

# Ireland: Current Conditions

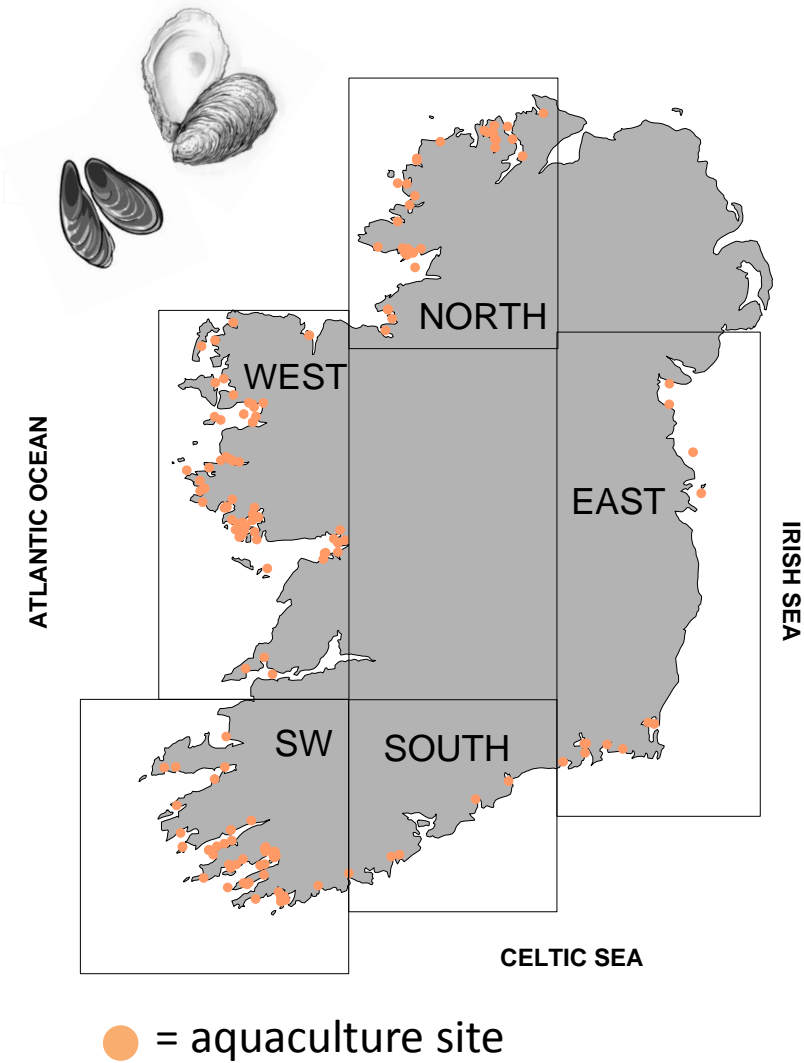
## Shellfish biotoxin report (last week)



**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**aspiracid **P**oisoning;  
DSP = **D**iarrhetic **S**hellfish **P**oisoning; PSP = **P**aralytic **S**hellfish **P**oisoning

### National Monitoring Programme Designated Sampling Sites



# Ireland: Predictions

## **Prediction for this week:**

ASP event: Low, but very slowly increasing

AZP event: Low to moderate

DSP event: Low

PSP event: Low

## **Why do we think this?**

ASP: Cell levels and related toxic results remain extremely low in all sites. This is historically the beginning of the trend period for this species so a level of caution should be exercised.

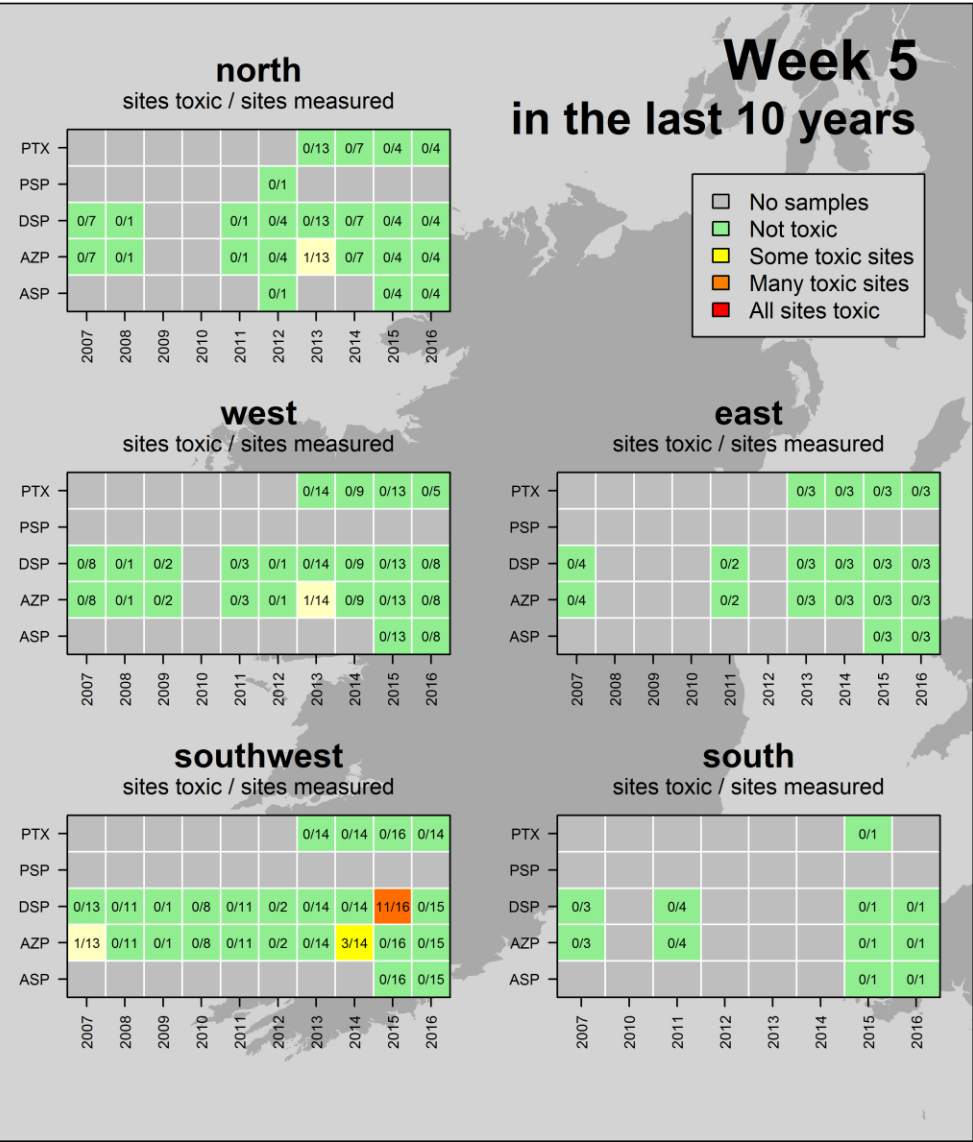
AZP: Low fluctuating levels of AZP continue to persist in specific sites in limited locations. Until environmental conditions change a level of risk still exists.

DSP: Low and decreasing levels of residual toxins still remain in limited specific sites. Environmental conditions currently would not indicate a new large scale event.

PSP: Environmental conditions are not conducive to any normal event at this time.

# Ireland: Historic Conditions

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



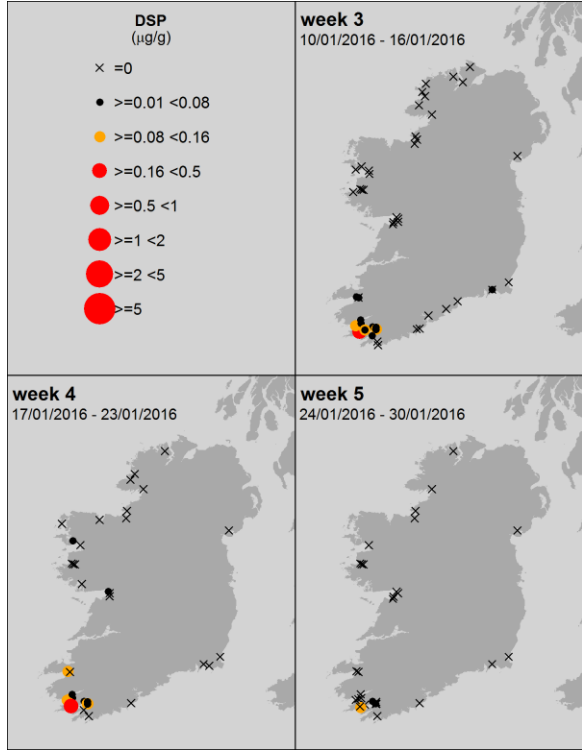
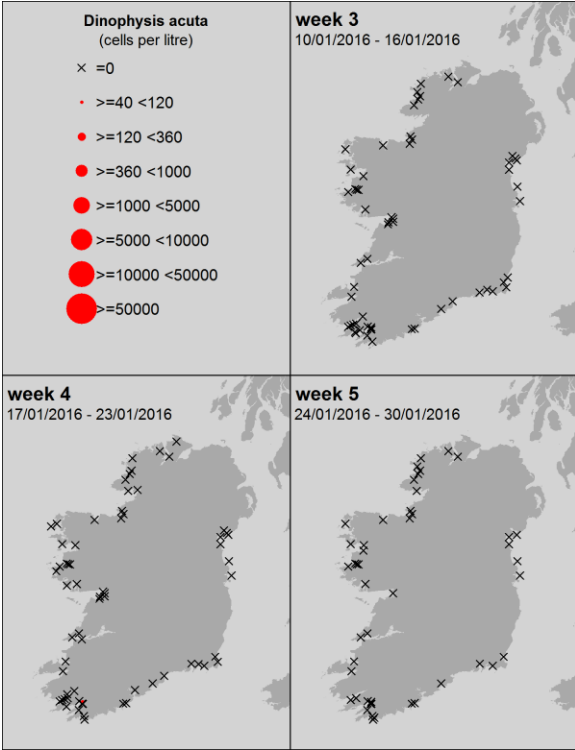
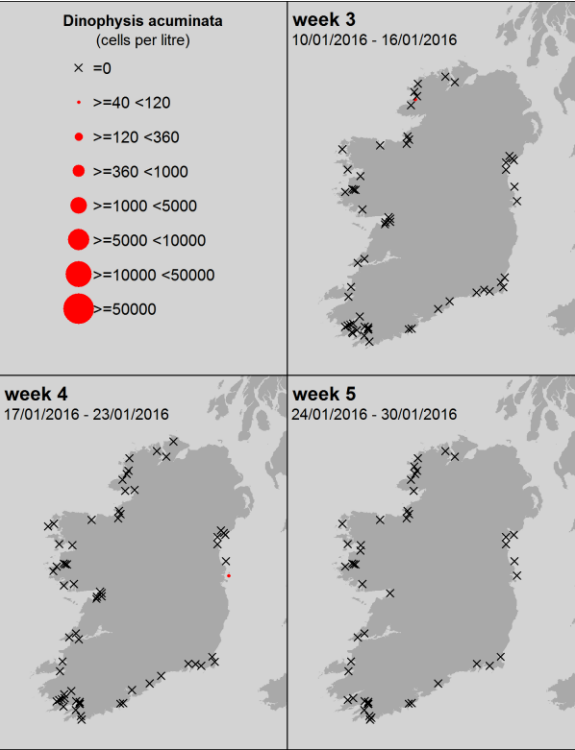
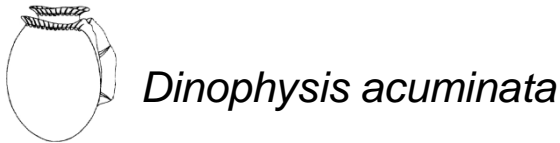
## Ireland HISTORIC TRENDS

**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



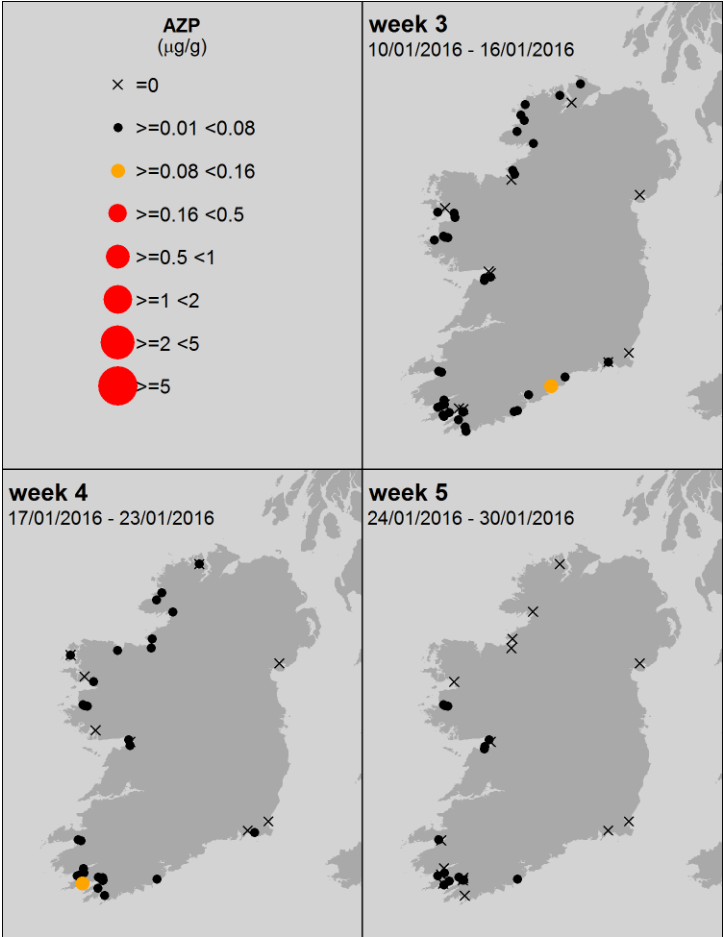
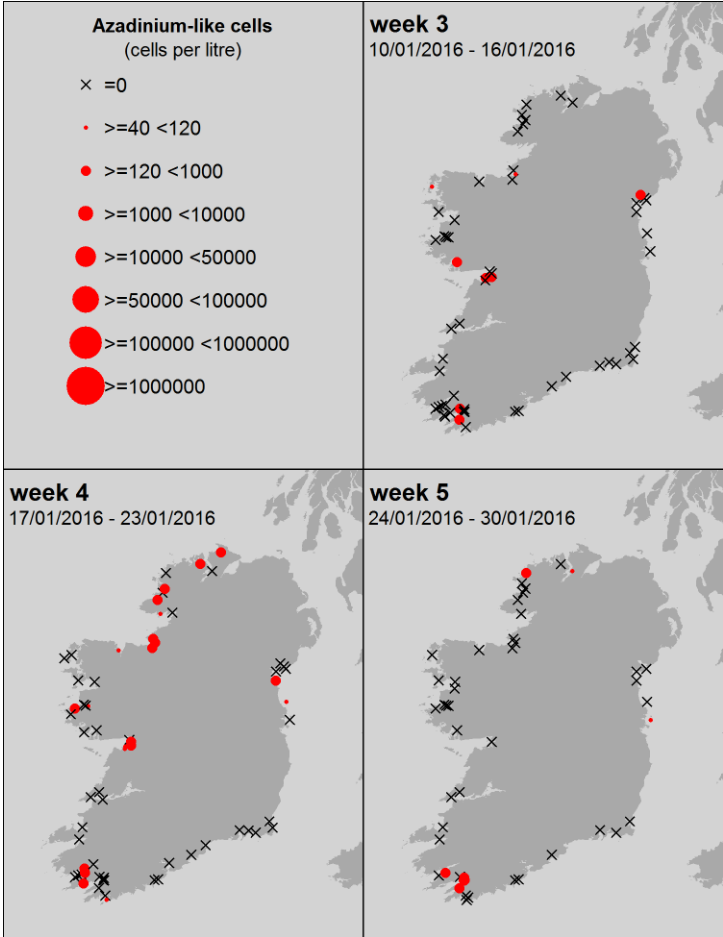
Ireland: Last 3 weeks of available National Monitoring Programme data



*Azadinium* – like spp.



AZP



Ireland: Last 3 weeks of available National Monitoring Programme data

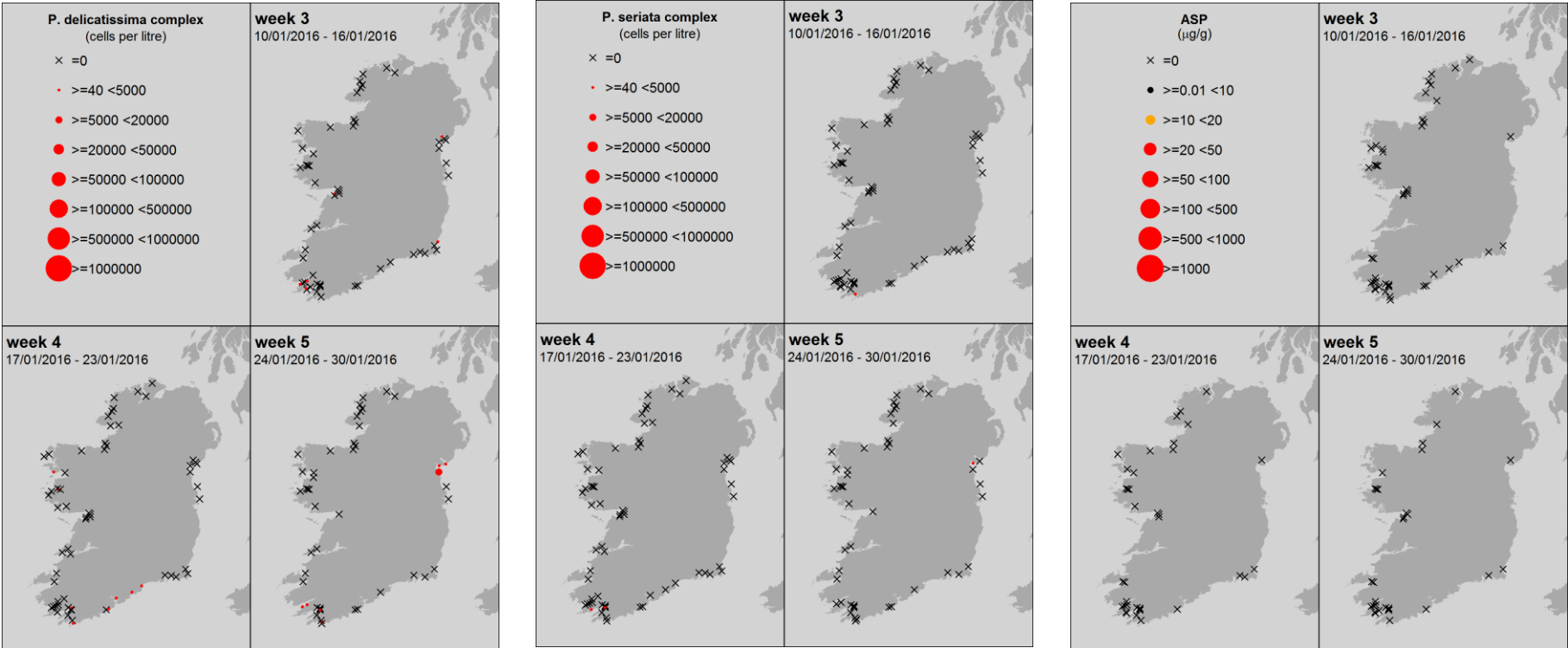
*Pseudo-nitzschia* spp.



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

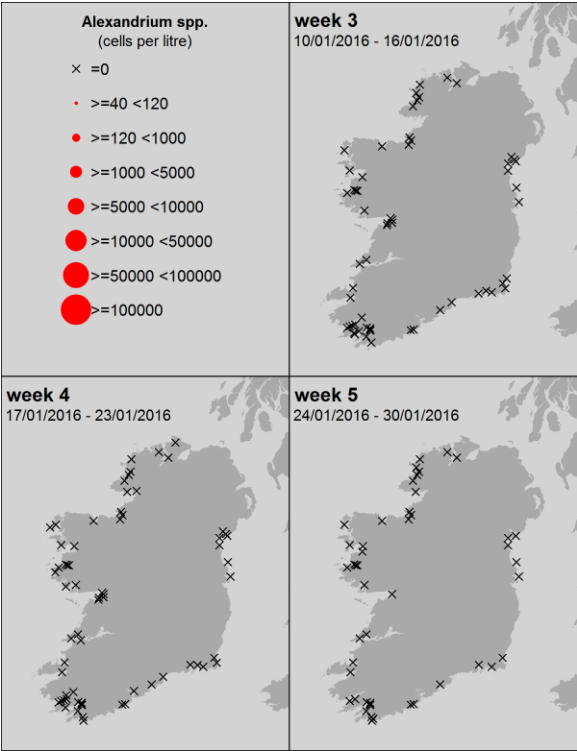


**Taken from the literature:** Of the 4 species (*P. fraudulenta*, *P. australis*, *P. pungens* and *P. delicatissima*) from Irish waters, tested for ASP toxins in culture work, only one, *P. australis* (from the “*P. seriata*” group) was toxic.

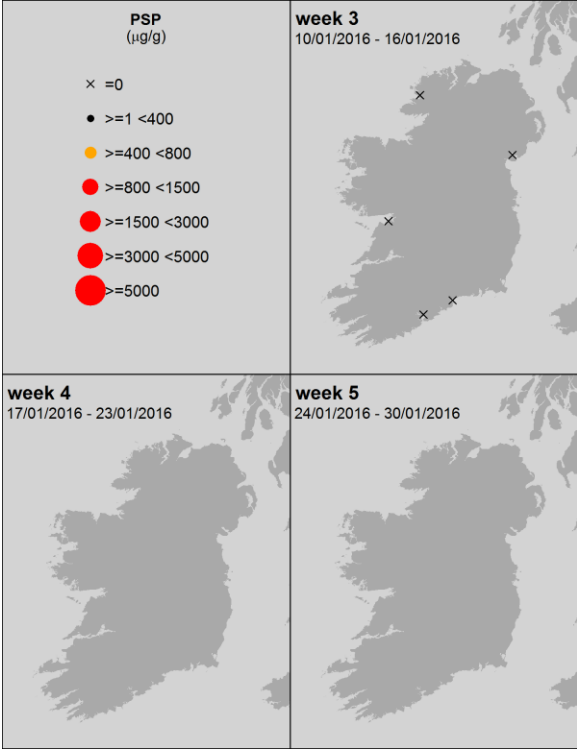
Ireland: Last 3 weeks of available National Monitoring Programme data



Alexandrium spp.



PSP



# Ireland HAB & Biotoxin temporal trends

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

## Ireland: Biotoxins



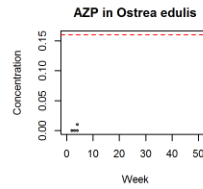
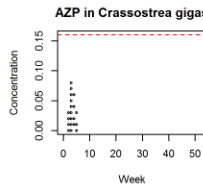
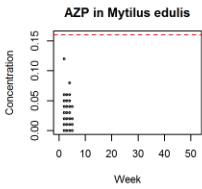
Toxin groups

mussels

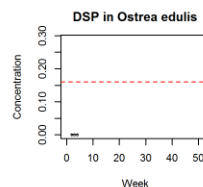
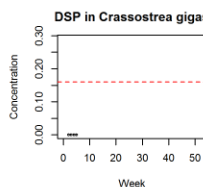
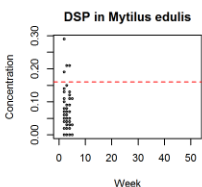
oysters

oysters

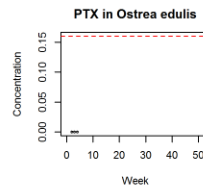
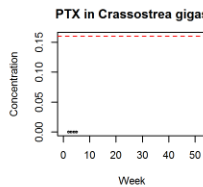
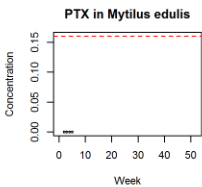
**AZP**  
AZaspiracid  
Poisoning



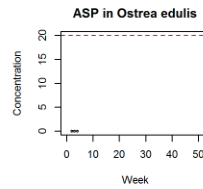
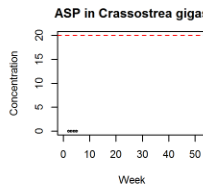
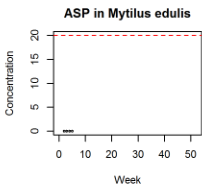
**DSP**  
Diarrhetic  
Shellfish  
Poisoning



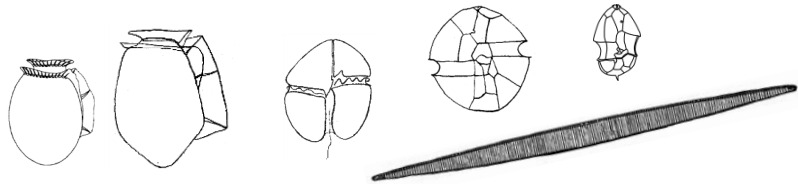
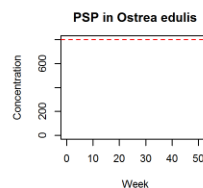
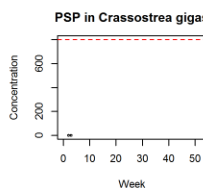
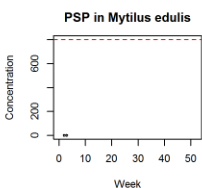
**PTX**  
Pectenotoxin



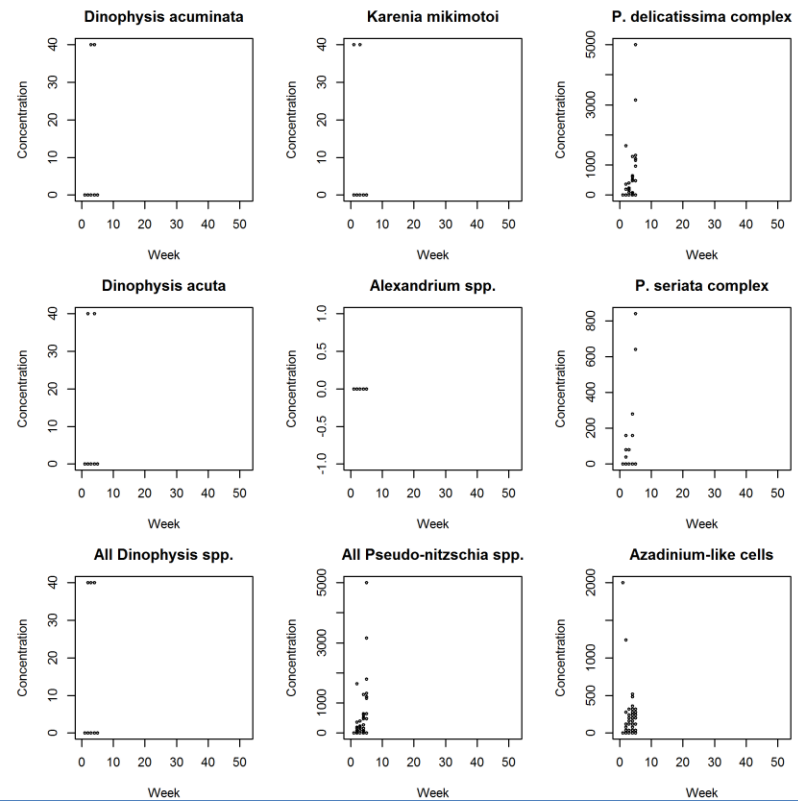
**ASP**  
Amnesic  
Shellfish  
Poisoning



**PSP**  
Paralytic  
Shellfish  
Poisoning



## Ireland: HABs

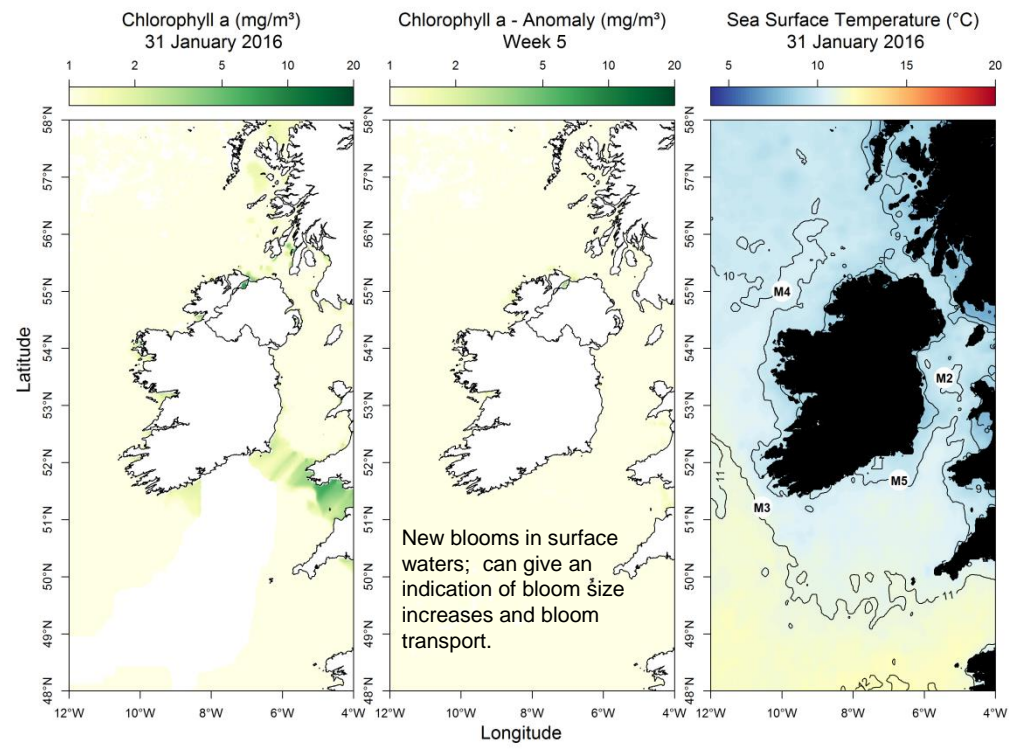


EU Regulatory Limit: ASP 20 µg/g; AZP 0.16 µg/g; DSP 0.16 µg/g; PSP 800 µg/kg

Regulatory limit = ■■■■■



Most up to date available satellite data

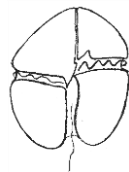


**SST (°C) anomaly for last week:**  
Data taken from the Irish data buoy network where the anomaly is the weekly difference in SST compared to the long term mean (~ 10 yrs)

- NW coast (M4)**    above average by 0.64 °C
- SW coast (M3)**    Offline
- SE coast (M5)**    Offline

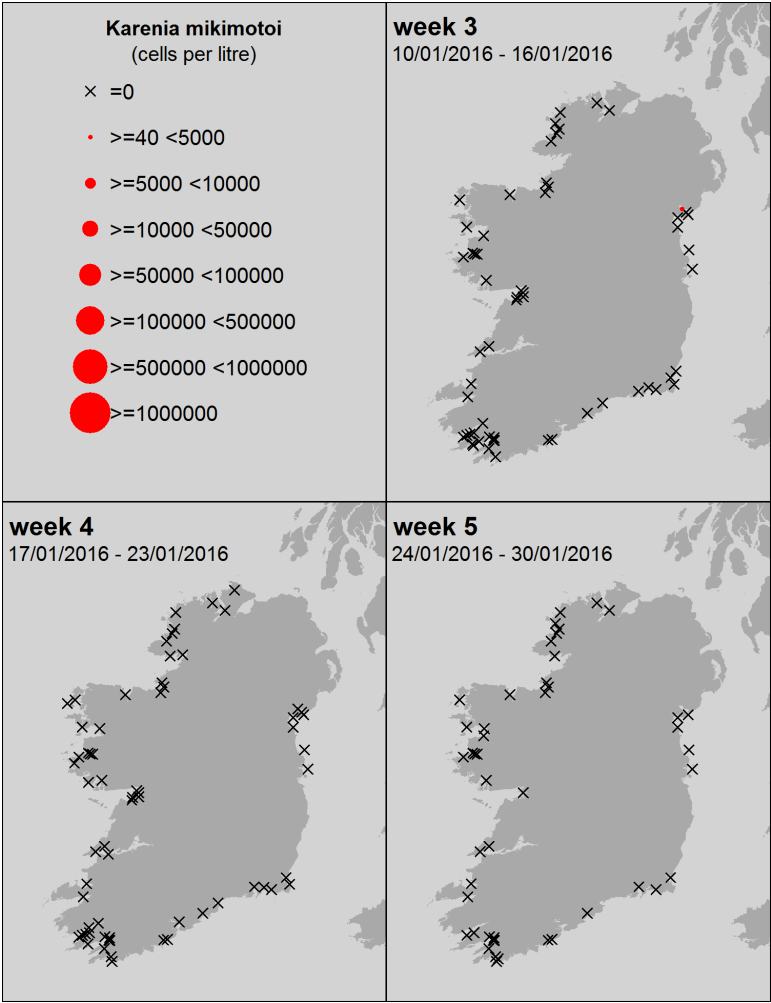
What phytoplankton were blooming at inshore coastal sites last week?

Week 5			
Region	Predominant Phytoplankton (most abundant taxa)	Cells/L	Cells/L (rounded)
north:	<b>Diatoms:</b>		
	Pennate diatom	21,888	22,000
	<i>Striatella</i> spp	3,080	3,000
	<b>Dinoflagellates:</b>		
	<i>Azadinium/heterocapsa</i> spp.	240	0
	<b>Others:</b>		
	Cryptophyte	200	0
west:	<b>Diatoms:</b>		
	<i>Paralia</i> spp.	4,280	4,000
	Pennate diatom	2,000	2,000
	<b>Dinoflagellates:</b>		
	<i>Scrippsiella</i> spp.	40	0
	<b>Others:</b>		
	Microflagellate	520	1,000
SW:	<b>Diatoms:</b>		
	Pennate diatom	80,999	81,000
	Navicula<25	74,186	74,000
	<b>Dinoflagellates:</b>		
	<i>Azadinium/heterocapsa</i> spp.	320	0
	<b>Others:</b>		
	Haptophytes	37,840	38,000
	Rhaphidophytes	3,720	4,000
	Cilliates	2,200	2,000
south:	<b>Diatoms:</b>		
	Pennate diatom	79,485	79,000
	<b>Others:</b>		
	Haptophytes	38,240	38,000
	Cilliates	1,880	2,000
east:	<b>Diatoms:</b>		
	<i>Paralia sulcata</i>	6,040	6,000
	<i>Pseudo-nitzschia delicatissima</i> complex	5,000	5,000
	<b>Others:</b>		
	Cilliates	160	0



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

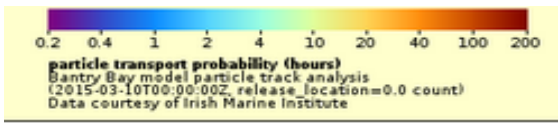
A *Karenia mikimotoi* bloom  
is NOT expected this week



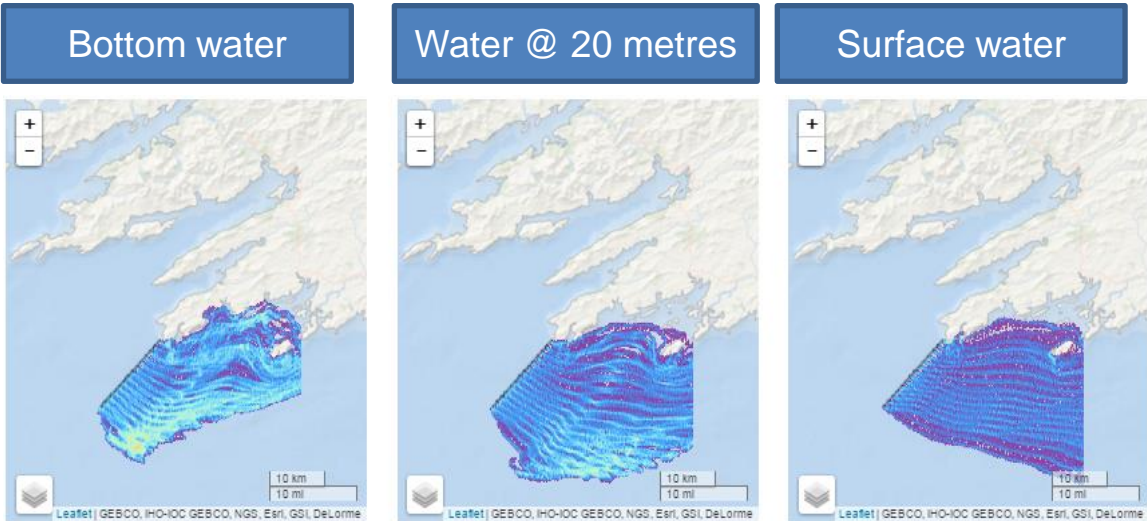
## SOUTHWEST: Bantry Bay

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)

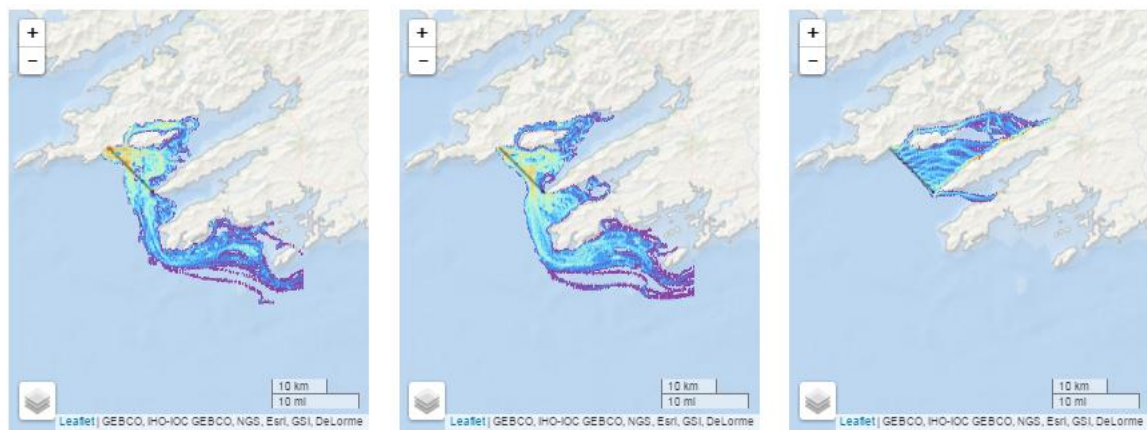
Reddish colours represent areas where phytoplankton remain longest  
Cooler colours represent areas where phytoplankton remain for shorter periods



### Forecast for the next 3 days



South/South easterly movement of water at all depths a dominant feature.



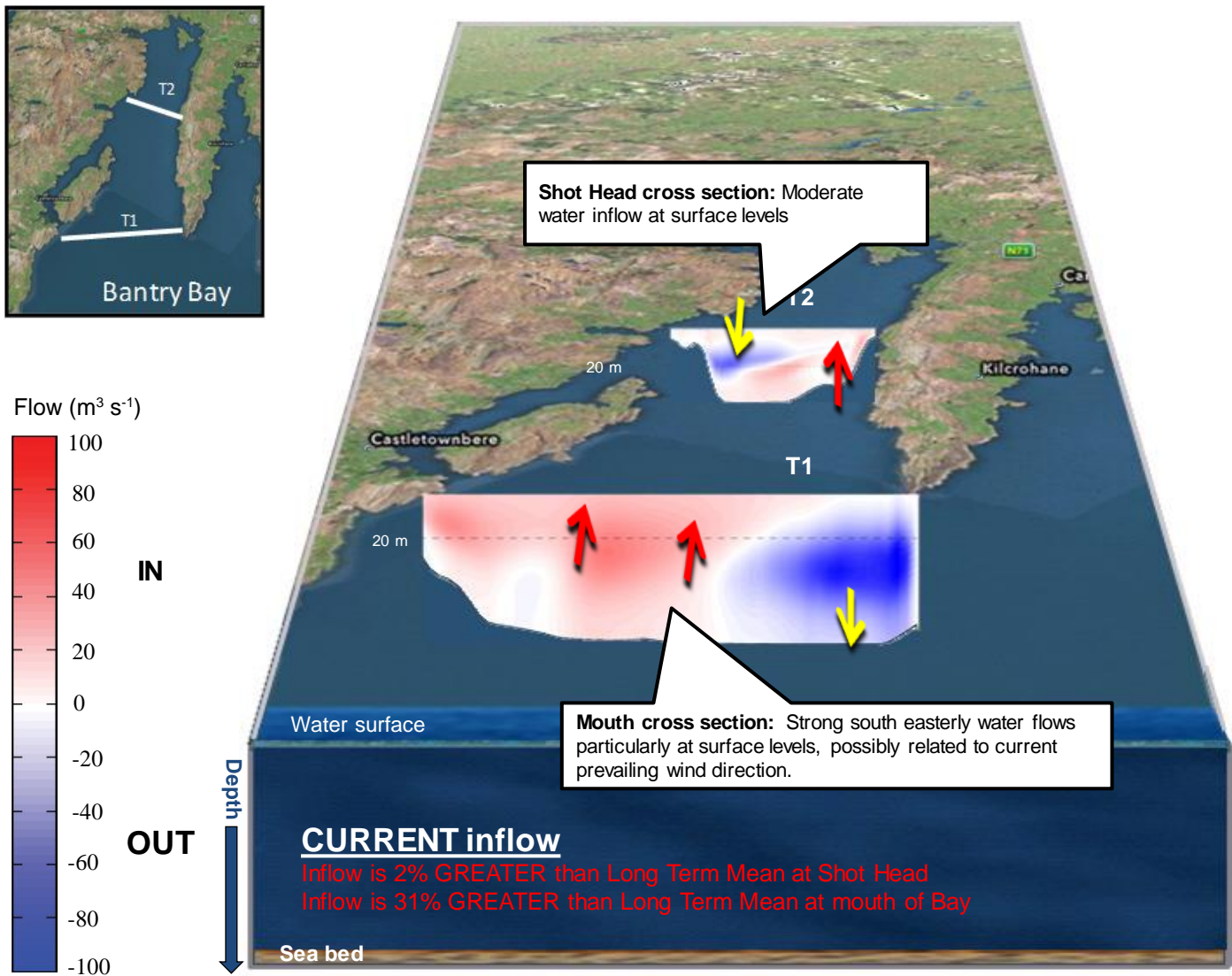
While waters may be moving in a southerly direction, the easterly component of transport could allow bay intrusions, particularly at surface levels.

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

# Bantry Bay

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

Forecast for next 3 days



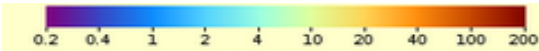


WEST: Killary Harbour

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

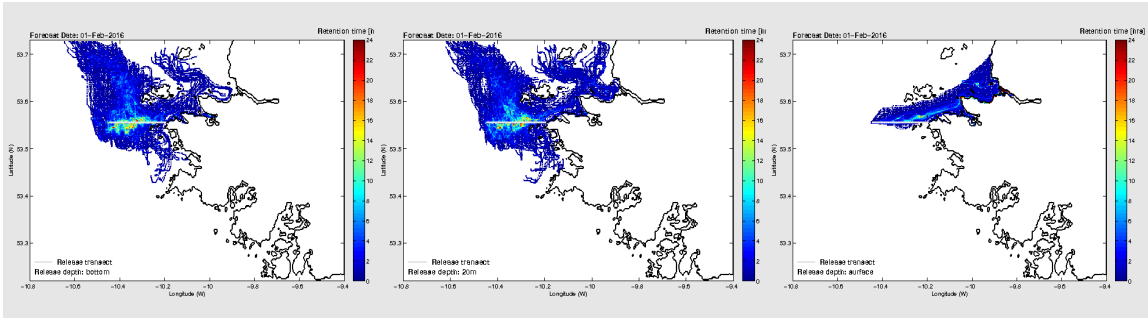


0.2 0.4 1 2 4 10 20 40 100 200

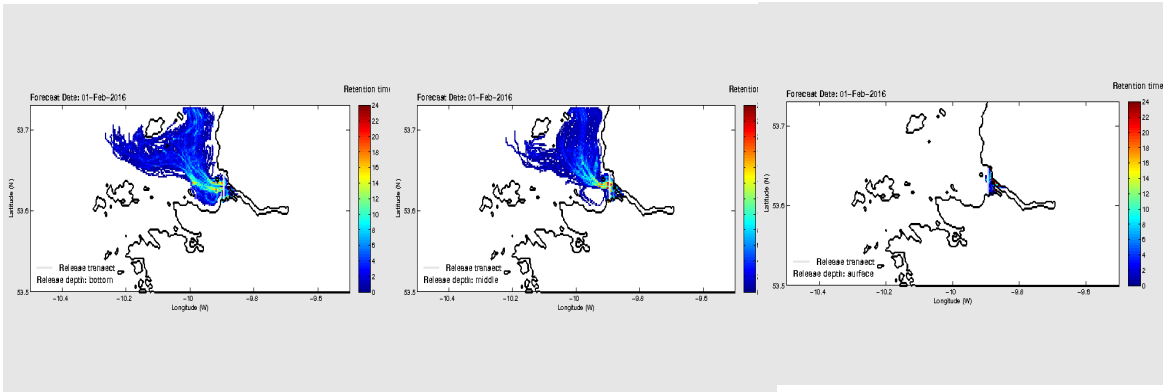
particle transport probability (hours)  
Bantry Bay model particle track analysis  
(2015-03-10T00:00:00Z, release\_location=0.0 count)  
Data courtesy of Irish Marine Institute

Forecast for the next 3 days

- Bottom water
- Water @ 20 metres
- Surface water



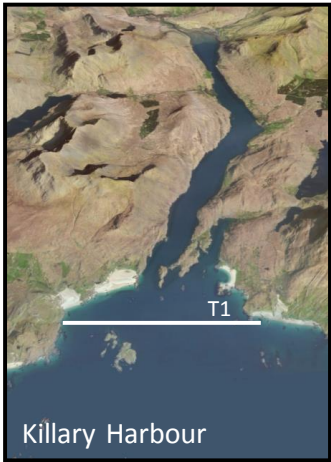
Predominately North/North easterly Flow at all depths leading to surface waters intrusions into bay areas.



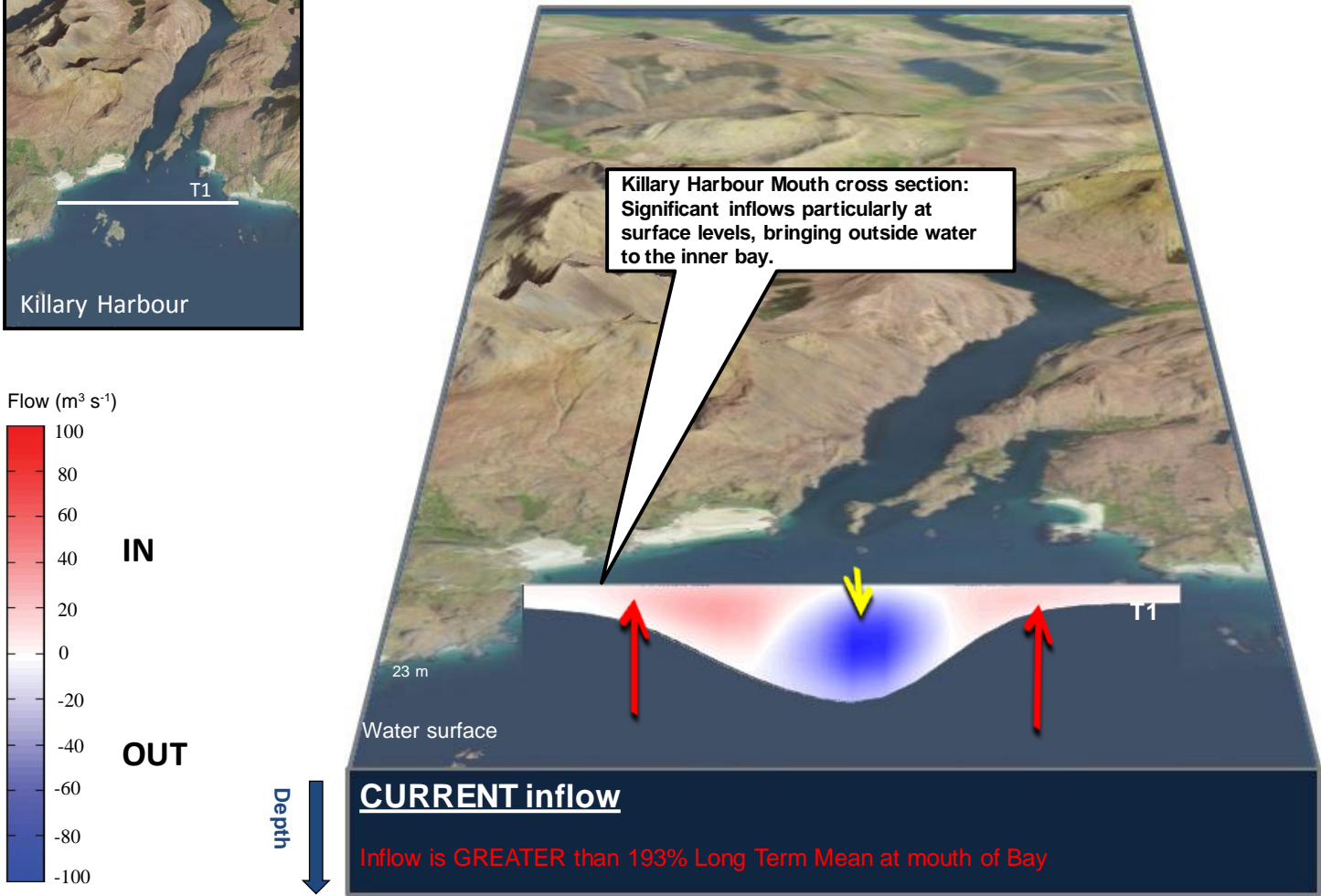
Northerly flows of water transport. Dominant at depth while Easterly movement a feature of surface water.

# 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

