

# Ireland: Predictions

ASP event: Low to moderate

AZP event: High (constant fluctuation)

DSP event: High ( S, SW and W )

PSP event: High (site specific , moderate in general)

## NMP Current closures

ASP	AZP	DSP	PSP
0	0	2	1

ASP: Similar to last week with increasing cells but currently no related toxicity issues . While it would be unusual to have an issue at this time of year and the species present do not appear to be causing any toxin issues , a slight increase in the level of caution is advised due directly to the slowly increasing cell levels and dominance in some sites.

AZP: Similar to last week with continued additional caution advised due to current historical occurrence period, suitable environmental conditions, possibility of onshore transport and difficulty predicting the sudden potential occurrence of this species. Issues with this toxin can occur suddenly and acutely .Caution is advised.

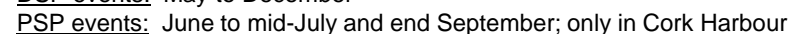
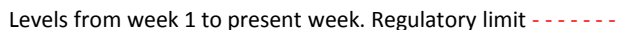
DSP: Continued toxicity issues in some sites (SW). This is still the main season to be traditionally affected by this group so highest caution is advised until the impact has peaked and past. All sites should insure best sampling practices and obtaining the most recent results available. Continued rise and impact of this species is to be expected at present based on current trends, historic patterns and predictive marine models.

PSP: As advised last week -High levels of caution advised in historically affected sites (S) as the current weather pattern could provide ideal environmental rapid localised bloom conditions. Increased levels of caution should be exercised at this point in all areas where significant cell levels are observed.

Blooms: There is a **high risk of bloom conditions** due to current environmental conditions. Any unusual water discoloration should be noted and regional labs contacted if concerned /regarding possible need for additional sampling.

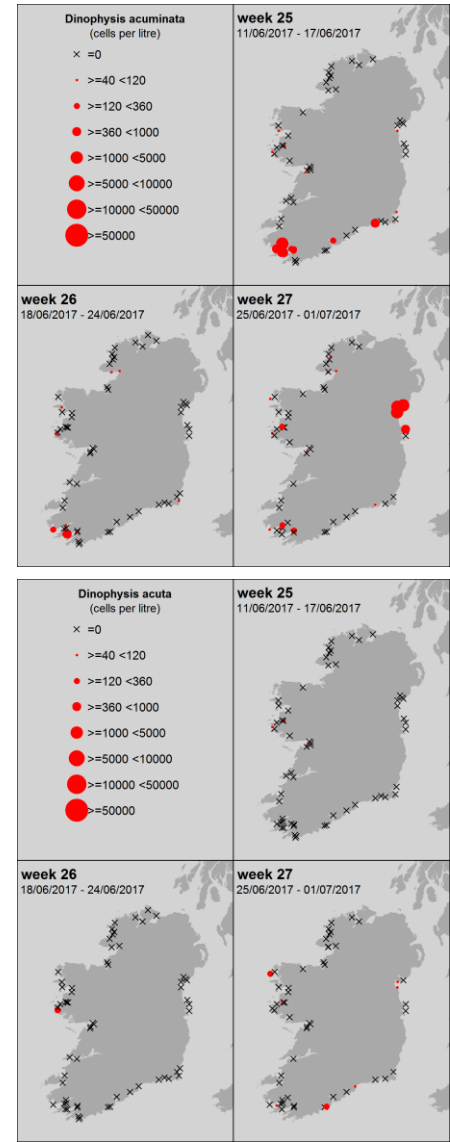
All feedback is welcome at [Joe.Silke@Marine.ie](mailto:Joe.Silke@Marine.ie) .

AZP

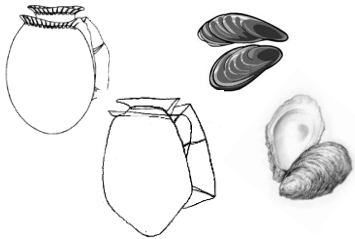
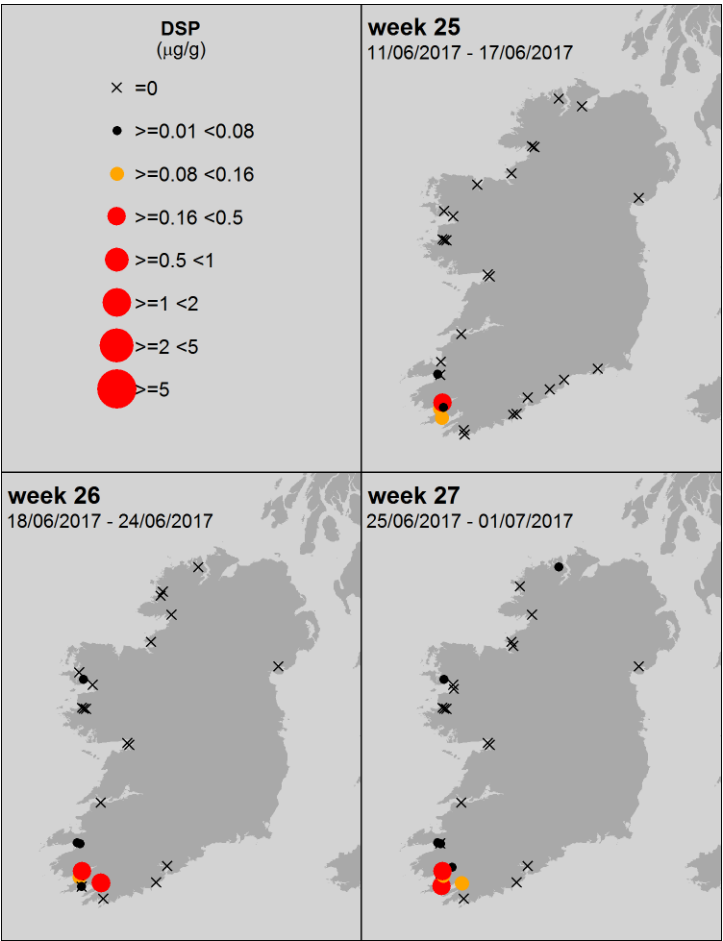


DSP and Dinophysis sp. current trends

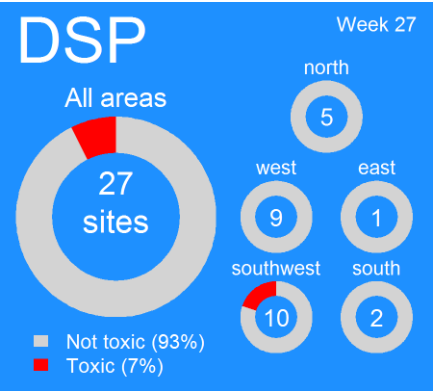
Phytoplankton species – 3 wks.



All levels of DSP biotoxin recorded- 3 wks.

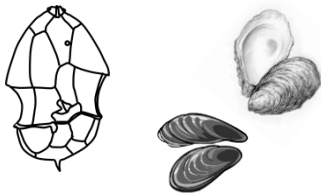


Current closures levels  
≥ DSP 0.16 µg/g



Comment – *Dinophysis* species continue to cause a toxicity issue in some sites in SW. Cell levels will probably go higher and increase coastal area coverage before the end of the traditional risk period. Continued high caution advised.

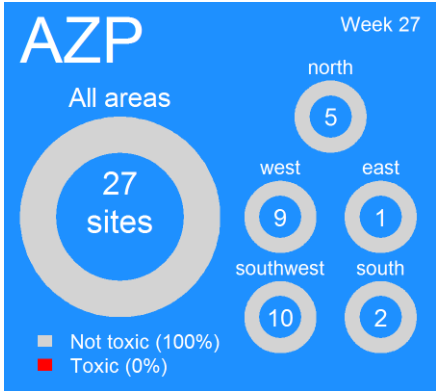
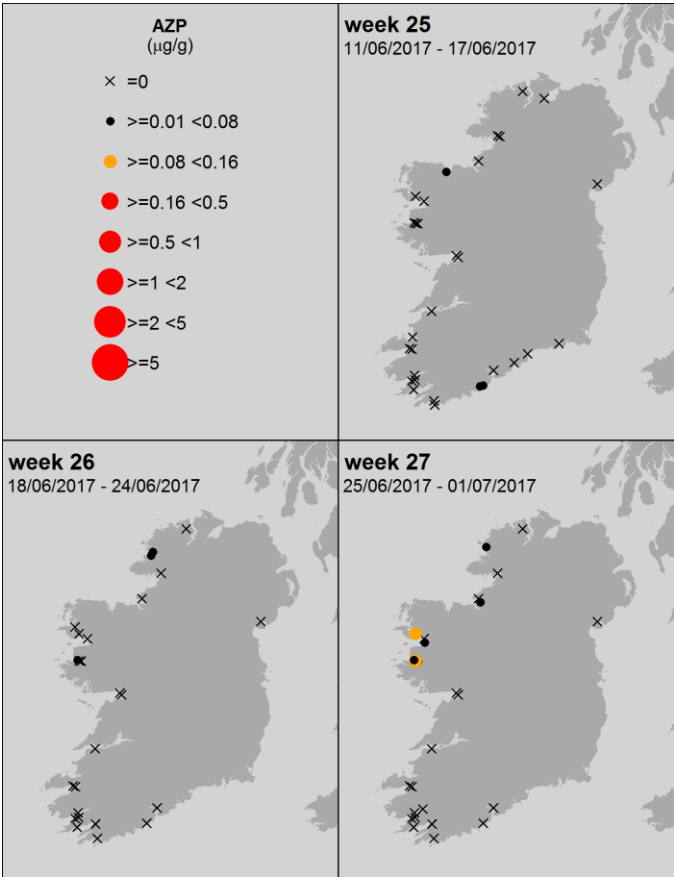
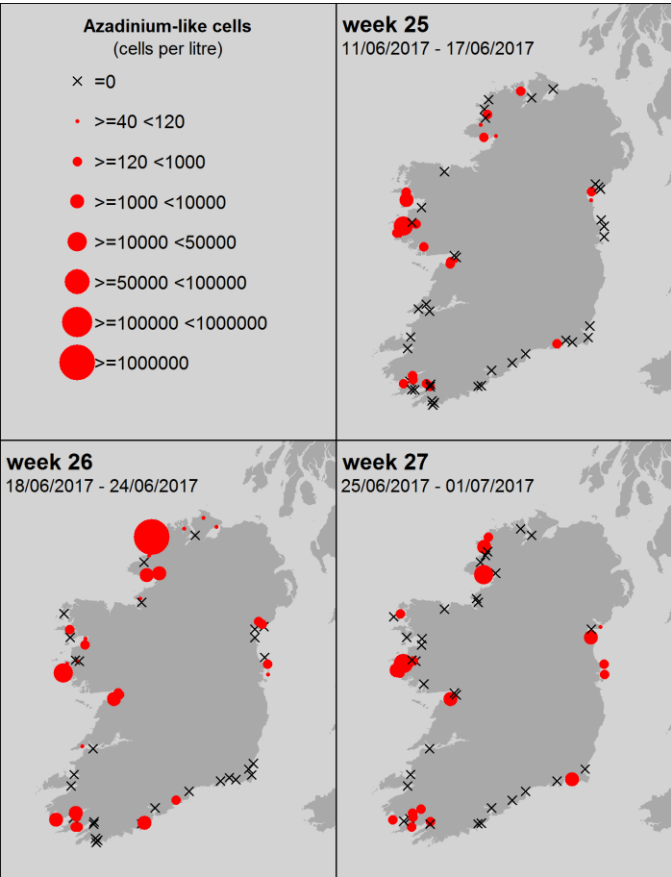
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.

Current closures levels  
≥ AZP 0.16 µg/g

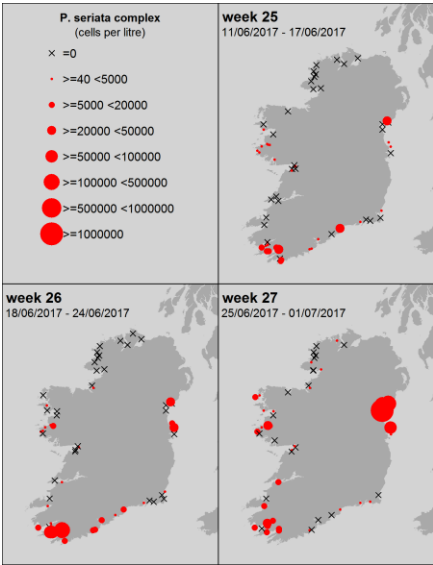
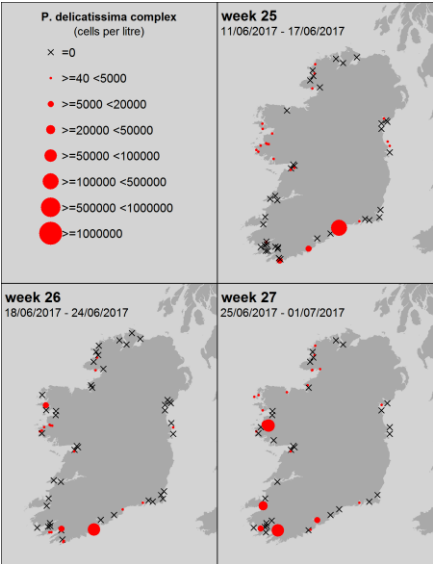


Comments

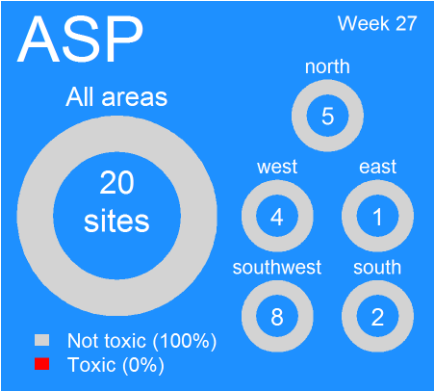
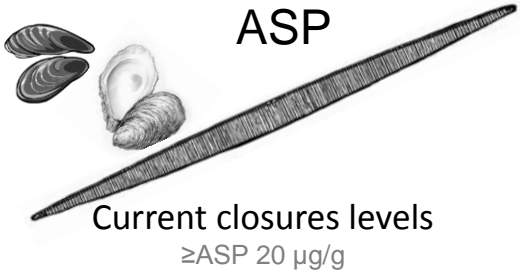
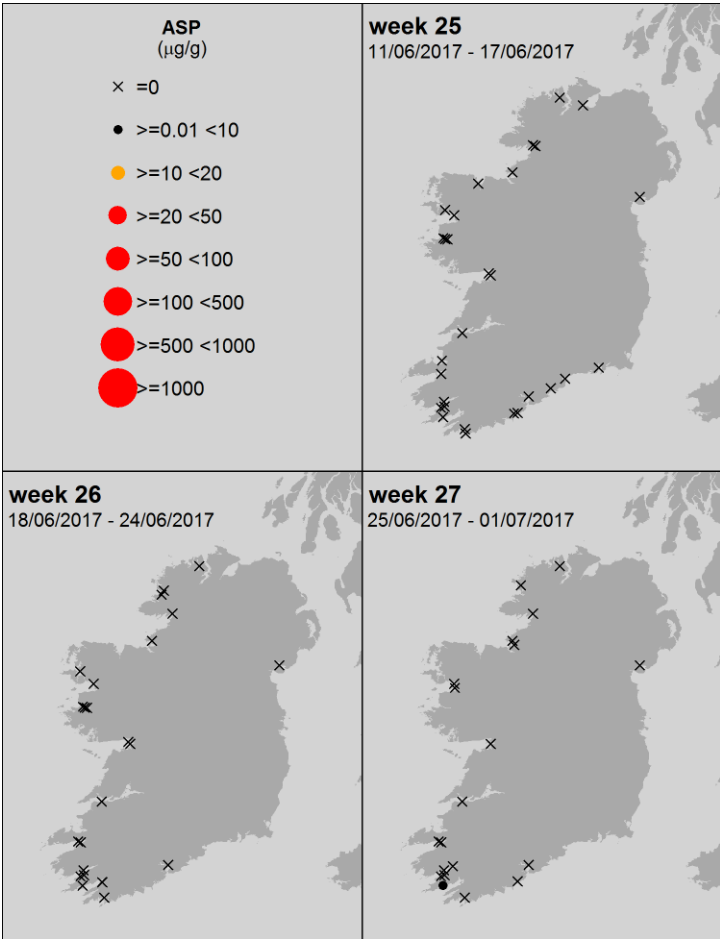
Continued need for highest level of caution and observance- currently in historical period of occurrence, cell levels on a potential upward fluctuating trend and low toxin levels in some sites. This species has been recorded previously to rapidly bloom or get transport into bay areas at bloom levels. Such conditions are possible this week in West and South areas.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



All levels of ASP biotoxin recorded - 3 wks.



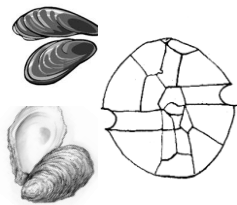
Comments

Cell levels continue to rise , but fortunately no significant toxin levels are associated with the current species present. While it would be unlikely that a toxic event would occur at this time of year, a slight increase in caution is advised while cell levels remain high.

PSP and Alexandrium sp. current trends

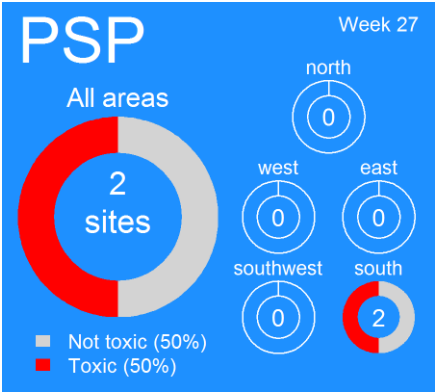
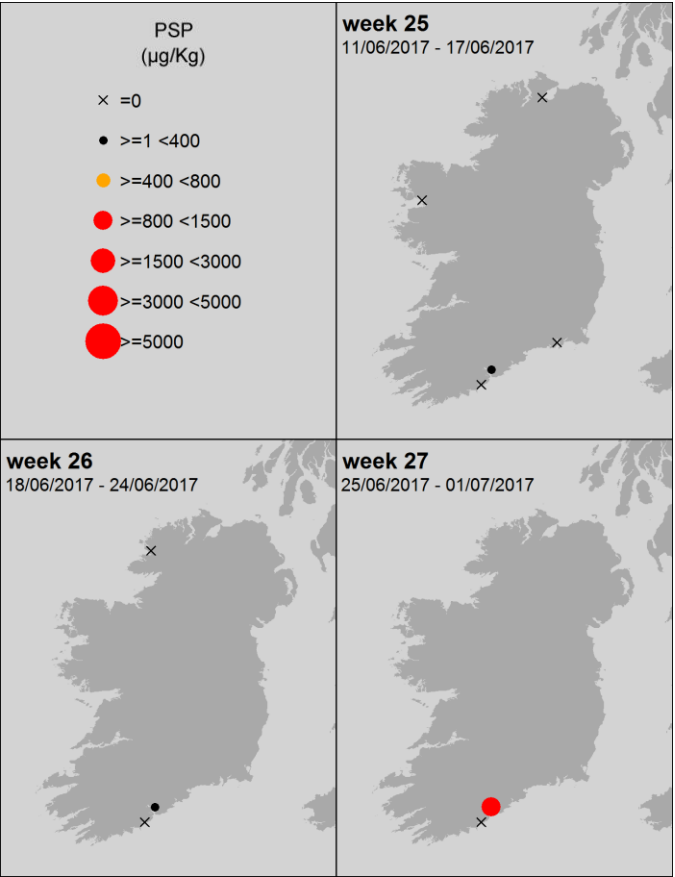
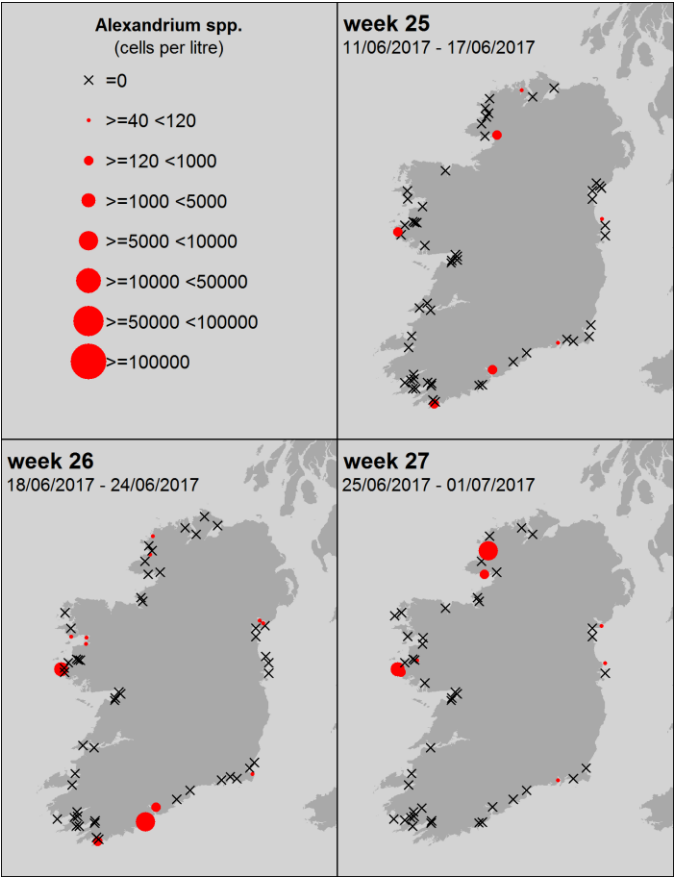
Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.



Current closures levels

≥ PSP 800 µg/Kg

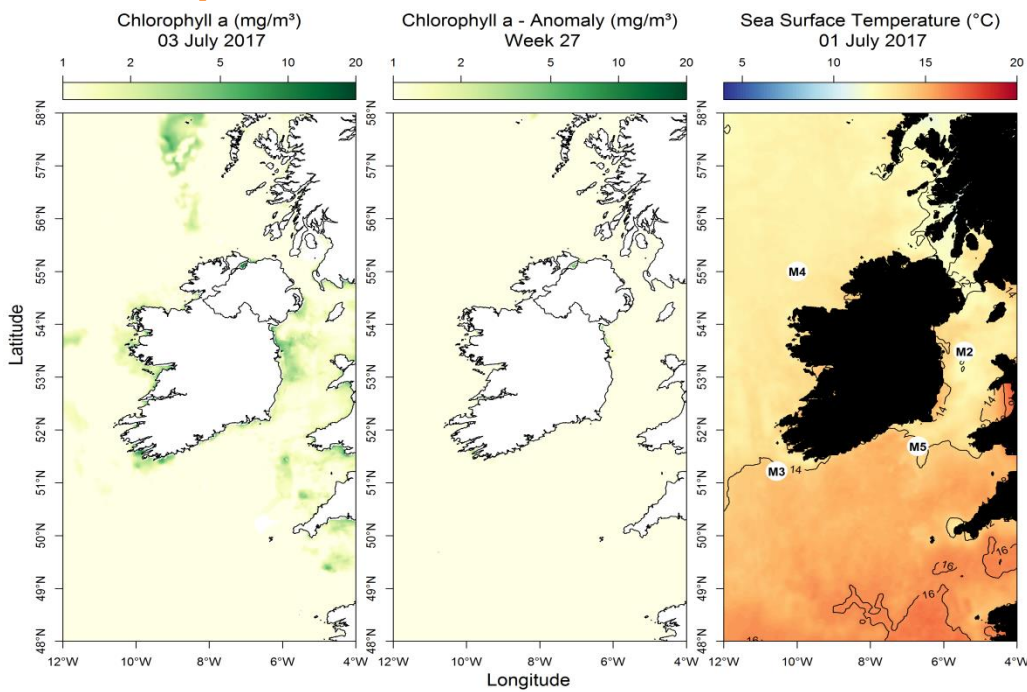


Comments

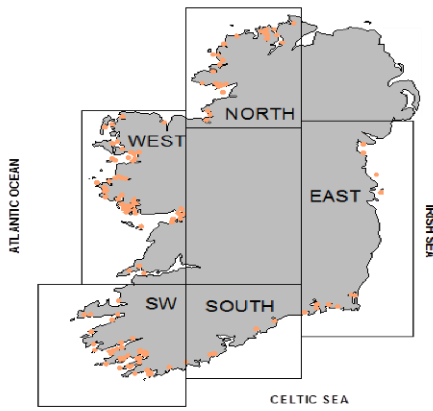
Unfortunately this species , as indicated , has now caused a temporary seasonal closure in 1 site in the south. This is the peak time of historical likely occurrence and currently environmental conditions remain relatively favourable so full caution advised.



Most up to date available satellite data



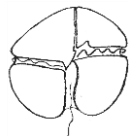
Diatoms species more prominent and dominant in the water but dinoflagellate levels rising. High levels of mixed beneficial and potential toxic diatoms (see table) in some inshore areas.



**NW coast (M4)** Below average by 0.85°C wk26  
**SW coast (M3)** Above average by 0.34°C wk26  
**SE coast (M5)** Above average by 0.16°C wk26

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Pseudo-nitzschia seriata complex	1188000
2	east	Leptocylindrus danicus	272000
3	east	Microflagellate sp.	126000
4	east	Skeletonema spp.	124000
5	east	Euglena/Eutreptiella spp.	91000
1	north	Chaetoceros (Hyalochaete) spp.	2254000
2	north	Skeletonema spp.	114000
3	north	Prorocentrum micans	89000
4	north	Cylindrotheca closterium/ Nitzschia longissima	17000
5	north	Pennate diatom	16000
1	south	Bacteriastrium spp.	348000
2	south	Thalassiosira <20um	242000
3	south	Chaetoceros (Hyalochaete) spp.	180000
4	south	Lauderia / Detonula sp	102000
5	south	Centric diatoms <20um	78000
1	southwest	Skeletonema spp.	331000
2	southwest	Leptocylindrus minimus	329000
3	southwest	Asterionellopsis glacialis	274000
4	southwest	Navicula spp. <25um	265000
5	southwest	Pseudo-nitzschia delicatissima complex	82000
1	west	Chaetoceros spp. (H) (small)	1852000
2	west	Chaetoceros (Hyalochaete) spp.	654000
3	west	Glenodinium spp.	198000
4	west	Pseudo-nitzschia delicatissima complex	94000
5	west	Pennate diatom	92000



*Karenia mikimotoi* bloom warning level  
- High -

This is now the peak season for the potential occurrence of *Karenia* blooms. These blooms , millions of cells/ lt, tend to establish offshore and get transported inshore during suitable environmental conditions, sometimes quite rapidly. Significant warning levels of cells have been observed currently in the south west. Increased awareness is advised that this species may cause issues, particularly in SE and SW areas.

Other bloom species news

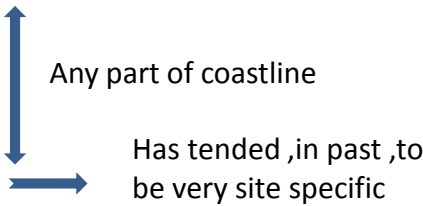
Most species have the potential to reach high numbers and be considered a bloom. The majority of such blooms are short lived and not a problem. At this time of year the typical species to watch out for , that can cause problems, are:

*Karenia mikimotoi*

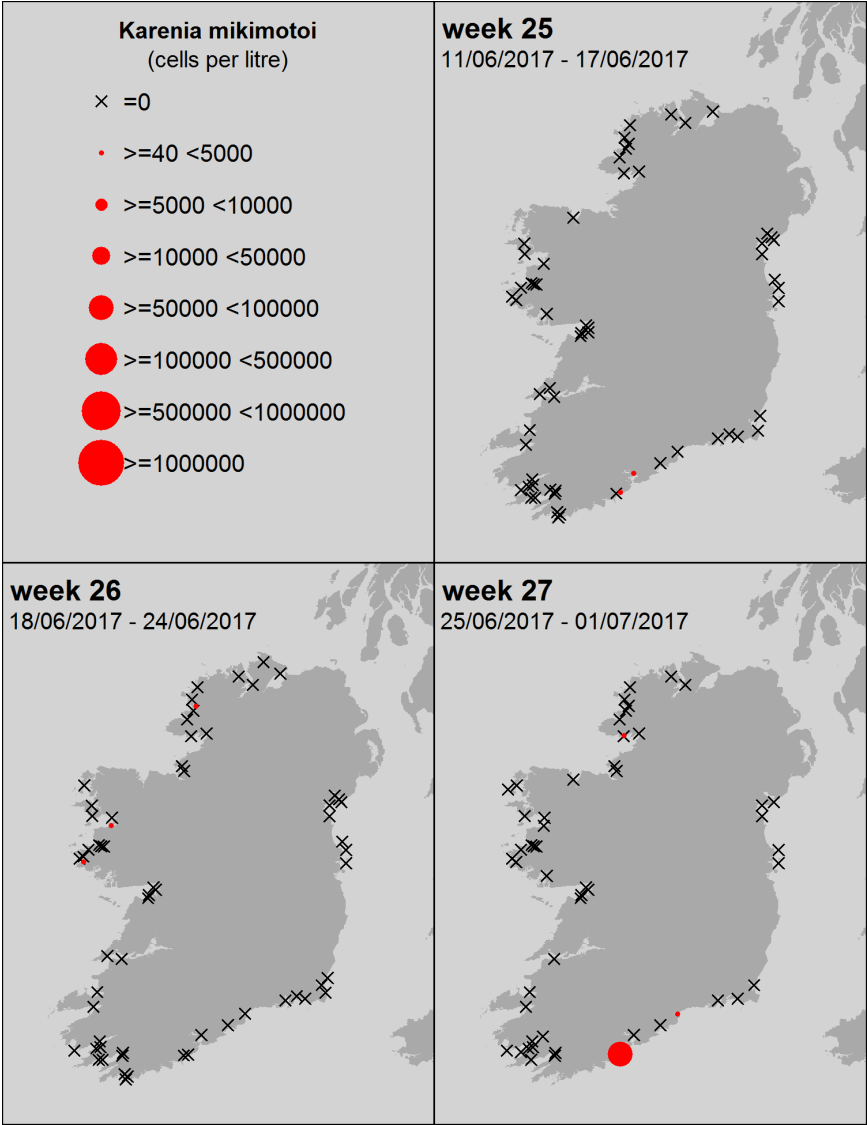
*Heterocapsa* spp.

*Noctiluca scintillans*

*Alexandrium* spp.



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





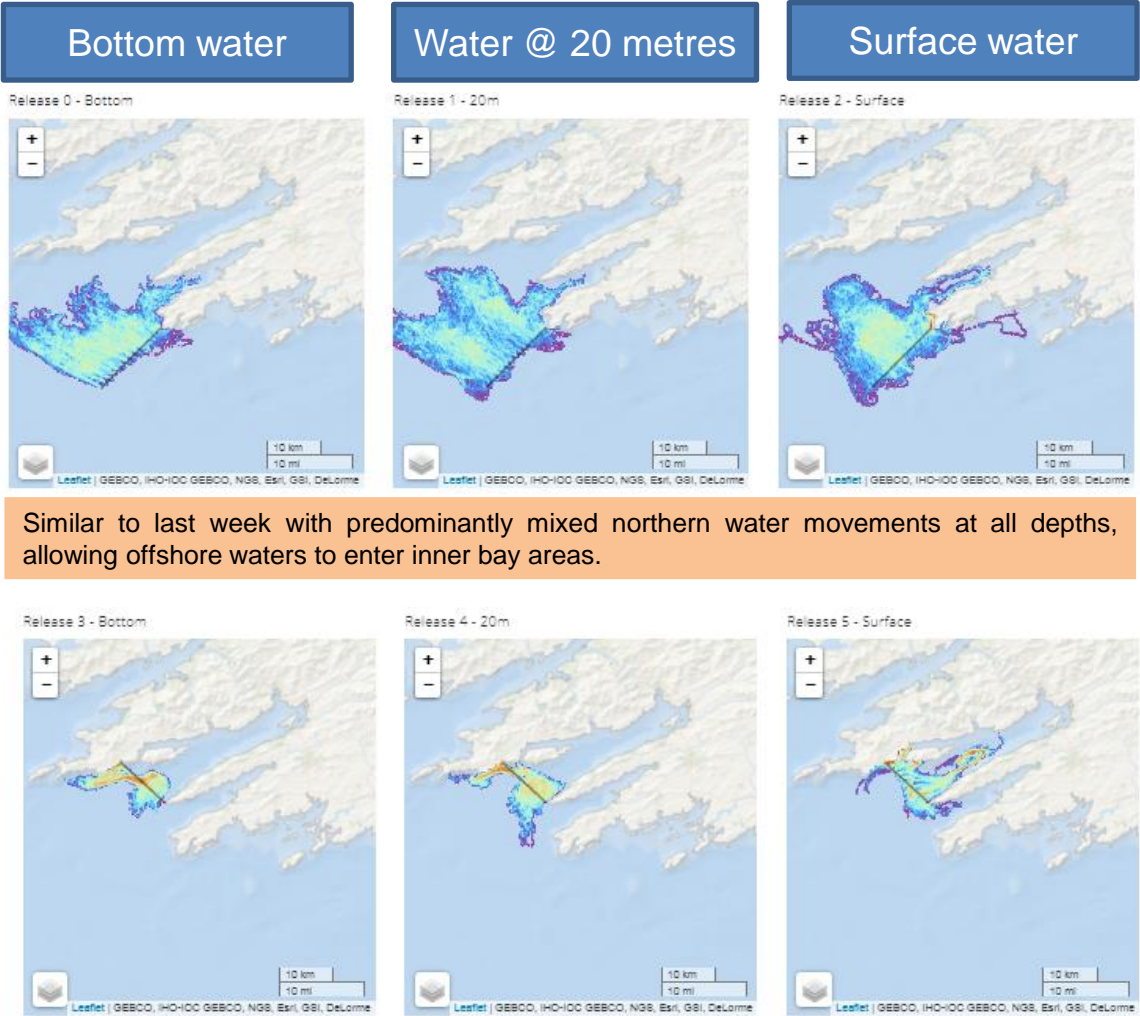
# SOUTHWEST: Bantry Bay

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 to last week with predominantly mixed northern water movements at all depths, allowing offshore waters to enter inner bay areas.

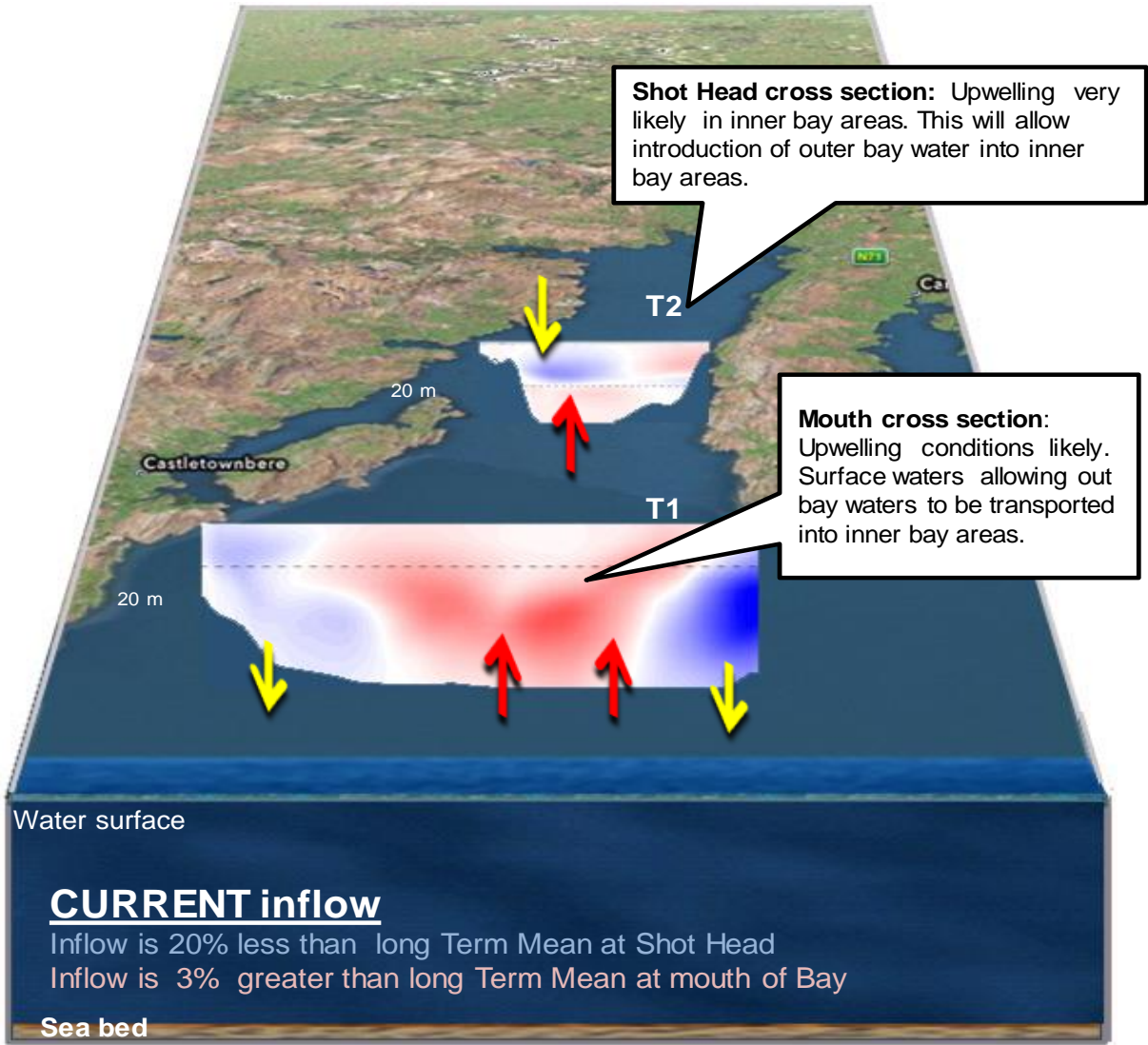
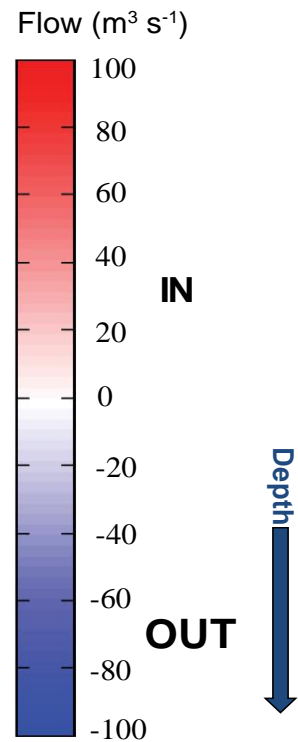
Inner bay down welling possible. Surface outer bay waters reaching inner bay areas likely.

# Bantry Bay

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



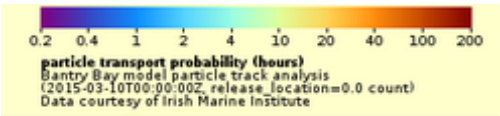
Forecast for next 3 days



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)

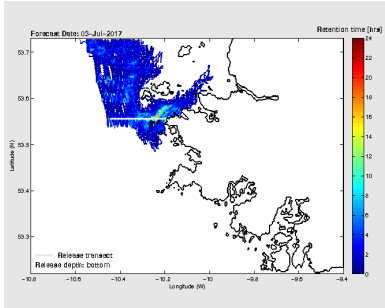
Reddish colours represent areas where phytoplankton remain longest  
Cooler colours represent areas where phytoplankton remain for shorter periods



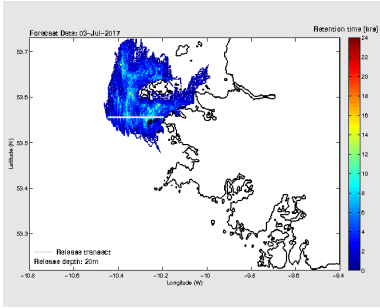
0.2 0.4 1 2 4 10 20 40 100 200  
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

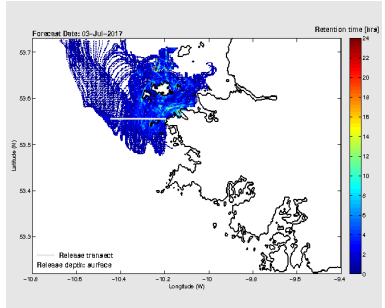
Bottom water



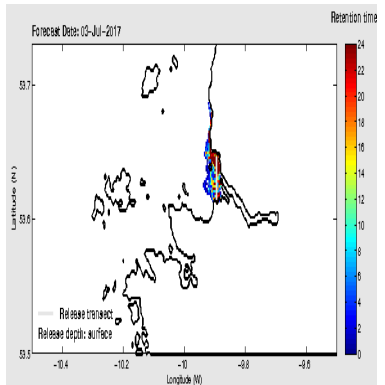
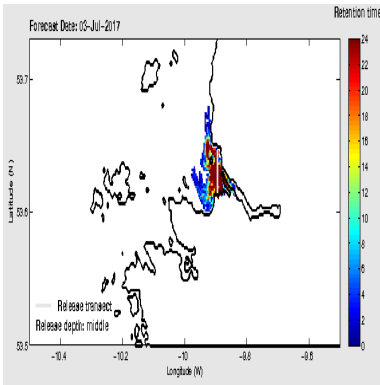
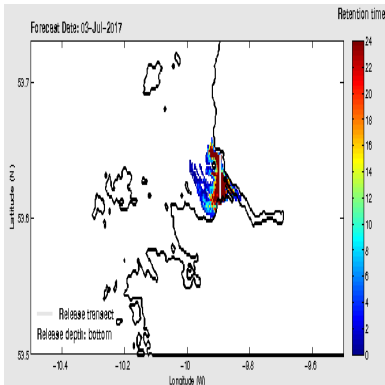
Water @ 20 metres



Surface water



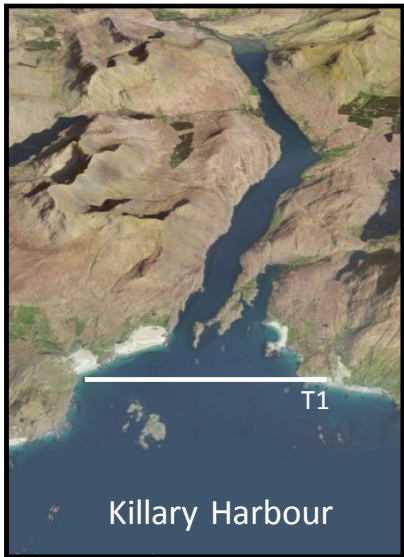
**Cleggan**  
Similar to last week - strong predominantly northerly water movements at all depths. Offshore waters reaching near shores areas likely.



**Killary**  
Waters at all depths moving northward outside bay mouth area. Upwelling conditions likely in inner bay area as bottom and deeper waters indicate movement inward while surface waters indicate opposite transport.

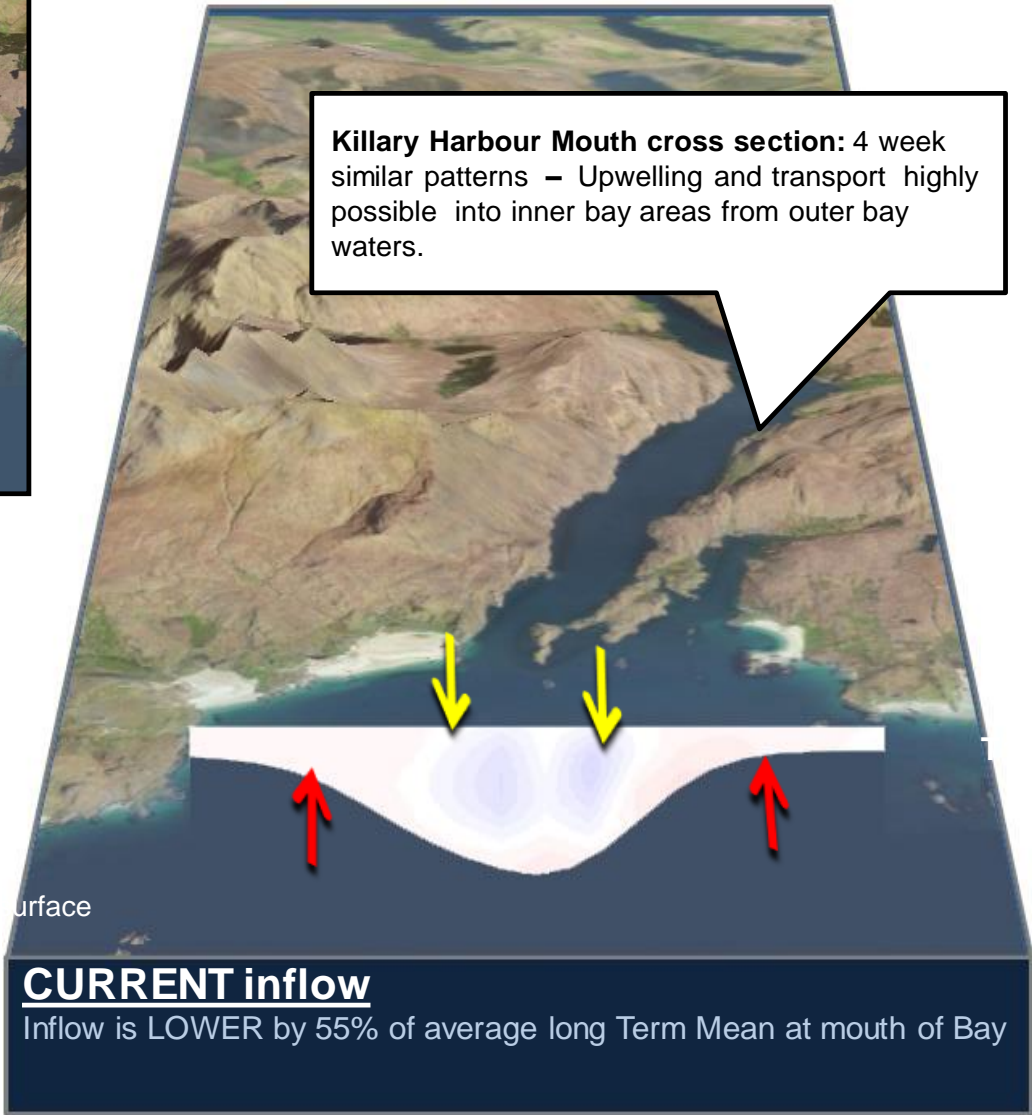
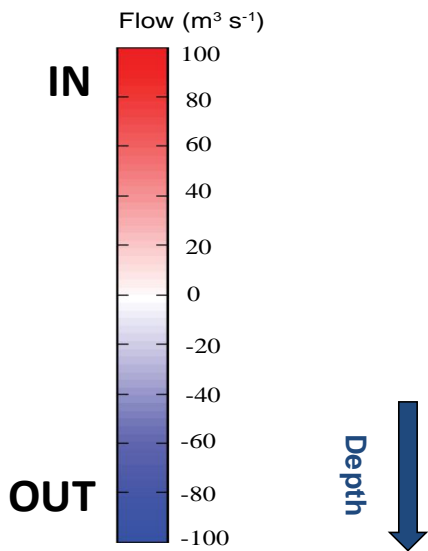
# Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



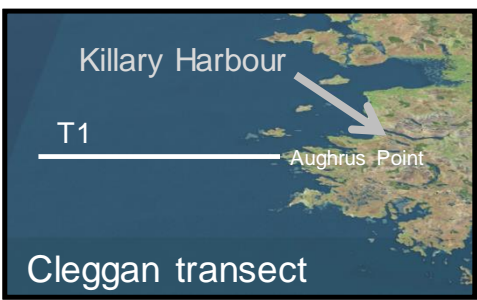
Forecast for next 3 days

**Killary Harbour Mouth cross section:** 4 week similar patterns – Upwelling and transport highly possible into inner bay areas from outer bay waters.





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



## Forecast for next 3 days

**Cleggan section:** Again conditions appear to be the same as last week - Strong water mixing and dominant northerly flows offshore, at all depths, with some counter southerly flows continuing to establish in near shore areas. .

