

Ireland: Predictions

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

NMP Current closures			
ASP	AZP	DSP	PSP
0	0	0	0

ASP: The same conditions and trends as last week with continued decreasing and stable 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: Again ,**Highest caution** is still advised with this difficult species. Toxin levels (below closure levels) and coastal spread appear to be currently increasing. This is the main historical occurrence period and suitable environmental conditions continue to prevail . 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 other 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 occurring and is expected to continue for a period based on current trends, historic patterns and predictive marine models.

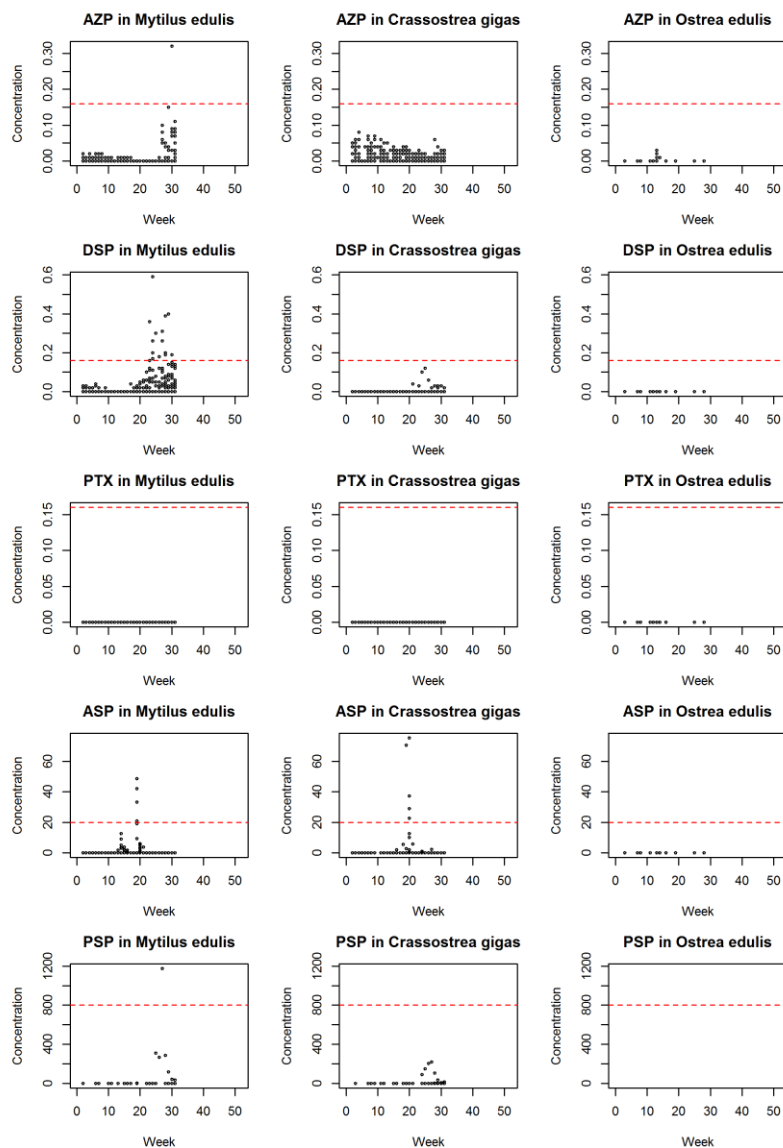
PSP: Ideal weather conditions could definitely have an impact on the possibility of a brief bloom in historically affected sites – **high caution** still advised particularly in historically affected sites (S) and any site with significant species levels during any good weather period.

Blooms: There is a **moderate -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 .

HISTORIC TRENDS

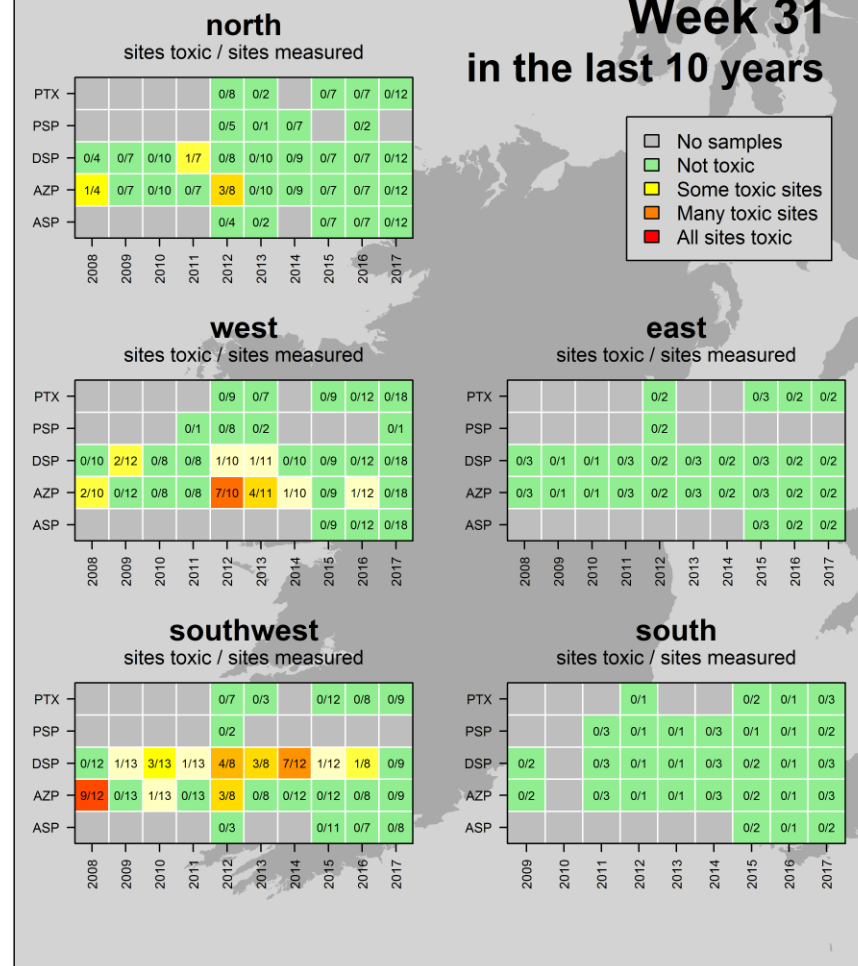


PSP



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

Week 31
in the last 10 years



ASP events: mid-March to early May

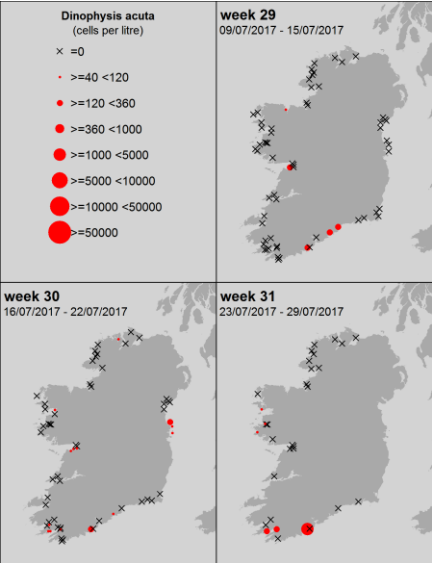
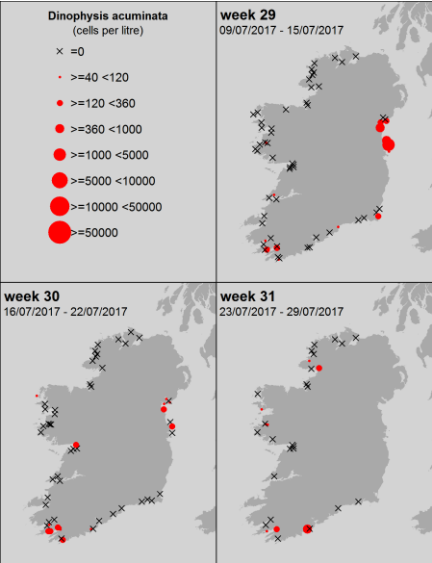
AZP events: April to December

DSP events: May to December

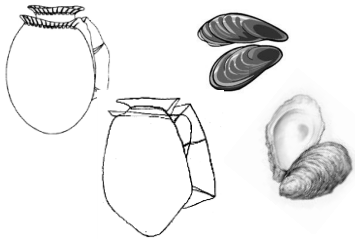
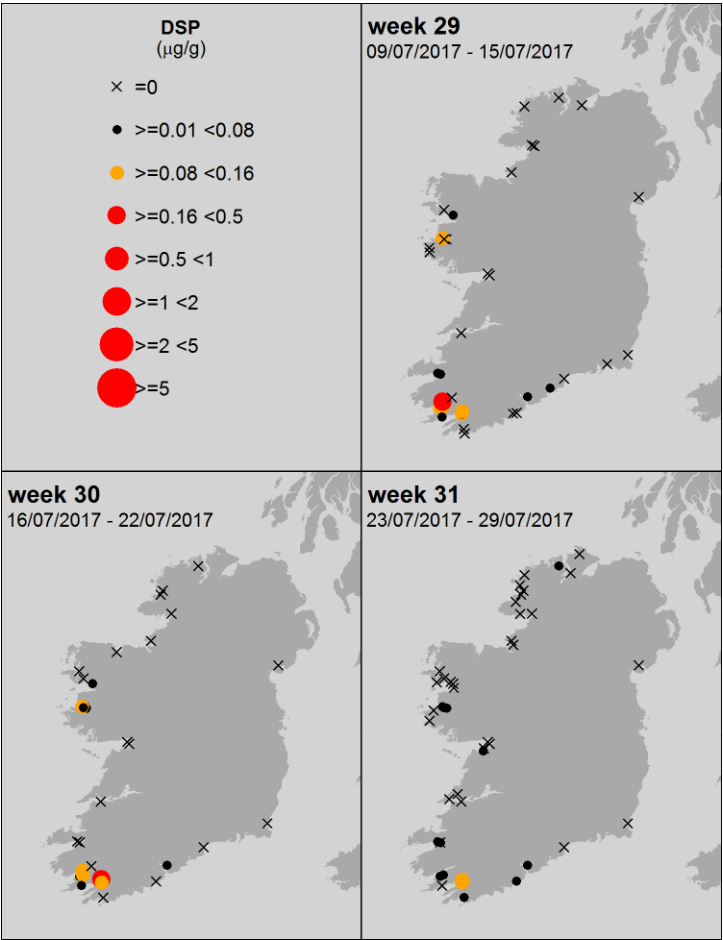
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

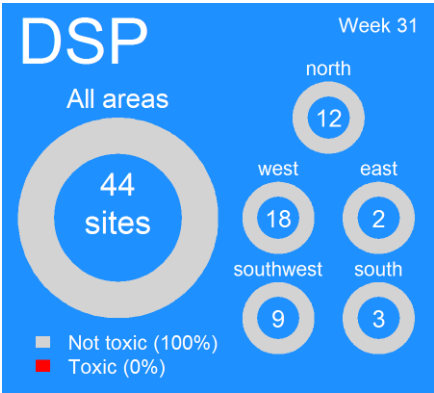
Phytoplankton species – 3 wks.



All levels of DSP biotoxin recorded- 3 wks.

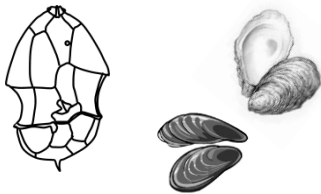


Current closures levels
≥ DSP 0.16 µg/g



Comment – Again similar to the last few weeks - Dinophysis species continue to cause a toxicity issue in some sites in SW and now appear to be spreading in coverage as predicted/seasonal pattern. Cell levels will probably go higher and increase coastal area coverage before the end of the traditional risk period .Continued high caution advised.

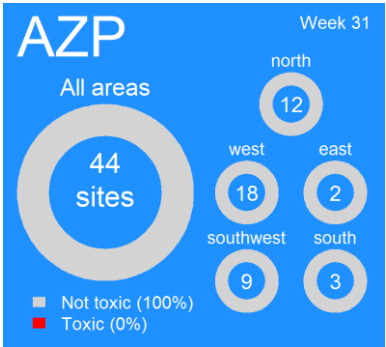
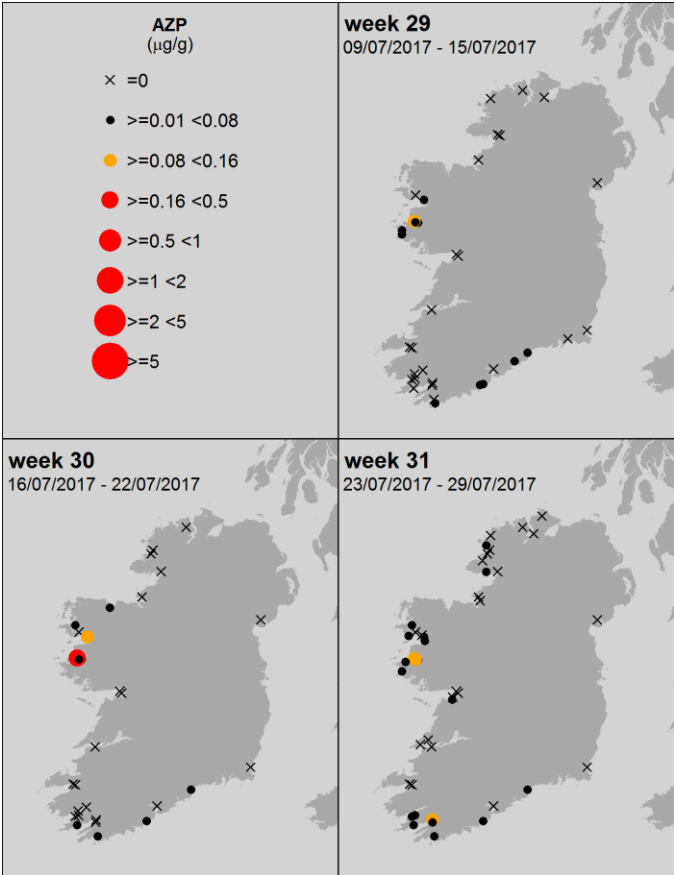
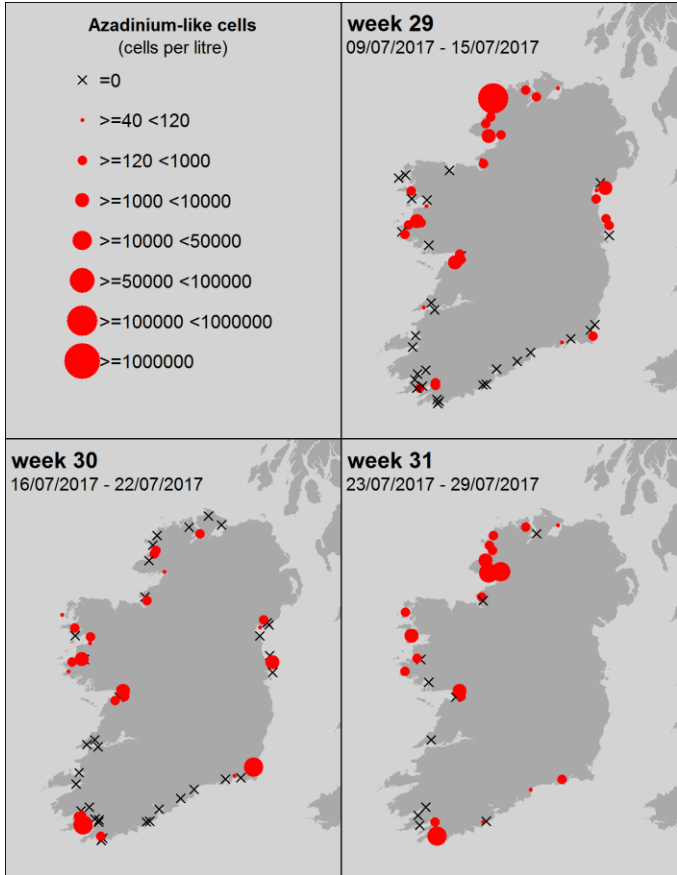
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.

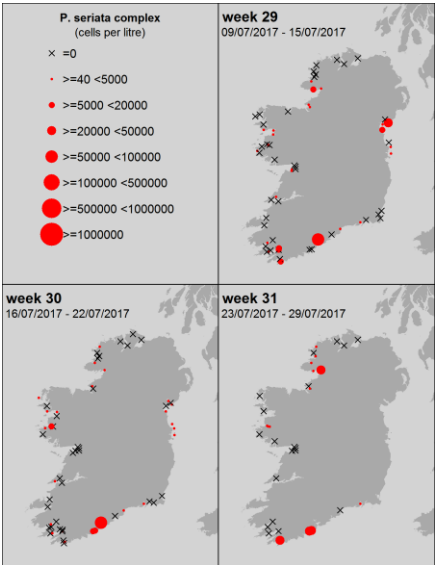
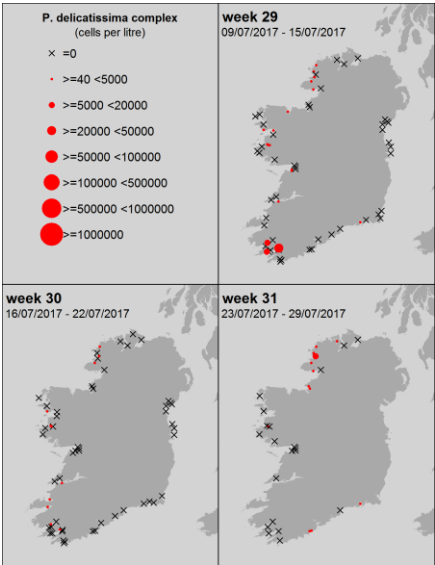
Current closures levels
≥ AZP 0.16 µg/g



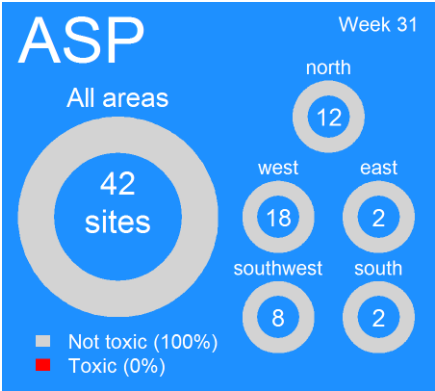
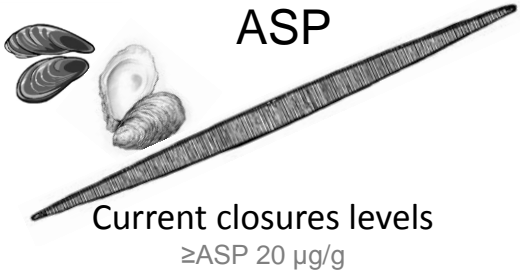
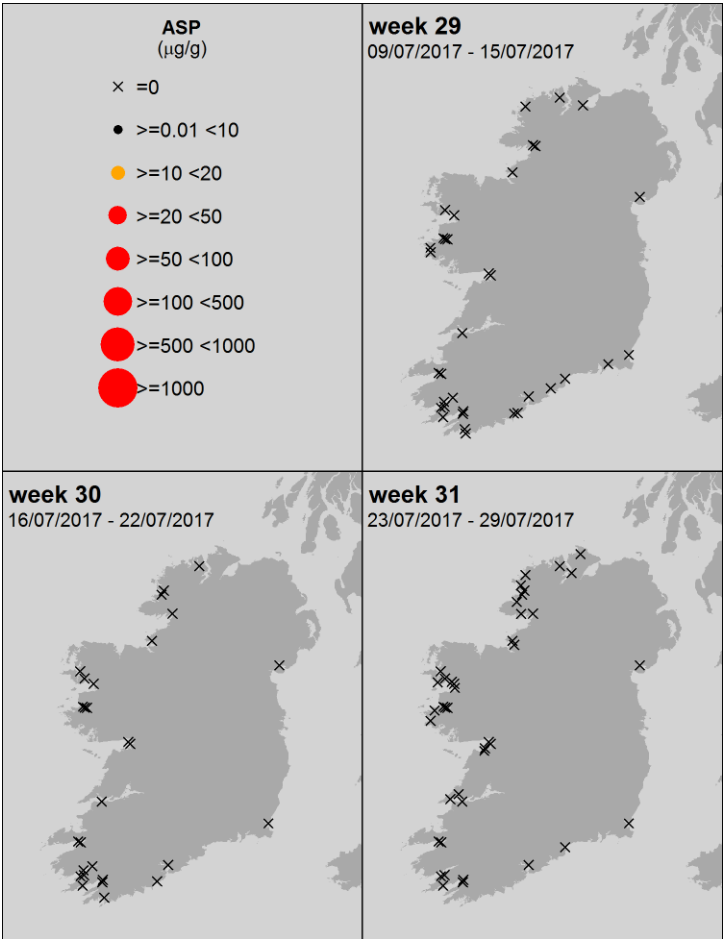
Comments
Below closure toxin levels and spread increasing - trends are all pointing towards further seasonal issues with this toxin group - highest level of caution and observance and testing in affected areas recommended. This species has been can rapidly bloom or get transport into bay areas at bloom 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.



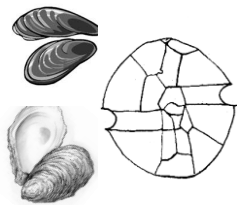
Comments

Similar to the last 2 weeks- with 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.

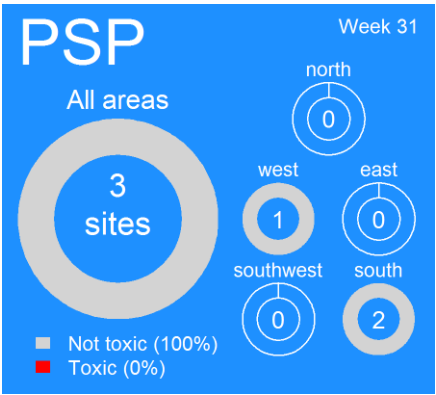
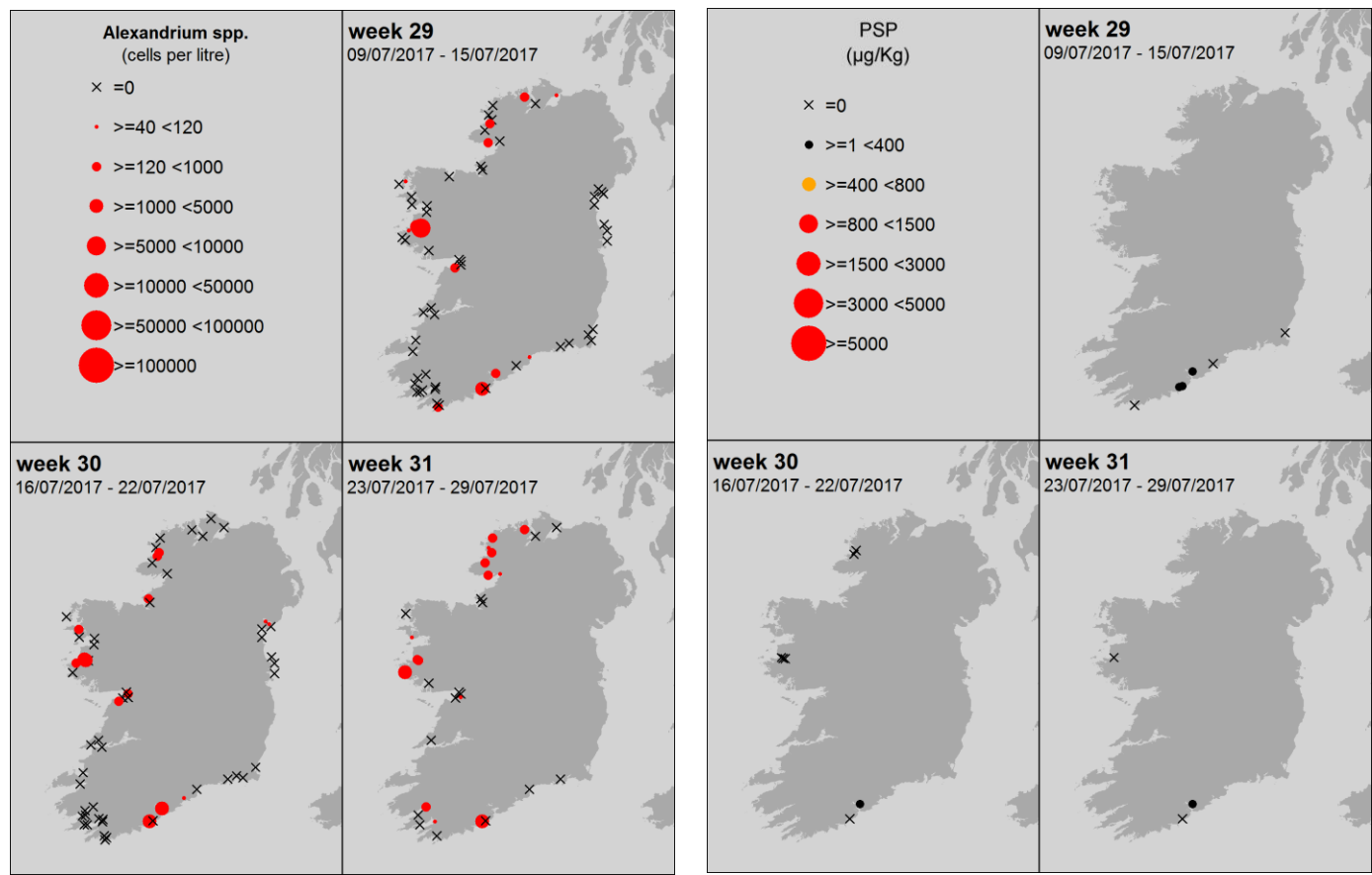
PSP and Alexandrium sp. current trends

Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.



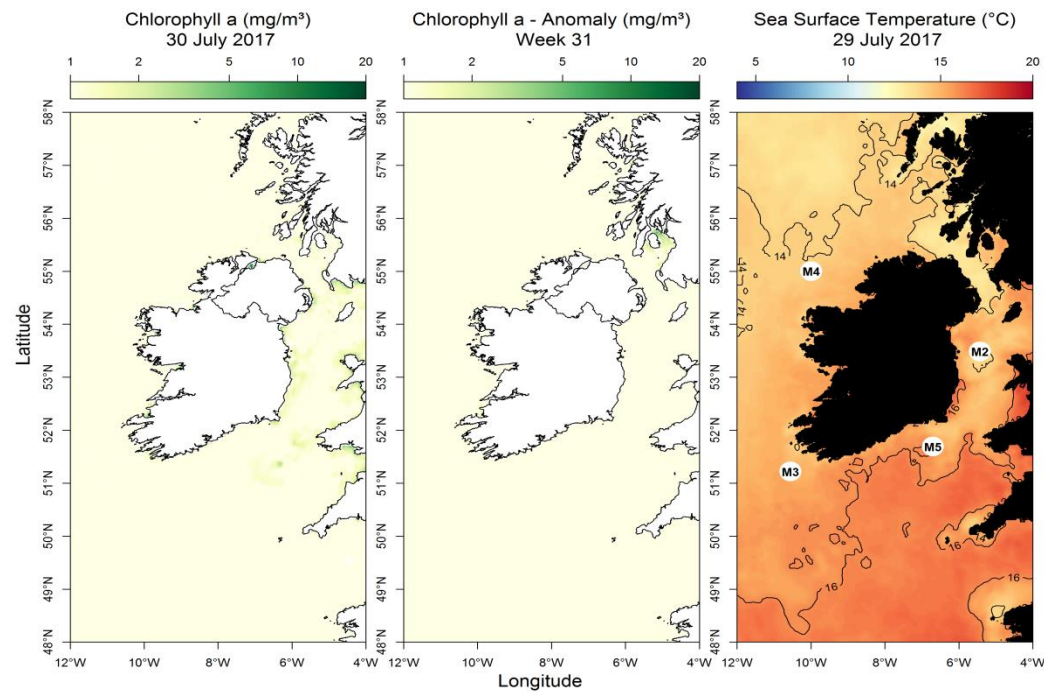
Current closures levels
≥ PSP 800 µg/Kg



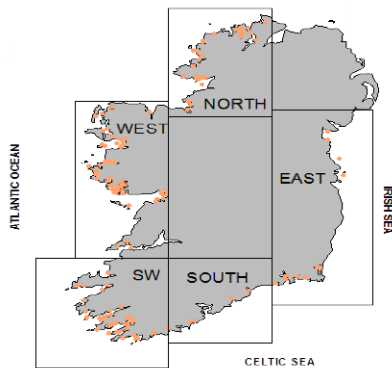
Comments

This is the peak time of historical likely occurrence and currently environmental conditions remain moderately favourable so full caution advised again.

Most up to date available satellite data



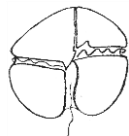
Diatom species dominating the abundance profile for most areas. No major chlorophyll anomalies indicated and similar conditions currently mirrored in actual cell counts in inshore areas.



NW coast (M4) Below average by 0.48°C wk30
SW coast (M3) Unavailable
SE coast (M5) Above average by 0.05°C wk30

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Chaetoceros (Hyalochaete) spp.	9000
2	east	Skeletonema spp.	2000
3	east	Scrippsiella spp.	2000
4	east	Cylindrotheca closterium/ Nitzschia longissima	1000
5	east	Pseudo-nitzschia delicatissima complex	1000
1	north	Chaetoceros (Hyalochaete) spp.	269000
2	north	Skeletonema spp.	67000
3	north	Pseudo-nitzschia seriata complex	49000
4	north	Leptocylindrus danicus	37000
5	north	Dactyliosolen fragilissimus	29000
1	south	Chaetoceros (Hyalochaete) spp.	66000
2	south	Prorocentrum micans	13000
3	south	Licmophora spp.	10000
3	south	Cryptophyte	10000
5	south	Scrippsiella spp.	2000
1	southwest	Haptophytes	1716000
2	southwest	Nitzschia spp. (small)	72000
3	southwest	Leptocylindrus mediterraneus	46000
4	southwest	Skeletonema spp.	31000
5	southwest	Pseudo-nitzschia seriata complex	27000
1	west	Haptophytes	97000
2	west	Skeletonema spp.	68000
3	west	Chaetoceros (Hyalochaete) spp.	39000
4	west	Pennate diatom	28000
5	west	Cylindrotheca closterium/ Nitzschia longissima	18000



Karenia mikimotoi bloom warning level
- High to medium -

Continued vigilance advised in case of potential bloom in southern areas in particular– related to current favourable weather conditions and wind/transportation on shore. Current cell indicator levels have dropped so imminent chance of a bloom has decreased slightly. Weather conditions may have broken and dispersed bloom levels. Continued good sampling advised.

Other bloom species news

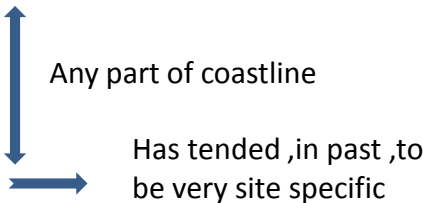
Most species have the potential to reach high numbers and be considered a bloom. The majority of such blooms are short lived and not a problem. At this time of year the typical species to watch out for , that can cause problems, are:

Karenia mikimotoi

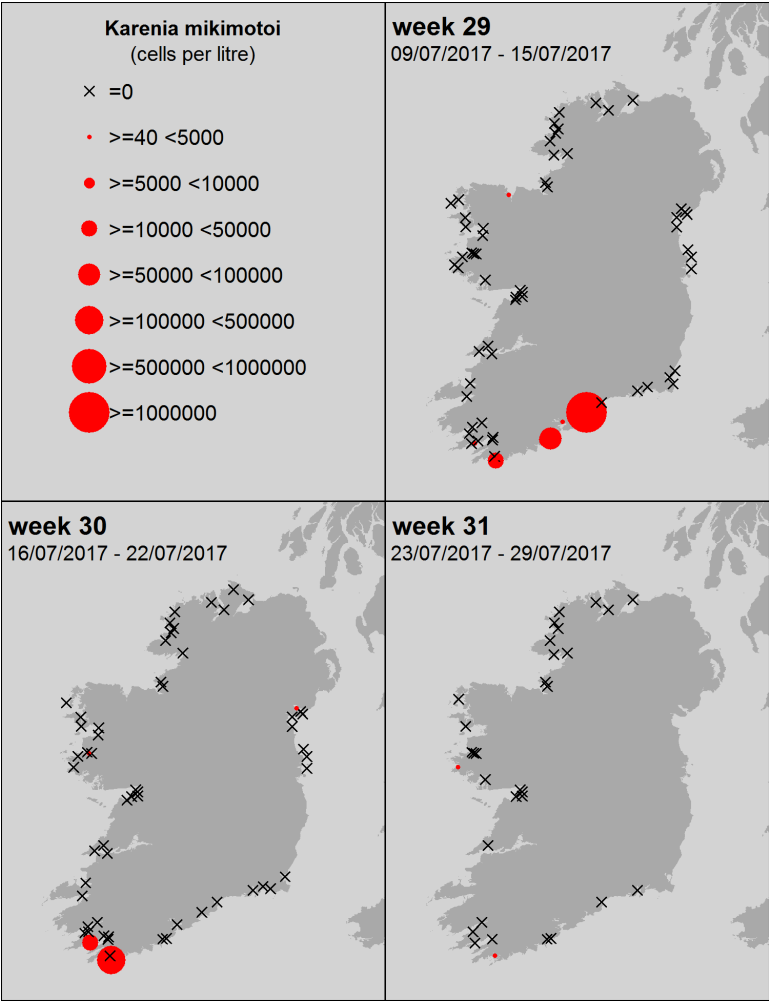
Heterocapsa spp.

Noctiluca scintillans

Alexandrium spp.



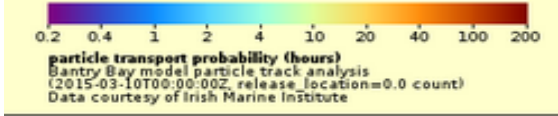
Karenia mikimotoi
(old name: *Gyrodinium aureolum*)



SOUTHWEST: Bantry Bay

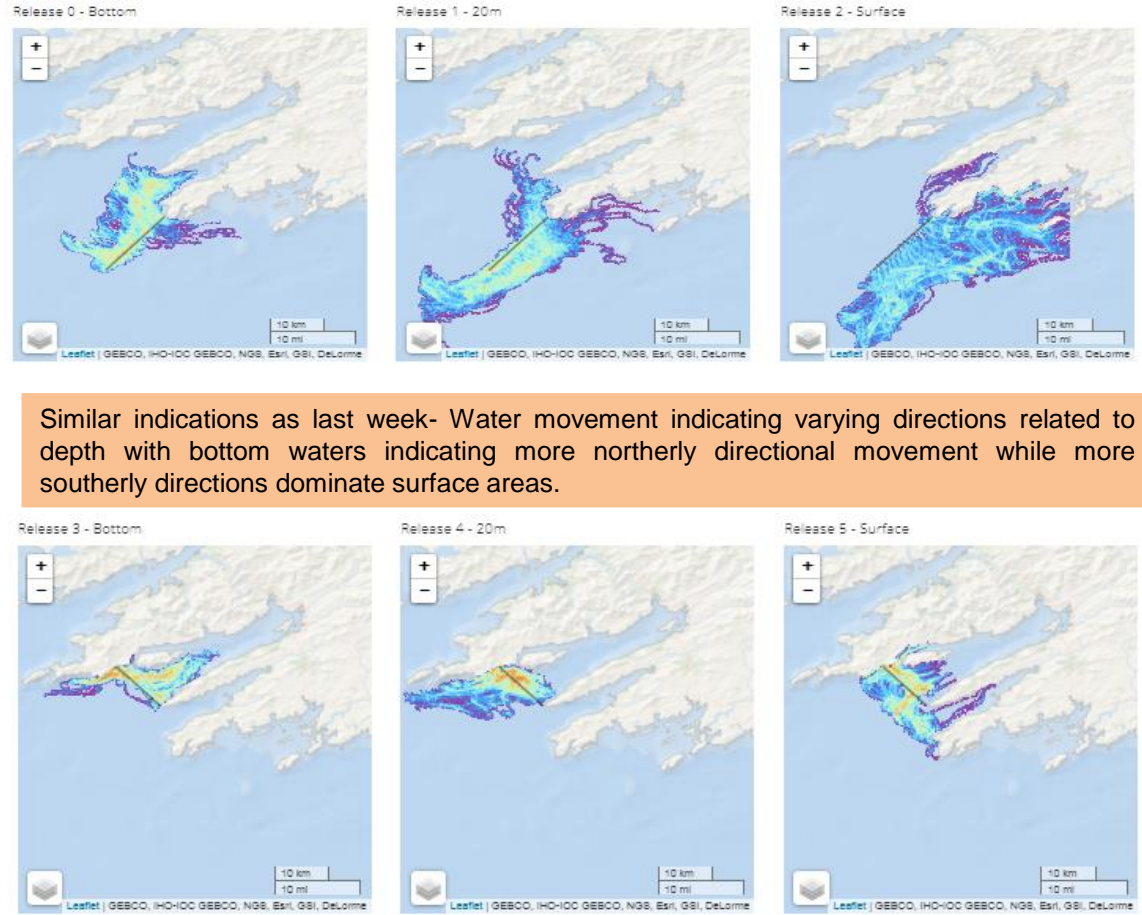
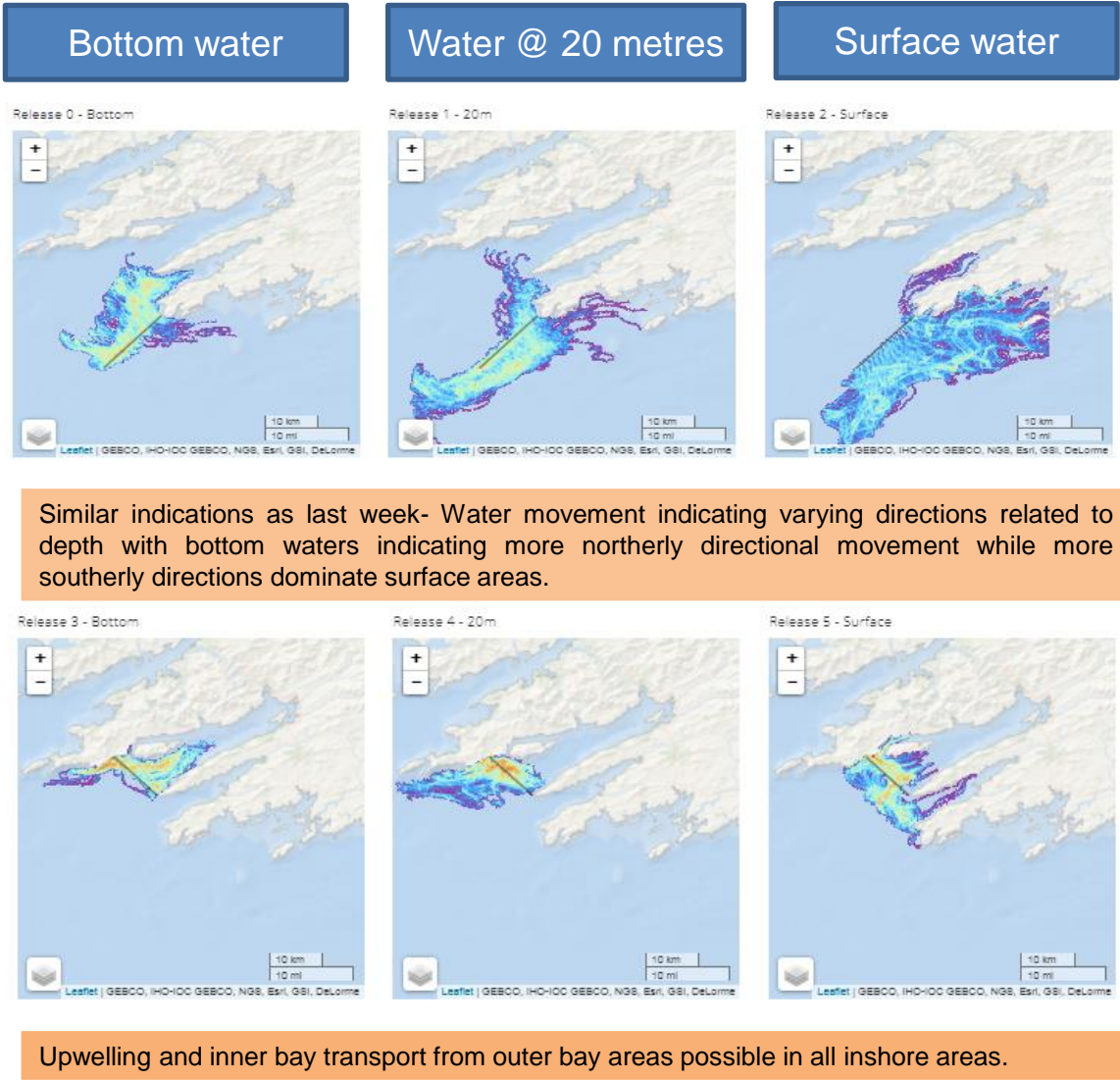
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

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



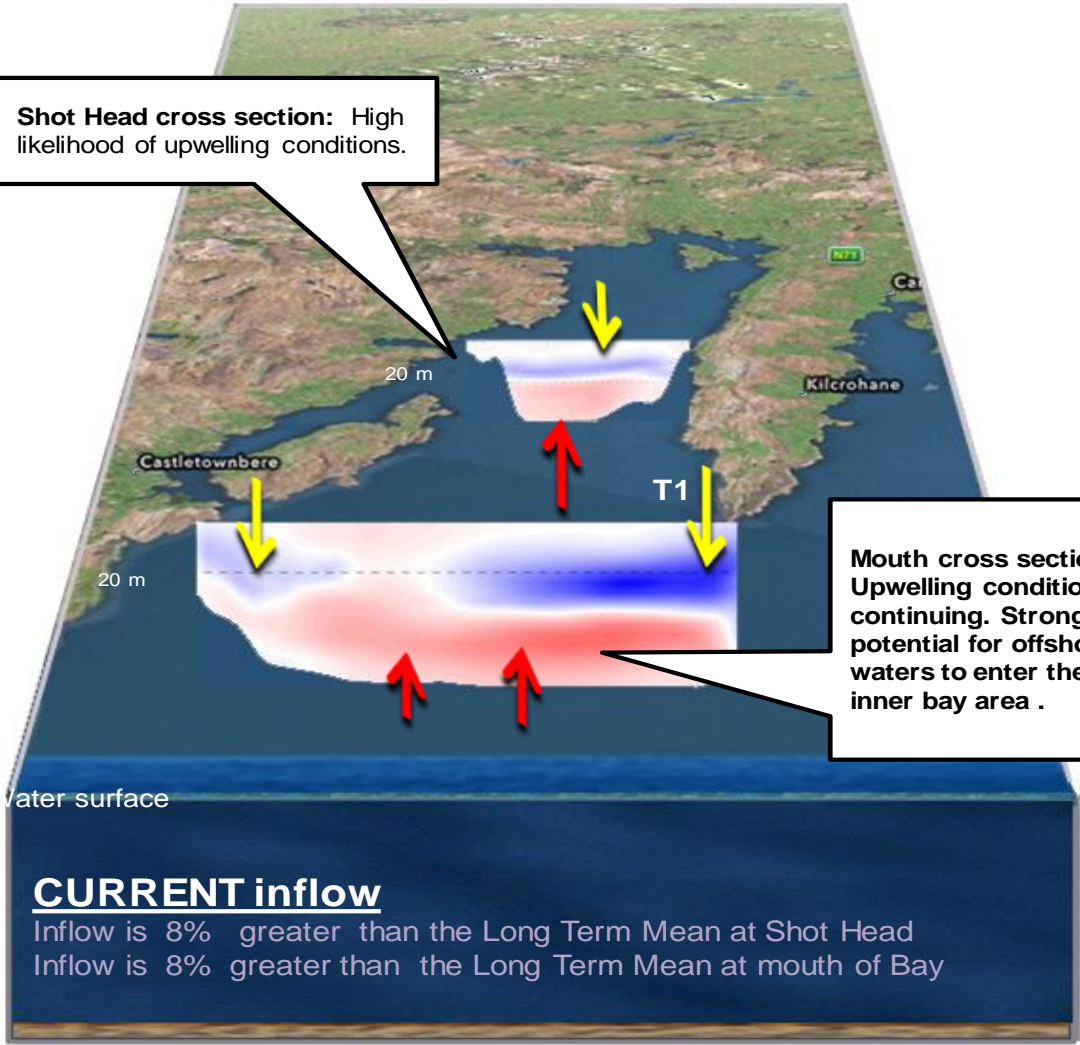
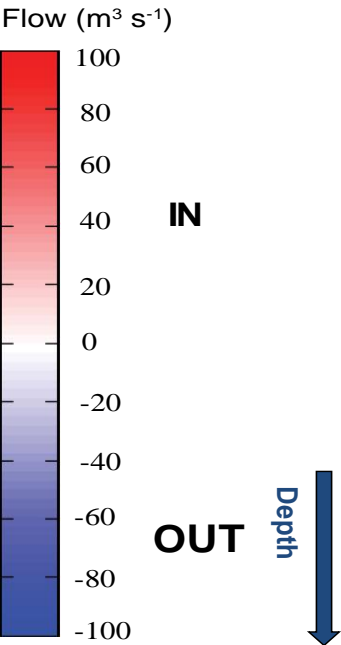
Bantry Bay

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



Forecast for next 3 days

Shot Head cross section: High likelihood of upwelling conditions.



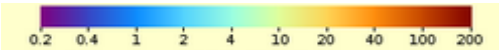
Mouth cross section: Upwelling conditions continuing. Strong potential for offshore waters to enter the inner bay area .

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

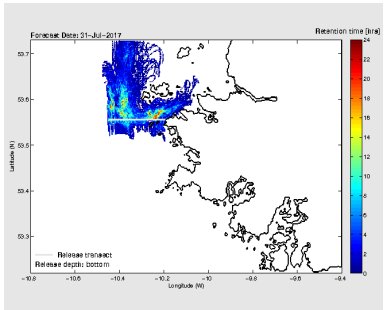


0.2 0.4 1 2 4 10 20 40 100 200

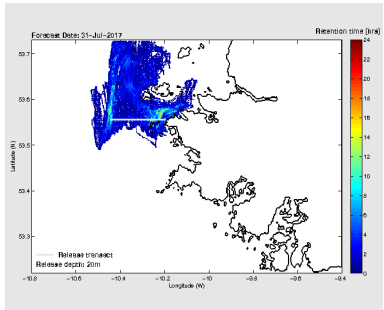
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

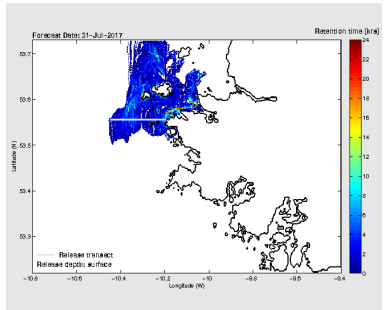
Bottom water



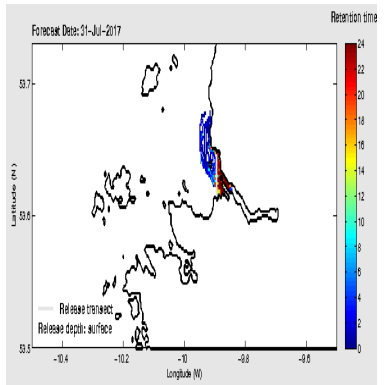
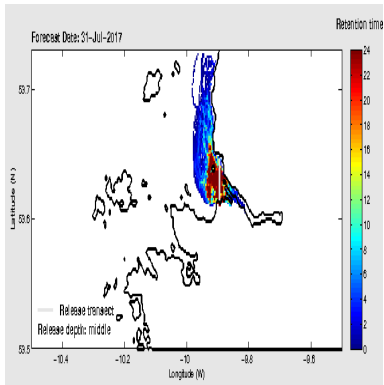
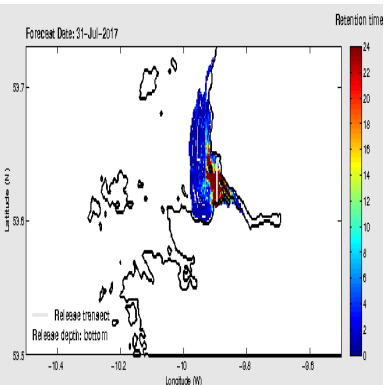
Water @ 20 metres



Surface water



Cleggan
Strong northerly (NW and NE) water movements at all depths. Offshore waters reaching near shores areas likely.



Killary
Similar to last week with well mixed outer bay waters reaching inner bay areas to some degree, at all depths, likely. Waters at all depths moving northward outside bay mouth area.

Killary Harbour

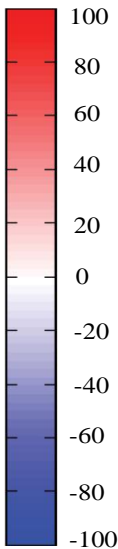
3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days

Killary Harbour Mouth cross section: Similar pattern to last week - Weak inflow rates dominating with upwelling conditions further in the bay area transporting outer bay waters to inner bay areas.

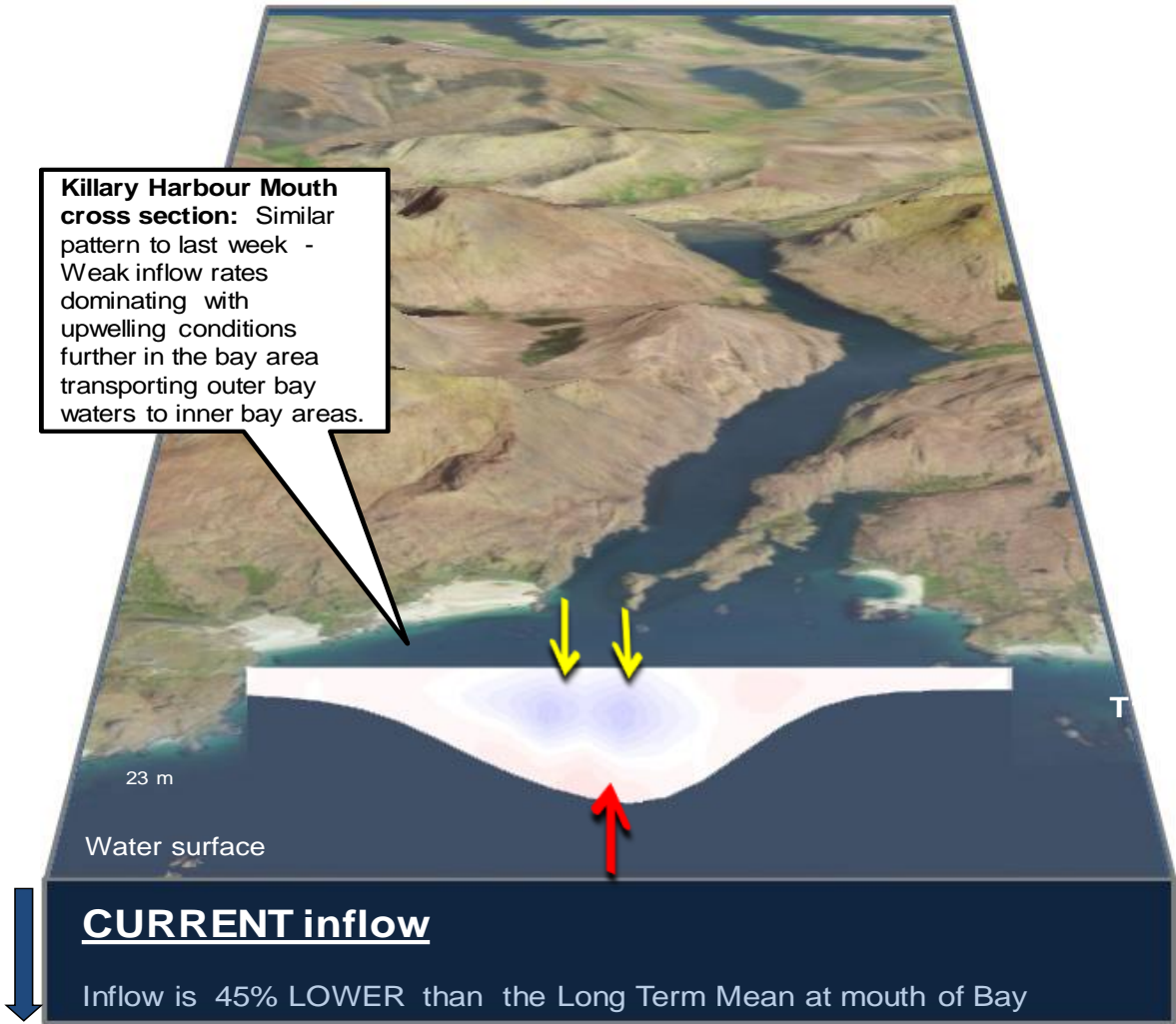
Flow ($\text{m}^3 \text{s}^{-1}$)



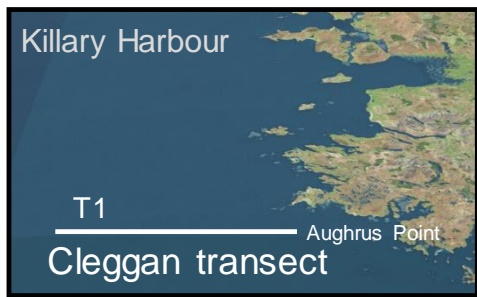
IN

OUT

Depth



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



Forecast for next 3 days

