

Ireland: Predictions

ASP event: Low
AZP event: **High**
DSP event: Moderate (to low)
PSP event: Low (site specific)

NMP Current closures			
ASP	AZP	DSP	PSP
0	0	0	0

ASP: No immediate issues indicated - Slow seasonal increase in cell levels continues with fluctuating weekly levels. No significant toxic species/toxin currently present .Precautionary increase in levels of caution and species awareness.

AZP: Continued **High 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 in moderate levels. Issues with this toxin can occur suddenly and acutely .

DSP: *Moderate caution level in sites currently affected*- 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 to depurate completely. However, all sites should continue to insure best sampling practices and obtaining the most recent results available.

PSP: Continued low caution only advised, mainly in historically affected sites (S) . While current weather conditions and patterns are not favourable for bloom issues , these conditions may yet change. Until cell levels and temperatures have dropped further some caution is still advised.

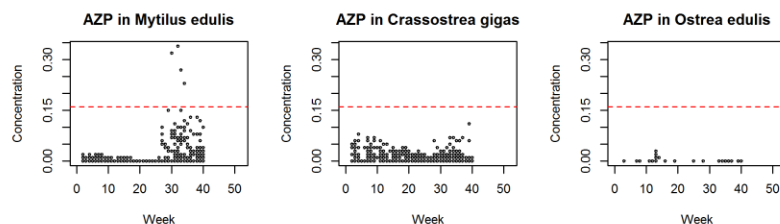
Blooms: **No current significant issues recorded but Noctiluca sp at low levels in background.** Any unusual water discoloration should be noted and regional labs contacted if concerned /regarding possible need for additional sampling. All feedback is welcome at Joe.Silke@Marine.ie .

National Monitoring Programme

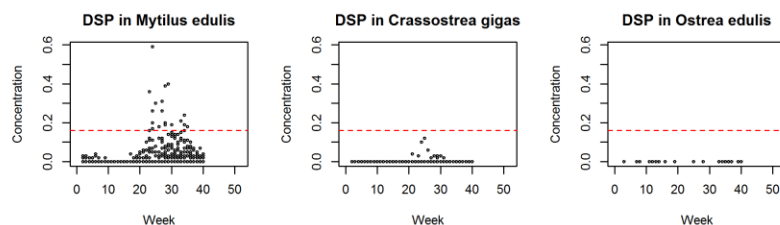


HISTORIC TRENDS

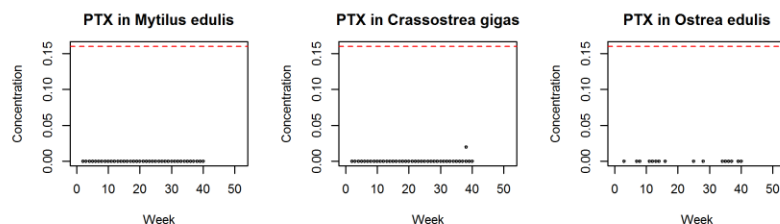
AZP



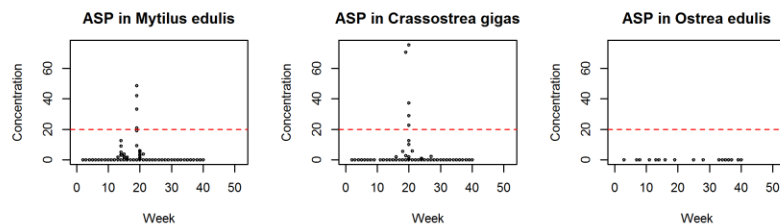
DSP



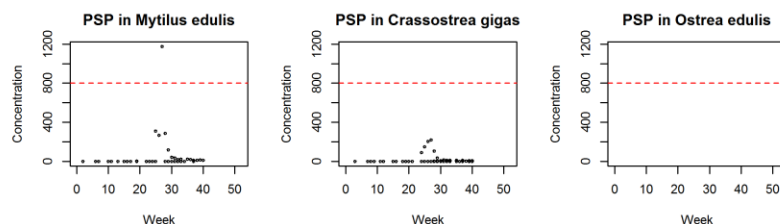
PTX



ASP

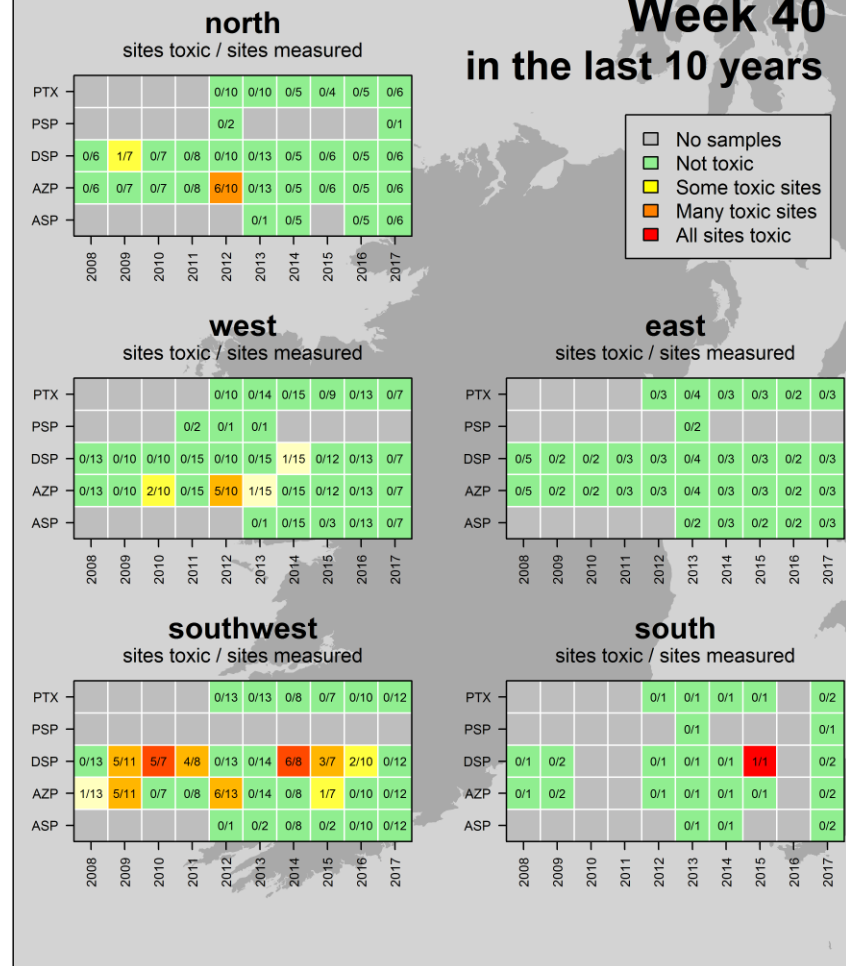


PSP



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

Week 40
in the last 10 years



ASP events: mid-March to early May

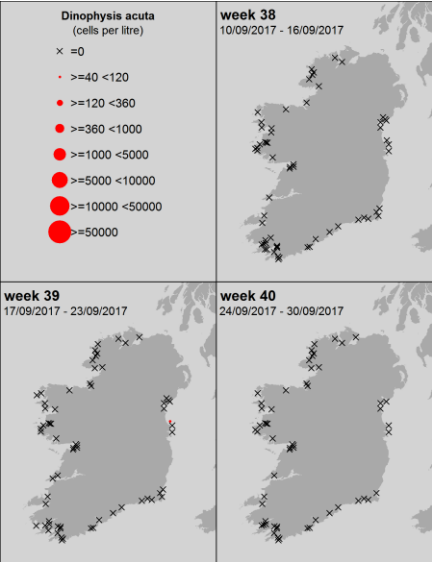
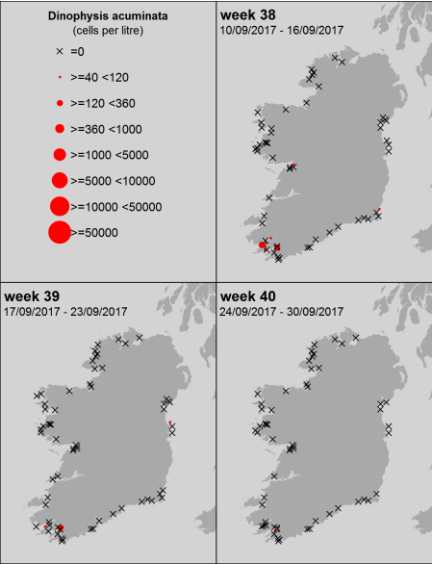
AZP events: April to December

DSP events: May to December

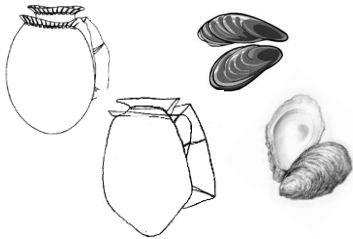
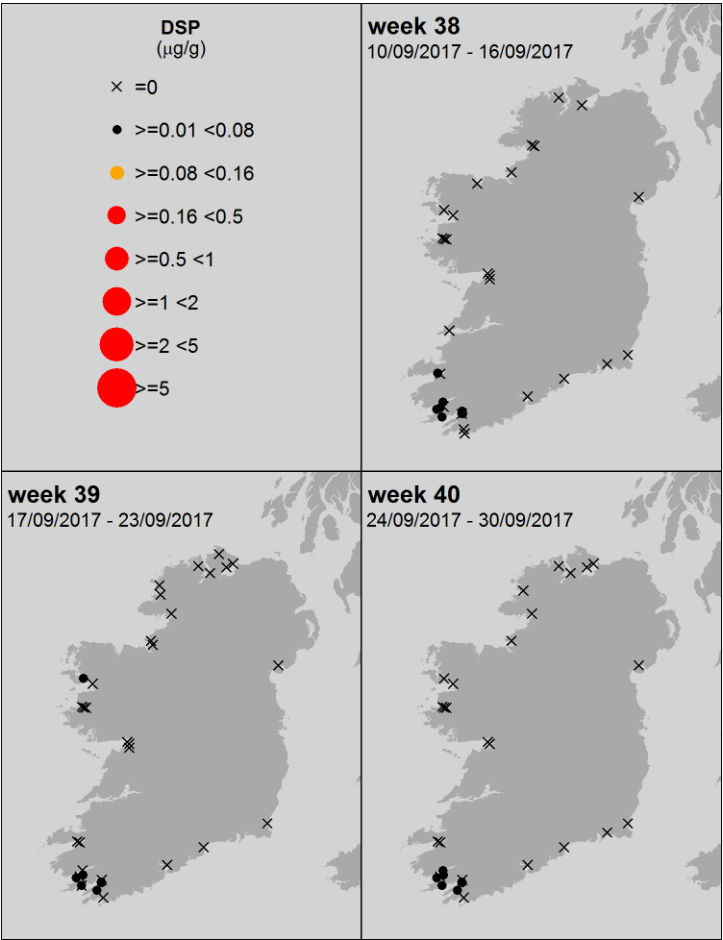
PSP events: June to mid-July and end September; only in Cork Harbour

DSP and Dinophysis sp. current trends

Phytoplankton species – 3 wks.

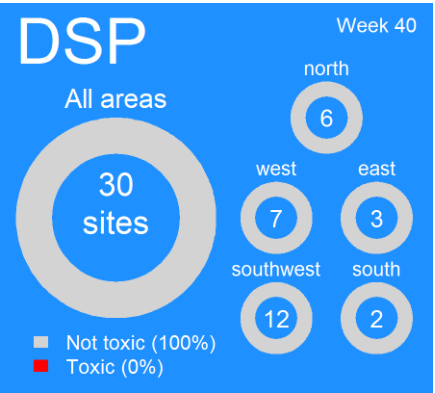


All levels of DSP biotoxin recorded- 3 wks.



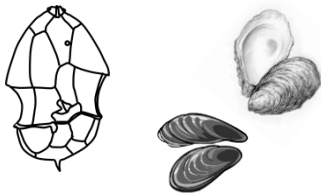
Current closures levels

≥ DSP 0.16 µg/g



Comment – Residual toxin issues , at low levels , still persisting in specific areas. While it would be expected, based on long term trends, that Dinophysis species should not be increasing in cell levels, toxic events still occur at this time of year.

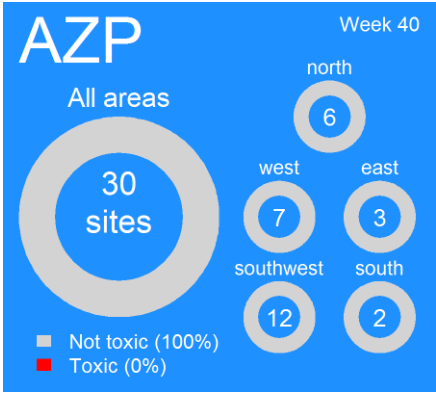
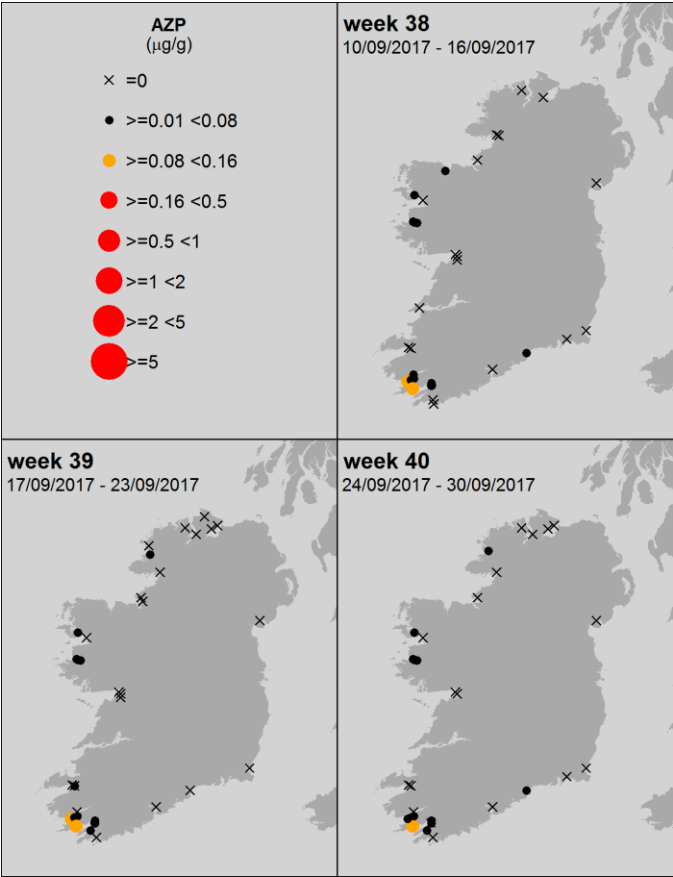
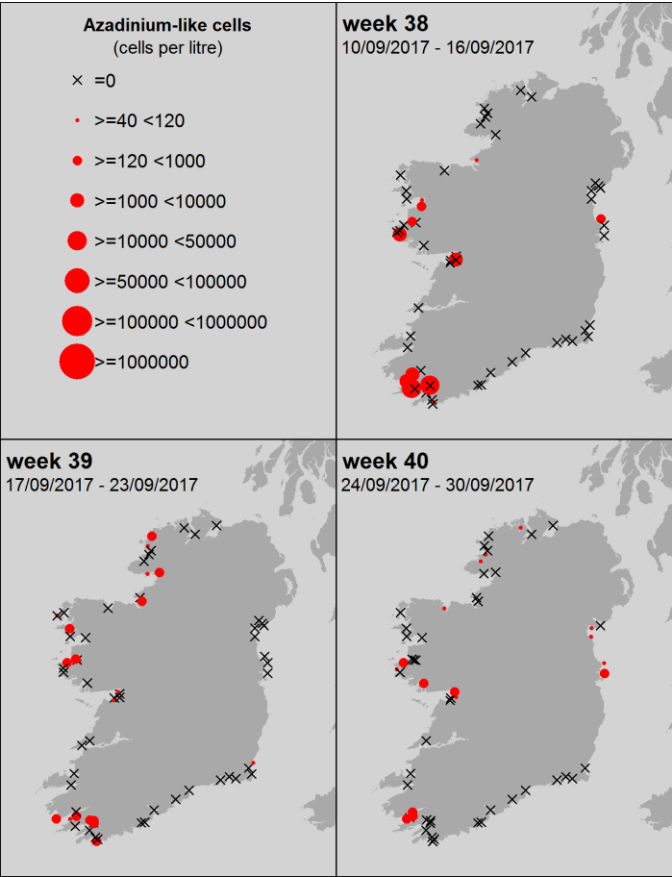
AZP and Azadinium like species current trends



Phytoplankton species – 3 wks.

All levels of AZP biotoxin recorded - 3 wks.

Current closures levels
≥ AZP 0.16 µg/g

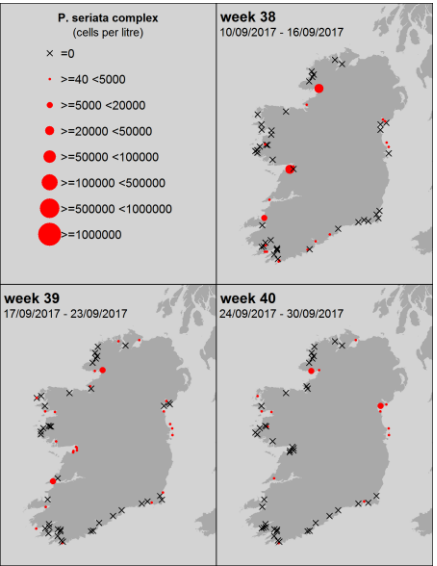
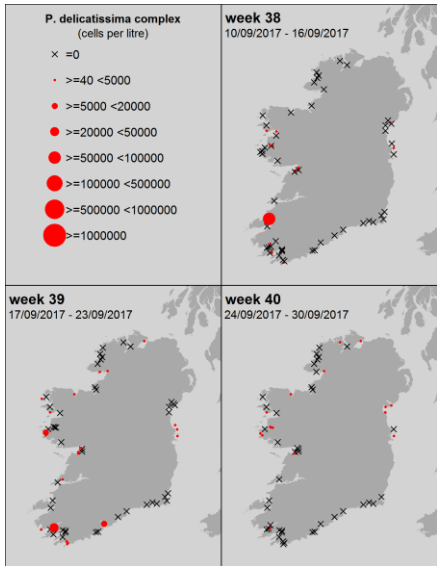


Comments

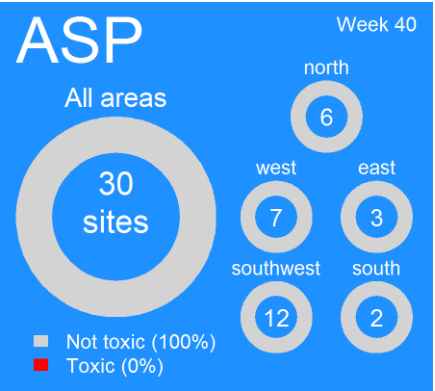
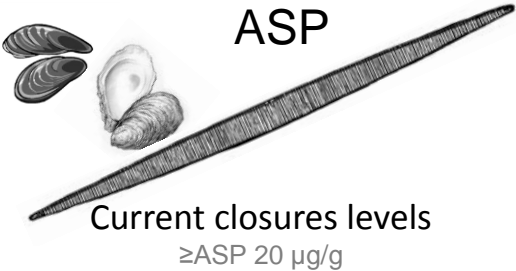
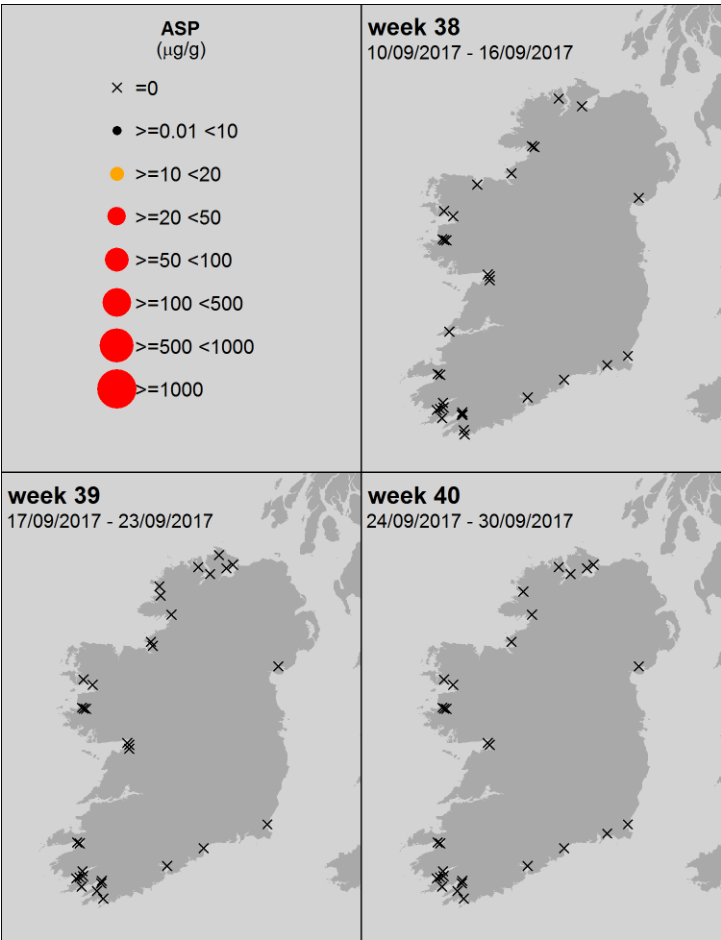
Continued high levels of caution and observance and testing in affected areas recommended. This species has can rapidly bloom or get transport into bay areas at bloom levels. Such transport conditions are typical at this time of year- sudden acute issues possible.

ASP and Pseudo nitzschia sp. current trends

Phytoplankton species – 3 wks.



All levels of ASP biotoxin recorded - 3 wks.



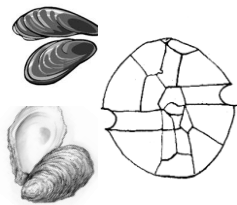
Comments

Similar to last week - No significant toxin levels are currently present but cell levels are fluctuating and would traditionally be expected to potentially rise for a period based on historical trends. Moderate caution levels.

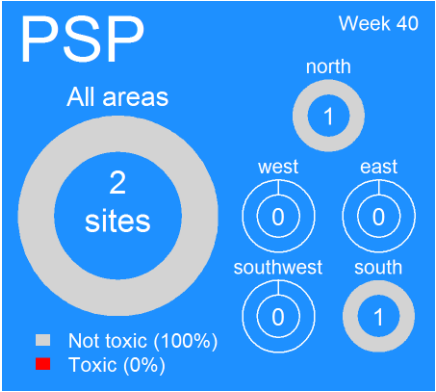
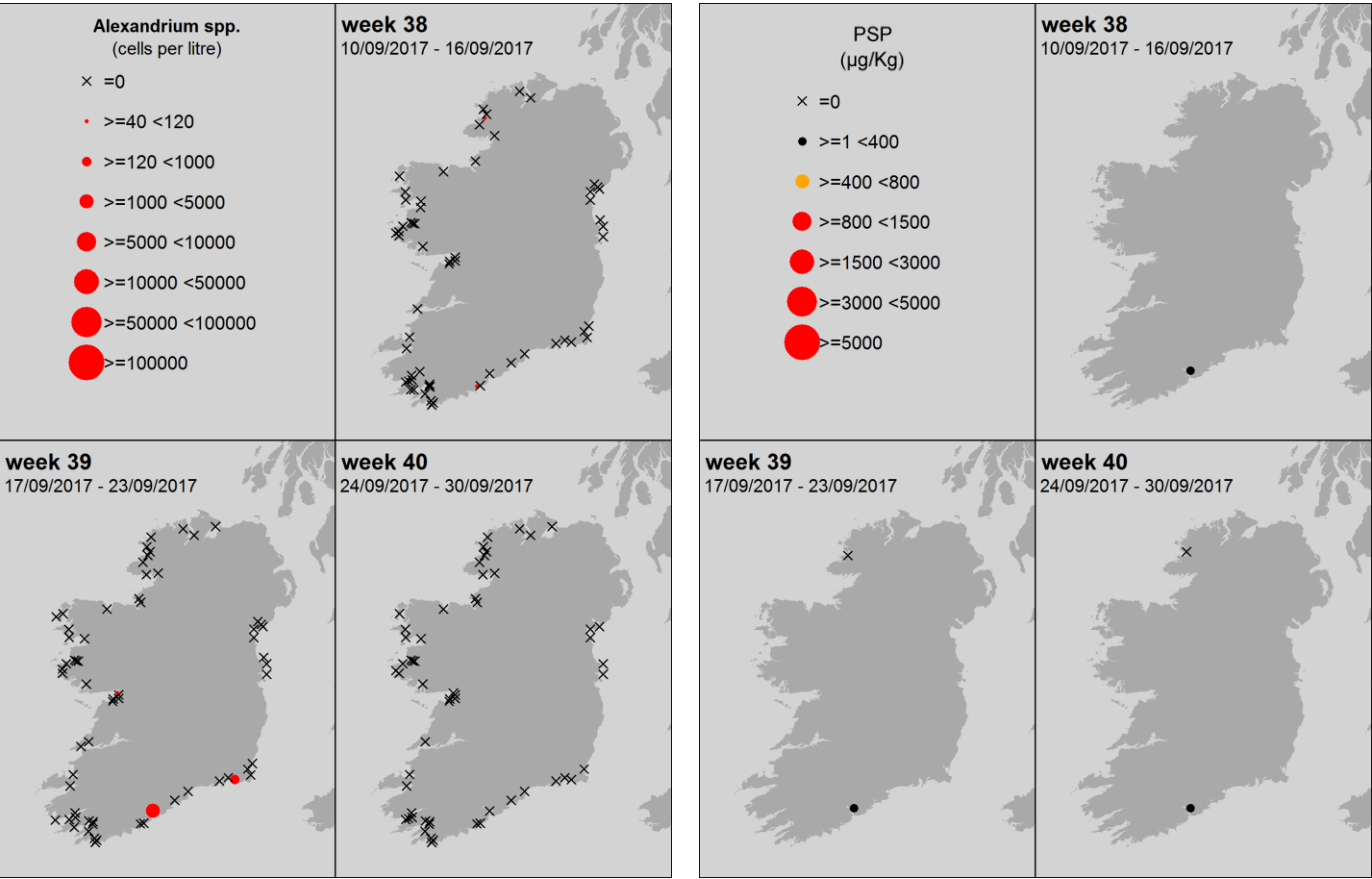
PSP and Alexandrium sp. current trends

Phytoplankton species – 3 wks.

All levels of PSP biotoxin recorded - 3 wks.



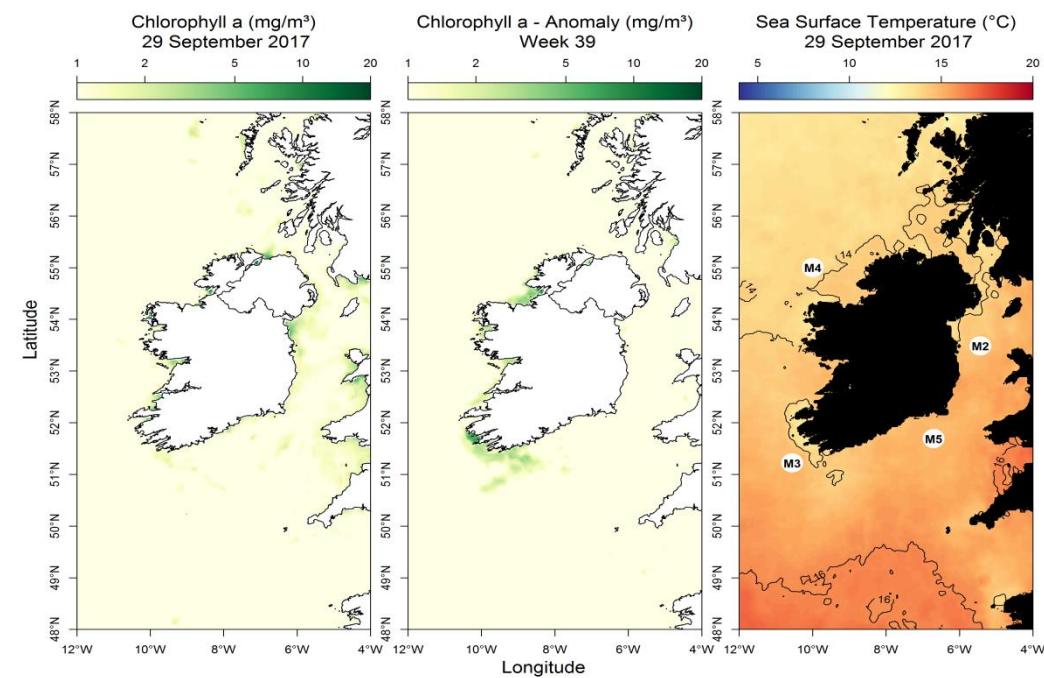
Current closures levels
≥ PSP 800 µg/Kg



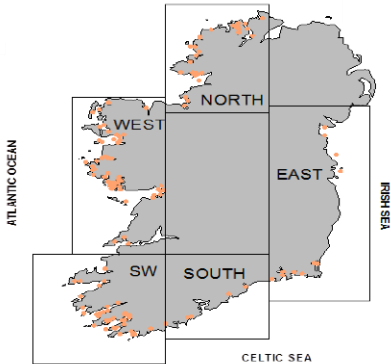
Comments

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



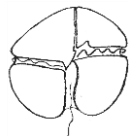
Some potential additional growth indicated particularly off Northern and Southern coastal areas. Diatoms dominating recorded related sample results except for the west .



NW coast (M4) Below average by 0.53°C wk39
SW coast (M3) Unavailable
SE coast (M5) Below average by 0.20°C wk39

What phytoplankton were blooming at inshore coastal sites last week?

Rank	Region	Species	Rounded Count
5	east	Leptocylindrus danicus	67000
4	east	Chaetoceros (Hyalochaete) spp.	173000
3	east	Skeletonema spp.	327000
2	east	Asterionellopsis glacialis	686000
1	east	Microflagellate sp.	1185000
5	north	Asterionellopsis spp.	14000
4	north	Leptocylindrus danicus	22000
3	north	Chaetoceros (Hyalochaete) spp.	145000
2	north	Prasinophytes	194000
1	north	Asterionellopsis glacialis	3024000
5	south	Detonula confervacea	13000
4	south	Navicula spp. 20-50 um	16000
3	south	Paralia sp.	19000
2	south	Navicula spp. <25um	72000
1	south	Cylindrotheca closterium/ Nitzschia longissima	590000
5	southwest	Skeletonema costatum	21000
4	southwest	Leptocylindrus minimus	22000
3	southwest	Lauderia / Detonula sp	34000
2	southwest	Chaetoceros curvisetus/debilis	35000
1	southwest	Skeletonema spp.	51000
5	west	Prorocentrum micans	17000
4	west	Chaetoceros (Hyalochaete) spp.	18000
3	west	Skeletonema spp.	31000
2	west	Pennate diatom	64000
1	west	Microflagellate sp.	190000

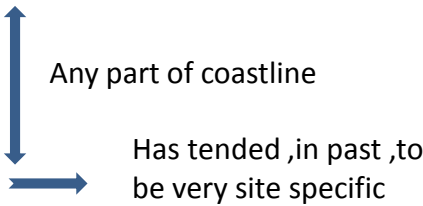


Karenia mikimotoi bloom
warning level – low

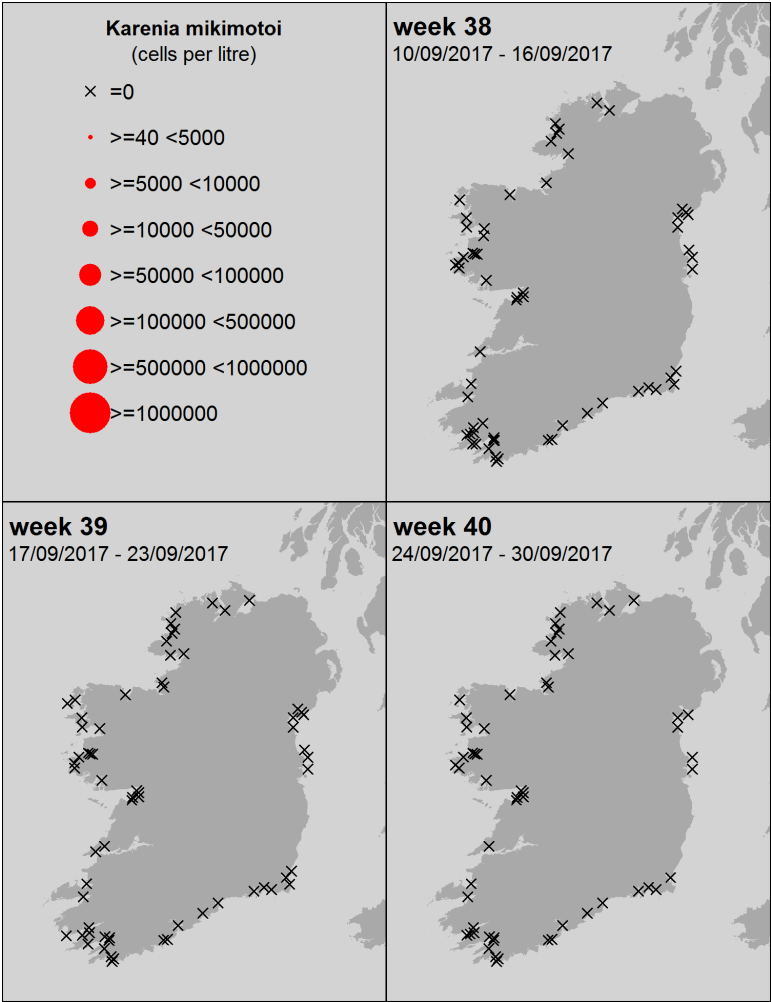
Current general conditions:

Water temperatures and light levels decreasing levels making the possibility of most bloom species causing an issue less likely. Noctiluca species still in residual background levels in some sites.

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

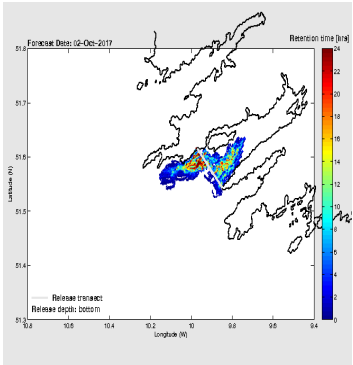


0.2 0.4 1 2 4 10 20 40 100 200

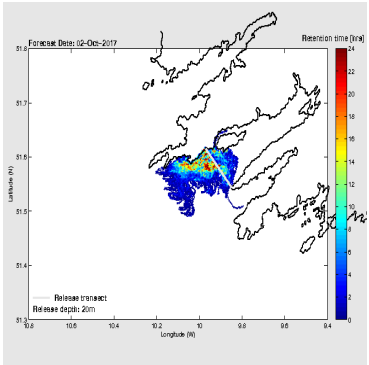
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

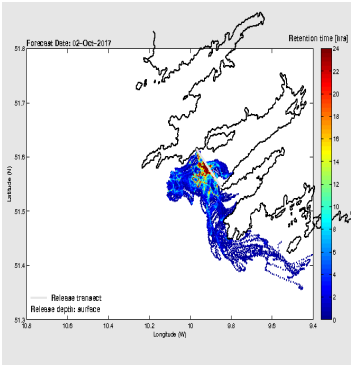
Bottom water



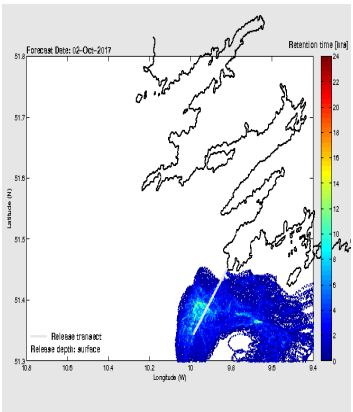
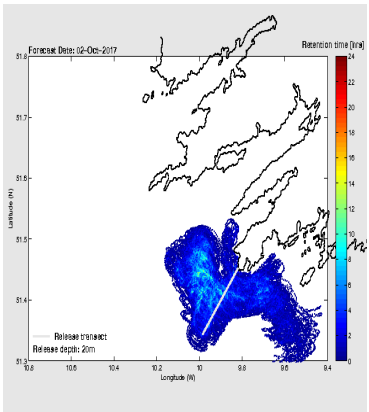
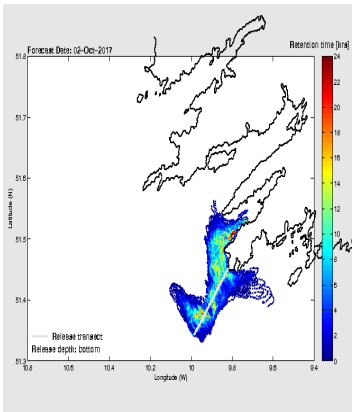
Water @ 20 metres



Surface water



Outer bay waters possibly being transported into inner bay areas at deeper depths only. Surface waters indicating movement in an offshore southerly direction.



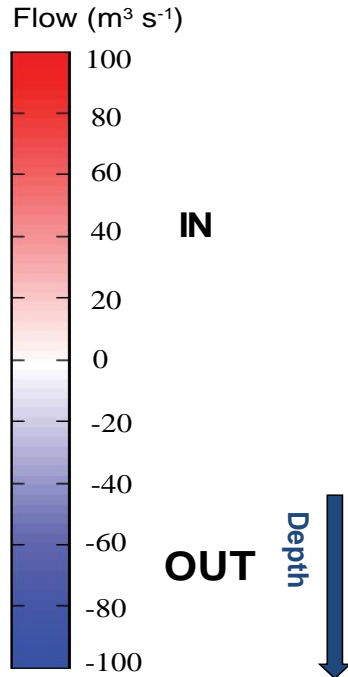
Off shore waters indication counter movements related to depth. Deeper water indicating Northerly directional movement while surface water indicating southerly directional movement.

Bantry Bay

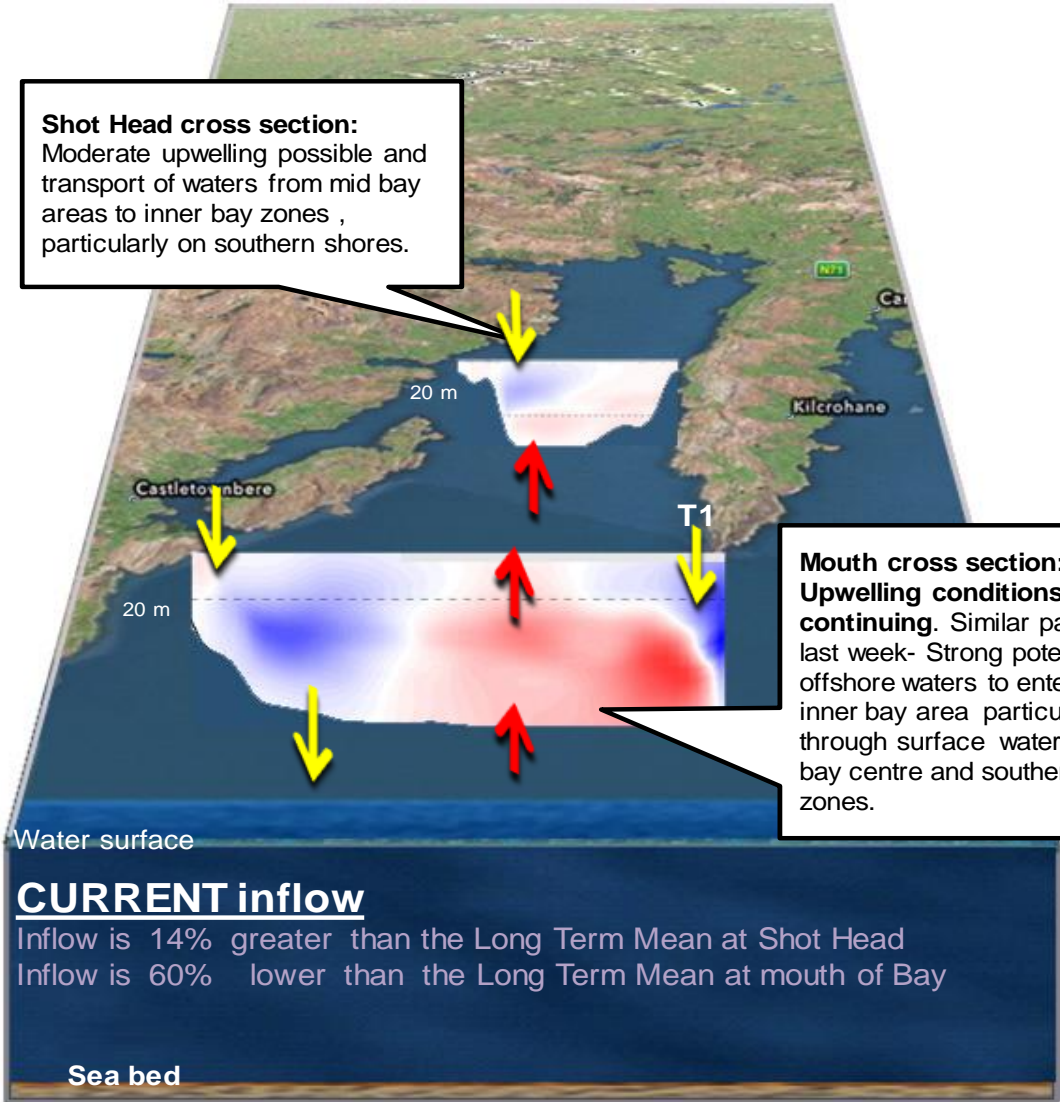
3 day estimated water flows at the mouth and mid-bay sections of Bantry Bay



Forecast for next 3 days



Shot Head cross section:
Moderate upwelling possible and transport of waters from mid bay areas to inner bay zones , particularly on southern shores.



Mouth cross section:
Upwelling conditions continuing. Similar pattern to last week- Strong potential for offshore waters to enter the inner bay area particularly through surface waters in bay centre and southern zones.

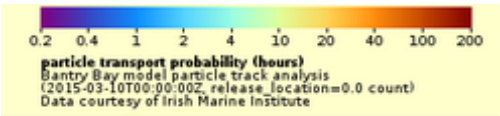
CURRENT inflow

Inflow is 14% greater than the Long Term Mean at Shot Head
Inflow is 60% lower than the Long Term Mean at mouth of 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)

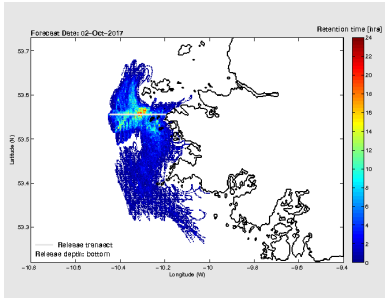
Reddish colours represent areas where phytoplankton remain longest
Cooler colours represent areas where phytoplankton remain for shorter periods



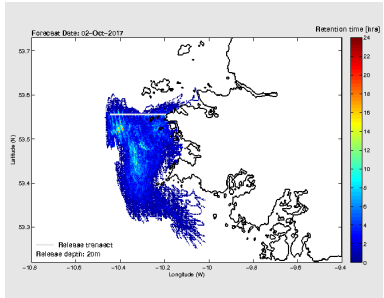
0.2 0.4 1 2 4 10 20 40 100 200
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

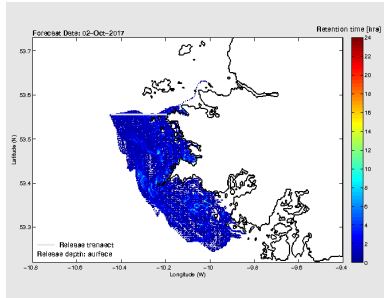
Bottom water



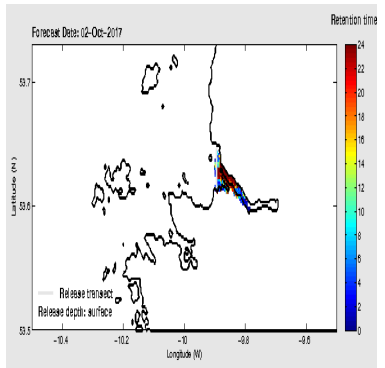
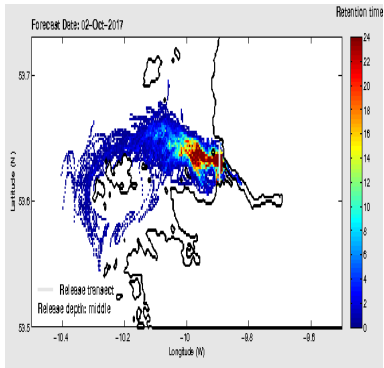
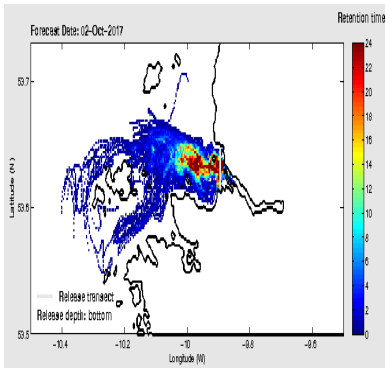
Water @ 20 metres



Surface water



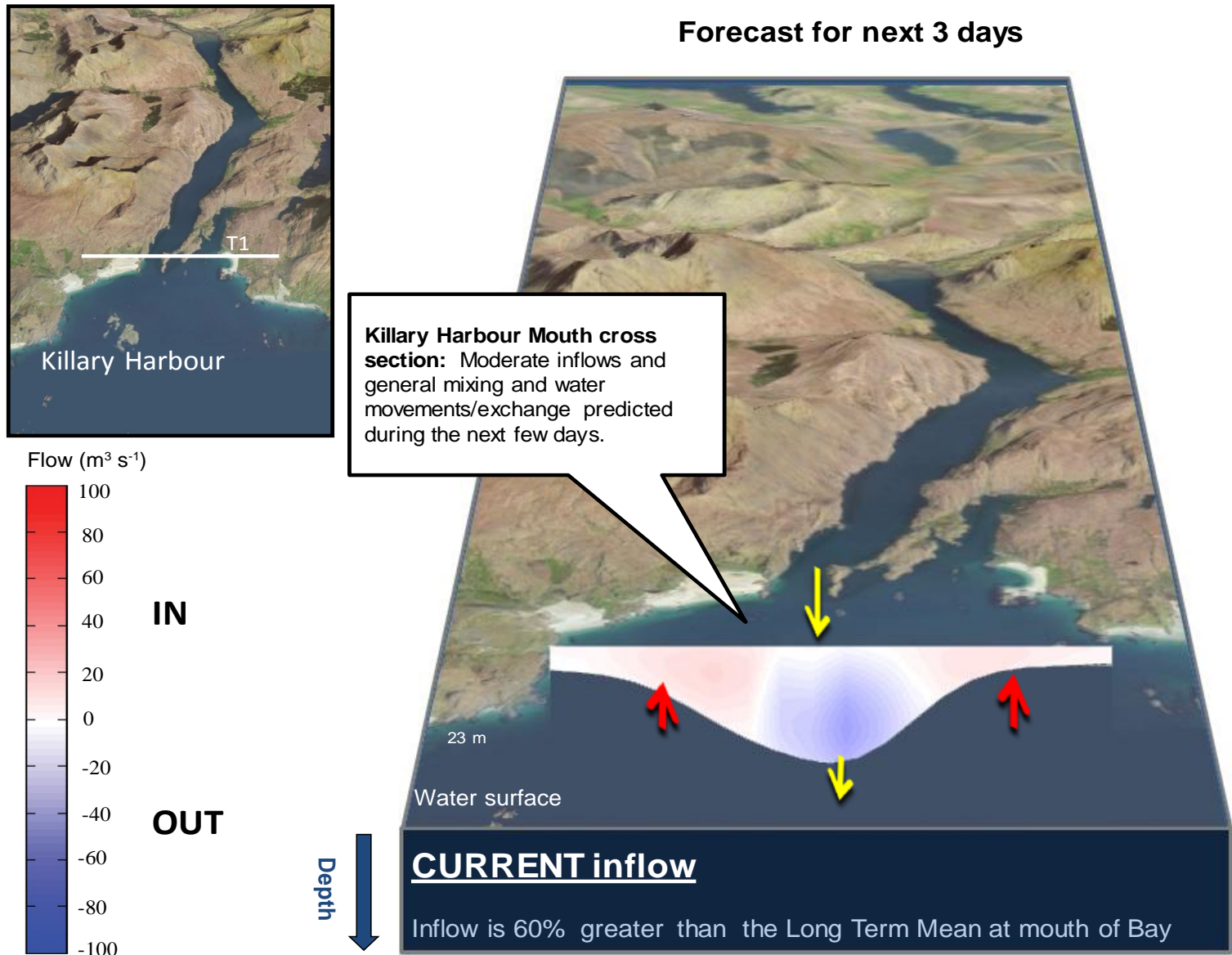
Cleggan
Strong mixing and predominantly southerly movement of water expected at all depths allowing for offshore waters reaching near shores areas and getting transported into middle bay areas.



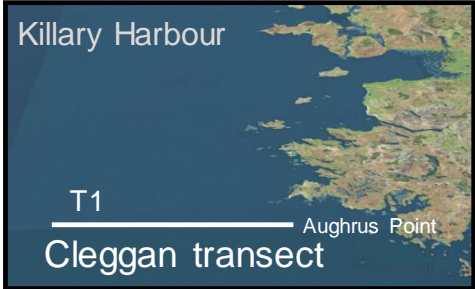
Killary
Deeper waters indicating strong movement out of bay areas with shallow surface water indicating inward transport and longer residual times.

Killary Harbour

3 day estimated water flows at the mouth of Killary Harbour



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



Forecast for next 3 days

Cleggan section: Counter directional movements of waters indicated. Surface waters appear to indicate movement in southerly directions while deeper waters are indicating transport in northerly directions.

