

# Ireland: Predictions

ASP event: Moderate to low (decreasing)  
AZP event: Moderate (constant fluctuation)  
DSP event: High (Increasing- S, SW and W)  
PSP event: low (very slow increase)

NMP Current closures			
ASP	AZP	DSP	PSP
0	0	0	0

ASP: A potential decreasing trend in toxicity was predicted last week and appears to be establishing further. It would be expected that this trend would continue based on current results. Suitable environmental and water transportation patterns may slow the trend of decreasing risk so caution is still advised this week.

AZP: Continuing cautious moderate warning remain due to the continued observation of potential cell levels in some sites with low levels of toxins present (all currently below closure levels). Suitable environmental conditions continue to fluctuate widely. Issues with this toxin can occur suddenly and acutely. Caution is advised.

DSP: Currently following predictions and historical trends – increasing in presence and levels. This is the traditional season for this species to occur naturally and unfortunately have an impact. Levels of 400cells/lit to 800cells/lit have in the past caused issues. High levels of caution advised in all sites. Please watch cell levels closely and insure routine sampling to get the most current information.

PSP: A toxic event is not expected at this time of year. Low levels of caution should be exercised as we get closer to the historical period of occurrence and/or we experience favourable environmental conditions.

Blooms: Currently no substantial indications of detrimental blooms indicated but species of concern may occur suddenly and acutely as environmental conditions change.

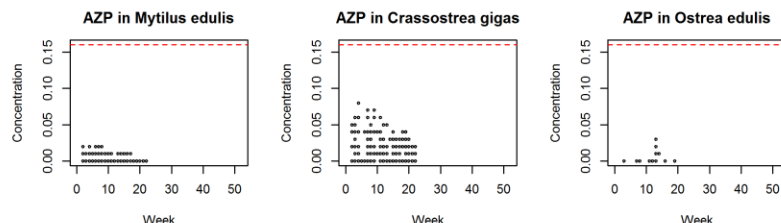
Please note: We will be updating the format of this bulletin throughout the year in an active effort to increase end user applicability and incorporate developing technologies. All feedback is welcome at [Joe.Silke@Marine.ie](mailto:Joe.Silke@Marine.ie).

## National Monitoring Programme

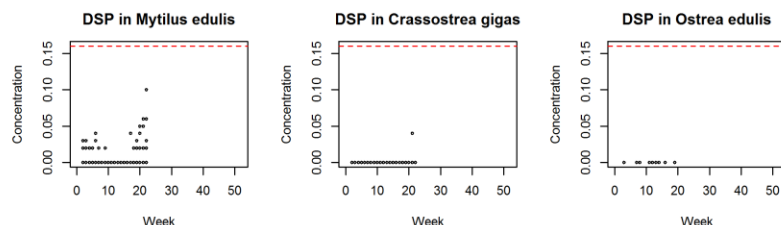


## HISTORIC TRENDS

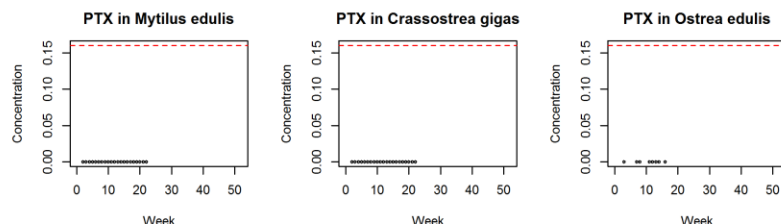
AZP



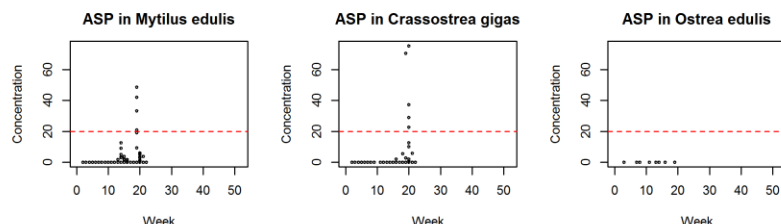
DSP



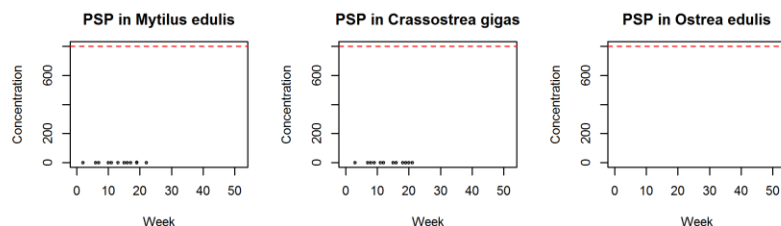
PTX



ASP



PSP



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

## Week 22 in the last 10 years



ASP events: mid-March to early May

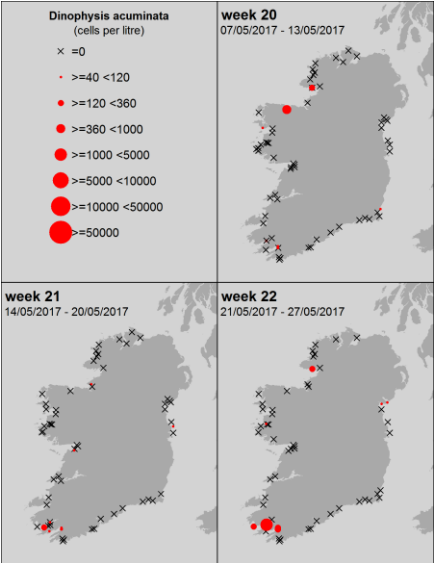
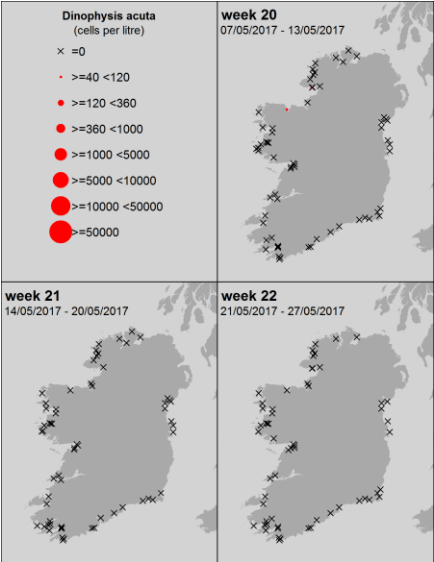
AZP events: April to December

DSP events: May to December

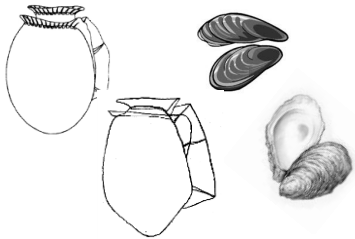
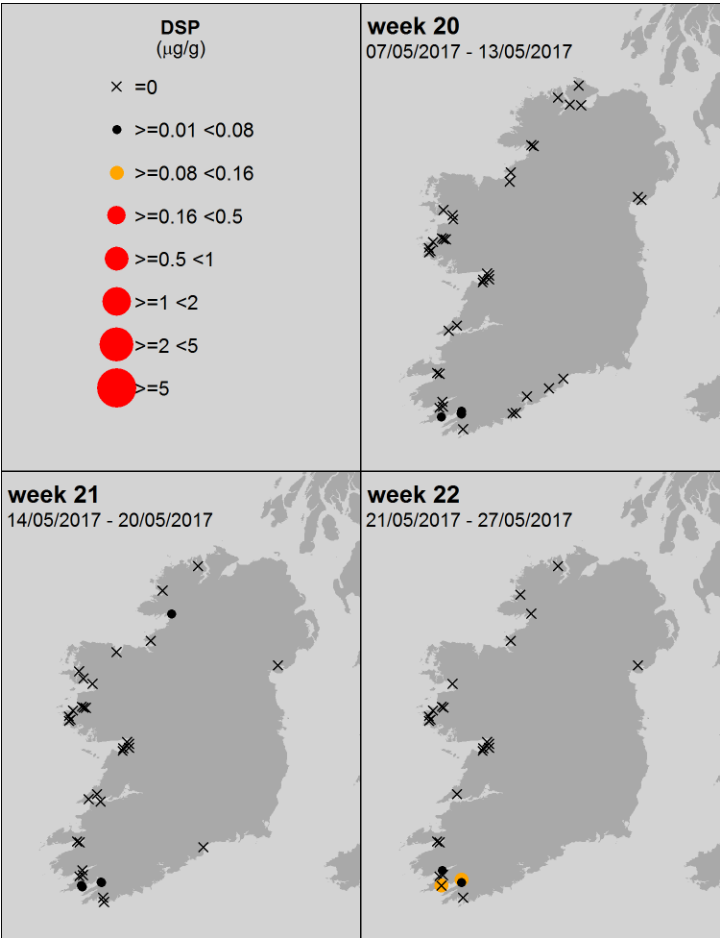
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks.

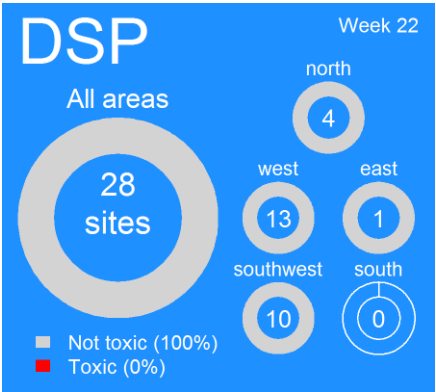


All levels of DSP biotoxin recorded- 3 wks.



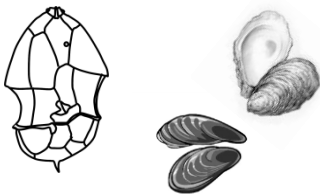
Current closures levels

≥ DSP 0.16 µg/g



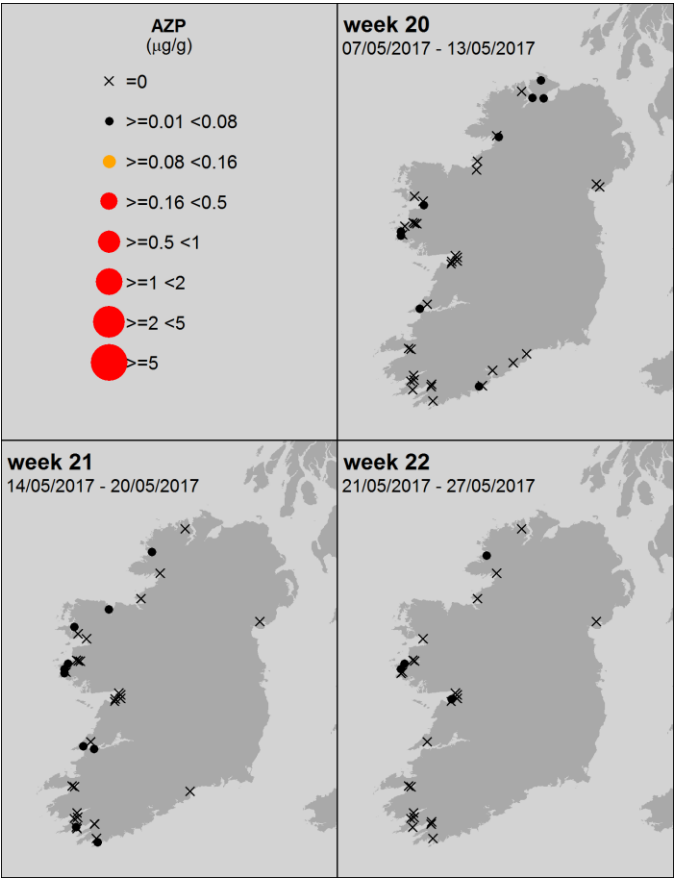
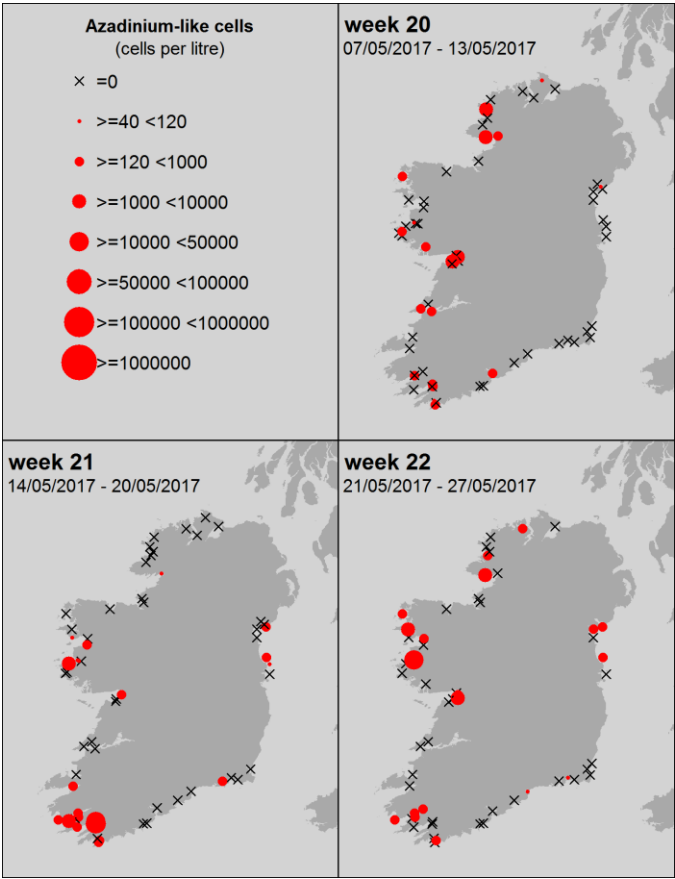
Comment – same as last week - Dinophysis cell levels continue to appear around the coast .This group do not need to reach high levels to cause a toxicity issue. Water transportation patterns , good weather predictions and historical period of occurrences, all indicate high possibility of toxicity increasing and becoming an issue in some sites .High level of caution.

AZP and Azadinium like species current trends



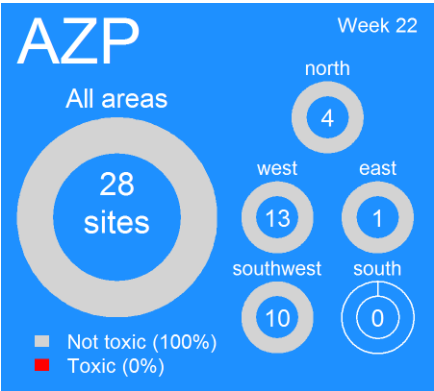
Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.



Current closures levels

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

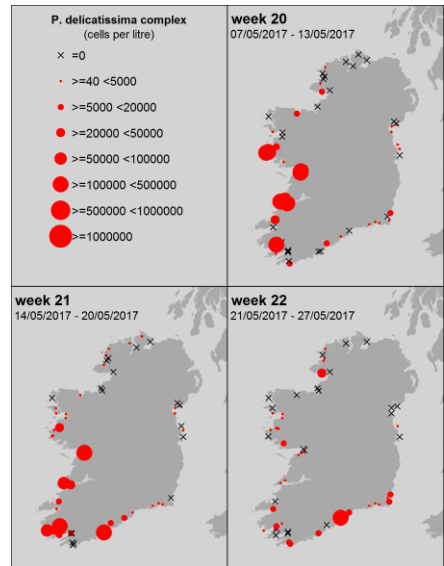
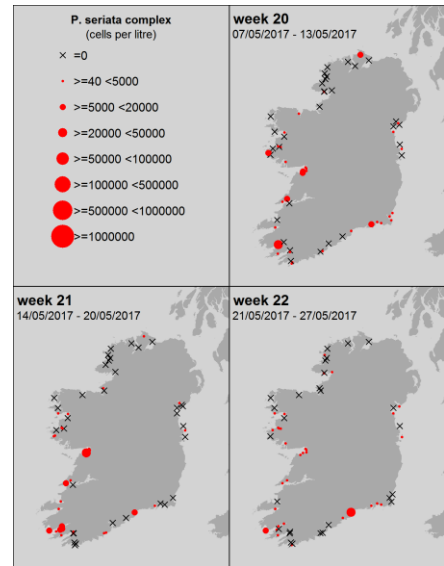


Comments

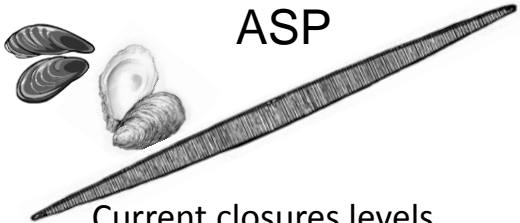
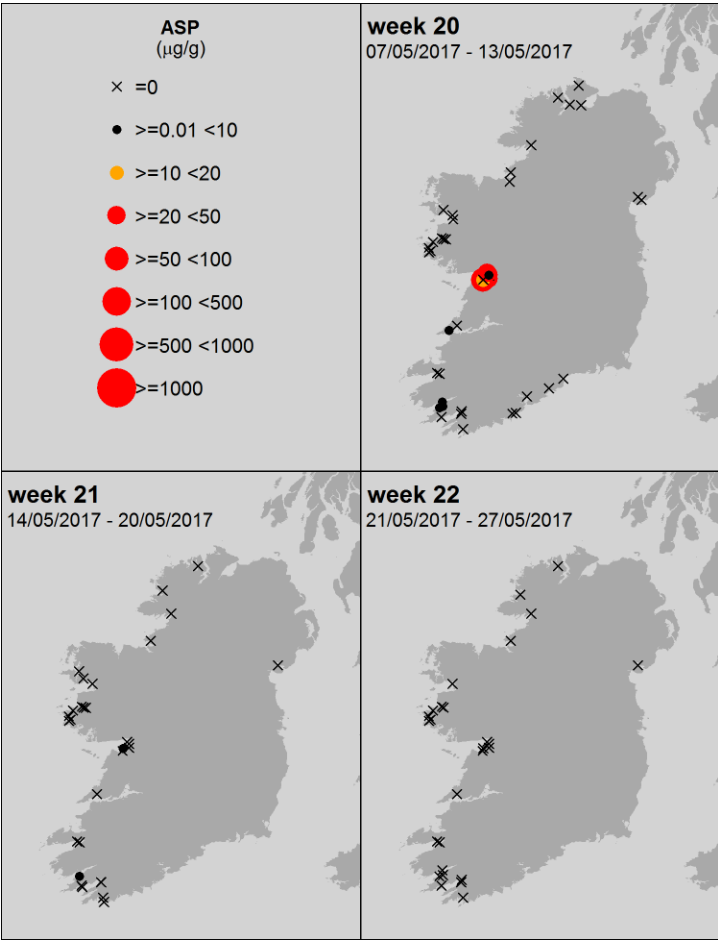
Fluctuation in cell levels continue to dominate – potential cells appearing in more sites but related low levels of toxicity levels decreasing temporarily. Toxicity related to this species can occur quickly if the causative species ‘comes in’. Caution advised.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.

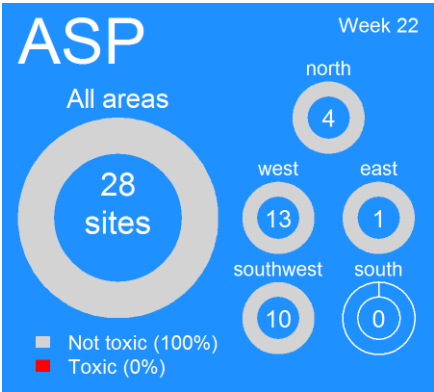


All levels of ASP biotoxin recorded - 3 wks.



Current closures levels

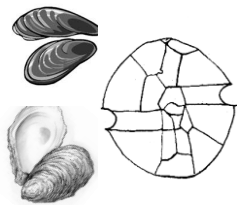
≥ASP 20 µg/g



Comments

Potential decreasing trend in levels of toxicity predicted last week appears to be establishing in affected areas. It is possible this trend will continue but potential good weather and inshore water transportation predictions for this week may cause localised reoccurrence issues. Caution still advised until cell levels drop further.

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

PSP

Week 22

All areas



north

1

west

0

east

0

southwest

0

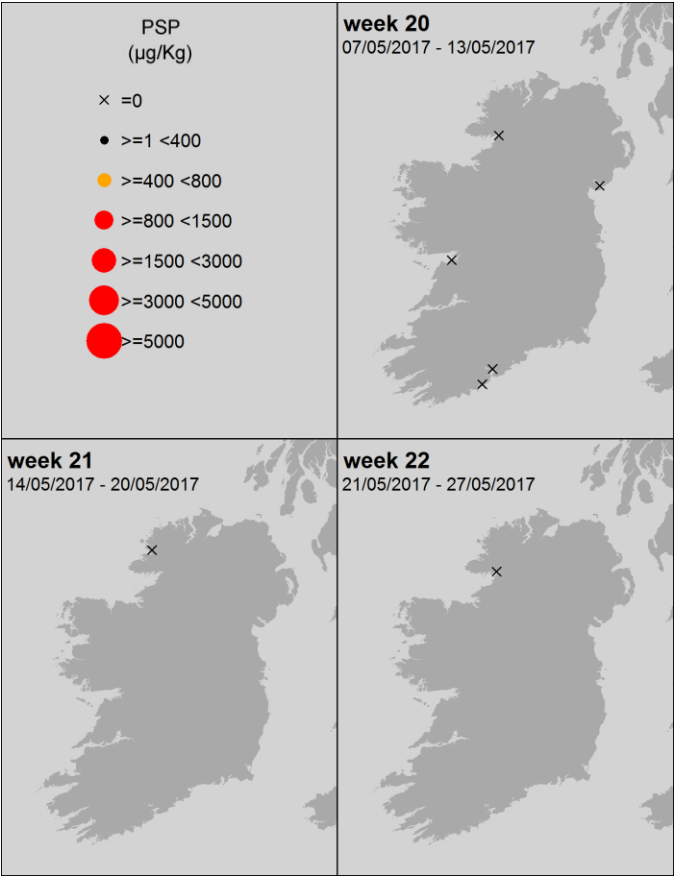
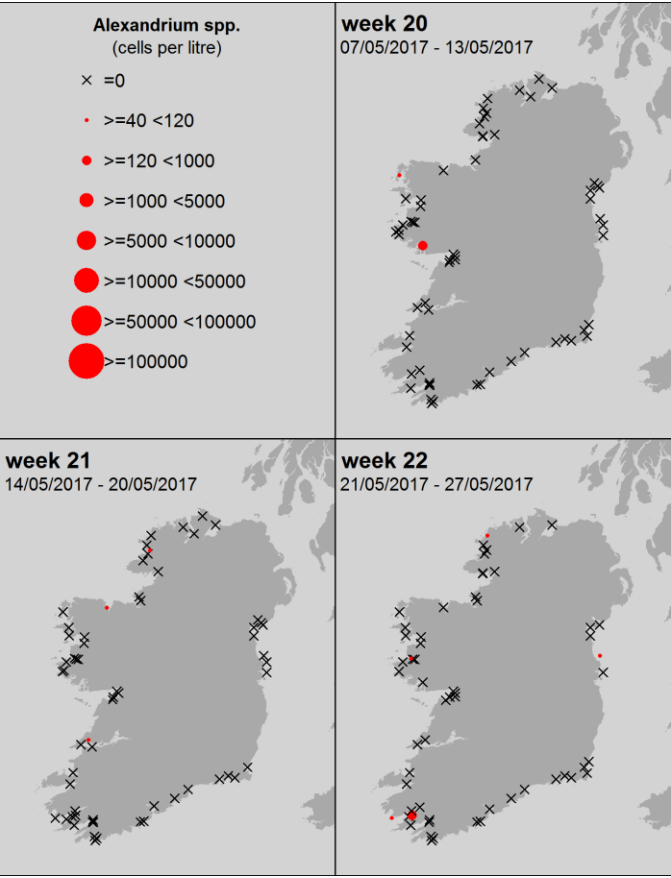
south

0

Not toxic (100%)  
Toxic (0%)

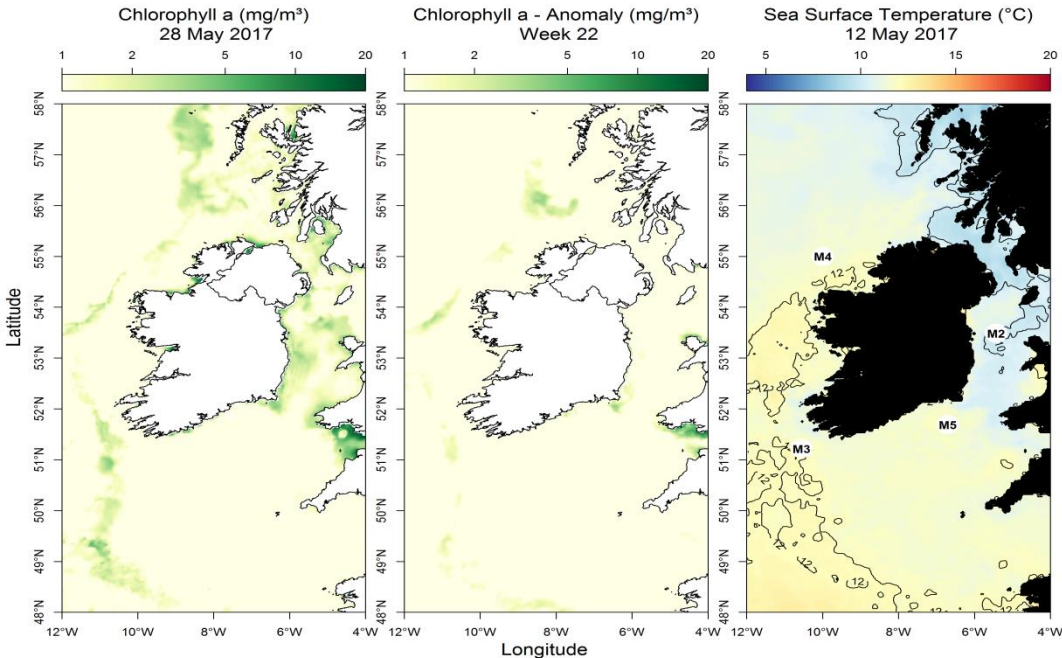
Comments

Currently no closures or issues with this group but as the likelihood of ideal environmental conditions increase so the possibility of potential impact will increase.

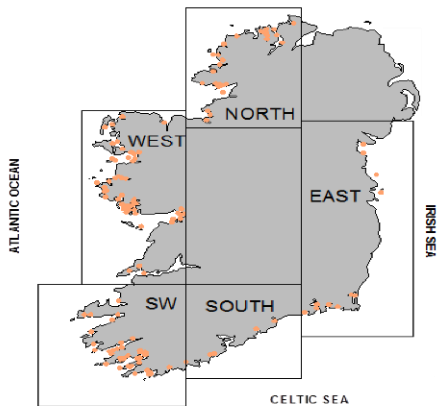




Most up to date available satellite data



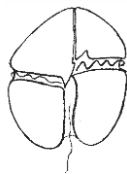
Chlorophyll levels indicate potential bloom patches off the Northern and western coasts. High levels of beneficial diatoms (see table) continue to be observed in most inshore areas.



**NW coast (M4)** Above average by 0.64°C wk21  
**SW coast (M3)** Below average by 0.61°C wk 21  
**SE coast (M5)** Above average by 1.33°C wk21

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Microflagellate sp.	3556000
2	east	Chaetoceros (Hyalochaete) spp.	258000
3	east	Cylindrotheca closterium/ Nitzschia longissima	82000
4	east	Centric Diatom	81000
5	east	Pennate diatom	33000
1	north	Dactyliosolen spp.	3290000
2	north	Leptocyldrus danicus	1803000
3	north	Dactyliosolen fragilissimus	724000
4	north	Chaetoceros (Hyalochaete) spp.	490000
5	north	Skeletonema spp.	184000
1	south	Pseudo-nitzschia delicatissima complex	290000
2	south	Heterocapsa spp. 20-50um	74000
3	south	Pymnesiophytes	46000
4	south	Leptocyldrus minimus	34000
5	south	Cerataulina spp.	30000
1	southwest	Microflagellate sp.	987000
2	southwest	Skeletonema costatum	423000
3	southwest	Cylindrotheca closterium/ Nitzschia longissima	329000
4	southwest	Skeletonema spp.	328000
5	southwest	Leptocyldrus minimus	199000
1	west	Dactyliosolen spp.	4878000
2	west	Leptocyldrus danicus	2006000
3	west	Mesodinium rubrum	120000
4	west	Pennate diatom	29000
5	west	Cylindrotheca closterium/ Nitzschia longissima	21000



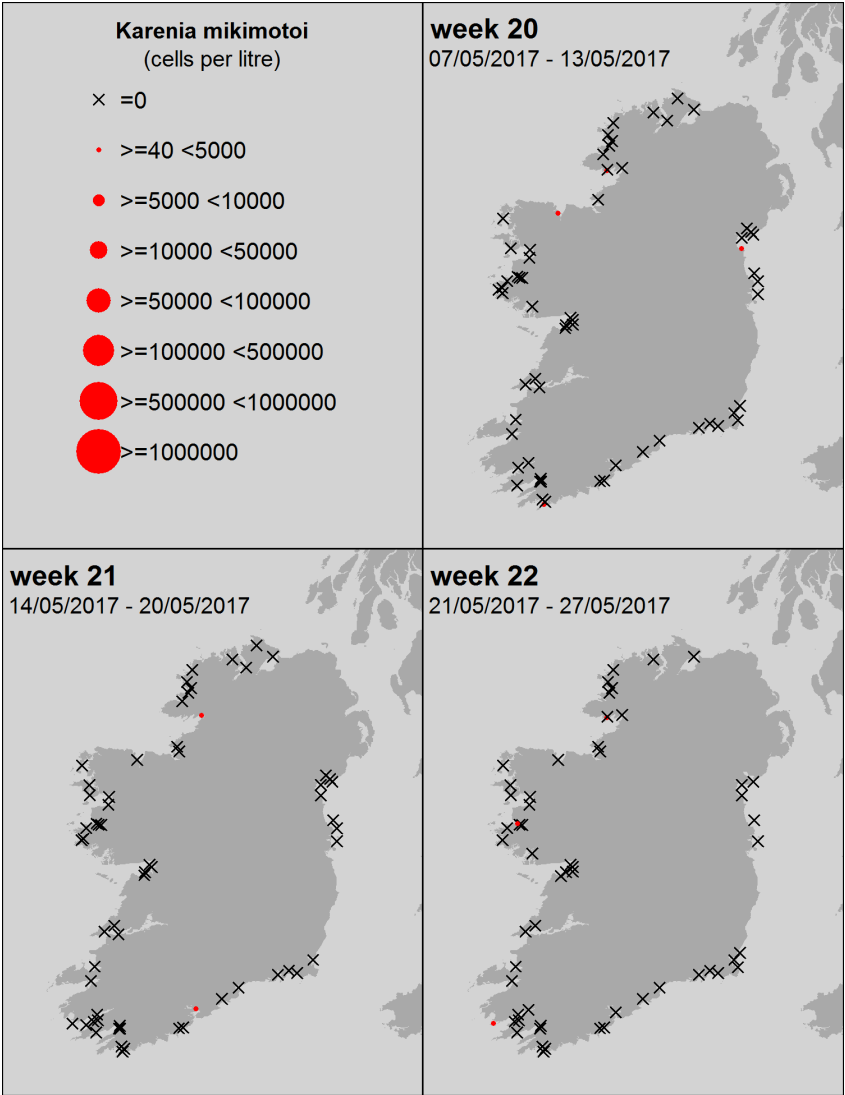
*Karenia mikimotoi* bloom warning level  
- Low but increasing -

Currently very low levels of cells have been observed in isolated sites only. This species can rapidly come inshore at bloom levels during suitable environmental growing and transport conditions. Caution levels will be increasing slowly as cell levels and conditions change.

Other bloom species news

Dominant species in all areas currently diatoms. Each geographical sector appears to be dominated by its unique species or group. Currently no major treats/ ictyotoxic species evident but please use the dominant species table to see specific localised areas of interest.

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





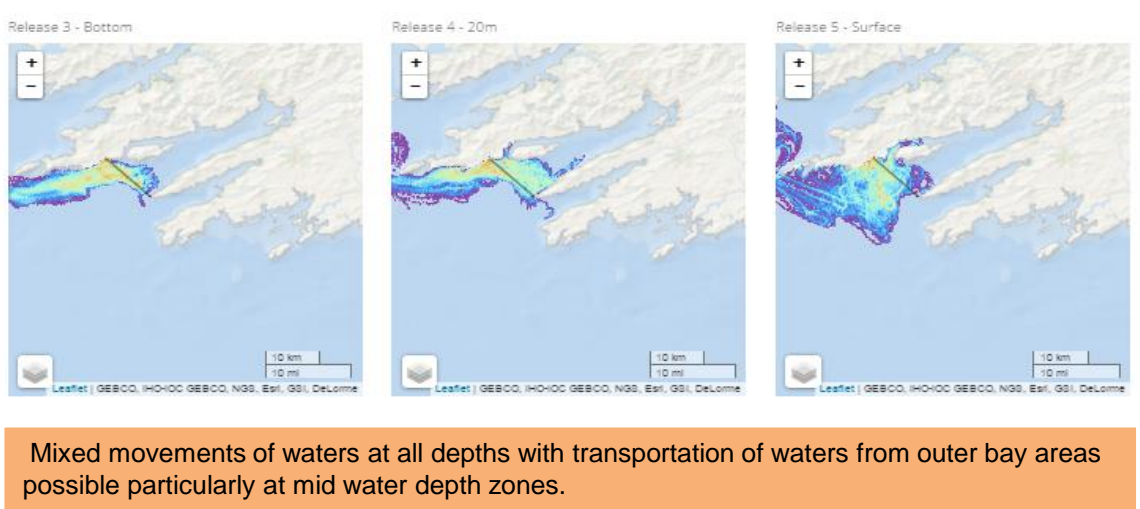
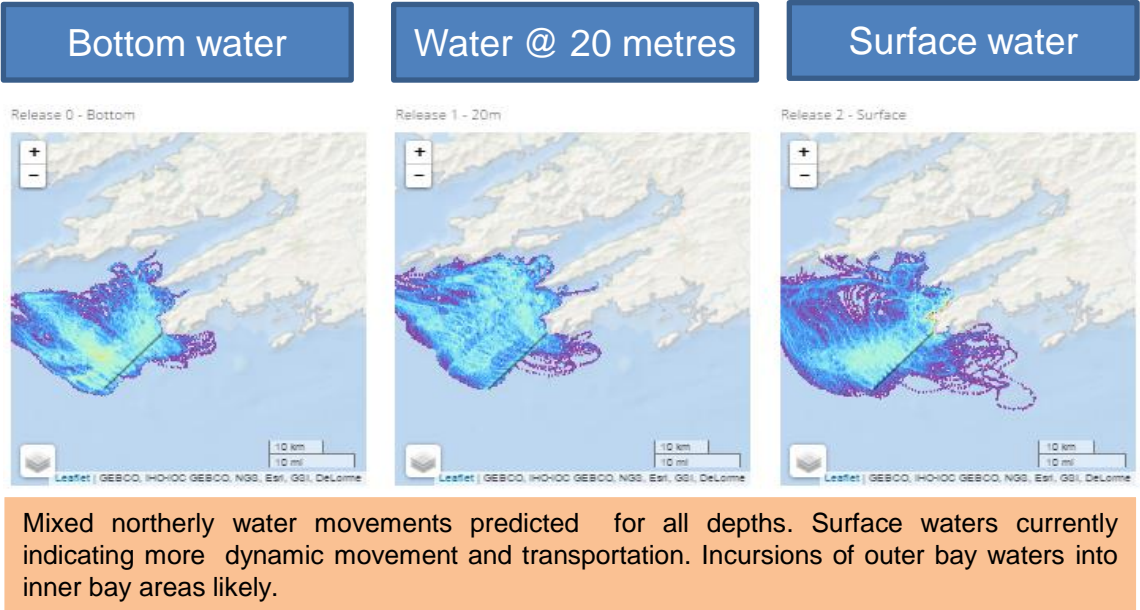
# SOUTHWEST: Bantry Bay

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

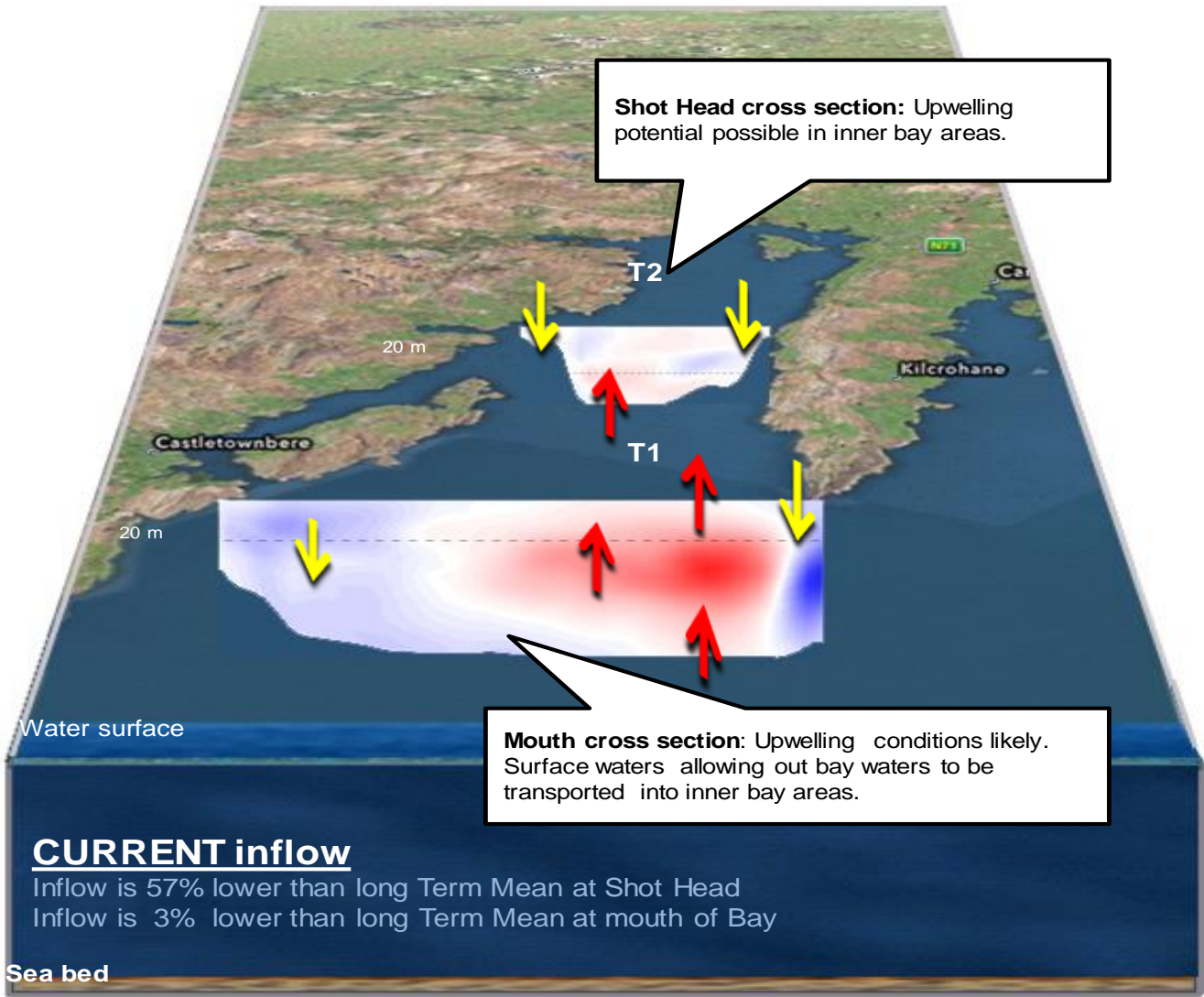
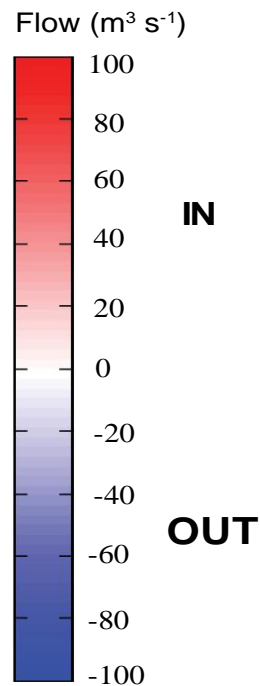


# Bantry Bay

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



Forecast for next 3 days



**Shot Head cross section:** Upwelling potential possible in inner bay areas.

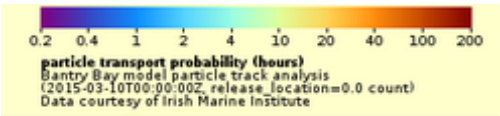
**Mouth cross section:** Upwelling conditions likely. Surface waters allowing out bay waters to be transported into inner bay areas.

**CURRENT inflow**  
Inflow is 57% lower than long Term Mean at Shot Head  
Inflow is 3% lower than long Term Mean at mouth of 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)

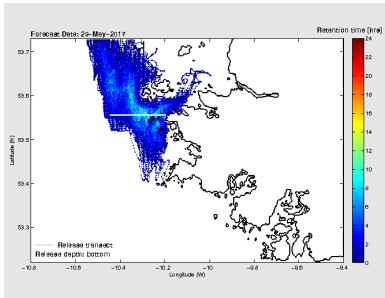
Reddish colours represent areas where phytoplankton remain longest  
Cooler colours represent areas where phytoplankton remain for shorter periods



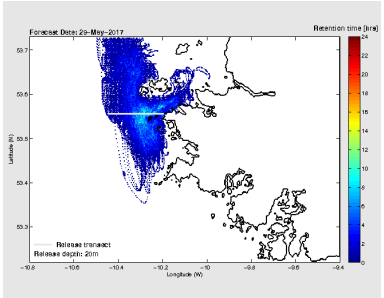
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

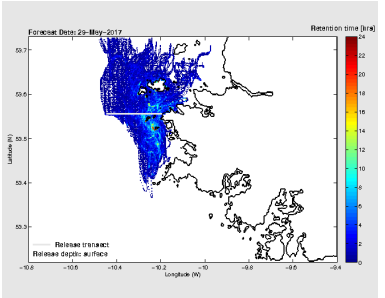
Bottom water



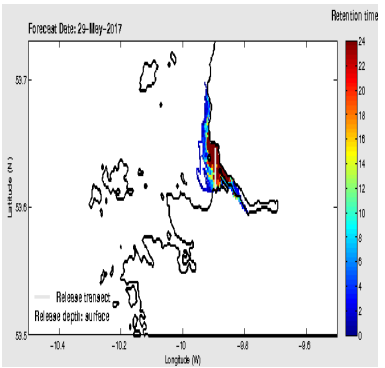
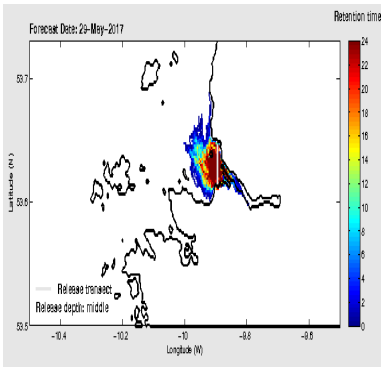
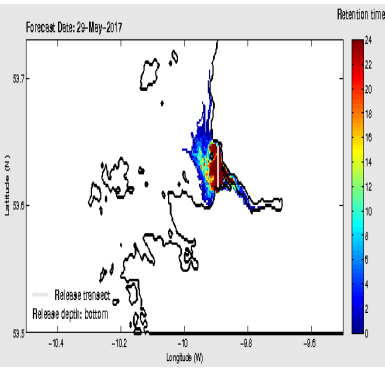
Water @ 20 metres



Surface water



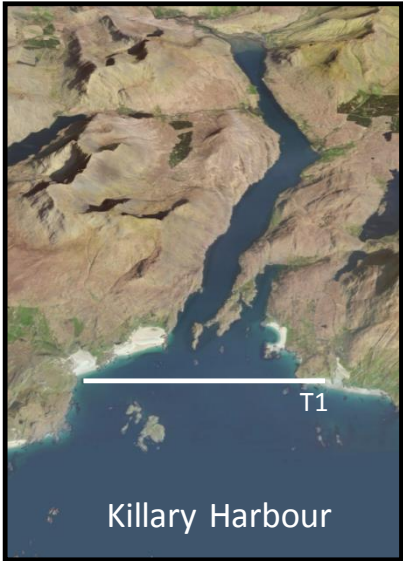
**Cleggan**  
Northerly flows and water movement marginally more dominant than southerly water movement at all depths. Incursions into inner bay areas possible.



**Killary**  
Similar to last week in predictions - Surface waters indication possibilities of transportation of outer bay waters into inner bay areas while exposed outer bay areas exhibiting strong water movements in a northern directions, particularly as depth increases.

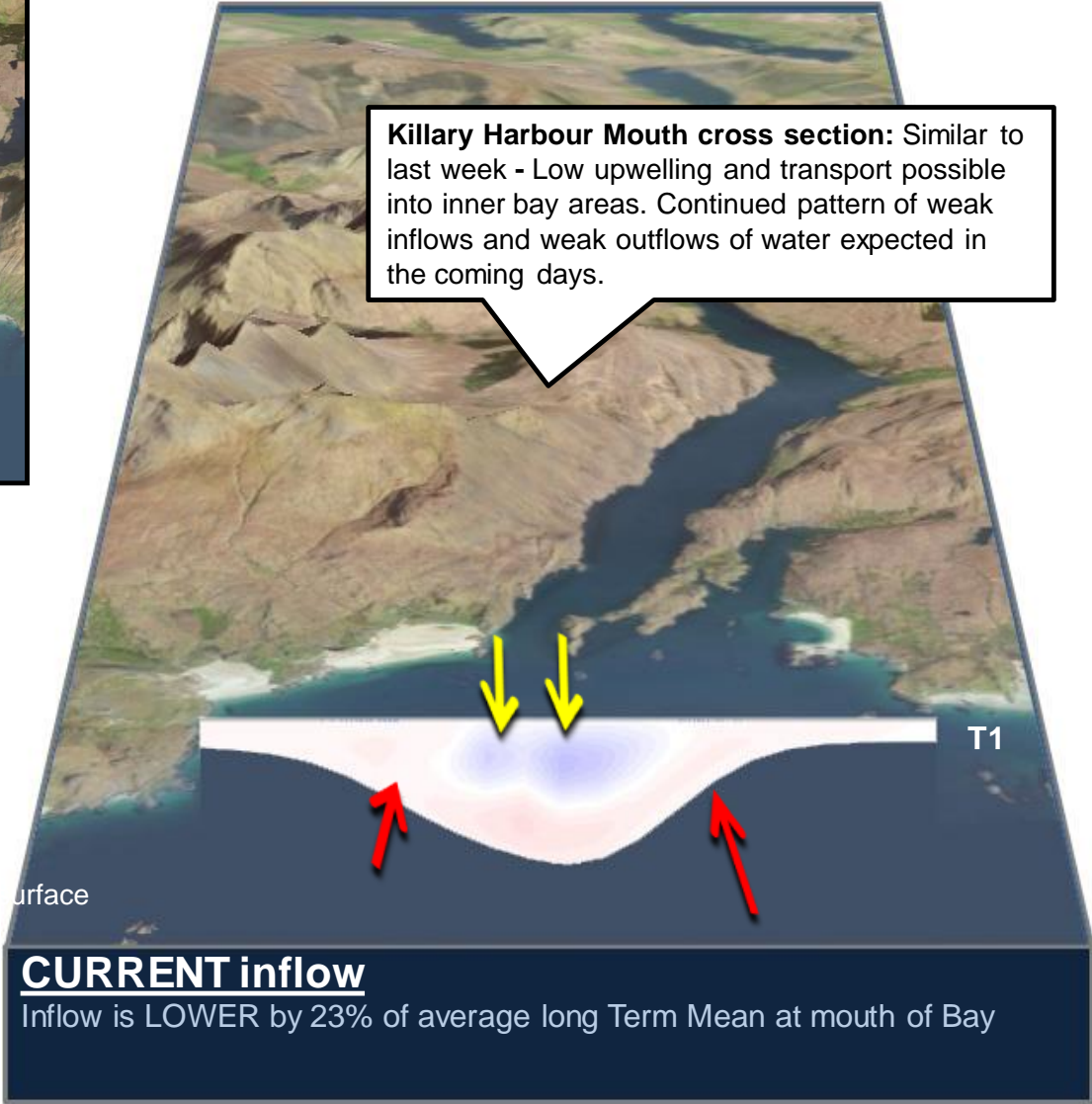
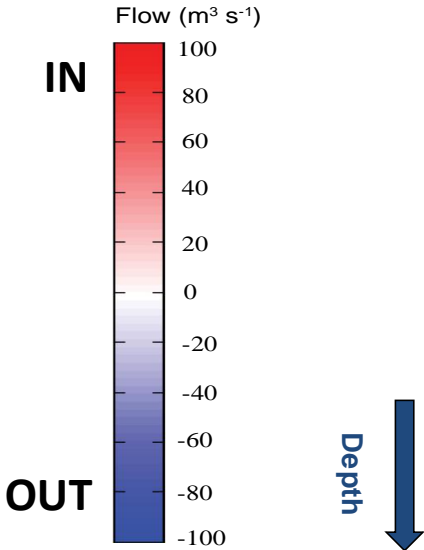
# Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days

**Killary Harbour Mouth cross section:** Similar to last week - Low upwelling and transport possible into inner bay areas. Continued pattern of weak inflows and weak outflows of water expected in the coming days.





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

