

# Ireland: Predictions

ASP event: Low  
AZP event: **High**  
DSP event: **High**  
PSP event: High (site specific , moderate in general)

NMP Current closures			
ASP	AZP	DSP	PSP
0	0	1	0

ASP: Continued decrease in cell levels. 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 level of caution is advised due to presence of cell levels in some sites.

AZP: Similar to last week- **Highest caution** is still advised with this difficult species. As previously indicated the potential causative species have been increasingly observed and the related toxins and coverage spread. This is the main historical occurrence period, suitable environmental conditions exist and the toxin is currently present in low levels. Issues with this toxin can occur suddenly and acutely . Highest caution is advised .

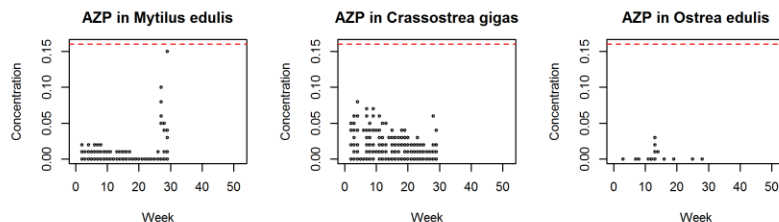
DSP: Same conditions and advise - **Highest caution** - Continued toxicity issues in some sites (SW) but cell levels increasing slowly in many areas throughout the coastline. All sites should insure best sampling practices and obtaining the most recent results available. Continued rise and impact of this species is to be expected at present based on current trends, historic patterns and predictive marine models.

PSP: Ideal weather conditions could definitely have an impact on the possibility of a brief bloom in historically affected sites – **highest caution** still advised in historically affected sites (S) and any site with significant species levels during this good weather period.

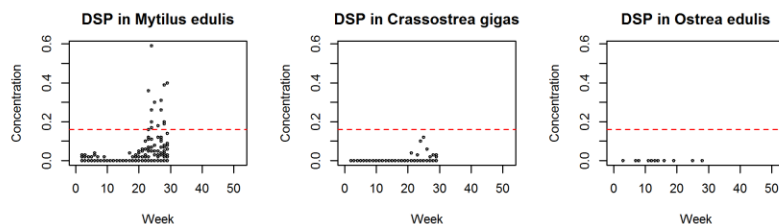
Blooms: There is a **high risk of bloom conditions spreading** due to current environmental conditions. Any unusual water discoloration should be noted and regional labs contacted if concerned /regarding possible need for additional sampling. All feedback is welcome at [Joe.Silke@Marine.ie](mailto:Joe.Silke@Marine.ie) .

## National Monitoring Programme

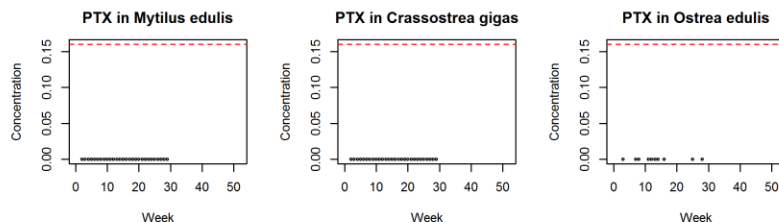
AZP



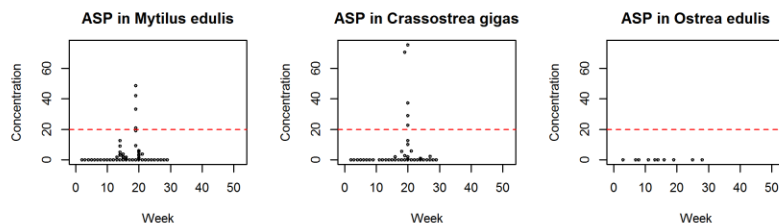
DSP



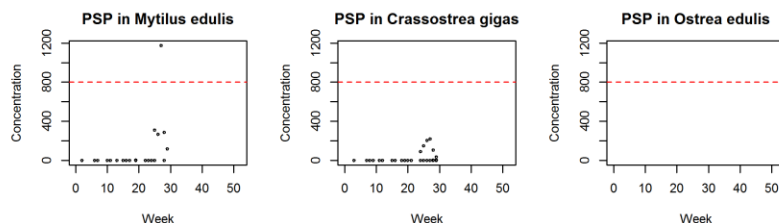
PTX



ASP



PSP



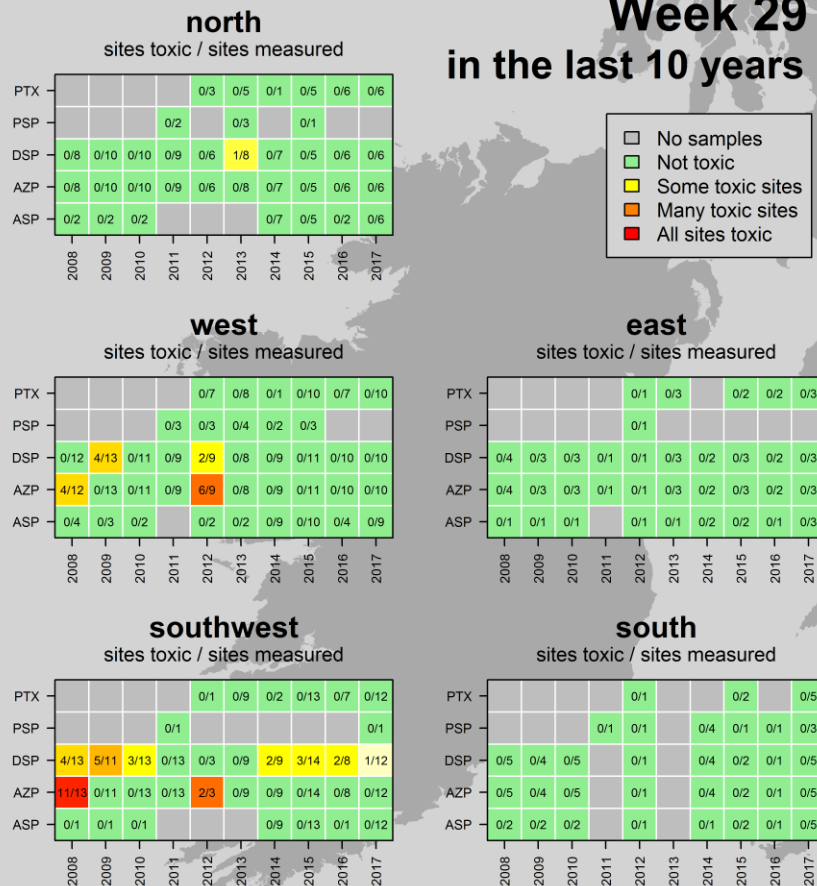
Levels from week 1 to present week. Regulatory limit - - - - -



## HISTORIC TRENDS



**Week 29**  
in the last 10 years



ASP events: mid-March to early May

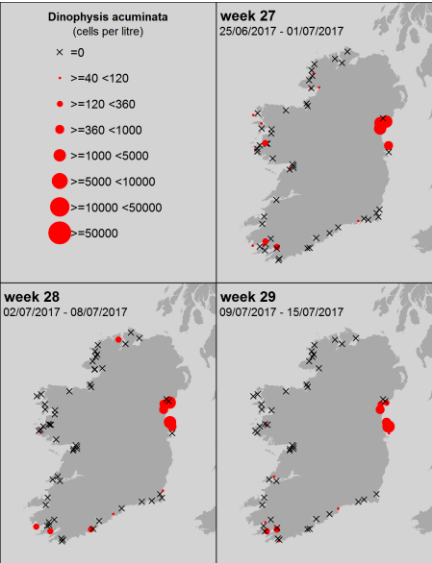
AZP events: April to December

DSP events: May to December

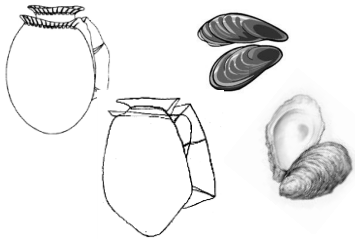
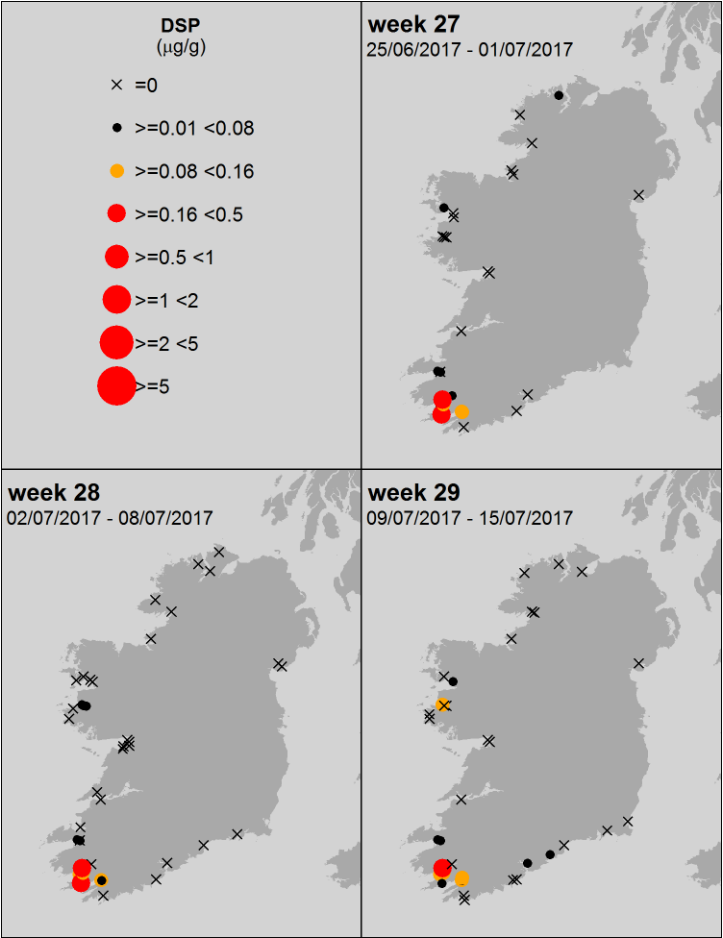
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks.

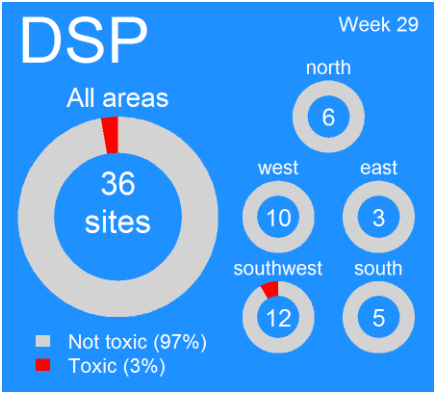


All levels of DSP biotoxin recorded- 3 wks.



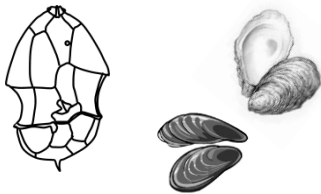
Current closures levels

≥ DSP 0.16 µg/g



Comment – Similar to the last few weeks - 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.

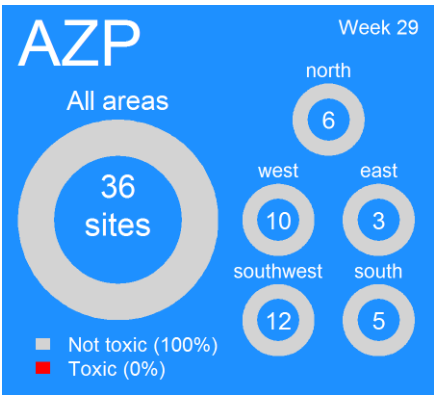
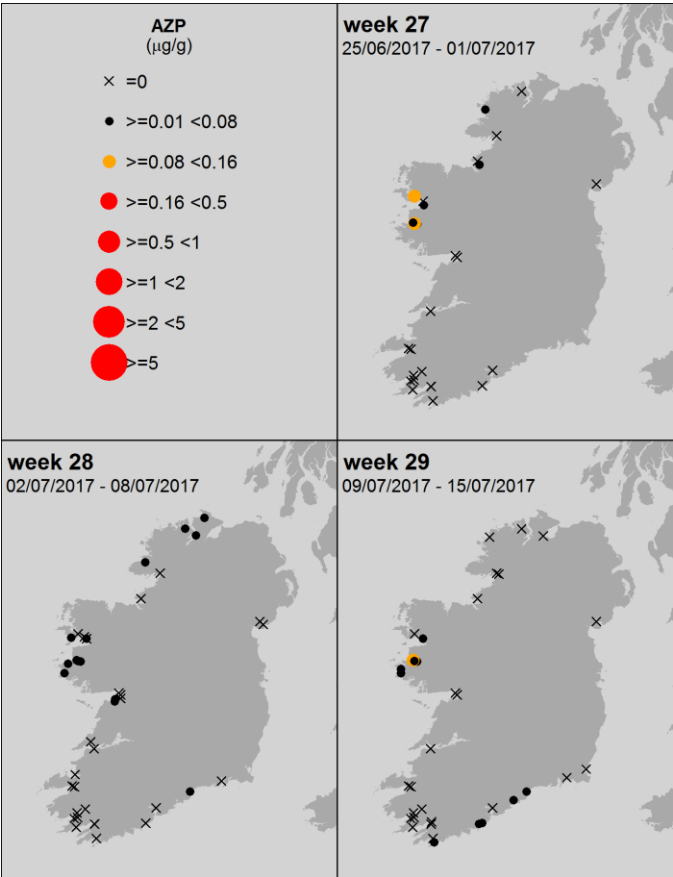
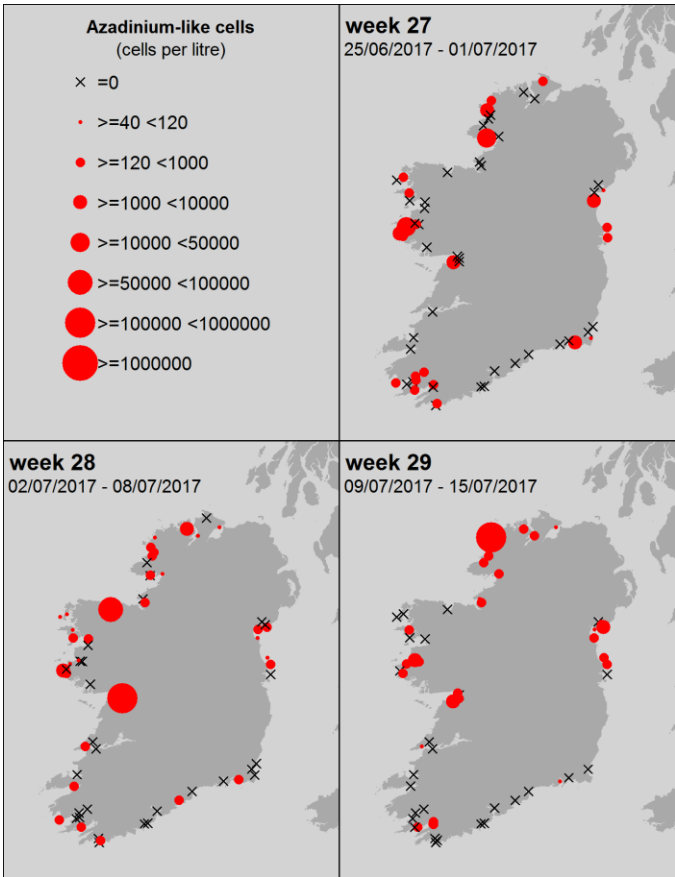
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.

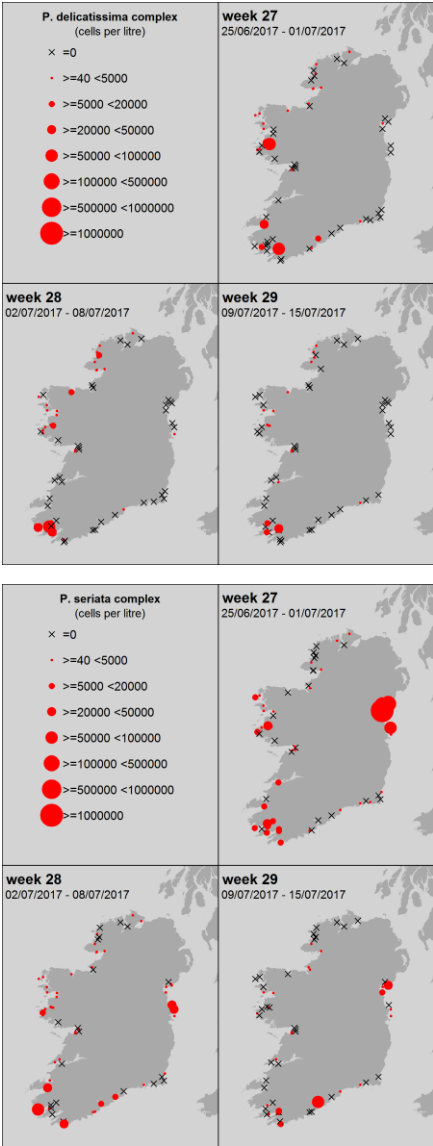
Current closures levels  
≥ AZP 0.16 µg/g



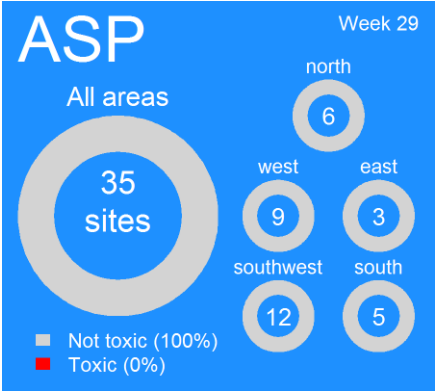
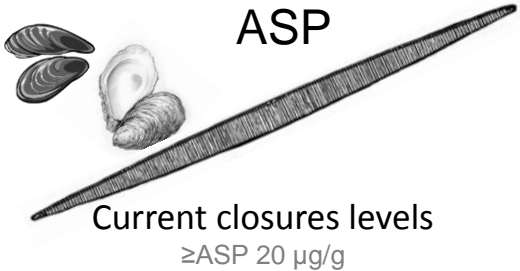
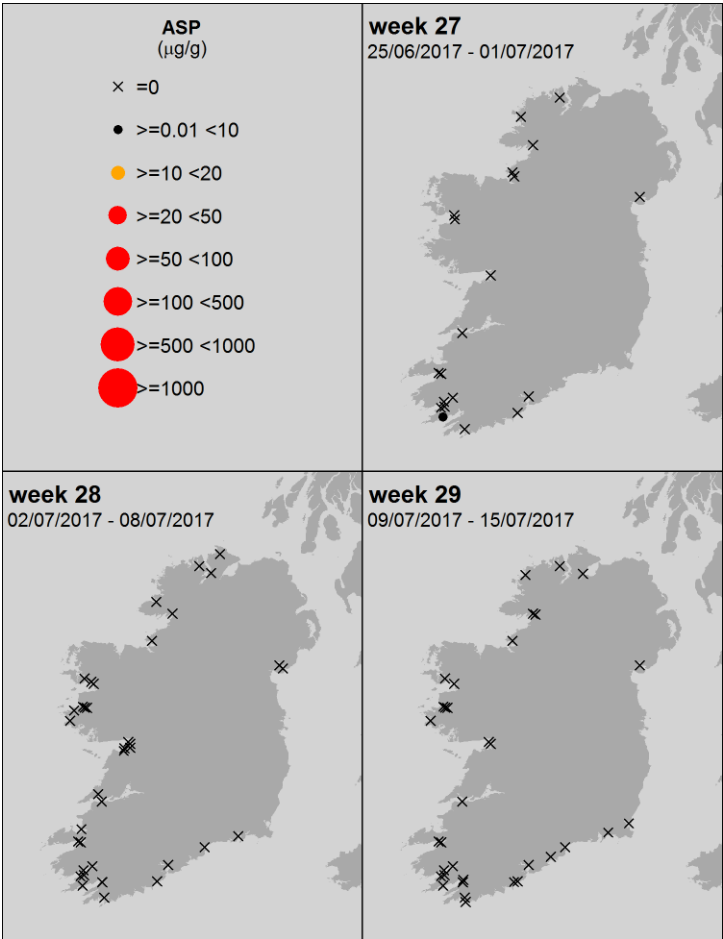
Comments  
Same levels of warnings and caution - highest level of caution and observance- main historical period of occurrence, 3 week increasing trend of toxin detection. This species has been can rapidly bloom or get transport into bay areas at bloom levels. Such transport conditions are typical at this time of year- sudden acute issues possible.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



All levels of ASP biotoxin recorded - 3 wks.



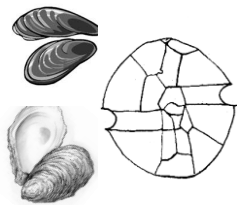
Comments

Low cell levels only. Cell levels appear to be returning to normal background levels and a toxin event would be unlikely at this time of year.

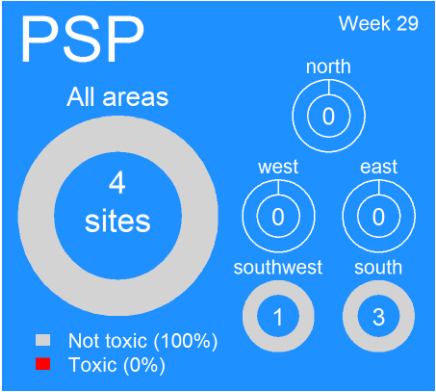
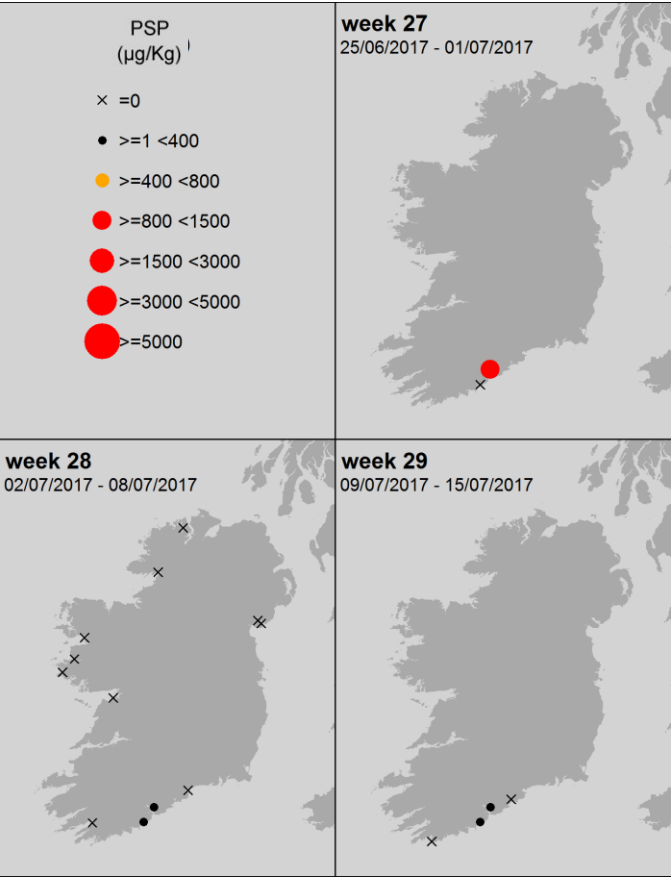
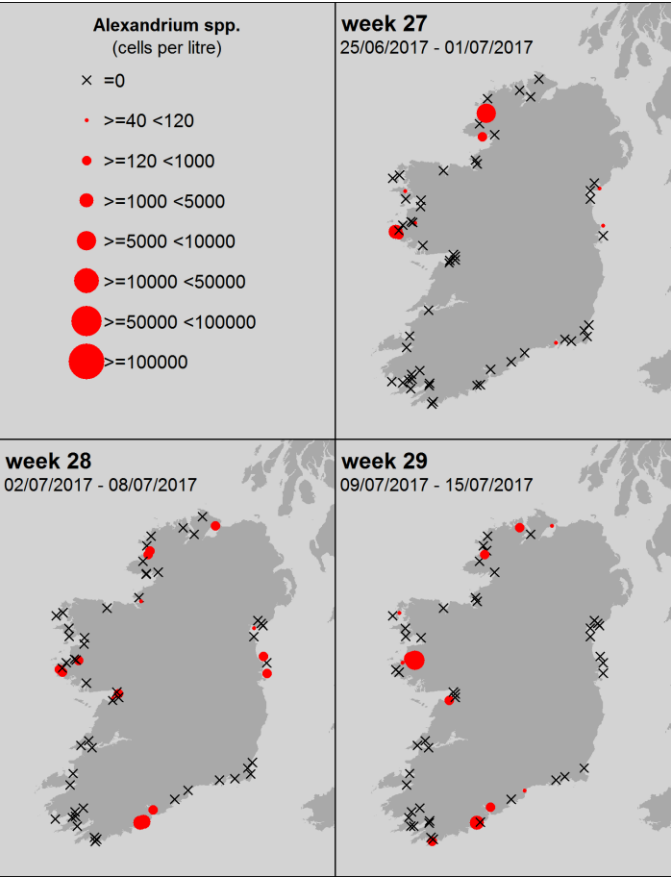
PSP and Alexandrium sp. current trends

Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.



Current closures levels  
≥ PSP 800 µg/Kg

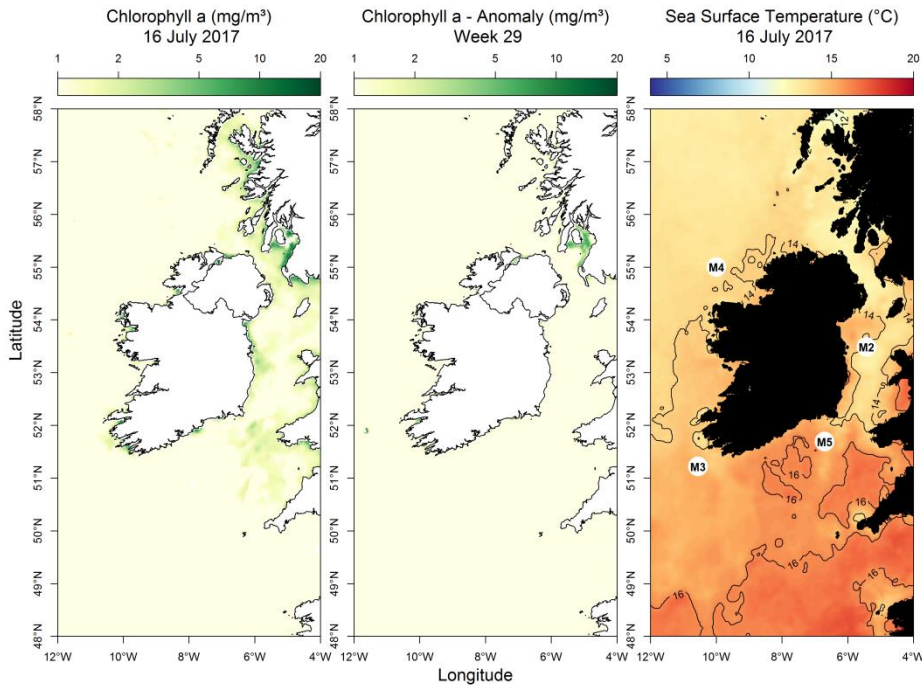


Comments

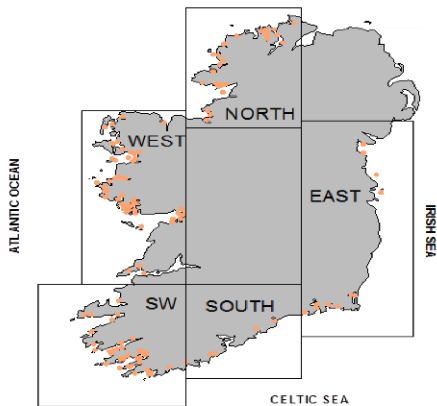
Weather conditions may be favourable this week for a temporary bloom issue in traditionally hit sites only. This is the peak time of historical likely occurrence and currently environmental conditions remain relatively favourable so full caution advised.



Most up to date available satellite data



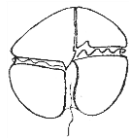
Changes in typical dominance of species type between Dinoflagellates and diatoms at this time of year occurring. Eastern and SW coast areas indicating increased chlorophyll/growth levels.



**NW coast (M4)** Below average by 0.63°C wk28  
**SW coast (M3)** Unavailable  
**SE coast (M5)** Above average by 0.75°C wk28

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Chaetoceros spp. (H) (small)	11178000
2	east	Chaetoceros (Hyalochaete) spp.	124000
3	east	Rhizosolenia sp	103000
4	east	Cylindrotheca closterium/ Nitzschia longissima	41000
5	east	Skeletonema spp.	31000
1	north	Chaetoceros (Hyalochaete) spp.	2535000
2	north	Skeletonema spp.	206000
3	north	Azadinium/heterocapsa spp.	136000
4	north	Cylindrotheca closterium/ Nitzschia longissima	60000
5	north	Pennate diatom	48000
1	south	Karenia mikimotoi	1240000
2	south	Microflagellate sp.	861000
3	south	Haptophytes	108000
4	south	Lauderia / Detonula sp	81000
5	south	Cylindrotheca closterium/ Nitzschia longissima	77000
1	southwest	Microflagellate spp. <10um	1791000
2	southwest	Asterionellopsis glacialis	245000
3	southwest	Leptocylindrus minimus	163000
4	southwest	Haptophytes	139000
5	southwest	Lauderia / Detonula sp	132000
1	west	Chaetoceros (Hyalochaete) spp.	647000
2	west	Leptocylindrus danicus	217000
3	west	Glenodinium foliaceum	201000
4	west	Striatella unipunctata	147000
5	west	Licmophora spp.	51000



*Karenia mikimotoi* bloom warning level  
- Highest -

Potential bloom on south/south east highly likely – related to current favourable weather conditions and wind/transportation on shore. This is now the peak season for the potential occurrence of *Karenia* blooms . If blooms reach shore areas for sustained periods of time high likelihood of potential issues for stock/habitats ranging from mild stress to mortalities.

Other bloom species news

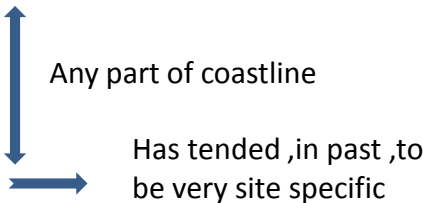
Most species have the potential to reach high numbers and be considered a bloom. The majority of such blooms are short lived and not a problem. At this time of year the typical species to watch out for , that can cause problems, are:

*Karenia mikimotoi*

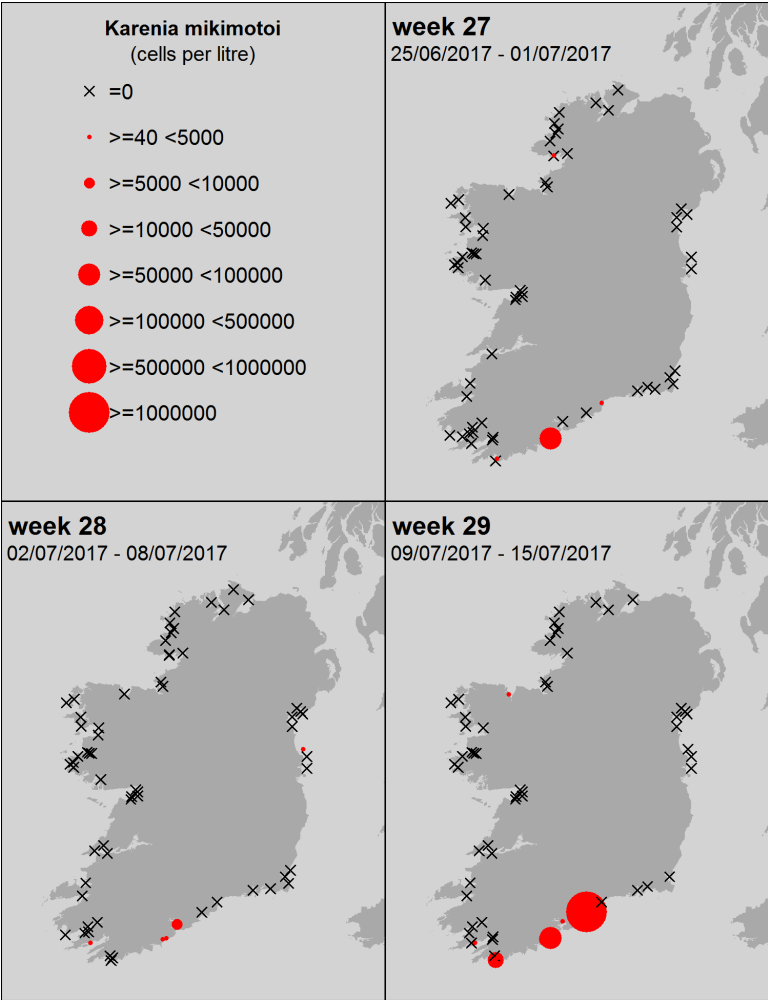
*Heterocapsa* spp.

*Noctiluca scintillans*

*Alexandrium* spp.



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



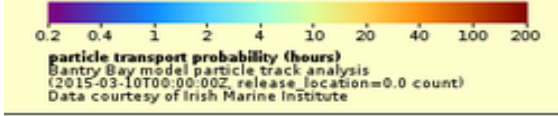


SOUTHWEST: Bantry Bay

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)

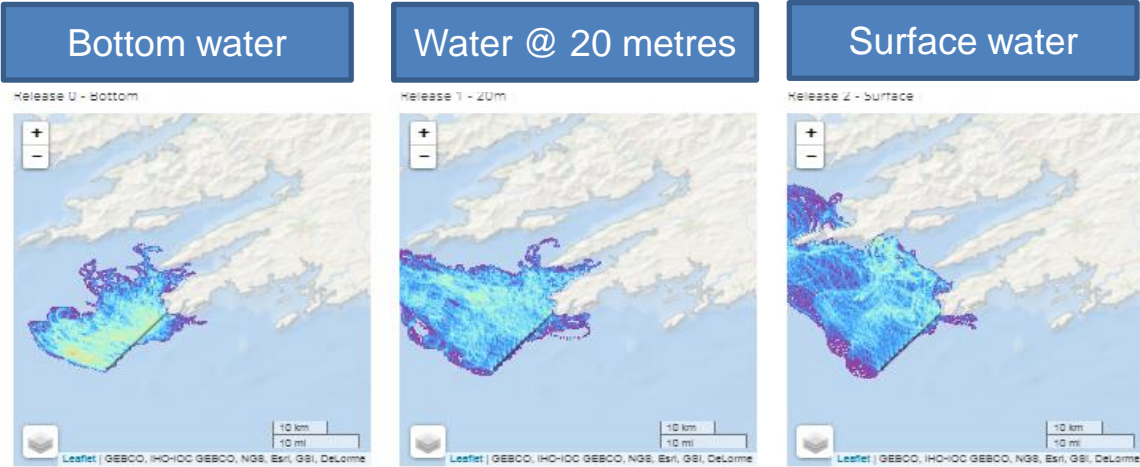
Reddish colours represent areas where phytoplankton remain longest

Cooler colours represent areas where phytoplankton remain for shorter periods

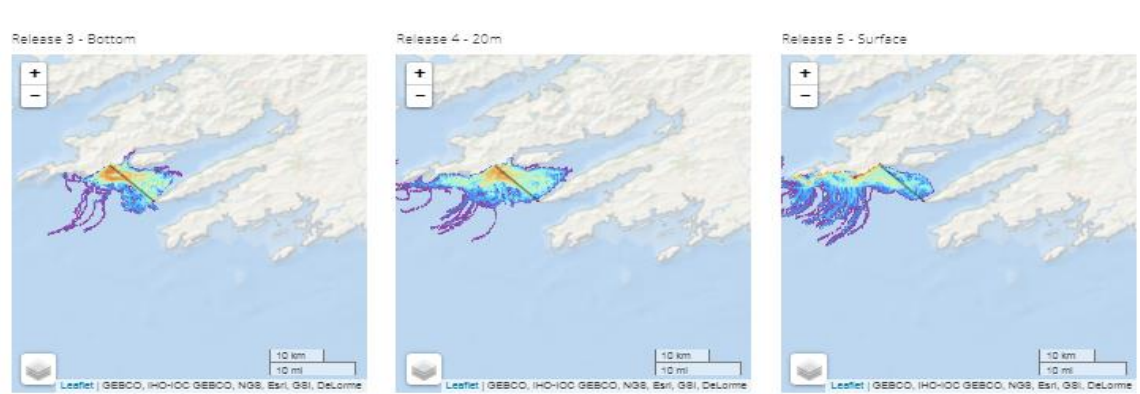


particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days



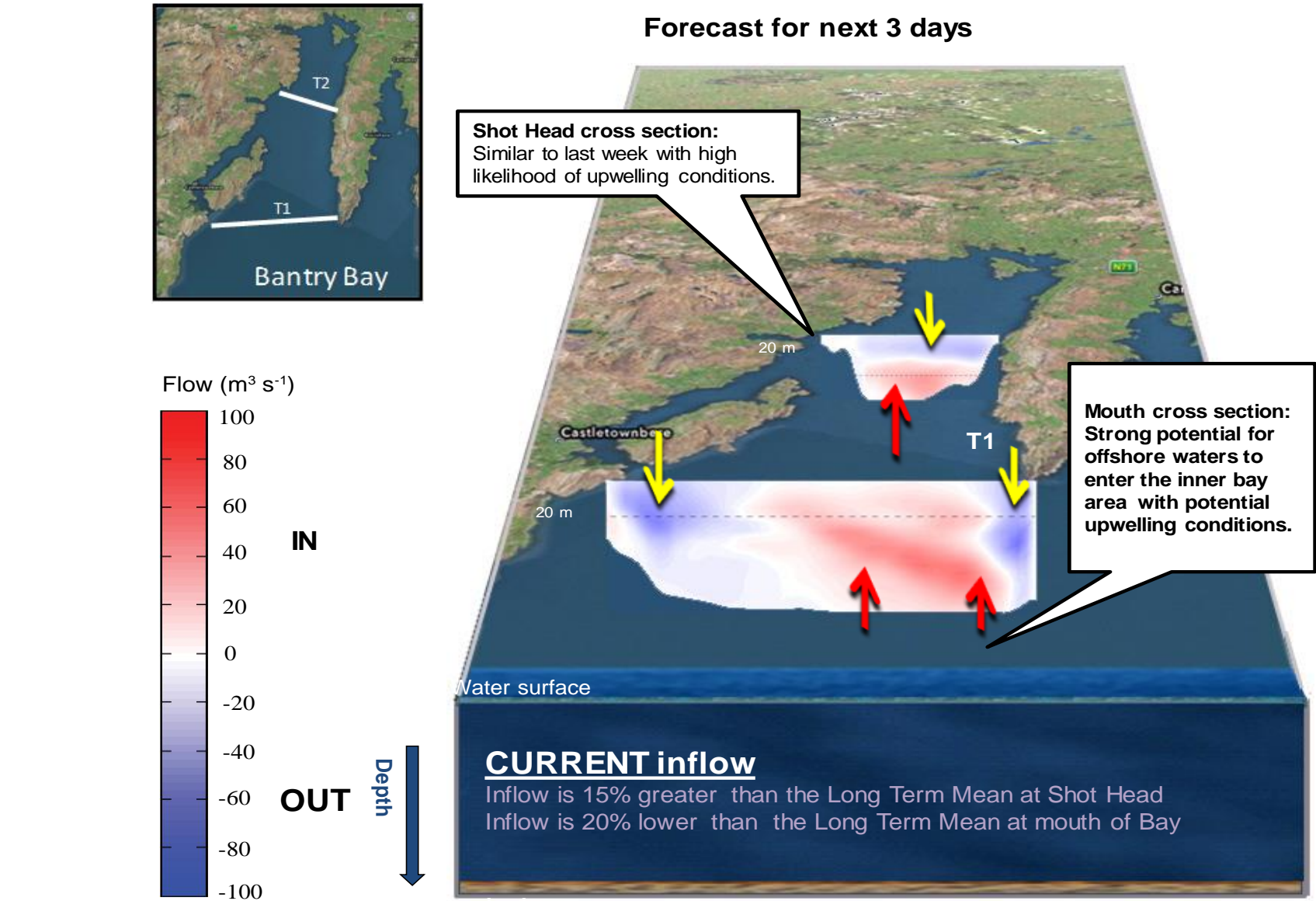
Same pattern as last week with mixed northerly water movement , particularly as depth decreases towards surface levels. Incursions of offshore waters into inner bay areas very likely.



Similar to last week patterns - Inner bay upwelling possible. Surface outer bay waters reaching inner bay areas likely.

# Bantry Bay

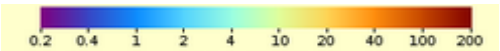
3 day estimated water flows at the mouth and mid-bay sections of Bantry Bay



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)

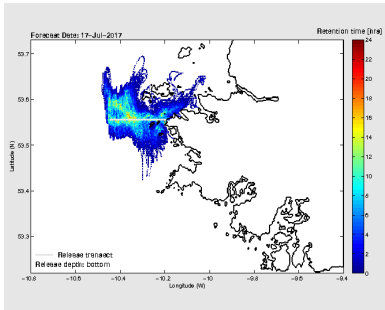
Reddish colours represent areas where phytoplankton remain longest  
Cooler colours represent areas where phytoplankton remain for shorter periods



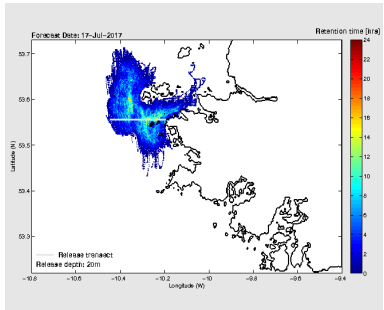
0.2 0.4 1 2 4 10 20 40 100 200  
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

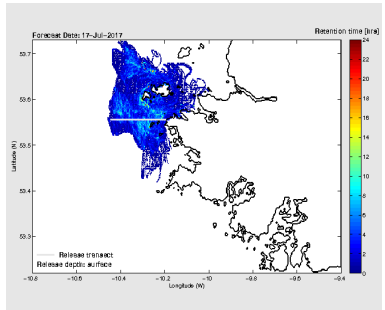
Bottom water



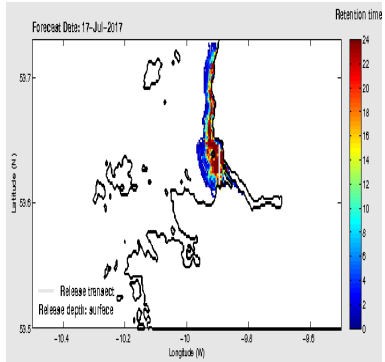
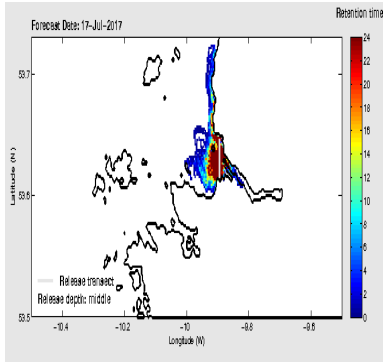
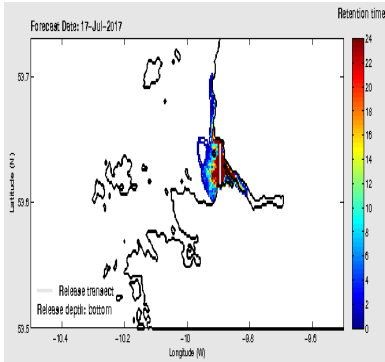
Water @ 20 metres



Surface water



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



**Killary**  
Outer bay waters reaching inner bay areas , at all depths, likely. Waters at all depths moving northward outside bay mouth area .

# Killary Harbour

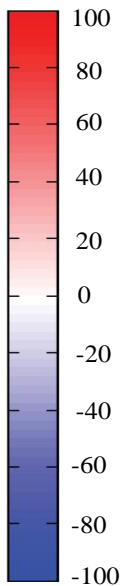
3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days

**Killary Harbour Mouth cross section:** Similar pattern to last week - Weak inflow rates dominating with possibility of marginal upwelling conditions further in the bay area possible.

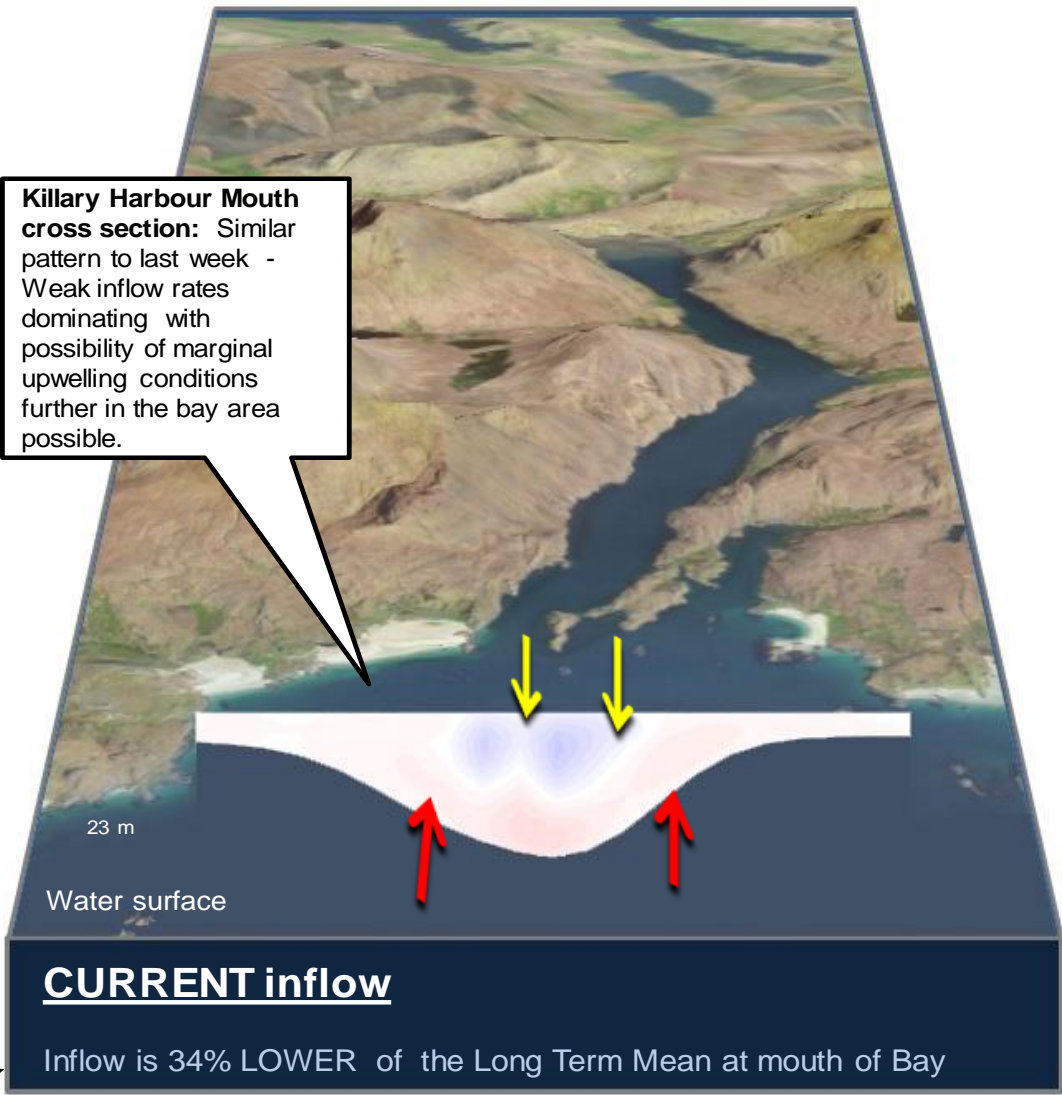
Flow ( $\text{m}^3 \text{s}^{-1}$ )



IN

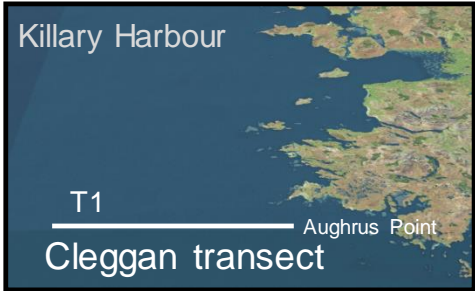
OUT

Depth





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



## Forecast for next 3 days

