

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: Currently there appears to be a steady weekly pattern of *Psuedo nitzschia* species 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 weekly, with the number of sites with any toxin presence having increased from last week. Issues with this toxin can occur suddenly and acutely. Caution is advised.

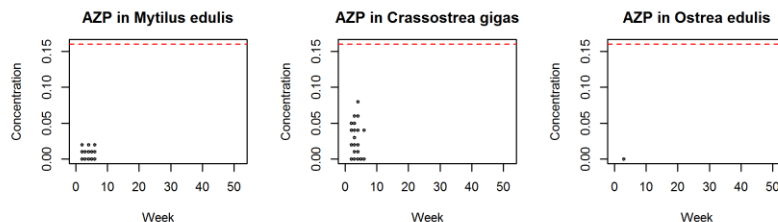
DSP: This is currently a low risk period for early DSP events. All sites are currently below regulatory limits .

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

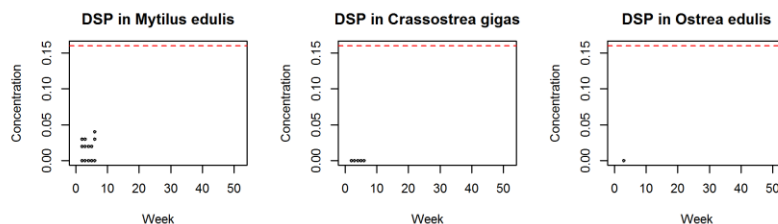
Please note: We will be updating the format of this bulletin throughout the year in an active effort to increase end user applicability and incorporate developing technologies. All feedback is welcome at Joe.Silke@Marine.ie .

National Monitoring Programme

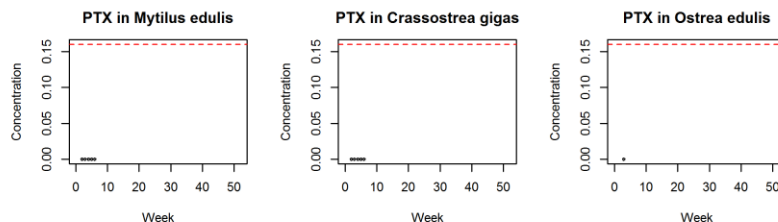
AZP



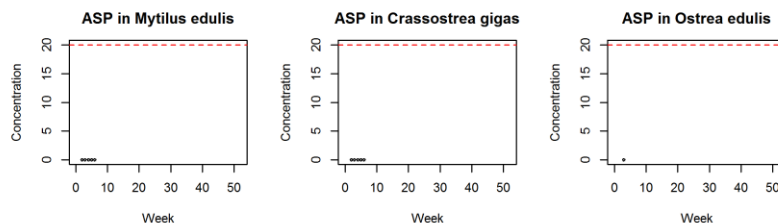
DSP



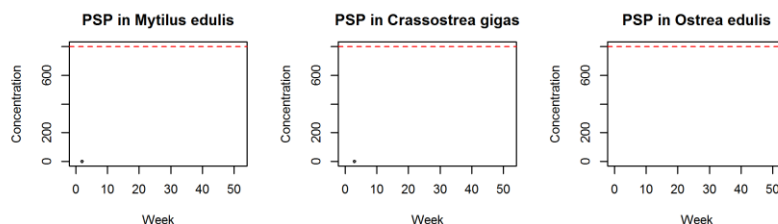
PTX



ASP



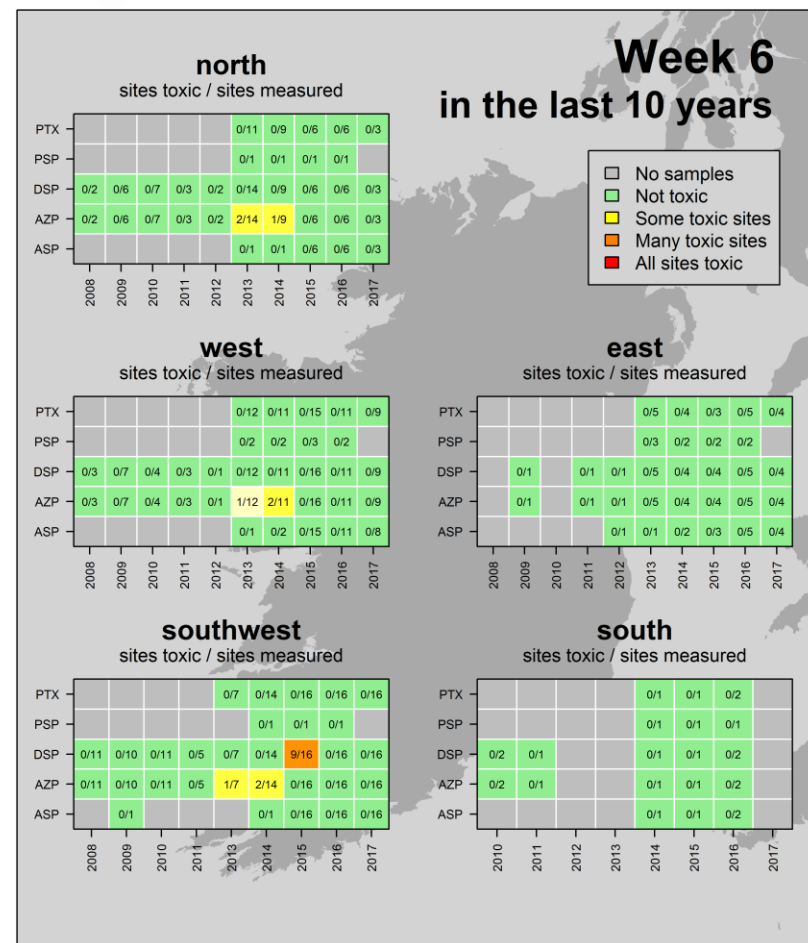
PSP



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



HISTORIC TRENDS



ASP events: mid-March to early May

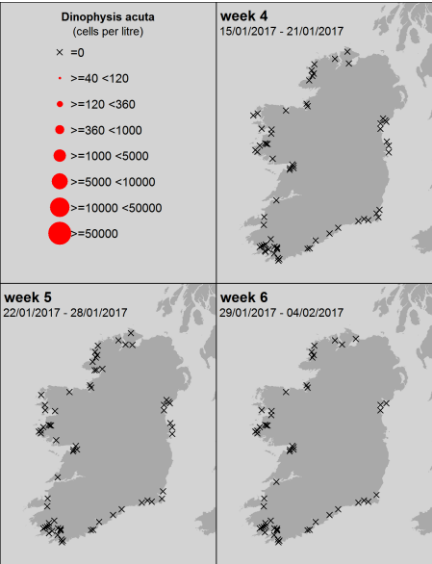
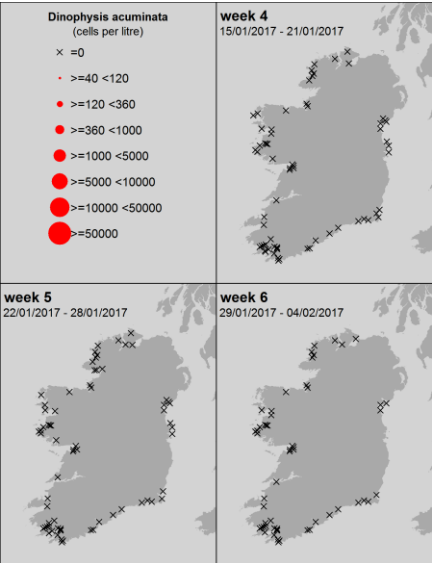
AZP events: April to December

DSP events: May to December

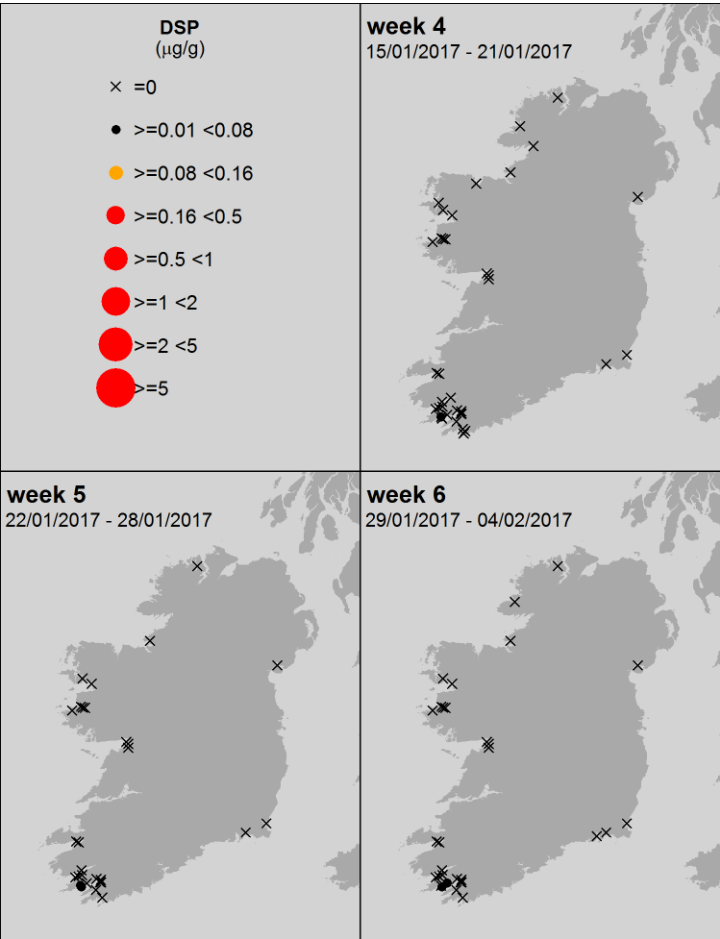
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

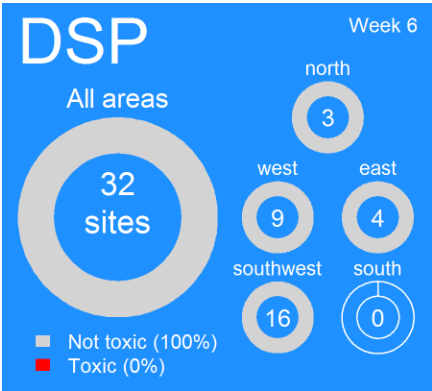
Phytoplankton species – 3 wks



All levels of DSP biotoxin recorded- 3 wks



Current closures levels
≥ DSP 0.16 µg/g



Comments

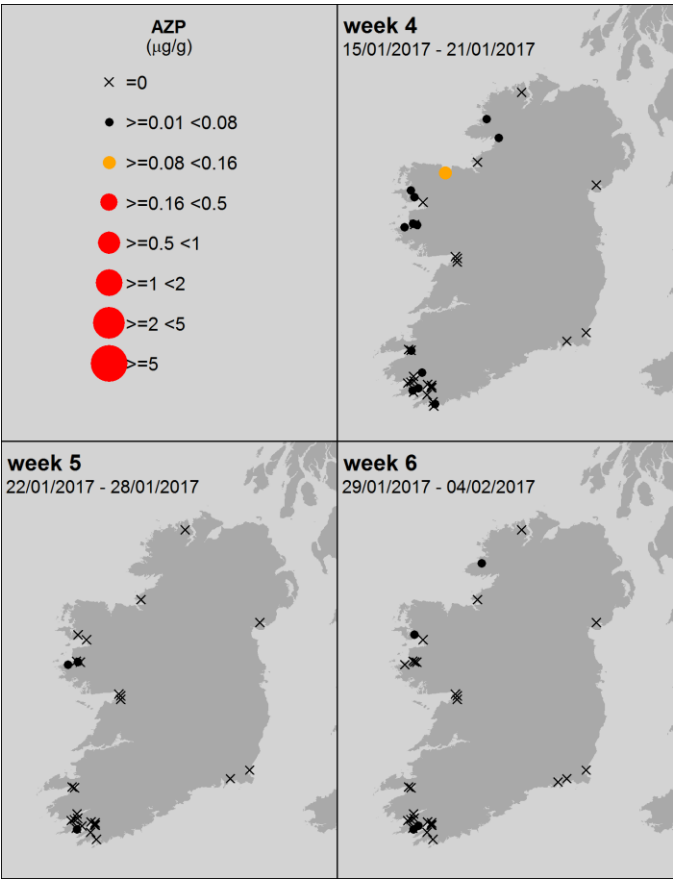
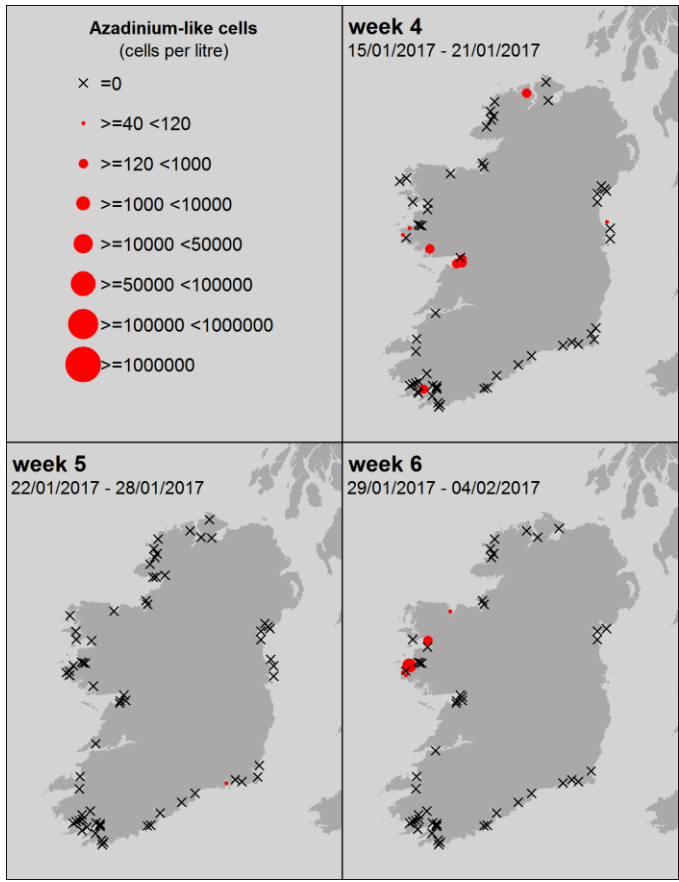
Same as last week -
Very low cell levels
and DSP detected in 1
or 2 sites only. No
closures currently
expected.

AZP and Azadinium like species current trends



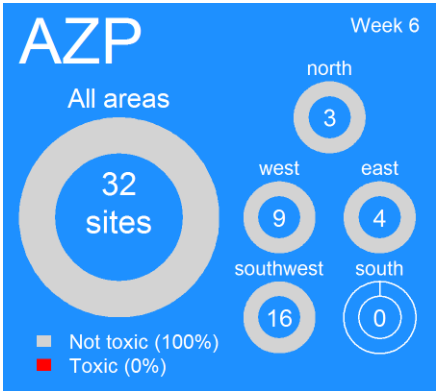
Phytoplankton species – 3 wks

All levels of AZP biotoxin recorded - 3 wks



Current closures levels

$\geq \text{AZP } 0.16 \mu\text{g/g}$

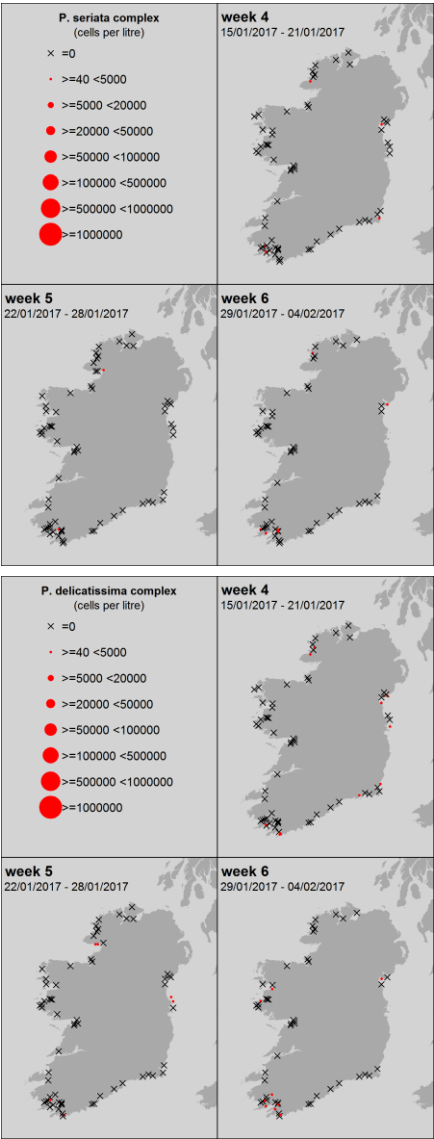


Comments

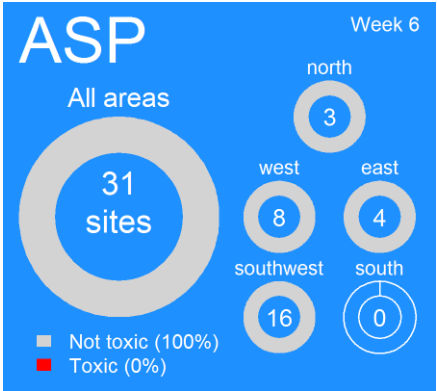
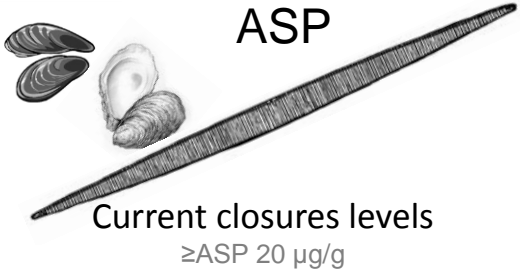
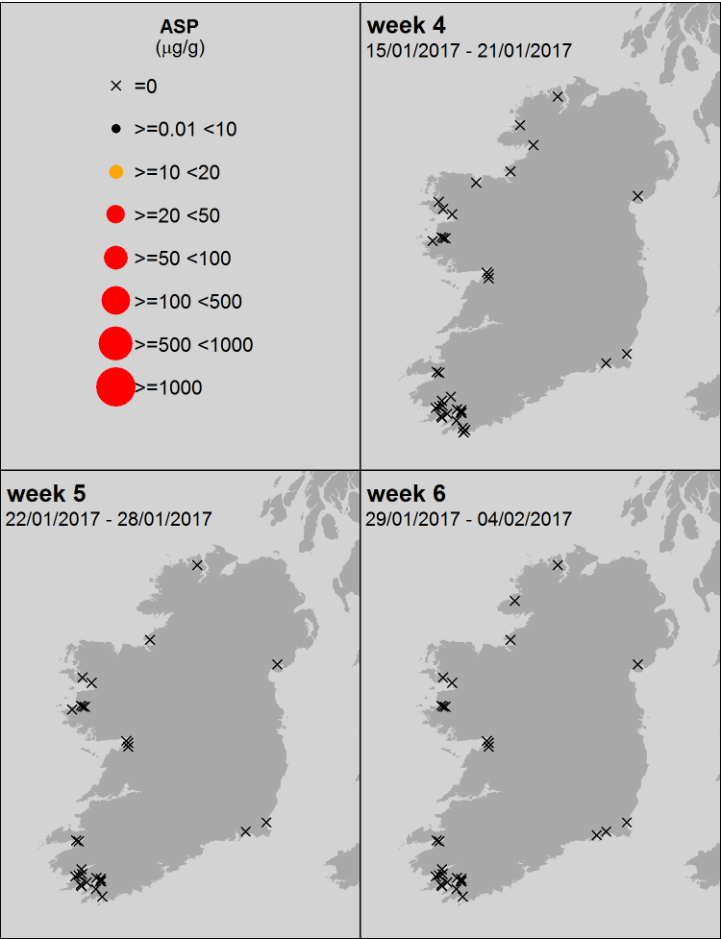
Pattern of all Levels fluctuating weekly. Slight increase in phytoplankton potential spread but all sites still well below biotoxin limits.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks



All levels of ASP biotoxin recorded - 3 wks

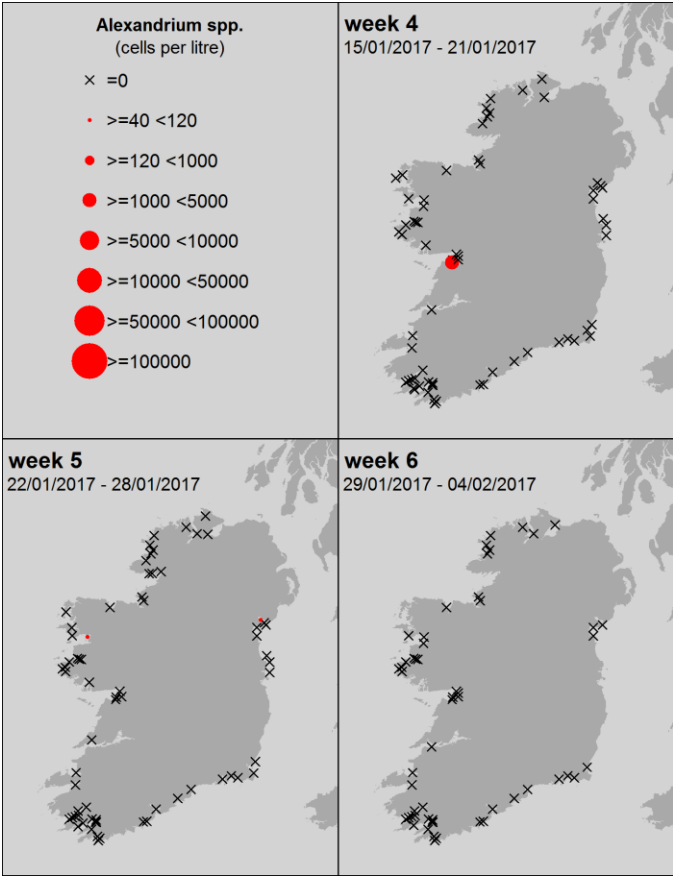


Comments

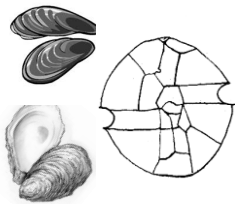
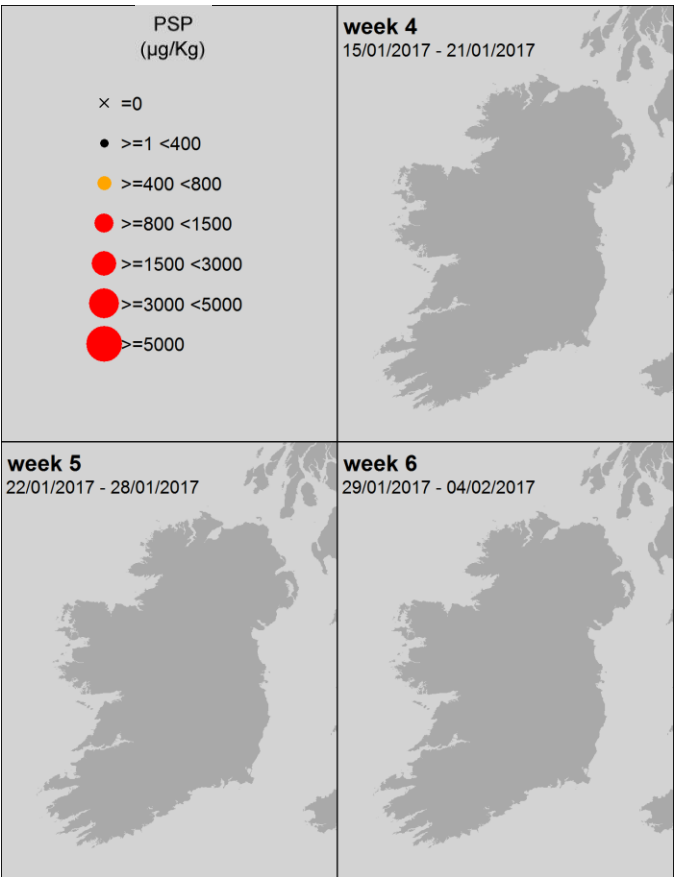
Very slow steady spread and increase in phytoplankton cells but all sites tested still well below biotoxin limits.

PSP and Alexandrium sp. current trends

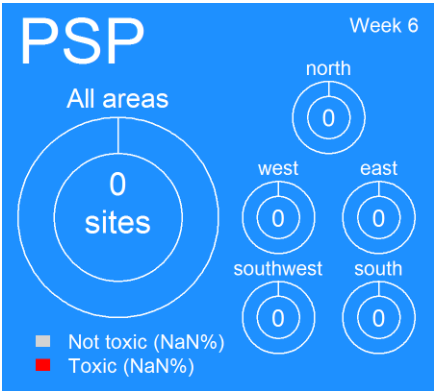
Phytoplankton species – 3 wks



All levels of PSP biotoxin recorded - 3 wks



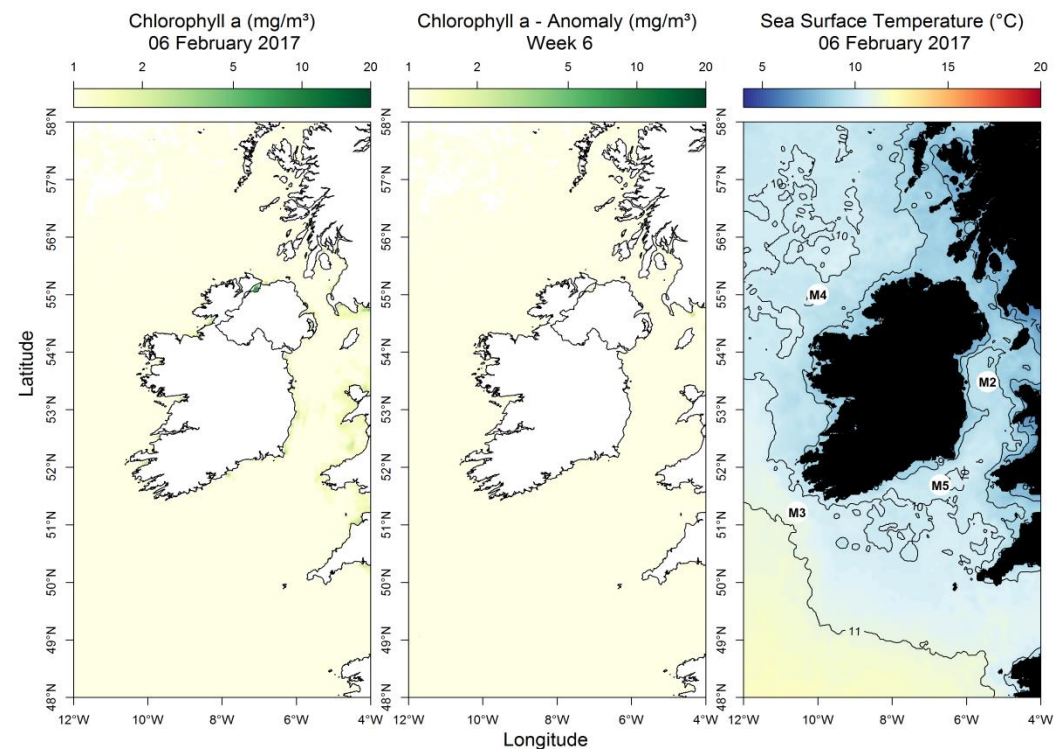
Current closures levels
≥ PSP 800 µg/Kg



Comments

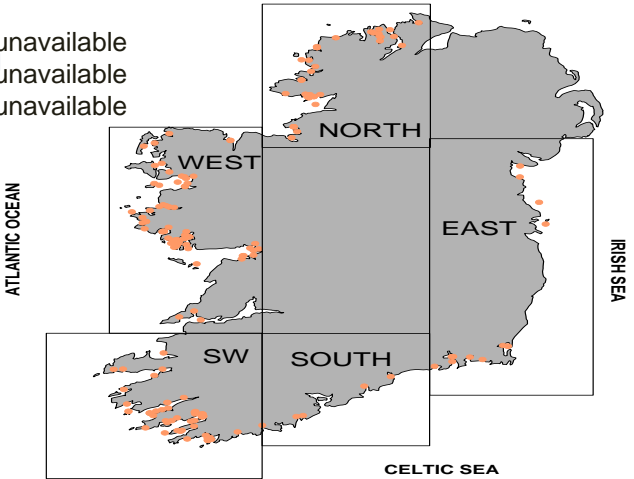
-No current changes -
No closures and
negligible likelihood
of bloom at this time.

Most up to date available satellite data



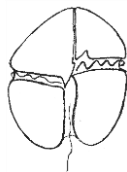
NW coast (M4)
SW coast (M3)
SE coast (M5)

Data unavailable
Data unavailable
Data unavailable



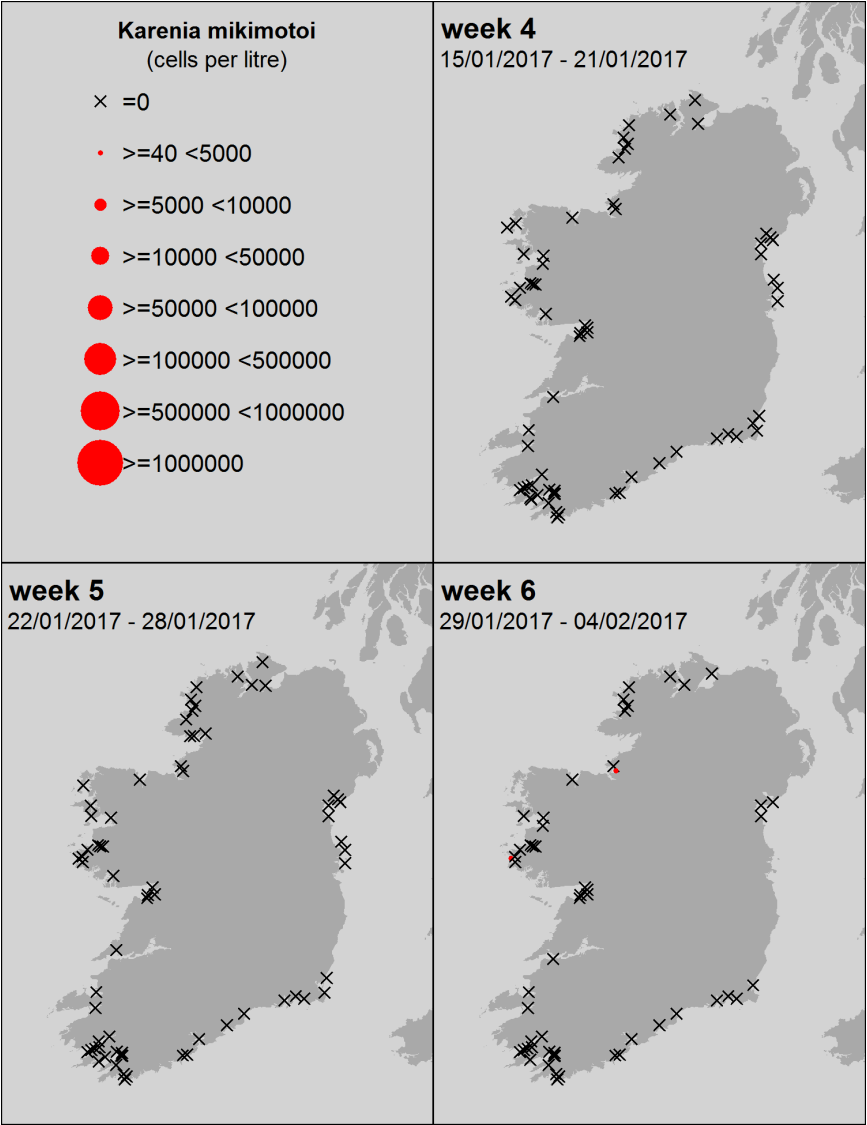
What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Skeletonema spp.	7000
2	east	Centric Diatom	6000
3	east	Pennate diatom 20-50um	6000
4	east	Pennate diatom >50um	2000
5	east	Paralia sulcata	2000
1	north	Skeletonema spp.	5000
2	north	Asterionellopsis spp.	4000
3	north	Chaetoceros (Hyalochaete) spp.	2000
3	north	Leptocylindrus minimus	2000
5	north	Cylindrotheca closterium/ Nitzschia longissima	1000
1	south	Odontella spp.	205000
2	south	Centric diatoms <20um	49000
3	south	Prymnesiophytes	43000
4	south	Pennate diatom >50um	43000
5	south	Navicula spp. <25um	27000
1	southwest	Navicula spp. <25um	77000
2	southwest	Skeletonema spp.	26000
3	southwest	Centric diatom 20-50um	22000
4	southwest	Skeletonema costatum	11000
5	southwest	Leptocylindrus minimus	10000
1	west	Navicula spp.	52000
2	west	Navicula spp. 20-50 um	13000
3	west	Pennate diatom	13000
4	west	Paralia sulcata	9000
5	west	Paralia sp.	8000



Karenia mikimotoi
(old name: *Gyrodinium aureolum*)

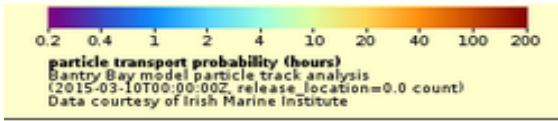
A *Karenia mikimotoi* bloom
is NOT expected this week



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

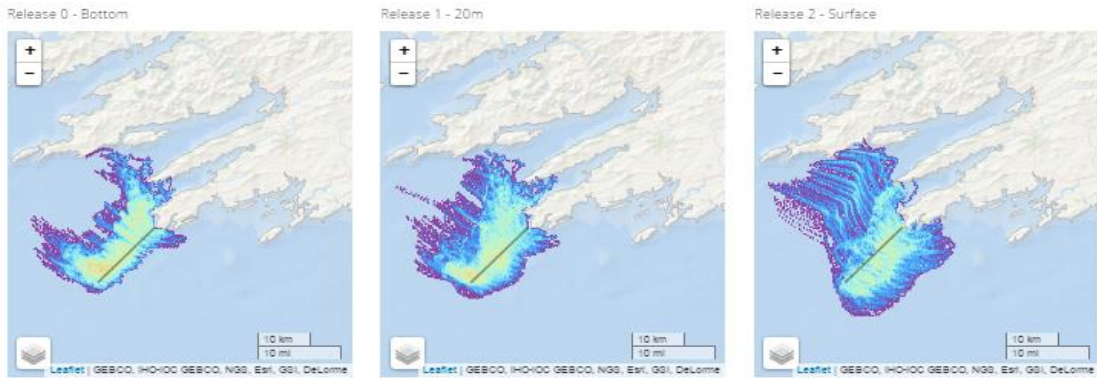


Forecast for the next 3 days

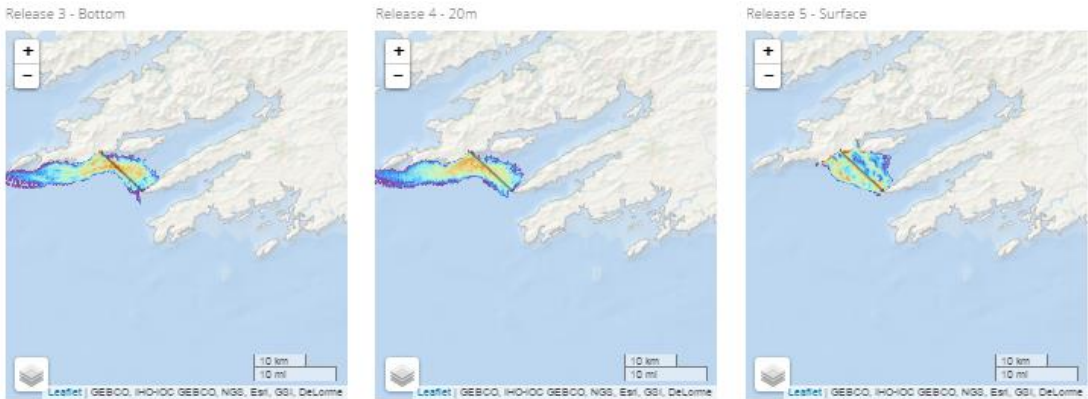
Bottom water

Water @ 20 metres

Surface water



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

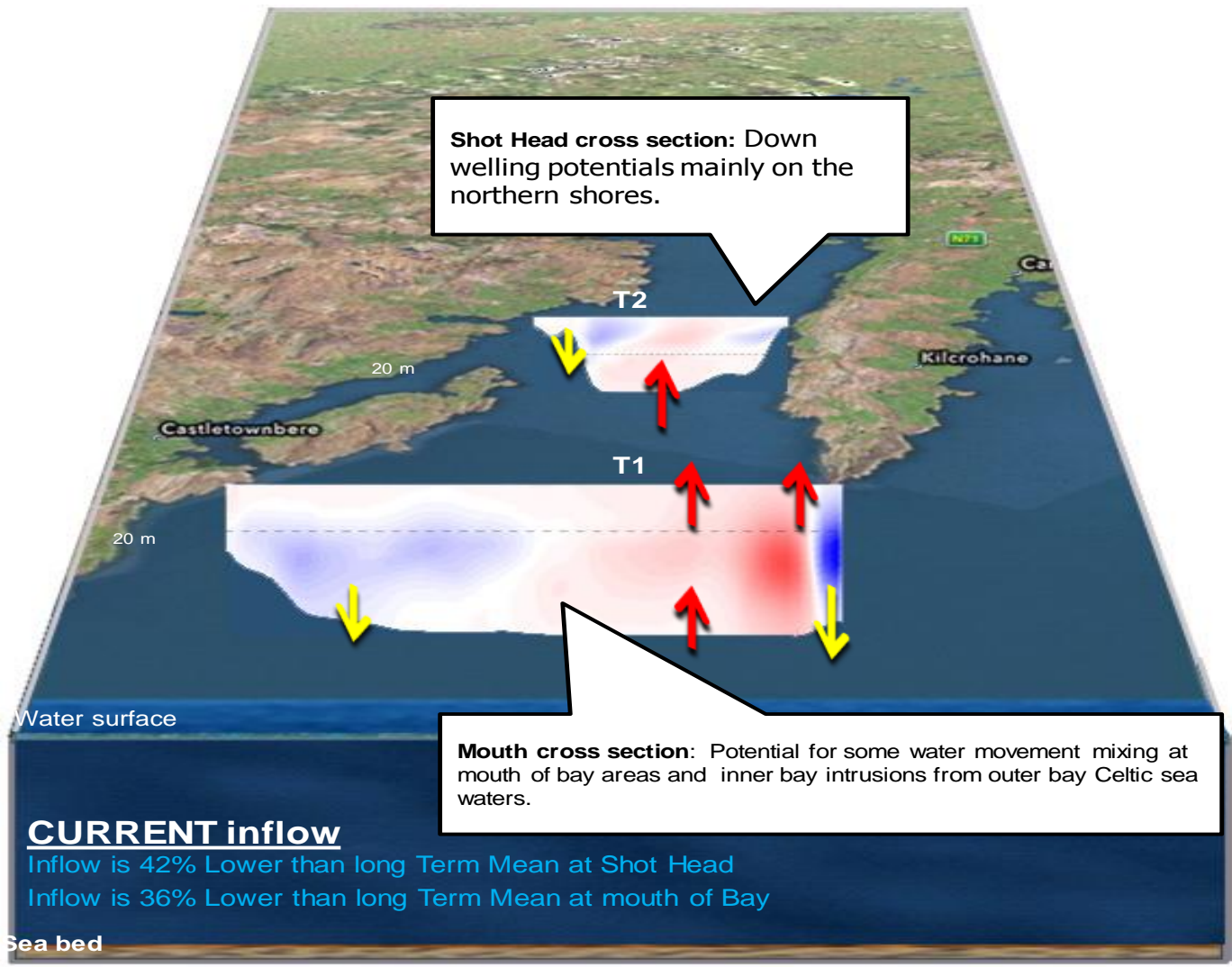
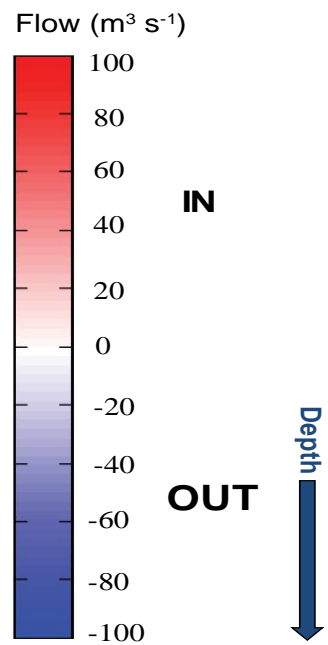


Some Inner bay incursions potentially possible, at all depths while deeper waters indicating more north westerly outer bay movement.

Bantry Bay

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

Forecast for next 3 days

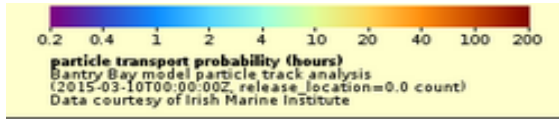


WEST: Killary Harbour

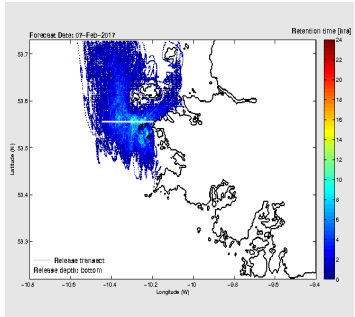
Forecast for the next 3 days

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)

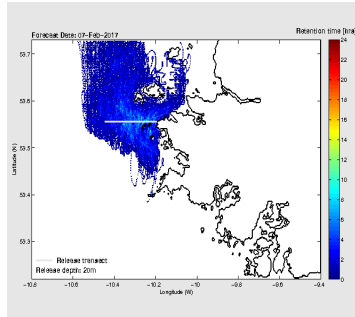
Reddish colours represent areas where phytoplankton remain longest
Cooler colours represent areas where phytoplankton remain for shorter periods



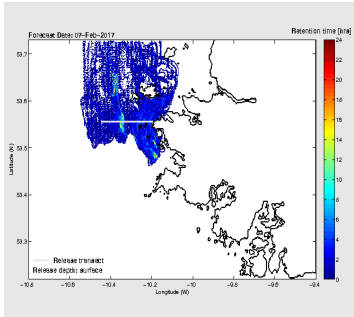
Bottom water



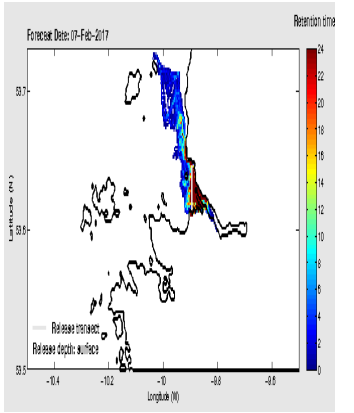
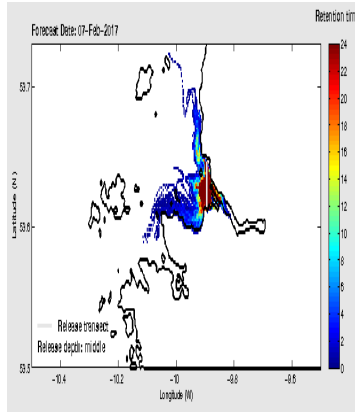
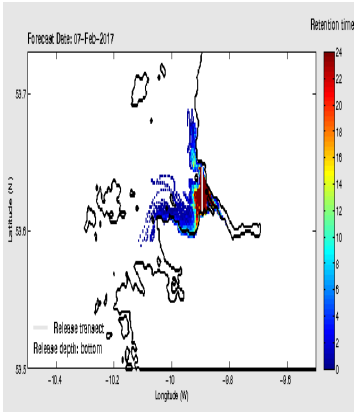
Water @ 20 metres



Surface water



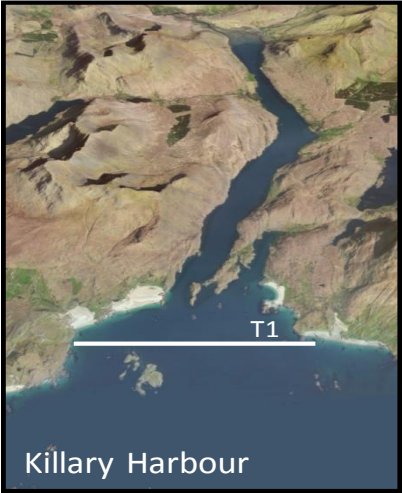
Similar to last week – Water movement in a predominantly mixed northerly direction allowing for low levels of off shore waters to reach exposed shore areas at all depths.



Upwelling potential - 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

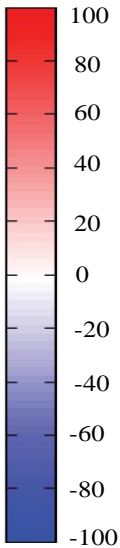
3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days

Killary Harbour Mouth cross section:
Weak to moderate inflows of outer bay waters as far in as mid bay possible.

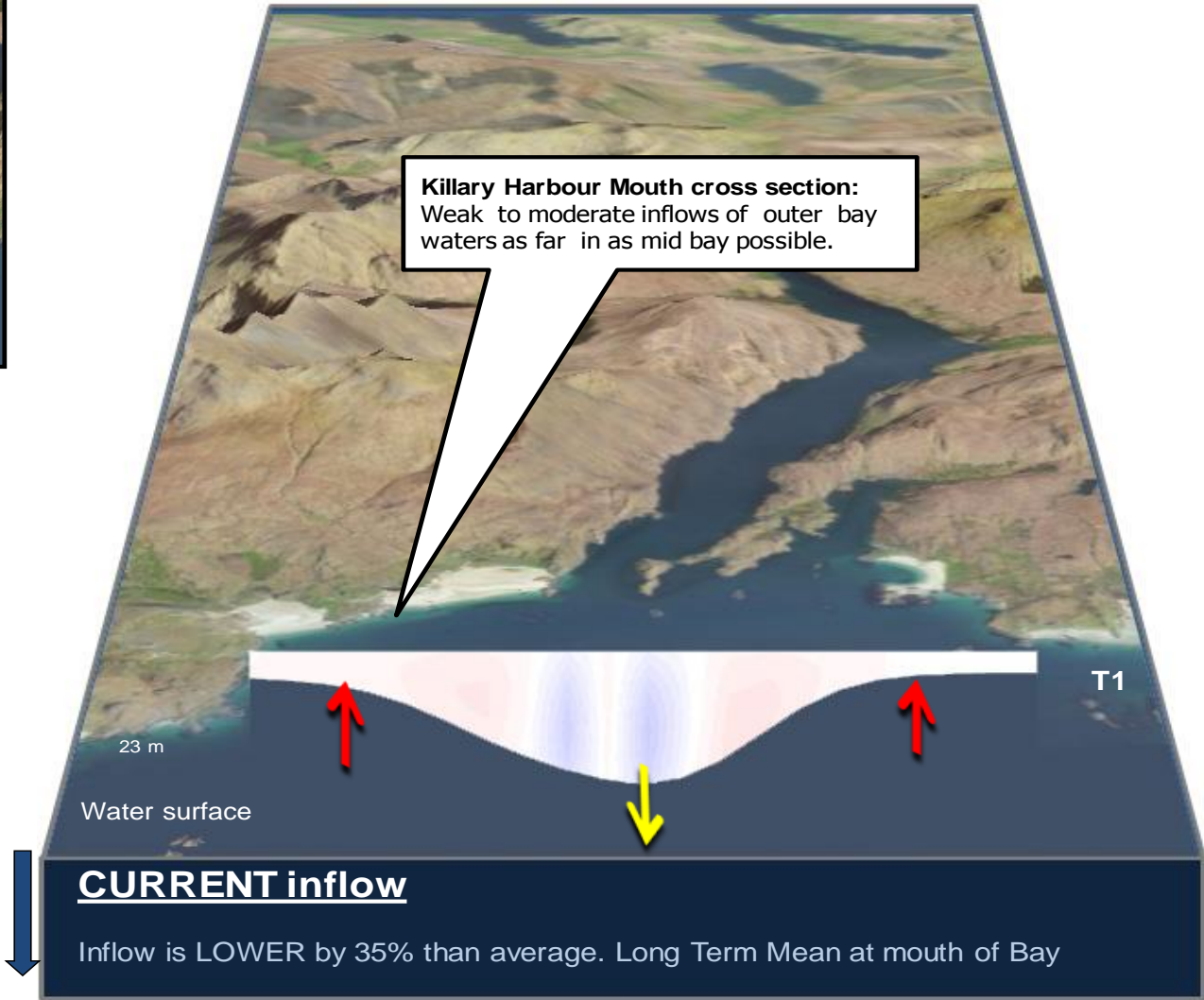
Flow ($\text{m}^3 \text{s}^{-1}$)



IN

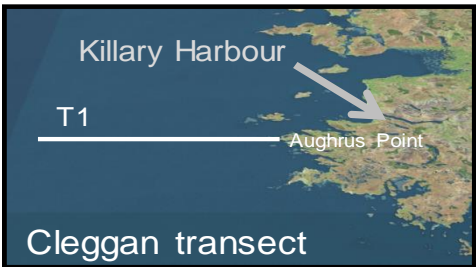
OUT

Depth

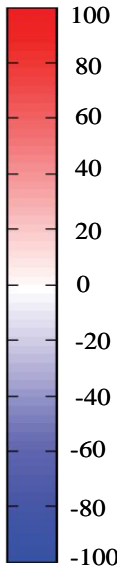


West Coast - 3 day estimated water flows along a transect off Aughrus Point

Forecast for next 3 days



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



northward
flow

southward
flow

Depth

