

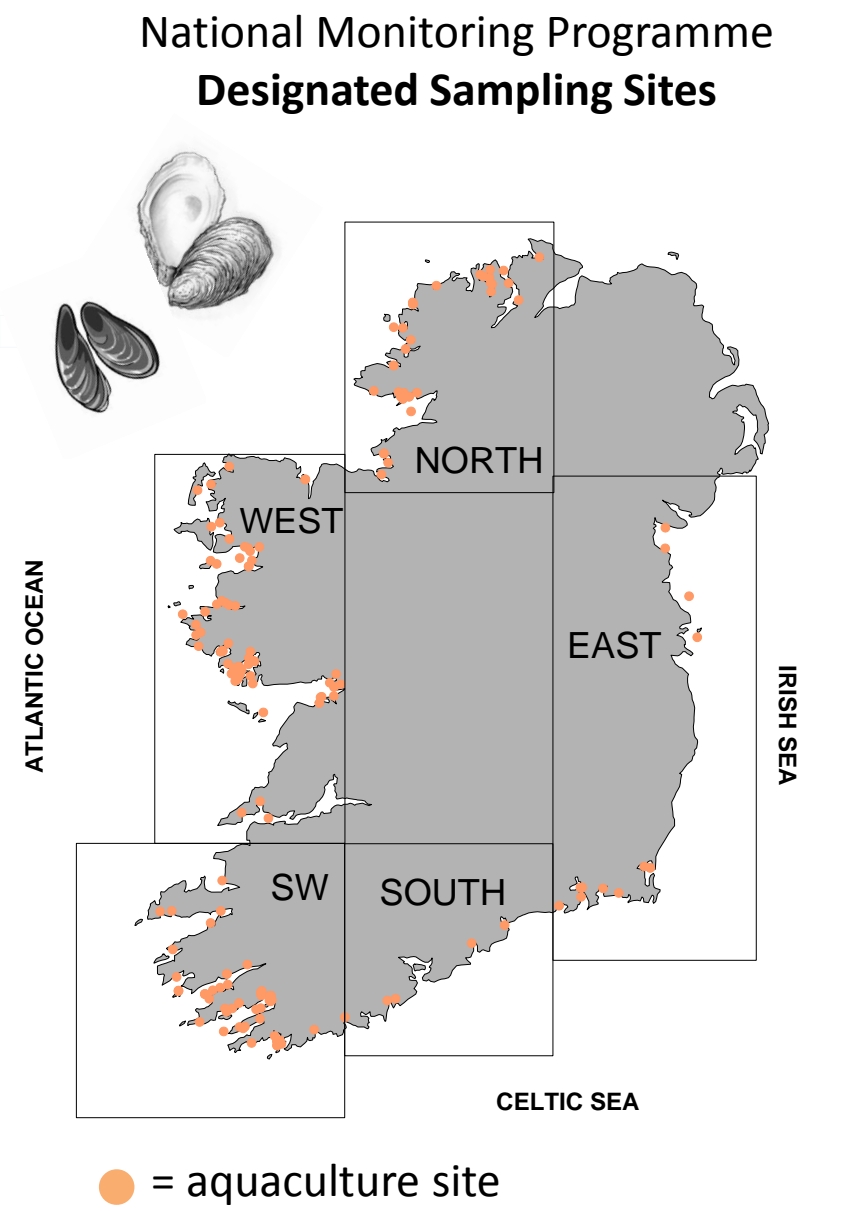
Ireland: Current Conditions

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 = **A**mnestic **S**hellfish **P**oisoning; AZP = **AZ**spiracid **P**oisoning;
DSP = **D**iarrhetic **S**hellfish **P**oisoning; PSP = **P**aralytic **S**hellfish **P**oisoning



Ireland: Predictions

Prediction for this week:

ASP event: Moderate to high.

AZP event: Low

DSP event: Low

PSP event: Low

Why do we think this?

ASP: *Pseudo-nitzschia* cells in some locations have begun to increase with corresponding low levels of biotoxins detected, particularly in the SW at the moment. The 'Spring diatom bloom' appears to be underway therefore good growing conditions are prevalent. The *Pseudo nitzschia seriata* complex appears to be taking dominance over the less toxic *Pseudo nitzschia delicatissima* complex therefore caution is advised. This is historically a period of potential toxicity episodes.

AZP: While *Azadinium* –like cells continue to increase in some coastal areas, biotoxins remain below regulatory limits. Historical data shows this species can still cause issues at this time of year so caution is still advised.

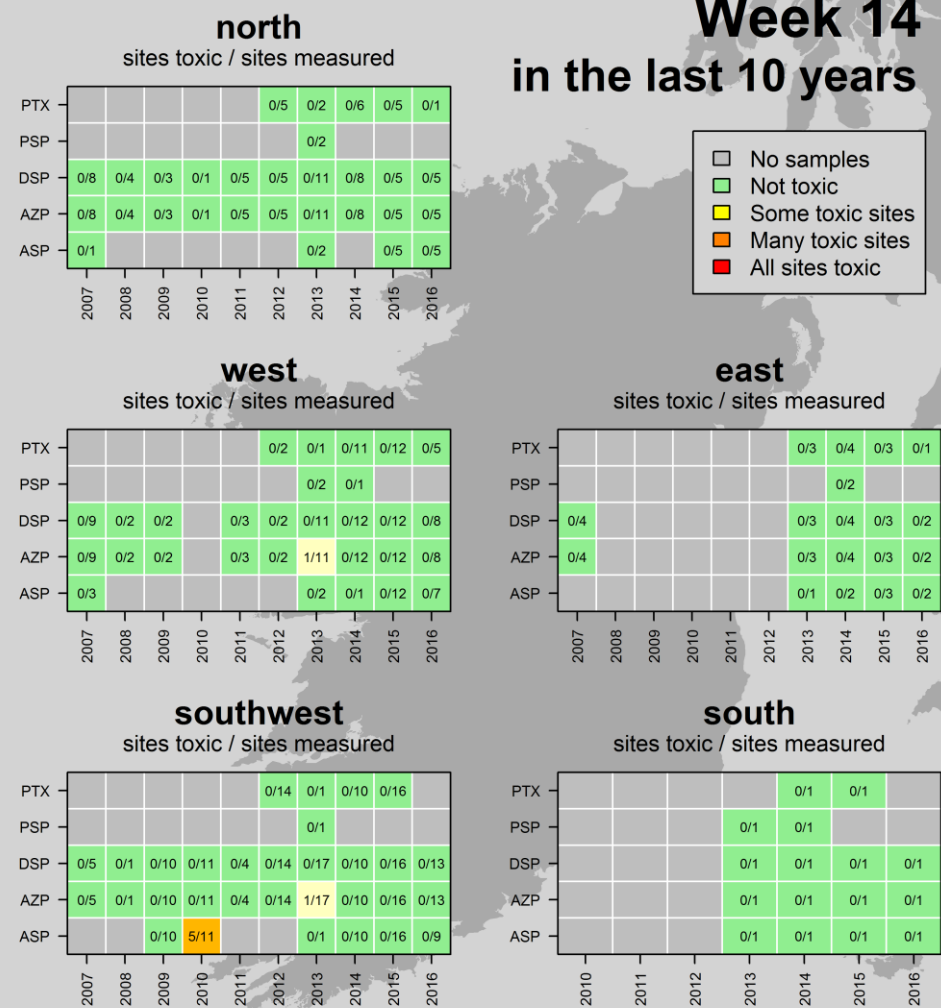
DSP: Currently there are still low to negligible cell levels and biotoxin distribution associated with this toxin. Historical data suggests this is still too early in the year to expect an episode and current cell levels reflect this trend.

PSP: Toxicity issues are very unlikely to occur at this time of year and cell levels currently reflect this.

Ireland: Historic Conditions

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

Week 14 in the last 10 years



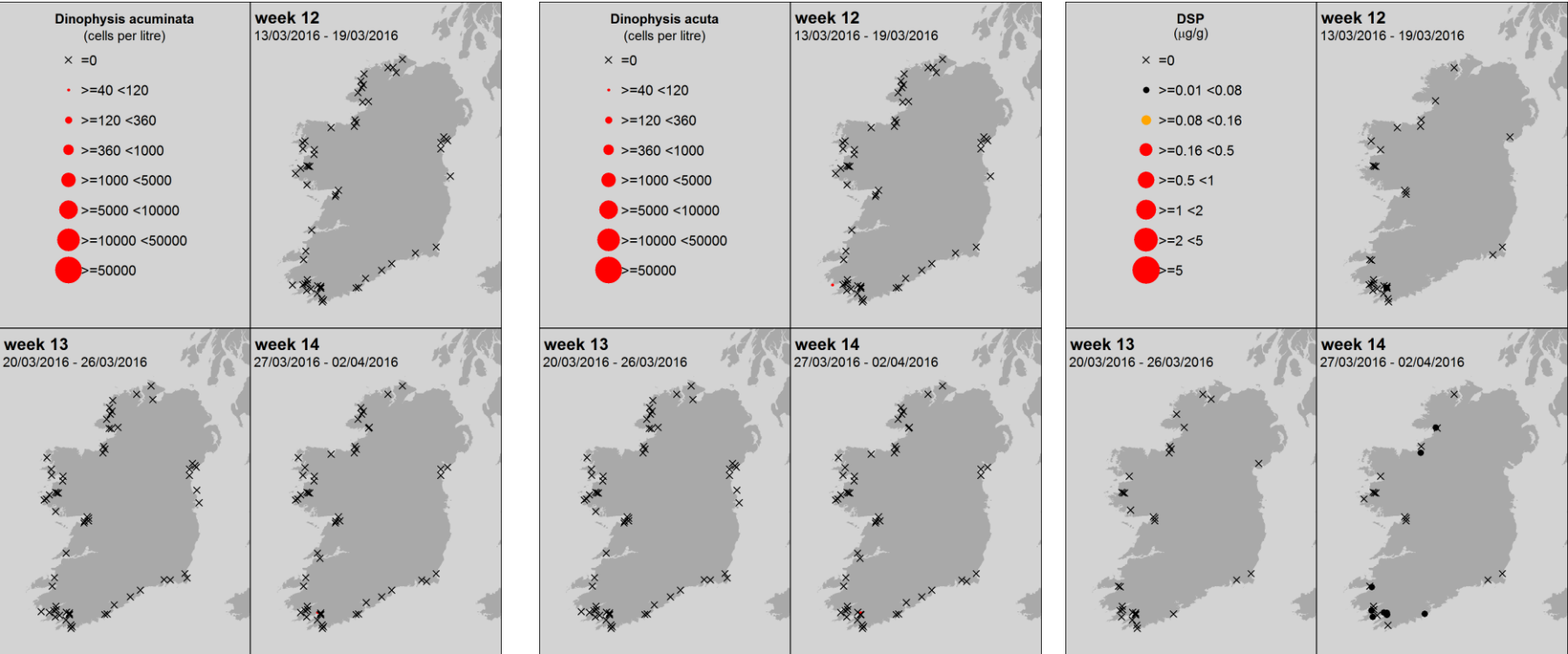
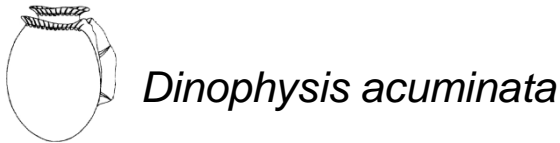
Ireland HISTORIC TRENDS

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



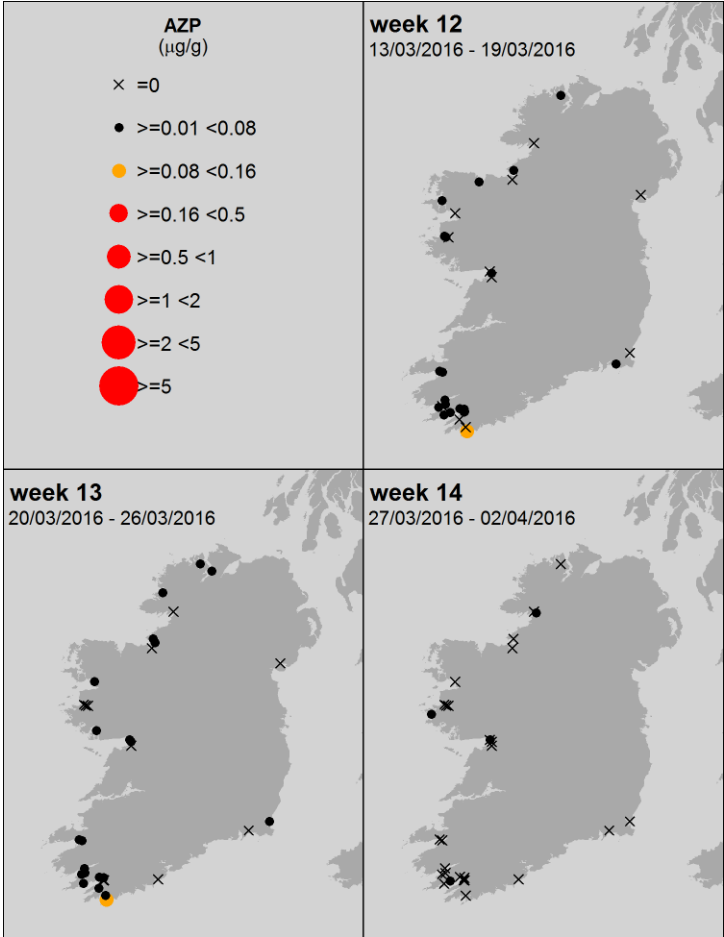
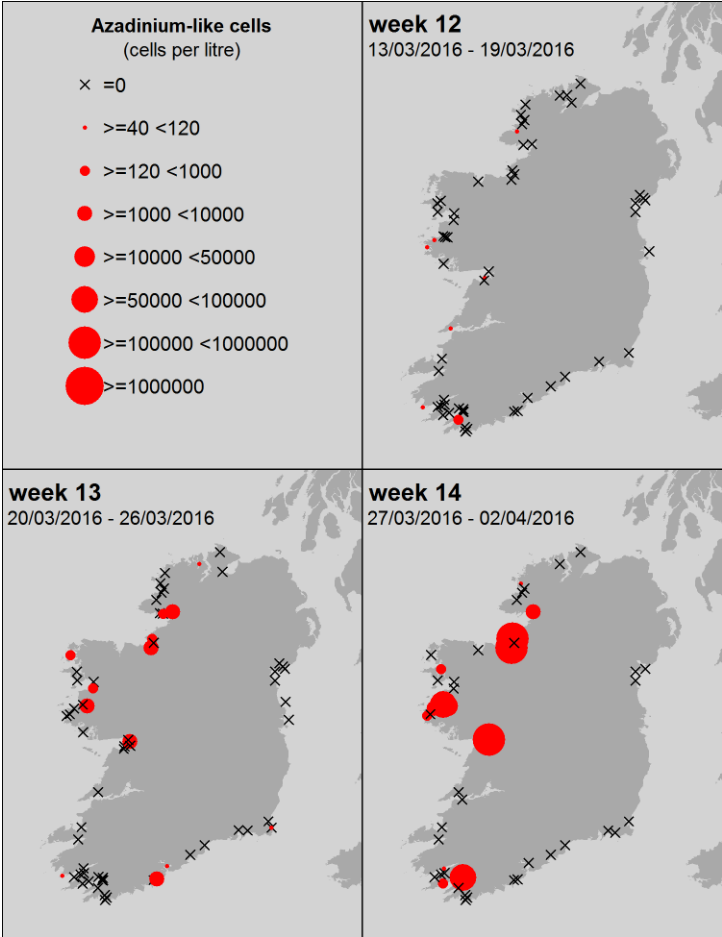
Ireland: Last 3 weeks of available National Monitoring Programme data



Azadinium – like spp.



AZP



Ireland: Last 3 weeks of available National Monitoring Programme data

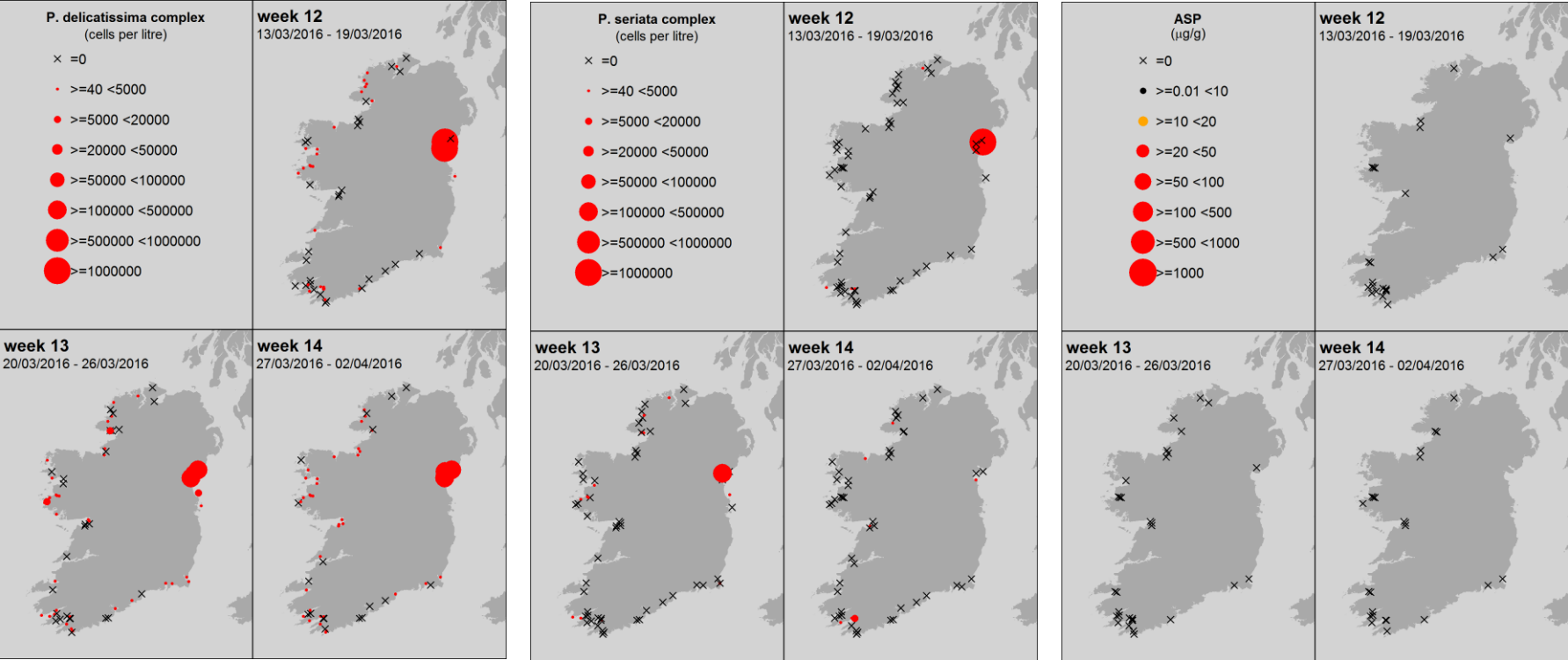
Pseudo-nitzschia spp.



ASP

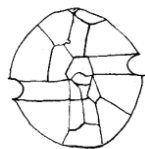
“*P. delicatissima*” complex = small cells
Taken from the literature:
3 species confirmed in Irish waters

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

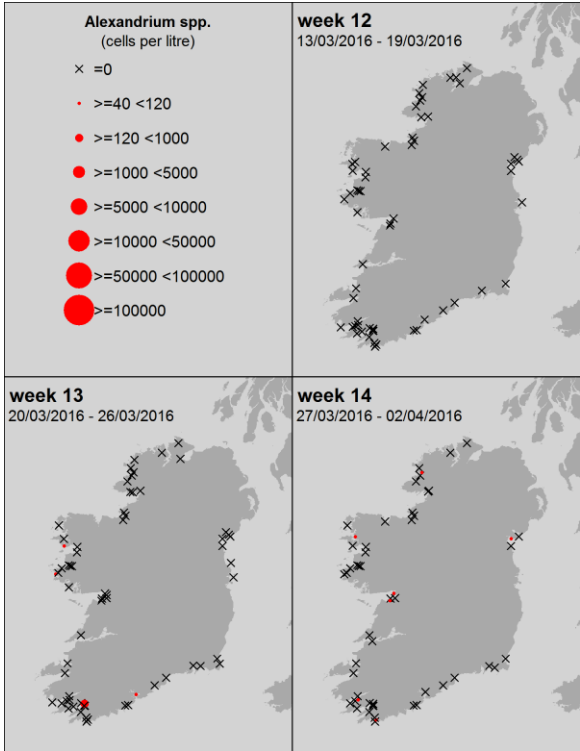


Taken from the literature: Of the 4 species (*P. fraudulenta*, *P. australis*, *P. pungens* and *P. delicatissima*) from Irish waters, tested for ASP toxins in culture work, only one, *P. australis* (from the “*P. seriata*” group) was toxic.

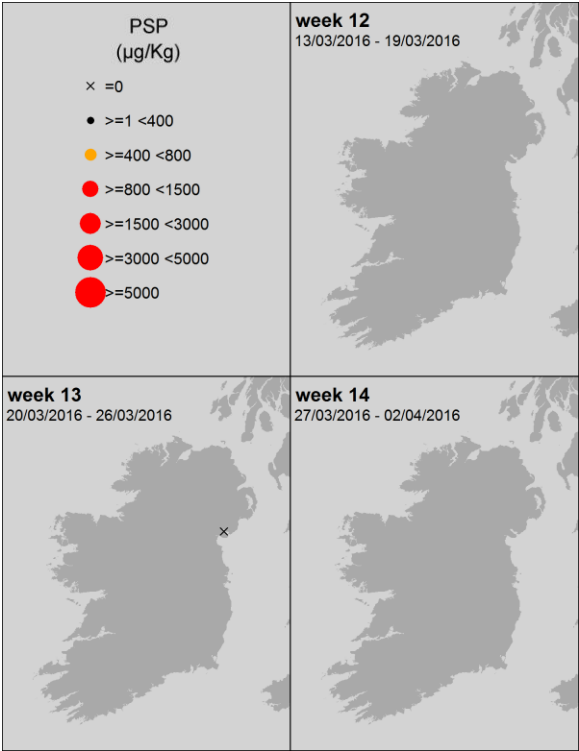
Ireland: Last 3 weeks of available National Monitoring Programme data



Alexandrium spp.

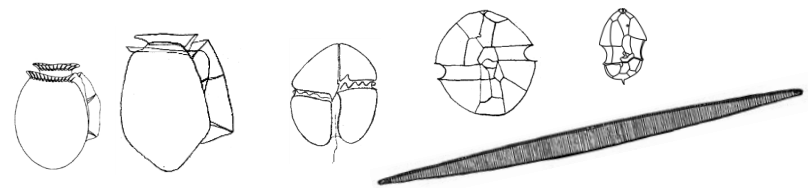


PSP



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

Ireland: **Biotoxins**



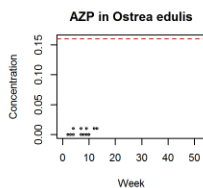
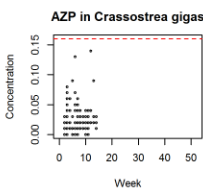
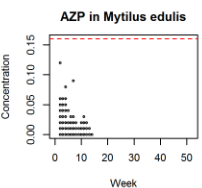
Toxin groups

mussels

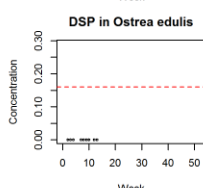
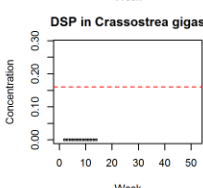
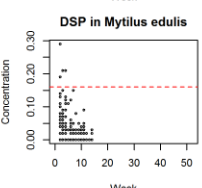
oysters

oysters

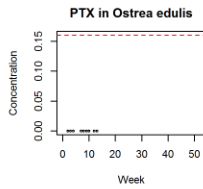
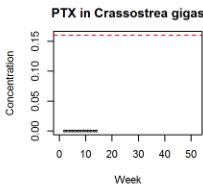
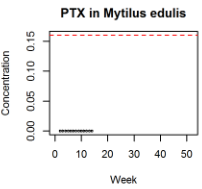
AZP
AZaspiracid
Poisoning



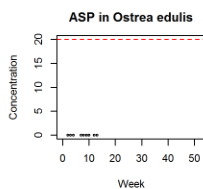
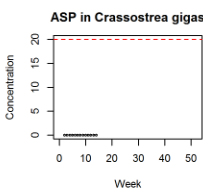
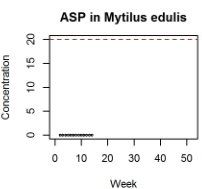
DSP
Diarrhetic
Shellfish
Poisoning



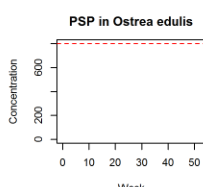
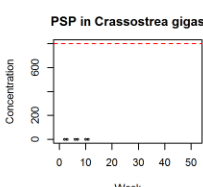
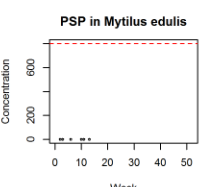
PTX
Pectenotoxin



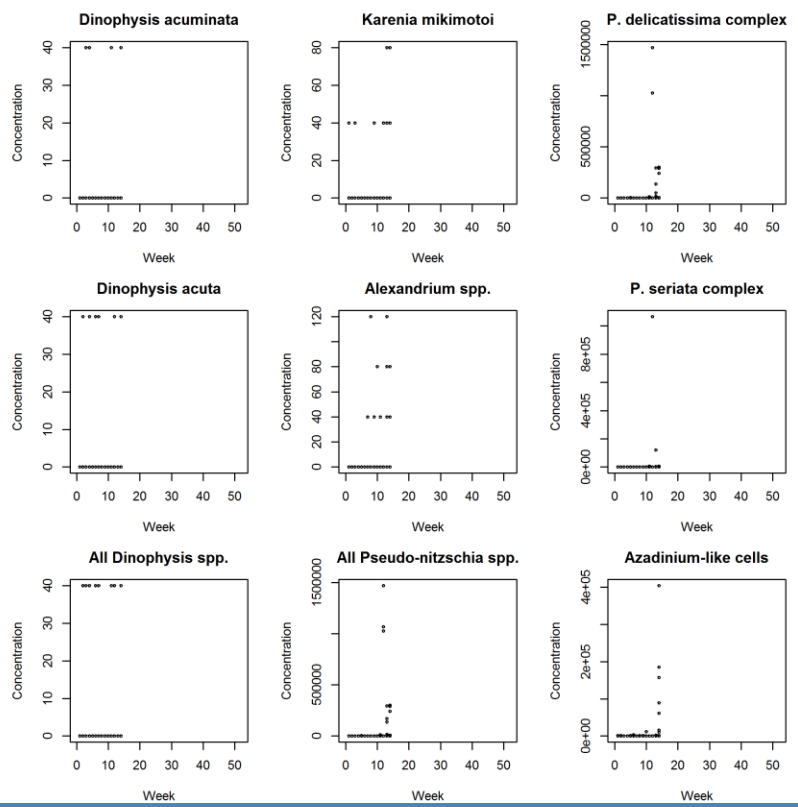
ASP
Amnesic
Shellfish
Poisoning



PSP
Paralytic
Shellfish
Poisoning



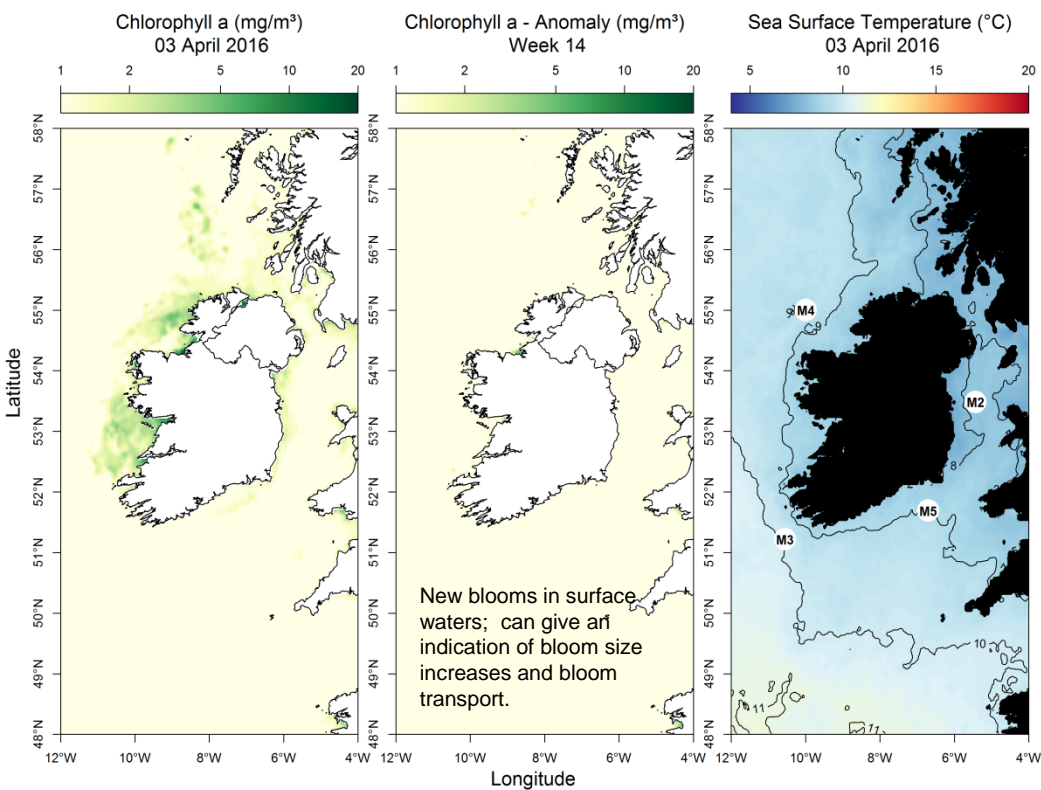
Ireland: **HABs**



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)

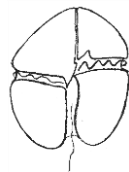
Offline
- SW coast (M3)

Offline
- SE coast (M5)

Offline

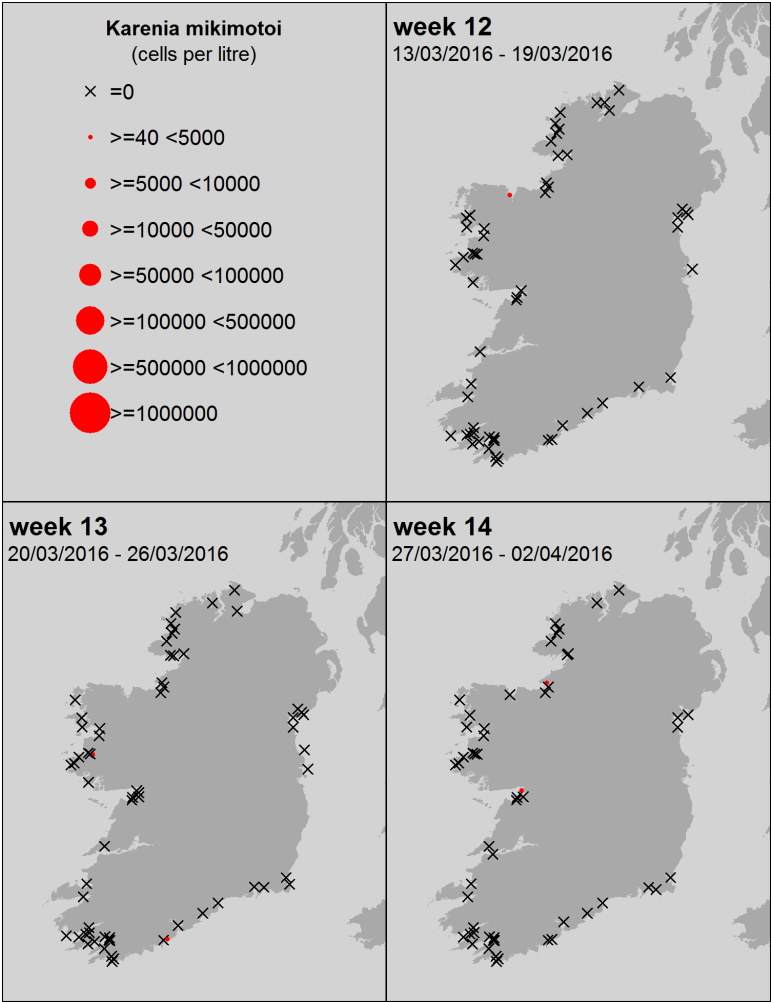
What phytoplankton were blooming at inshore coastal sites last week?

Region	Predominant Phytoplankton (most abundant taxa)	Cells/L (rounded)
north:	Diatoms:	
	<i>Porosira glacilis</i>	71,100
	<i>Chaetoceros (Hyalochaete) spp.</i>	2,200
	<i>Skeletonema spp.</i>	1,800
	Dinoflagellates:	
west:	<i>Scrippsiella spp.</i>	400
	Diatoms:	
	<i>Cylindrotheca closterium/ Nitzschia longissima</i>	32,600
	<i>Skeletonema spp.</i>	31,100
	<i>Thalassiosira spp.</i>	24,200
	<i>Chaetoceros (Hyalochaete) spp.</i>	7,100
	<i>Lauderia / Detonula sp</i>	3,100
	Dinoflagellates:	
	<i>Scrippsiella spp.</i>	900
	<i>Protoperidinium spp. 20-50um</i>	800
SW:	Others:	
	<i>Microflagellate sp.</i>	1,400
	Diatoms:	
	<i>Thalassiosira <20um</i>	45,800
	<i>Skeletonema spp.</i>	44,200
	<i>Cylindrotheca closterium/ Nitzschia longissima</i>	25,800
	<i>Leptocylindrus minimus</i>	11,400
	<i>Navicula spp. <25um</i>	4,200
	Dinoflagellates:	
	<i>Scrippsiella trochoideum</i>	1,600
	<i>Azadinium/heterocapsa spp.</i>	200
	Others:	
	<i>Haptophytes</i>	40,700
	<i>Euglena/Eutreptiella spp.</i>	7000
south:	Diatoms:	
	<i>Pennate diatom 20-50um</i>	78,700
	<i>Navicula spp. <25um</i>	75,800
	<i>Centric diatoms <20um</i>	46,200
	<i>Cylindrotheca closterium/ Nitzschia longissima</i>	40,400
	<i>Paralia sulcata</i>	26,800
	<i>Thalassiosira 20-50um</i>	17,300
	Others:	
	<i>Euglena/Eutreptiella spp.</i>	13,500
	<i>Ciliates</i>	3,300
east:	Diatoms:	
	<i>Skeletonema spp.</i>	613,300
	<i>Thalassiosira spp.</i>	384,800
	<i>Pseudo-nitzschia delicatissima complex</i>	292,200
	<i>Chaetoceros (Hyalochaete) spp.</i>	198,100
	<i>Asterionellopsis glacialis</i>	16,700
	Dinoflagellates:	
	<i>Gyrodinium spirale</i>	400



Karenia mikimotoi
(old name: *Gyrodinium aureolum*)

A *Karenia mikimotoi* bloom
is NOT expected this week

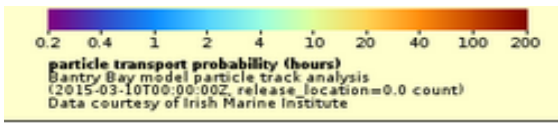


SOUTHWEST: Bantry Bay

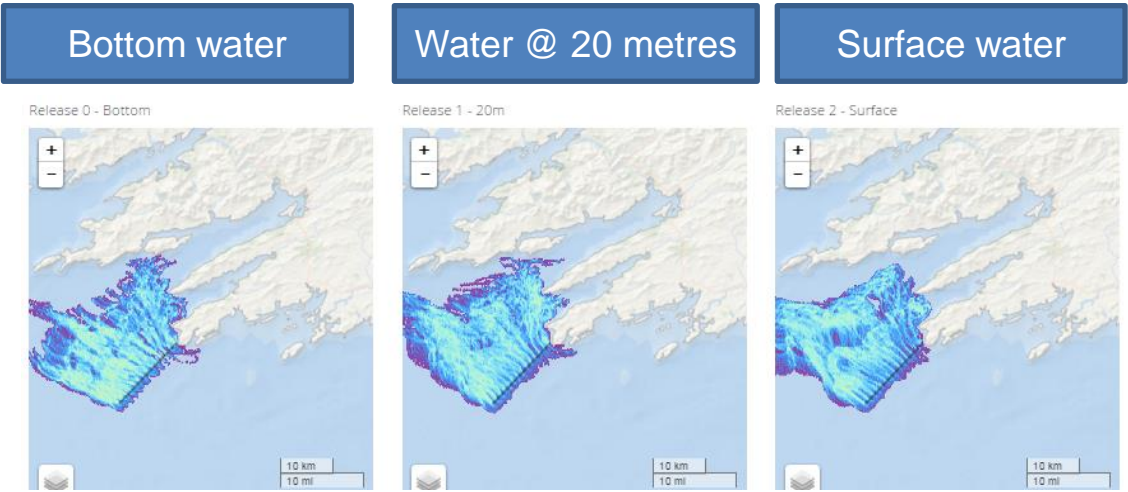
The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** (black lines off Mizen Head and the Mouth of Bantry Bay) and **water depths** (bottom, 20 metres and surface)

Reddish colours represent areas where phytoplankton remain longest

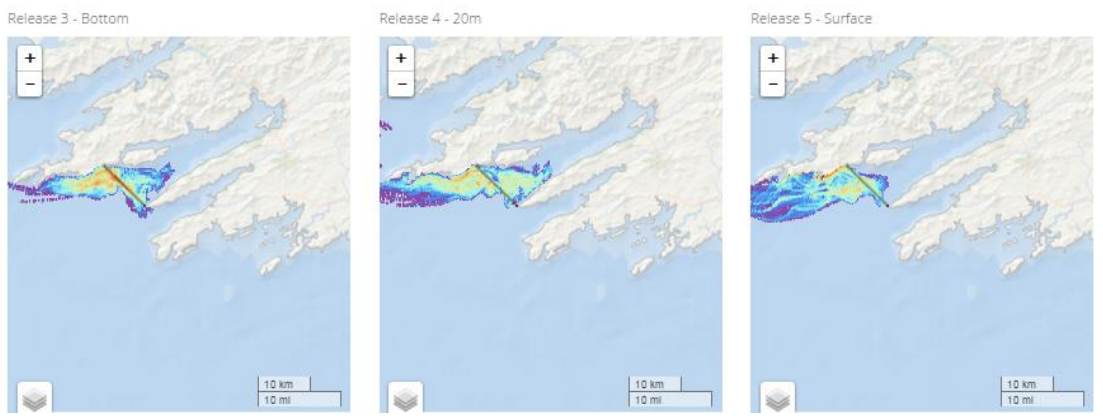
Cooler colours represent areas where phytoplankton remain for shorter periods



Forecast for the next 3 days



Predominantly North-western movement of water at depths. Possible inner bay intrusions.



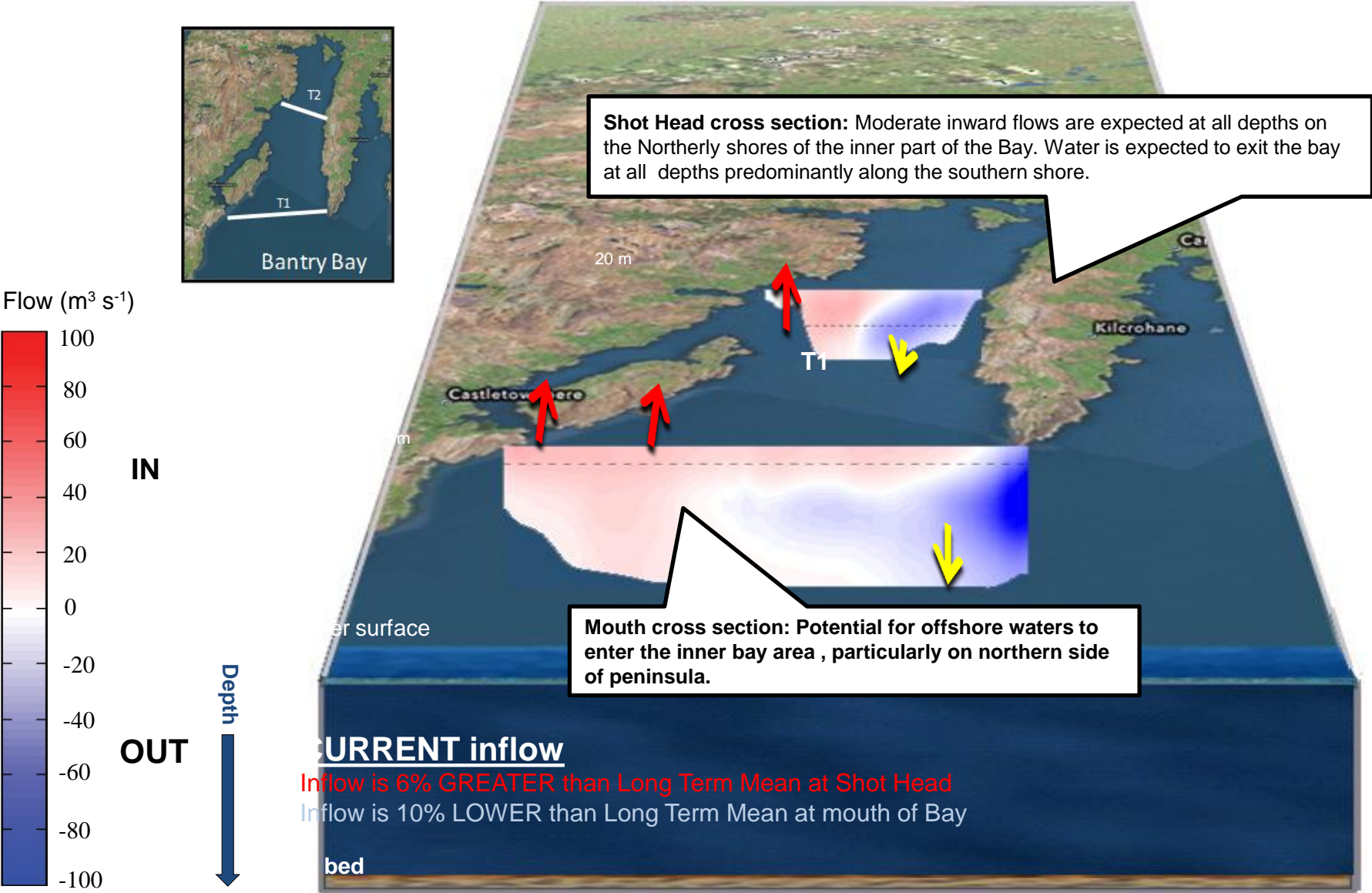
Potential inner bay intrusions from offshore waters , particularly at bottom and deeper waters.

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

Bantry Bay

Forecast for next 3 days

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

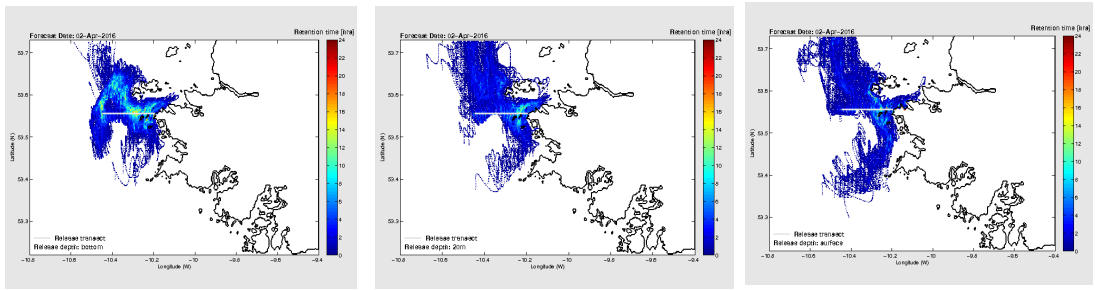
particle transport probability (hours)
Bantry Bay model particle track analysis
(2015-03-10T00:00:00Z, release_location=0.0 count)
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

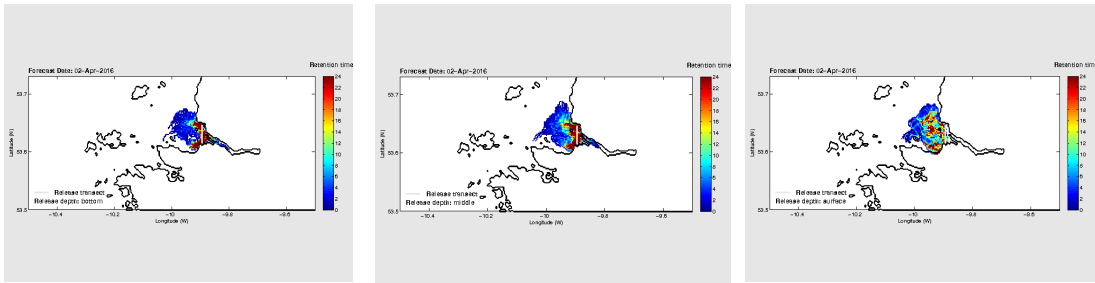
Bottom water

Water @ 20 metres

Surface water



Water movement mixed outside of bay mouth area. Strong multidirectional movement , particularly at depths leading to surface levels.

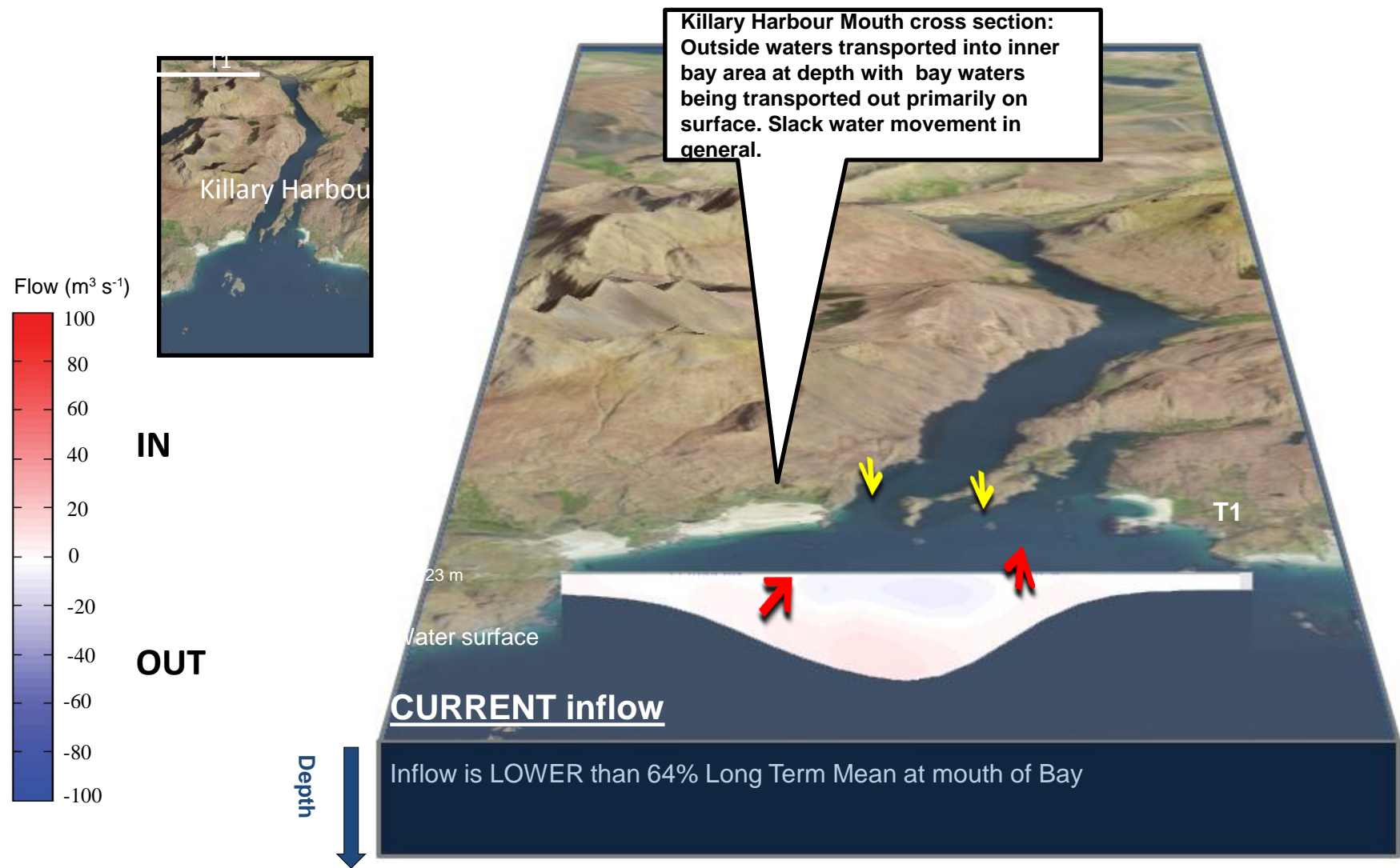


Potential for inner bay intrusions by outer bay waters ,predominantly at bottom and deeper water depths.

Killary Harbour

Forecast for next 3 days

3 day estimated water flows at the mouth of Killary Harbour



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

