

Ireland: Predictions

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

NMP Current closures			
ASP	AZP	DSP	PSP
0	1	2	0

ASP: Slow traditional increase in cell levels has begun. No toxic species/toxin currently present and it is still early in the historic season. We are however beginning to enter the historic period of occurrence and, combined with cell levels rising , it is time to slowly increase this level of caution and species awareness.

AZP: **Highest caution** is still advised with this difficult species. Current seasonal impact (1 site positive) may rise during onshore water transport conditions in the western areas. This is the main historical occurrence period, suitable environmental conditions continue to prevail and the toxin is currently present in moderate levels. Issues with this toxin can occur suddenly and acutely .

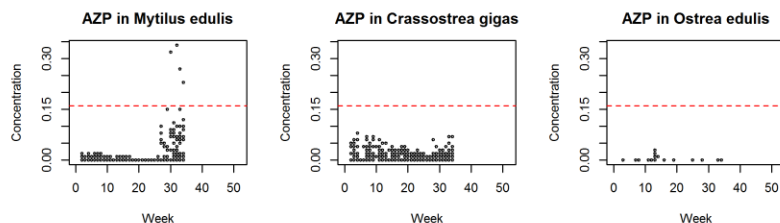
DSP: **Highest caution** - Continued toxicity issues and onshore water transport condition may lead to sudden, temporary , peaks at this time. All sites should insure best sampling practices and obtaining the most recent results available. Threats from this species are not over until temperatures drop significantly for a sustained period of time. Full caution is still advised.

PSP: Moderate caution still advised particularly in historically affected sites (S) and any site with significant species levels . Current weather conditions and patterns do not appear to be favourable for bloom establishment and issues but until cell levels and temperatures have dropped further caution is still advised.

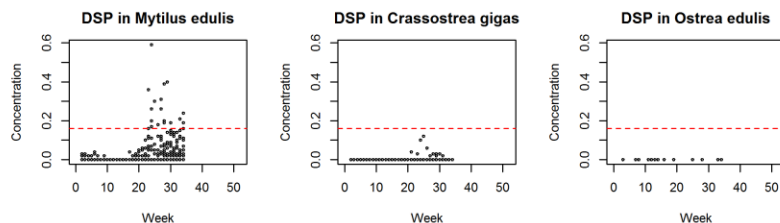
Blooms: There is a **moderate to low risk of bloom conditions spreading** due to current environmental conditions. Any unusual water discoloration should be noted and regional labs contacted if concerned /regarding possible need for additional sampling. All feedback is welcome at Joe.Silke@Marine.ie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

National Monitoring Programme

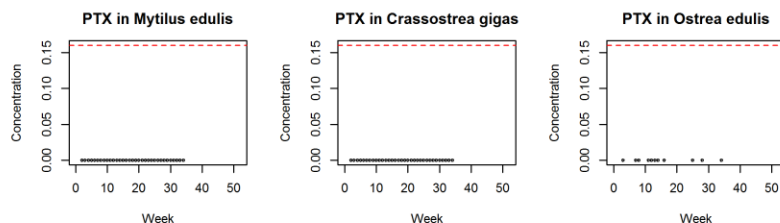
AZP



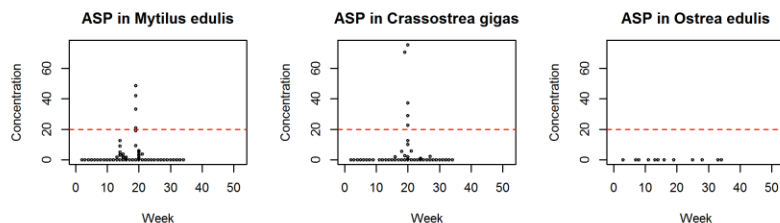
DSP



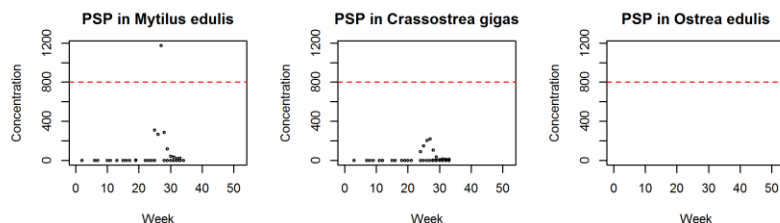
PTX



ASP



PSP



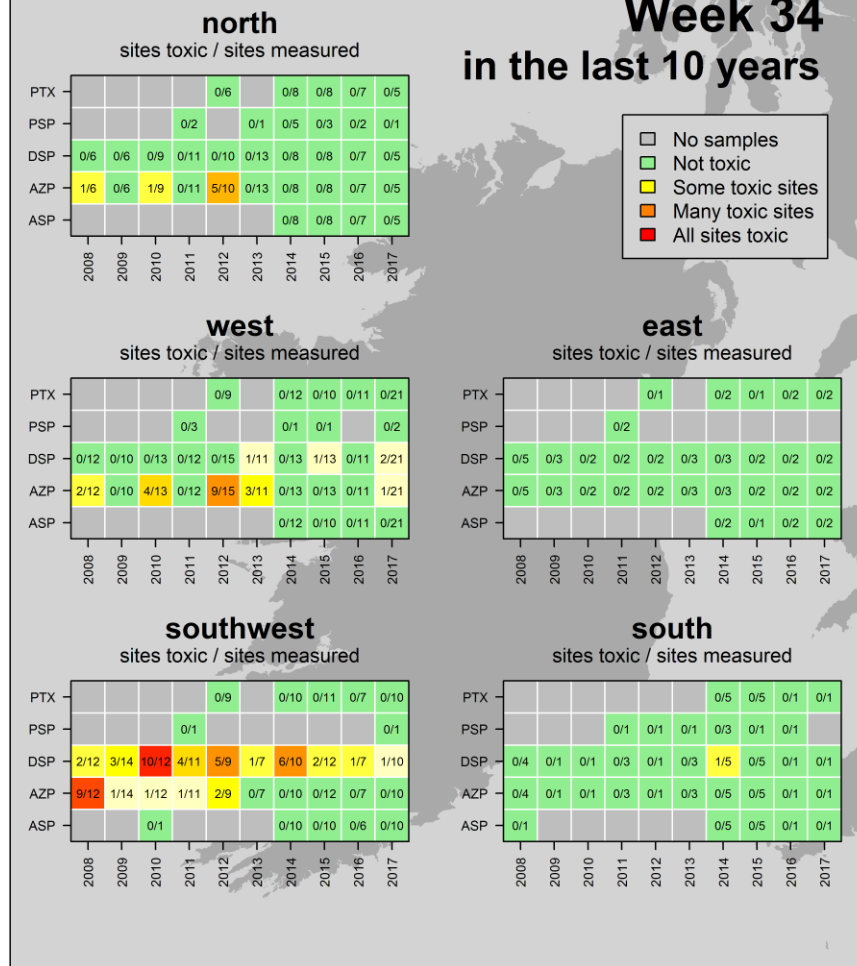
Levels from week 1 to present week. Regulatory limit - - - - -



HISTORIC TRENDS



Week 34
in the last 10 years



ASP events: mid-March to early May

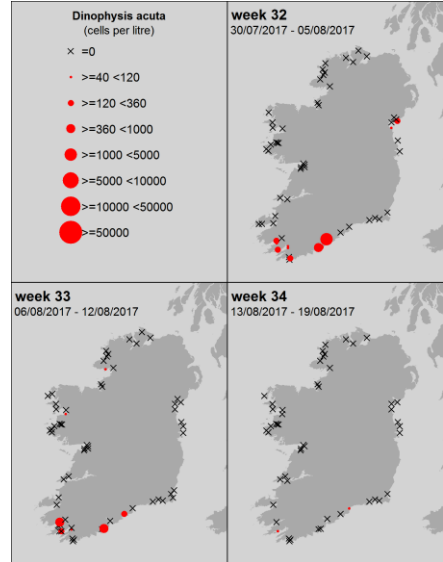
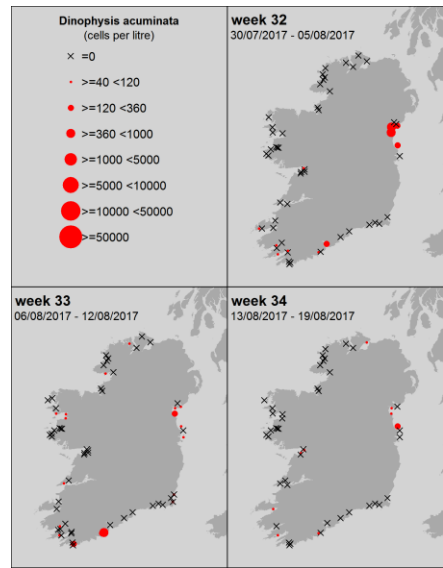
AZP events: April to December

DSP events: May to December

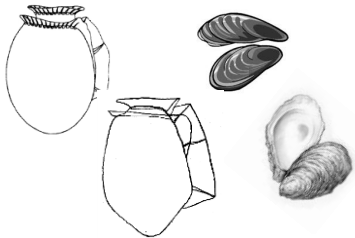
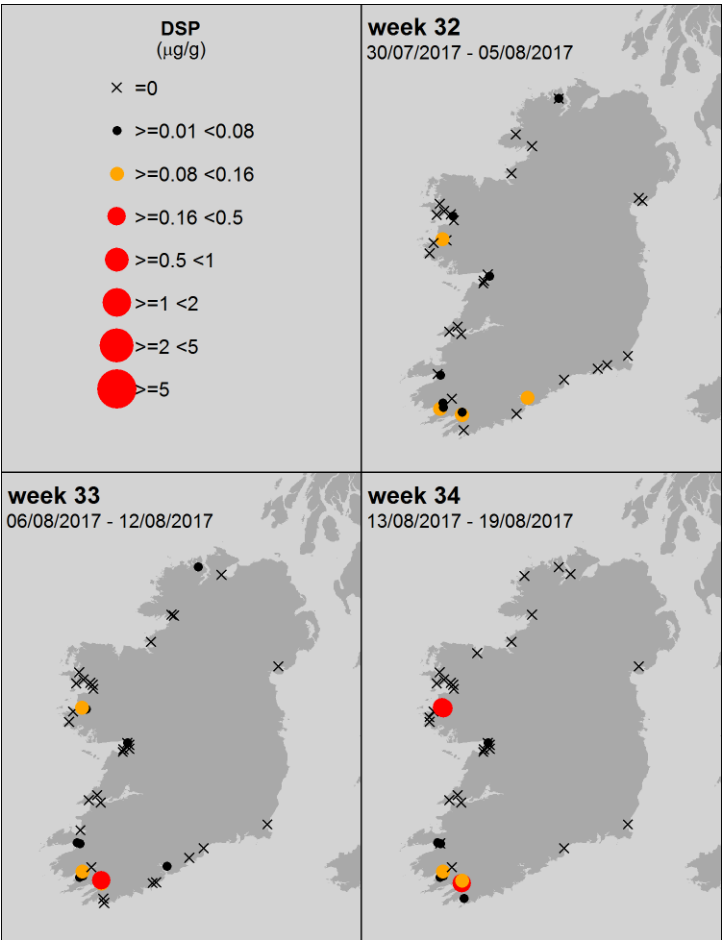
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks.

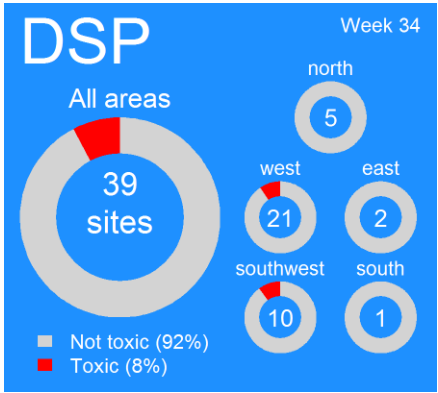


All levels of DSP biotoxin recorded- 3 wks.



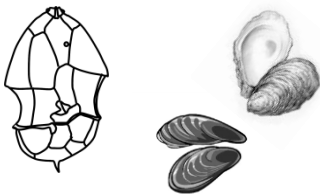
Current closures levels

≥ DSP 0.16 µg/g



Comment – Seasonal issues likely to continue in many areas. Temporary and sudden peaks in toxin levels possible during onshore water transport conditions. Continued highest caution advised.

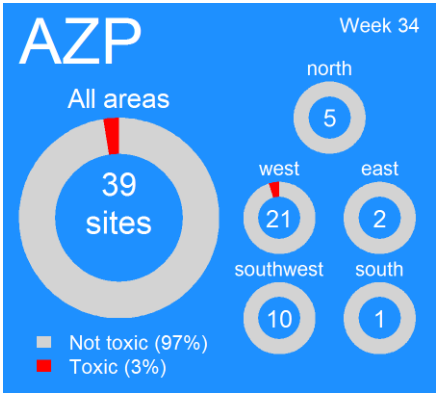
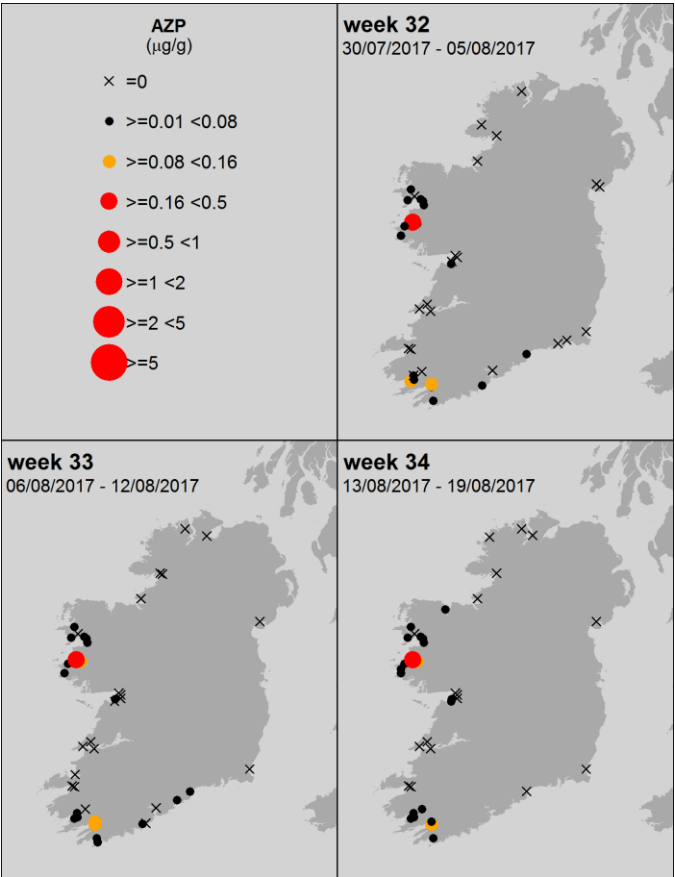
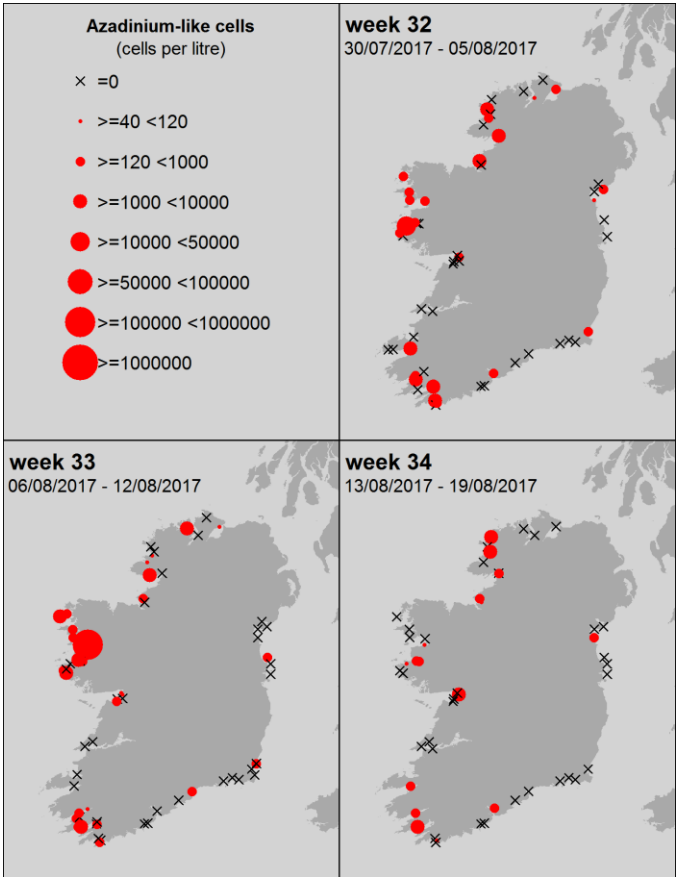
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.

Current closures levels
≥ AZP 0.16 µg/g

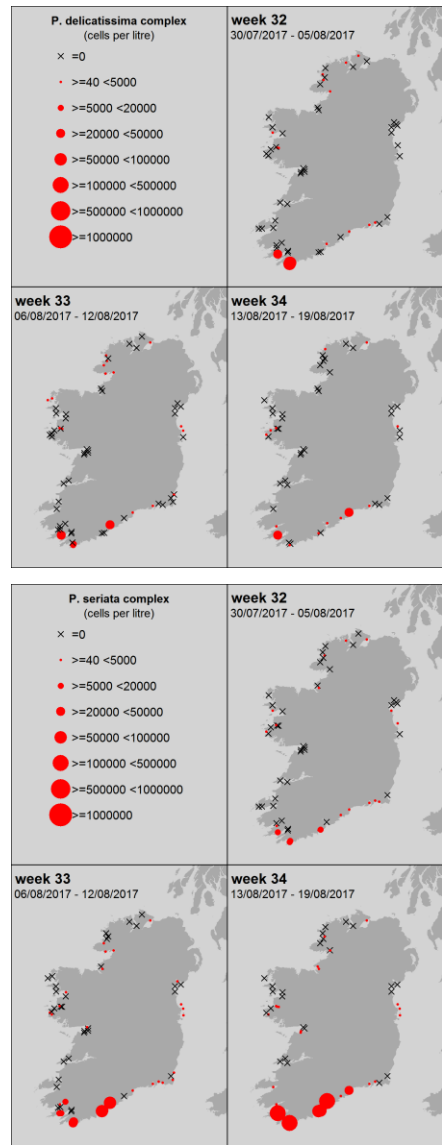


Comments

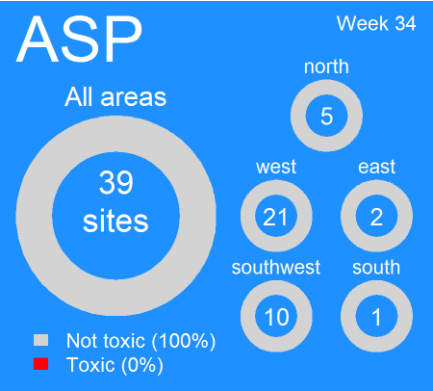
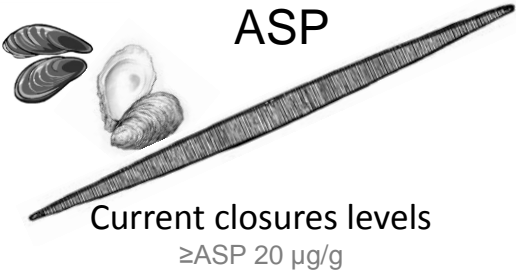
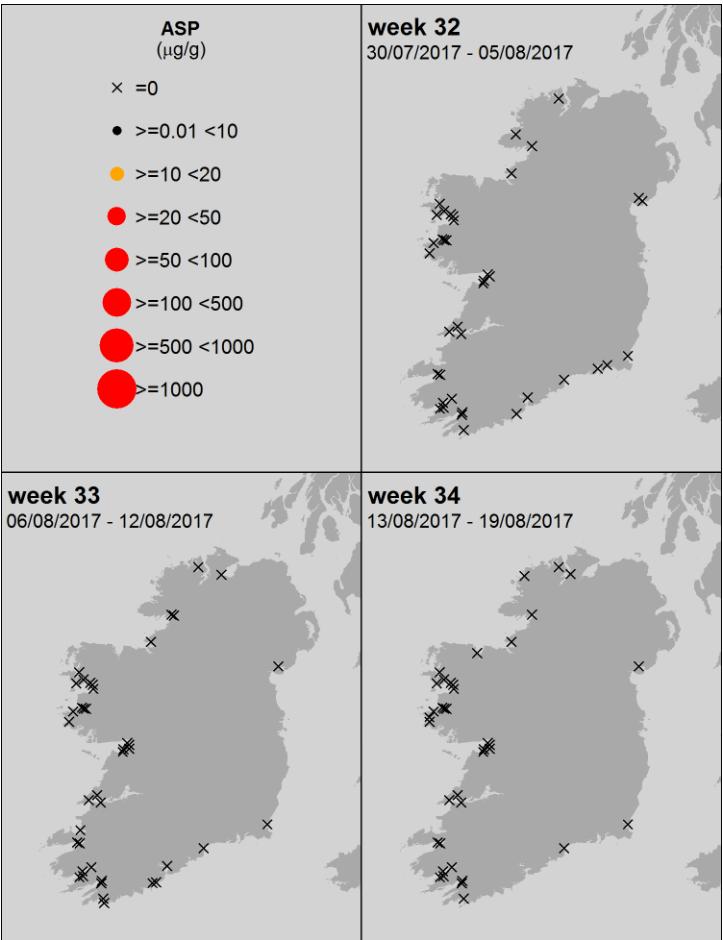
Highest level of caution and observance and testing in affected areas recommended. This species has can rapidly bloom or get transport into bay areas at bloom levels. Such transport conditions are typical at this time of year- sudden acute issues possible.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



All levels of ASP biotoxin recorded - 3 wks.



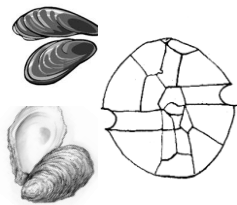
Comments

Beginning of the seasonal increased risk period and cell levels appear to be rising . No significant toxin levels are currently present and it would be the norm for this to continue at this point in the season.

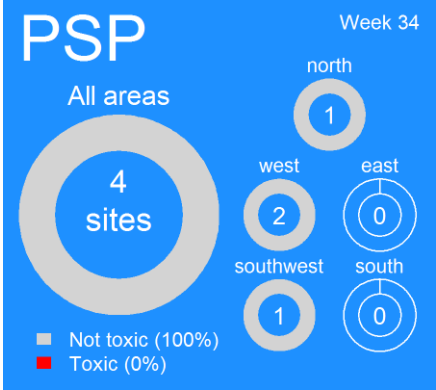
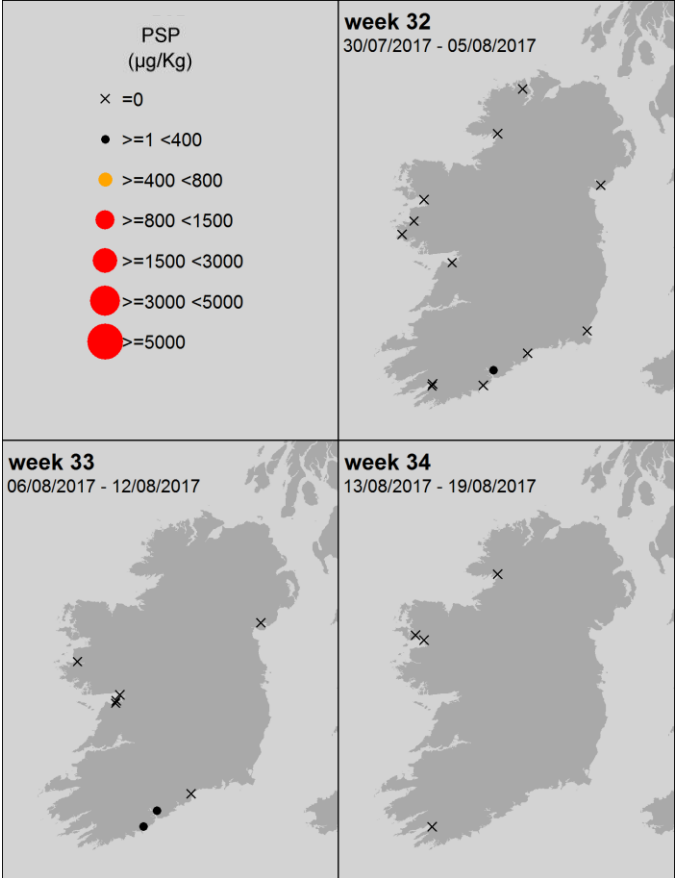
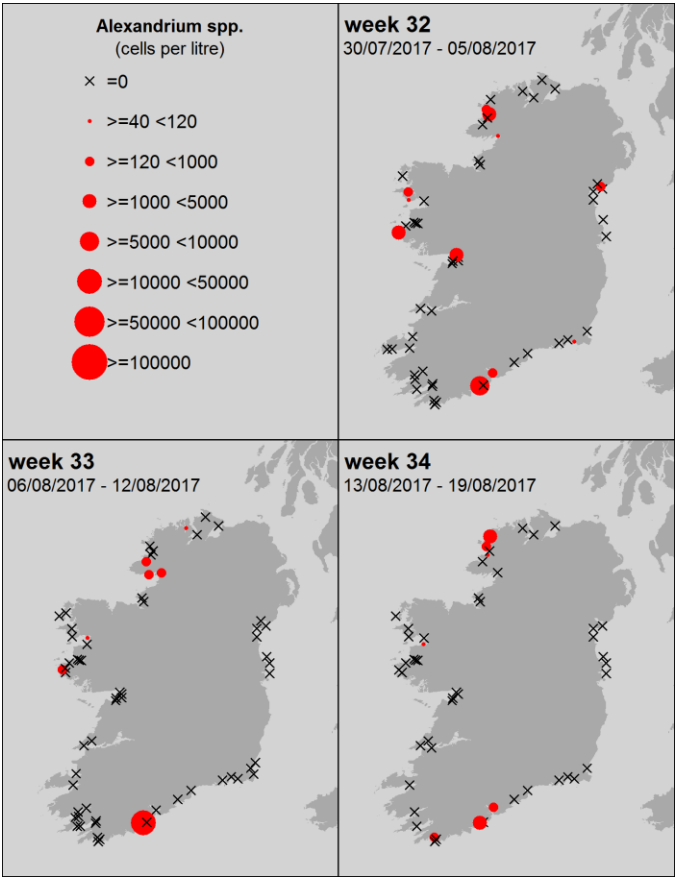
PSP and Alexandrium sp. current trends

Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.



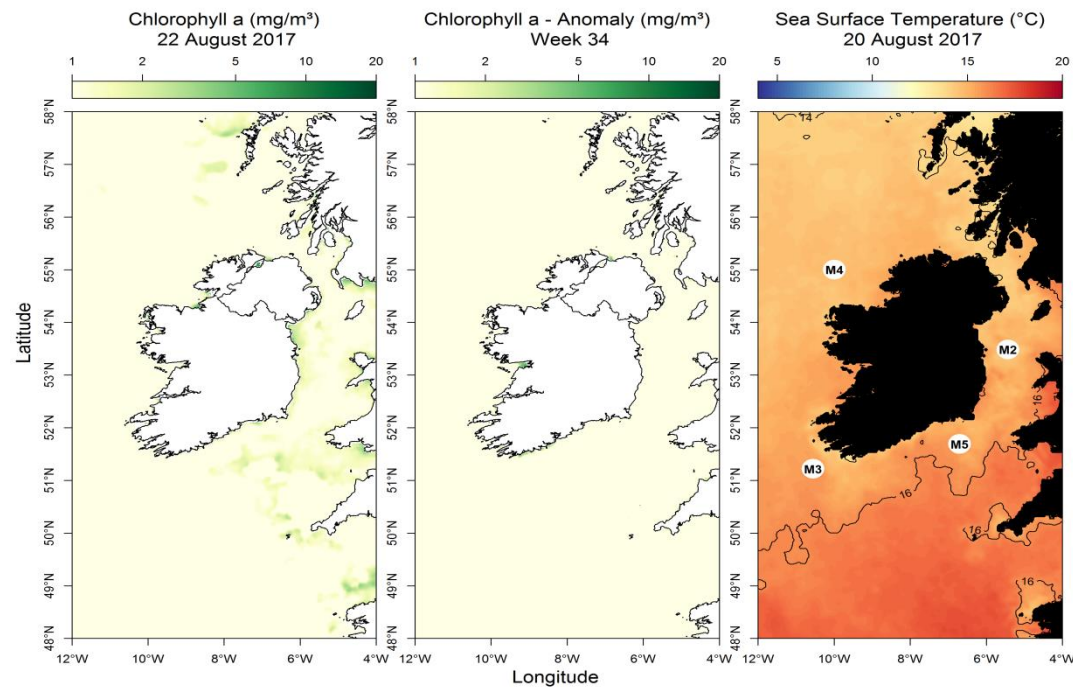
Current closures levels
≥ PSP 800 µg/Kg



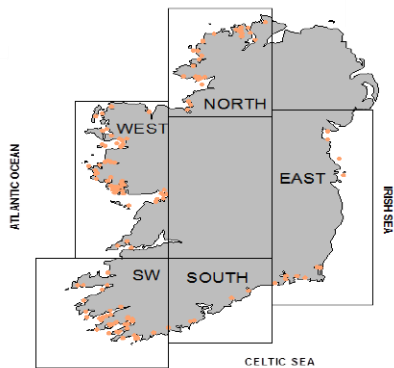
Comments

This is nearing the end of peak historical likely occurrence and current environmental conditions are not ideal for bloom formation. Moderate to lower caution is still advised.

Most up to date available satellite data



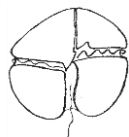
Slight chance in top 5 species profile which would be expected as transition to autumn begins slowly. Currently no significant chlorophyll peak anomalies in any area around coastline.



NW coast (M4) Below average by 0.74°C wk33
SW coast (M3) Unavailable
SE coast (M5) Below average by 0.16°C wk33

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Chaetoceros (Hyalochaete) spp.	116000
2	east	Cryptophyte	19000
3	east	Odontella spp.	10000
4	east	Cylindrotheca closterium/ Nitzschia longissima	10000
5	east	Pennate diatom	9000
1	north	Chaetoceros (Hyalochaete) spp.	443000
2	north	Leptocylindrus minimus	129000
3	north	Pennate diatom	124000
4	north	Cylindrotheca closterium/ Nitzschia longissima	93000
5	north	Prorocentrum micans	22000
1	south	Pseudo-nitzschia seriata complex	70000
2	south	Pseudo-nitzschia delicatissima complex	47000
3	south	Leptocylindrus danicus	2000
4	south	Alexandrium spp.	2000
5	south	Leptocylindrus minimus	1000
1	southwest	Pseudo-nitzschia seriata complex	263000
2	southwest	Asterionellopsis glacialis	70000
3	southwest	Haptophytes	54000
4	southwest	Prorocentrum micans	35000
5	southwest	Guinardia delicatula	34000
1	west	Microflagellate sp.	99000
2	west	Skeletonema spp.	80000
3	west	Prorocentrum micans	28000
4	west	Chaetoceros (Hyalochaete) spp.	26000
5	west	Pennate diatom	21000



Karenia mikimotoi bloom warning level
- Medium to low -

Current weather conditions continuing unfavourable but this is still 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

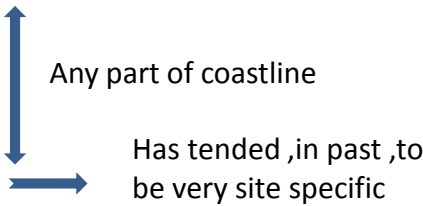
Most species have the potential to reach high numbers and be considered a bloom. The majority of such blooms are short lived and not a problem. At this time of year the typical species to watch out for , that can cause problems, are:

Karenia mikimotoi

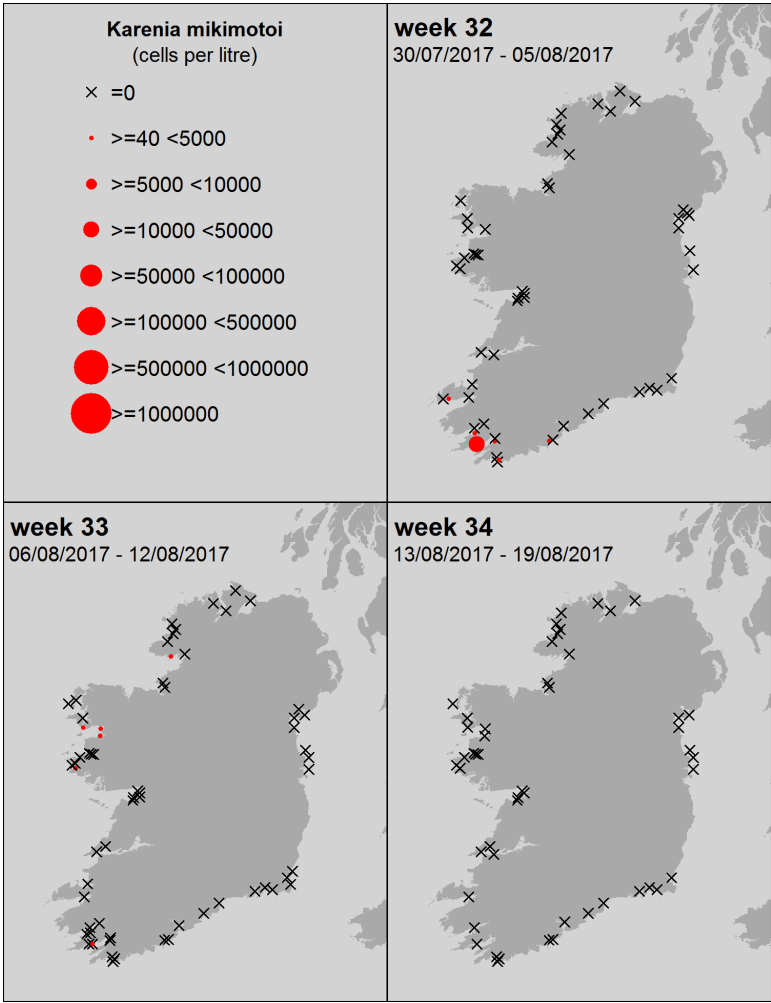
Heterocapsa spp.

Noctiluca scintillans

Alexandrium spp.



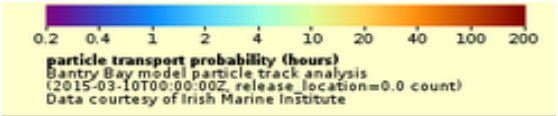
Karenia mikimotoi
(old name: *Gyrodinium aureolum*)



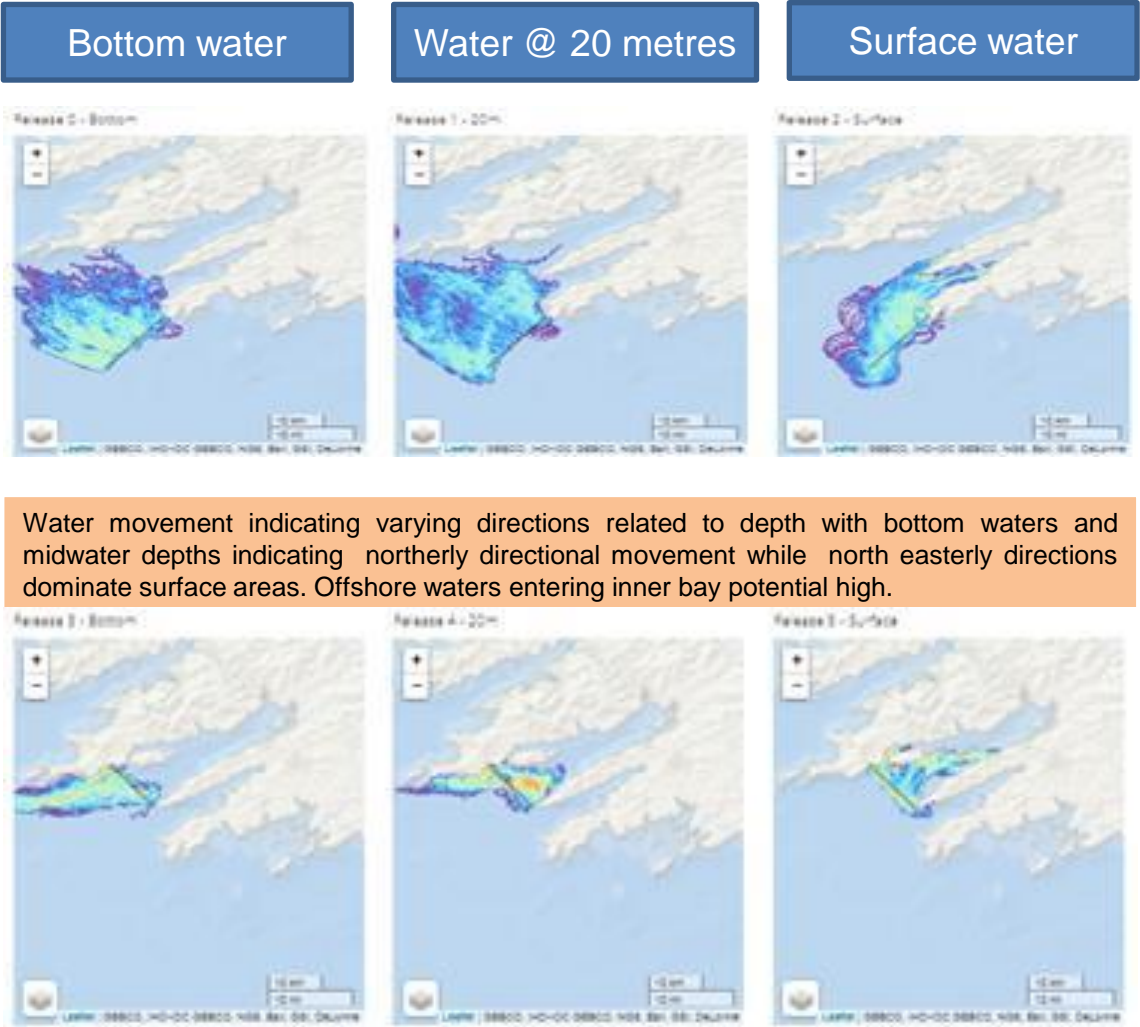
SOUTHWEST: Bantry Bay

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



Forecast for the next 3 days



Water movement indicating varying directions related to depth with bottom waters and midwater depths indicating northerly directional movement while north easterly directions dominate surface areas. Offshore waters entering inner bay potential high.

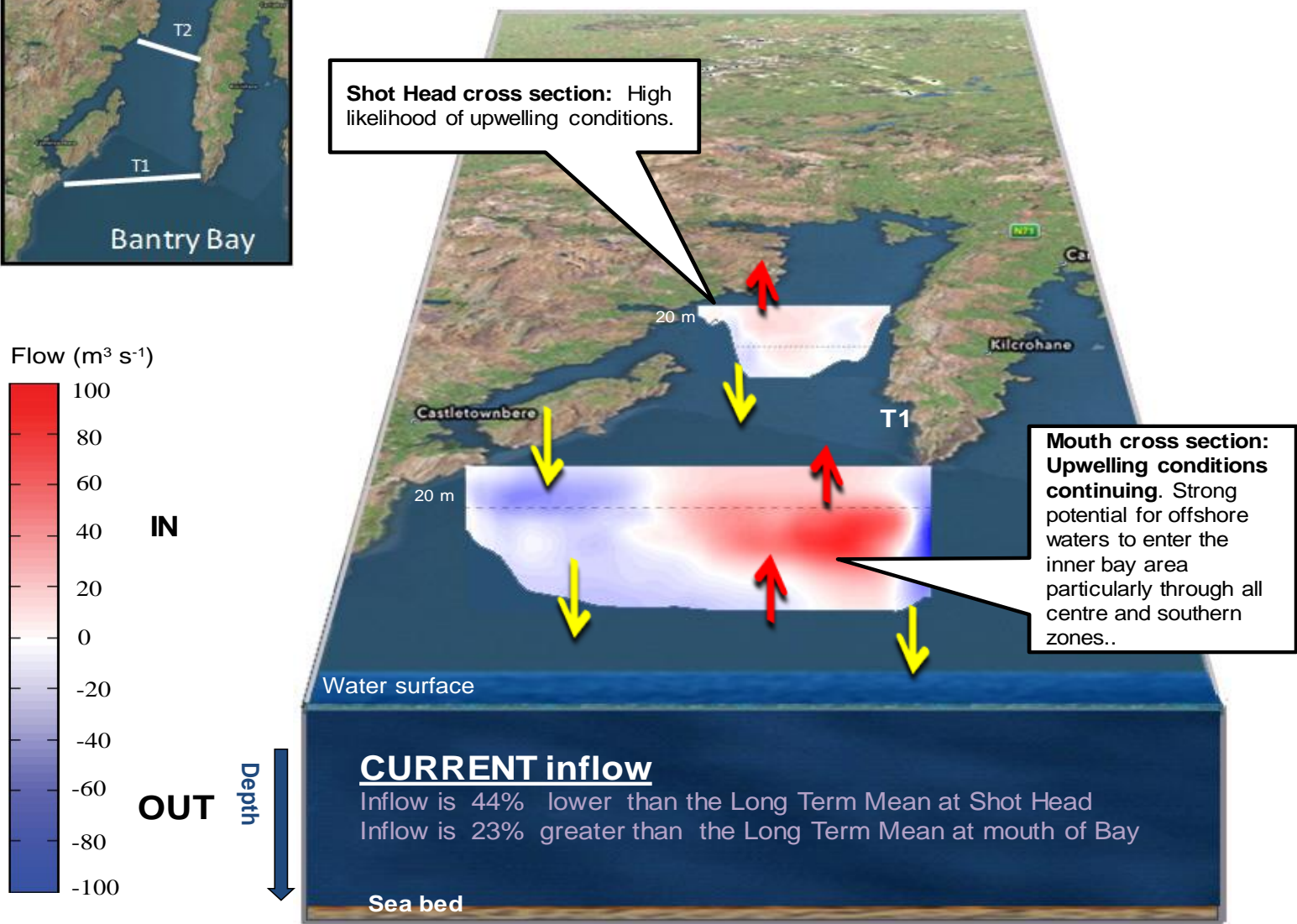
Mixed directions of movement in offshore waters allowing for down welling and transport events to occur.

Bantry Bay

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



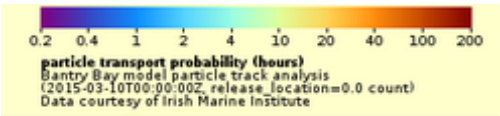
Forecast for next 3 days



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)

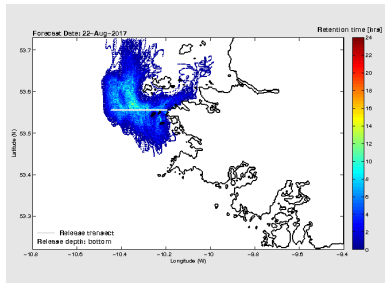
Reddish colours represent areas where phytoplankton remain longest
Cooler colours represent areas where phytoplankton remain for shorter periods



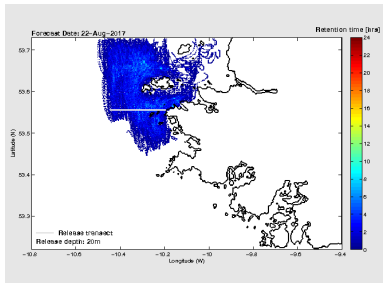
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

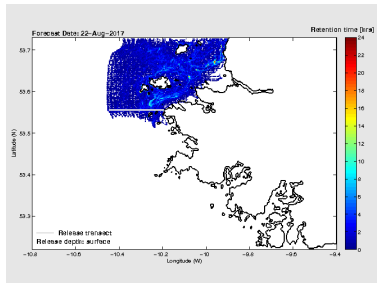
Bottom water



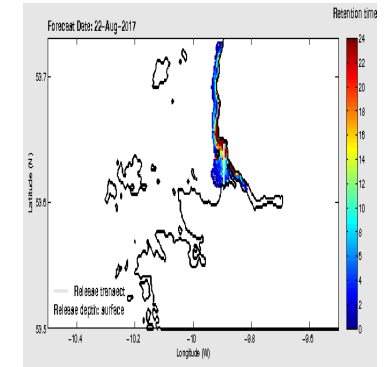
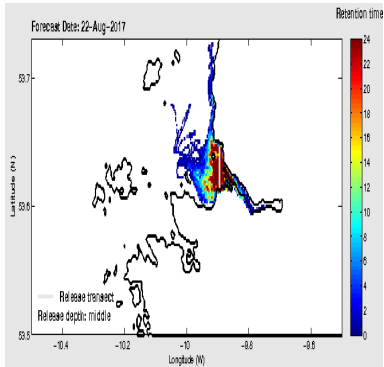
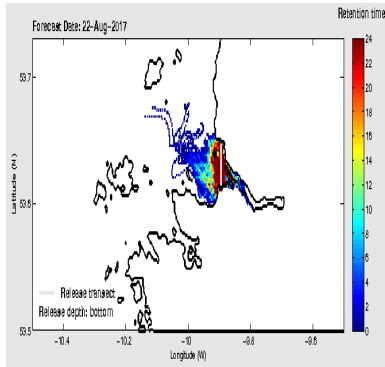
Water @ 20 metres



Surface water



Cleggan
Predominantly northerly/ north easterly water movements at all depths. Offshore waters reaching near shores areas likely.



Killary
Potential of intrusions of offshore waters into inner bay areas , particularly as depth increases.

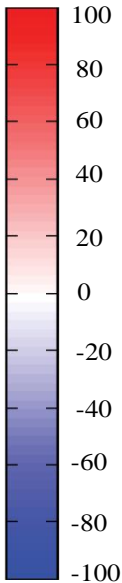
Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



Forecast for next 3 days

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

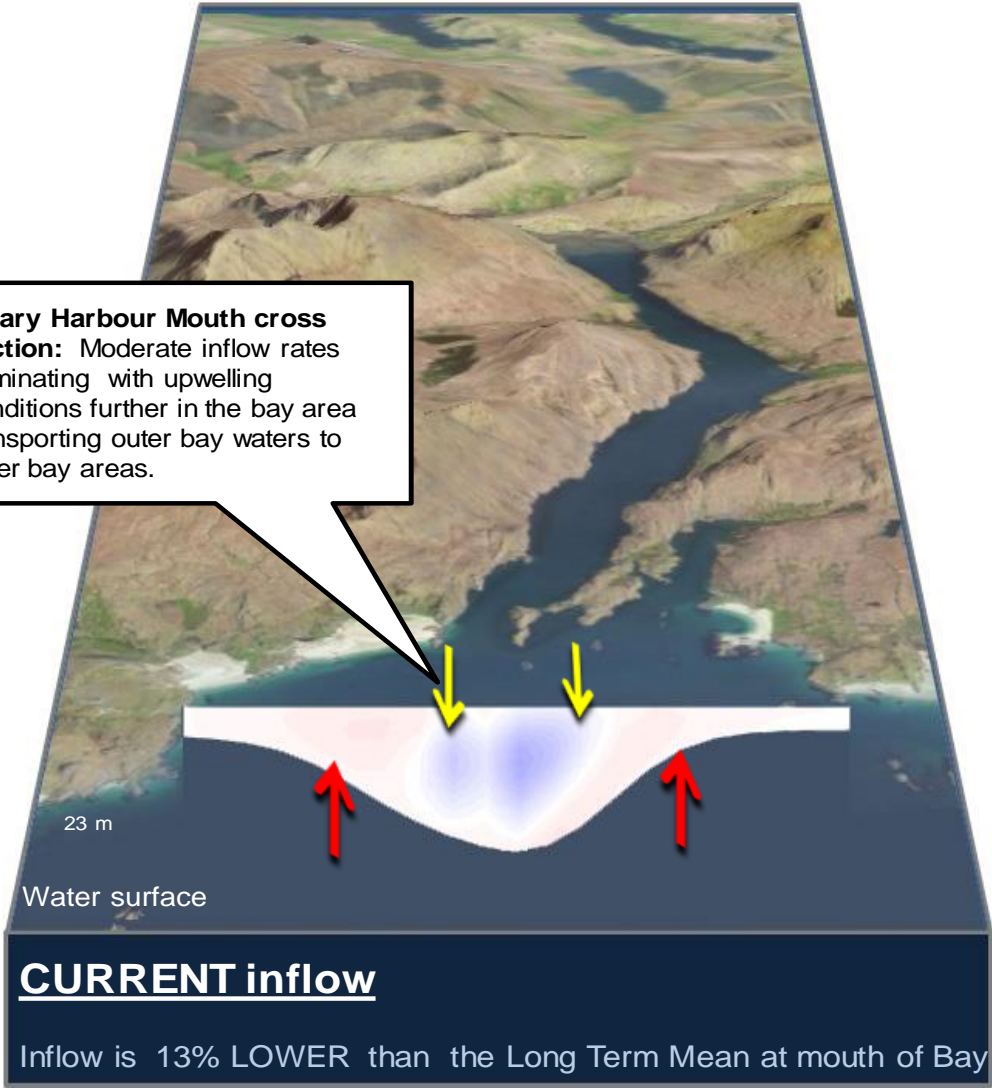


IN

OUT

Depth

Killary Harbour Mouth cross section: Moderate inflow rates dominating with upwelling conditions further in the bay area transporting outer bay waters to inner bay areas.



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

