

Ireland: Predictions

ASP event: Low

AZP event: Low to 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: *Pseudo nitzschia* species are very slowly increasing in distribution and cell concentrations around the coastline. All sites remain clear of toxins. This trend would be standard for this time of year historically.

AZP: *Azadinium* type species' levels continue to fluctuate with the number of sites with any toxin presence having approximately halved from last week. Issues with this toxin can occur suddenly and acutely .Caution is advised.

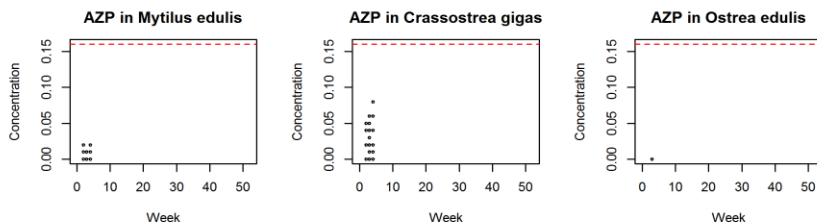
DSP: This is currently a low risk period for early DSP events. All sites are currently below regulatory limits .

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

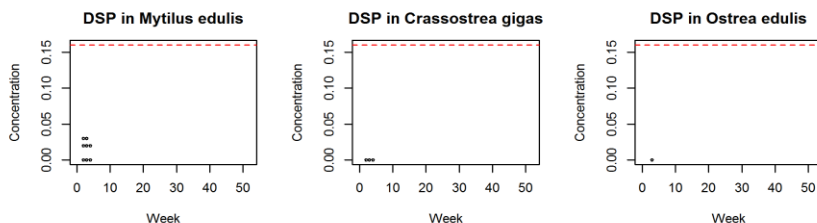
Please note: We will be updating the format of this bulletin throughout the year in an active effort to increase end user applicability and incorporate developing technologies. All feedback is welcome at Joe.Silke@Marine.ie .

National Monitoring Programme

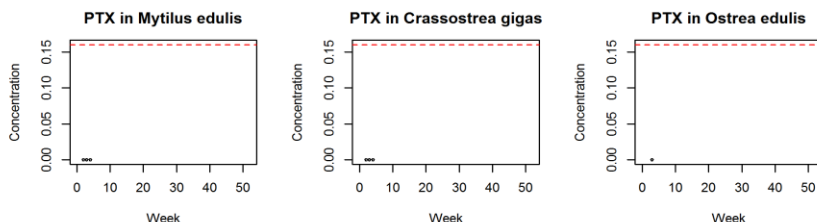
AZP



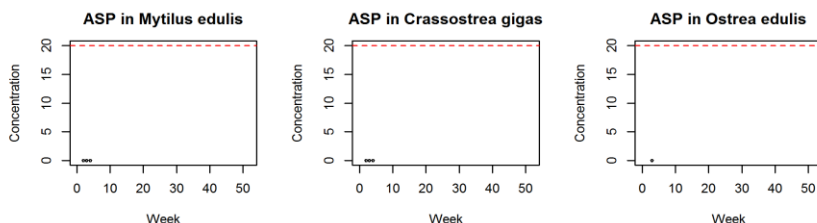
DSP



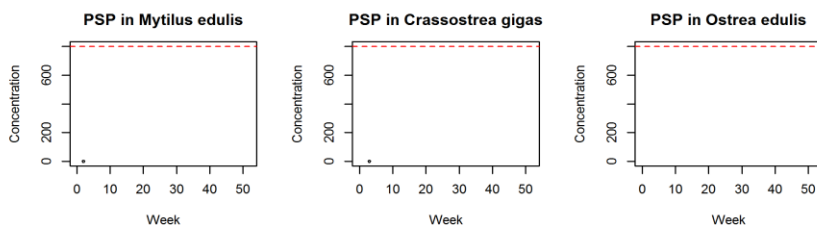
PTX



ASP



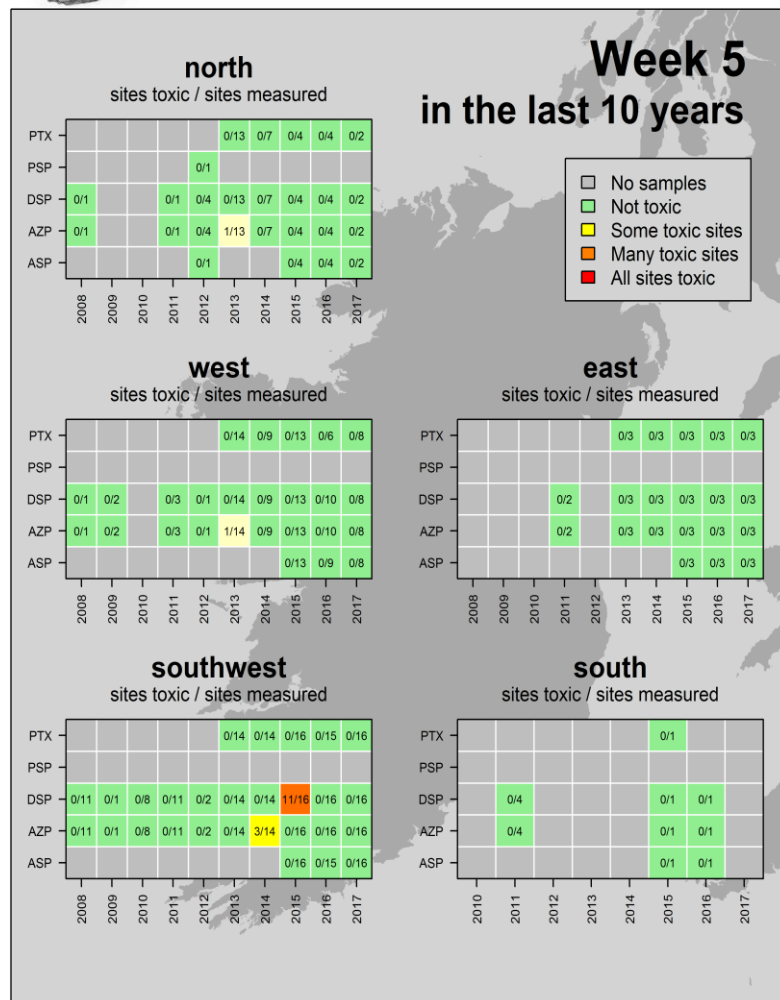
PSP



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



HISTORIC TRENDS



ASP events: mid-March to early May

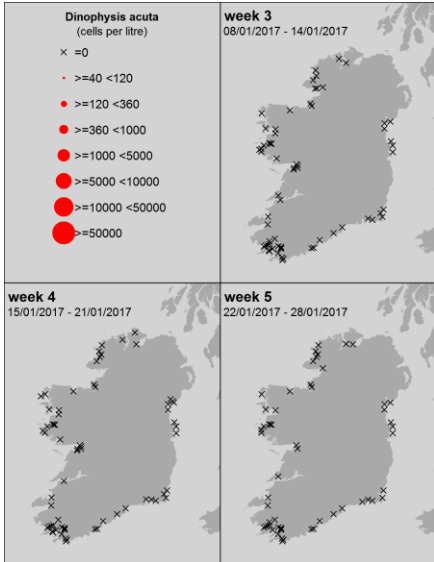
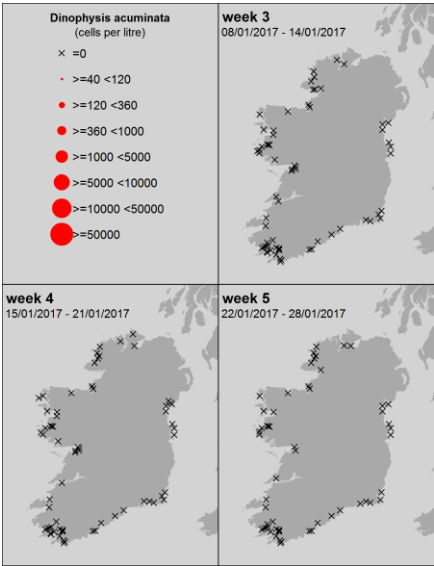
AZP events: April to December

DSP events: May to December

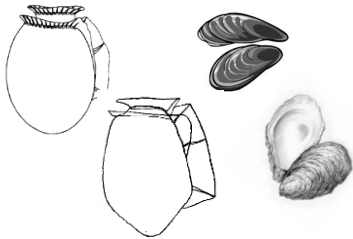
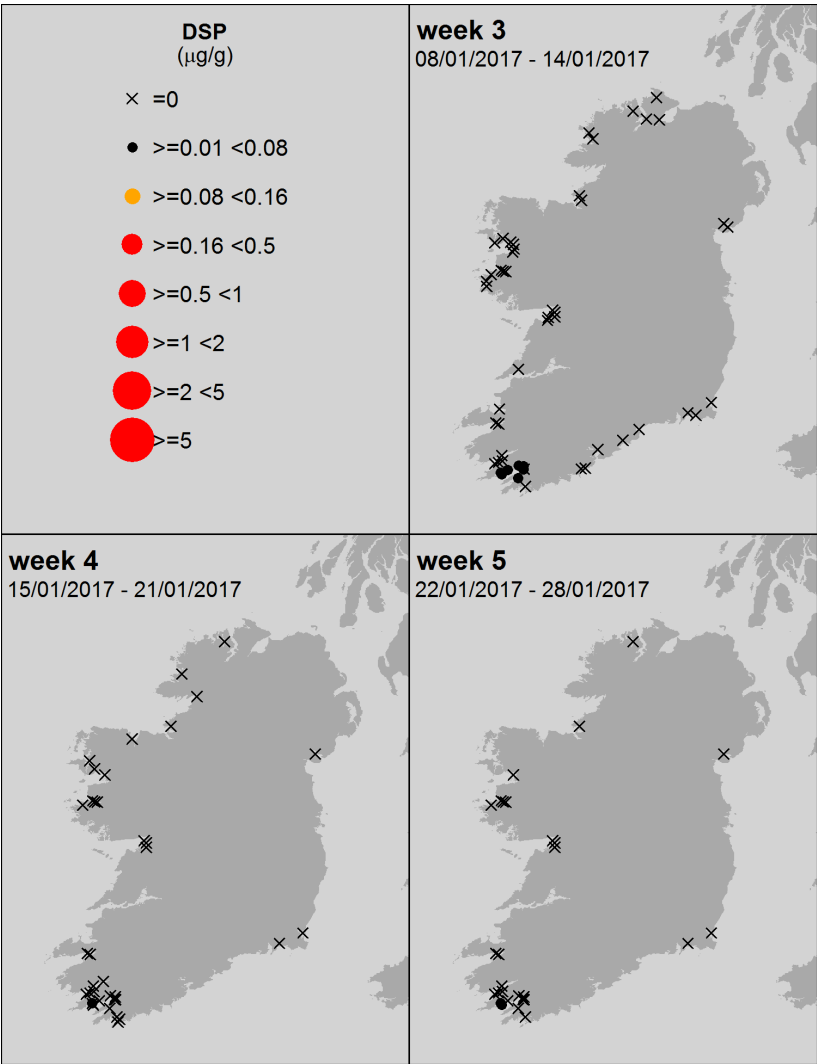
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

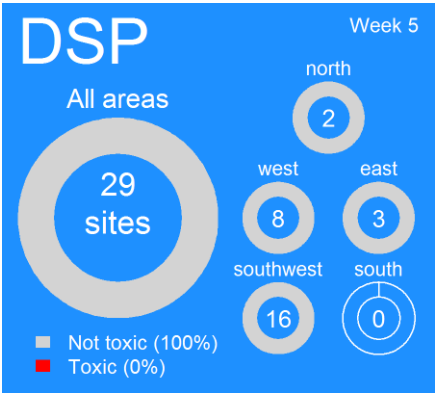
Phytoplankton species – 3 wks



All levels of DSP biotoxin recorded- 3 wks



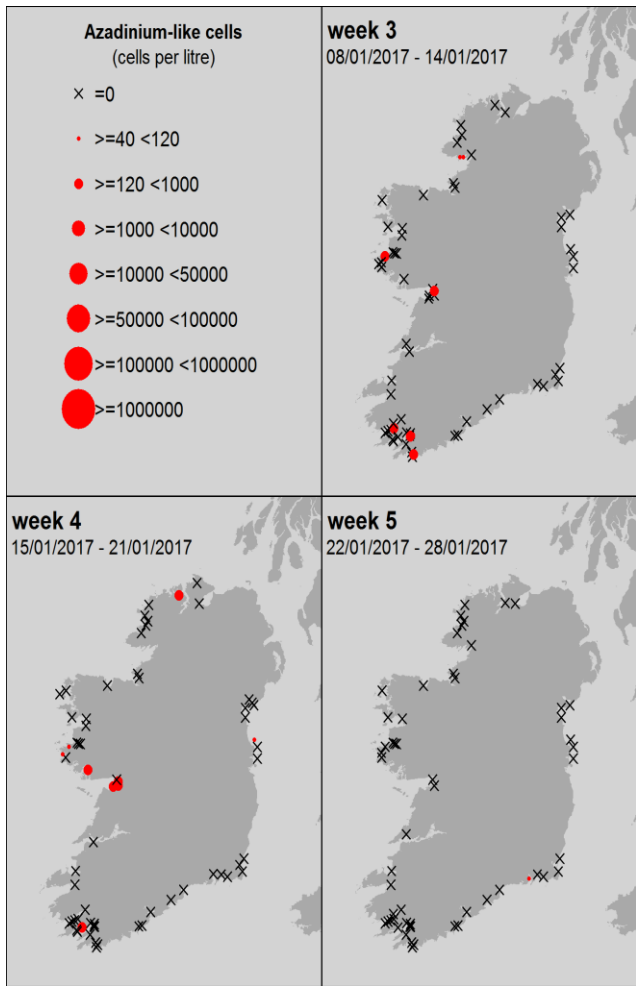
Current closures levels
≥ DSP 0.16 µg/g



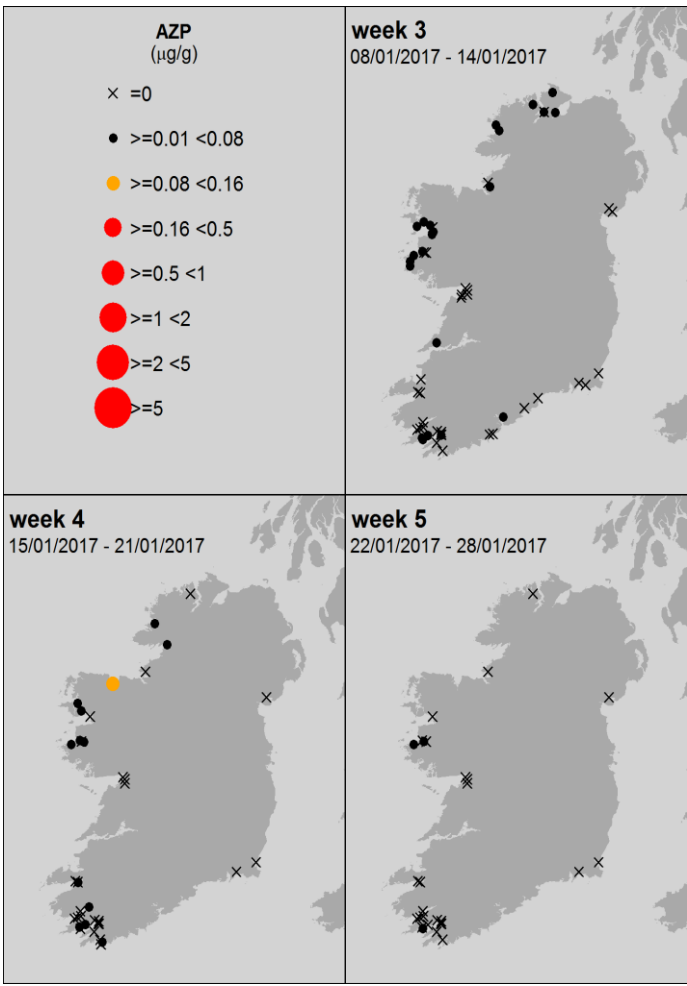
Comments
Very low cell levels and DSP detected in 1 or 2 sites only. No closures currently expected.

AZP and Azadinium like species current trends

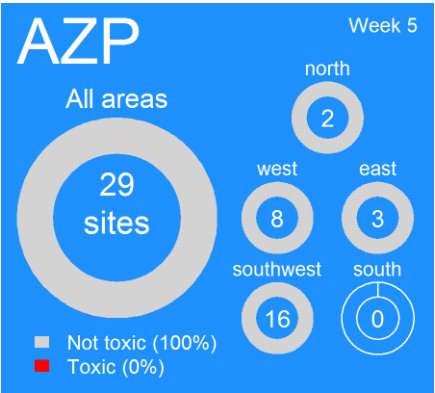
Phytoplankton species – 3 wks



All levels of AZP biotoxin recorded - 3 wks



Current closures levels
≥ AZP 0.16 µg/g

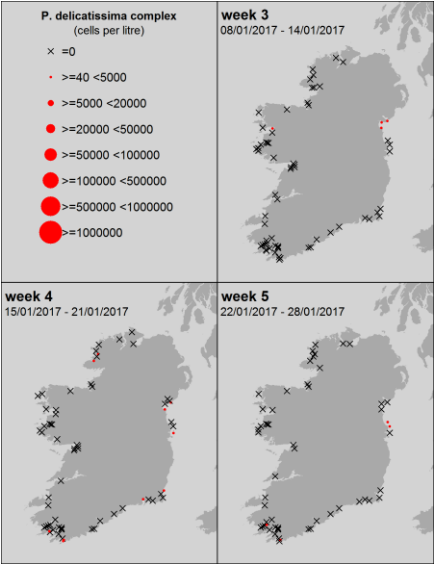
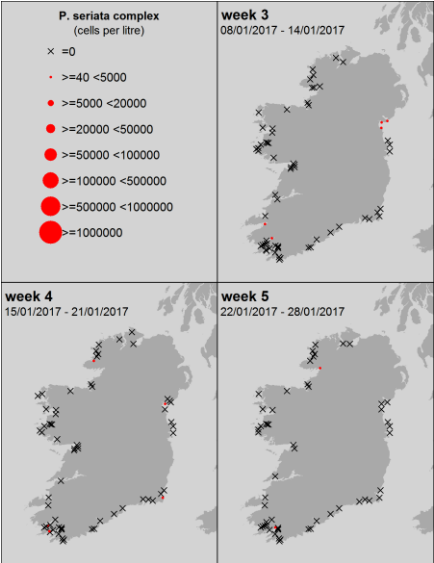


Comments

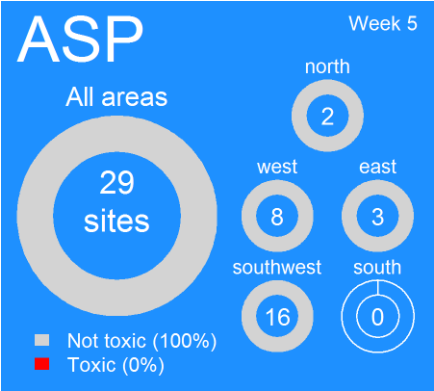
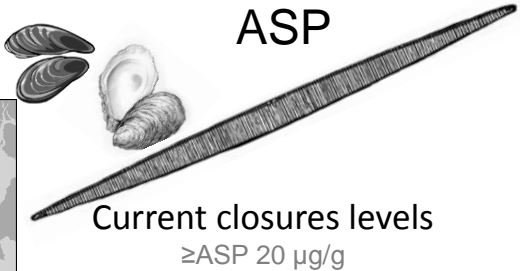
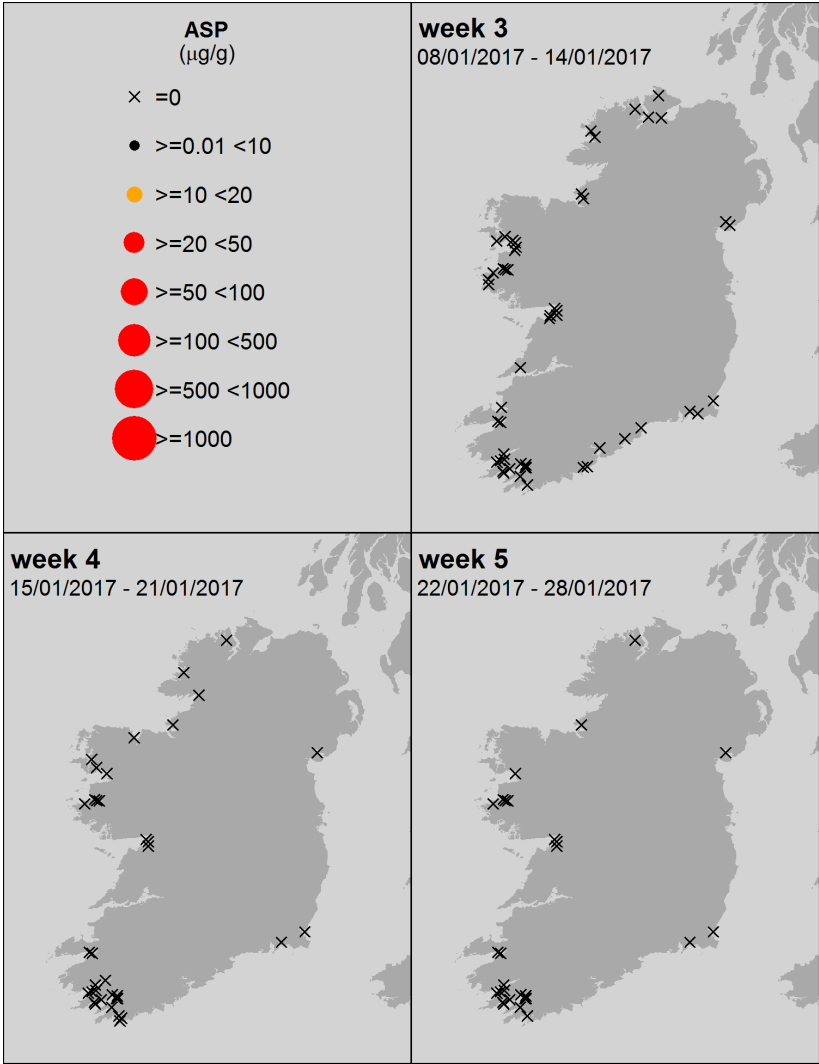
Levels fluctuating weekly. Lower presence this week compared to last week .

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks

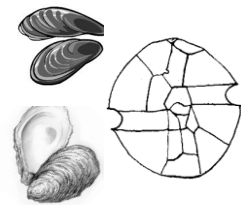


All levels of ASP biotoxin recorded - 3 wks

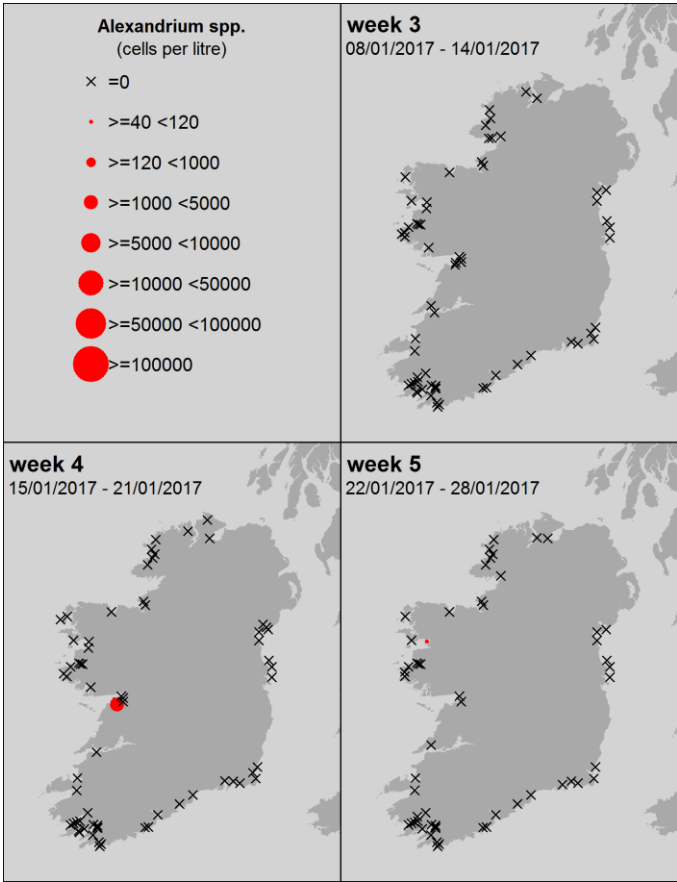


Comments
Slow and steady increase in spread and presence of species but well below toxin impact levels at this point.

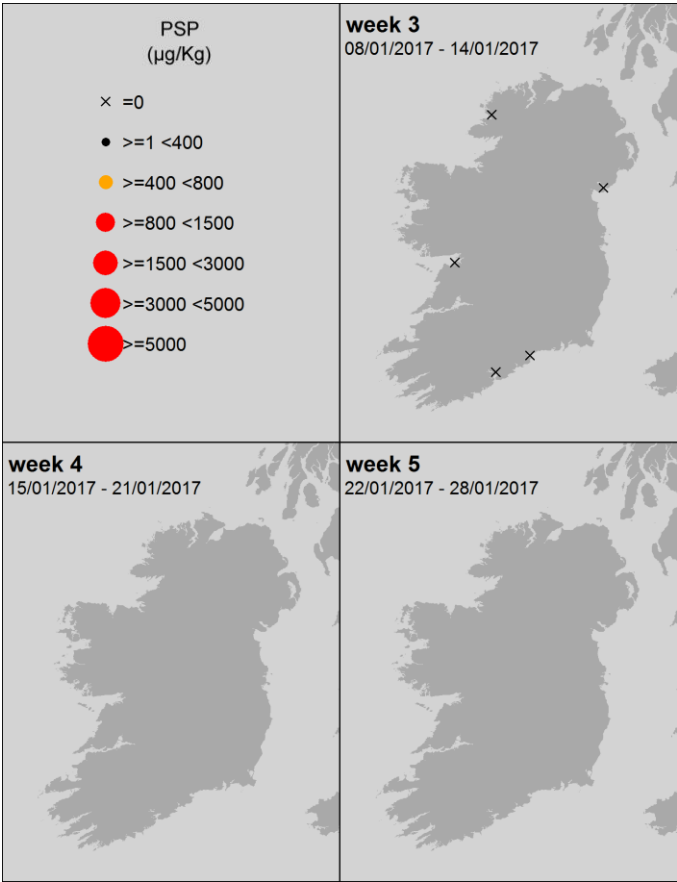
PSP and Alexandrium sp. current trends



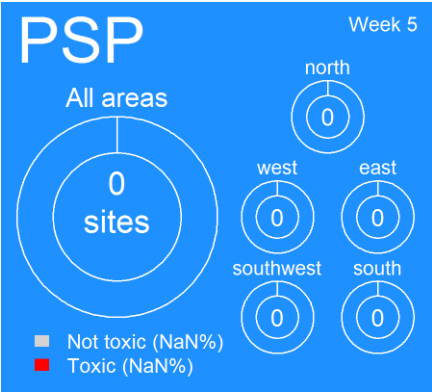
Phytoplankton species – 3 wks



All levels of PSP biotoxin recorded - 3 wks

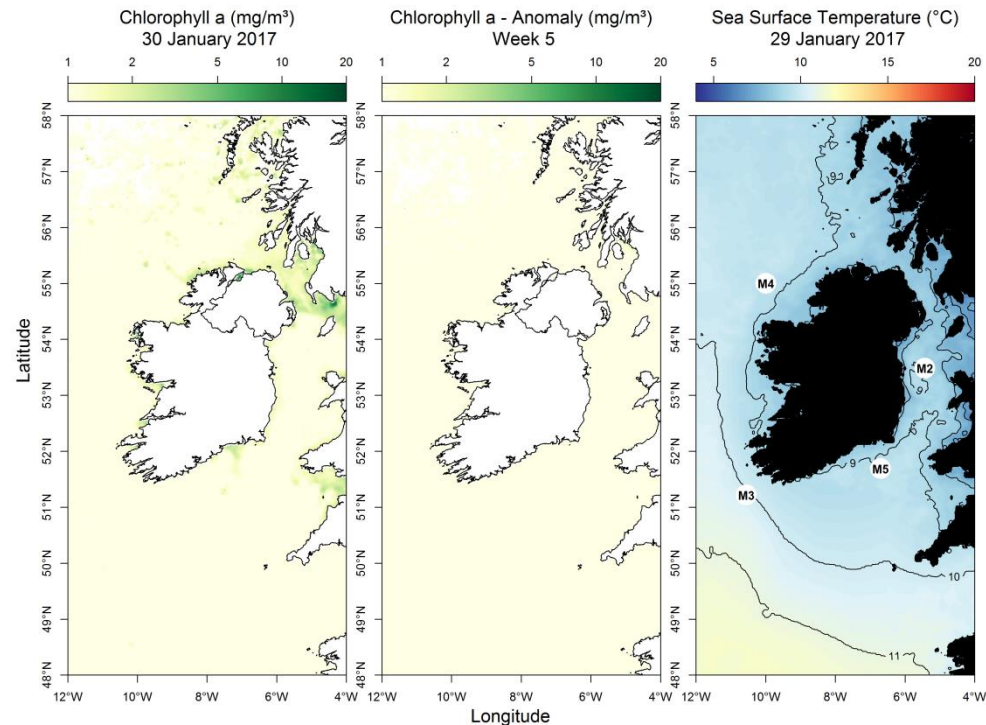


Current closures levels
≥ PSP 800 µg/Kg



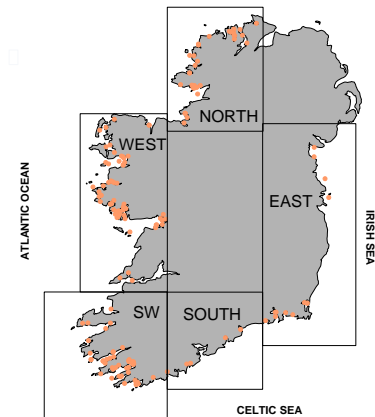
Comments
No closures and negligible likelihood of bloom at this time.

Most up to date available satellite data



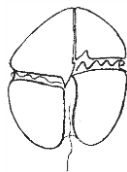
SST (°C) anomaly for last week:
Data taken from the Irish data buoy network where the anomaly is the weekly difference in SST compared to the long term mean (~ 10 yrs)

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



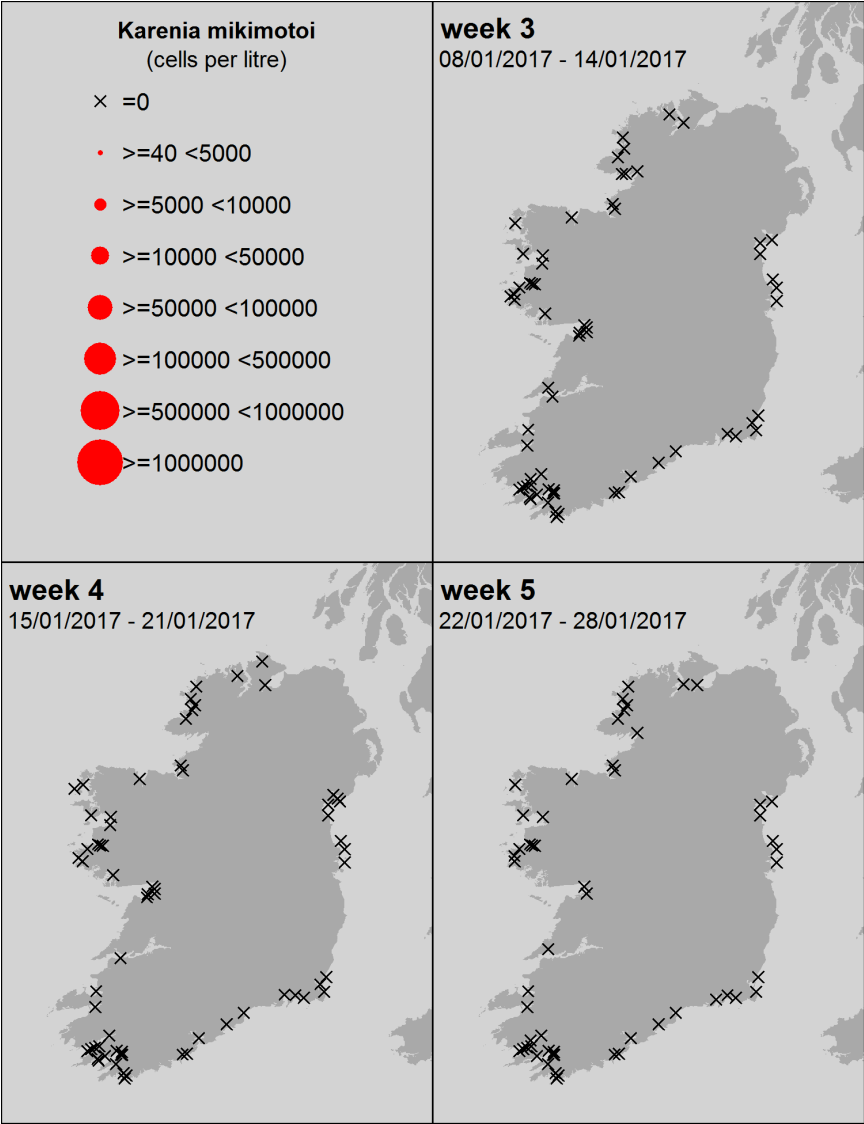
What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Pennate diatom <20um	73000
2	east	Navicula spp. <25um	61000
3	east	Nitzschia spp. (small)	44000
4	east	Grammatophora spp.	5000
5	east	Paralia sulcata	4000
1	north	Pennate diatom	3000
1	north	Skeletonema spp.	3000
3	north	Asterionellopsis spp.	2000
4	north	Thalassiosira 20-50um	1000
5	north	Paralia sp.	1000
1	south	Pennate diatom >50um	23000
2	south	Skeletonema costatum	6000
3	south	Euglena/Eutreptiella spp.	5000
4	south	Bacteriastrium spp.	4000
5	south	Ciliates	2000
1	southwest	Navicula spp. 20-50 um	26000
2	southwest	Pennate diatom 20-50um	15000
3	southwest	Skeletonema costatum	15000
4	southwest	Nitzschia spp. (small)	13000
5	southwest	Skeletonema spp.	11000
1	west	Skeletonema spp.	10000
2	west	Paralia sp.	4000
3	west	Fragilaria spp.	2000
4	west	Centric Diatom	2000
5	west	Thalassionema spp.	1000



A *Karenia mikimotoi* bloom
is NOT expected this week

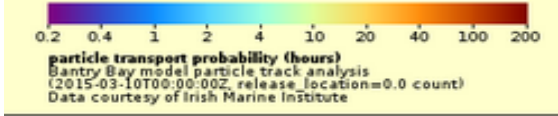
Karenia mikimotoi
(old name: *Gyrodinium aureolum*)



SOUTHWEST: Bantry Bay

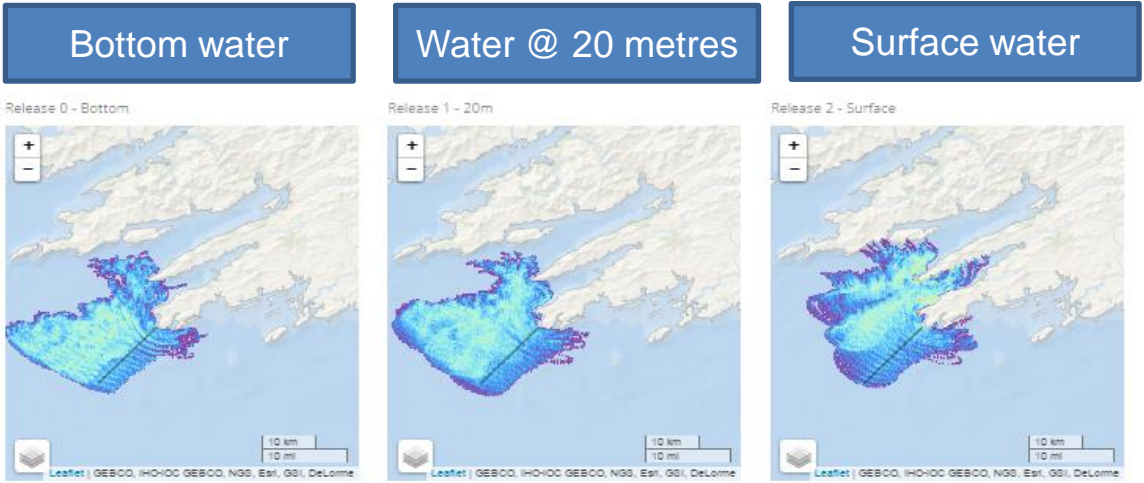
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

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 prediction patterns to last week with water movement predominantly in a mixed Northerly direction at all depths. Inner bay incursions possible from outer bay areas.



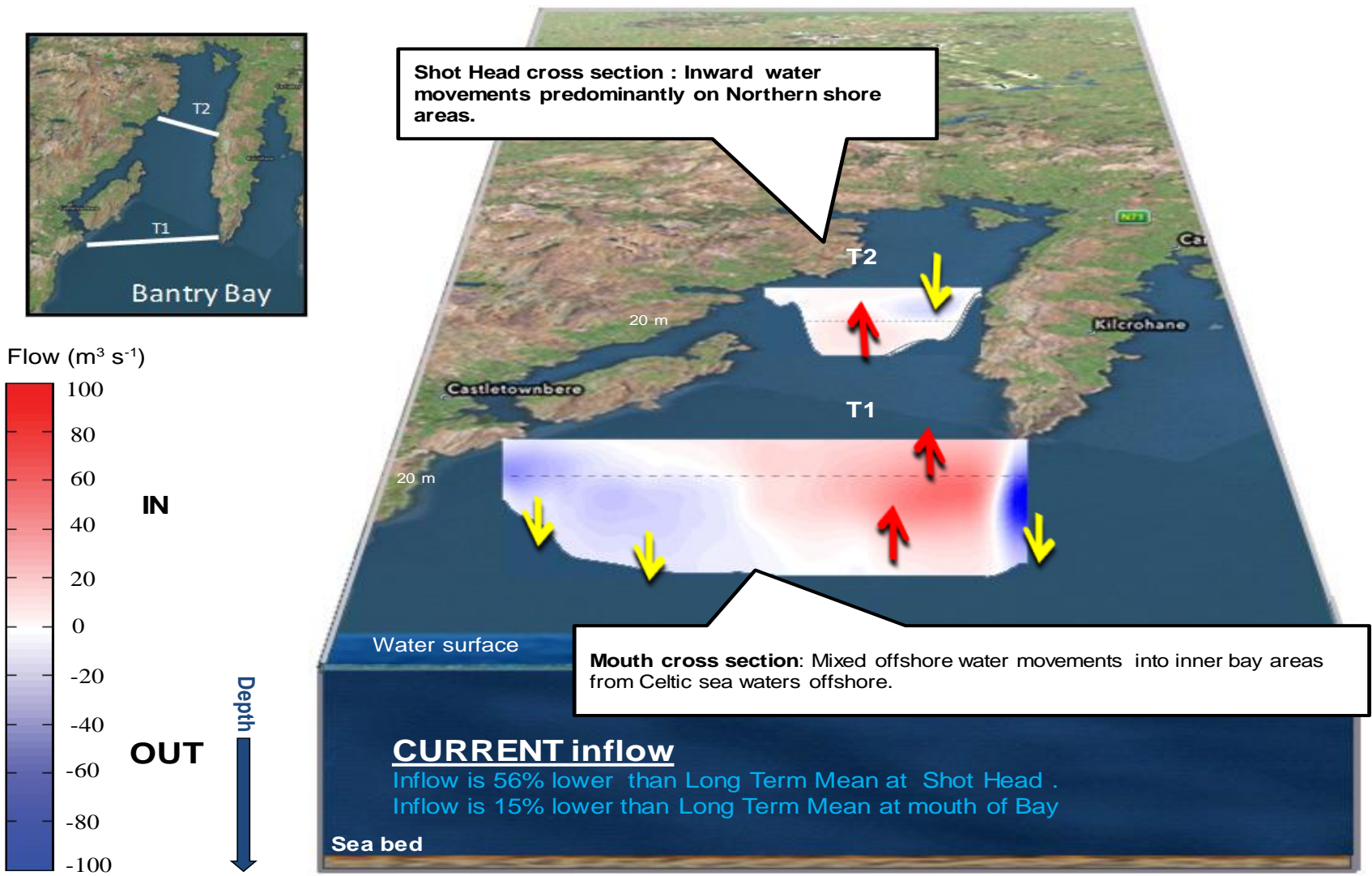
Inner bay incursions potentially possible, particularly at surface and shallower depths while deeper waters indicating more north westerly outer bay movement. Some down welling in inshore areas possible.

Go to <http://vis.marine.ie/particles/> to view daily forecasts

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

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

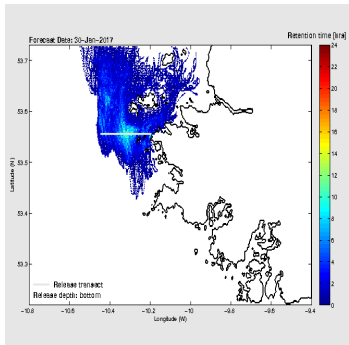


0.2 0.4 1 2 4 10 20 40 100 200

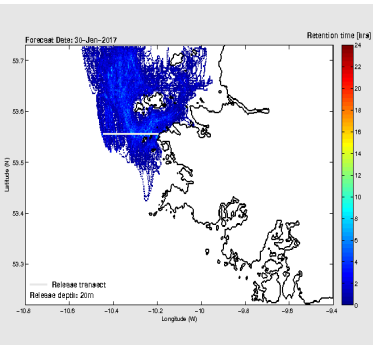
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

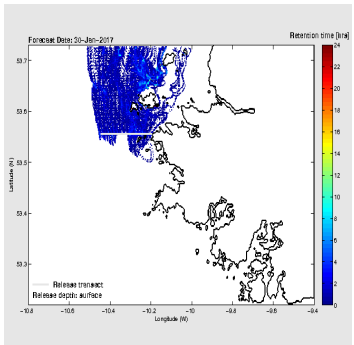
Bottom water



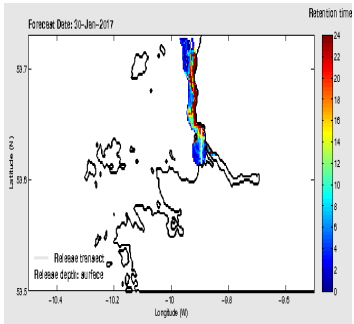
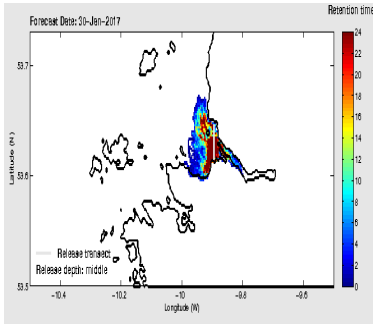
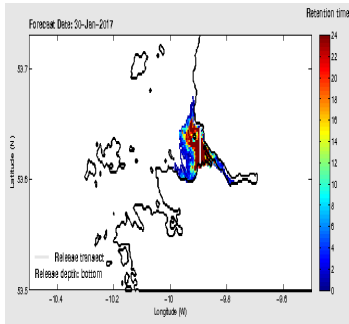
Water @ 20 metres



Surface water



Similar to last week – Water movement in a predominantly mixed northerly direction allowing for low levels of off shore waters to reach exposed shore areas at all depths.



Bottom and deeper water movement predicted to have potential to move in shore with surface waters moving in a more offshore northerly direction potentially allowing for some upwelling as far in as middle bay zones.

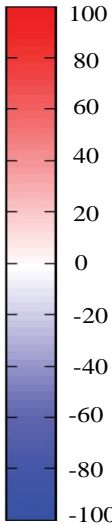
Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days

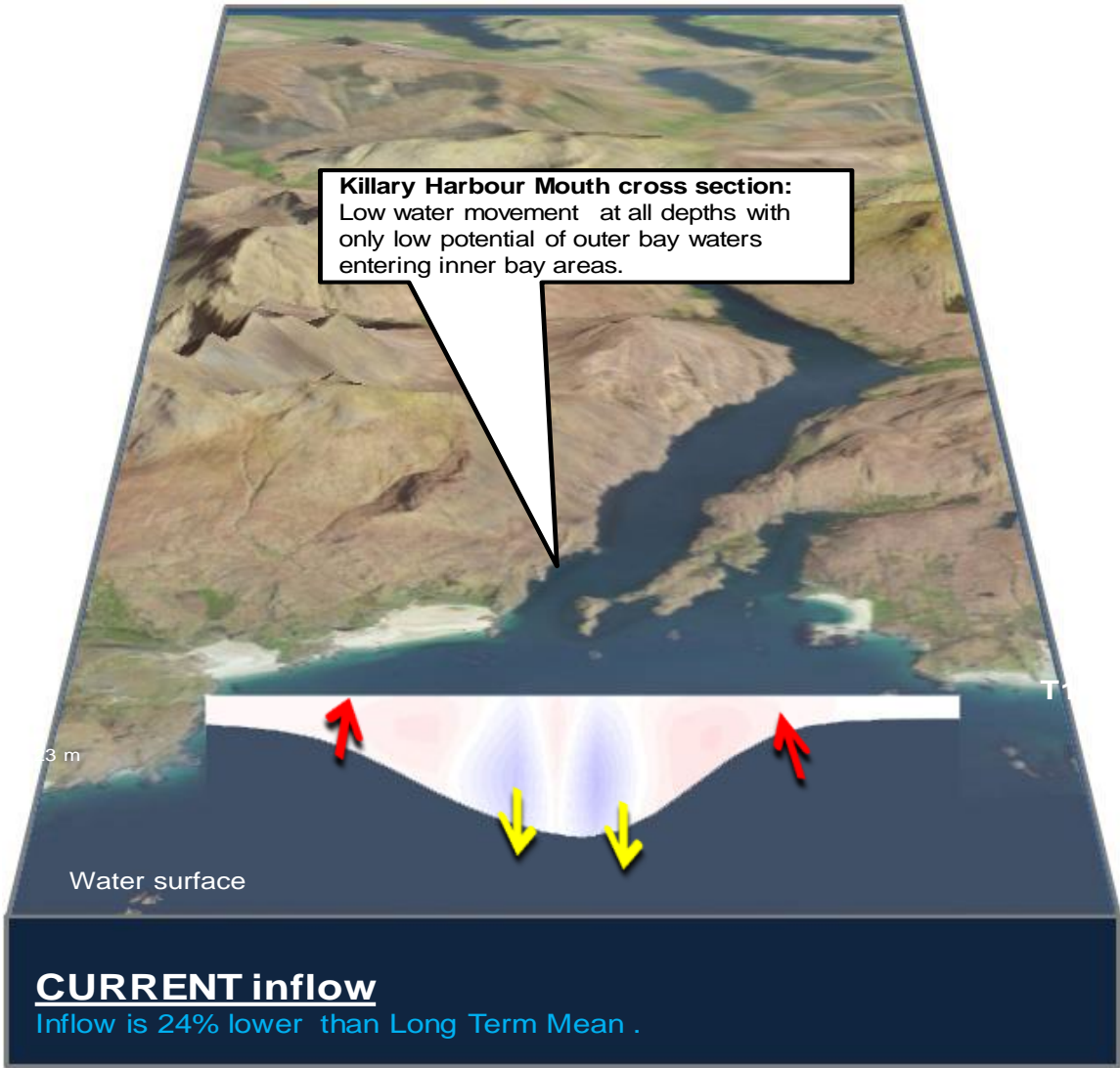
Flow ($\text{m}^3 \text{s}^{-1}$)



IN

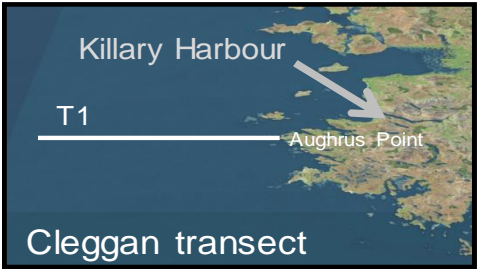
OUT

Depth

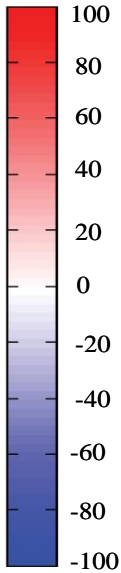


West Coast - 3 day estimated water flows along a transect off Aughrus Point

Forecast for next 3 days



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



northward
flow

southward
flow

Depth

