

# Ireland: Predictions

ASP event: Low  
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	3	0

ASP: Similar to last week with increasing cells but currently no related toxicity issues .Continued steady decreasing trend in toxicity where levels present. It would be expected that this trend would continue based on current results.

AZP: Continued additional caution is 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.

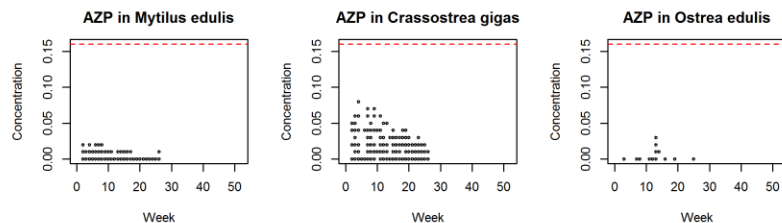
PSP: High levels of caution advised in historically affected sites (S) as the current weather pattern could provide ideal environmental rapid localised bloom conditions. Increased levels of caution should be exercised at this point in all areas where significant cell levels are observed.

Blooms: There is a **moderate to 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.

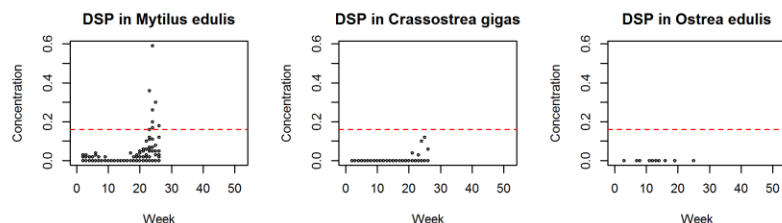
All feedback is welcome at [Joe.Silke@Marine.ie](mailto:Joe.Silke@Marine.ie) .

## National Monitoring Programme

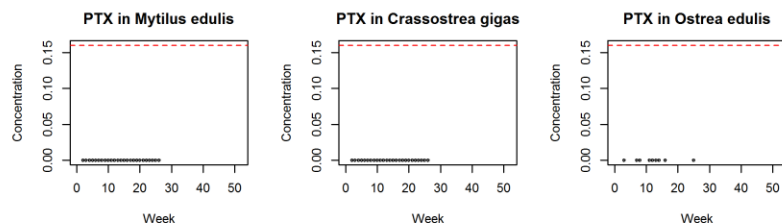
AZP



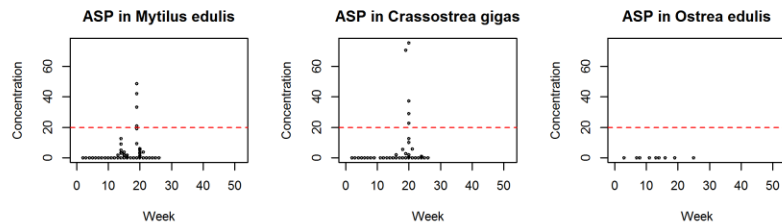
DSP



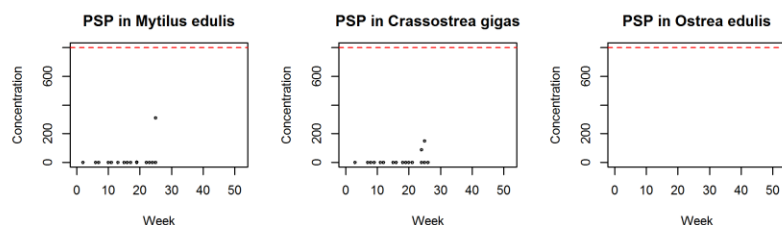
PTX



ASP



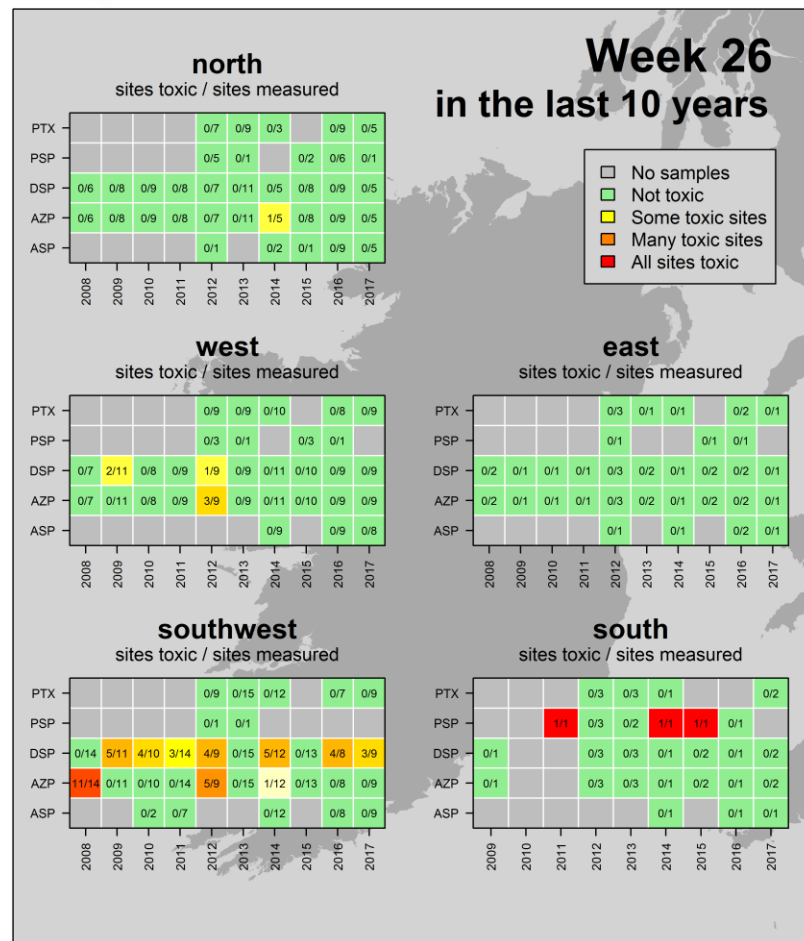
PSP



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



## HISTORIC TRENDS



ASP events: mid-March to early May

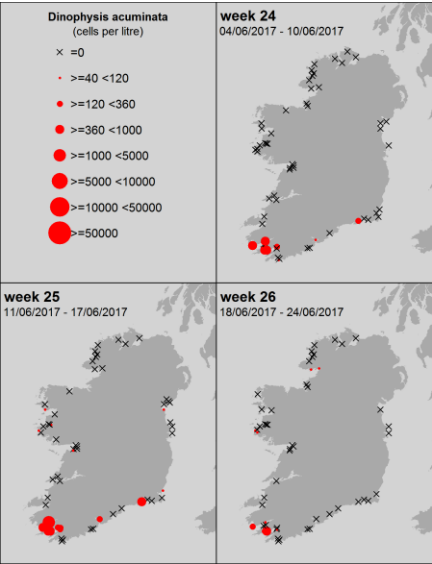
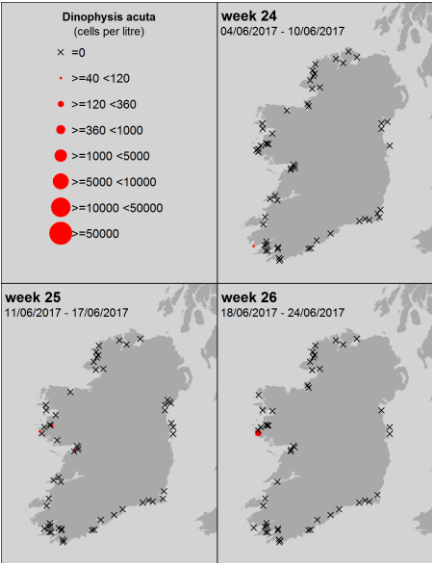
AZP events: April to December

DSP events: May to December

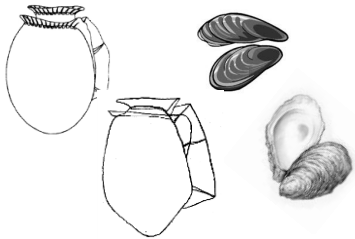
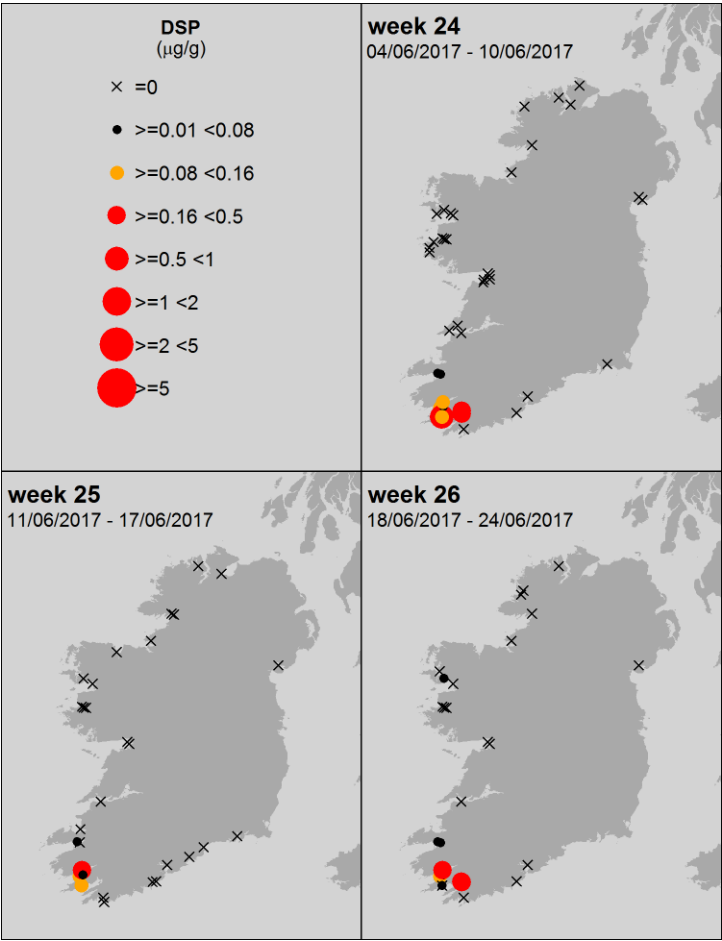
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks.

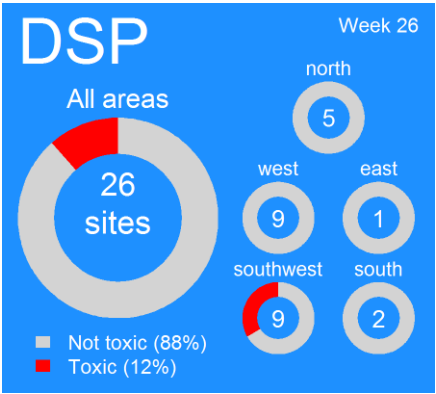


All levels of DSP biotoxin recorded- 3 wks.



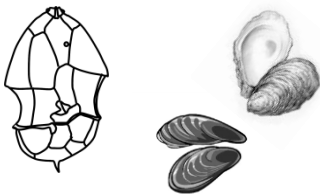
Current closures levels

≥ DSP 0.16 µg/g



Comment – Despite temporary slight decreasing trend highest caution still advised .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 coming to a natural end.

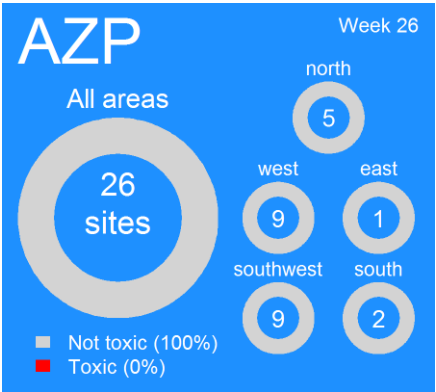
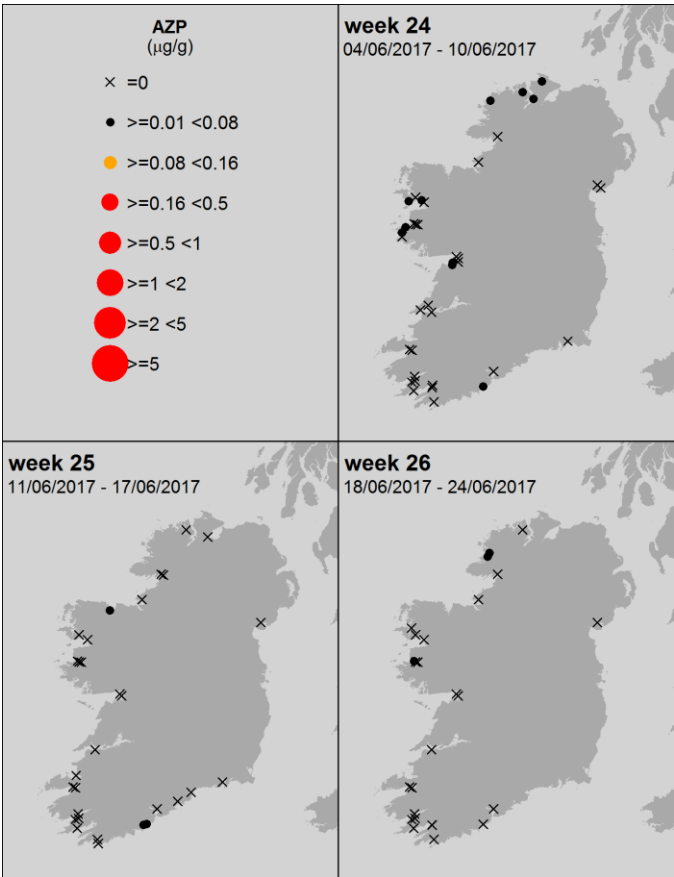
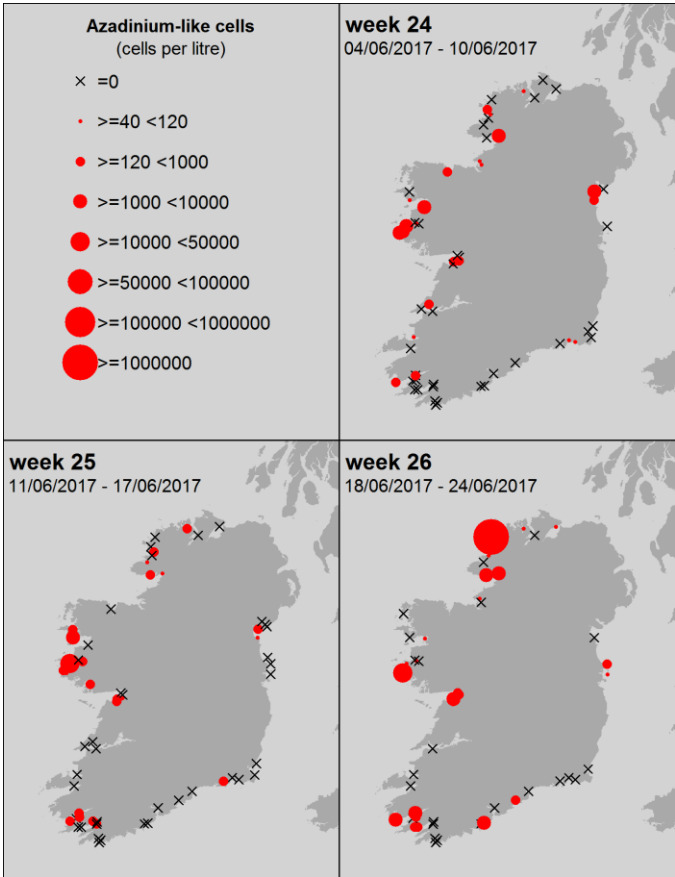
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.

Current closures levels  
≥ AZP 0.16 µg/g

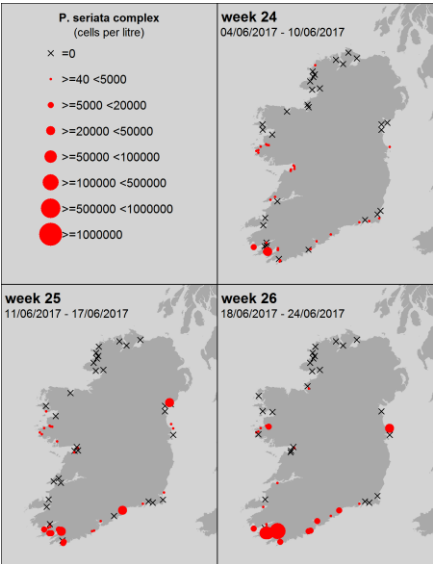
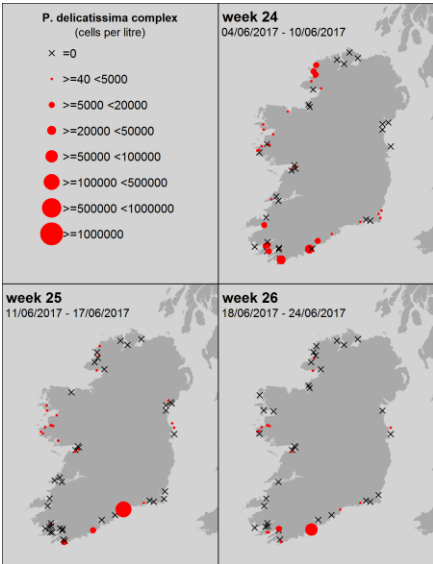


Comments

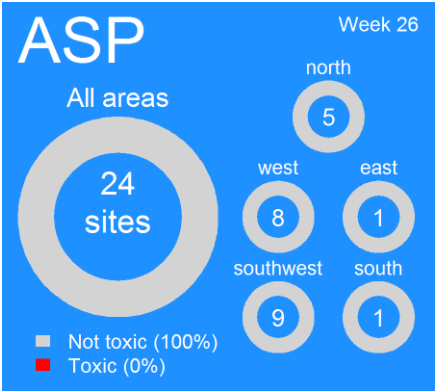
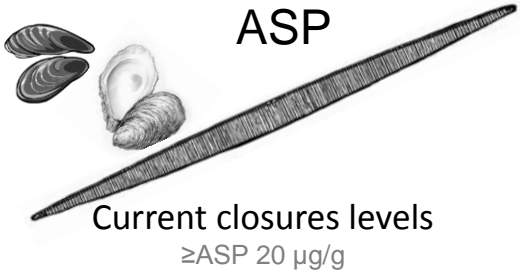
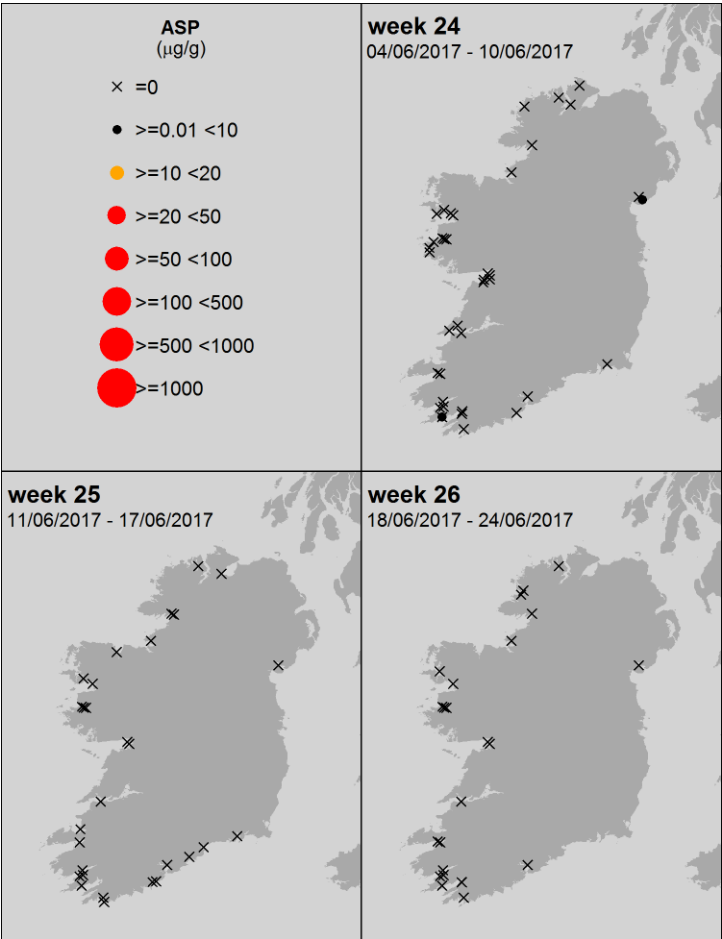
Highest level of caution and observance- currently in historical period of occurrence, cell levels on a potential upward fluctuating trend and this species has been recorded previously to rapidly bloom or get transport into bay areas at bloom levels.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



All levels of ASP biotoxin recorded - 3 wks.



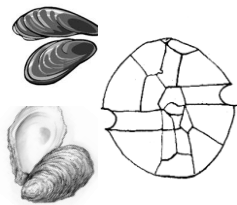
Comments

Cell levels continue to fluctuate but based on the presence of high levels of non toxic diatom background species and historical occurrence records – a toxic event at this time would not be very likely.

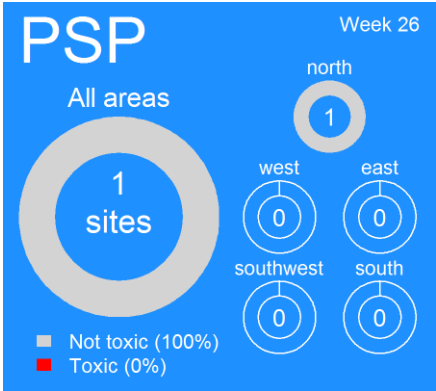
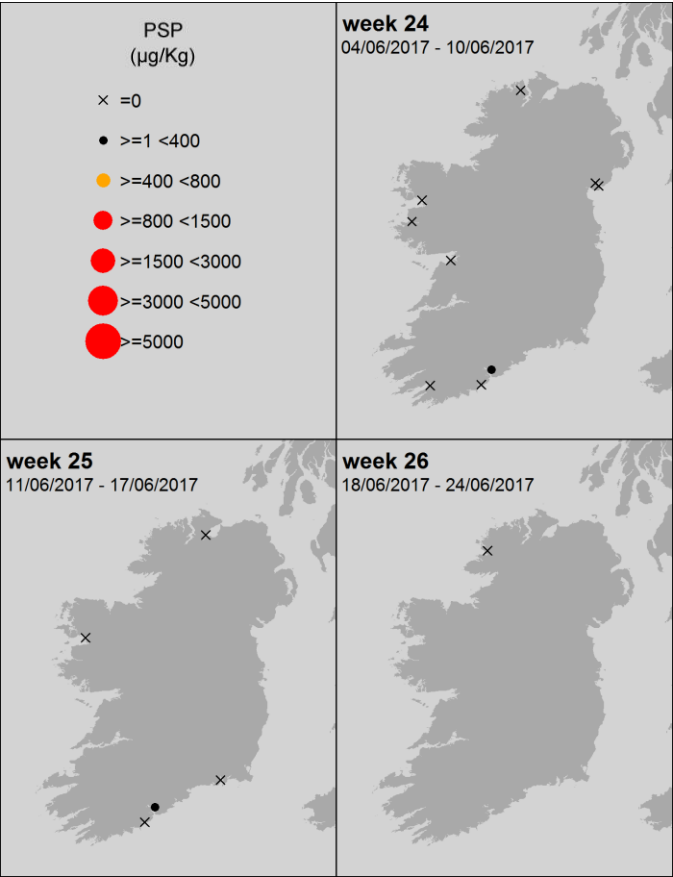
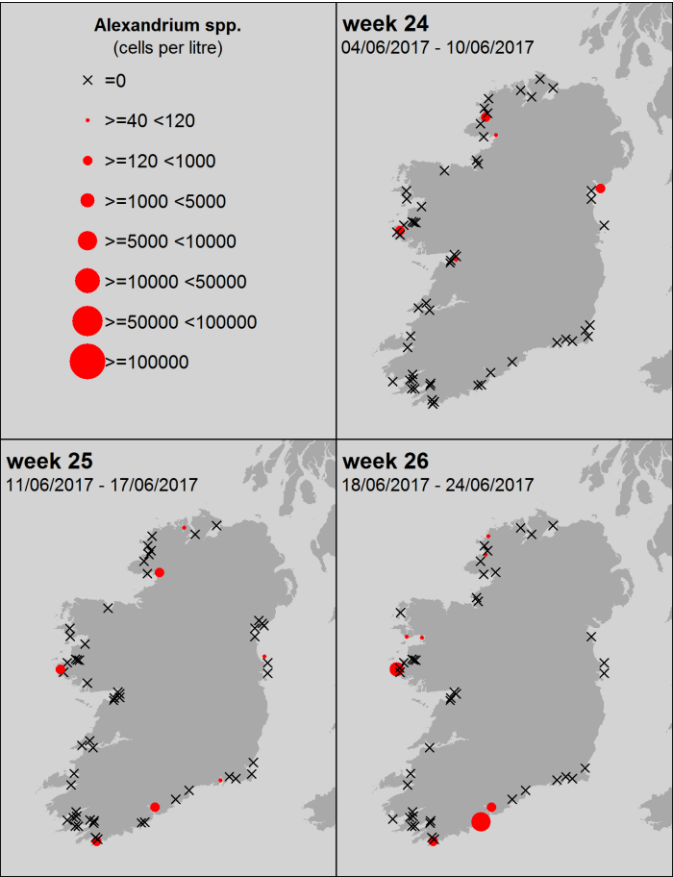
PSP and Alexandrium sp. current trends

Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.



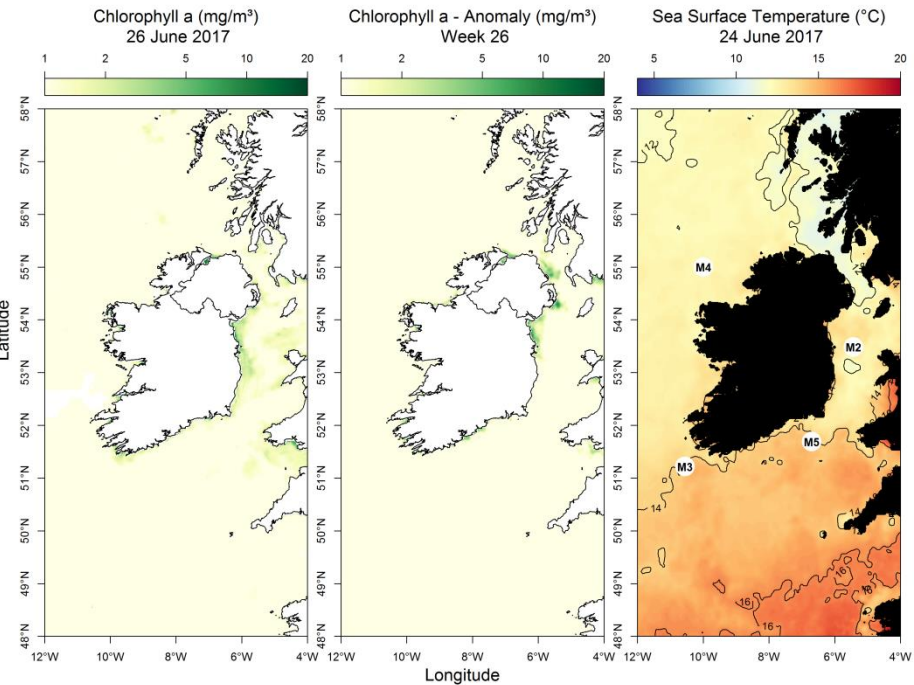
Current closures levels  
≥ PSP 800 µg/Kg



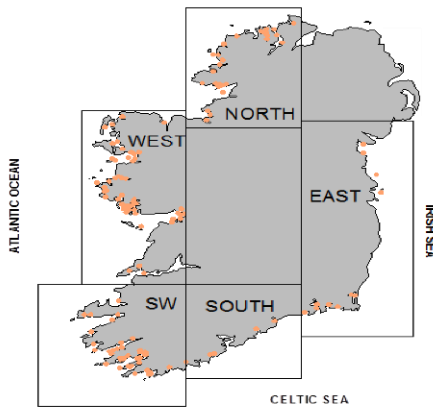
Comments

This species can cause an acute issue very rapidly if conditions are suitable i.e. within a 2-3 day period. This is the peak time of historical occurrence and environmental conditions are relatively favourable so full caution advised.

Most up to date available satellite data



Dinoflagellate species becoming more prominent and dominant in the water. High levels of beneficial diatoms (see table) continue to be observed in most inshore areas.

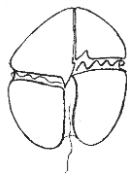


**NW coast (M4)** Below average by 0.47°C wk25  
**SW coast (M3)** Above average by 0.98°C wk25  
**SE coast (M5)** Above average by 0.56°C wk25

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Microflagellate sp.	15125000
2	east	Centric Diatom	5477000
3	east	Pennate diatom	2993000
4	east	Euglena/Eutreptiella spp.	1479000
5	east	Chaetoceros (Hyalochaete) spp.	244000
1	north	Azadinium/heterocapsa spp.	1131000
2	north	Chaetoceros (Hyalochaete) spp.	1130000
3	north	Prorocentrum micans	14000
4	north	Skeletonema spp.	13000
5	north	Microflagellate sp.	8000
1	south	Bacteriastrium spp.	423000
2	south	Thalassiosira 20-50um	267000
3	south	Chaetoceros (Hyalochaete) spp.	209000
4	south	Skeletonema spp.	180000
5	south	Euglena/Eutreptiella spp.	117000
1	southwest	Leptocylindrus minimus	439000
2	southwest	Skeletonema costatum	405000
3	southwest	Leptocylindrus danicus	246000
4	southwest	Prymnesiophytes	215000
5	southwest	Asterionellopsis glacialis	199000
1	west	Chaetoceros (Hyalochaete) spp.	298000
2	west	Skeletonema spp.	292000
3	west	Azadinium/heterocapsa spp.	32000
4	west	Dactyliosolen spp.	27000
4	west	Leptocylindrus danicus	27000





*Karenia mikimotoi* bloom warning level  
- Moderate to high -

Currently only low levels of cells have been observed in some sites but this species can bloom offshore and come inshore rapidly during favourable transport conditions. Caution levels will be increasing as cell levels and conditions change.

Other bloom species news

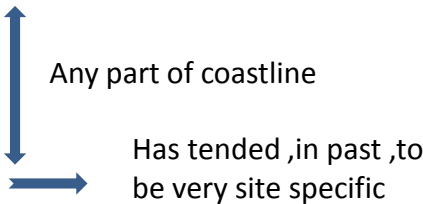
Most species have the potential to reach high numbers and be considered a bloom. The majority of such blooms are short lived and not a problem. At this time of year the typical species to watch out for , that can cause problems, are:

*Karenia mikimotoi*

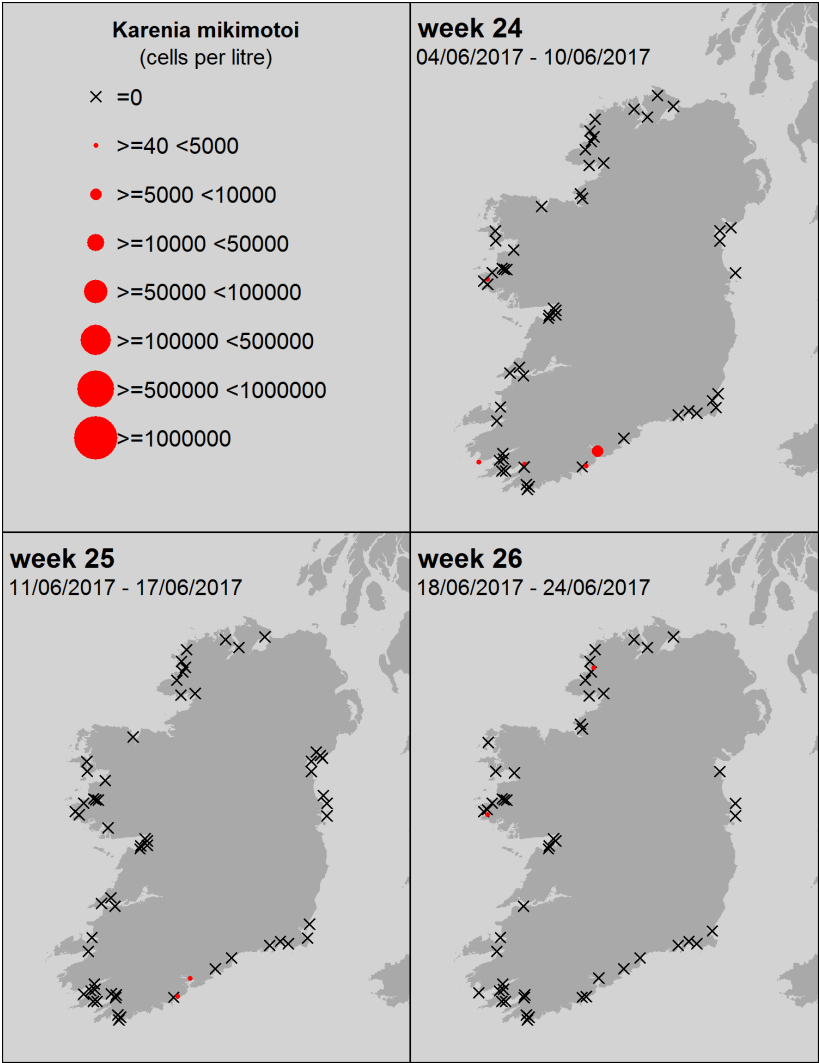
*Heterocapsa* spp.

*Noctiluca scintillans*

*Alexandrium* spp.



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

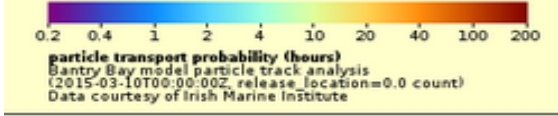




# SOUTHWEST: Bantry Bay

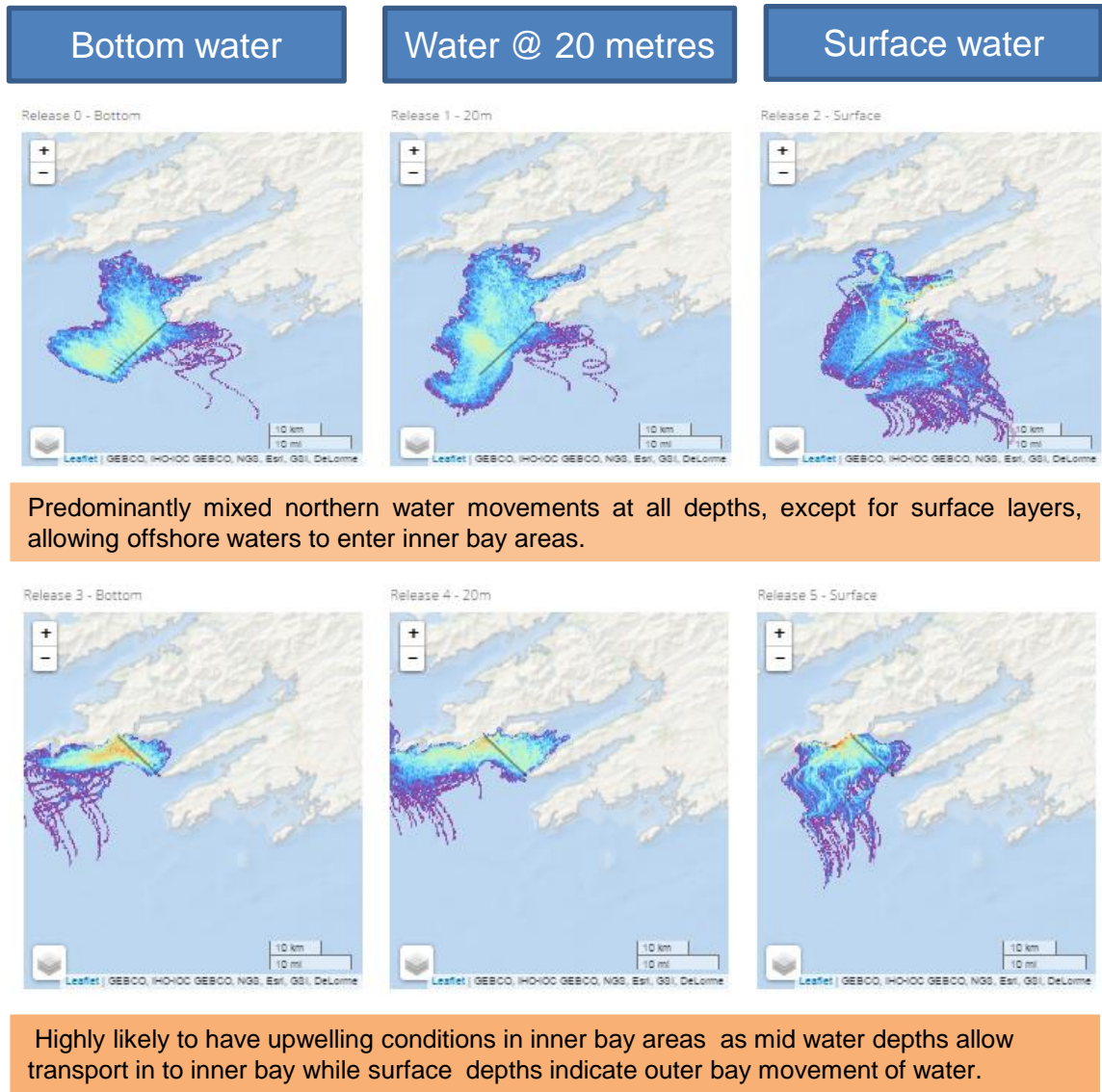
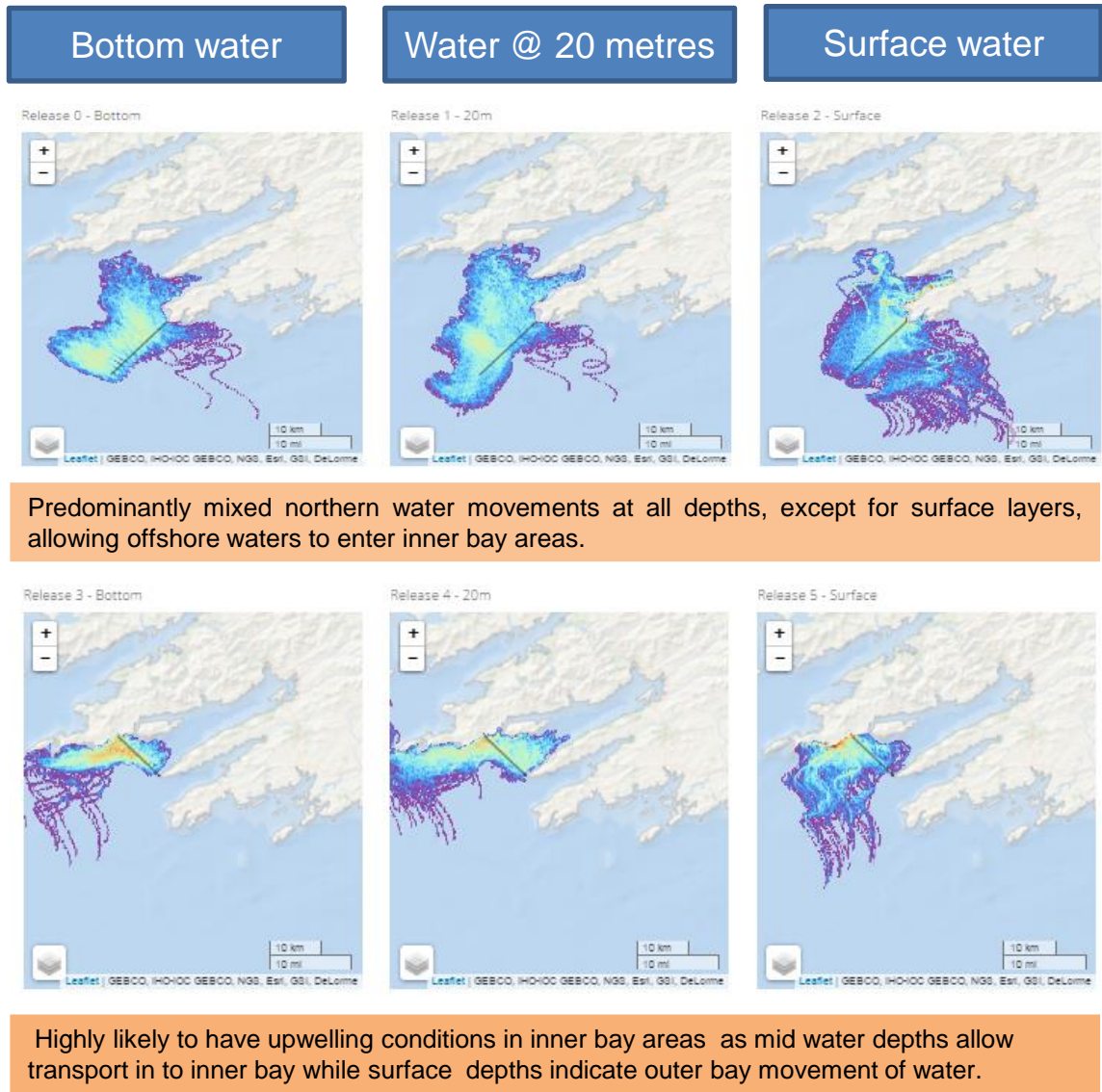
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

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



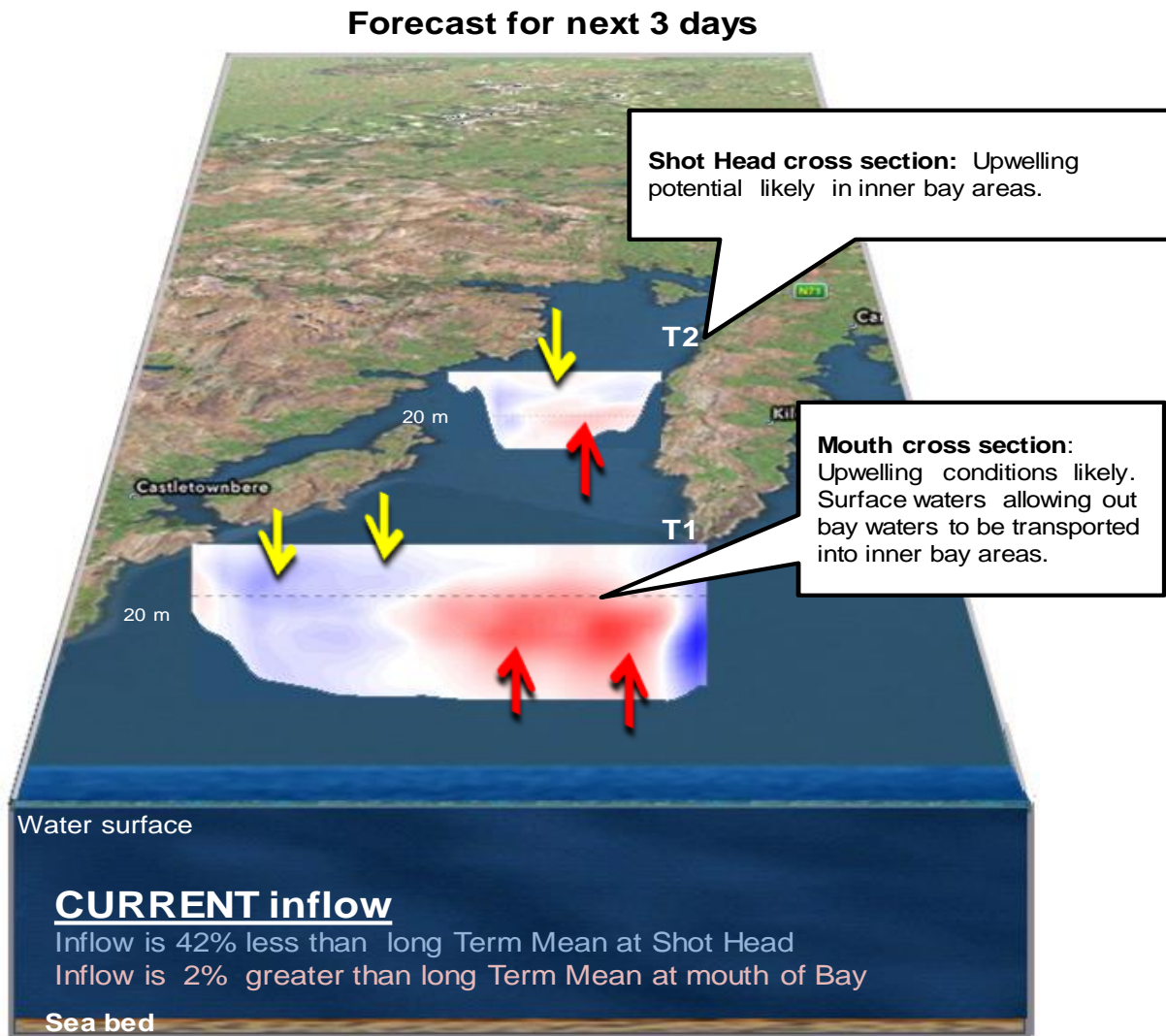
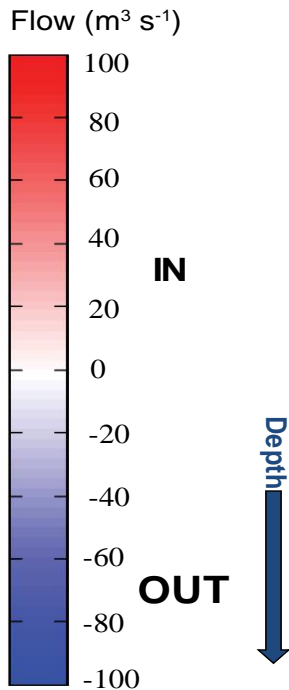
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

## Forecast for the next 3 days



# Bantry Bay

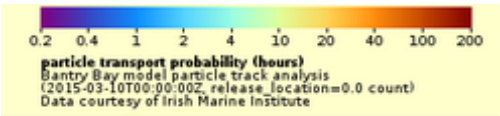
3 day estimated water flows at the mouth and mid-bay sections of Bantry Bay



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)

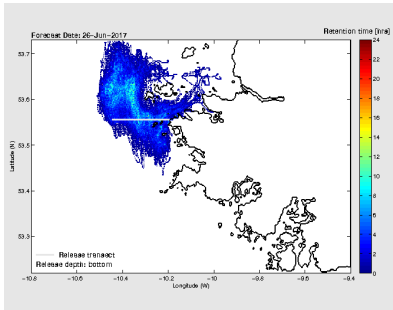
Reddish colours represent areas where phytoplankton remain longest  
Cooler colours represent areas where phytoplankton remain for shorter periods



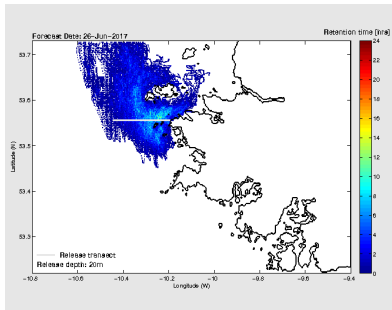
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

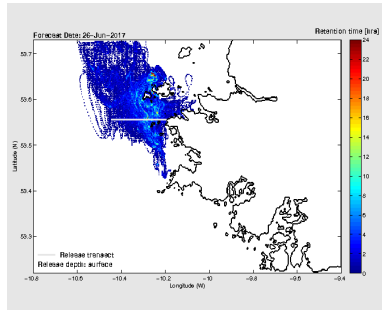
Bottom water



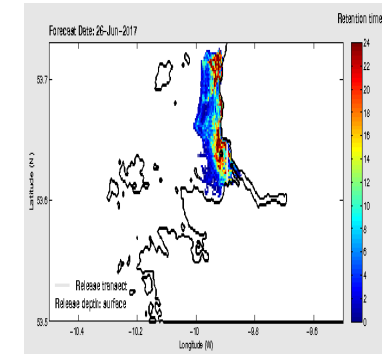
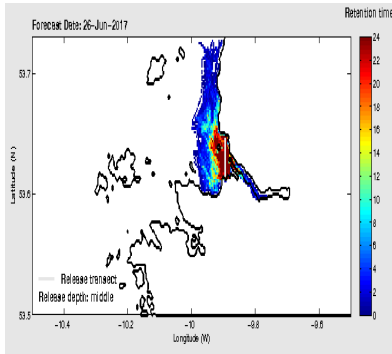
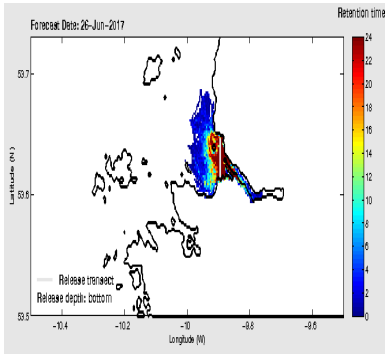
Water @ 20 metres



Surface water



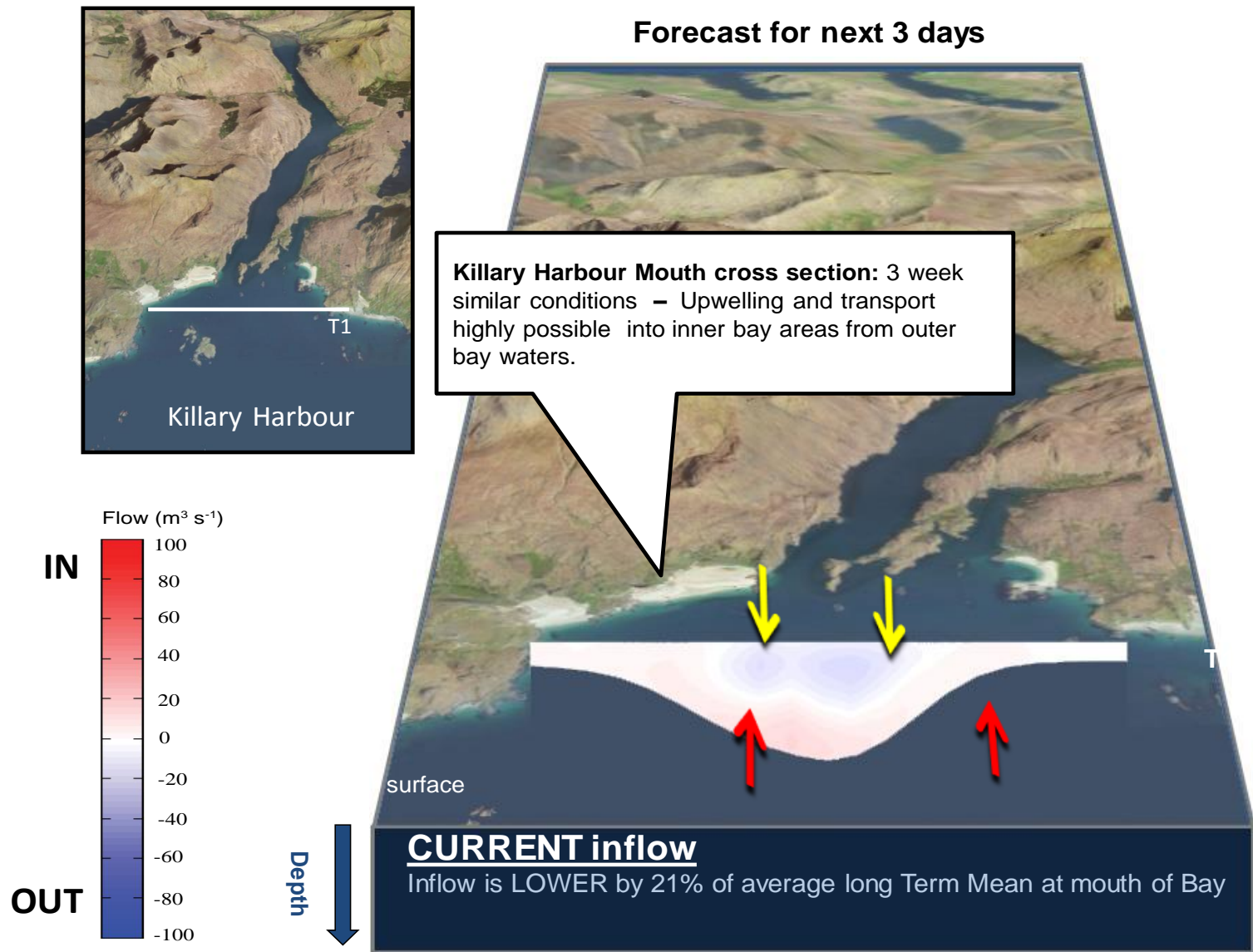
**Cleggan**  
Strong predominantly northerly water movements at all depths. Offshore waters reaching near shores areas likely.



**Killary**  
Similar conditions to last week. 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.

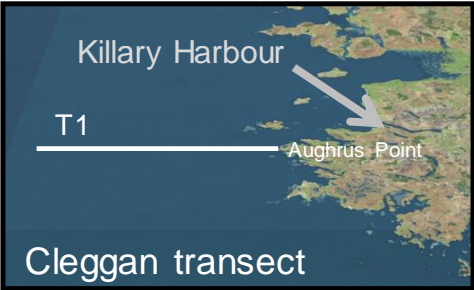
# Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour





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



## Forecast for next 3 days

**Cleggan section:** 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. .

