

Ireland: Predictions

ASP event: Low
AZP event: **High and potentially increasing.**
DSP event: Low
PSP event: Low (site specific)

NMP Current closures			
ASP	AZP	DSP	PSP
0	0	0	0

ASP: No change from last week , steady seasonal trend with no immediate issues indicated – Very slow seasonal increase in cell levels continues with marginally fluctuating weekly levels. No significant toxic species/toxin currently present .

AZP: Continued **Highest caution level** is still advised with this difficult species. Current seasonal impact may rise during onshore water transport conditions in any area. This is the main historical occurrence period, suitable environmental conditions continue to prevail and the toxin is currently present and possibly increasing . Issues with this toxin can occur suddenly and acutely .

DSP: Similar to last week - *Low, except in SW, caution level in sites currently affected*- Steady pattern similar to last week - Low toxicity issues in general, but there is still the possibility of short term peaks at this seasonal transitional period. Cell levels continuing to decrease would be the expected trend with toxicity issue sites being dependant on sufficient levels of non toxic phytoplankton.

PSP: Stable seasonal pattern of very low cell levels and low likelihood of issues establishing .Current environmental conditions and patterns are not indicated to be favourable for bloom issues .

Blooms: **No current significant issues recorded with any of the historically occurring problematic species.** 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

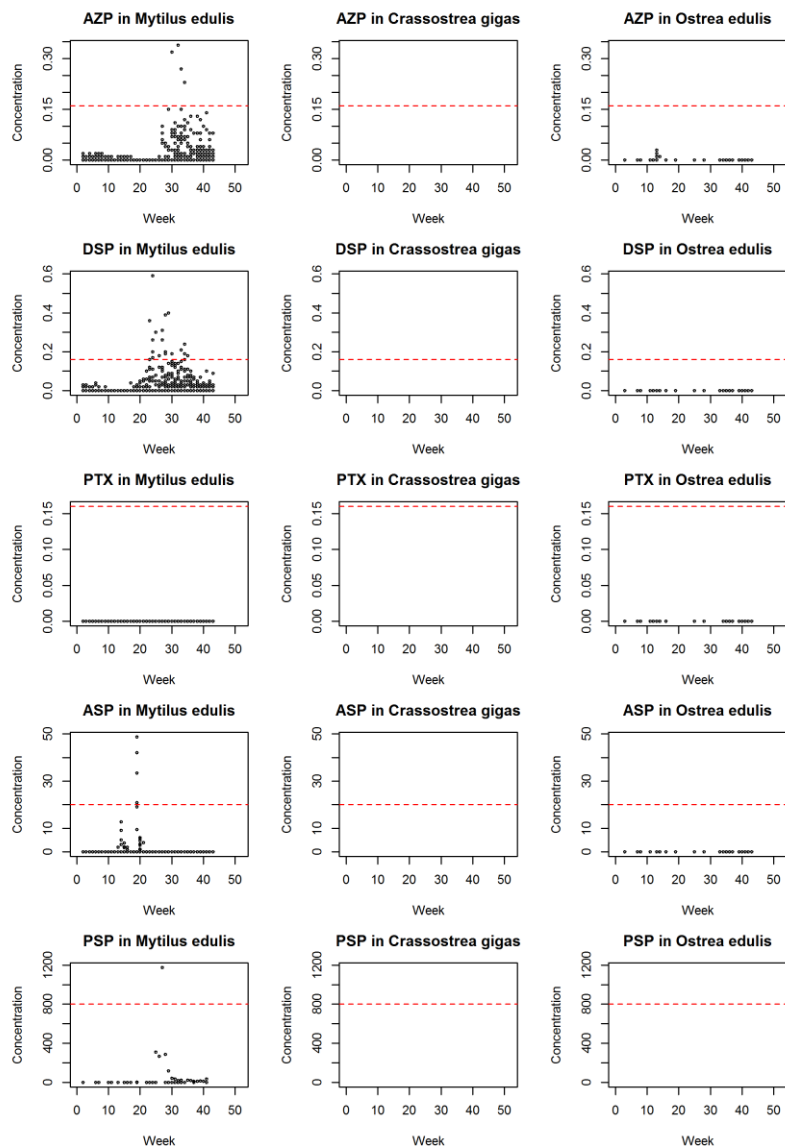
AZP

DSP

PTX

ASP

PSP



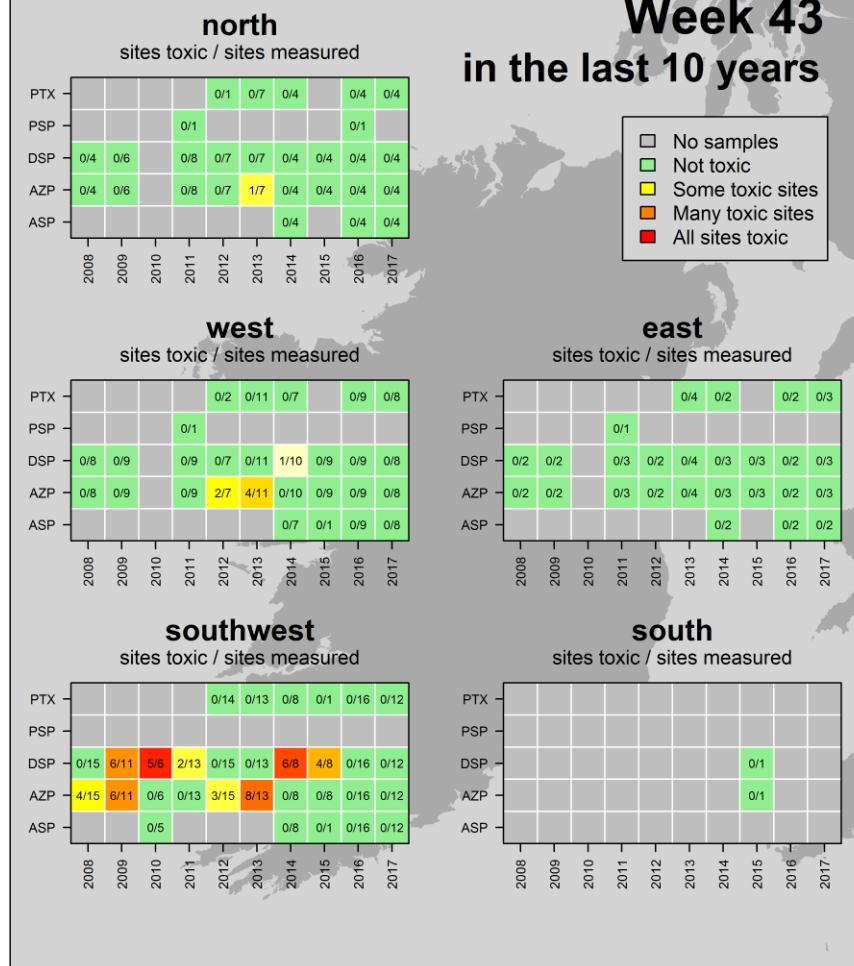
Levels from week 1 to present week. Regulatory limit - - - - -



HISTORIC TRENDS



Week 43
in the last 10 years



ASP events: mid-March to early May

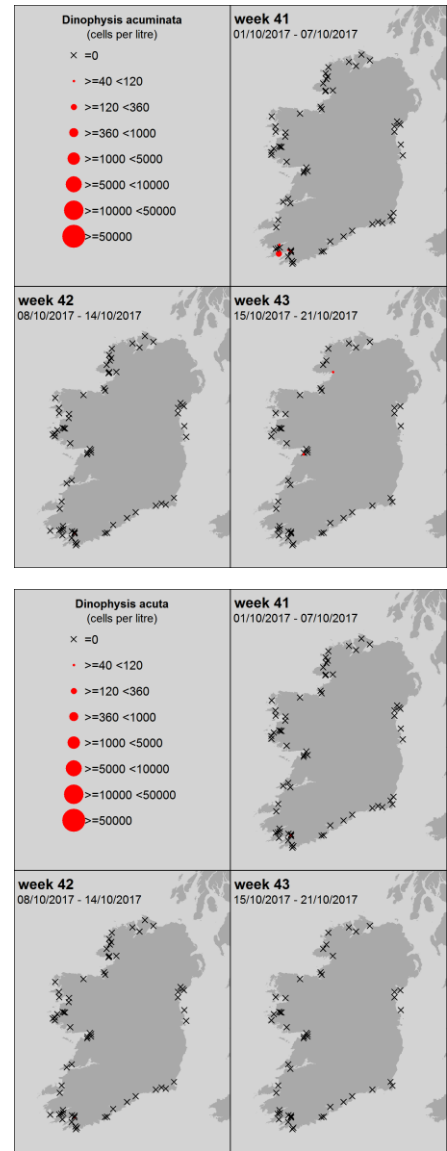
AZP events: April to December

DSP events: May to December

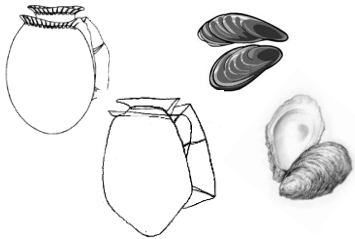
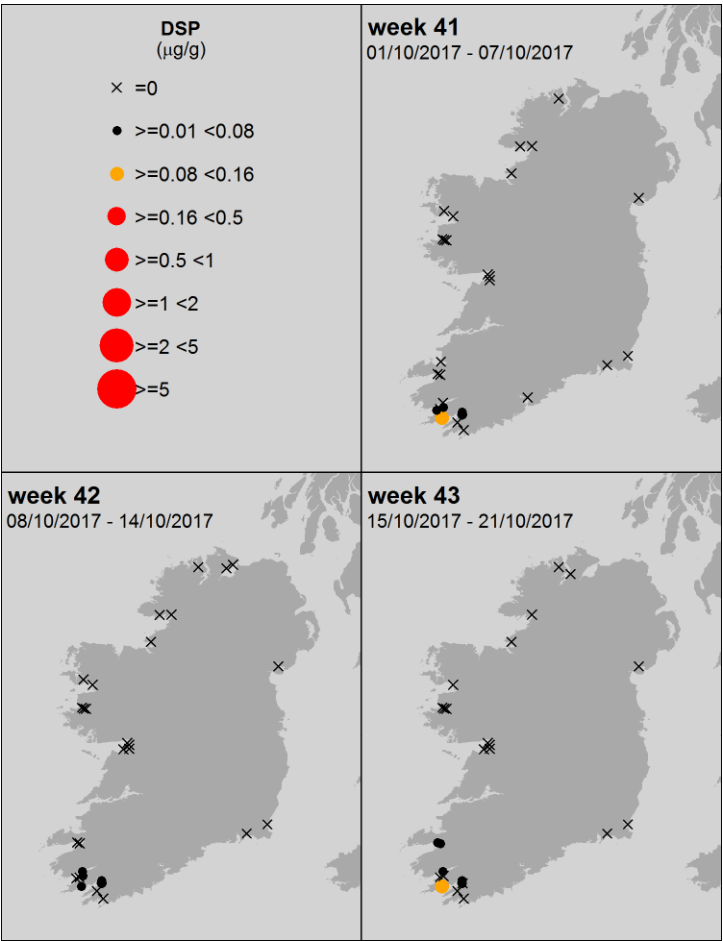
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks.

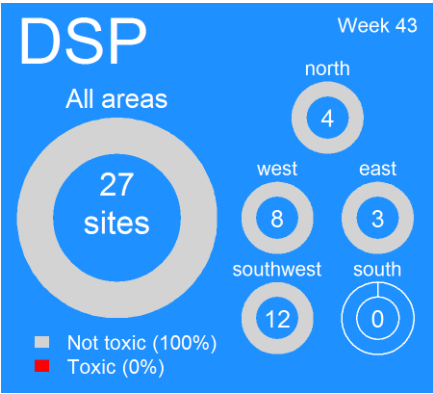


All levels of DSP biotoxin recorded- 3 wks.



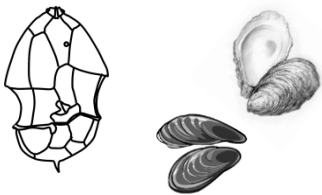
Current closures levels

≥ DSP 0.16 µg/g



Comment – Levels continuing to decrease, in general, in affected areas. This trend would be expected to continue at this time of year. Slow rates of depuration and slight fluctuations in toxin levels, may be the main issue with this species at this time of year due to naturally decreasing levels of non toxic species of phytoplankton availability.

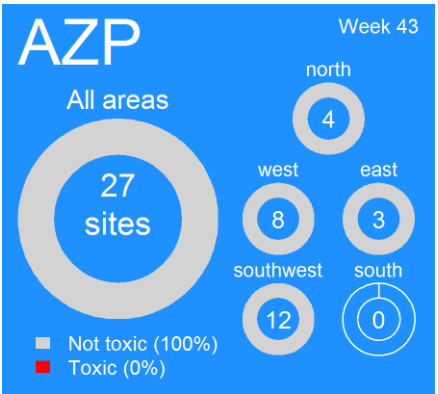
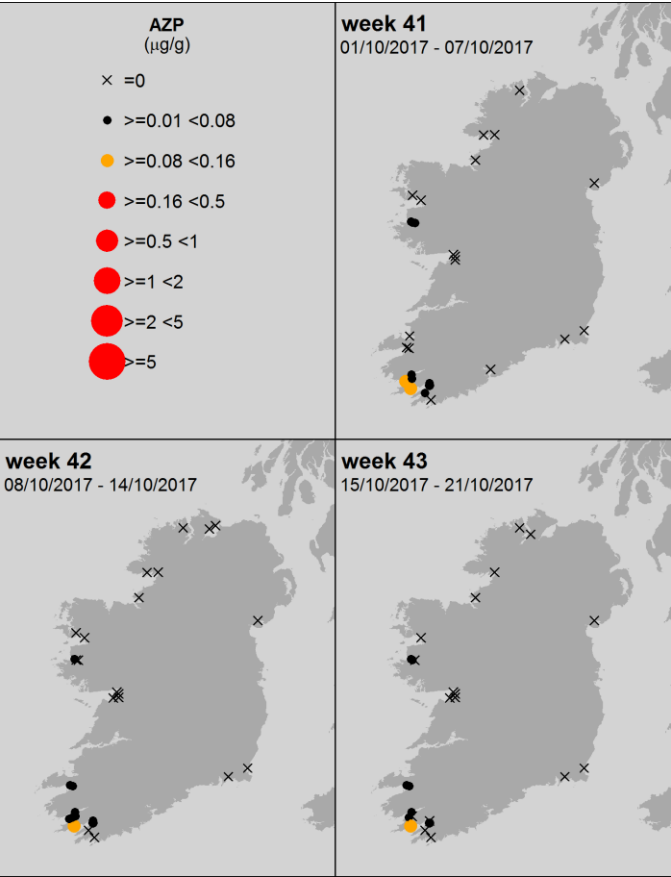
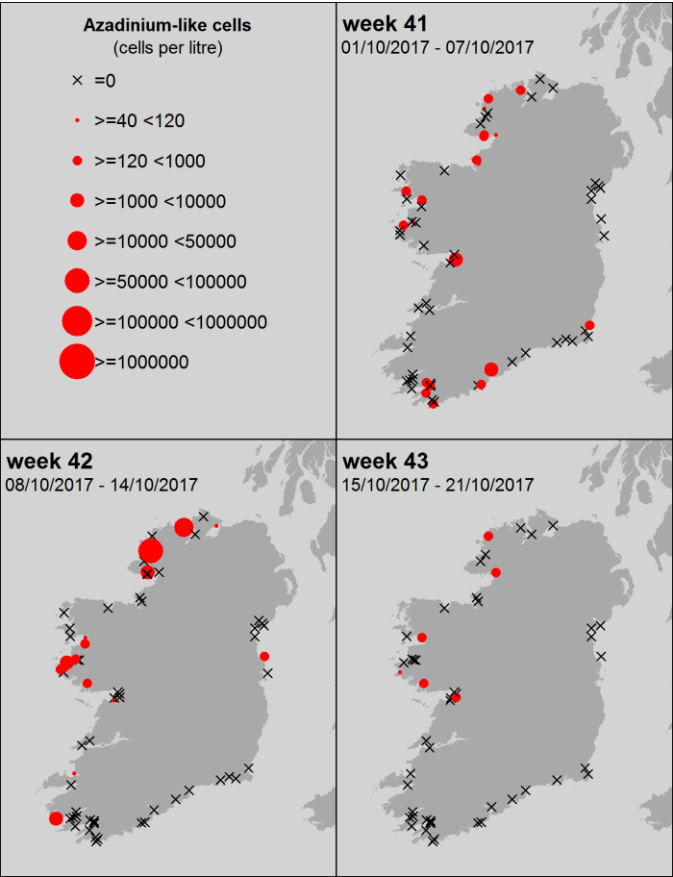
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.

Current closures levels
≥ AZP 0.16 µg/g

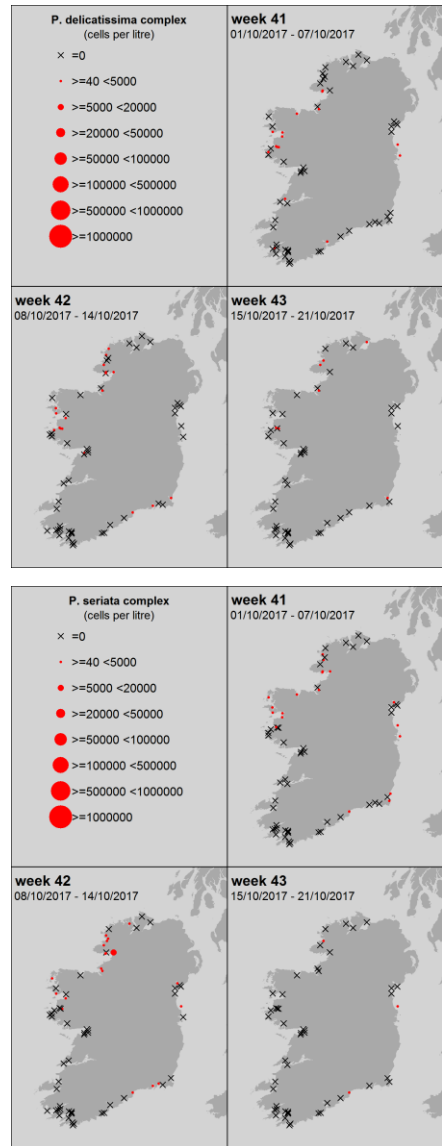


Comments

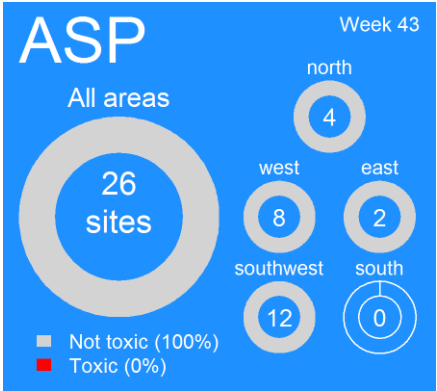
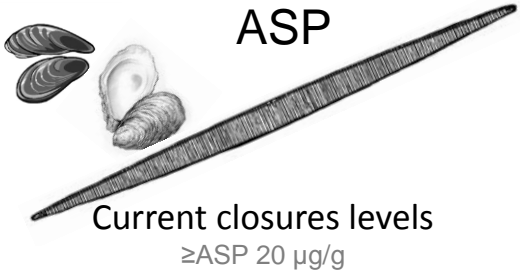
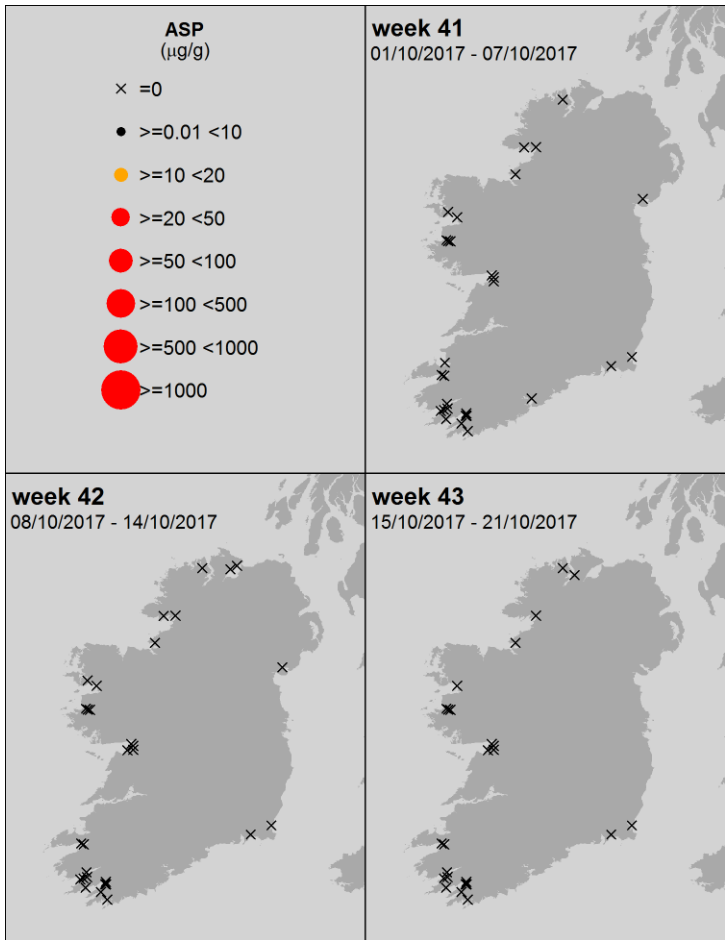
Current slight increase in number of sites with some level of toxin present. Highest caution will continue to be advised with this difficult species as this is the main season for occurrence, the causative species can 'come in' rapidly and cause acute toxic events and onshore water transportation pattern are predominant at this time of year.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



All levels of ASP biotoxin recorded - 3 wks.



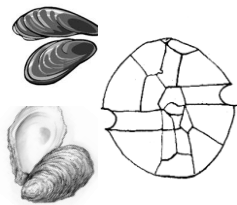
Comments

Seasonal trend continuing steady - No significant toxin levels are currently present and no significant fluctuations in cell levels . Currently low caution levels.

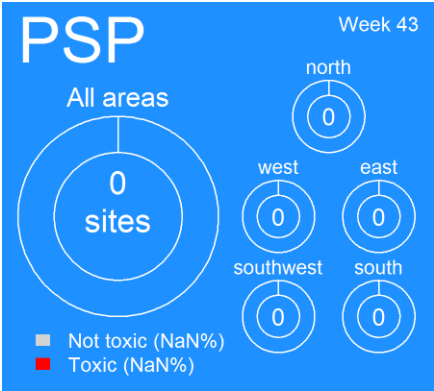
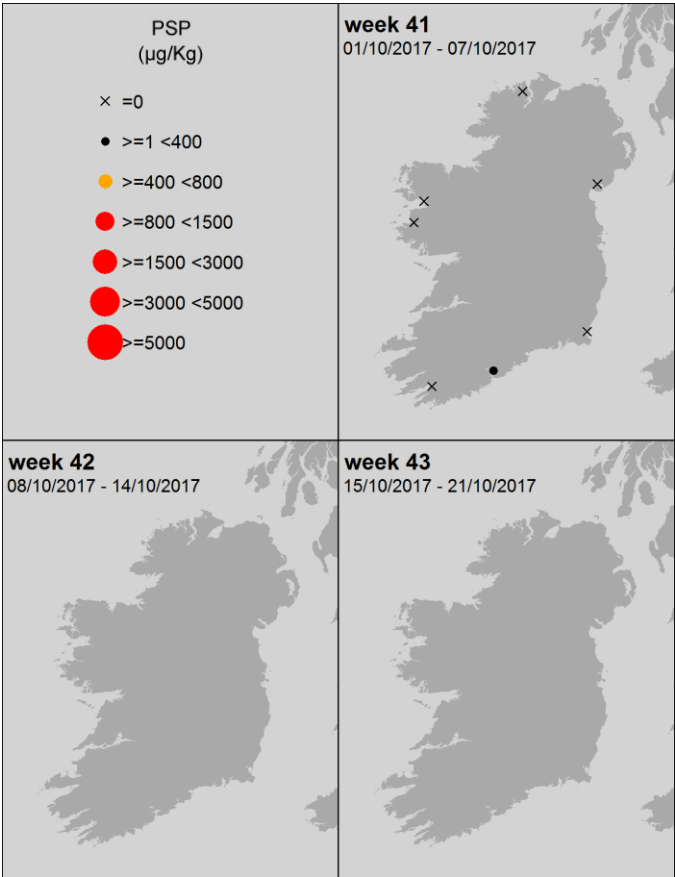
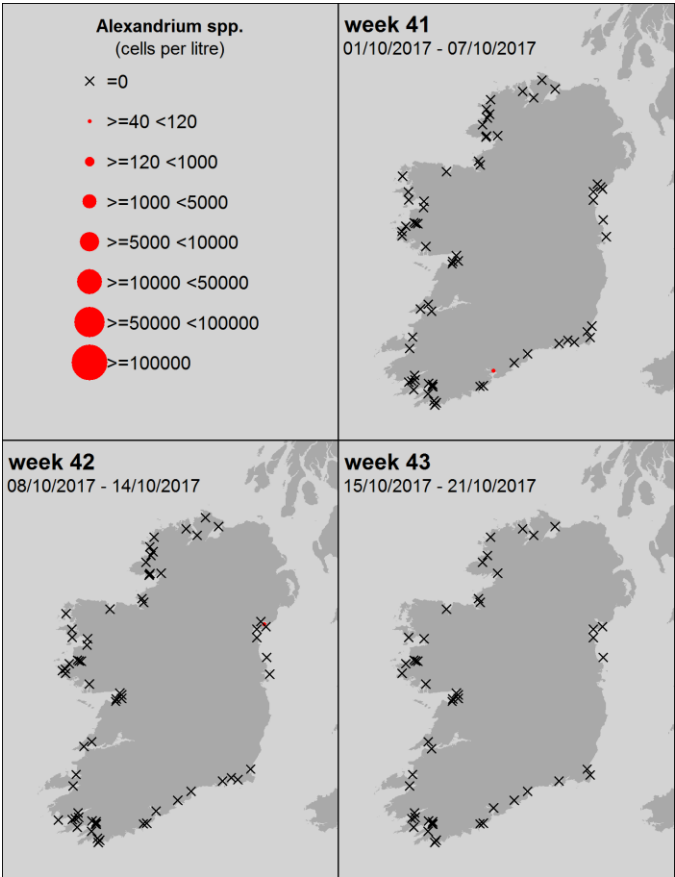
PSP and Alexandrium sp. current trends

Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.



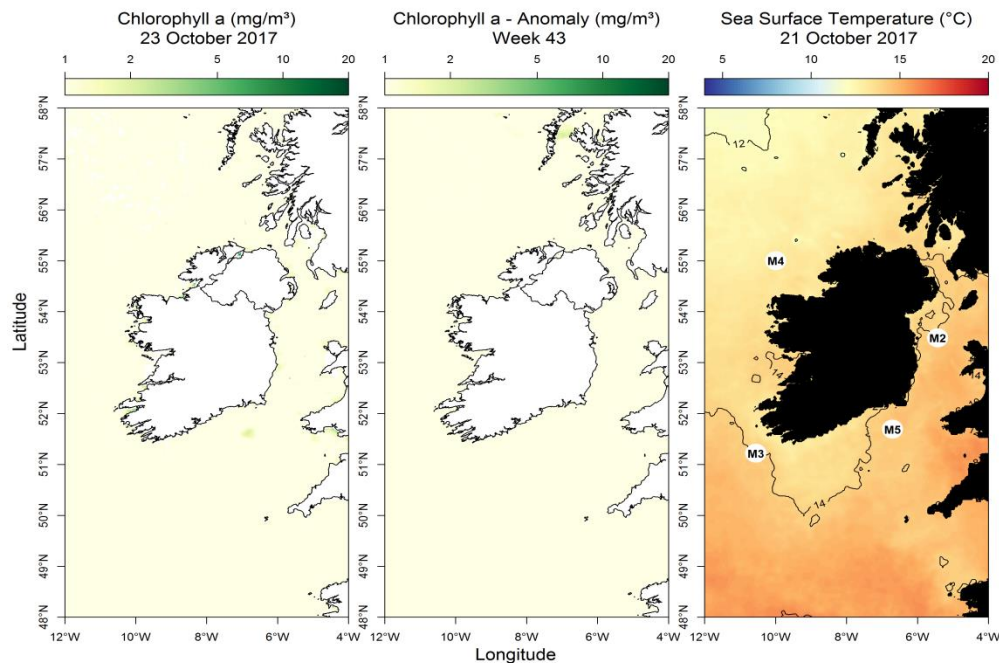
Current closures levels
≥ PSP 800 µg/Kg



Comments

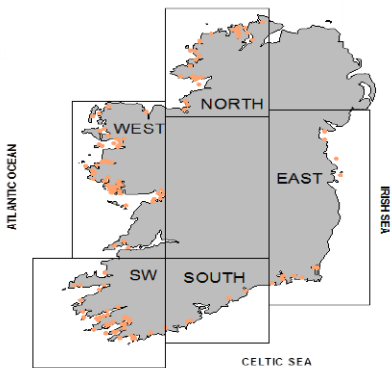
Stable seasonal pattern - Environmental conditions unlikely to be suitable to sustain growth of potential blooms and potential cell levels low .Low probability of sudden issues at this time of year.

Most up to date available satellite data



Relatively stable seasonal pattern with no significant chlorophyll levels above average levels for this time of year, recorded around the coastline.

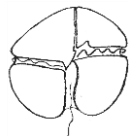
Diatoms dominating recorded related sample results .



- NW coast (M4)** Below average by 0.35°C wk42
- SW coast (M3)** Above average by 0.06°C wk42
- SE coast (M5)** Above average by 0.12°C wk42

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
1	east	Paralia sp.	36000
2	east	Centric Diatom	11000
3	east	Paralia sulcata	2000
4	east	Odontella spp.	1000
5	east	Fragilaria spp.	1000
1	north	Haptophytes	1635000
2	north	Asterionellopsis glacialis	650000
3	north	Pennate diatom	14000
4	north	Scrippsiella spp.	10000
5	north	Chaetoceros (Hyalochaete) spp.	9000
1	south	Navicula spp. <25um	103000
2	south	Centric diatoms <20um	29000
3	south	Lauderia / Detonula sp	26000
4	south	Navicula spp. 20-50 um	13000
5	south	Paralia sp.	13000
1	southwest	Pennate diatom 20-50um	3077000
2	southwest	Nitzschia spp. (small)	108000
3	southwest	Prymnesiophytes	102000
4	southwest	Navicula spp. <25um	74000
5	southwest	Navicula spp. 20-50 um	61000
1	west	Pennate diatom	106000
2	west	Trachelomonas Spp.	59000
3	west	Skeletonema spp.	21000
4	west	Pennate diatom 20-50um	13000
5	west	Paralia sulcata	6000

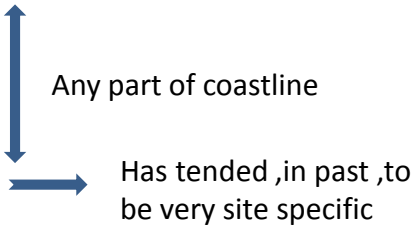


Karenia mikimotoi bloom warning level – very low

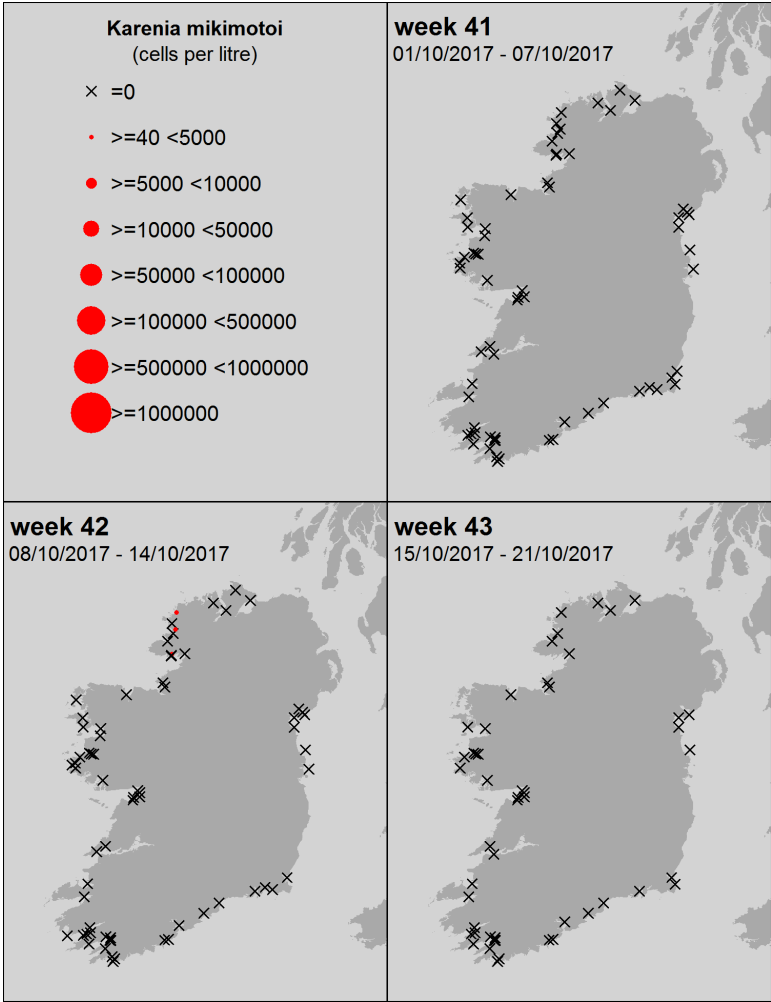
Current general bloom conditions:

Seasonal decrease in phytoplankton growth, in general, is now being traditionally affected by decreasing temperatures and light availability ,as well as the very occasional hurricane. There are currently no bloom threats indicated from traditionally species listed below.

- Karenia mikimotoi*
- Heterocapsa spp.*
- Noctiluca scintillans*
- Alexandrium spp.*



Karenia mikimotoi
(old name: *Gyrodinium aureolum*)



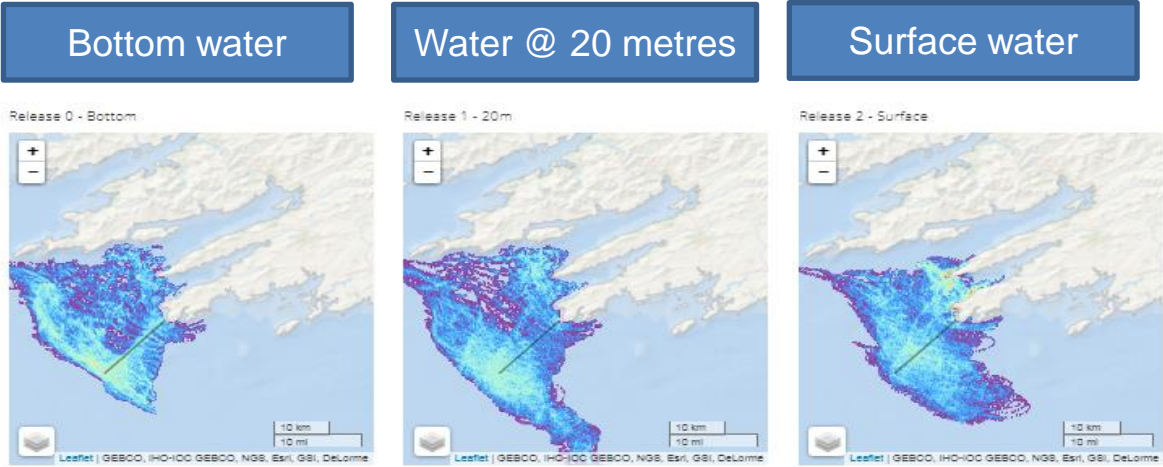
SOUTHWEST: Bantry Bay

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



Deeper waters indicating a northerly directional movement with shallower and surface waters indicating less active and mixed directional movement. Incursions possible.



Upwelling possibilities indicated with deeper waters moving inshore while surface waters indicating off shore movement..

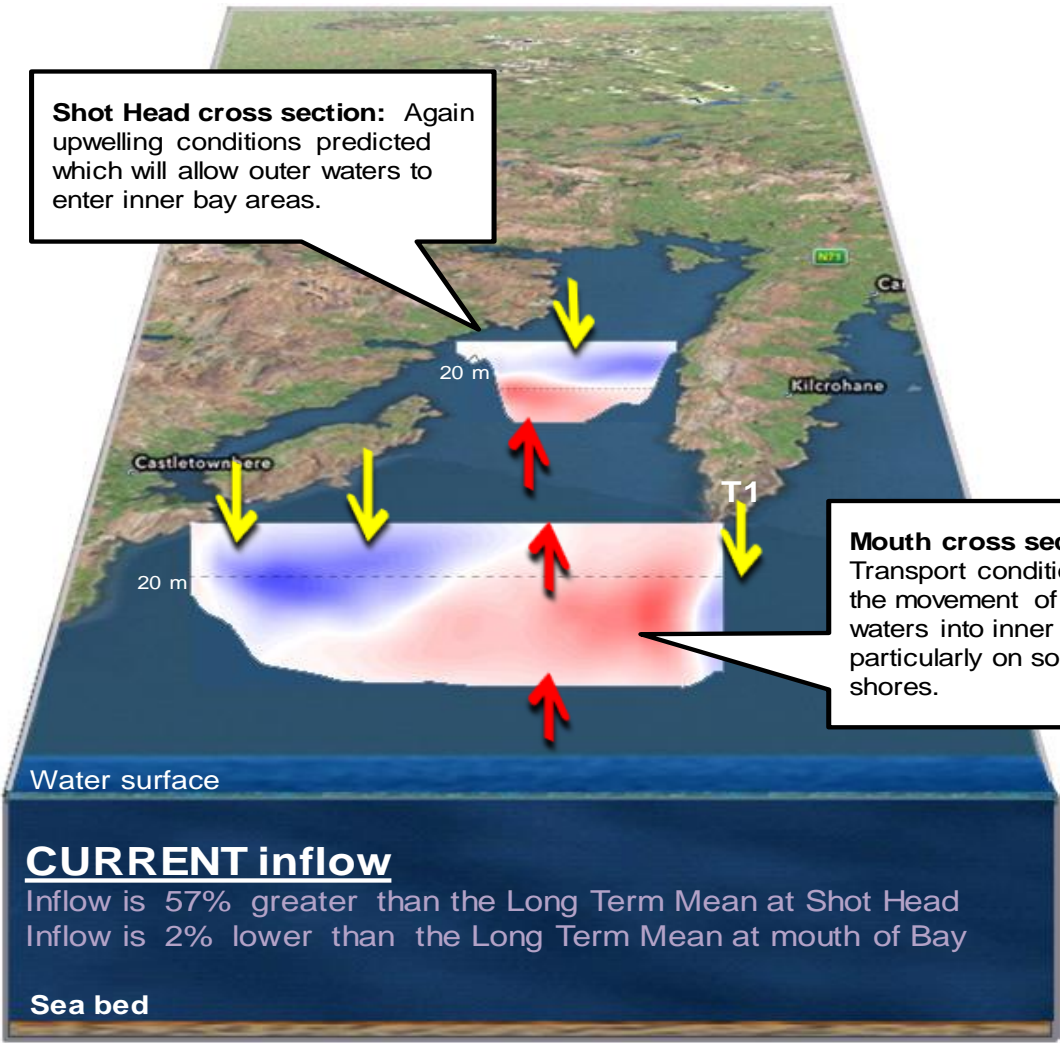
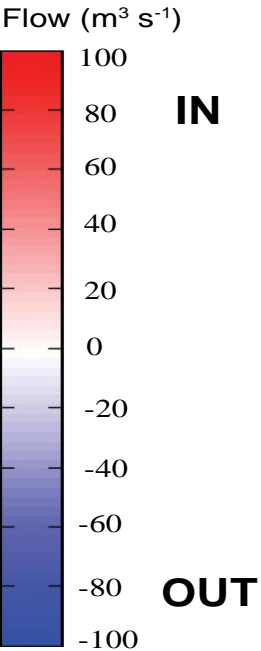
Bantry Bay

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



Forecast for next 3 days

Shot Head cross section: Again upwelling conditions predicted which will allow outer waters to enter inner bay areas.

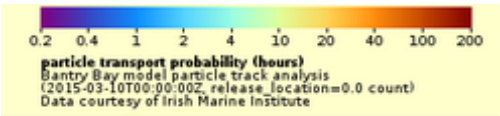


Mouth cross section: Transport conditions allowing the movement of outer bay waters into inner bay areas, particularly on southern shores.

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)

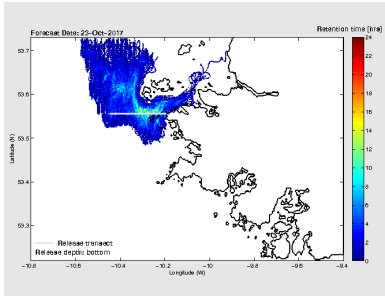
Reddish colours represent areas where phytoplankton remain longest
Cooler colours represent areas where phytoplankton remain for shorter periods



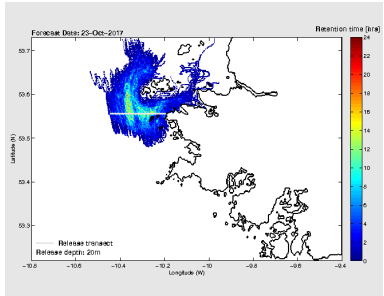
0.2 0.4 1 2 4 10 20 40 100 200
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

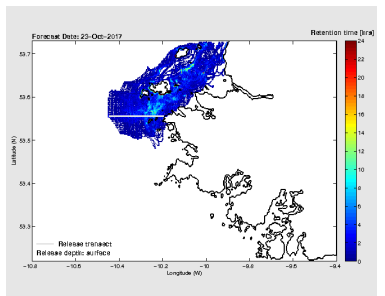
Bottom water



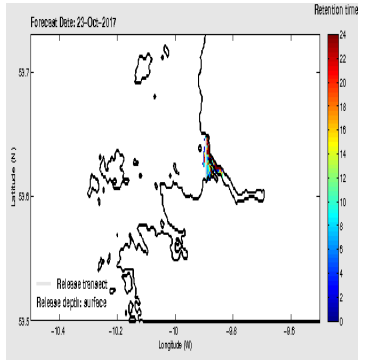
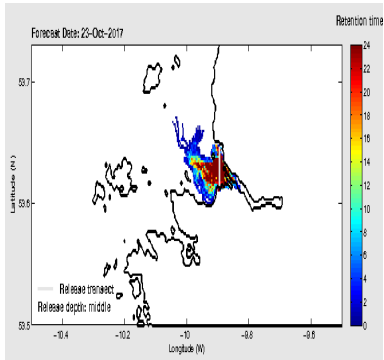
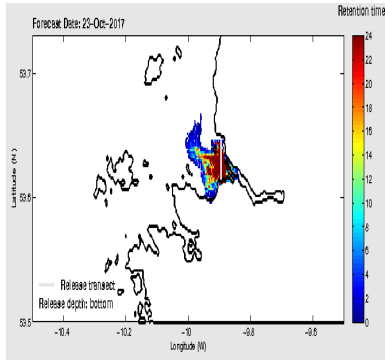
Water @ 20 metres



Surface water



Cleggan
In general all depth zones indicating dominant northerly directional movements with strong possibilities of onshore water incursions.



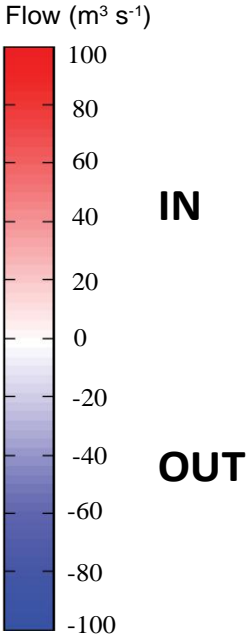
Killary
Changes in patterns from last week with bottom and deeper waters indicating some transport out of bay areas and low transport into inner bay areas at surface depths. Low activity levels.

Killary Harbour - 3 day estimated water flows at the mouth of Killary Harbour

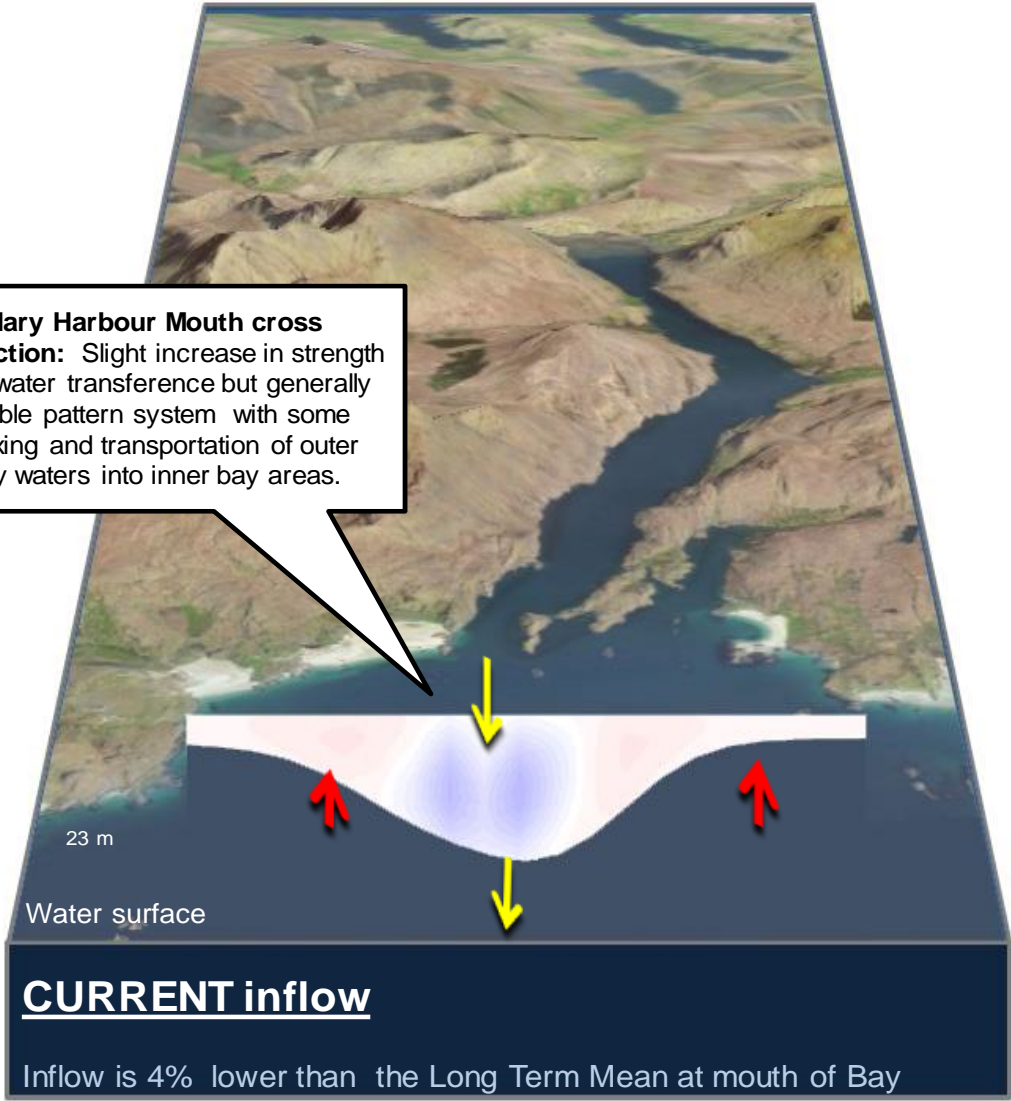


Forecast for next 3 days

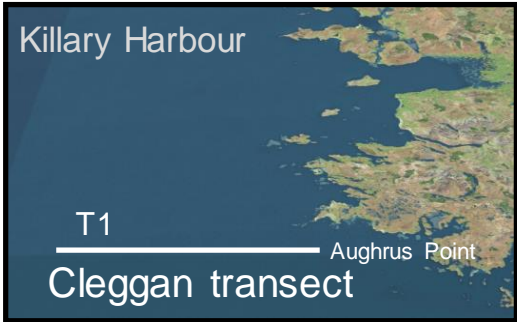
Killary Harbour Mouth cross section: Slight increase in strength of water transference but generally stable pattern system with some mixing and transportation of outer bay waters into inner bay areas.



Depth



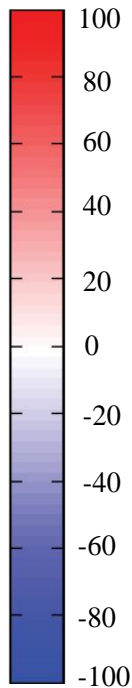
West Coast - 3 day estimated water flows along a transect off Aughrus Point



Forecast for next 3 days

Cleggan section: Steady pattern of water movement in a predominant northerly direction in offshore waters with squeezed counter movements in inshore areas.

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



**northward
flow**

**southward
flow**

Depth

