

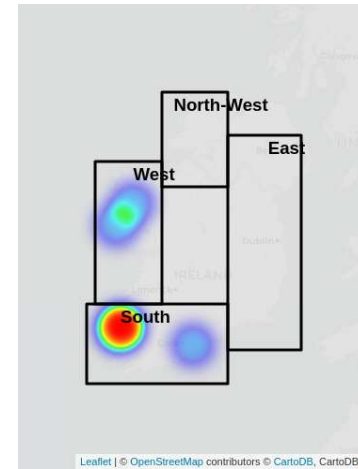
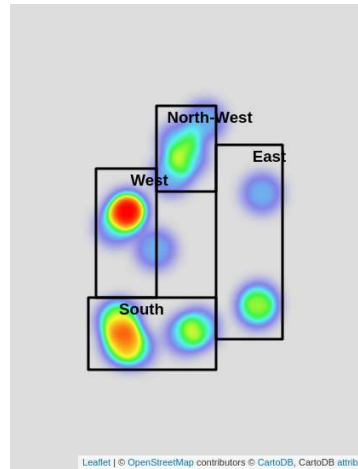
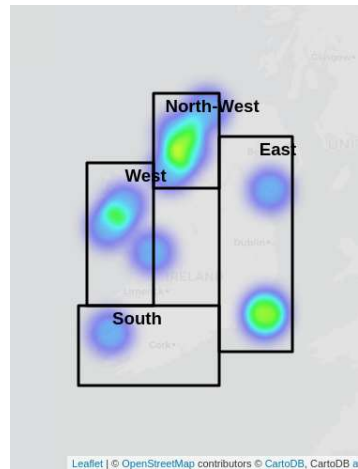
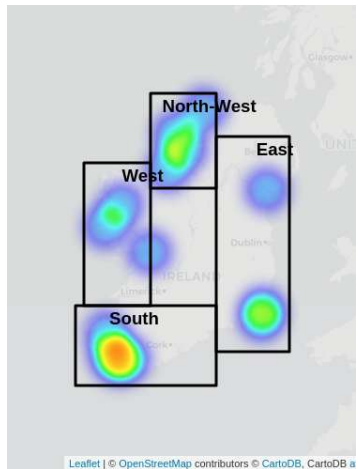
Diarrhetic Shellfish Toxins

Azaspiracid Shellfish Toxins

Amnesic Shellfish Toxins

Paralytic Shellfish Toxins

Yessotoxins



Toxic Sites	0
-------------	---

0

Analysed Sites	30
----------------	----

30

Toxic Sites	0
-------------	---

0

Analysed Sites	30
----------------	----

30

Toxic Sites	0
-------------	---

0

Analysed Sites	31
----------------	----

31

Toxic Sites	0
-------------	---

0

Analysed Sites	7
----------------	---

7

Toxic Sites	0
-------------	---

0

Analysed Sites	24
----------------	----

24

AST: (Amnesic shellfish toxin) In Bantry Bay, *Pseudo-nitzschia* species cell levels have reduced and no toxins observed over a 11 week decreasing trend, *Pseudo-nitzschia* species also reduced Kenmare Bay, Moderate to low risk in the SW still & caution advised.

AZA: (Azaspiracid toxin) Low risk. Azadinium spp. counts indicate presence and spread of potential cells on all coasts. Caution advised.

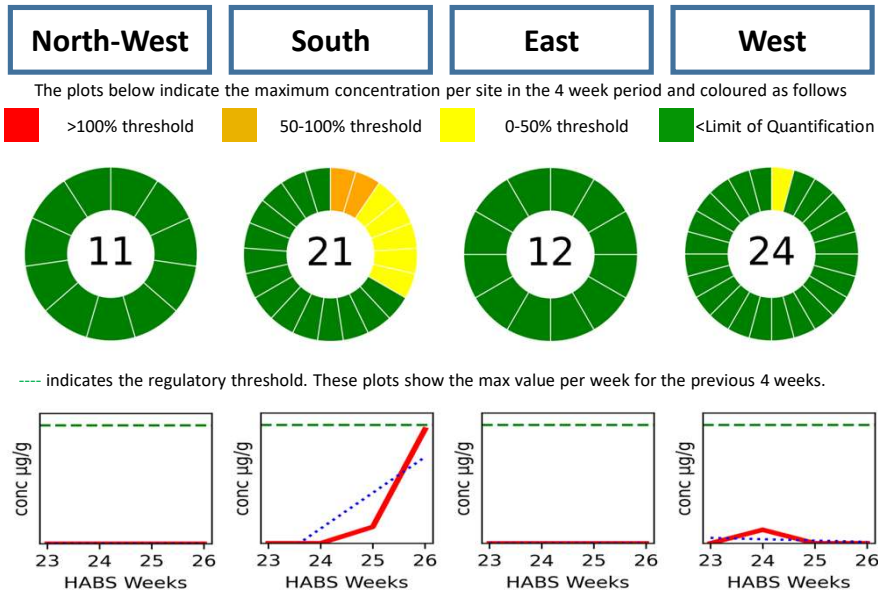
DST: (Dinophysis shellfish toxin) High Risk Quantifiable DST concentrations have been observed in nearly all samples from Bantry & Dunmanus this week, all below regulatory levels, with Snave CK-BN-SE the highest concentration just under reg levels at 0.15µg/g, as there have been elevated Dinophysis counts observed in the Southwest which would indicate an increased risk of DSP toxicity in shellfish.

PST: (Paralytic shellfish toxins) Low/Medium Risk levels are present in Castlemaine Harbour where Alexandrium spp. cells have been observed and quantifiable levels of PST below regulatory limits detected. Caution advised especially on these coasts. Low risk in all other sites.

Diarhetic Shellfish Toxins & *Dinophysis* species

Regional 4-Week Trends 31/05/26 - 27/06/26

In this 4 week period there were 163 Samples tested for DST. These samples were collected at 68 Sites around the country. Resulting in 0 Site(s) with values above the regulatory limit of 0.16 µg/g



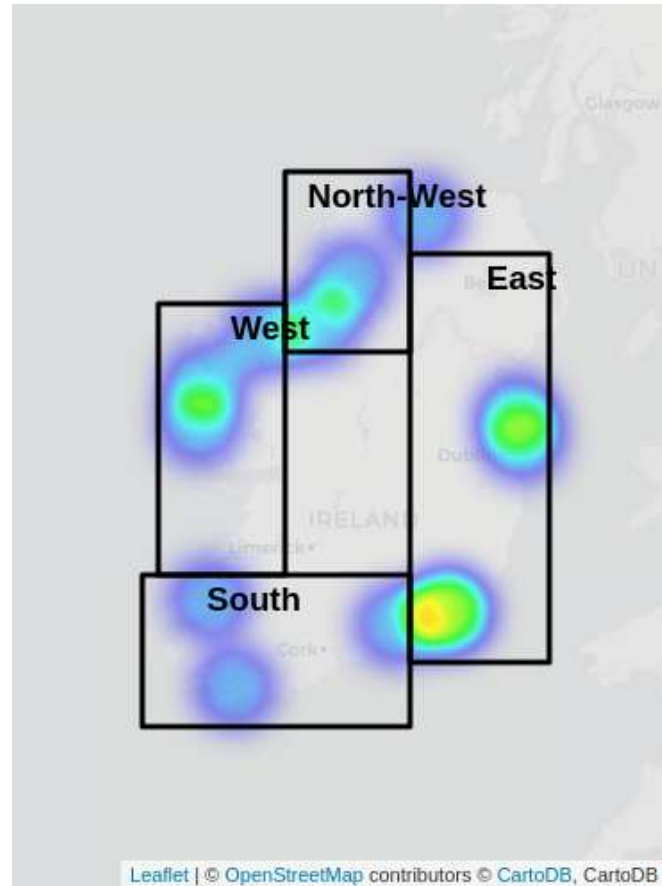
Risk: **Low** **Medium** **Low** **Low**

Trend:

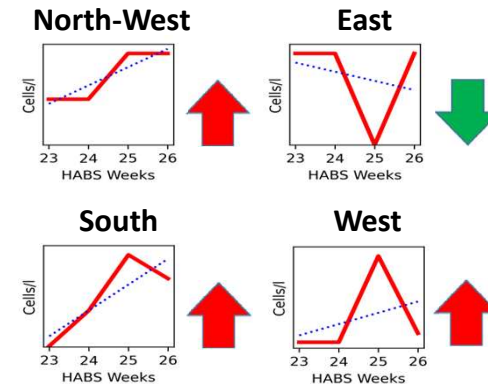
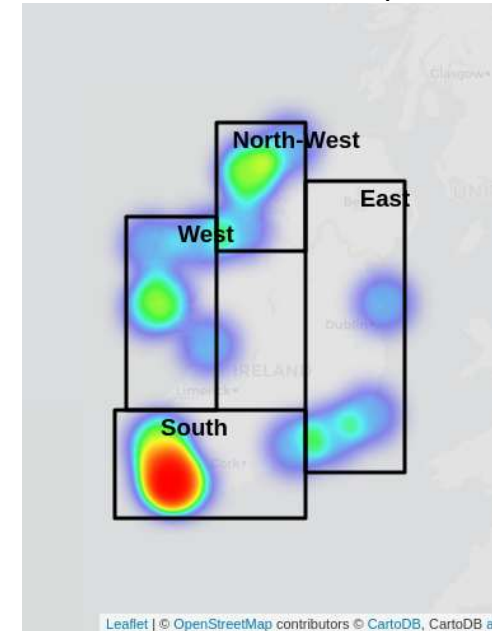
Risk:

High Risk Quantifiable DST concentrations have been observed in nearly all samples from Bantry & Dunmanus this week, all below regulatory levels. *Dinophysis* counts have been observed in the Southwest which would indicate an increased risk of DSP toxicity in shellfish.

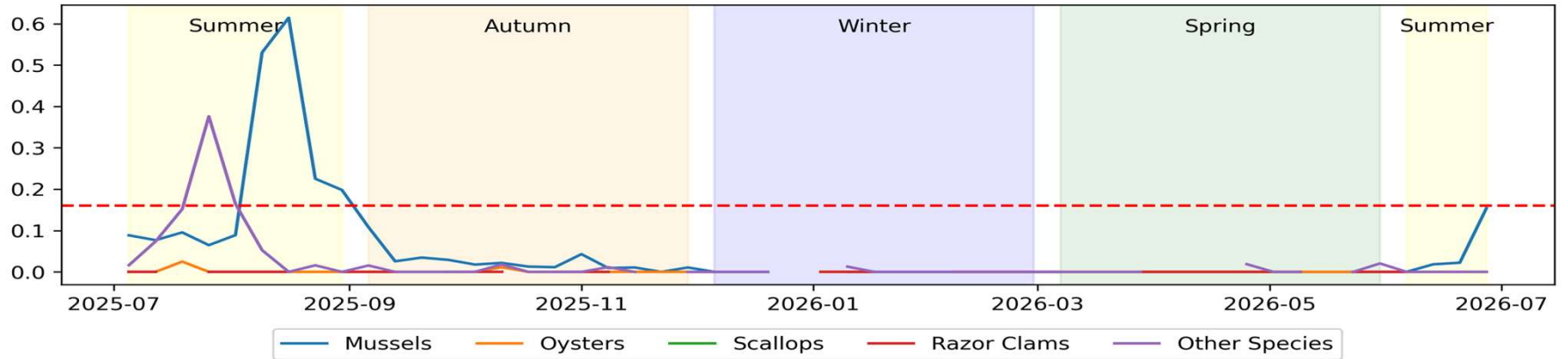
Diarhetic Shellfish Toxins National 4-Week Heatmap



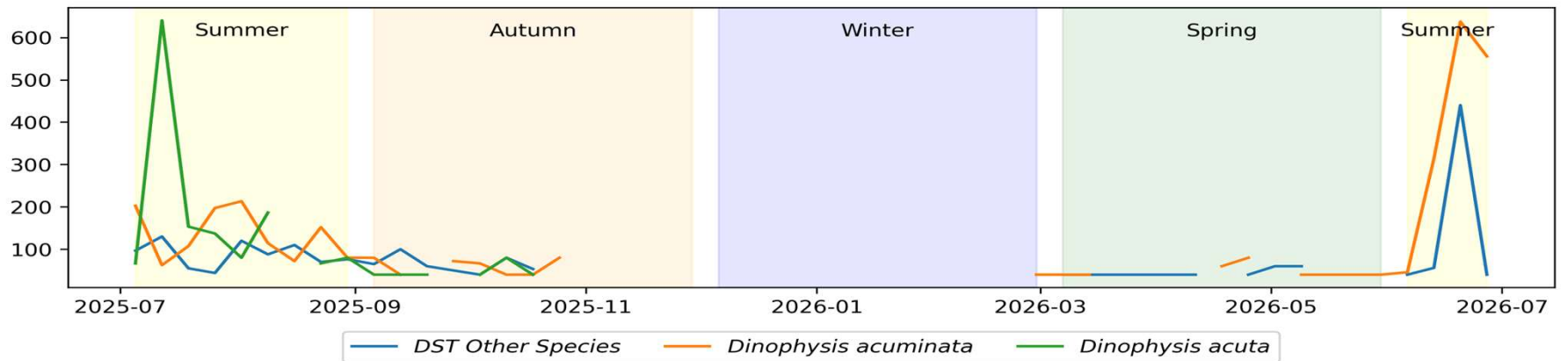
Phytoplankton *Dinophysis* spp. 4 Week Heatmap



Trend of Maximum Toxin concentrations in Shellfish Species (measured in $\mu\text{g/g}$)



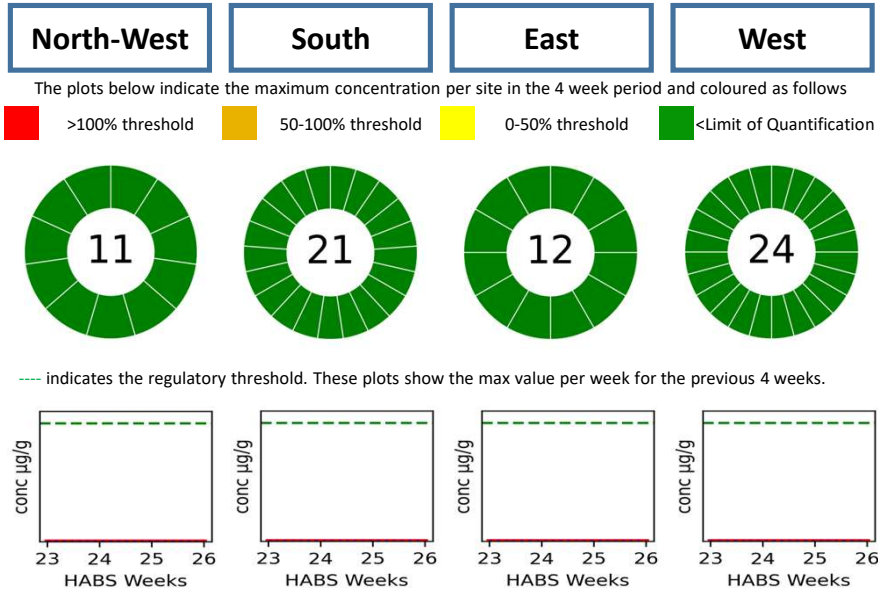
Trend of Average Counts of Toxin Causing PhytoPlankton Species Per Week (measured in Cells per Litre)



Azspiracid Shellfish Toxins & *Azadinium* species

Regional 4-Week Trends 31/05/26 - 27/06/26

In this 4 week period there were 163 Samples tested for AZT. These samples were collected at 68 Sites around the country. Resulting in 0 Site(s) with values above the regulatory limit of 0.16 µg/g



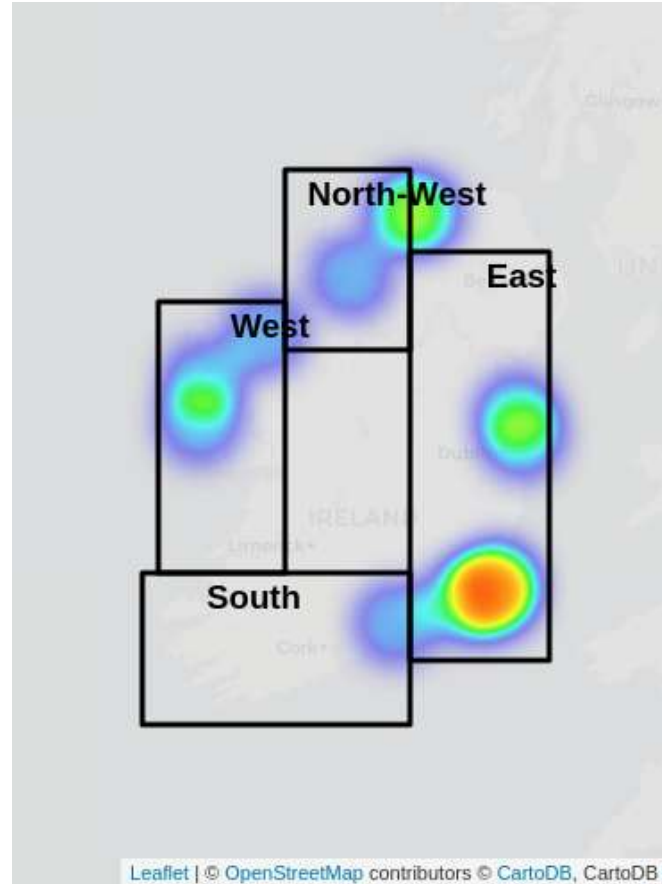
Risk: **Low** **Low** **Low** **Low**

Trend:

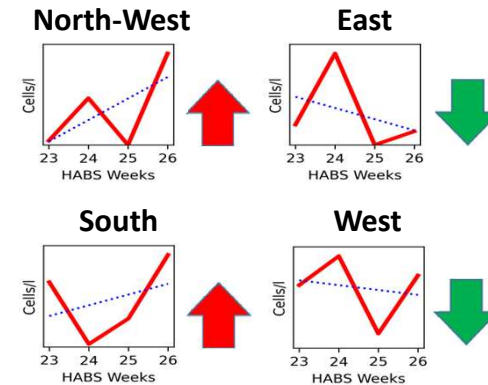
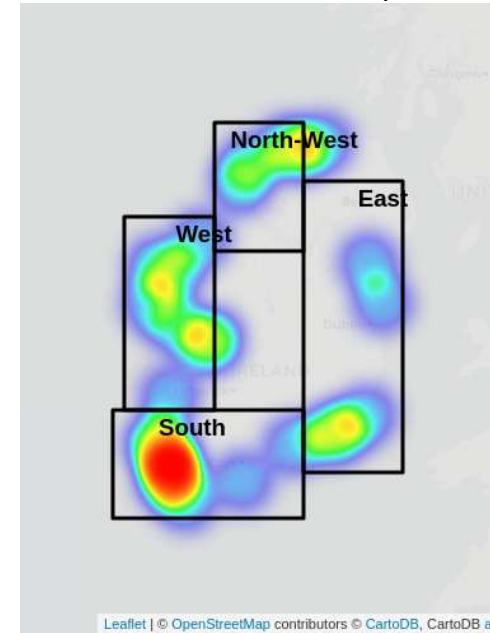
Risk:

Low risk *Azadinium* spp. counts indicate presence and spread of potential cells on all coasts.

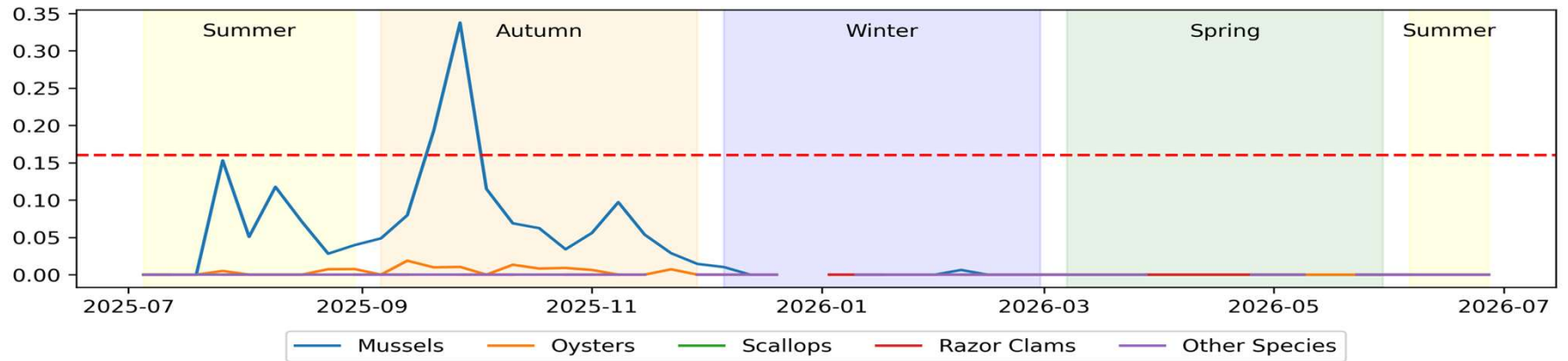
Azspiracid Shellfish Toxins National 4-Week Heatmap



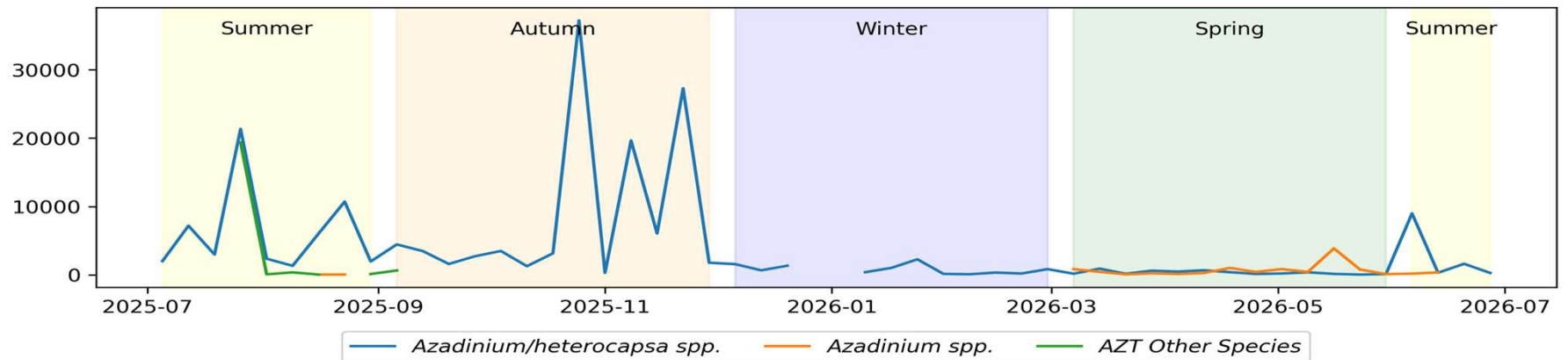
Phytoplankton *Azadinium* spp. 4 Week Heatmap



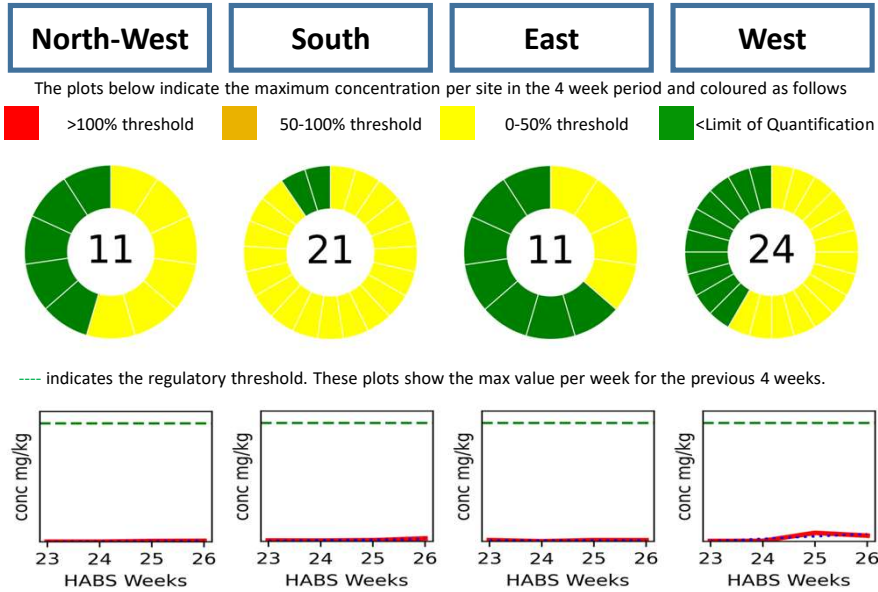
Trend of Maximum Toxin concentrations in Shellfish Species (measured in $\mu\text{g/g}$)



Trend of Average Counts of Toxin Causing PhytoPlankton Species Per Week (measured in Cells per Litre)



In this 4 week period there were 163 Samples tested for AST. These samples were collected at 67 Sites around the country. Resulting in 0 Site(s) with values above the regulatory limit of 20.0 mg/kg

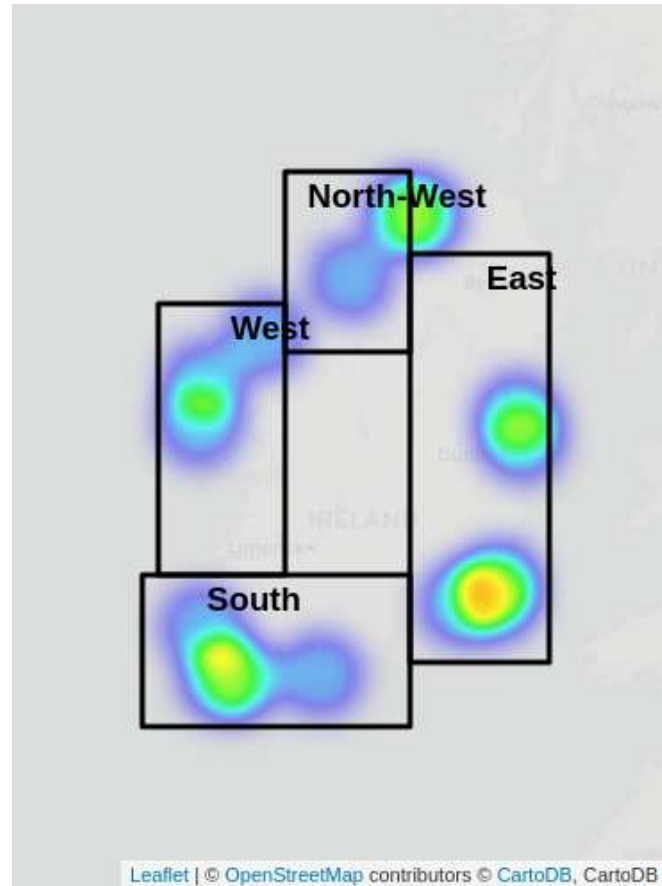


Risk: **Low** **Low** **Low** **Low**

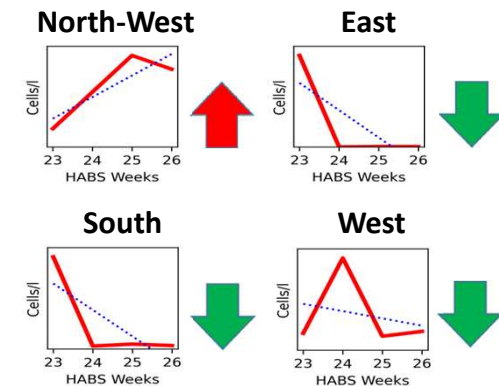
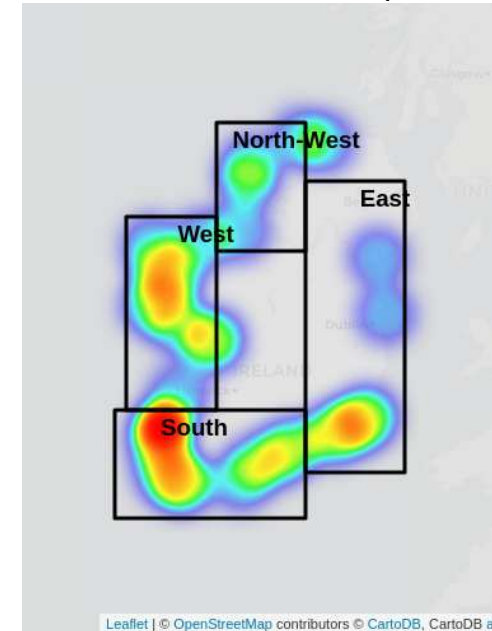
Trend:

Low Risk:
In the Bantry Bay & Kenmare Bay *Pseudo-nitzschia* have greatly reduced
The related ASP toxins are not present in the shellfish in either bay.

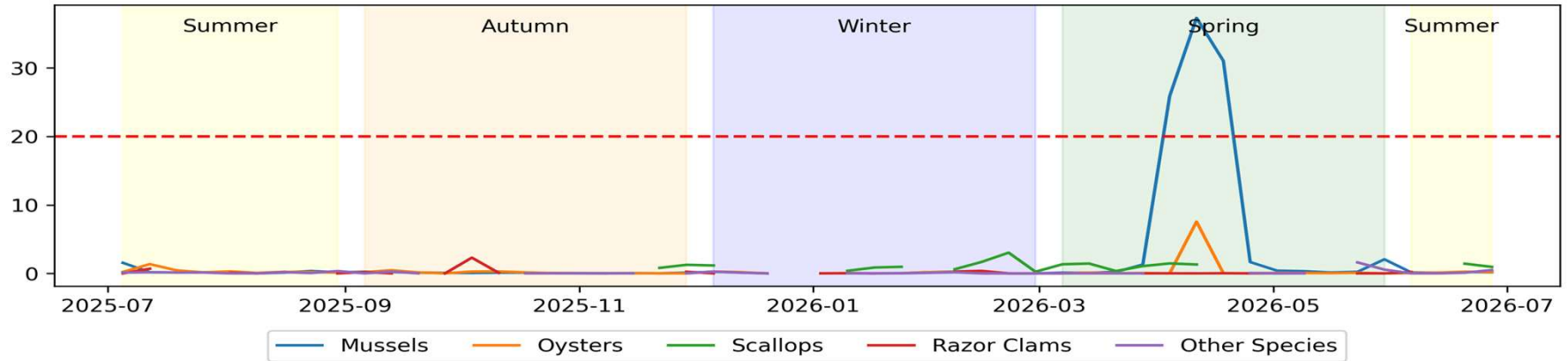
Amnesic Shellfish Toxins National 4-Week Heatmap



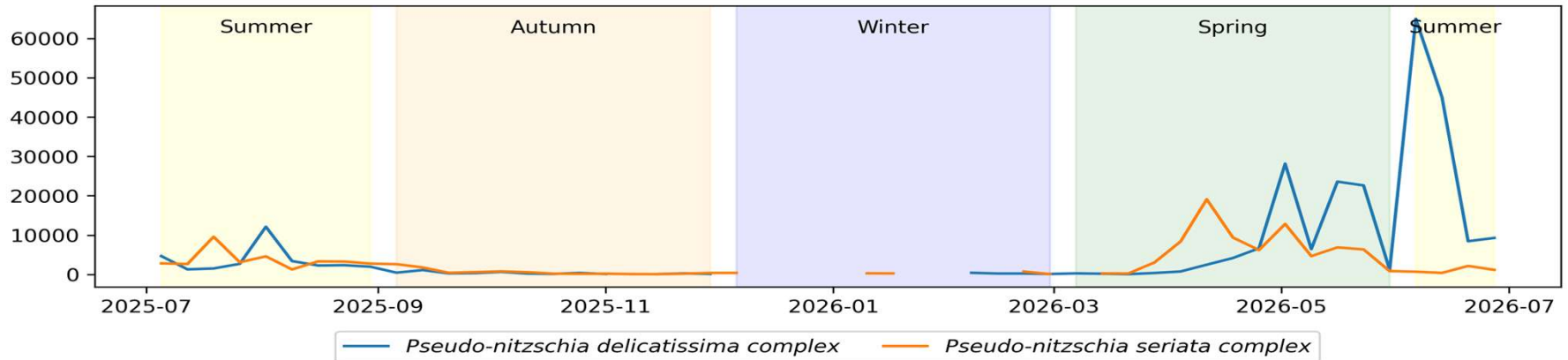
Phytoplankton *Pseudo-nitzschia* spp. 4 Week Heatmap



Trend of Maximum Toxin concentrations in Shellfish Species (measured in mg/kg)



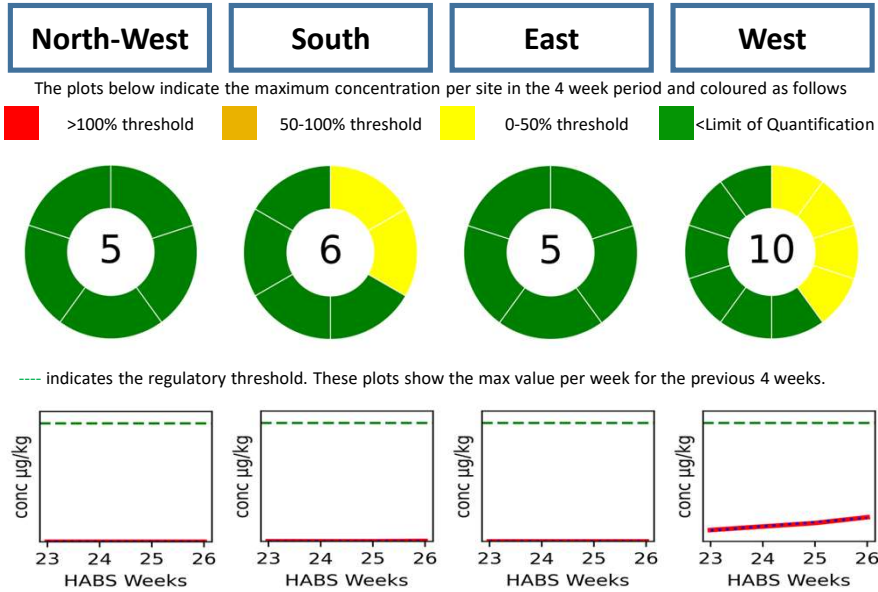
Trend of Average Counts of Toxin Causing PhytoPlankton Species Per Week (measured in Cells per Litre)



Paralytic Shellfish Toxins & *Alexandrium* species

Regional 4-Week Trends 31/05/26 - 27/06/26

In this 4 week period there were 52 Samples tested for PST. These samples were collected at 26 Sites around the country. Resulting in 0 Site(s) with values above the regulatory limit of 800.0 µg/kg

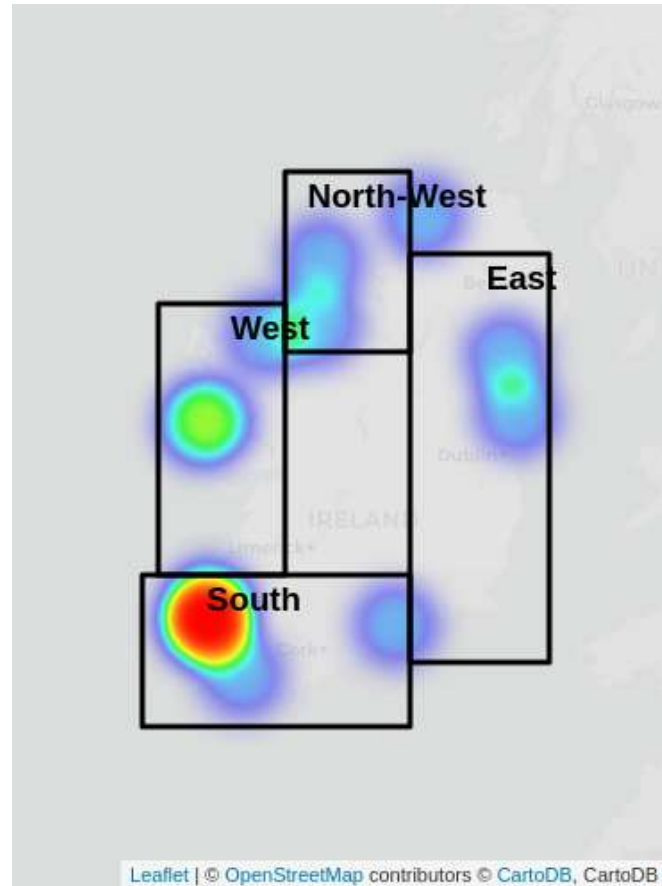


Risk: **Low** **Low** **Low** **Medium**

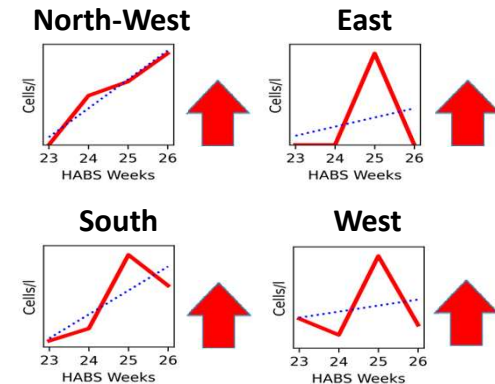
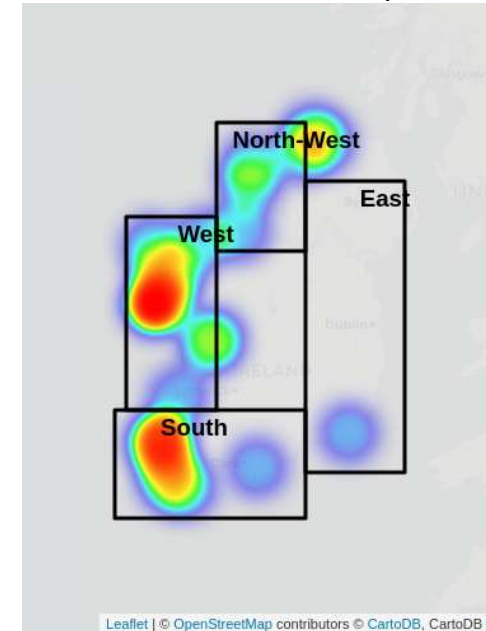
Trend:

Risk: Medium Risk as quantifiable values have been observed in Castlemaine Harbour. Low/Medium Risk levels are present in Castlemaine Harbour where *Alexandrium spp.* cells have been observed and quantifiable levels of PST below regulatory limits still detected.

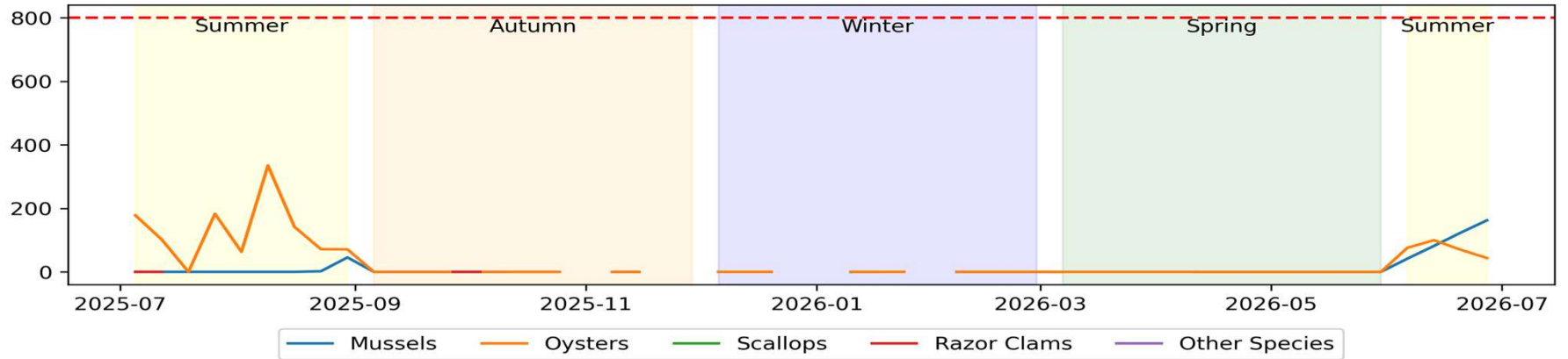
Paralytic Shellfish Toxins National 4-Week Heatmap



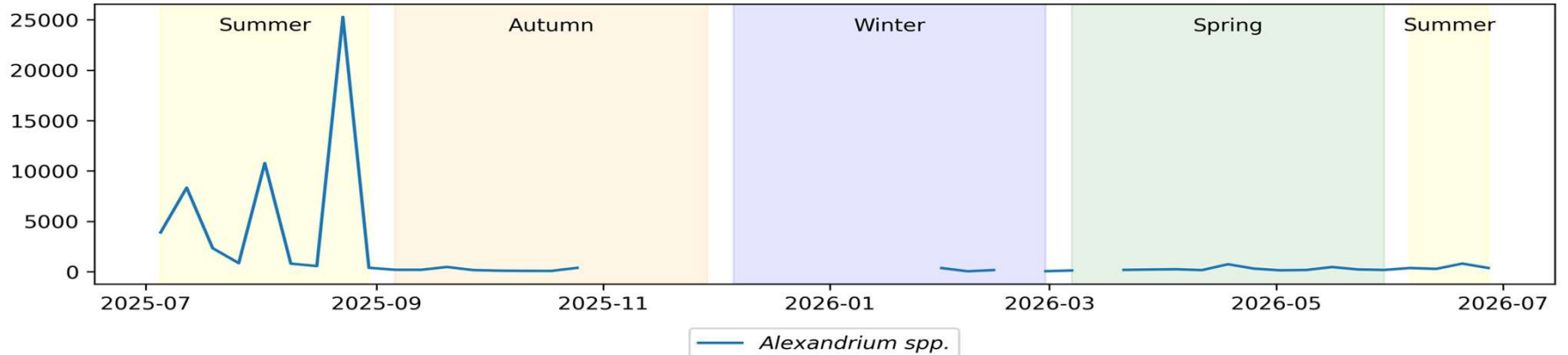
Phytoplankton *Alexandrium spp.* 4 Week Heatmap

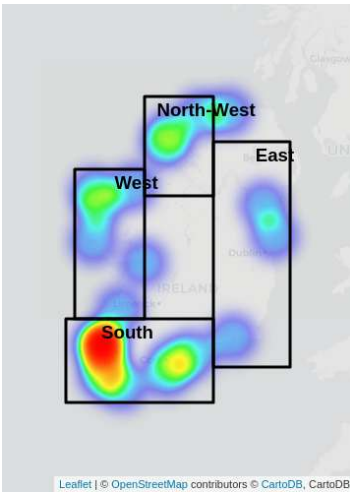


Trend of Maximum Toxin concentrations in Shellfish Species (measured in $\mu\text{g}/\text{kg}$)

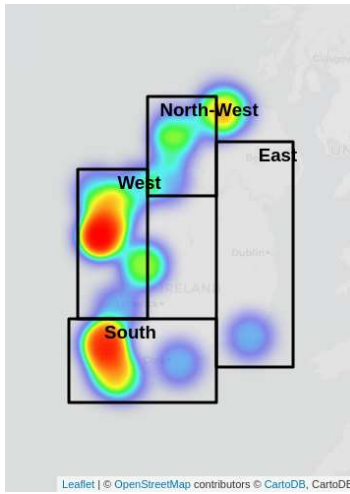


Trend of Average Counts of Toxin Causing PhytoPlankton Species Per Week (measured in Cells per Litre)

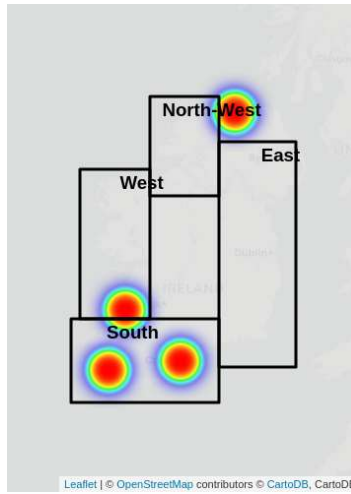




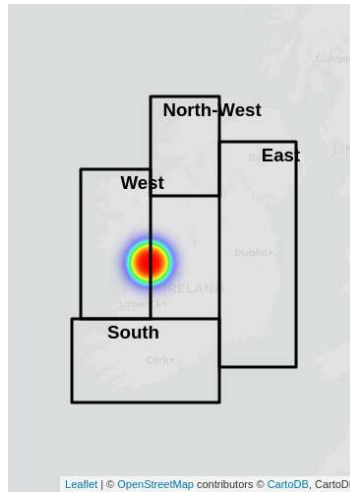
Heterocapsa sp.



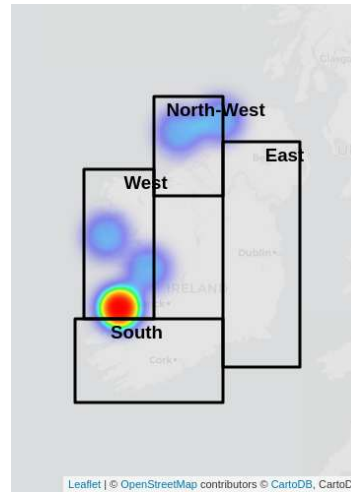
Alexandrium sp.



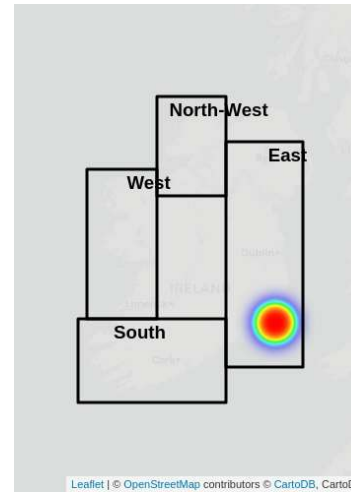
Coscinodiscus sp.



Phaeocystis sp.

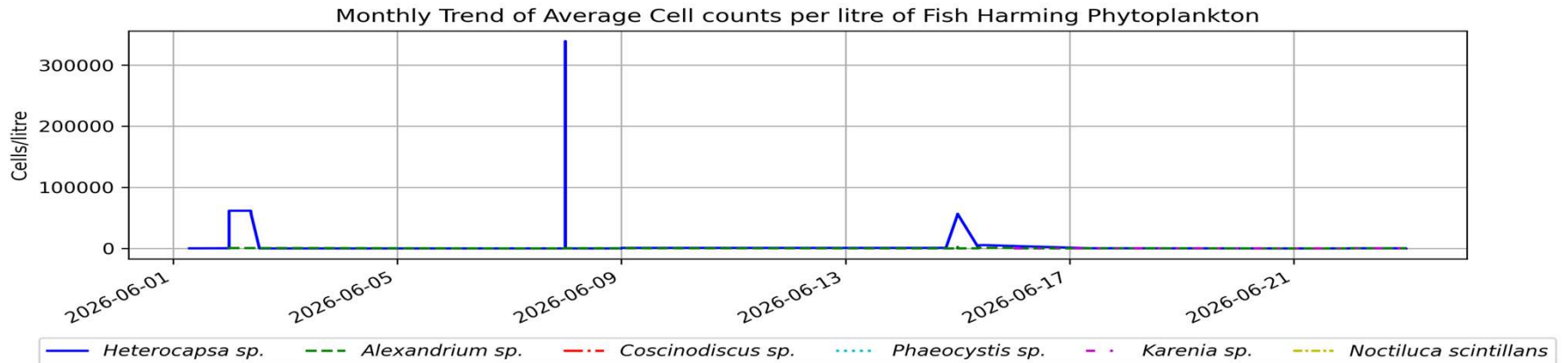


Karenia sp.

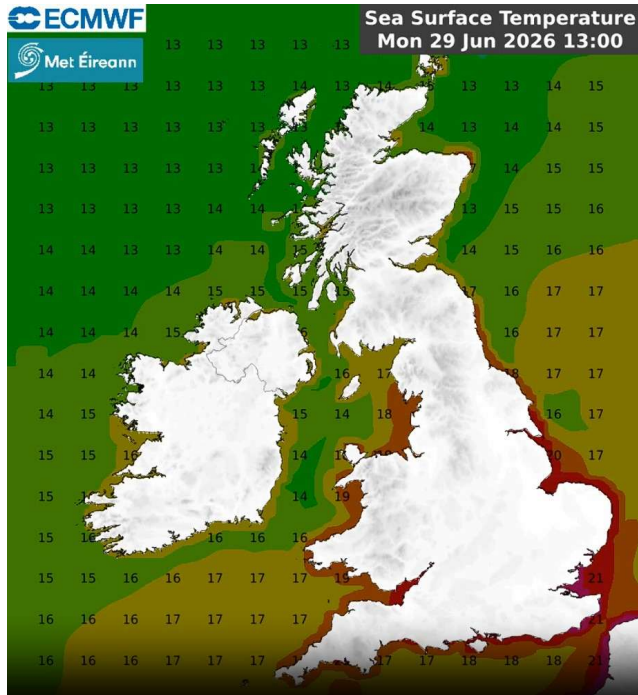


Noctiluca Scintillans

Phytoplankton cell levels are in line with this time of the year. Offshore Sea water temperatures & light levels are at Summer levels. Offshore transportation potential higher likelihood of occurrence as insitu risk levels of HABs growth increasing significantly. Any Phytoplankton species at sufficient numbers may cause temporary issues in water quality which could impact specific areas over the course of a tidal cycle or for a period of days while specific suitable conditions prevail. Please note some blooms can occur rapidly and acutely. If concerned about a problematic or toxic species level please check specific site information updates at www.marine.ie.



Sea Surface Temperature (°C)



Chlorophyll Concentrations (mg/m3)



Sea water temperatures summer levels offshore areas with onshore movements & light levels increasing. *Dinophysis Spp.* Now present in the Southwest. *Alexandrium spp.* Present in Castlemaine harbour. Please check specific area information for local activity.

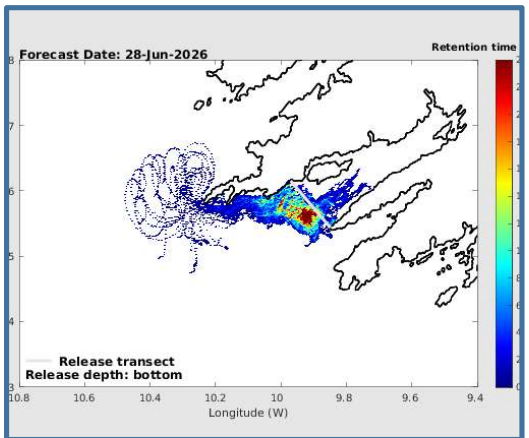
Marine Institute Data Buoy – Temperature Data



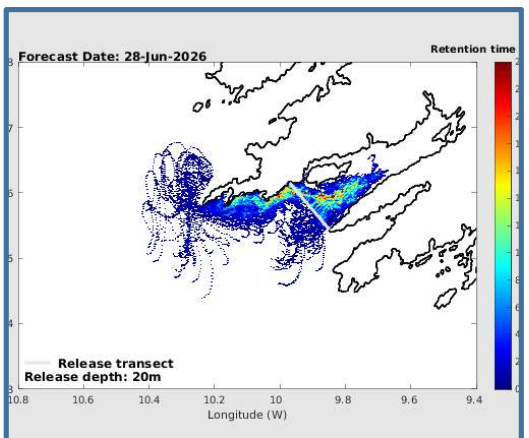
- M4: No buoy data available this week
- SW Coast (M3) Average SST of 15.85 Celcius: Increase of 0.83 Celcius over the historic Weekly Average
- SE Coast (M5) Average SST of 16.02 Celcius: Increase of 0.91 Celcius over the historic Weekly Average

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).

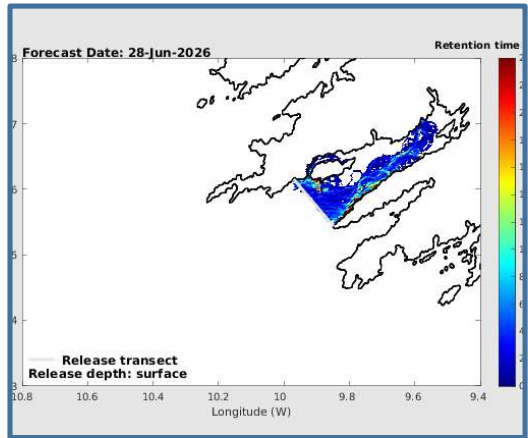
Reddish colours represent areas where phytoplankton remain longest. **Cooler colours represent areas where phytoplankton remain for shorter periods**



Bottom water



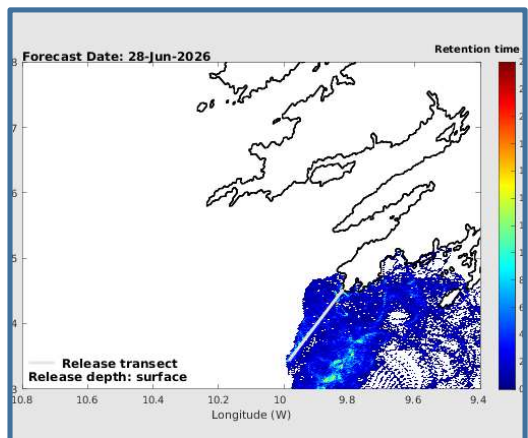
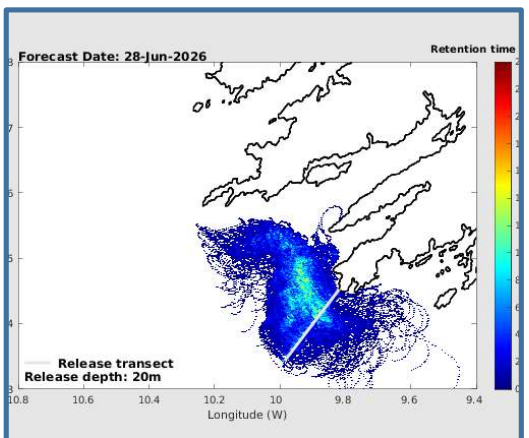
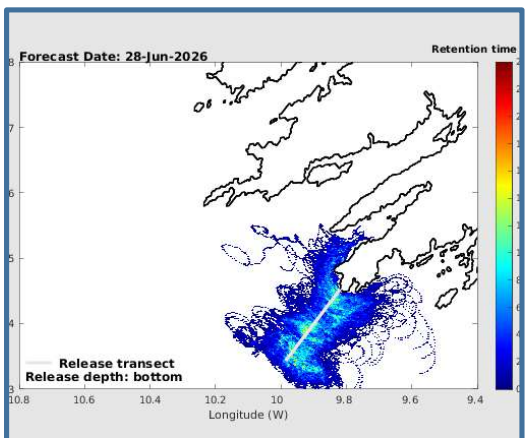
Water @ 20 metres



Surface water

Mouth of Bantry Bay:

Mostly Southern water movements at depths, where deeper waters indicate slower movement of waters. At surface levels there is a quicker change of water.

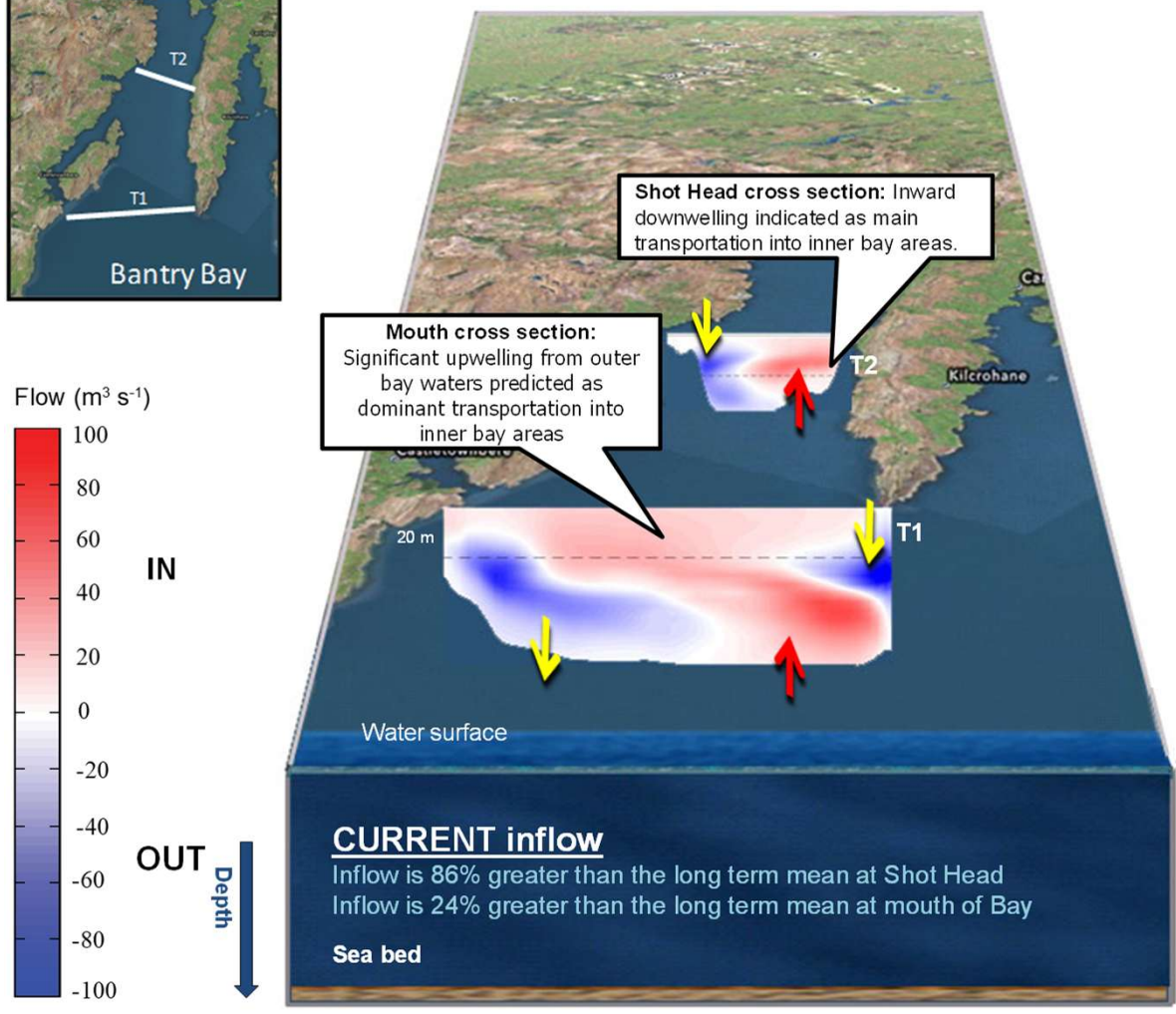


Mizen Head:

Northern water movements at all depths, where deeper waters indicate slower movement of phytoplankton.

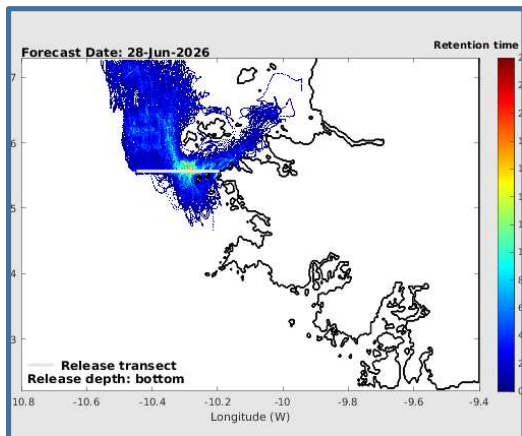


Forecast for next 3 days

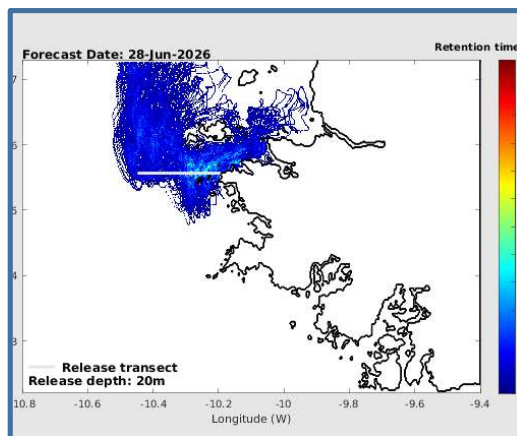


The maps show the **most likely transport pathways for the next 3 days of phytoplankton** found along the **presented transects** i.e. white lines off Aughrus Point and the Mouth of Killary Harbour, and **water depths** (bottom, 20 metres and surface).

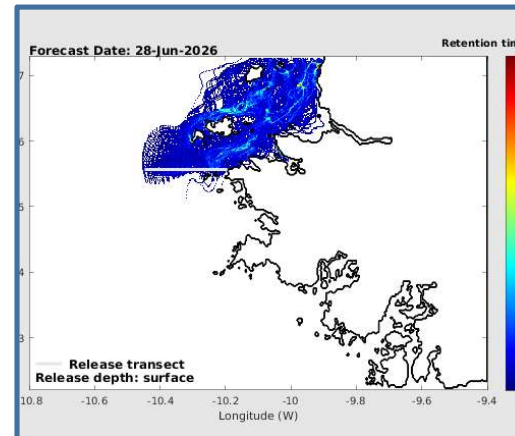
Reddish colours represent areas where phytoplankton remain longest. **Cooler colours represent areas where phytoplankton remain for shorter periods**



Bottom water



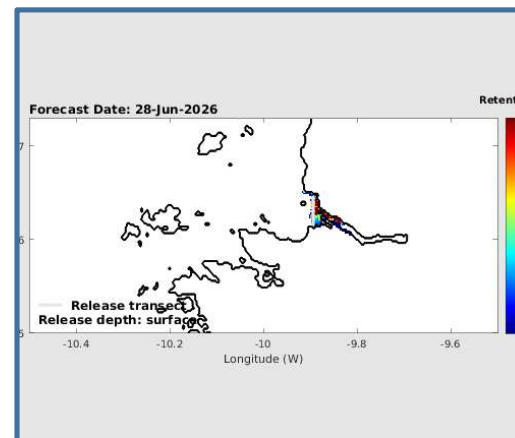
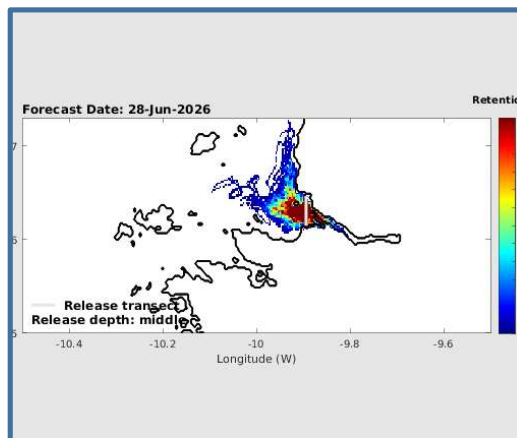
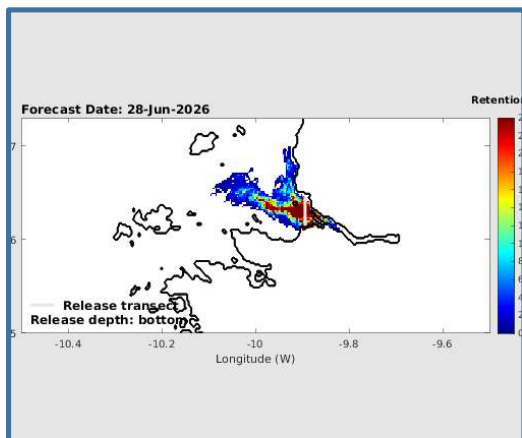
Water @ 20 metres



Surface water

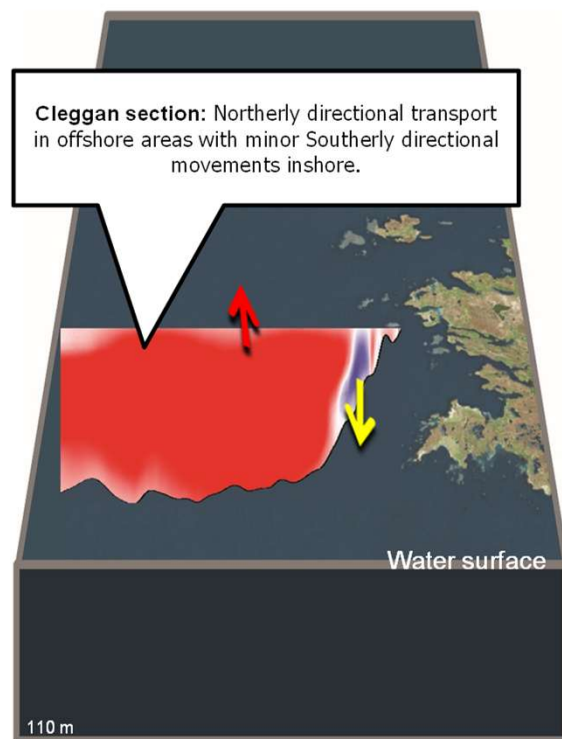
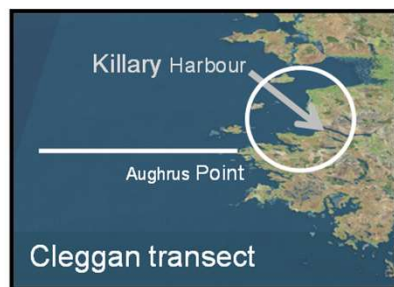
Cleggan

- Change to Northerly movements at all depth waters.



Killary

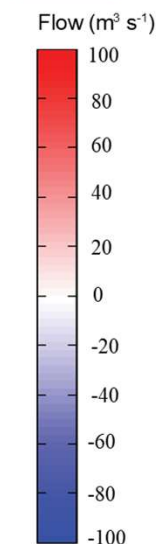
- Upwelling of offshore water remains as main inshore transportation.



Forecast for next 3 days

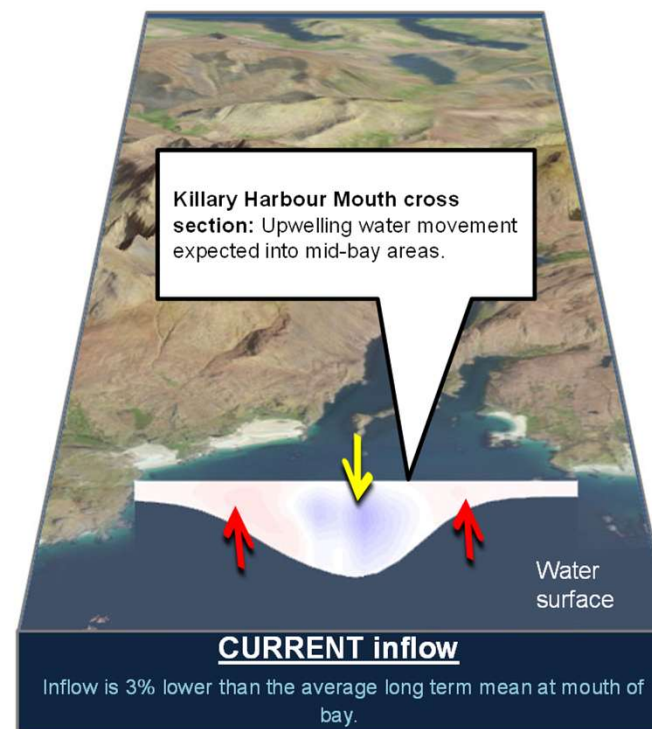


IN



OUT

Depth ↓



This Harmful Algal Blooms (HAB) Bulletin aims to provide a short (3-5 day) predictive forecast on the likelihood of the onset of a HAB event occurring/continuing in a region. The data provided for the compilation of this report is derived from a number of sources comprising of in-situ, remote sensing and hydrodynamic modelling datasets. For the latest and historical biotoxin and phytoplankton results for aquaculture production areas please visit <https://webapps.marine.ie/habs>

In-situ Data

- Biotoxin and Phytoplankton data is provided by National Monitoring Programmes from the HABs database (Marine Institute)
- Heat map images – Leaflet.

Remote Sensing Data

- Sea Surface Temperature Data Product: SST_NWS_SST_L4_NRT_OBSERVATIONS_010_003 (ODYESSA L4 SST from Copernicus CMEMS MCS).
- Chlorophyll image data is provided by:EUR-L4-CHL-ATL-v01 (IFREMER/ DYNECO and CERSAT).
- Sea Surface Temperature observations: Irish weather buoy network (Marine Institute).

Hydrodynamic modelled data

- Particle Tracking Simulation data: The downscale models of areas of particular interest (Bantry Bay, Killary Harbour and Cleggan Bay) incorporate online particle tracking with virtual particles released at pre-defined transects at the start of each model. The operational model produces an estimate of the ocean state once a week and a daily 3-day forecast of the dominant regional physical processes that result in water exchange events between the bay and its adjacent shelf (Marine Institute).
- Hydrodynamic model data: Hydrodynamic nowcast/forecast models show the latest 3-day volumetric flux forecast for vertical transects at the mouth and mid-bay. The results are plotted graphically on a map of the area.

Definitions

- A toxic site is defined as a site that had at least 1 result in the time period indicated greater than the regulatory limit.
- Heat maps represent relative distribution and patterns, and should not be interpreted as indicative of the maximum or absolute concentrations of a toxin in a region.
- Risk levels are calculated based on internal logic applied to measurements captured over the period, along with any additional information available to the evaluator. These risk levels are to be regarded as advisory only.
- Trends are calculated based on average or maximum values per week over the period of time and the slope of the line connecting these points.

Disclaimers

The predictions and comments produced within this bulletin are based on our expert opinion on the datasets and sources as outlined above. The Marine Institute cannot accept any responsibility for business and risk management decisions on harvesting and husbandry based on this report.

Acknowledgements

Funding for the development of this bulletin version has been provided by Interreg Atlantic Area Project: PRIMROSE (Predicting the Impact of Regional Scale events on the Aquaculture Sector) EPA 182/2106