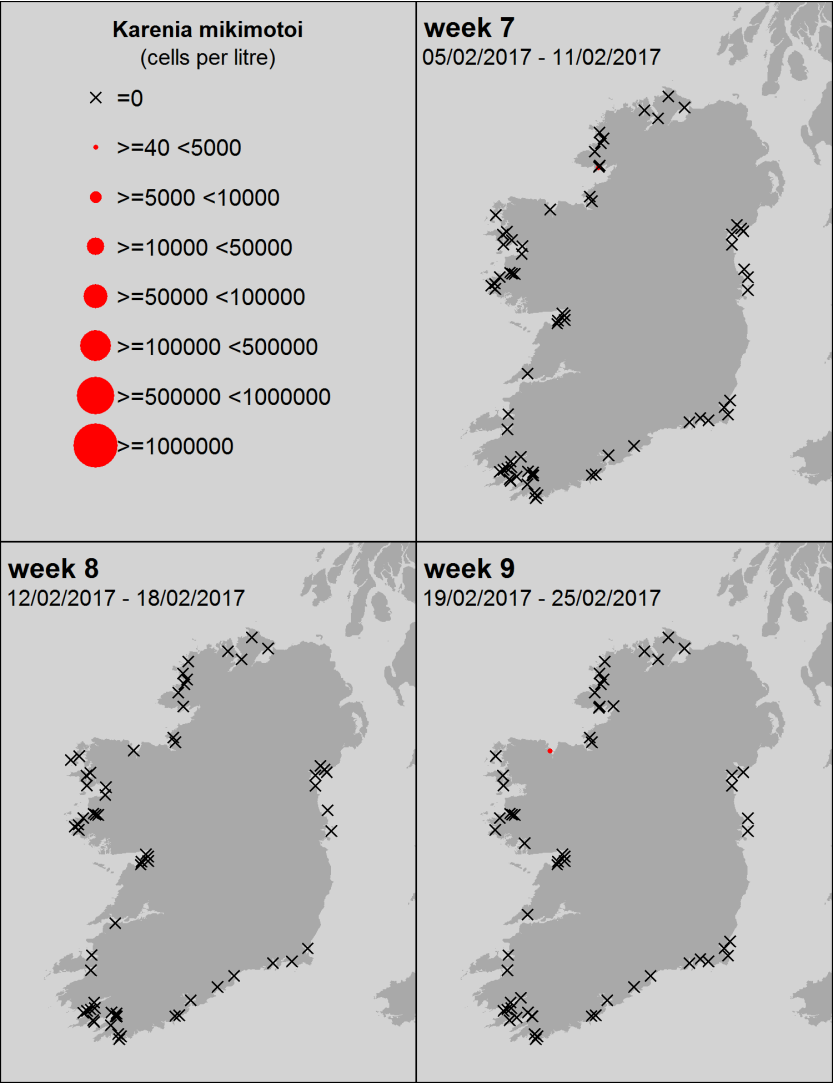
What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Skeletonema spp.	292000
2	east	Pennate diatom	3000
3	east	Thalassiosira 20-50um	3000
4	east	Thalassiosira spp.	2000
5	east	Fragilaria spp.	1000
1	north	Pennate diatom	42000
2	north	Asterionellopsis spp.	17000
3	north	Cylindrotheca closterium/ Nitzschia longissima	14000
4	north	Skeletonema spp.	12000
5	north	Attheya sp.	5000
1	south	Pennate diatom >50um	22000
2	south	Paralia sp.	13000
2	south	Navicula spp. <25um	13000
3	south	Navicula spp. 20-50 um	9000
3	south	Thalassiosira nordenskioldii	9000
3	south	Skeletonema costatum	9000
1	southwest	Navicula spp. 20-50 um	67000
2	southwest	Euglena/Eutreptiella spp.	27000
3	southwest	Thalassiosira nordenskioldii	26000
4	southwest	Skeletonema costatum	24000
5	southwest	Skeletonema spp.	17000
1	west	Euglena/Eutreptiella spp.	88000
2	west	Azadinium/heterocapsa spp.	44000
3	west	Skeletonema spp.	13000
4	west	Pennate diatom	10000
5	west	Cylindrotheca closterium/ Nitzschia longissima	5000



Karenia mikimotoi
(old name: *Gyrodinium aureolum*)

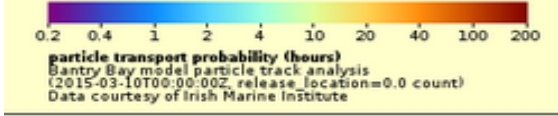
A *Karenia mikimotoi* bloom
is NOT expected this week



SOUTHWEST: Bantry Bay

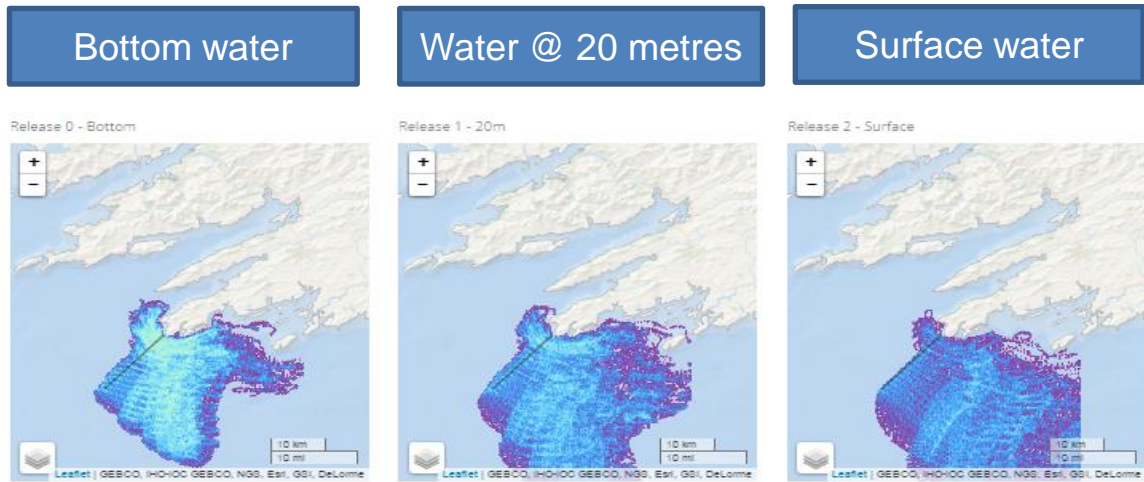
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

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



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



Similar to last week with strong water movement in offshore exposed areas in an east south east direction at all depths.

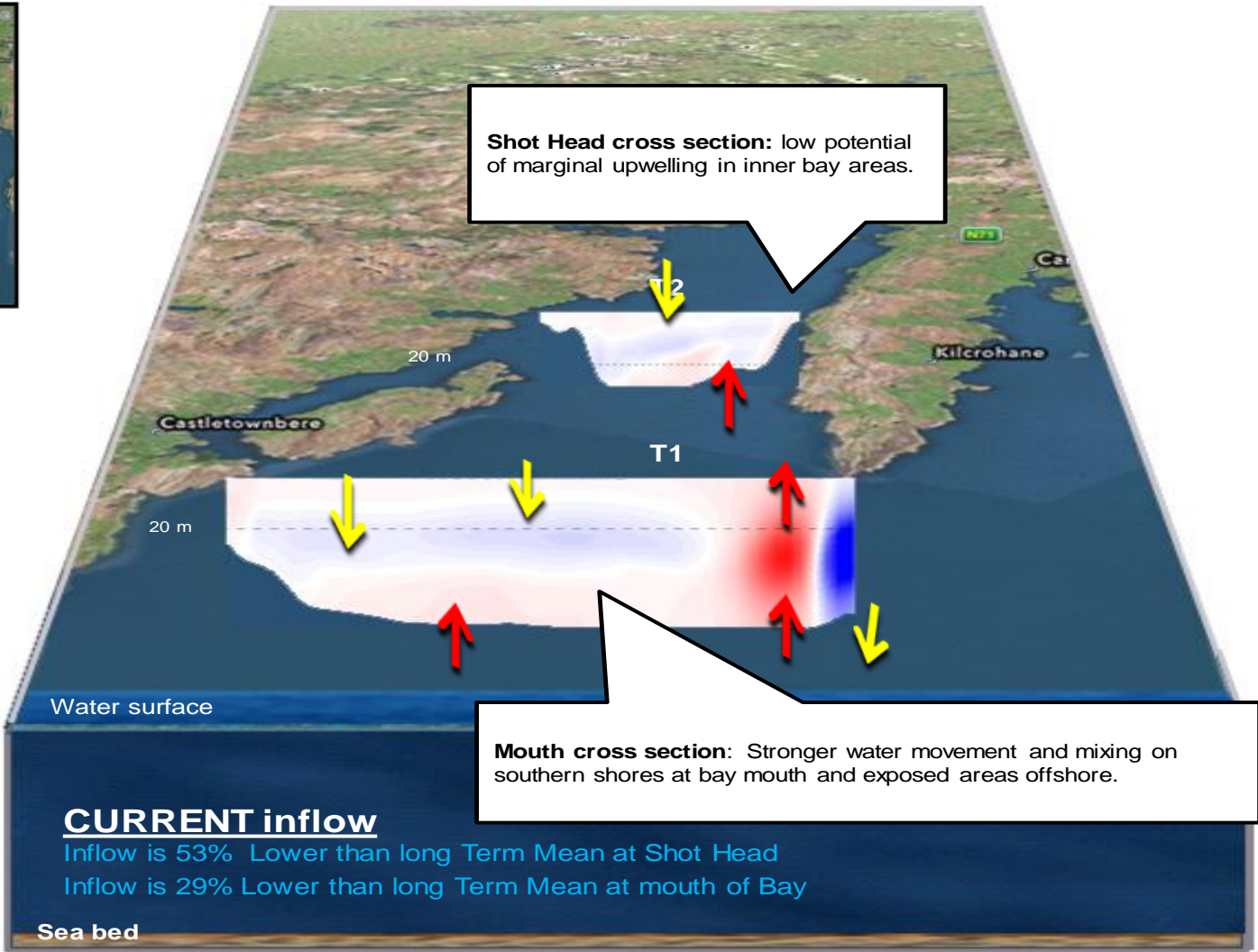
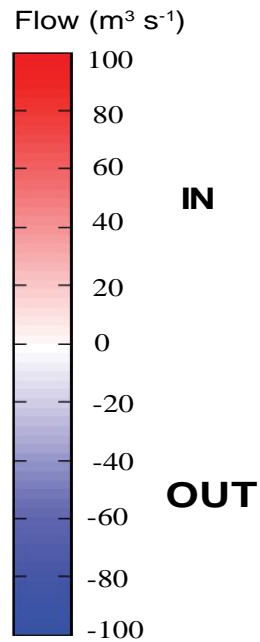


Low water movements in sheltered inner bay areas with only slight possibilities of inner bay incursions at any depth. Strong offshore exposed areas' movement in south eastern direction.

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

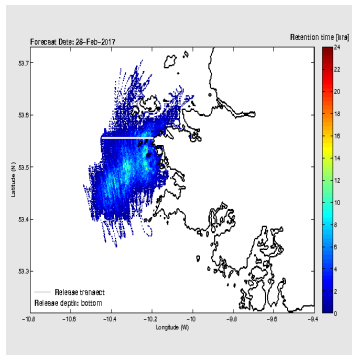
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** i.e. white lines off Aughrus Point and the Mouth of Killary Harbour, and **water depths** (bottom, 20 metres and surface)

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

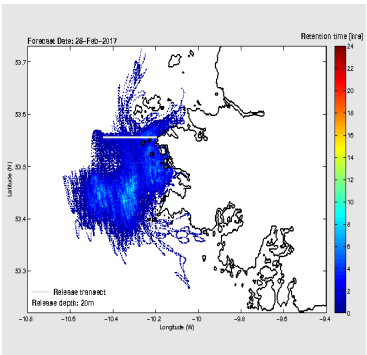


0.2 0.4 1 2 4 10 20 40 100 200
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

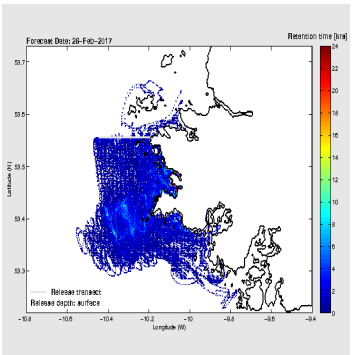
Bottom water



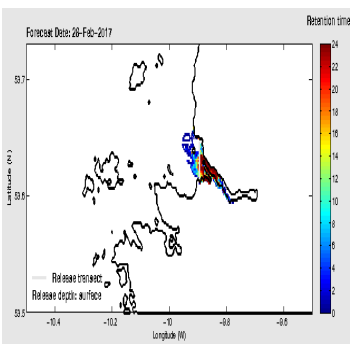
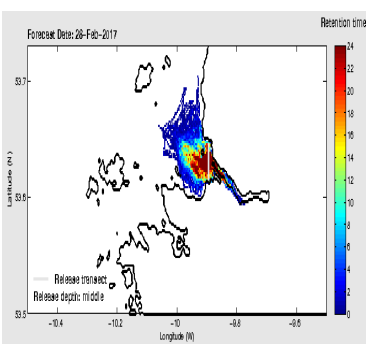
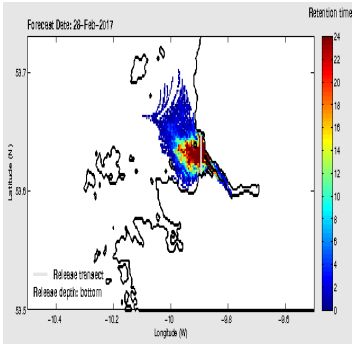
Water @ 20 metres



Surface water



Strong south and south eastern water movement and mixing at all depths in offshore areas.



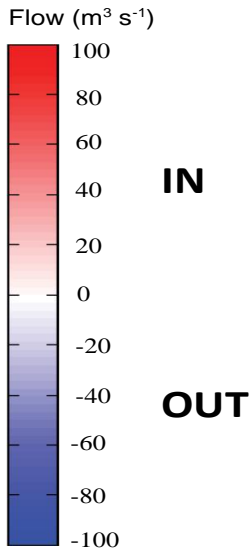
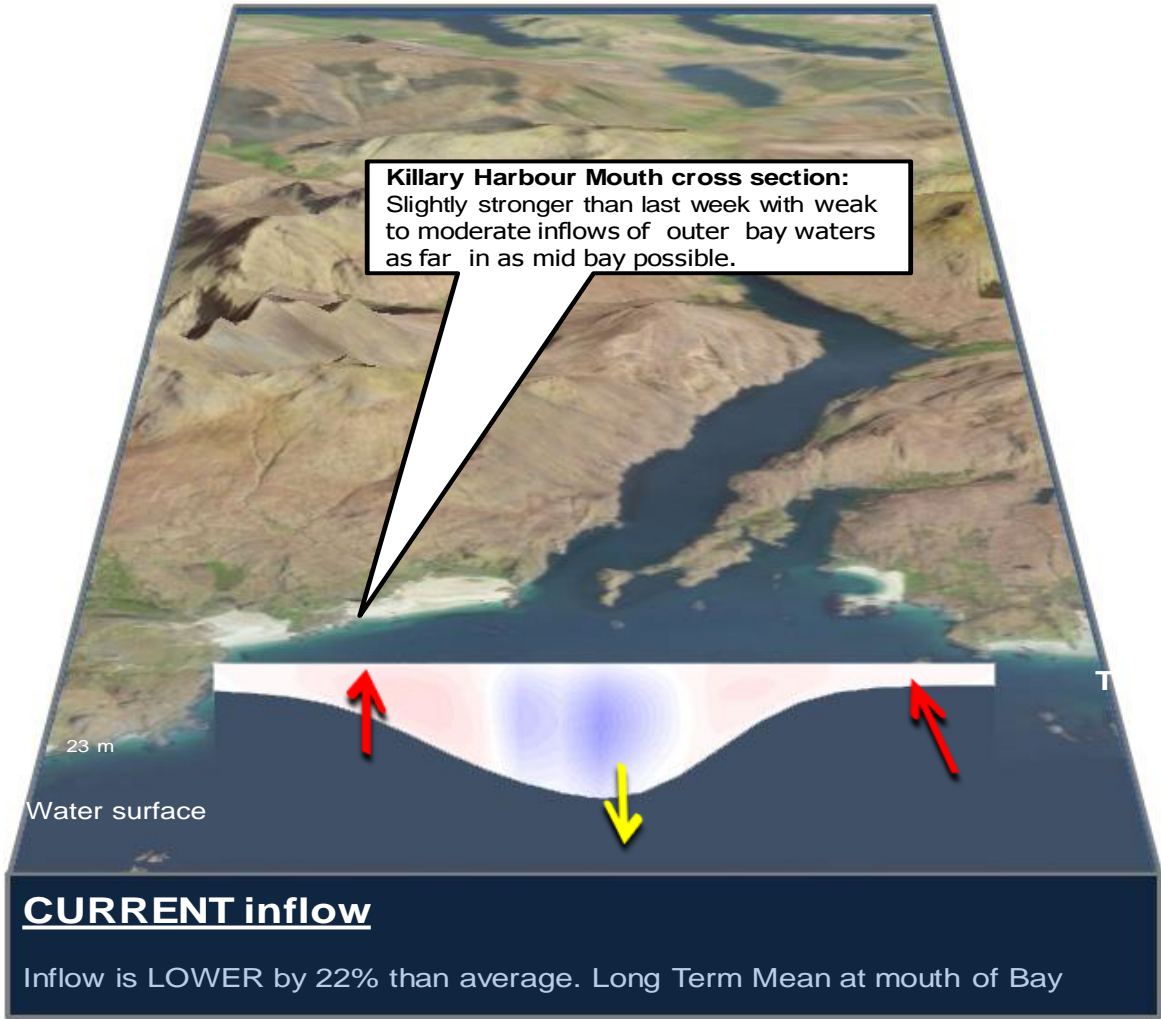
Potential at all depths for well mixed outer waters to enter and remain in inner bay areas.

Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour

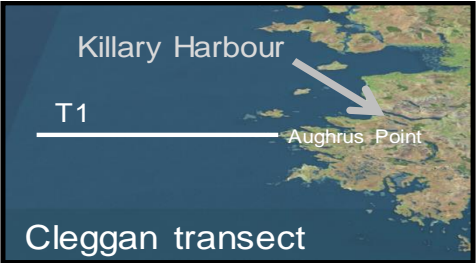


Forecast for next 3 days

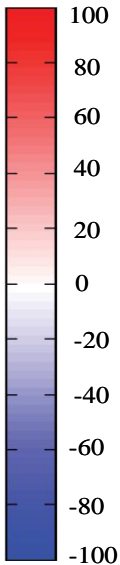


West Coast - 3 day estimated water flows along a transect off Aughrus Point

Forecast for next 3 days



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



**northward
flow**

**southward
flow**

Depth

