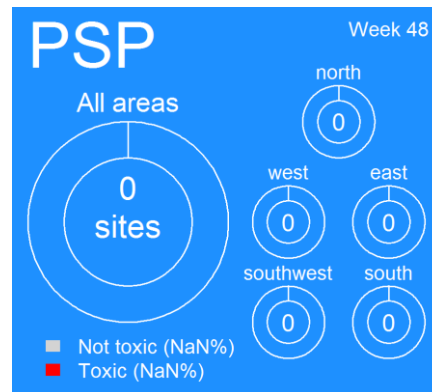
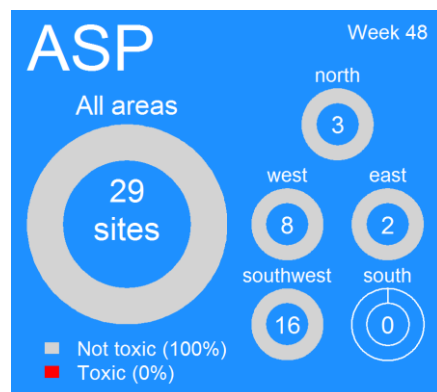
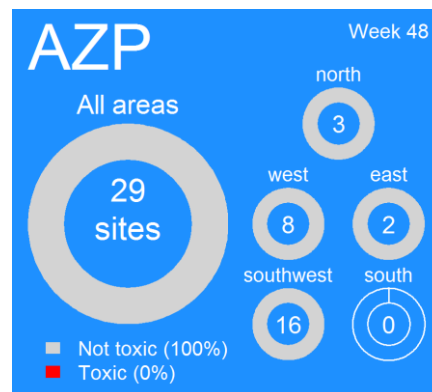
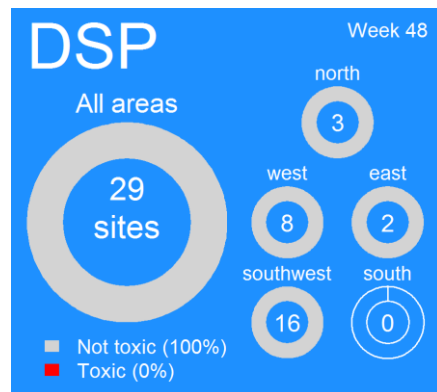


# Ireland: Current Conditions

## Shellfish biotoxin report (last week)



### EU Regulatory Limit:

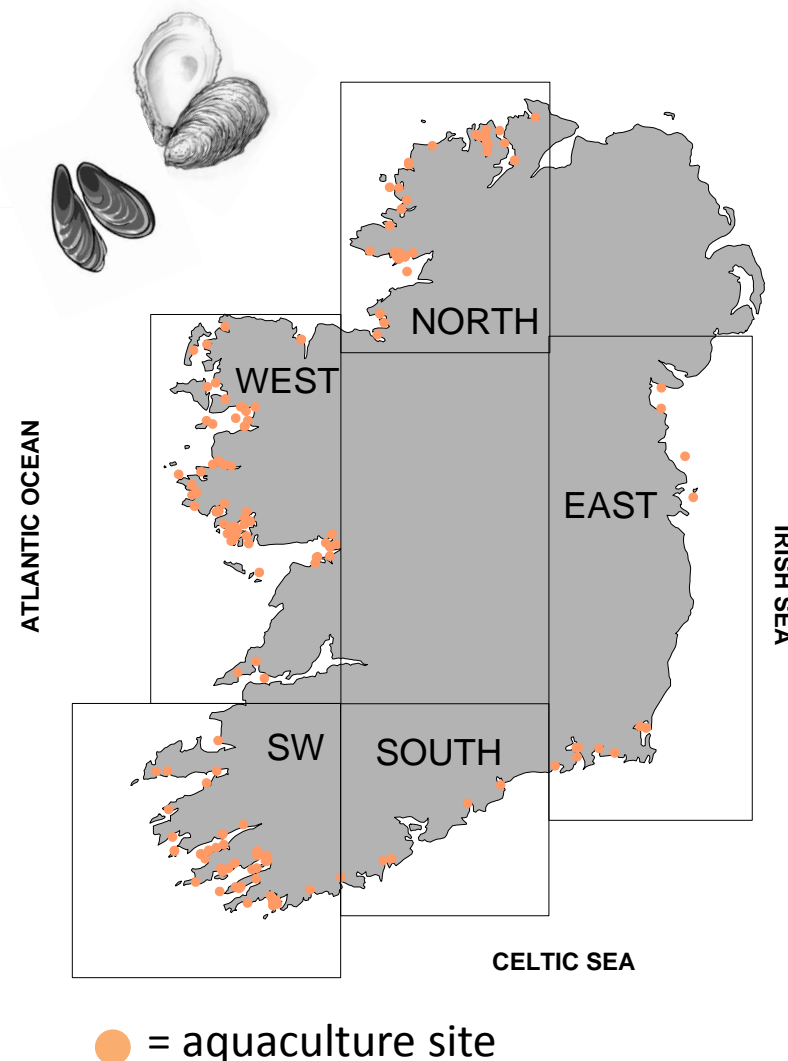
ASP 20 µg/g; AZP 0.16 µg/g; DSP 0.16 µg/g; PSP 800 µg/kg

### Toxin groups

ASP = Amnesic Shellfish Poisoning; AZP = AZaspiracid Poisoning;

DSP = Diarrhetic Shellfish Poisoning; PSP = Paralytic Shellfish Poisoning

## National Monitoring Programme Designated Sampling Sites



# Ireland: Predictions

## Prediction for this week:

ASP event: Low

AZP event: Medium

DSP event: Low

PSP event: Low

## Why do we think this?

ASP: Toxin issues from this species are not expected at this time of year.

Cell levels of *Pseudo-nitzschia seriata* group continue to decline around the coast. In recent weeks, low *Pseudo-nitzschia* cell levels continue to be reported and ASP biotoxins were not detected at any site countrywide.

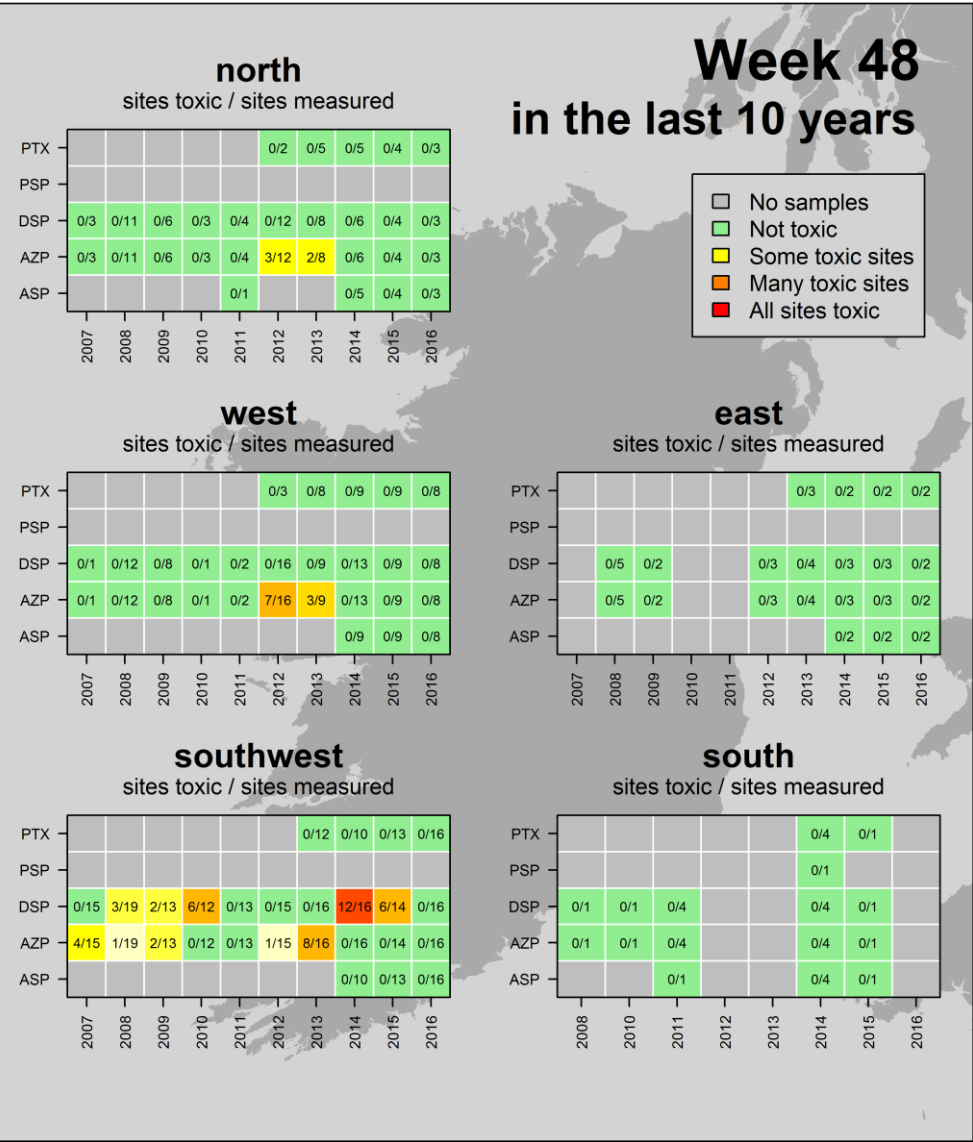
AZP: This is considered a high risk period for AZP. Fluctuating levels of *Azadinium* spp. continue to be observed around the coast. Biotoxin levels are currently below regulatory limits.

DSP: This is historically a risk period . However, DSP has fallen even lower in the SW and is well below regulatory limits, there are no *Dinophysis* cells.

PSP: A toxic event is not expected at this time of year.

# Ireland: Historic Conditions

A look back at how last weeks biotoxin results compares to other years



## Ireland HISTORIC TRENDS

**Likely times for Shellfish Toxicity:** does not include winter carry over of biotoxins

- 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



Ireland: Last 3 weeks of available National Monitoring Programme data



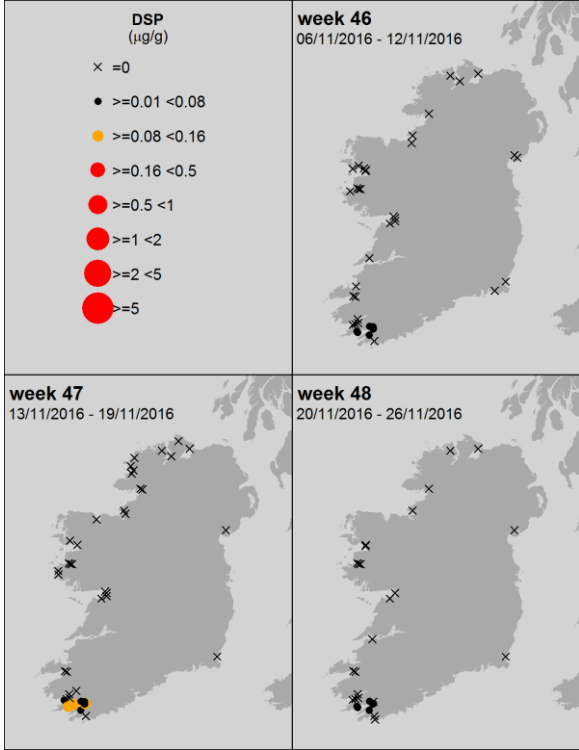
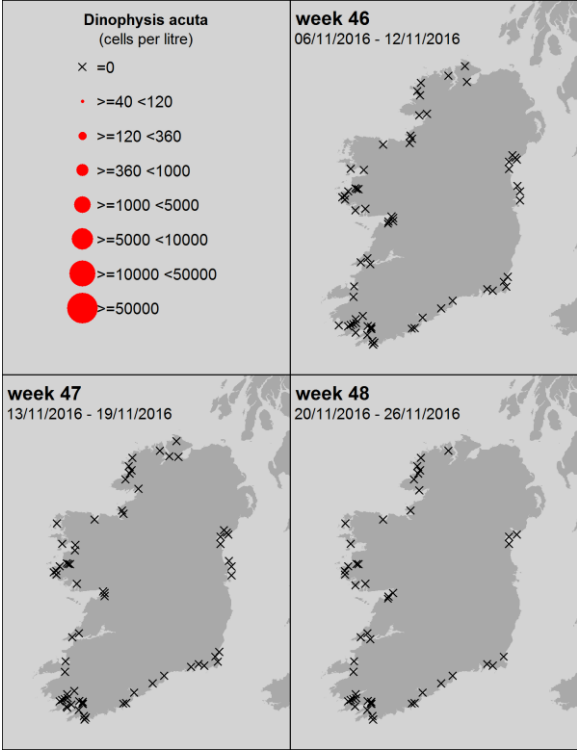
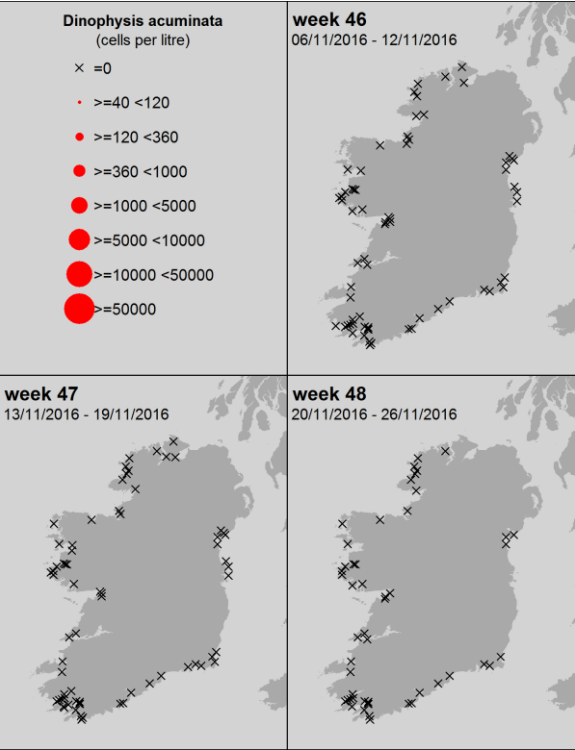
*Dinophysis acuminata*



*Dinophysis acuta*



DSP



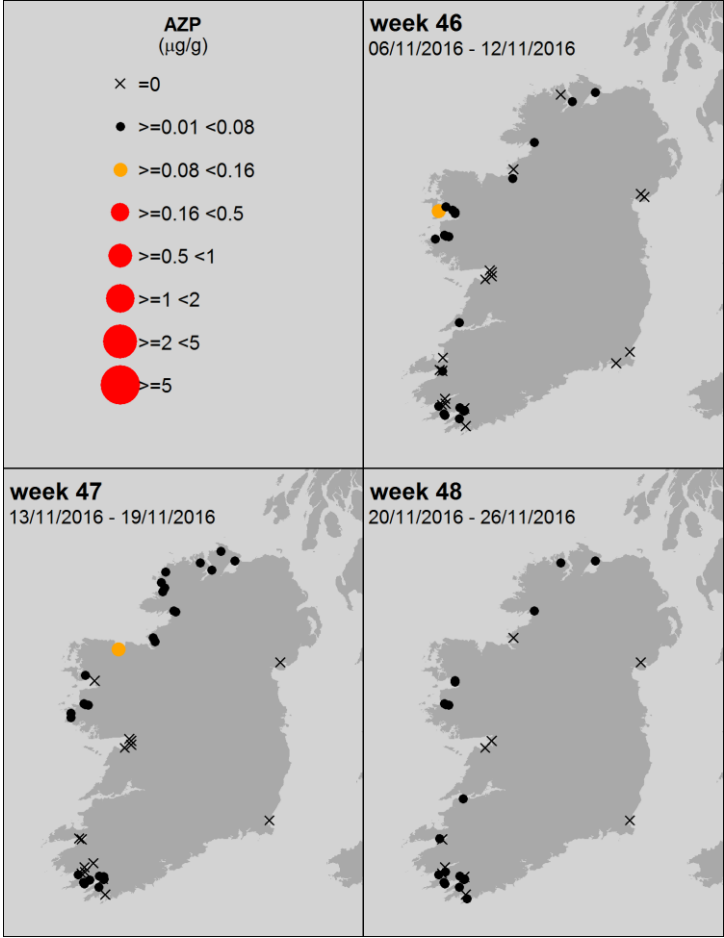
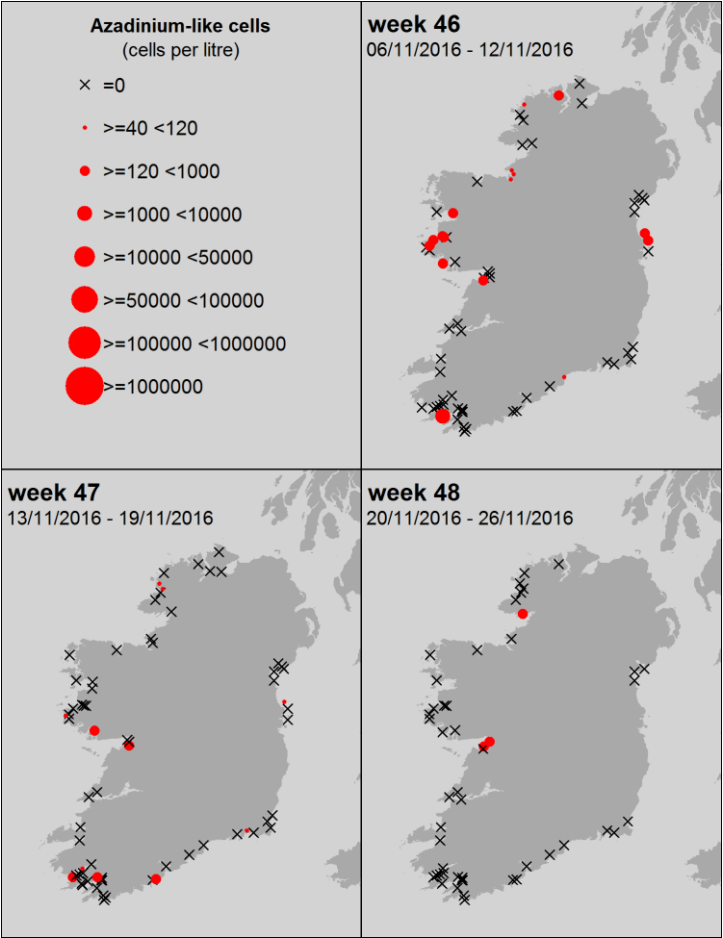
Ireland: Last 3 weeks of available National Monitoring Programme data



*Azadinium* – like spp.



AZP



Ireland: Last 3 weeks of available National Monitoring Programme data

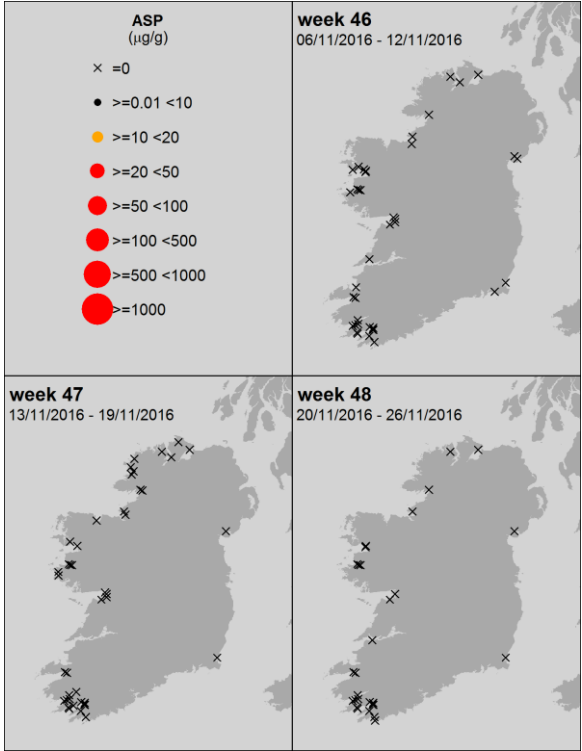
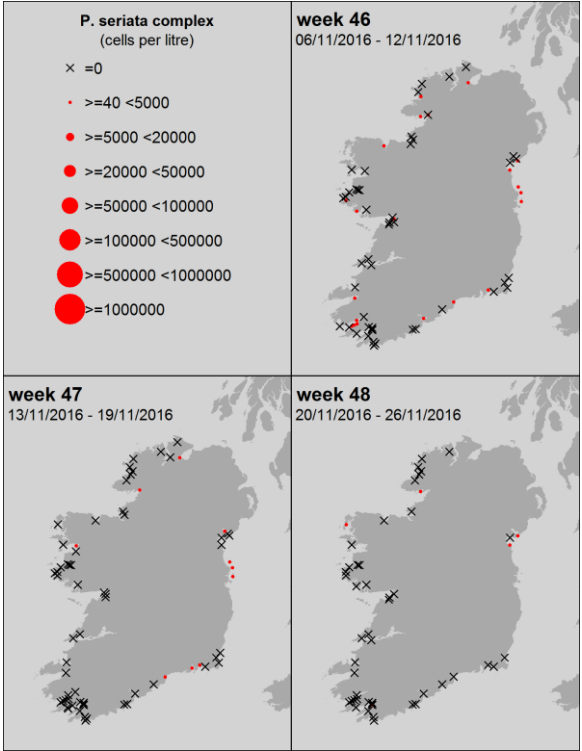
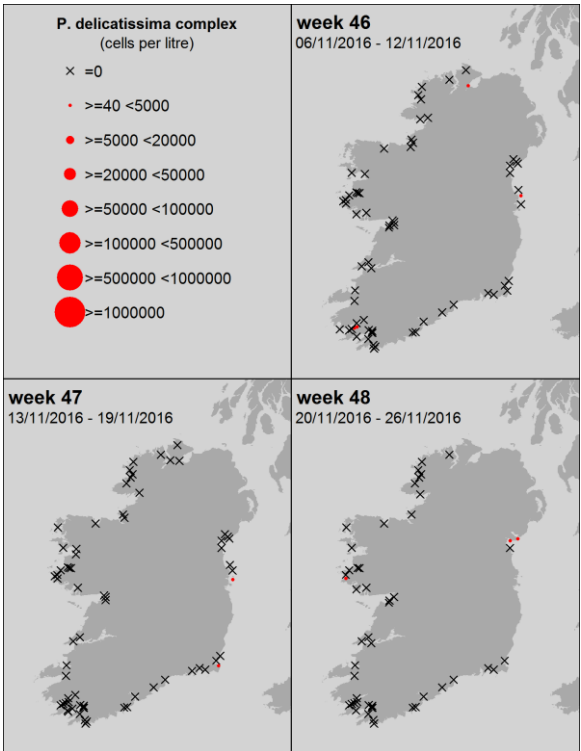
*Pseudo-nitzschia* spp.



ASP

“*P. delicatissima*” complex = small cells  
Taken from the literature:  
3 species confirmed in Irish waters

“*P. seriata*” complex = large cells  
Taken from the literature:  
7 species confirmed in Irish waters

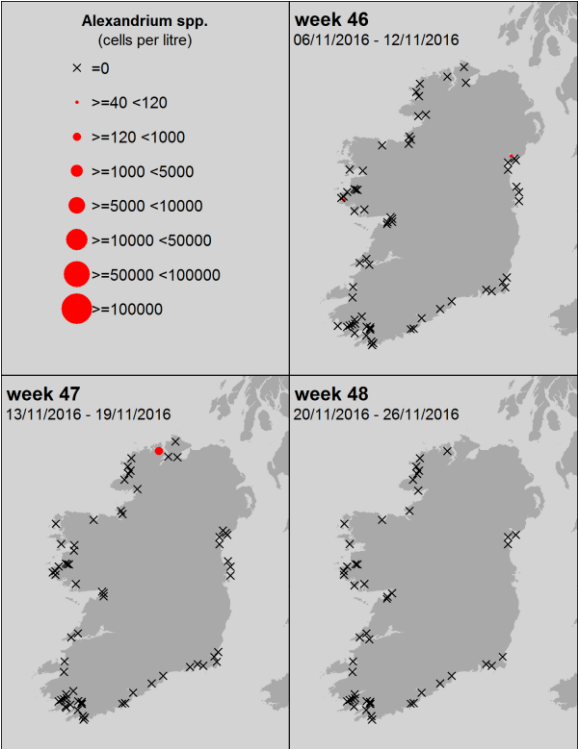


**Taken from the literature:** Of the 4 species (*P. fraudulenta*, *P. australis*, *P. pungens* and *P. delicatissima*) from Irish waters, tested for ASP toxins in culture work, only one, *P. australis* (from the “*P. seriata*” group) was toxic.

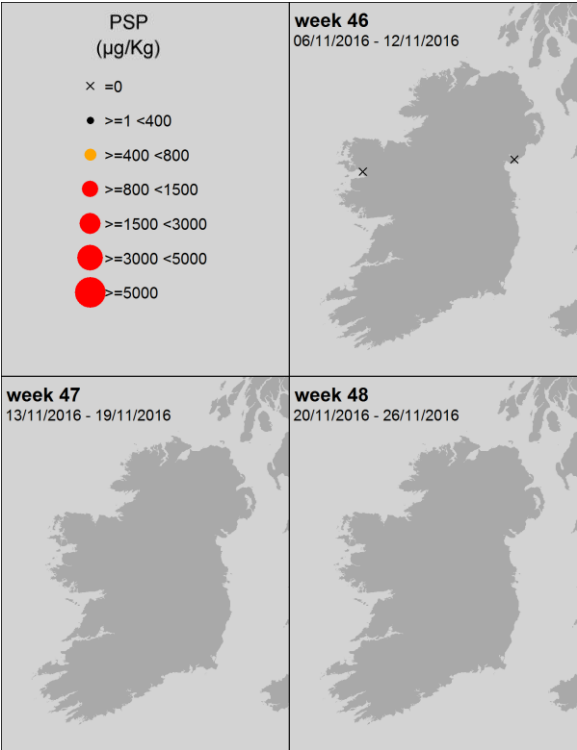
Ireland: Last 3 weeks of available National Monitoring Programme data



*Alexandrium* spp.



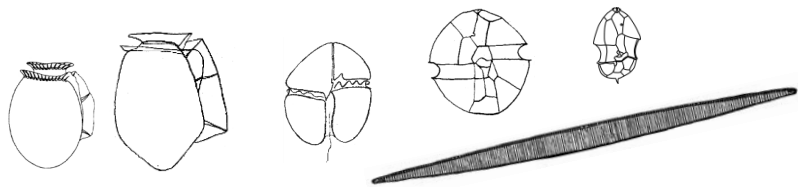
PSP



# Ireland HAB & Biotoxin temporal trends

Ireland: **HABs and biotoxins** Levels from week 1 to present

## Ireland: Biotoxins



Toxin groups

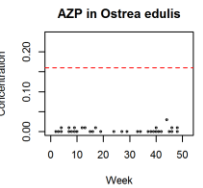
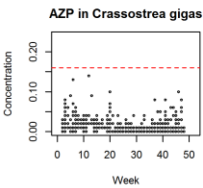
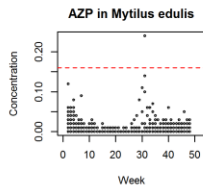
mussels

oysters

oysters

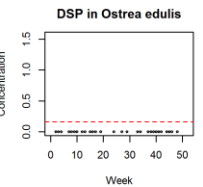
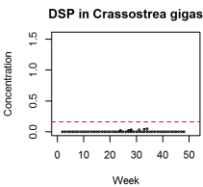
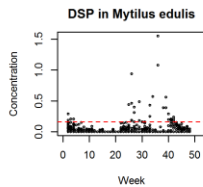
**AZP**

AZaspiracid  
Poisoning



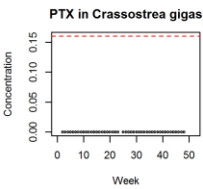
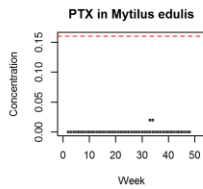
**DSP**

Diarrhetic  
Shellfish  
Poisoning



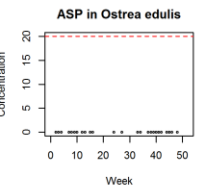
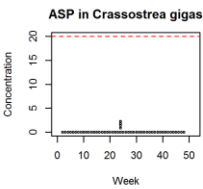
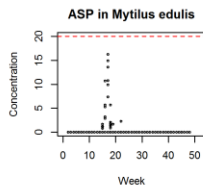
**PTX**

Pectenotoxin



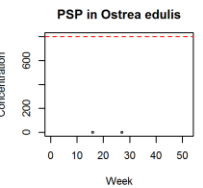
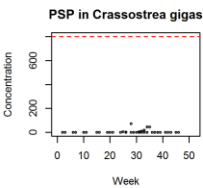
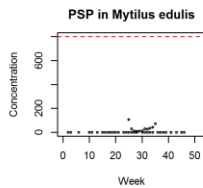
**ASP**

Amnesic  
Shellfish  
Poisoning

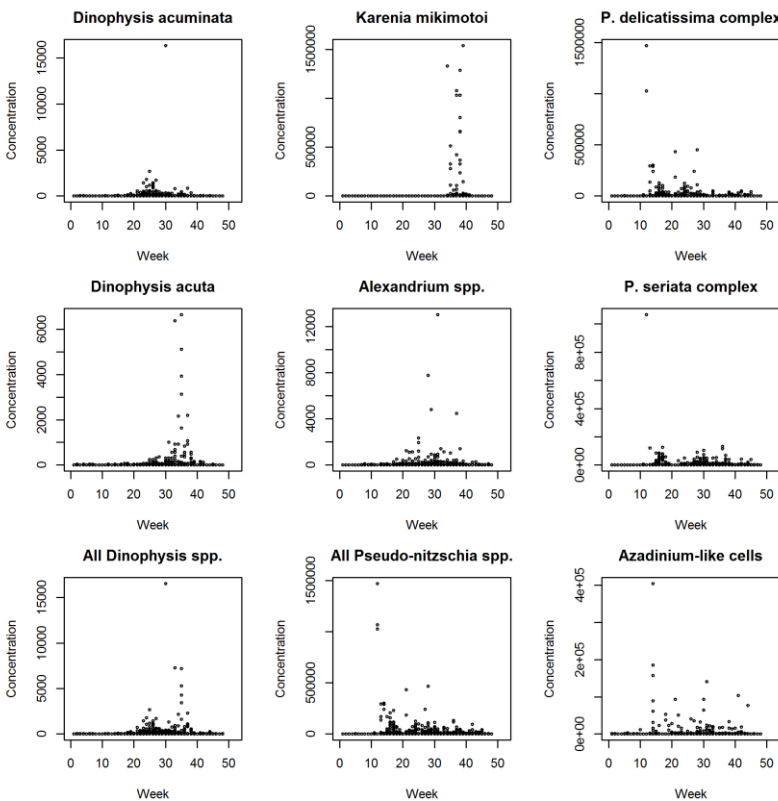


**PSP**

Paralytic  
Shellfish  
Poisoning



## Ireland: HABs

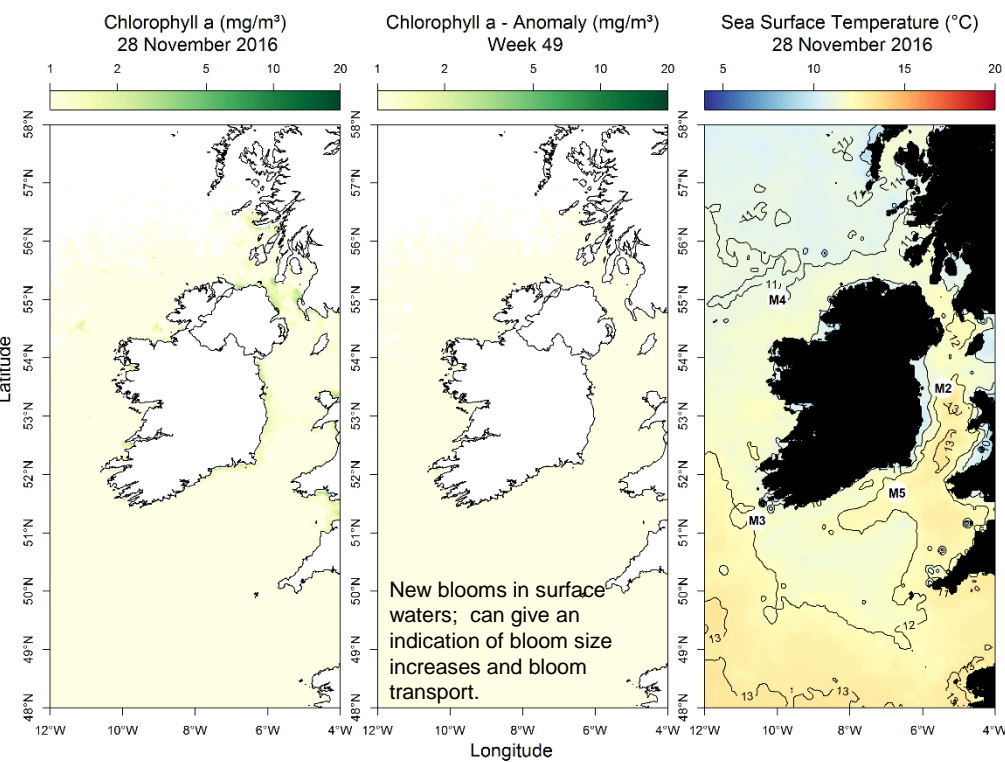


EU Regulatory Limit: ASP 20 µg/g; AZP 0.16 µg/g; DSP 0.16 µg/g; PSP 800 µg/kg

Regulatory limit = ■■■■■

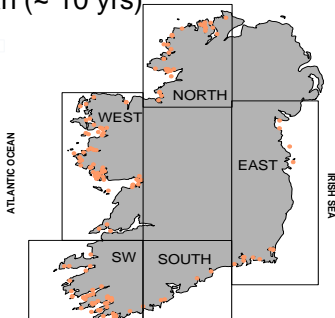


Most up to date available satellite data

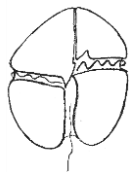


**SST (°C) anomaly for last week:**  
Data taken from the Irish data buoy network where the anomaly is the weekly difference in SST compared to the long term mean (~ 10 yrs)

- NW coast (M4) above average by 0.20 °C
- SW coast (M3) above average by 0.17 °C
- SE coast (M5) above average by 0.53 °C

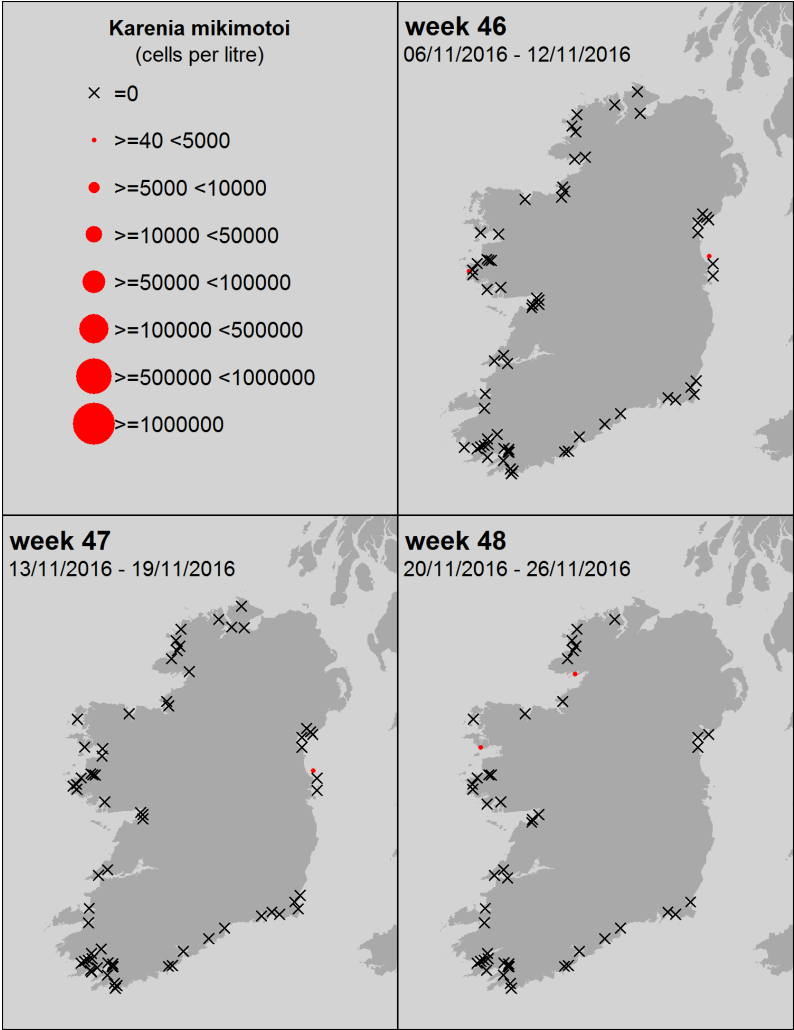


What phytoplankton were blooming at inshore coastal sites		
Region	Species	Rounded Count
east	<i>Chaetoceros</i> (Hyalochaete) spp.	9
east	Pennate diatom	8
east	Centric Diatom	5
east	<i>Guinardia delicatula</i>	4
east	<i>Thalassionema</i> spp.	3
north	<i>Asterionellopsis</i> spp.	15
north	<i>Ceratium</i> spp.	5
north	Microflagellate sp.	1
north	<i>Skeletonema</i> spp.	1
north	<i>Guinardia delicatula</i>	1
south	<i>Navicula</i> spp. <25µm	44
south	Centric diatoms <20µm	42
south	<i>Skeletonema costatum</i>	7
south	<i>Paralia</i> spp.	5
south	<i>Actinoptychus</i> spp	3
southwest	<i>Navicula</i> spp. <25µm	45
southwest	<i>Paralia sulcata</i>	5
southwest	<i>Cylindrotheca closterium</i> / <i>Nitzschia longissima</i>	4
southwest	<i>Thalassiosira</i> <20µm	3
southwest	<i>Paralia</i> spp.	3
west	Pennate diatom	7
west	<i>Skeletonema</i> spp.	4
west	<i>Paralia sulcata</i>	3
west	<i>Thalassiosira</i> 20-50µm	3
west	Ciliates	2



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

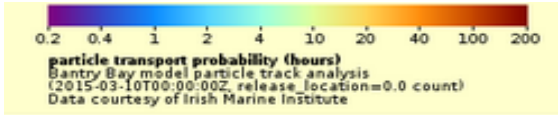
A *Karenia mikimotoi* bloom  
is NOT expected this week



SOUTHWEST: Bantry Bay

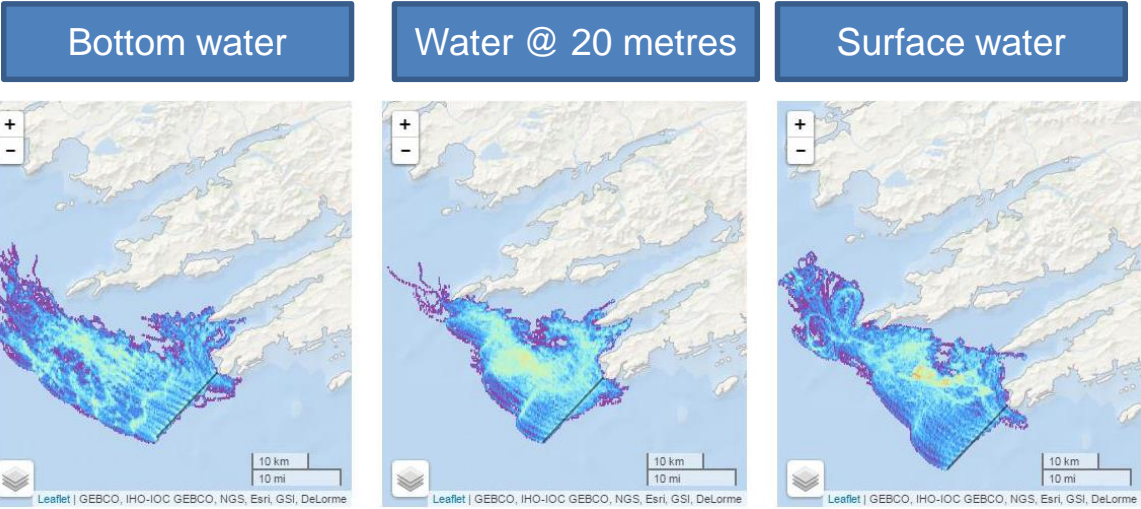
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

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

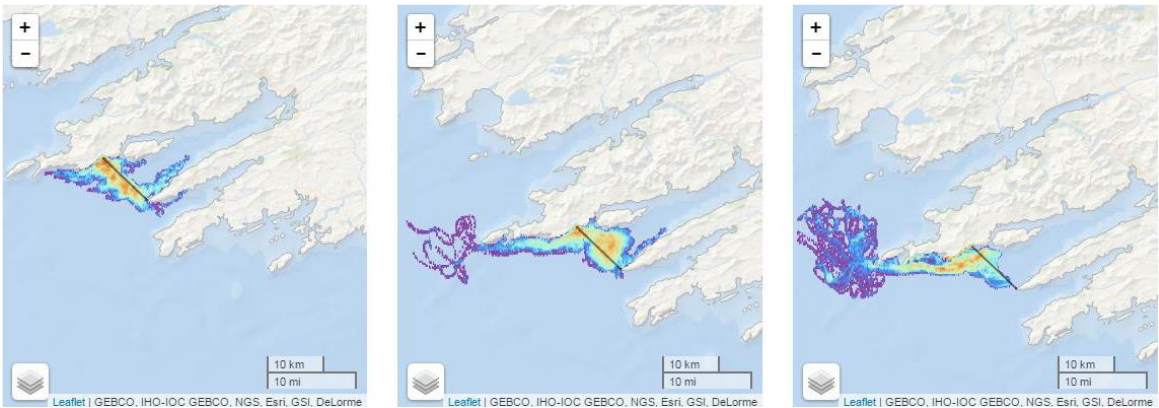


Go to <http://vis.marine.ie/particles/> to view daily forecasts

Forecast for the next 3 days



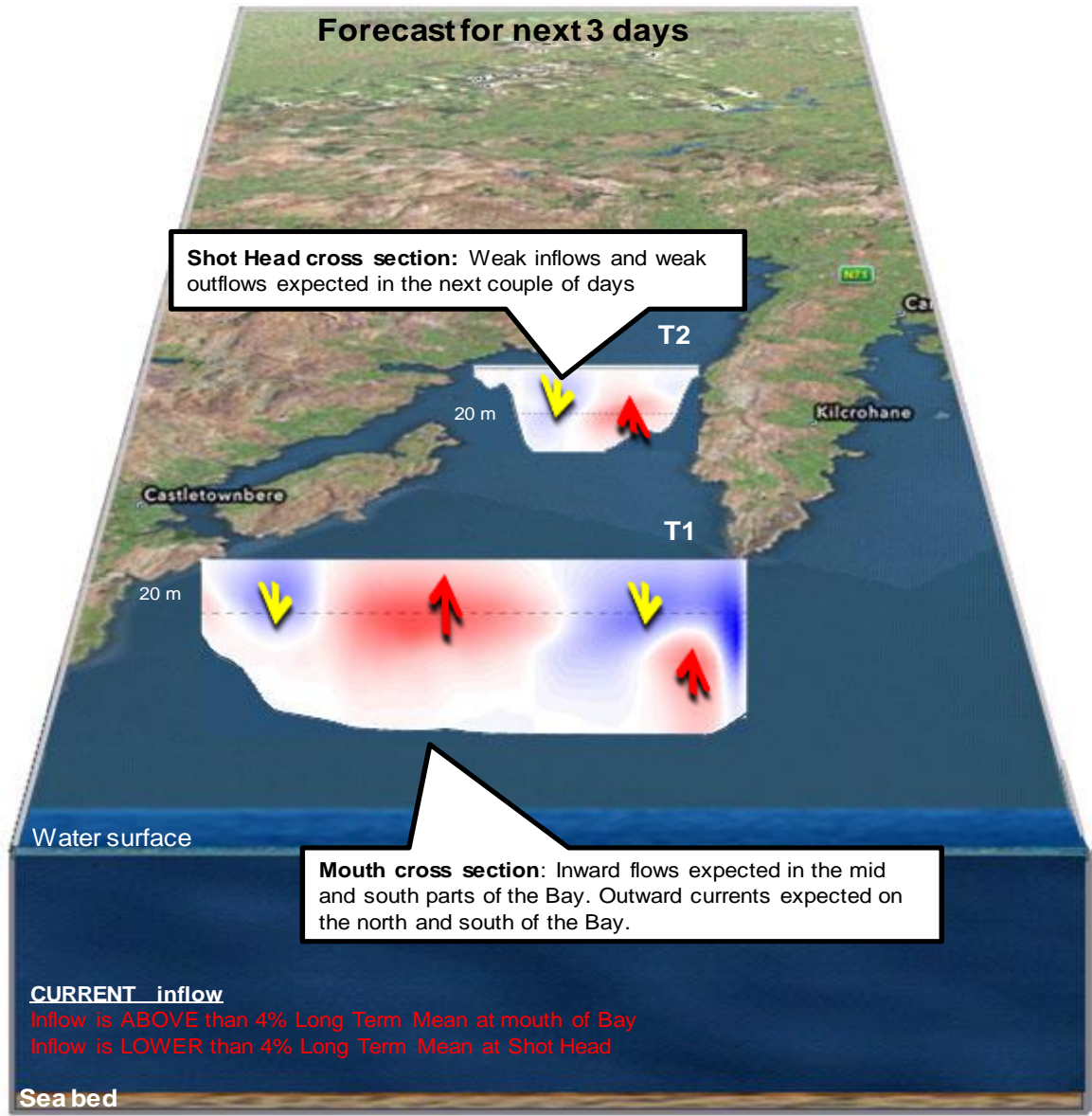
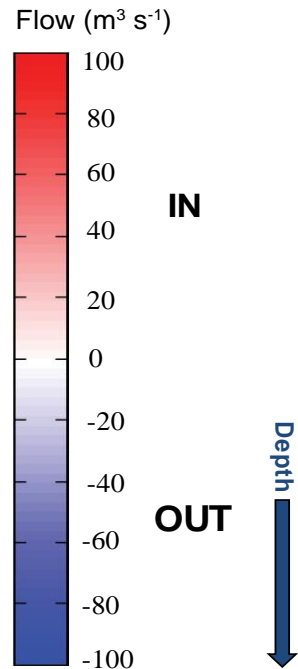
Estimated water circulation patterns at Mizen Head will flow north with some water at depth entering Bantry and Dunmanus Bay.



water at the surface and depth is likely to flow north with bottom water retained and some intrusion into Bantry and Dunmanus Bay.

# 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)

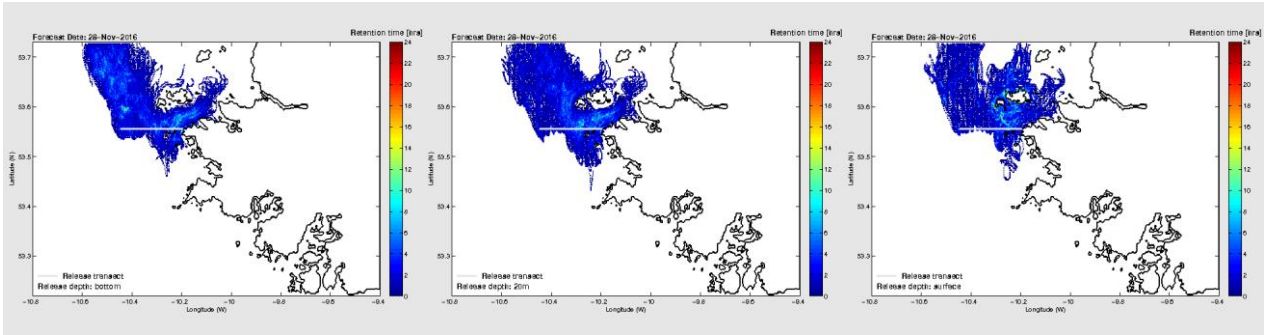
Reddish colours represent areas where phytoplankton remain longest  
Cooler colours represent areas where phytoplankton remain for shorter periods



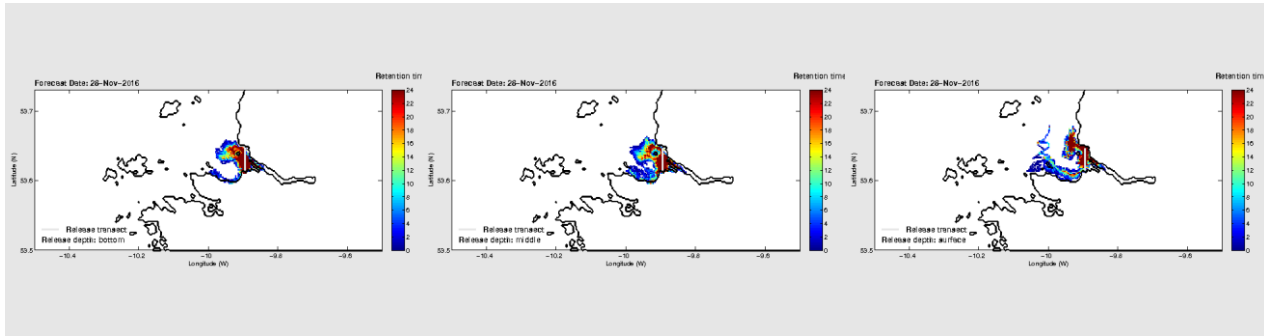
0.2 0.4 1 2 4 10 20 40 100 200  
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

- Bottom water
- Water @ 20 metres
- Surface water



Water off the west coast will flow predominantly north. Waters offshore are likely to reach the mouth of Killary Harbour.



Estimated water circulation at the mouth of Killary Harbour will mostly be retained. Some water at all depths is attempting to flow south but is getting pushed north at the surface.

# Killary Harbour

**IN**

**OUT**

## Depth

### Forecast for next 3 days

**Killary Harbour Mouth cross section:**  
Weak inflows and weak outflows of water expected in the coming days.

T1

23 m

## Water surface

## CURRENT inflow

Inflow is LOWER than 24% Long Term Mean at mouth of Bay

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

Forecast for next 3 days

