

# 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: Steady and increasing slowly. The weekly potential pattern of *Psuedo nitzschia* species slowly increasing (4 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: 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](mailto:Joe.Silke@Marine.ie) .

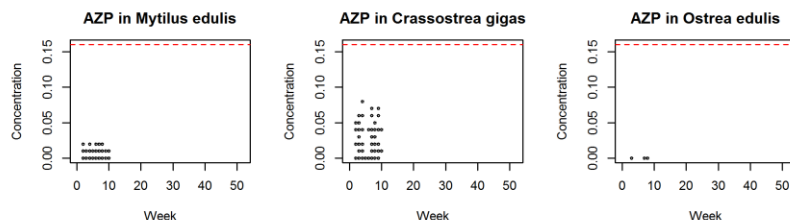
# National Monitoring Programme



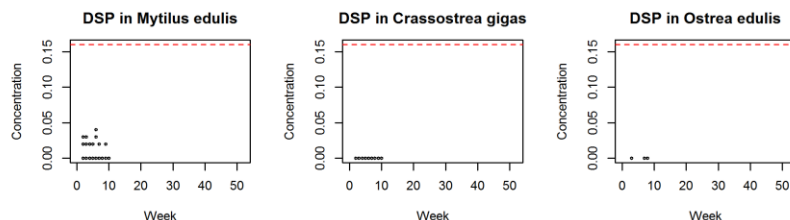
## HISTORIC TRENDS



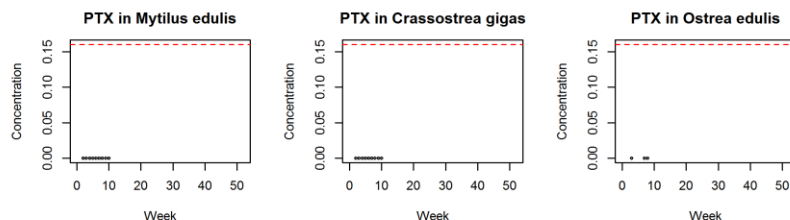
AZP



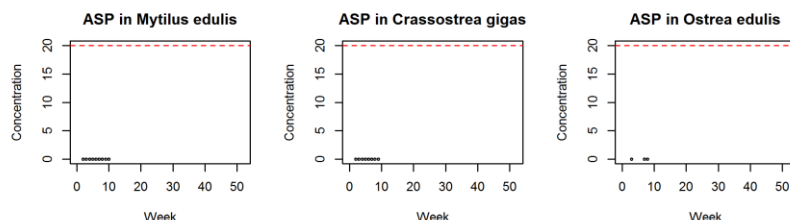
DSP



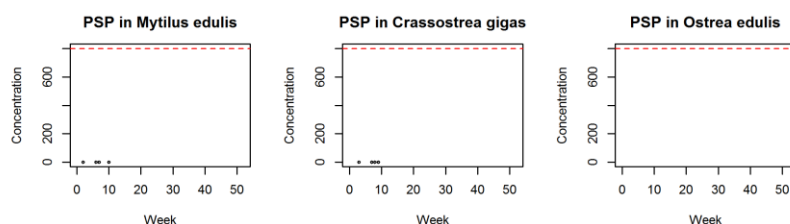
PTX



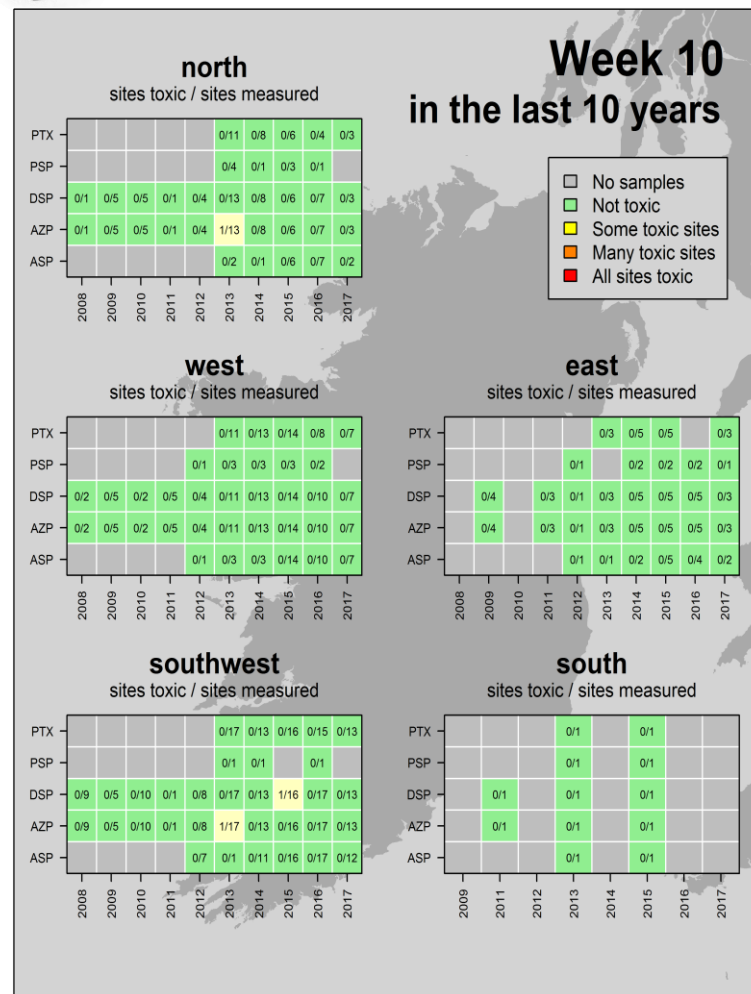
ASP



PSP



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



ASP events: mid-March to early May

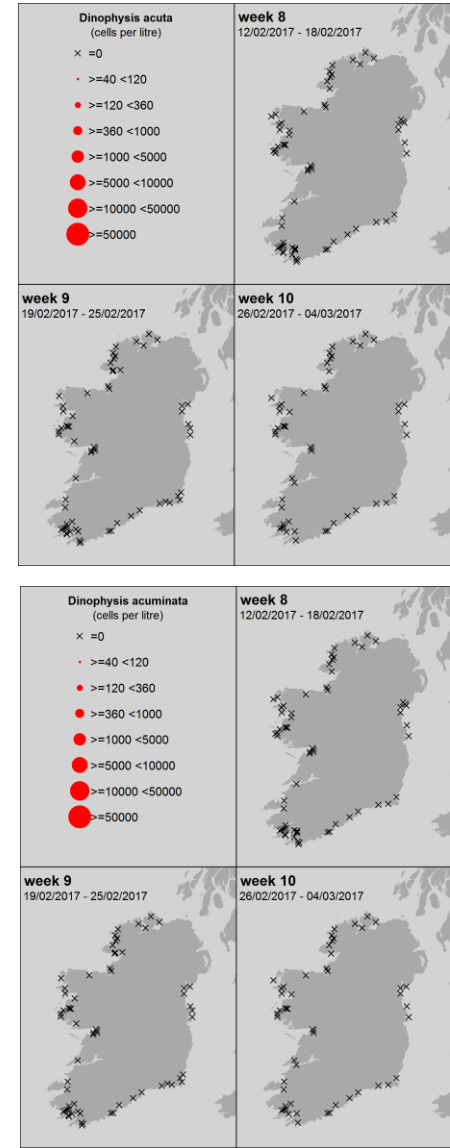
AZP events: April to December

DSP events: May to December

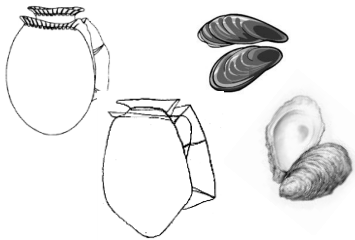
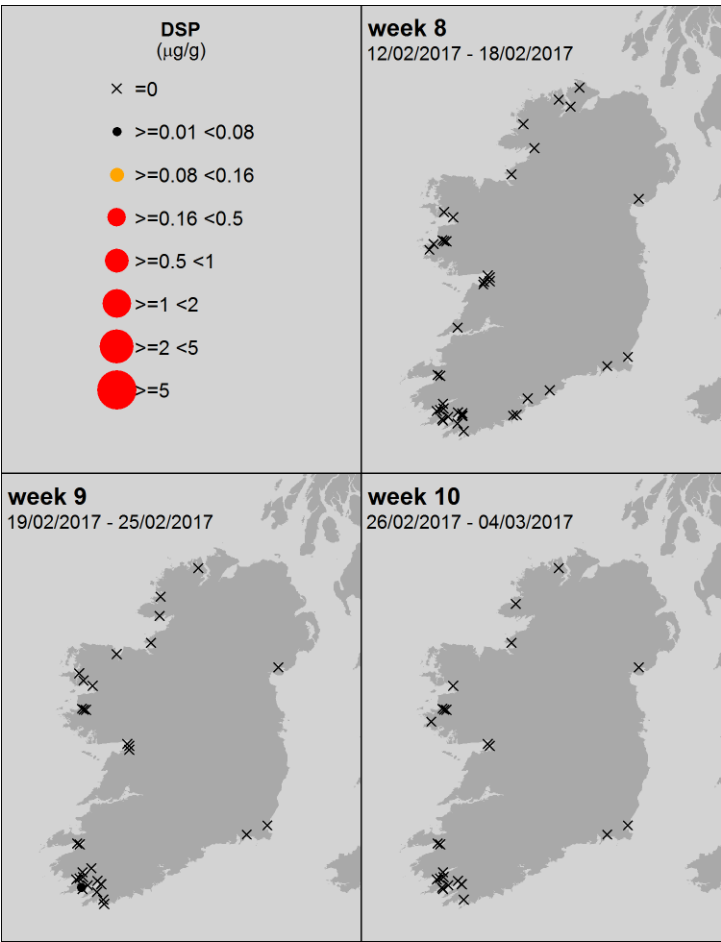
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks

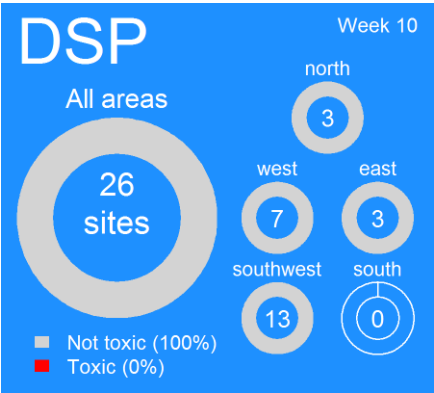


All levels of DSP biotoxin recorded- 3 wks



Current closures levels

≥ DSP 0.16 µg/g



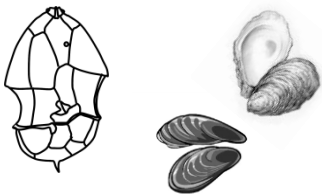
Comments

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

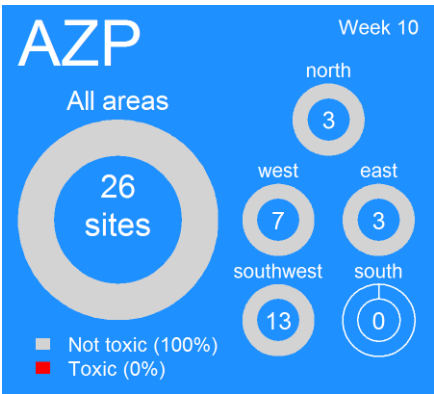
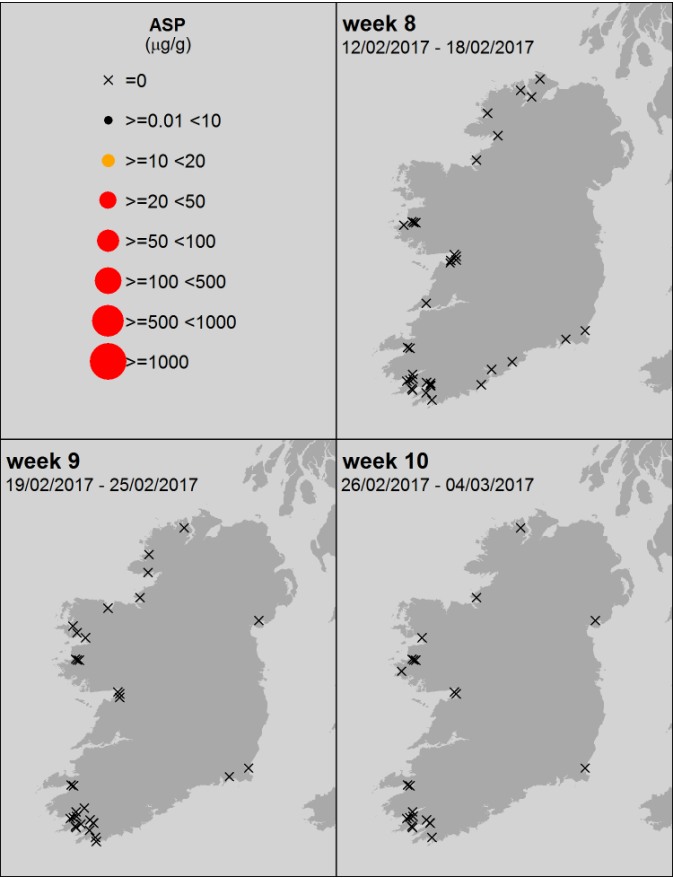
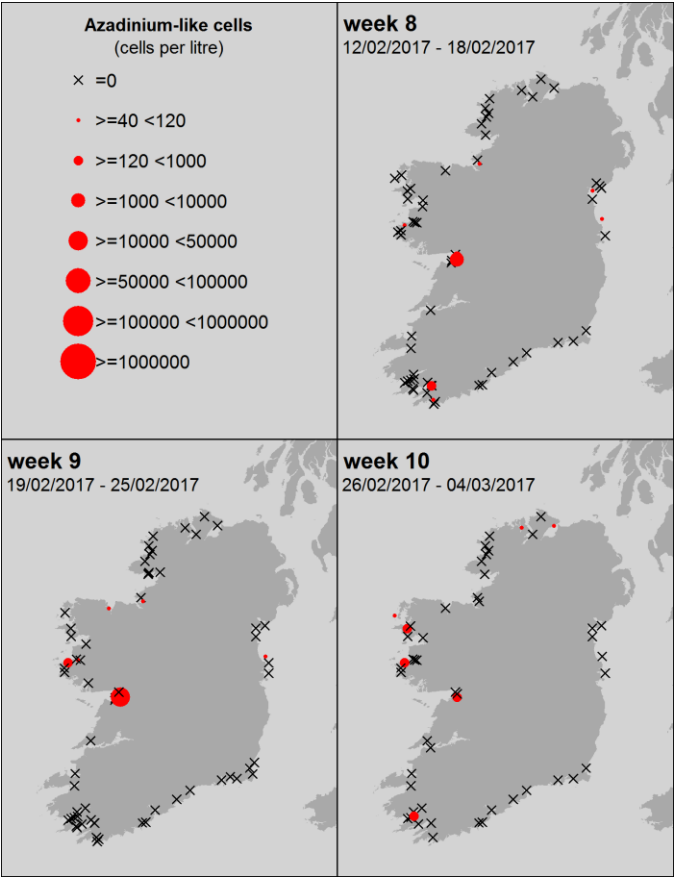
AZP and Azadinium like species current trends

Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks



Current closures levels  
≥ AZP 0.16 µg/g

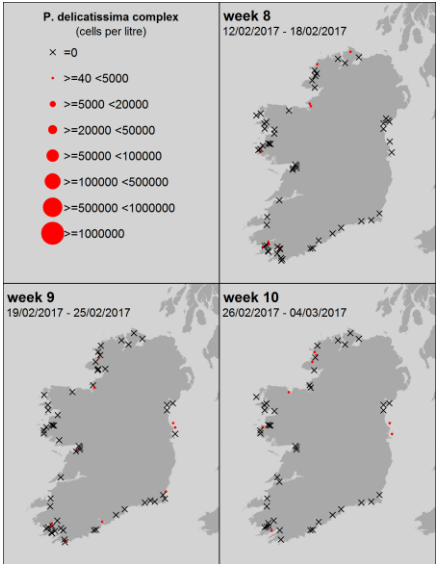
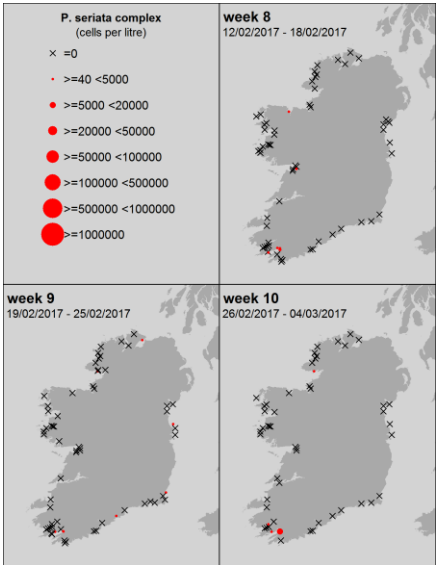


Comments

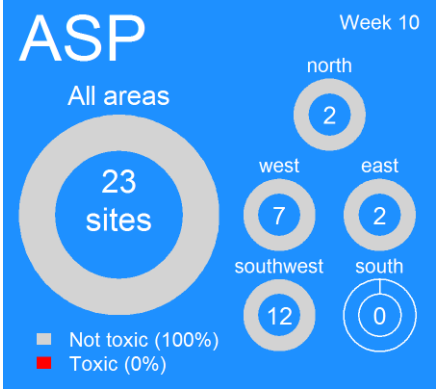
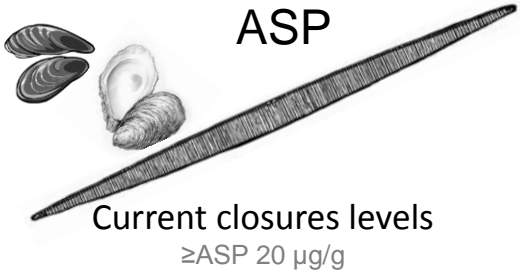
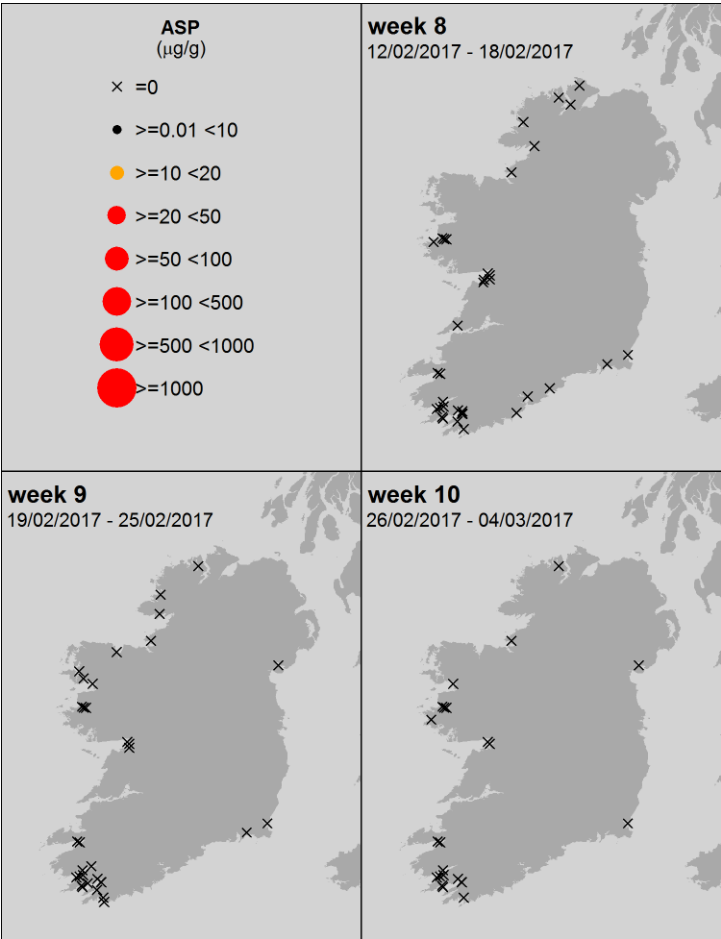
Again a slight increase in presence of potential cell levels in some sites toxins but all sites still below biotoxin limits.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



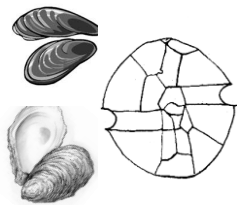
All levels of ASP biotoxin recorded - 3 wks.



Comments

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

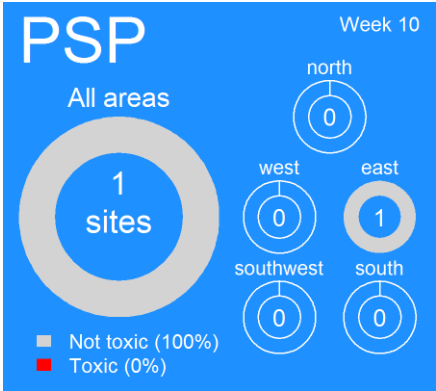
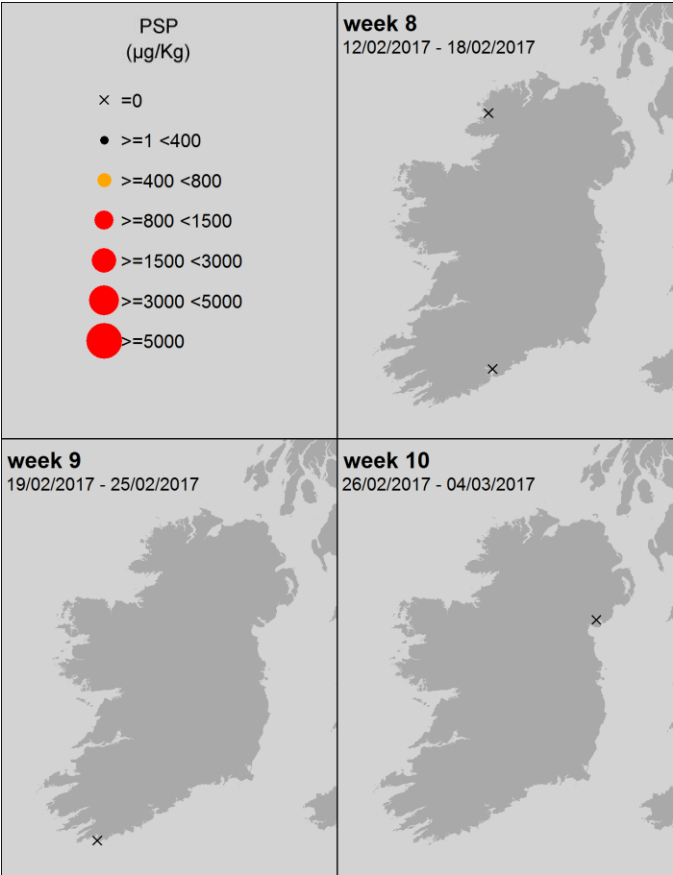
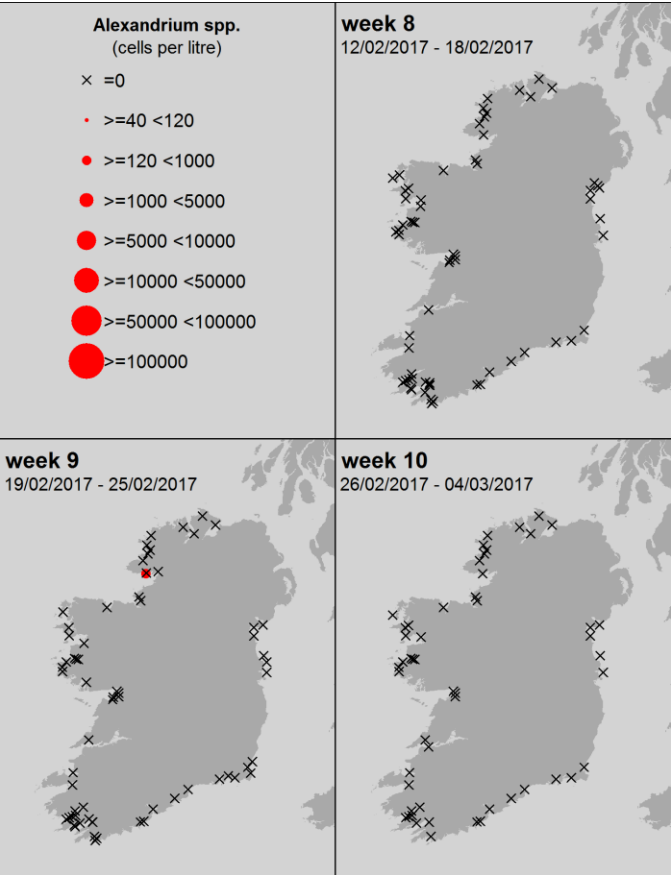
PSP and Alexandrium sp. current trends



Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.

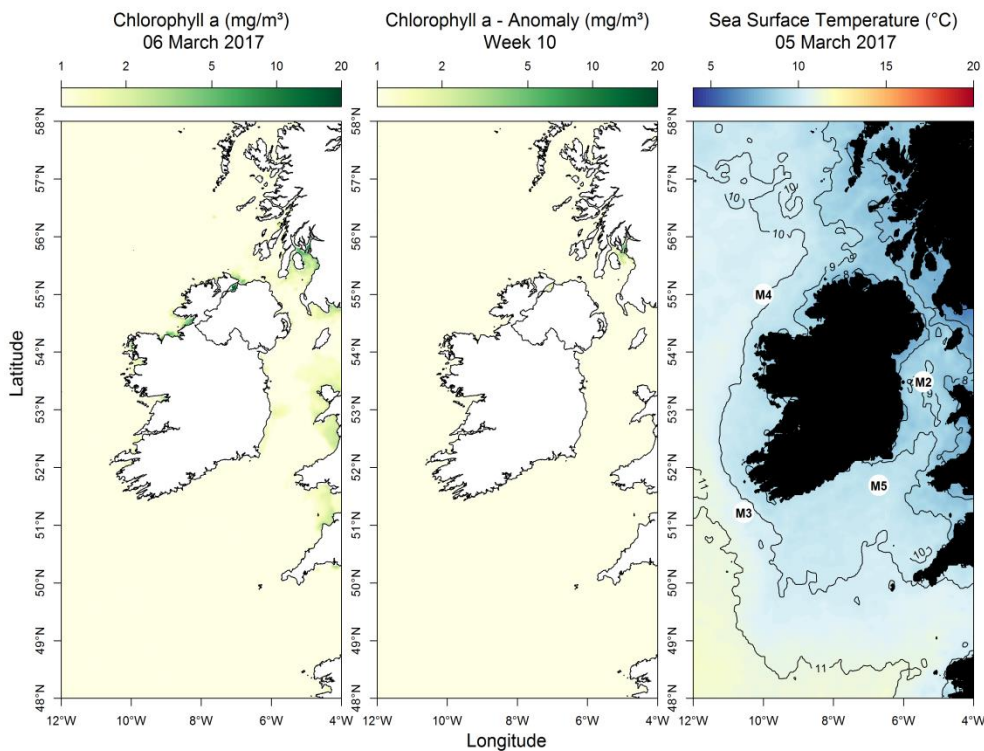
Current closures levels  
≥ PSP 800 µg/Kg



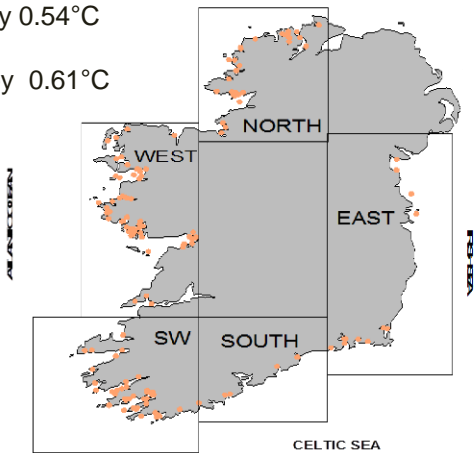
Comments

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

Most up to date available satellite data



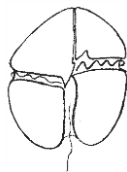
NW coast (M4) Below average by 0.54°C  
SW coast (M3) Data unavailable  
SE coast (M5) Above average by 0.61°C



What phytoplankton were blooming at inshore coastal sites last week?

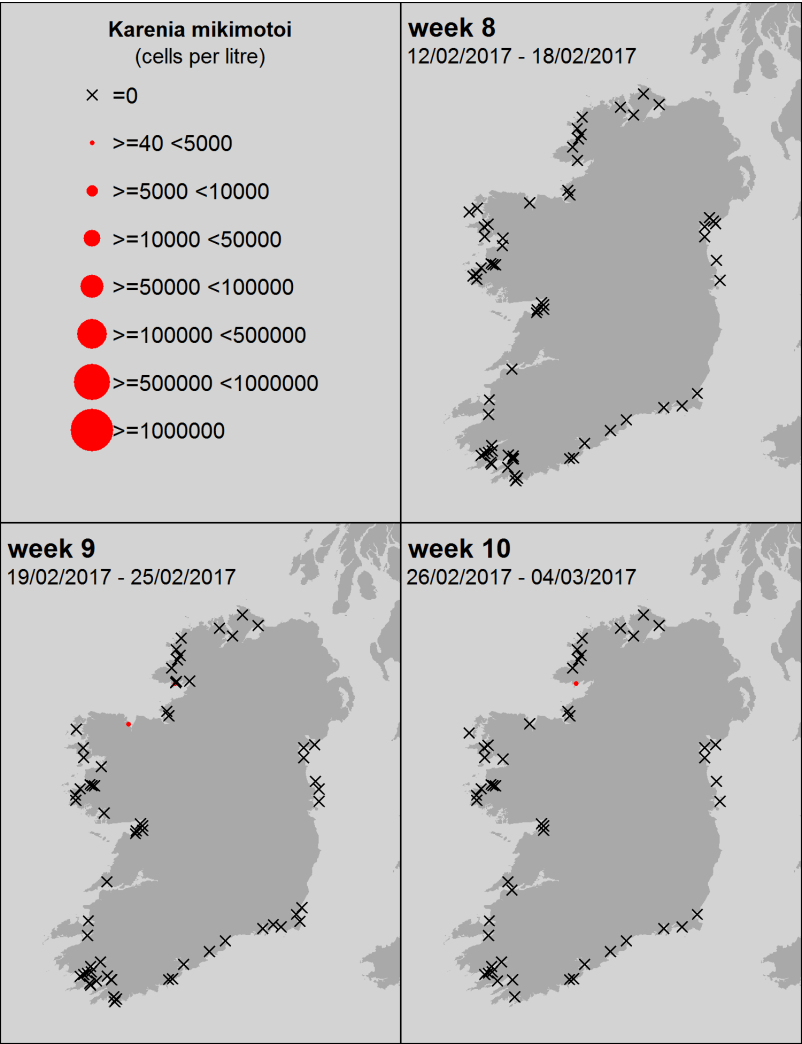
Rank	Region	Species	Rounded Count
1	east	Skeletonema spp.	292000
2	east	Pennate diatom <20um	77000
3	east	Navicula spp. <25um	43000
4	east	Pennate diatom	25000
5	east	Paralia sp.	7000
1	north	Skeletonema spp.	993000
2	north	Asterionellopsis spp.	58000
3	north	Pennate diatom	55000
4	north	Cylindrotheca closterium/ Nitzschia longissima	45000
5	north	Asterionellopsis glacialis	17000
1	south	Odontella spp.	205000
2	south	Pennate diatom 20-50um	71000
3	south	Centric diatoms <20um	49000
4	south	Prymnesiophytes	43000
5	south	Pennate diatom >50um	43000
1	southwest	Nitzschia spp. (small)	81000
2	southwest	Navicula spp. <25um	77000
3	southwest	Navicula spp. 20-50 um	67000
4	southwest	Skeletonema spp.	52000
5	southwest	Prymnesiophytes	35000
1	west	Euglena/Eutreptiella spp.	88000
2	west	Navicula spp.	52000
3	west	Azadinium/heterocapsa spp.	44000
4	west	Pennate diatom	41000
5	west	Cylindrotheca closterium/ Nitzschia longissima	22000





*Karenia mikimotoi*  
(old name: *Gyrodinium aureolum*)

A *Karenia mikimotoi* bloom  
is NOT expected this week

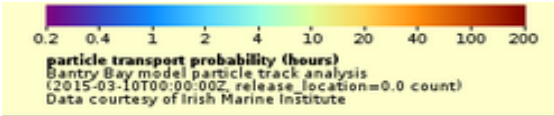




## SOUTHWEST: Bantry Bay

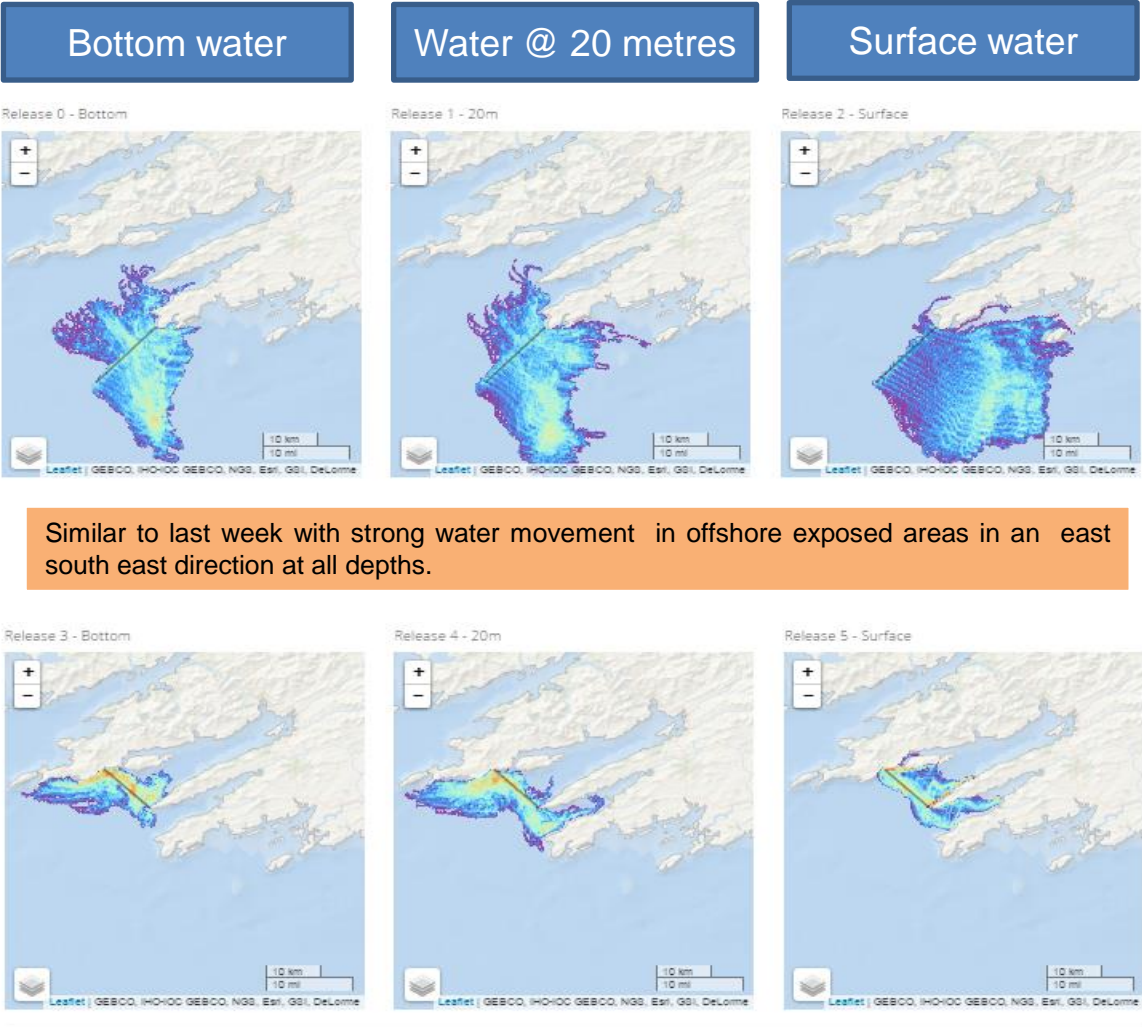
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

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



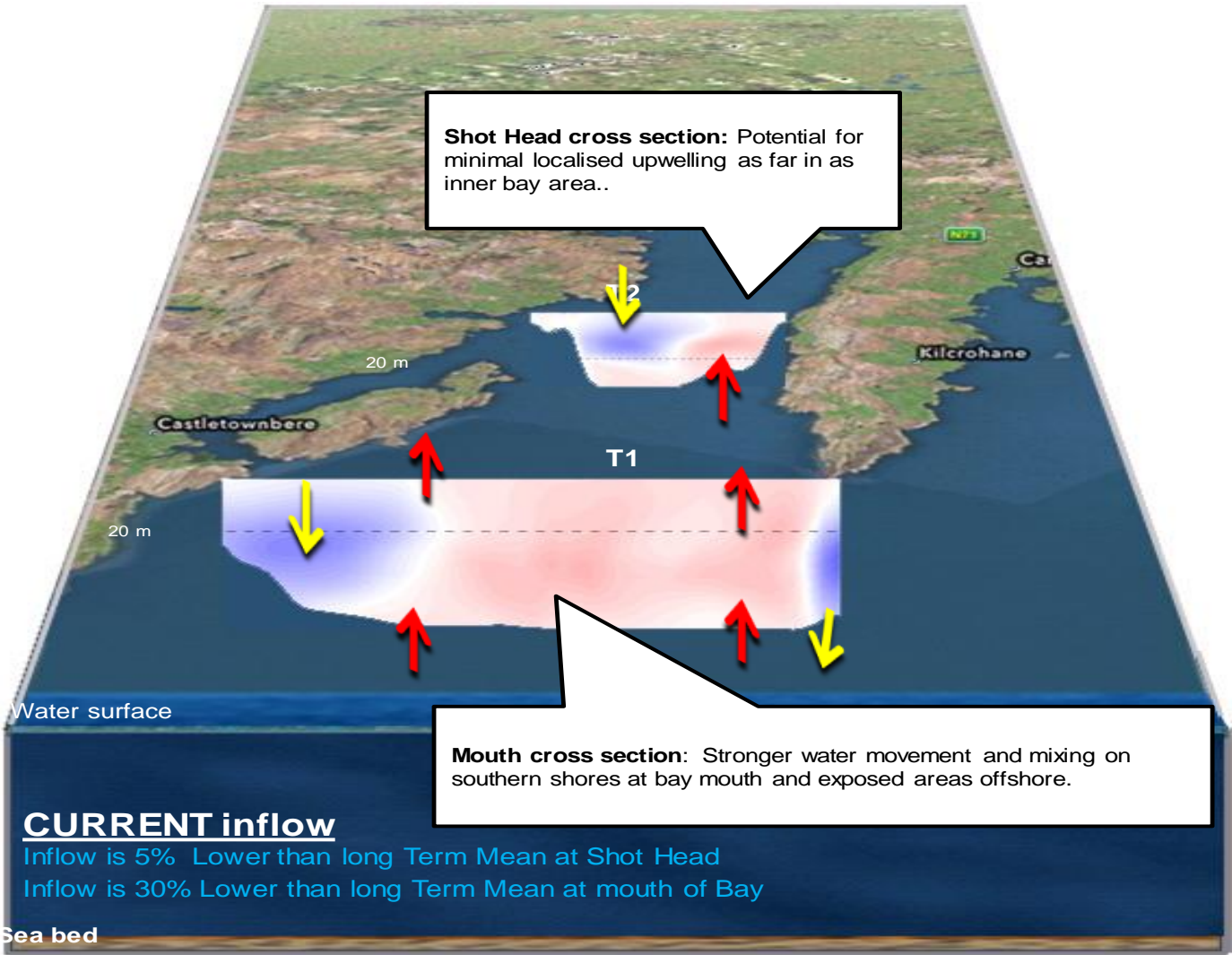
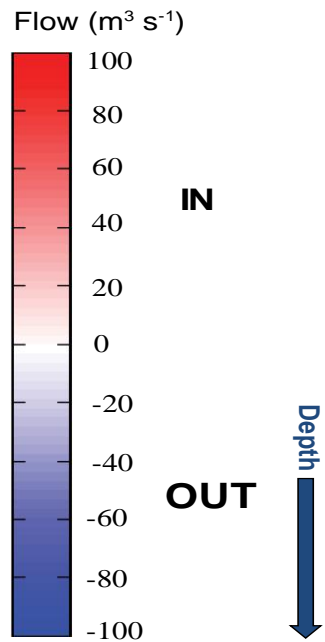
Similar to last week with strong water movement in offshore exposed areas in an east south east direction at all depths.

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

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

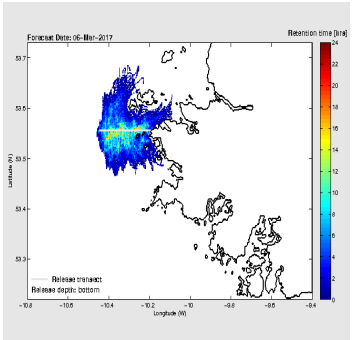
Cooler colours represent areas where phytoplankton remain for shorter periods



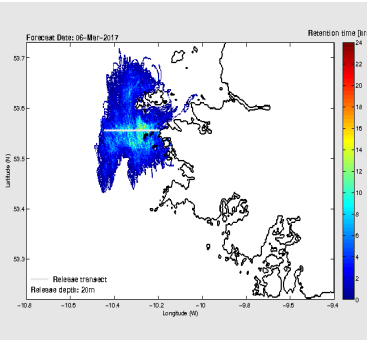
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

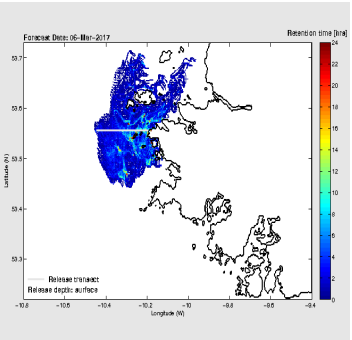
Bottom water



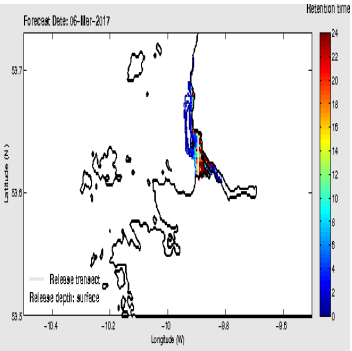
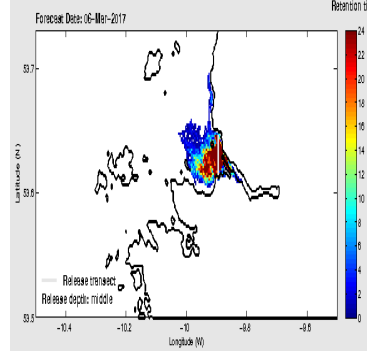
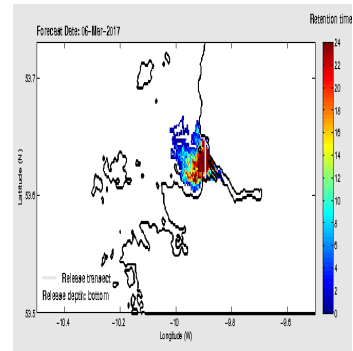
Water @ 20 metres



Surface water



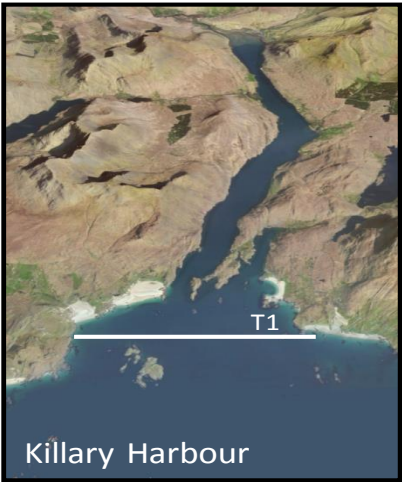
Strong mixed water movements in opposing directions in offshore areas. Most dynamic movement in areas as depth decreases.



Outer bay areas tending to show more water body movements in shallow depths, moving in a northerly direction. Inner bay waters indicating less movement at all depths.

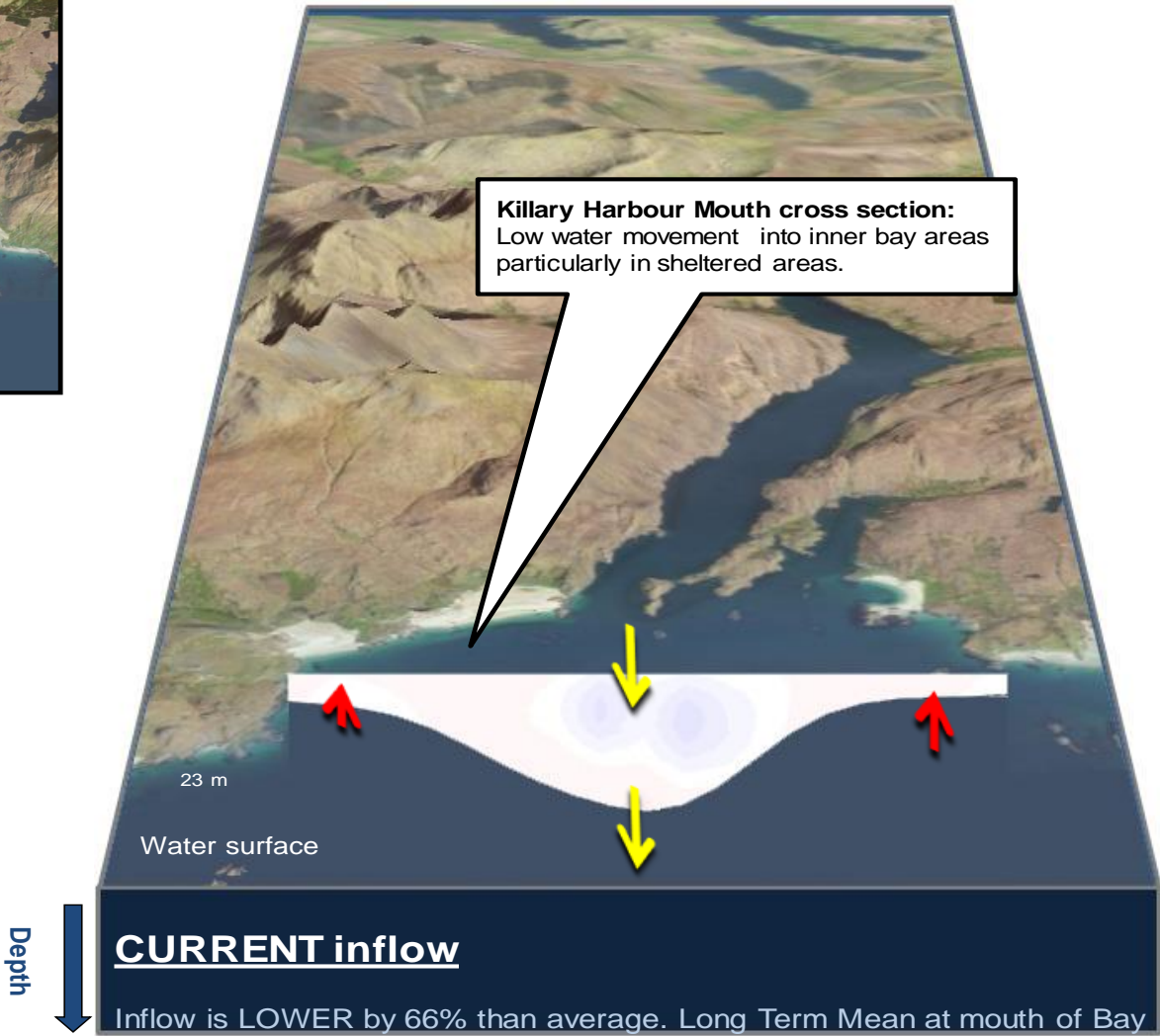
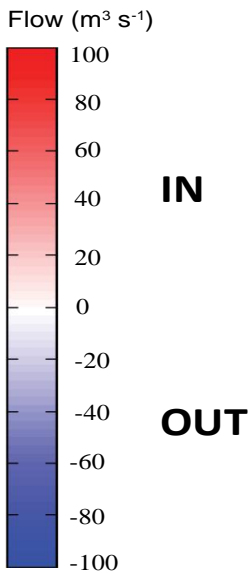
# Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days

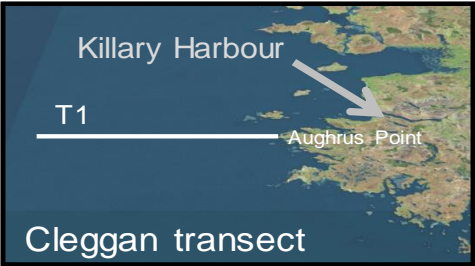
**Killary Harbour Mouth cross section:**  
Low water movement into inner bay areas particularly in sheltered areas.



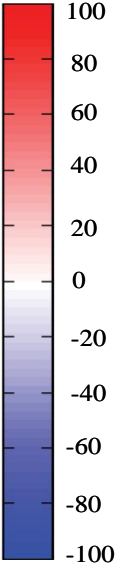


# West Coast - 3 day estimated water flows along a transect off Aughrus Point

Forecast for next 3 days



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



northward  
flow

southward  
flow

Depth

