# Ireland: **Current Conditions**

## Shellfish biotoxin report (last week)

### DSP — Week 50

All areas: 43 sites

| north | west | east | southwest | south |
|---|---|---|---|---|
| 5 | 15 | 6 | 16 | 1 |

Not toxic (100%)
Toxic (0%)

### AZP — Week 50

All areas: 43 sites

| north | west | east | southwest | south |
|---|---|---|---|---|
| 5 | 15 | 6 | 16 | 1 |

Not toxic (100%)
Toxic (0%)

### ASP — Week 50

All areas: 40 sites

| north | west | east | southwest | south |
|---|---|---|---|---|
| 5 | 13 | 6 | 15 | 1 |

Not toxic (100%)
Toxic (0%)

### PSP — Week 50

All areas: 6 sites

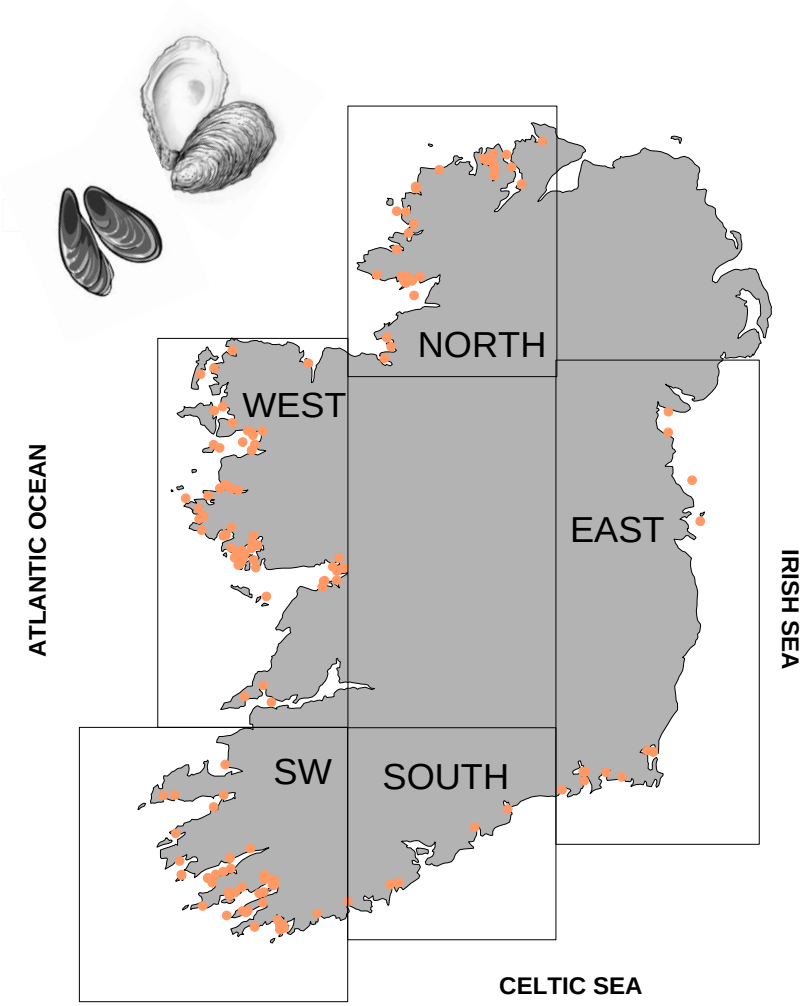
| north | west | east | southwest | south |
|---|---|---|---|---|
| 1 | 2 | 1 | 1 | 1 |

Not toxic (100%)
Toxic (0%)

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

**Toxin groups**
ASP = **A**mnesic **S**hellfish **P**oisoning; AZP = **AZ**aspiracid **P**oisoning;
DSP = **D**iarrhetic **S**hellfish **P**oisoning; PSP = **P**aralytic **S**hellfish **P**oisoning

## National Monitoring Programme
## **Designated Sampling Sites**




● = aquaculture site

# Ireland: **Predictions**

ASP event: Low
AZP event: Low-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* groups are negligible currently around the coast. ASP biotoxins were not detected at any site countrywide.

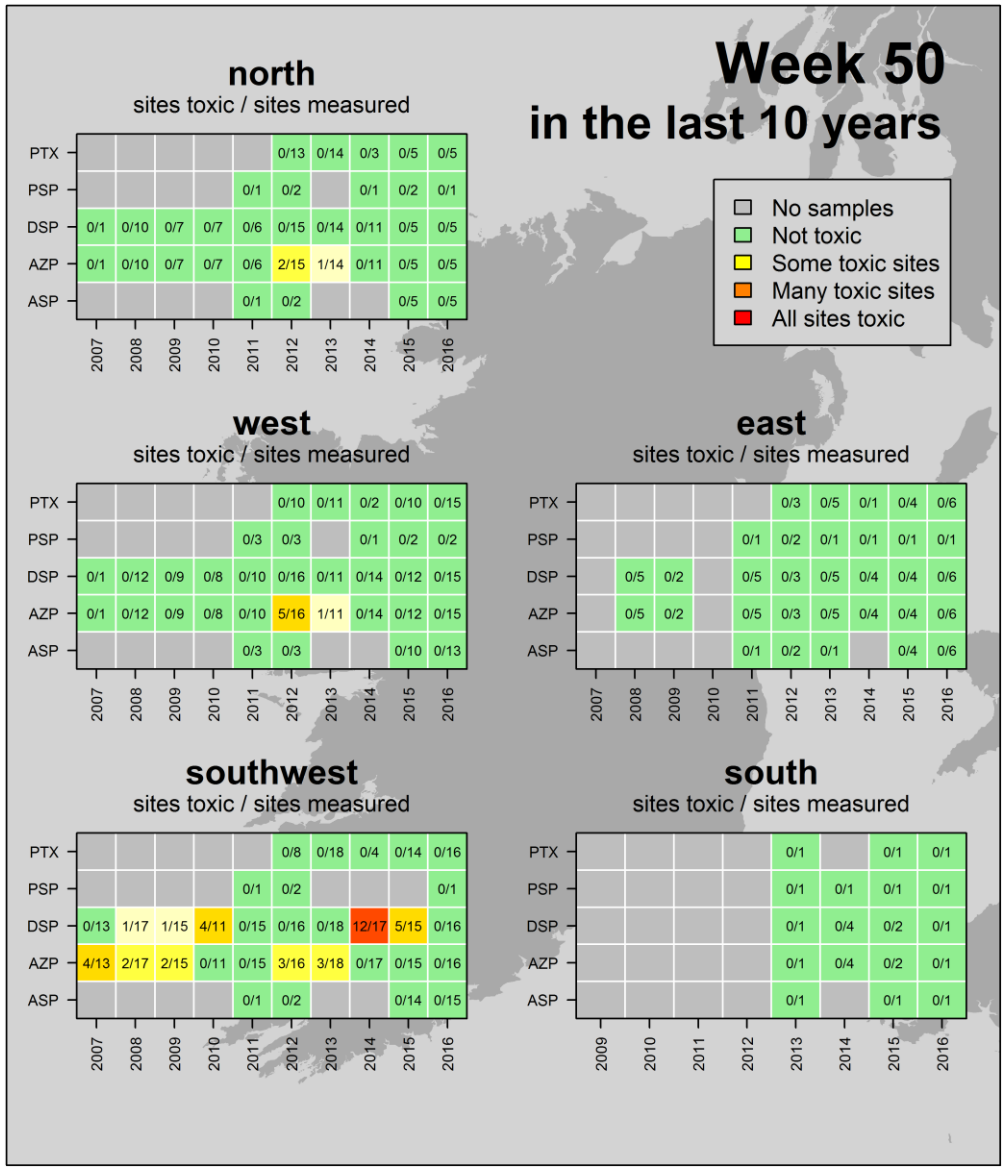
AZP: This is still considered potentially a moderate to high risk period for AZP. Levels of *Azadinium* spp. continue to fluctuate around the coast with a slight increase in the last week. Biotoxin levels are currently below regulatory limits.

DSP: This is historically near the end of the potential risk period . A new intoxication event would not be expected under normal environmental conditions.

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

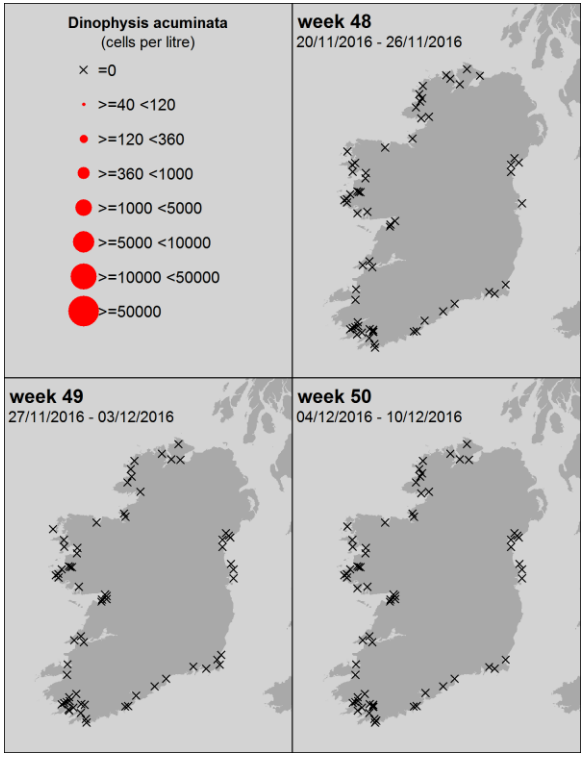
ASP events: mid-March to early May
AZP events: April to December
DSP events: May to December
PSP events: June to mid-July and end September; only in Cork Harbour

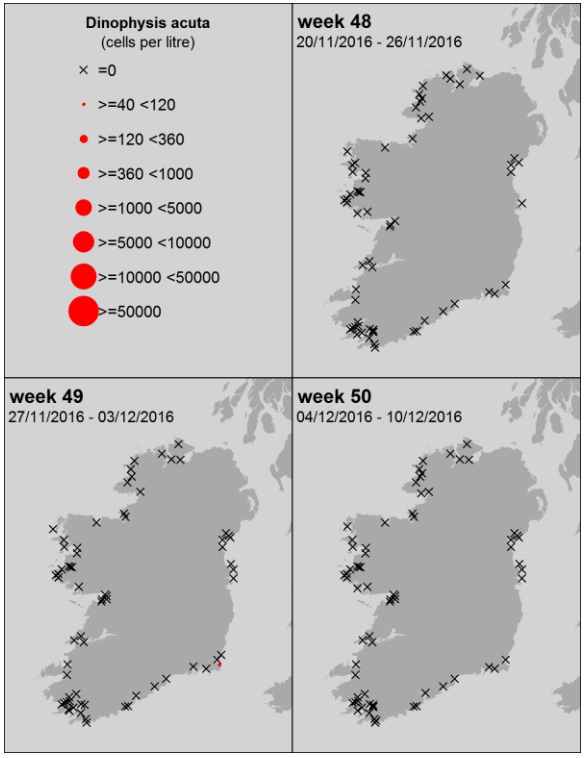
# Ireland: **Last 3 weeks of available National Monitoring Programme data**

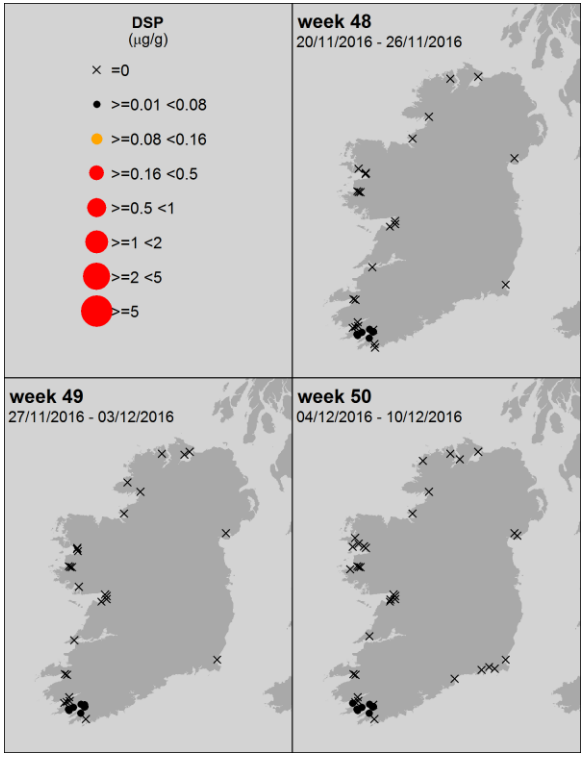
*Dinophysis acuminata*

*Dinophysis acuta*

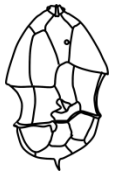
DSP



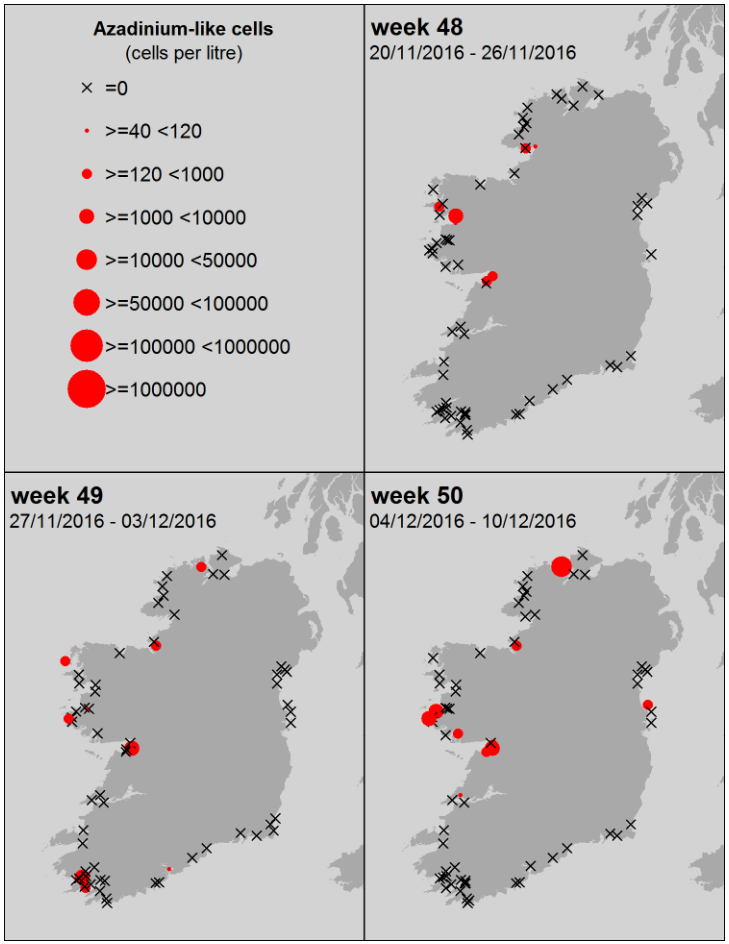



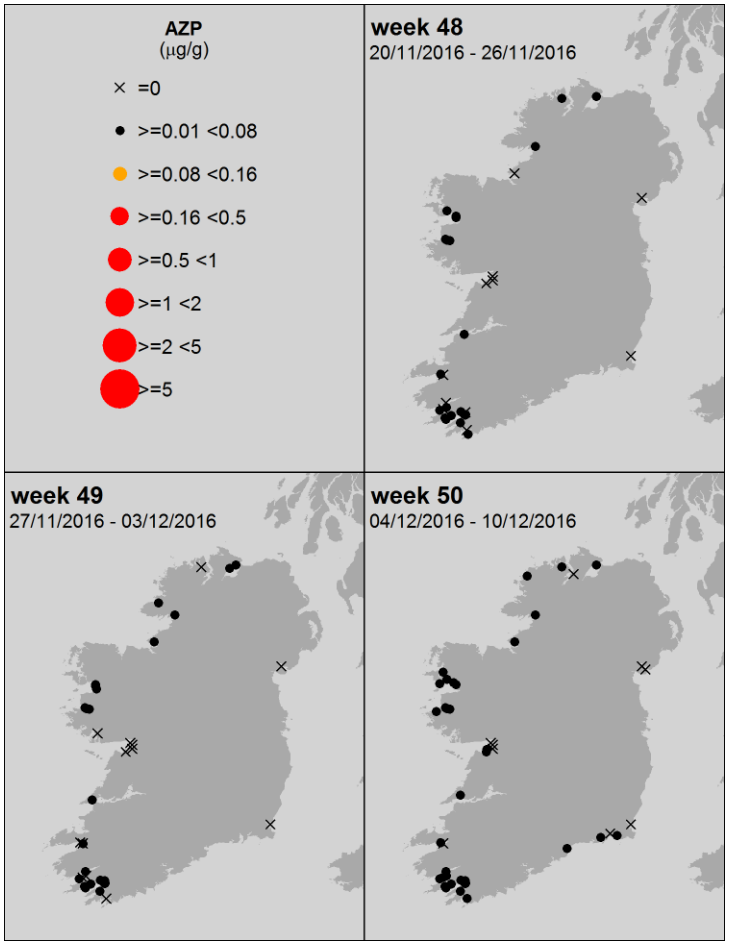
# Ireland: **Last 3 weeks of available National Monitoring Programme data**



*Azadinium* – like spp.

AZP



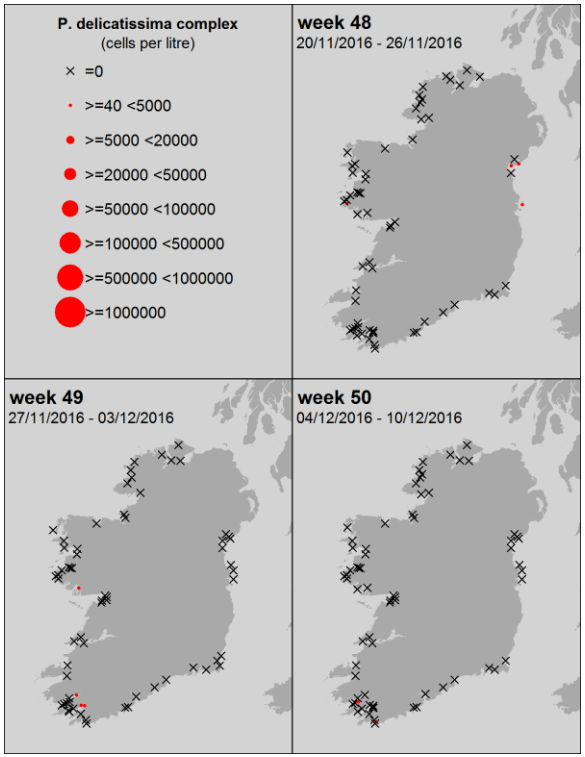
# Ireland: **Last 3 weeks of available National Monitoring Programme data**

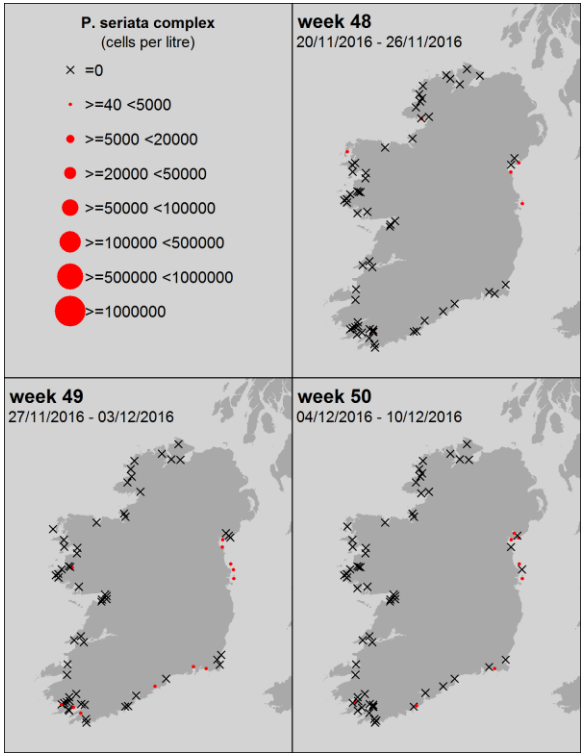
## *Pseudo-nitzschia* spp.

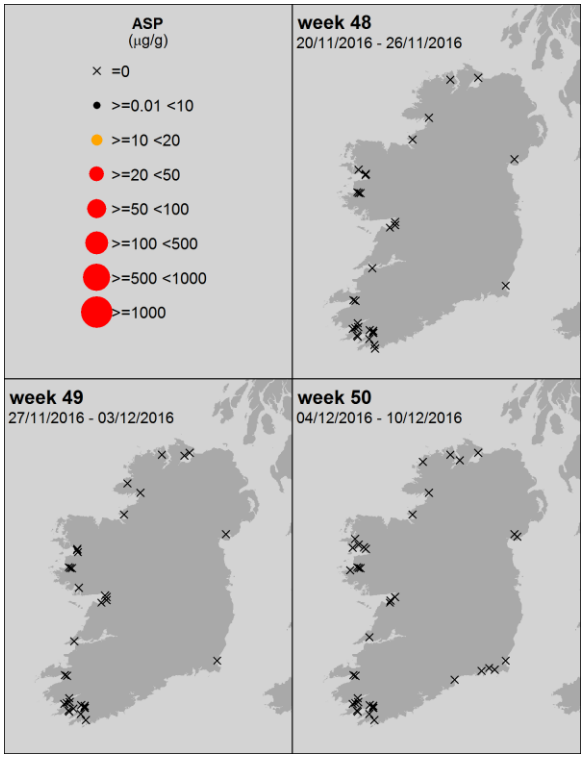
## ASP

"*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

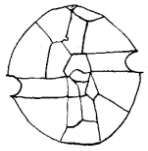


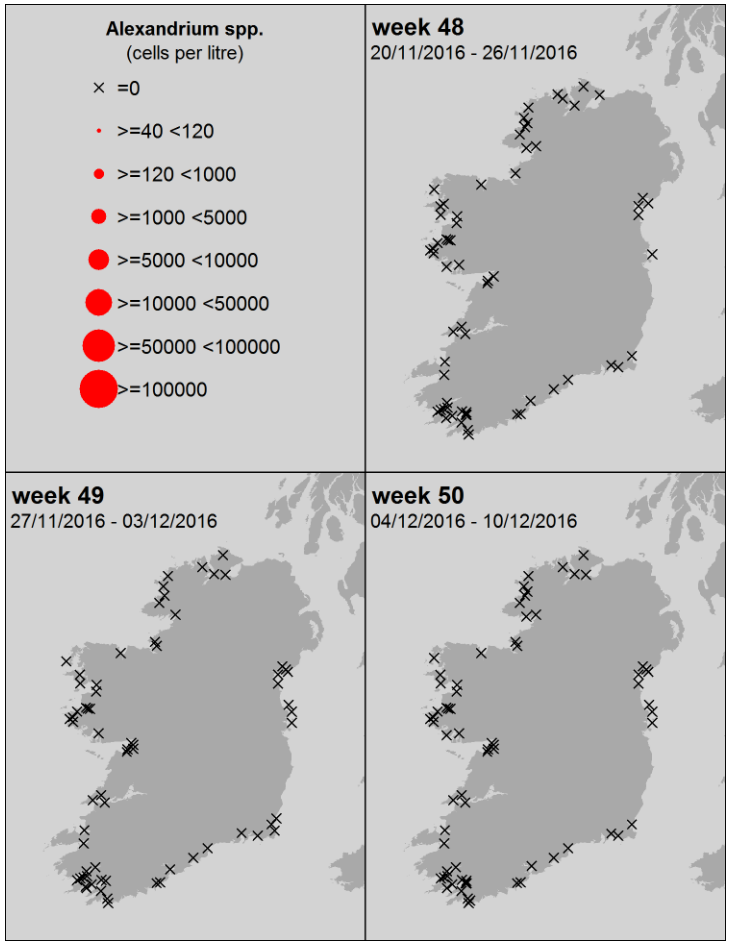

**Taken from the literature:** Of the 4 species (*P. fraudulenta*, *P. australis*, *P. pungens* and *P. delicatissima*) from Irish waters, tested for ASP toxins in culture work, only one, *P. australis* (from the "*P. seriata*" group) was toxic.

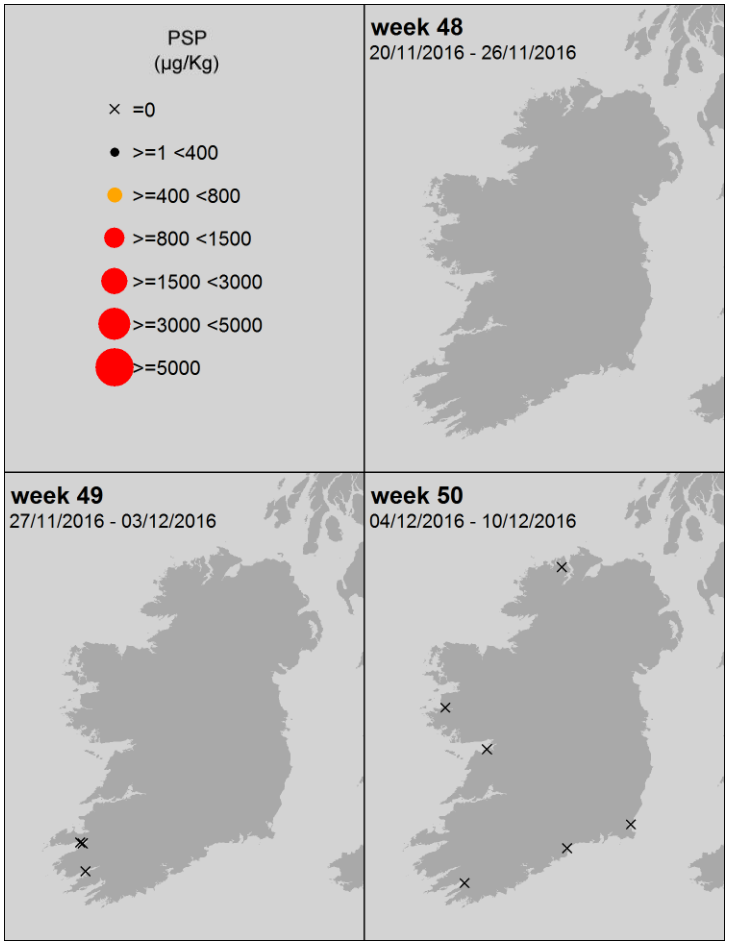
# Ireland: **Last 3 weeks of available National Monitoring Programme data**



## *Alexandrium* spp.

## PSP

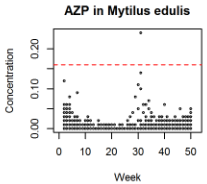
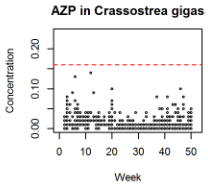
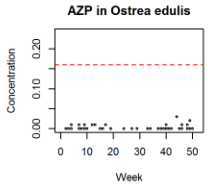
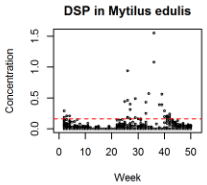
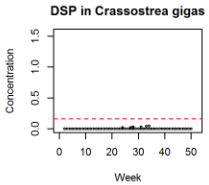
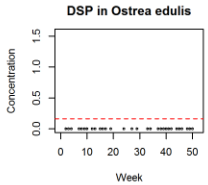
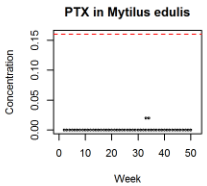
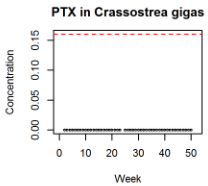
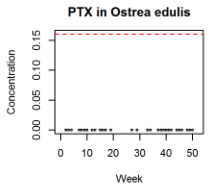
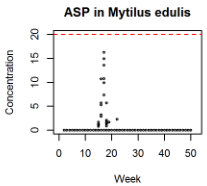
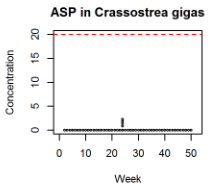
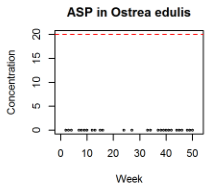
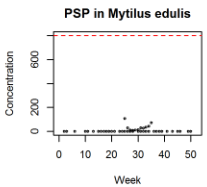
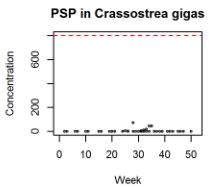
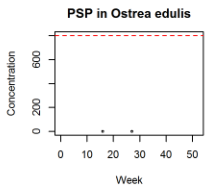


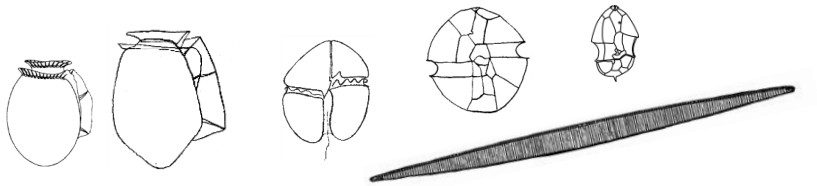
# Ireland HAB & Biotoxin temporal trends

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

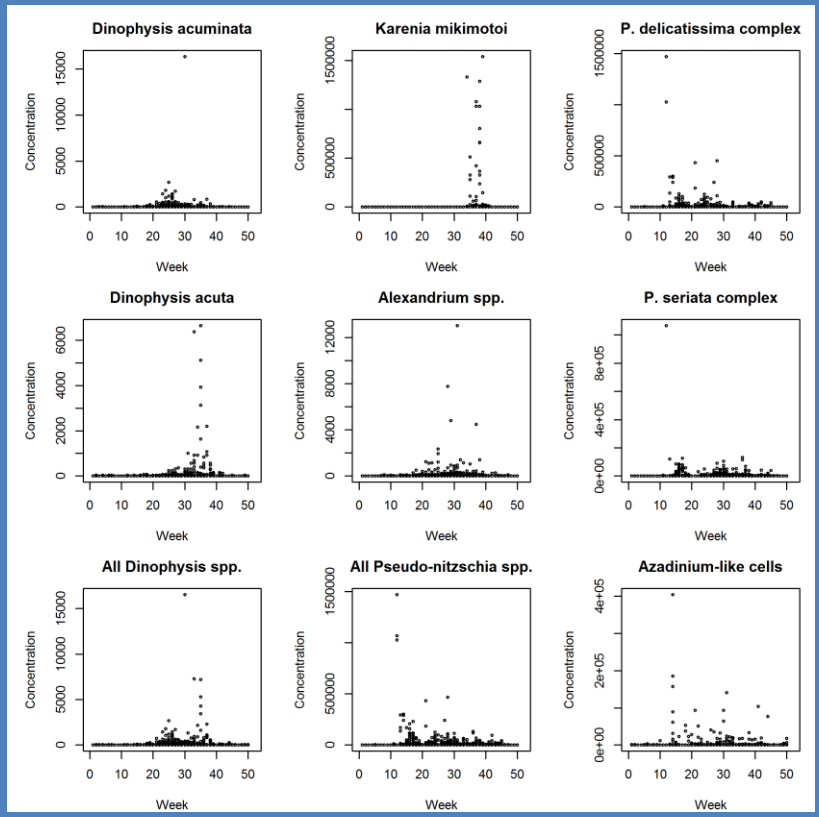
## Ireland: **Biotoxins**

| Toxin groups | mussels | oysters | oysters |
|---|---|---|---|
| **AZP** AZaspiracid Poisoning |  |  |  |
| **DSP** Diarrhetic Shellfish Poisoning |  |  |  |
| **PTX** Pectenotoxin |  |  |  |
| **ASP** Amnesic Shellfish Poisoning |  |  |  |
| **PSP** Paralytic Shellfish Poisoning |  |  |  |





## Ireland: **HABs**



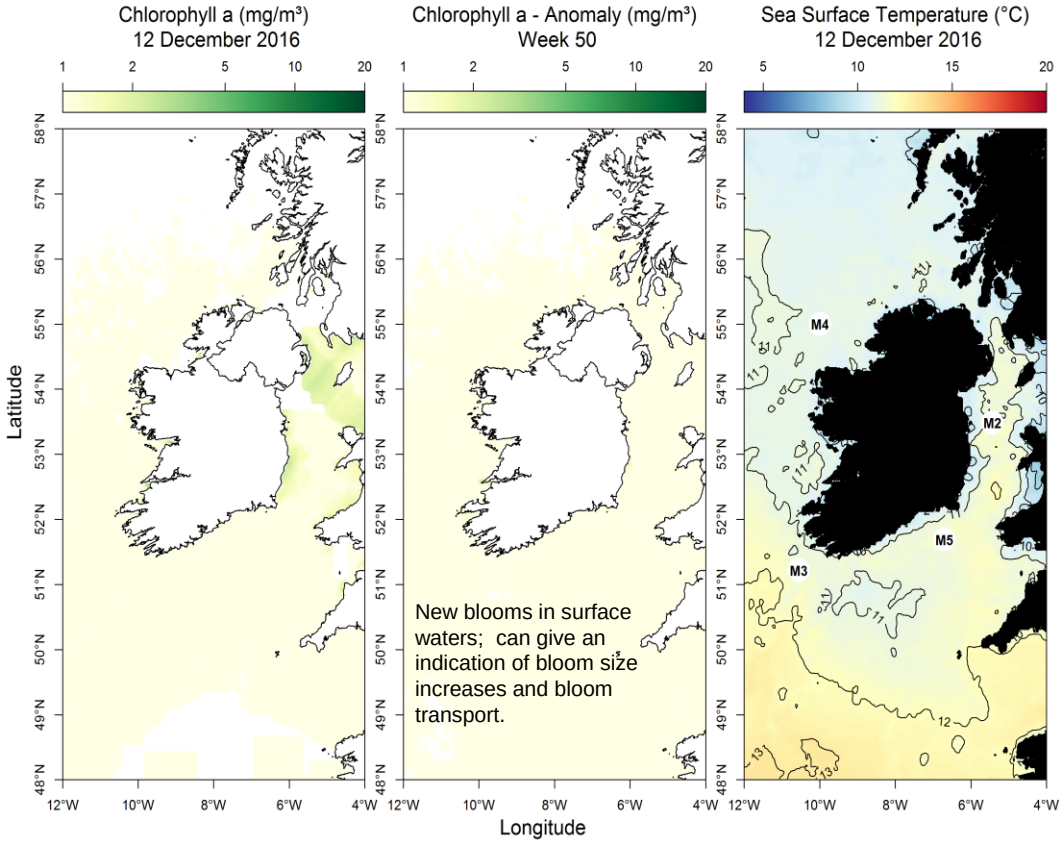


**EU Regulatory Limit**: ASP 20 µg/g; AZP 0.16 µg/g; DSP 0.16 µg/g; PSP 800 µg/kg

**Regulatory limit =**

# Ireland Satellite data: surface chlorophyll and temperature maps

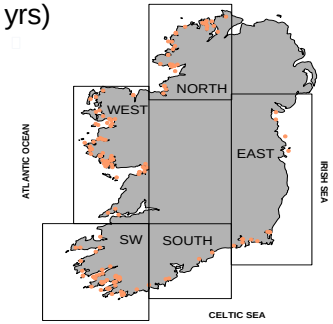
## Most up to date available satellite data




**SST (ºC) anomaly for last week:**

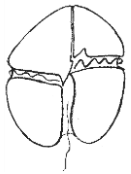
Data taken from the Irish data buoy network where the anomaly is the weekly difference in SST compared to the long term mean (~ 10 yrs)

| | |
|---|---|
| **NW coast (M4)** | Data unavailable |
| **SW coast (M3)** | above average by 0.25 ºC |
| **SE coast (M5)** | above average by 0.78 ºC |



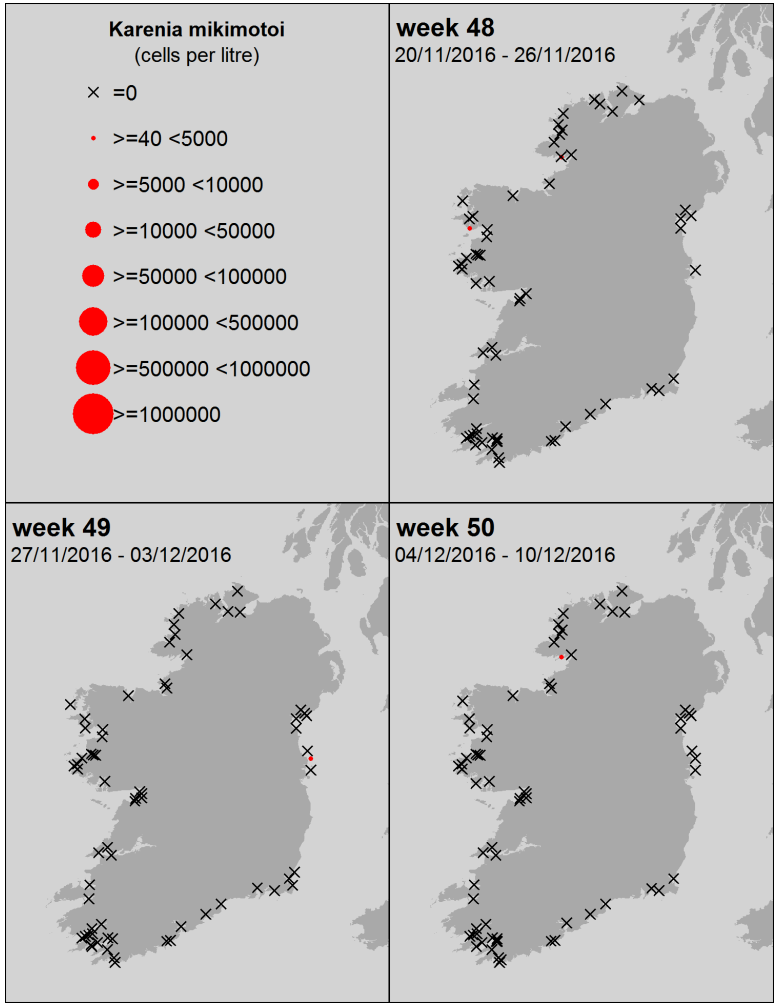

**What phytoplankton were blooming at inshore coastal sites last week?**

| Rank | Region | Species | Rounded Count |
|---|---|---|---|
| 1 | east | Centric Diatom | 24000 |
| 2 | east | Pennate diatom | 22000 |
| 3 | east | Cylindrotheca closterium/ Nitzschia longissima | 11000 |
| 4 | east | Chaetoceros (Hyalochaete) spp. | 9000 |
| 5 | east | Leptocylindrus danicus | 6000 |
| 1 | north | Pennate diatom | 69000 |
| 2 | north | Azadinium/heterocapsa spp. | 18000 |
| 3 | north | Ceratium macroceros | 14000 |
| 4 | north | Cylindrotheca closterium/ Nitzschia longissima | 8000 |
| 5 | north | Cilliates | 6000 |
| 1 | south | Odontella spp. | 127000 |
| 2 | south | Skeletonema costatum | 112000 |
| 3 | south | Haptophytes | 77000 |
| 4 | south | Skeletonema spp. | 61000 |
| 5 | south | Navicula spp. <25um | 54000 |
| 1 | southwest | Pennate diatom 20-50um | 257000 |
| 2 | southwest | Prorocentrum micans | 31000 |
| 3 | southwest | Haptophytes | 13000 |
| 4 | southwest | Cylindrotheca closterium/ Nitzschia longissima | 13000 |
| 5 | southwest | Paralia sulcata | 13000 |
| 1 | west | Pennate diatom <20um | 116000 |
| 2 | west | Cylindrotheca closterium/ Nitzschia longissima | 11000 |
| 3 | west | Azadinium/heterocapsa spp. | 7000 |
| 4 | west | Paralia sulcata | 5000 |
| 5 | west | Pennate diatom | 5000 |



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

A *Karenia mikimotoi* bloom is NOT expected this week

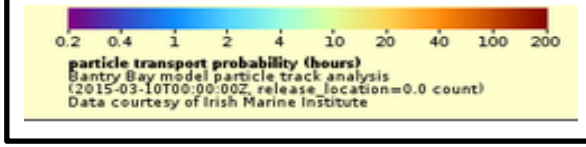


# SOUTHWEST: Bantry Bay

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

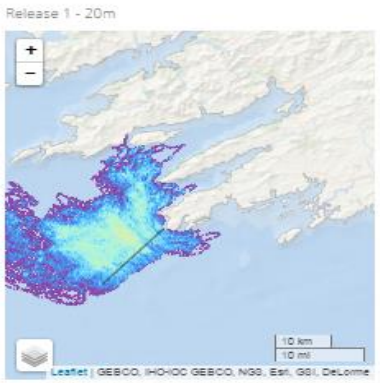
Cooler colours represent areas where phytoplankton remain for shorter periods

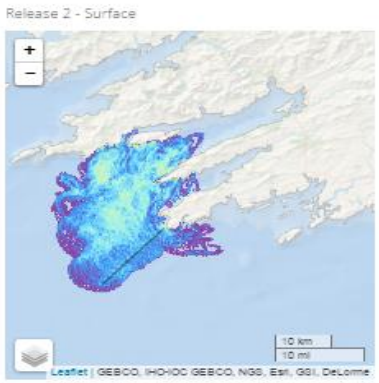



Go to http://vis.marine.ie/particles/ to view daily forecasts

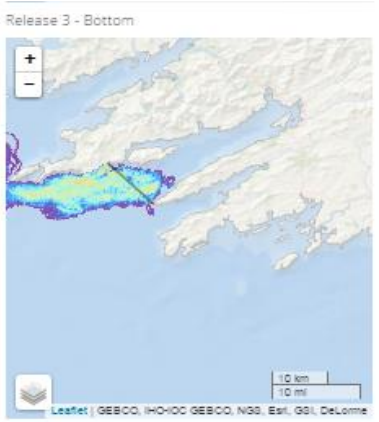
## Forecast for the next 3 days

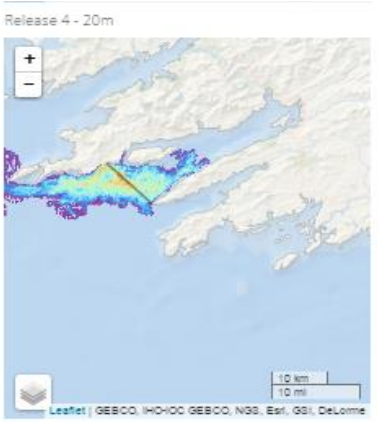
| Bottom water | Water @ 20 metres | Surface water |
|---|---|---|

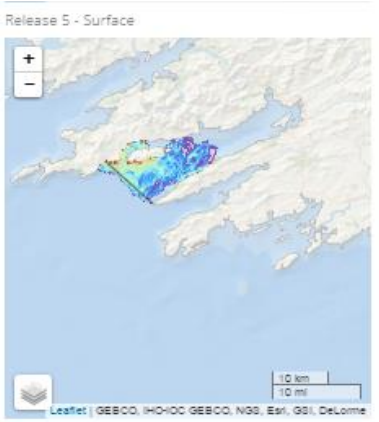




Water movements predicted in a mixed north /north easterly direction allowing for inner bay incursions of mixed waters from outer bay areas at all depths.



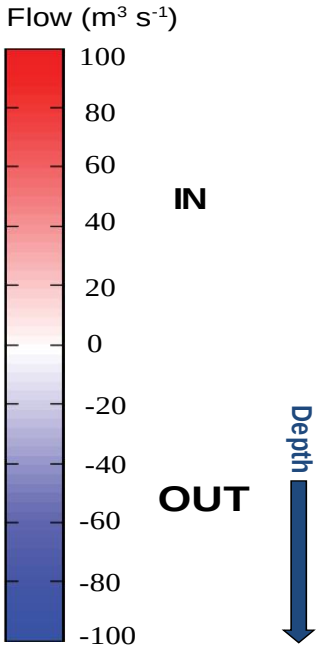



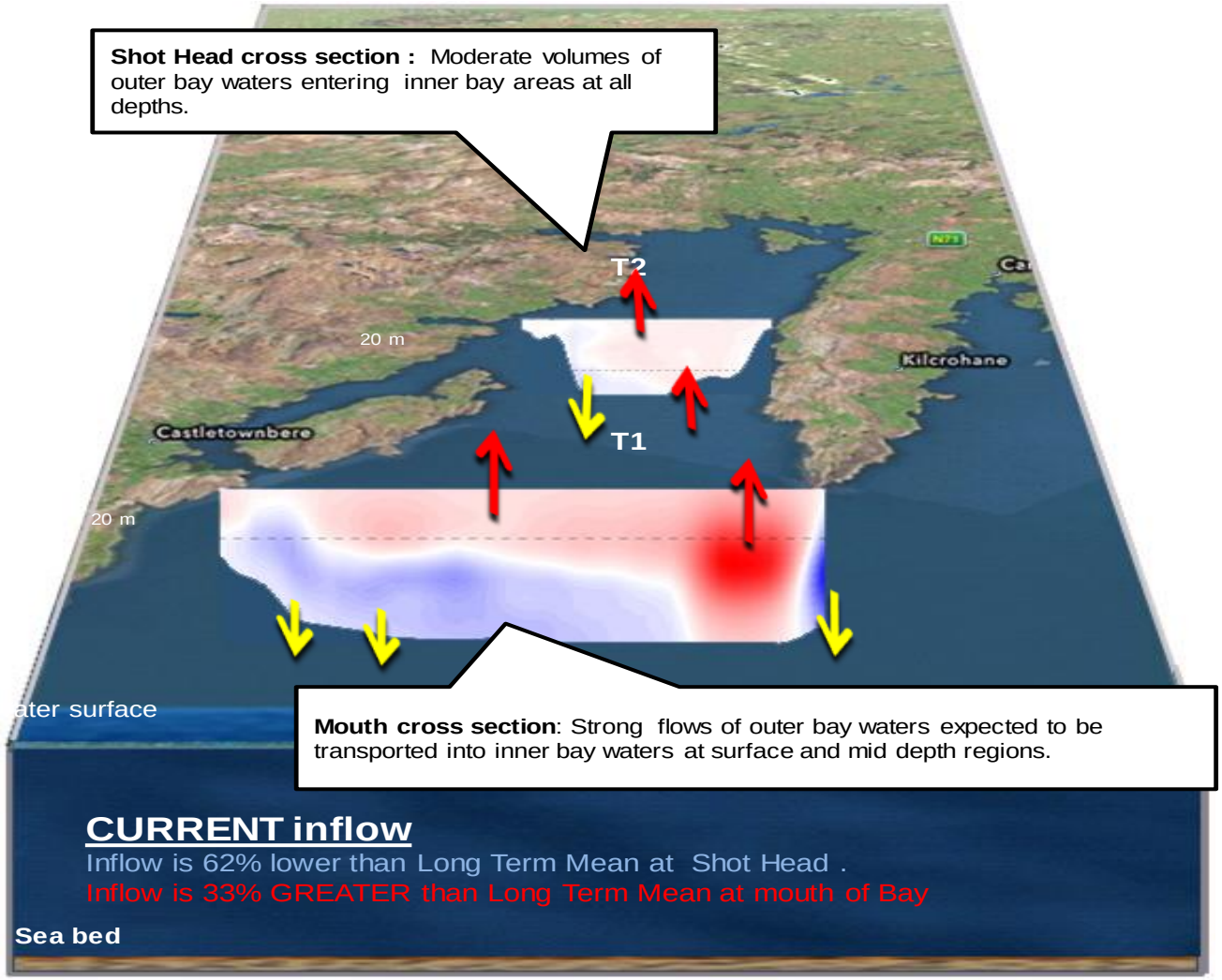

North /north easterly directional movement of outer bay waters into inner bay areas expected ,with increasing flows and retention times as depth decreases.

# Bantry Bay

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

**Forecast for next 3 days**

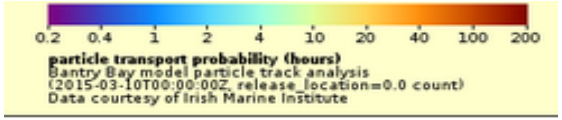
# WEST: Killary Harbour

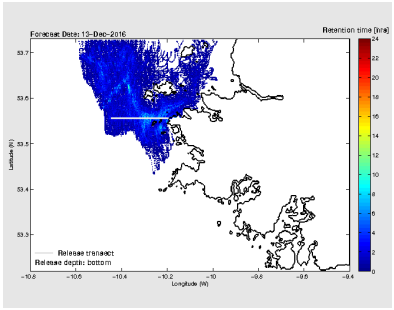
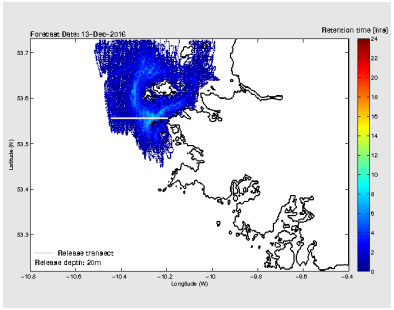
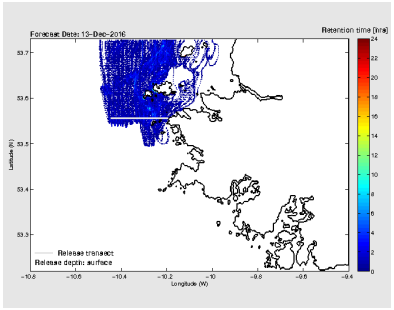
Forecast for the next 3 days

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)

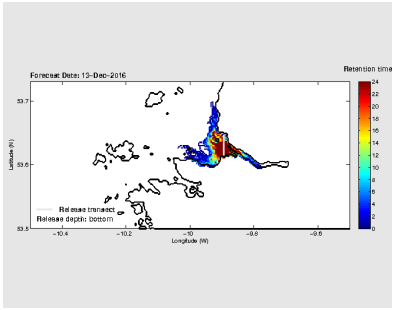
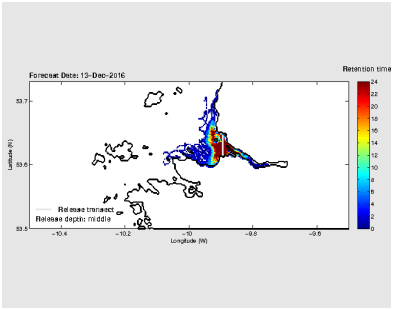
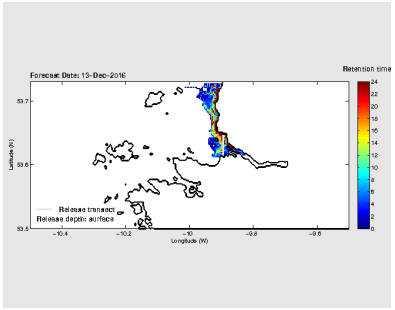
Reddish colours represent areas where phytoplankton remain longest

Cooler colours represent areas where phytoplankton remain for shorter periods




| Bottom water | Water @ 20 metres | Surface water |
|---|---|---|
|  |  |  |

Water flows off shore expected to move predominantly in north /north-easterly direction allowing for potential incursions into inner bay areas.

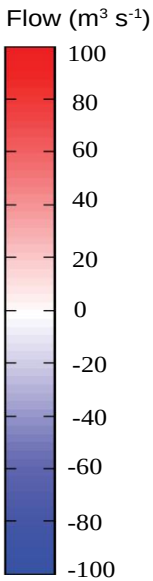
| | | |
|---|---|---|
|  |  |  |

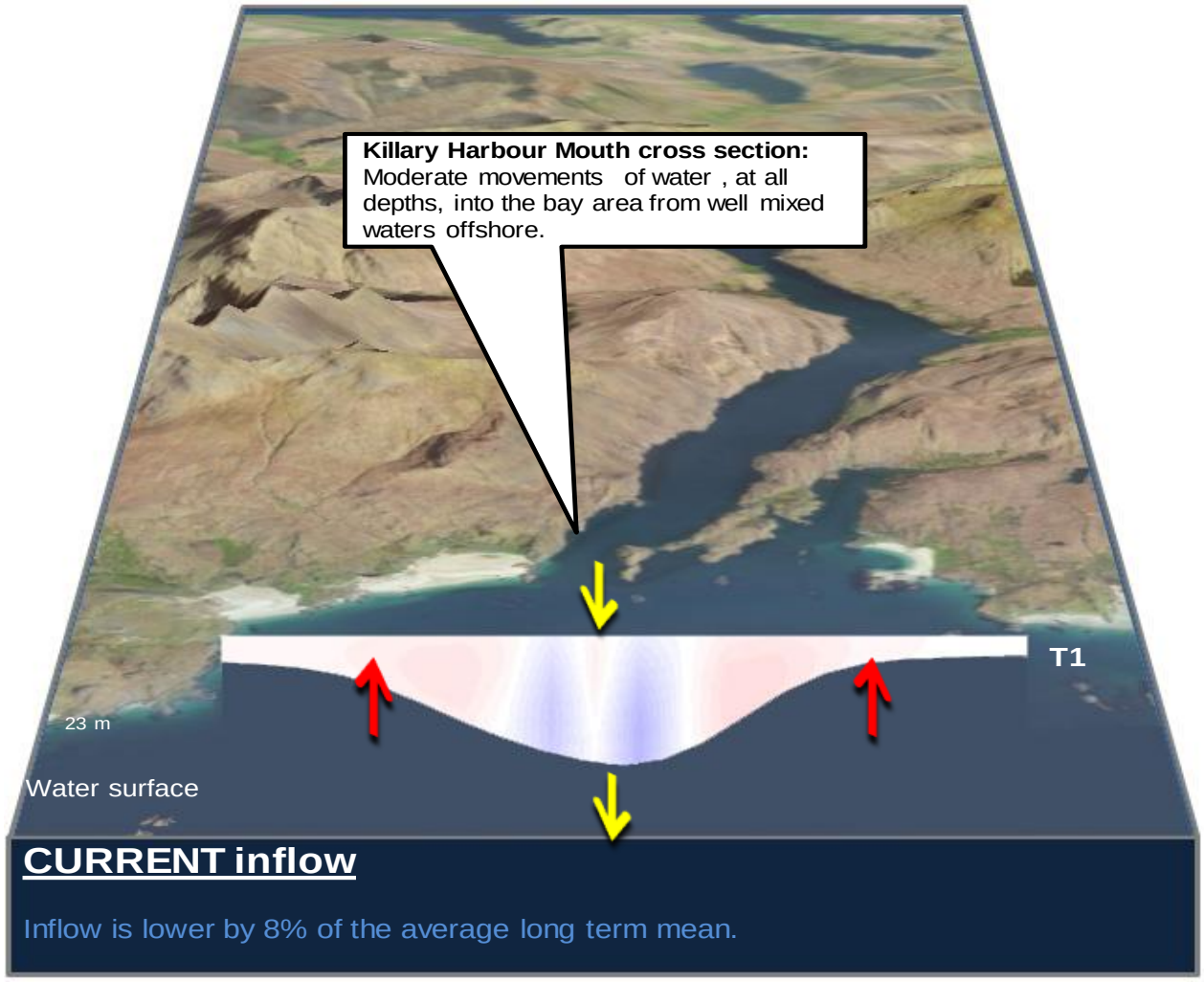
Potential of bottom off shore water movements reaching mid bay regions with similar but decreasing magnitudes of movements of waters inshore as depth decreases to surface levels.

# Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour

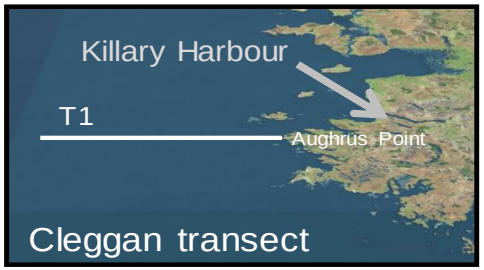

**Forecast for next 3 days**

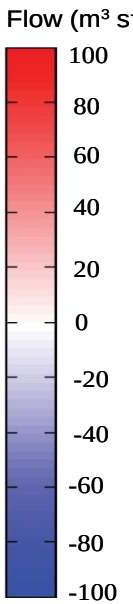


# West Coast - 3 day estimated water flows along a transect off Aughrus Point

**Forecast for next 3 days**




**northward flow**

**southward flow**