

Shetland Bulletin on the status of harmful & toxic algae Week 41, 6th - 12th Oct 2025

Biotoxin report:

PSP toxins: Sixteen sites were analysed this week. Toxins were not detected.

DSP toxins: Sixteen samples were analysed this week. Toxins were detected at warning levels in Busta Voe Lee, Parkgate and Braewick Voe, and in low levels in Scarvar Ayre, Stream Sound, Cole Deep, Wadbister Voe, Slyde, Hamar Voe, North Flotta, East of Linga and Sandsound Voe.

ASP toxins: Sixteen samples were analysed this week. Toxins were not detected.

AZA toxins: Sixteen samples were analysed this week. No toxins were detected.

YTX toxins: Sixteen samples were analysed this week. No toxins were detected.

Harmful algae report:

Alexandrium: Eleven samples were analysed this week. *Alexandrium* was not detected.

***Pseudo-nitzschia delicatissima*:** Eleven samples were analysed this week. *P.delicatissima* was detected at low levels in Baltasound, East of Linga, Seggi Bight, Inner Site 1, Slyde and Busta Voe Lee.

***Pseudo-nitzschia seriata*:** Eleven samples were analysed this week. *P.seriata* was detected at low levels in Stream Sound, Braewick Voe, Parkgate, Sandsound Voe, North Flotta, Seggi Bight, Inner Site 1 and Busta Voe Lee.

***Dinophysis*:** Eleven samples were analysed this week. *Dinophysis* was detected at low levels in Parkgate and Sandsound Voe.

***Prorocentrum lima*:** Eleven samples were analysed this week. *P.lima* was not detected.

***Karenia mikimotoi*:** Eleven samples were analysed this week. *Karenia* was detected at low levels in Sandsound Voe and Seggi Bight.

Shetland: trends and forecast

Alexandrium/PSP: *Alexandrium* was not detected this week. No toxins were detected. It is very unlikely that there will be a toxic bloom this week.

Dinophysis/DSP: *Dinophysis* was detected at low levels in two sites. Toxins were detected at warning level in three sites and at low levels in nine others. We would still advise caution as toxins can linger.

***Pseudo-nitzschia*/ASP:** *P.delicatissima* was detected in low numbers in six sites. *P.seriata* was detected in low numbers in eight sites. Toxins were not detected. It is unlikely that there will be a toxic bloom this week.

AZA and YTX: It is extremely unlikely that there will be a toxic bloom this week.

Risk for **PSP**: Low

Risk for **DSP**: Moderate

Risk for **ASP**: Low

Risk for **YTX**: Low

Risk for **AZA**: Low

While this bulletin is based on our expert opinion, SAMS cannot accept responsibility for harvesting or husbandry decisions. Those remain the responsibility of the industry.



Toxin concentrations provided courtesy of the Centre for Environment, Fisheries and Aquaculture Science



Seafood Shetland

Funding for these bulletins is kindly provided by Seafood Shetland

Primary data for biotoxins and biotoxin producing phytoplankton available at: <http://www.food.gov.uk/enforcement/monitoring/shellfish/algaltotoxin/#.UY0TkcgTQ6O>

Warning/Threshold Levels

<i>Alexandrium</i> (PSP causative)	Warning 20 cells/l Threshold 40 cells/l
<i>Pseudo nitzschia</i> (ASP causative)	Warning: 40,000 cells/l Threshold: 50,000 cells/l
<i>Dinophysis</i> (DSP causative)	Warning : 80 cells/l Threshold: 100 cells/l
<i>Prorocentrum lima</i> (DSP causative)	Warning: 80 cells/l Threshold: 100 cells/l

The maximum permitted levels of biotoxins in shellfish are:

PSP: 800 µg/kg

ASP: 20 mg/kg

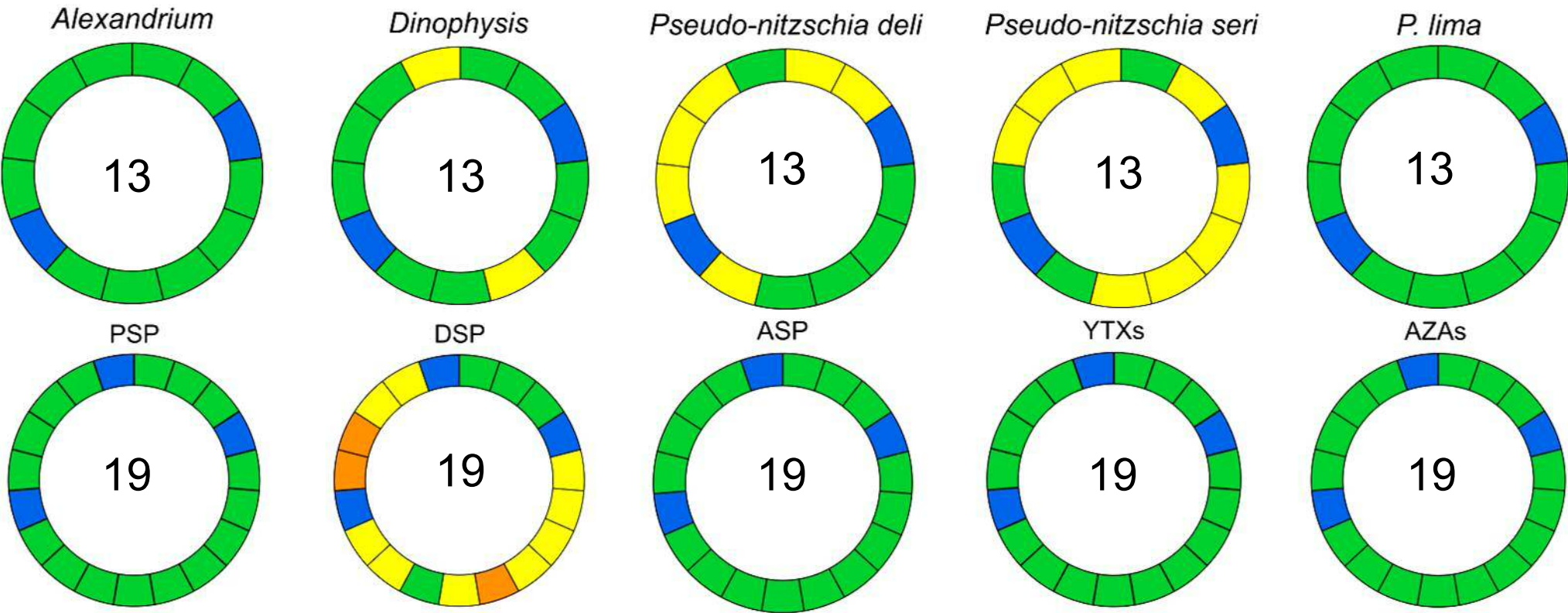
Lipophilic toxins (tested by LC-MS):

OA/DTXs/PTXs: 160 µg/kg of Okadaic acid equivalents

YTXs: 3.75 milligram of yessotoxin equivalent/kilogram

AZAs: 160 micrograms of azaspiracids equivalents/kilogram

Status of biotoxins & harmful algae present in Shetland



Segments - no of individual sites, Colours: Green, red, amber and yellow as per key. Blue - not analysed. Coloured segment indicates approximate position of site in Shetland

Biotoxin & Species					
PSP	<RL	RL - 399 µg/kg	400 - 800 µg/kg	>800 µg/kg	Not analysed
OA/DTX/PTX	<RL	1 - 79 µg/kg	80 - 160 µg/kg	>160 µg/kg	Not analysed
ASP	<LOQ	LOQ - 9.9 mg/kg	10 - 20 mg/kg	>20 mg/kg	Not analysed
YTX	<RL	1 - 1.7 mg/kg	1.8 - 3.75 mg/kg	>3.75 mg/kg	Not analysed
AZA	<RL	1 - 79 µg/kg	80 -160 µg/kg	>160 µg/kg	Not analysed
<i>Alexandrium</i>	<20 cells/l	n/a	20 cells/l	≥ 40 cells/l	Not sampled
<i>Dinophysis</i>	<20 cells/l	20 - 79 cells/l	80 - 99 cells/l	≥100 cells/l	Not sampled
<i>Pseudo nitzschia</i>	<20 cells/l	20 - 39,999 cells/l	40,000 - 49,999 cells/l	≥50,000 cells/l	Not sampled
<i>Prorocentrum lima</i>	<20 cells/l	20 - 79 cells/l	80 - 99 cells/l	≥100 cells/l	Not sampled

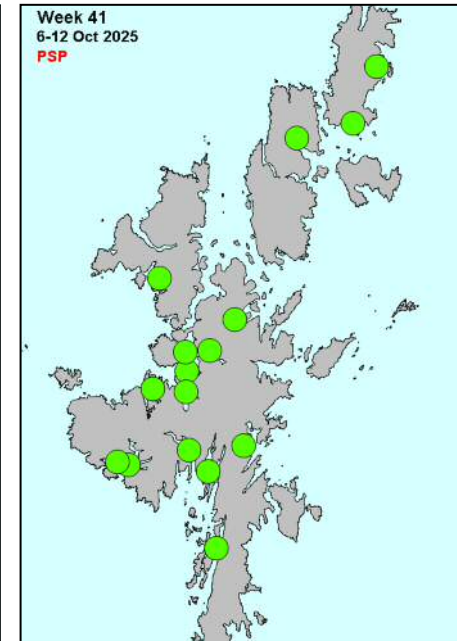
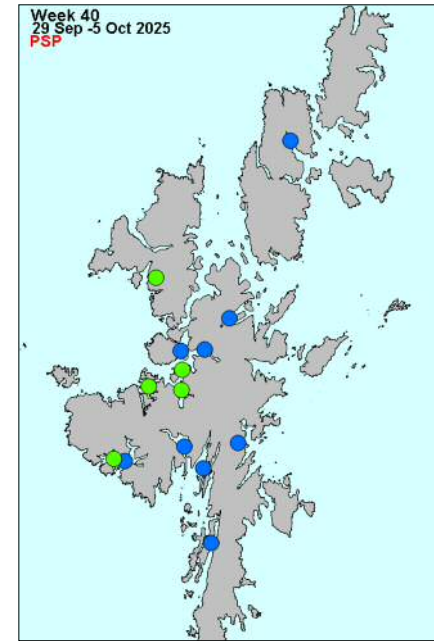
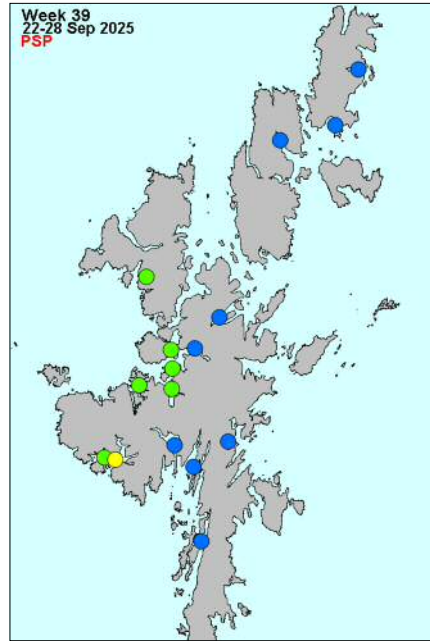
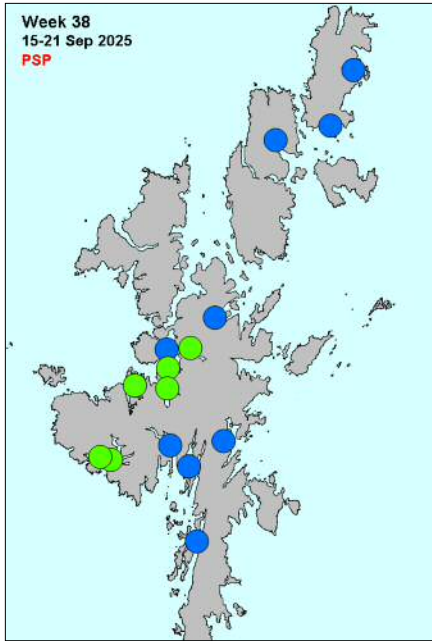
NOTE:
This page is intended as a quick overview of the situation in the Shetland Islands. If the status for a particular species or biotoxin is amber or red please check the relevant pages in the bulletin for more details and specific locations.
RL- reporting limit;
LOQ – Limit of quantification

Paralytic shellfish poisoning toxins & causative phytoplankton

PSP

µg STX eq/kg

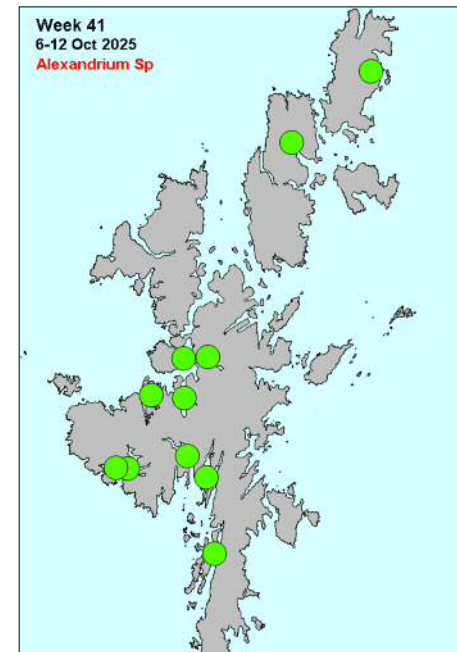
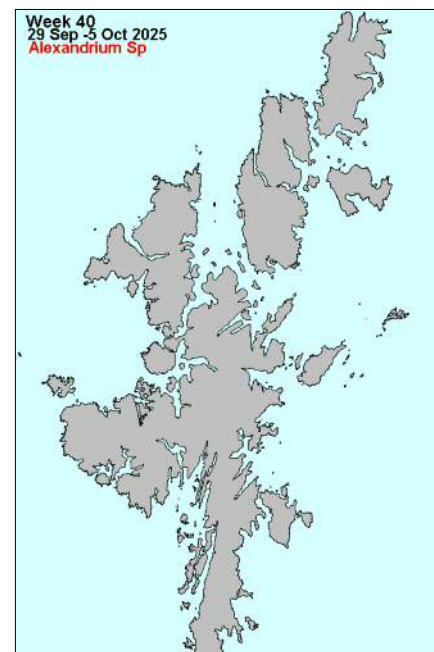
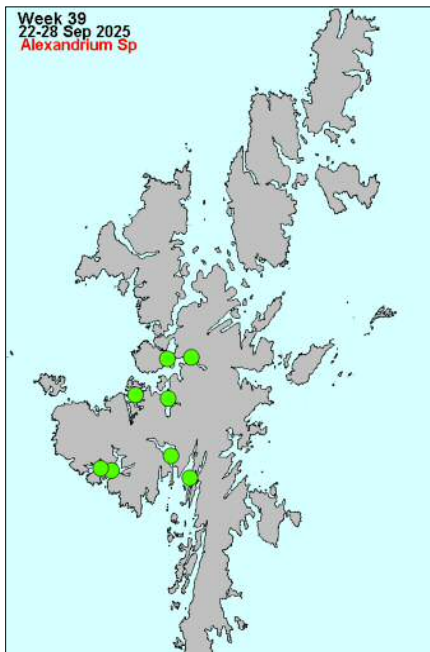
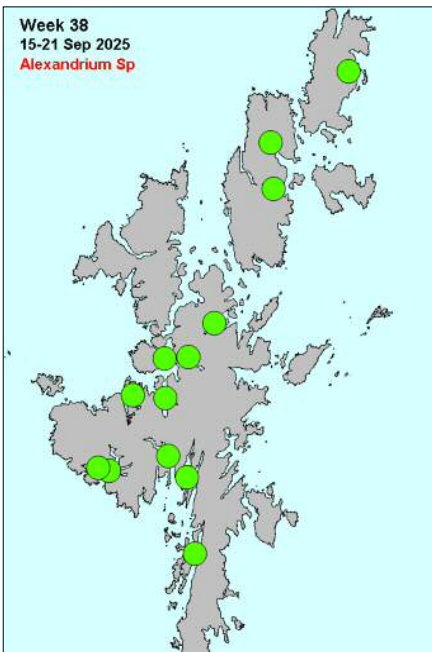
- Not Analyzed
- 0
- 0-400
- 400-800
- 800-1,600
- 1,600-2,000
- 2,000-3,000
- 3,000-4,000
- ≥4,000



Alexandrium Sp.

cells/l

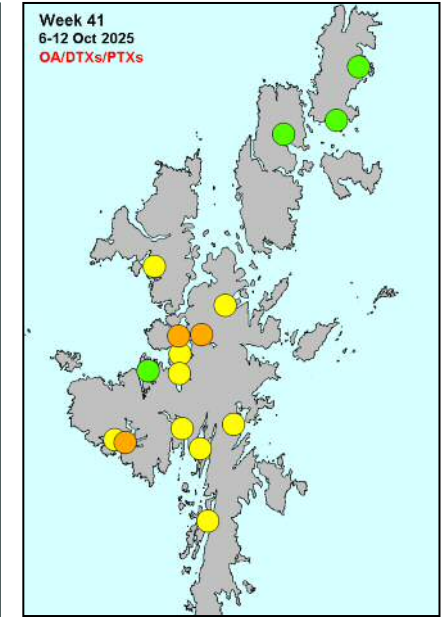
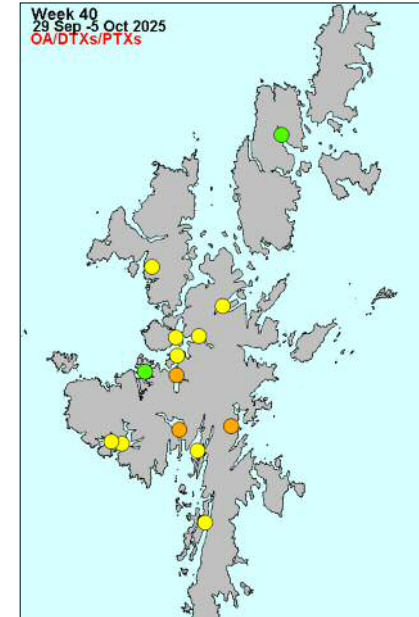
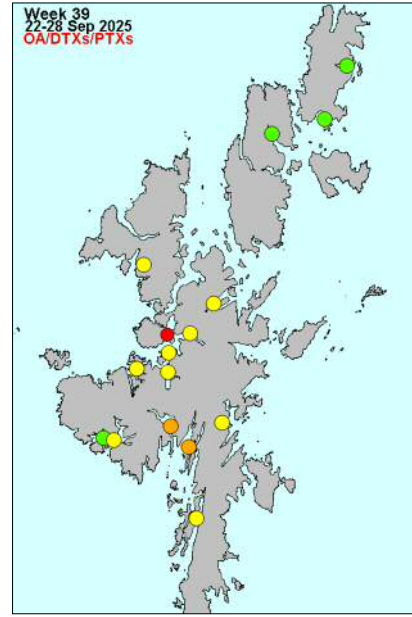
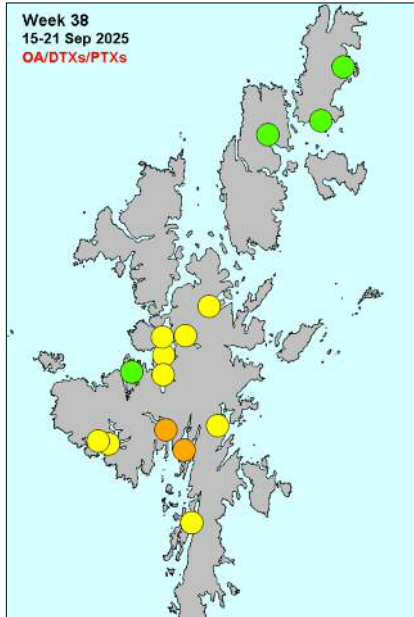
- 0
- 1-20
- 20-500
- 500-2,000
- 2,000-5,000
- 5,000-20,000
- ≥20,000



Diarrhetic shellfish poisoning toxins & causative phytoplankton

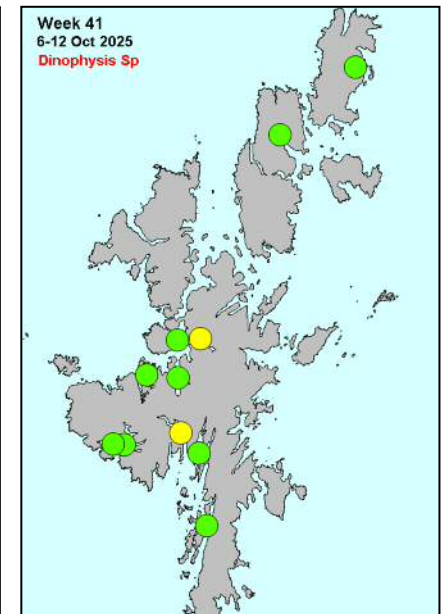
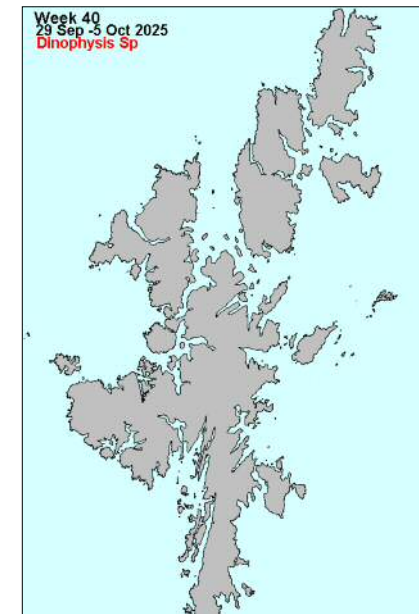
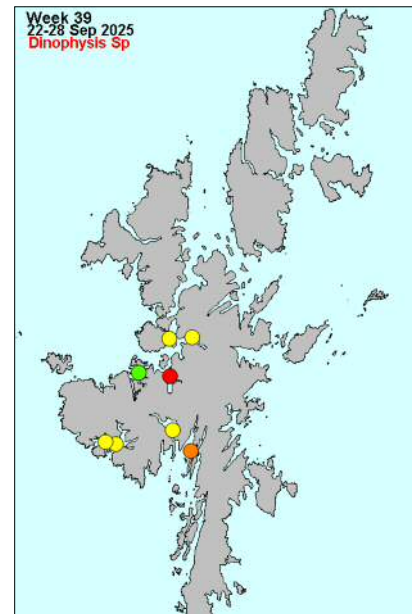
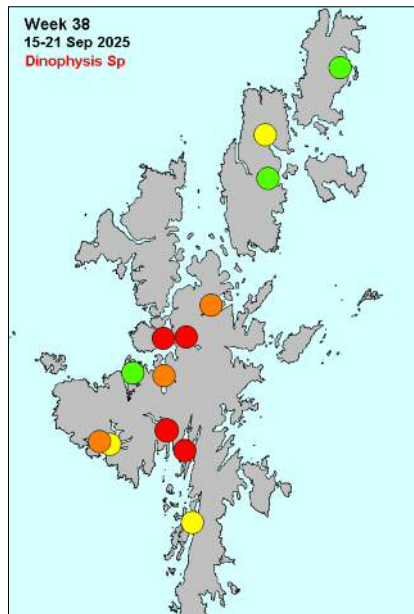
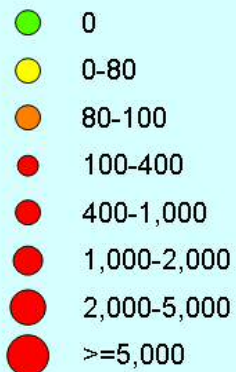
OA/DTXs/PTXs

µg OA eq/kg

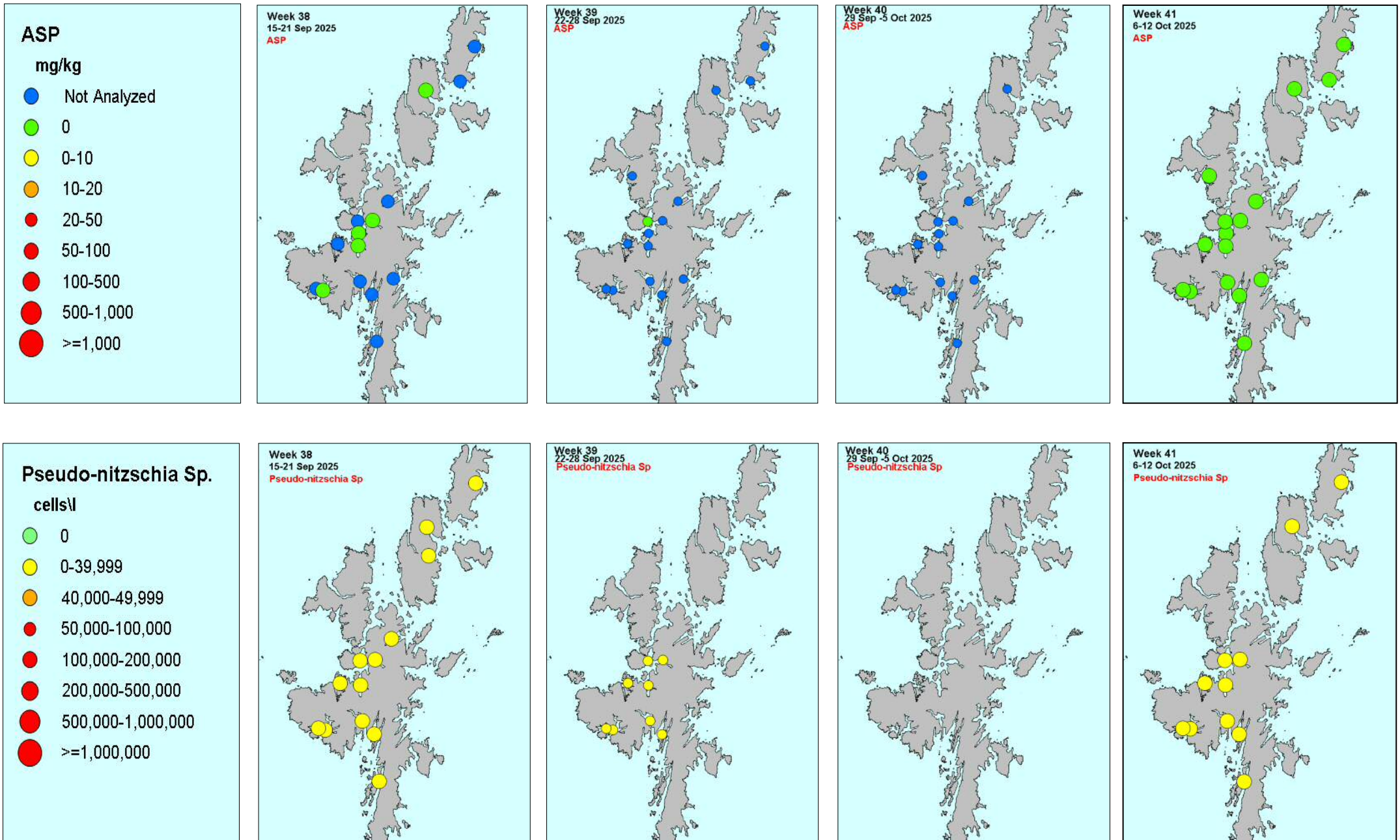


Dinophysis Sp.

cells/l



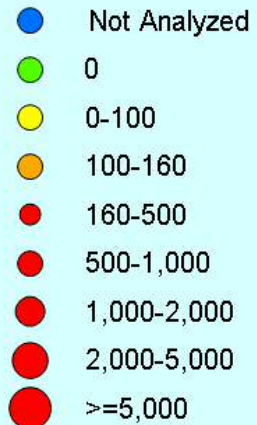
Amnesic Shellfish Poisoning & causative phytoplankton



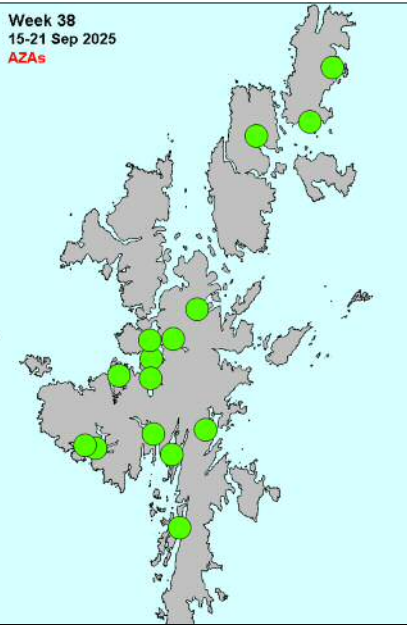
Azaspiracid & Yessotoxin shellfish poisoning toxins

AZAs

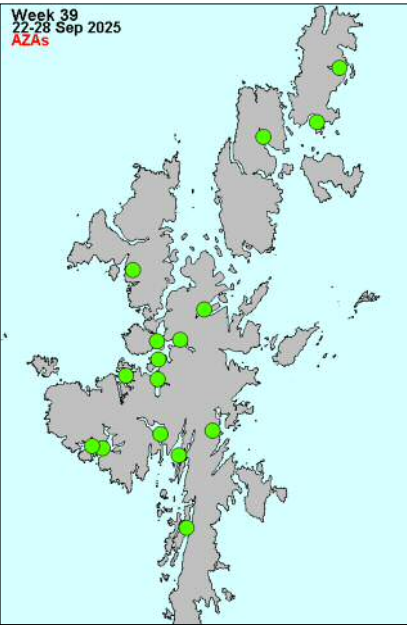
µg AZA1 eq/kg



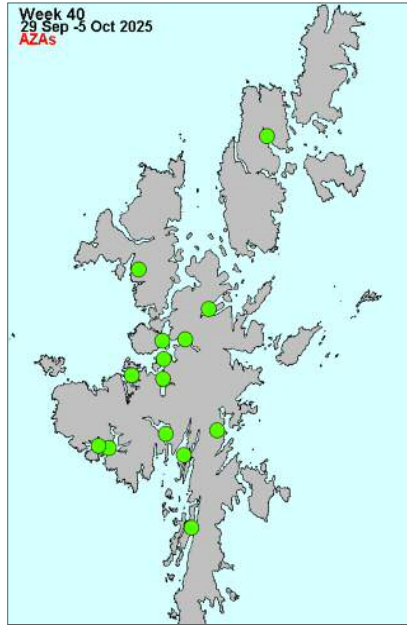
Week 38
15-21 Sep 2025
AZAs



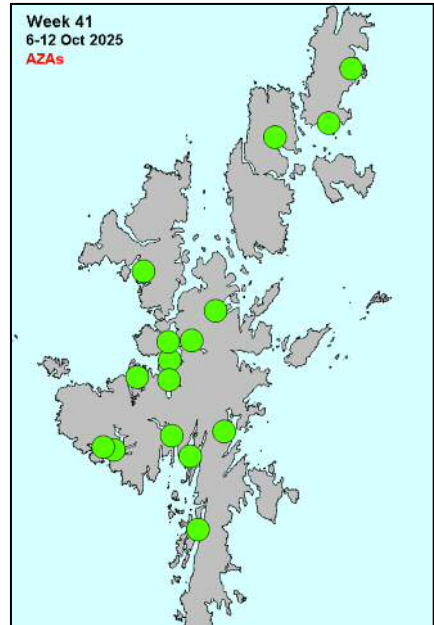
Week 39
22-28 Sep 2025
AZAs



Week 40
29 Sep - 5 Oct 2025
AZAs

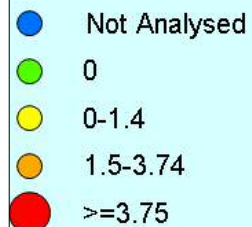


Week 41
6-12 Oct 2025
AZAs

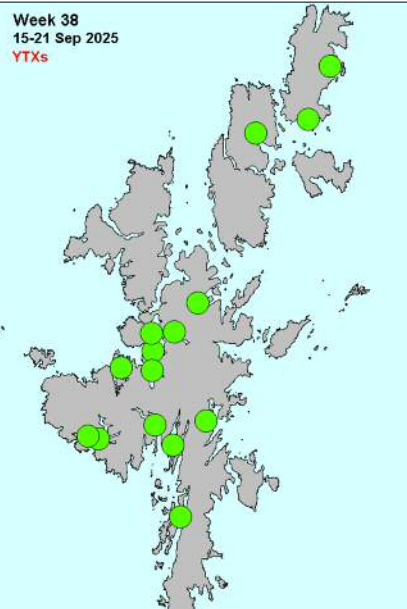


YTXs

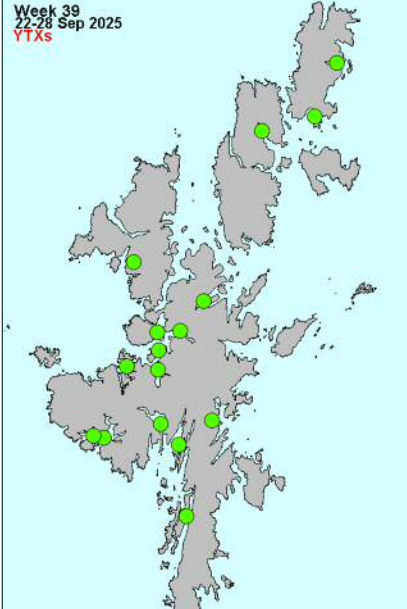
mg YTX eq/kg



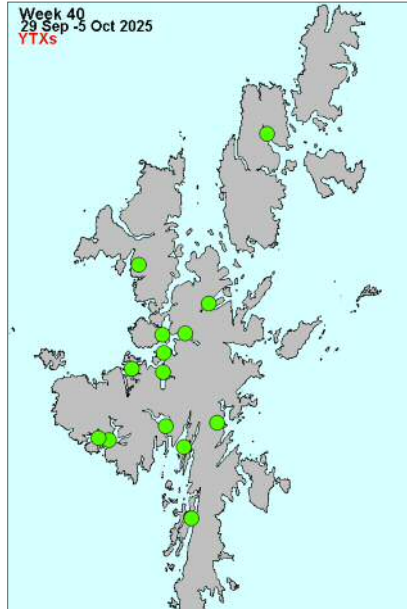
Week 38
15-21 Sep 2025
YTXs



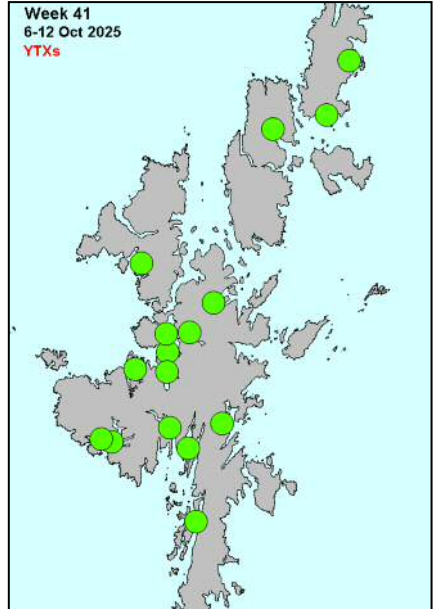
Week 39
22-28 Sep 2025
YTXs



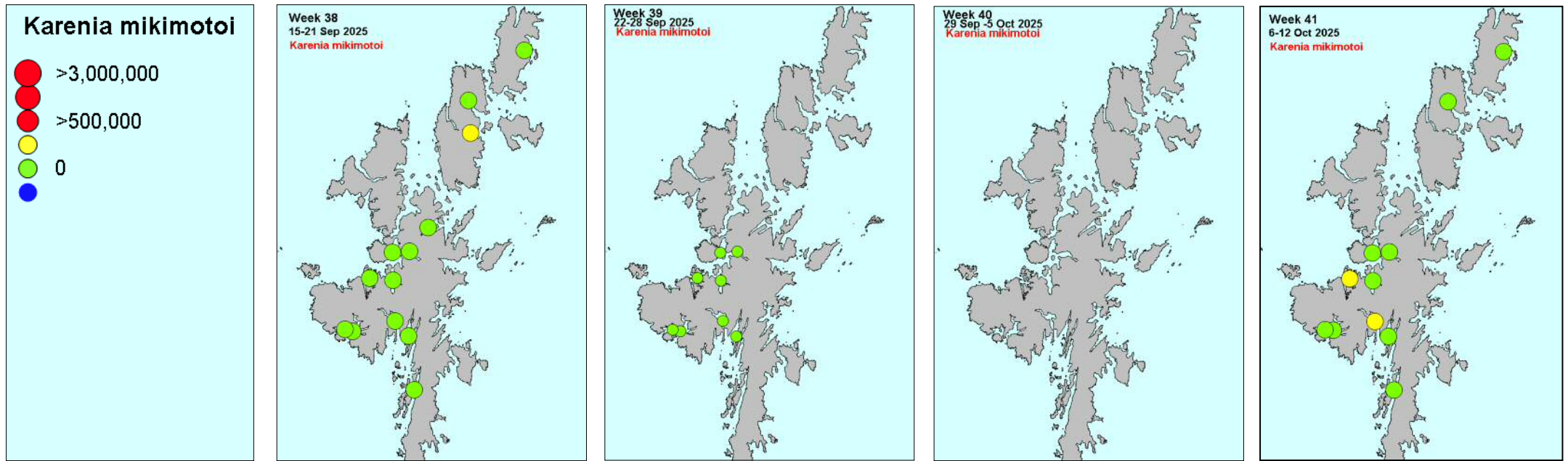
Week 40
29 Sep - 5 Oct 2025
YTXs



Week 41
6-12 Oct 2025
YTXs



Karenia mikimotoi



Chain forming Phytoplankton

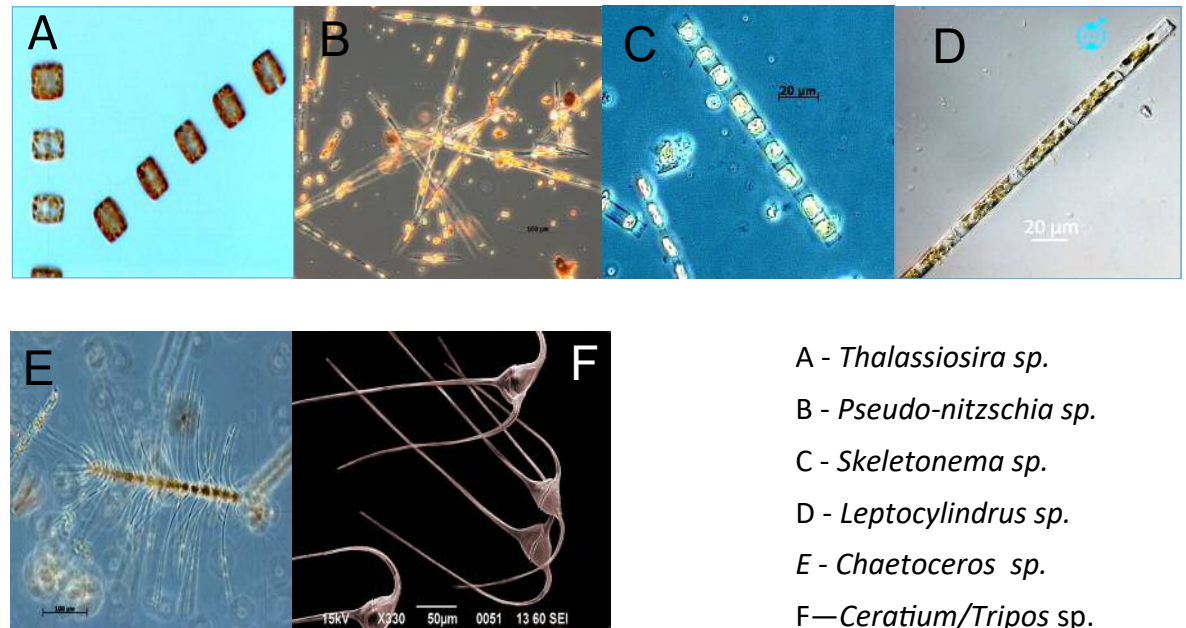
High densities of chain forming diatoms including, but not limited to the genus, *Chaetoceros*, *Skeletonema*, *Leptocylindrus*, *Rhizosolenia*, *Thalassiosira*, *Corethron* and *Pseudo-nitzschia*, the centric species *Coscinodiscus wailesii*, and species with long spines such as *Ceratium* (*Triplos*) can cause debilitating damage to fish gills.

Status

Eleven samples were analysed this week. *Karenia* was detected at low levels in Sandsound Voe and Seggi Bight.

The IFCB at Cole Deep is detecting mainly small chains of *Chaetoceros* and small flagellates. The one at Scalloway remains down for maintenance.

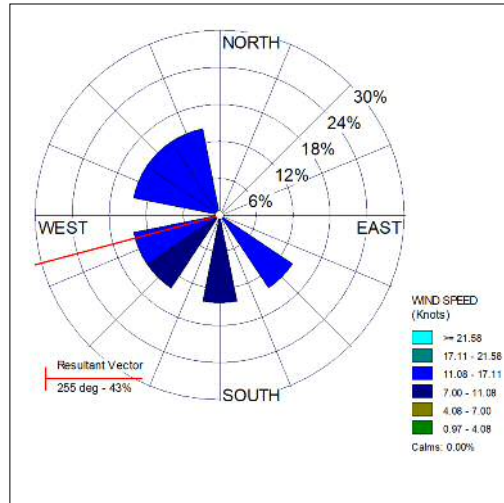
<https://www.habreports.org/ifcb-nafc.php>



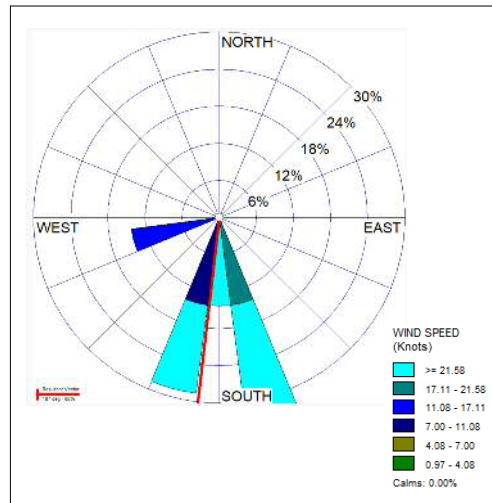
A - *Thalassiosira* sp.
B - *Pseudo-nitzschia* sp.
C - *Skeletonema* sp.
D - *Leptocylindrus* sp.
E - *Chaetoceros* sp.
F - *Ceratium/Triplos* sp.

Mean wind direction observed in Shetland for current and three preceding weeks

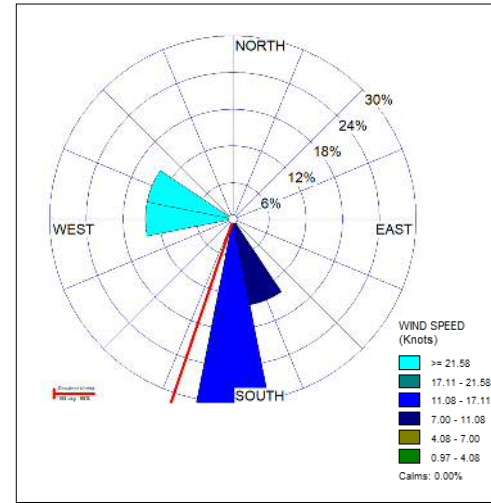
Week 38



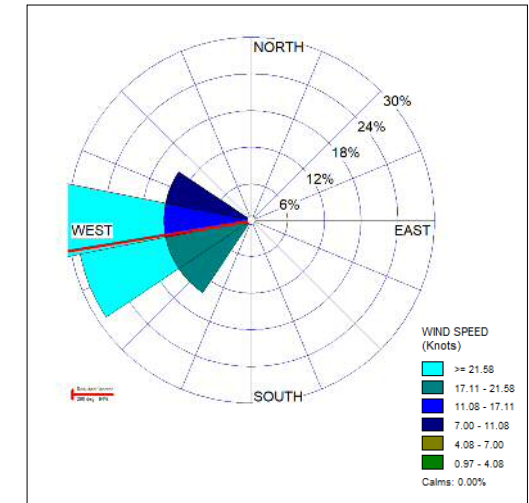
Week 39



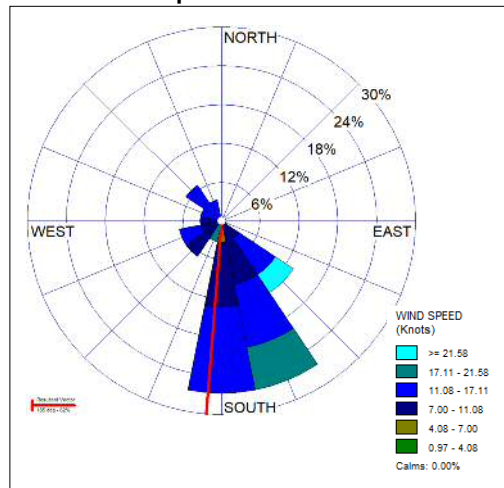
Week 40



Week 41



September



Mean wind direction and speed observed in Shetland over the past four weeks. Higher wind speeds are shown in lighter shades. The percentage of time the wind blew from any particular direction is shown by the length of the triangle. The resultant vector, represented by the red or blue line, shows the average wind direction for the week. It is based on wind direction only and includes periods of calm which are not indicated on the diagram. The data used is taken from the weather station at Sumburgh.

Predictions:

The risk of wind blown *Dinophysis* blooms in Shetland is **moderate/low** this week.

Why do we think this?

During the summer *Dinophysis* can bloom out at sea and at shelf fronts found off the West of Shetland. Westerly winds can then blow these blooms into shore. Westerly winds may also retain *Dinophysis* cells in Westerly facing voes and inlets where their numbers may increase. Wind for the past week has been predominantly from the west, it is possible that there will be an advected bloom of *Dinophysis* in the coming week.

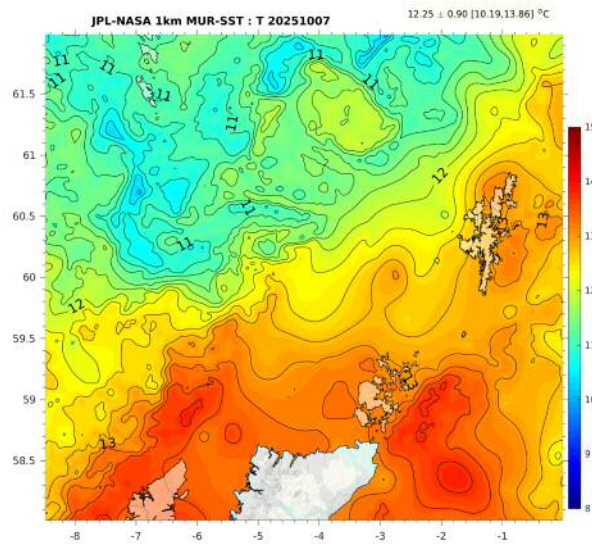
Status:

Over the past week the average wind direction has been from the west.

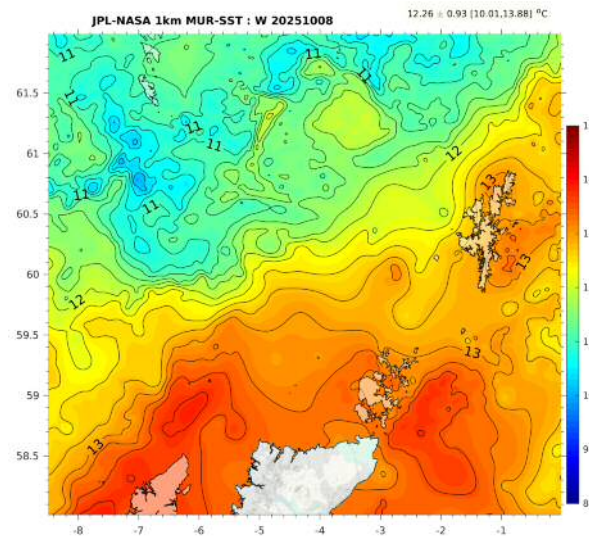
Shetland Bulletin on the status of harmful & toxic algae Week 41, 6th - 12th Oct 2025

Sea Surface temperature (°C) in preceding 6 days in the Shetland Islands

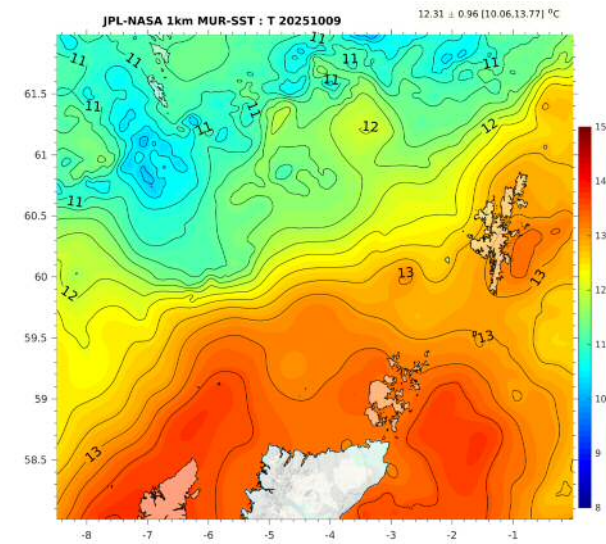
7 Oct 2025



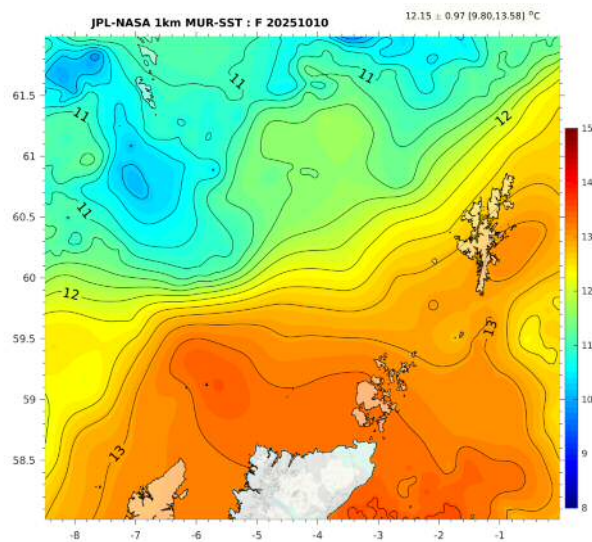
8 Oct 2025



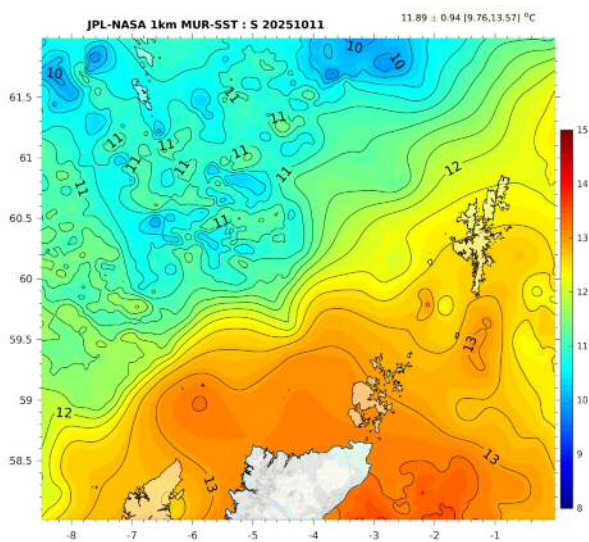
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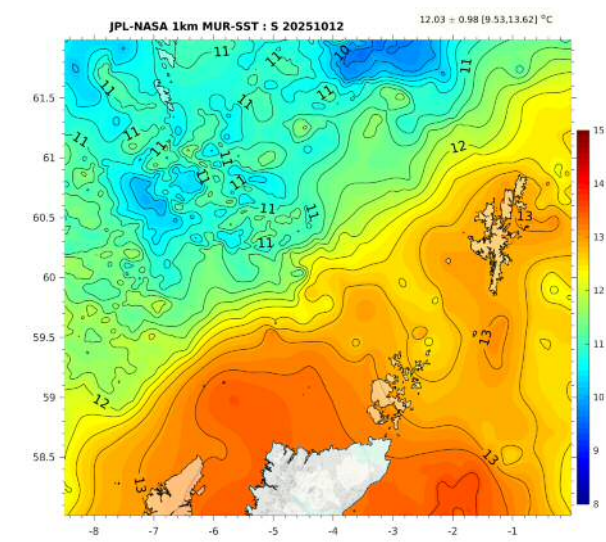
10 Oct 2025



11 Oct 2025

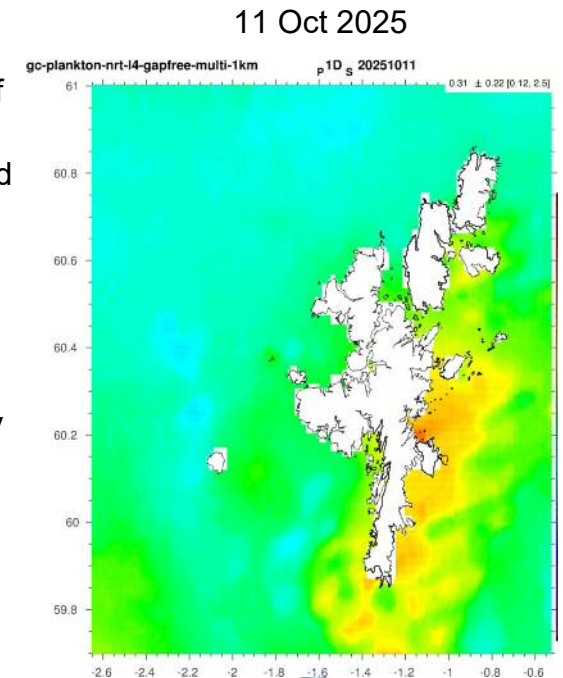
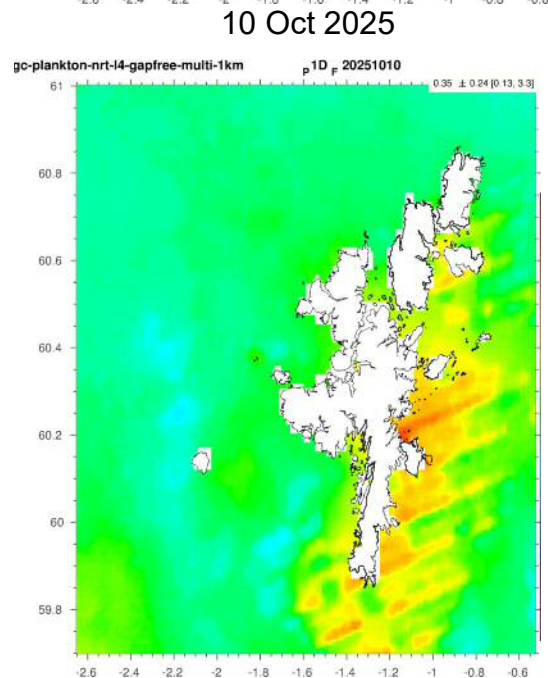
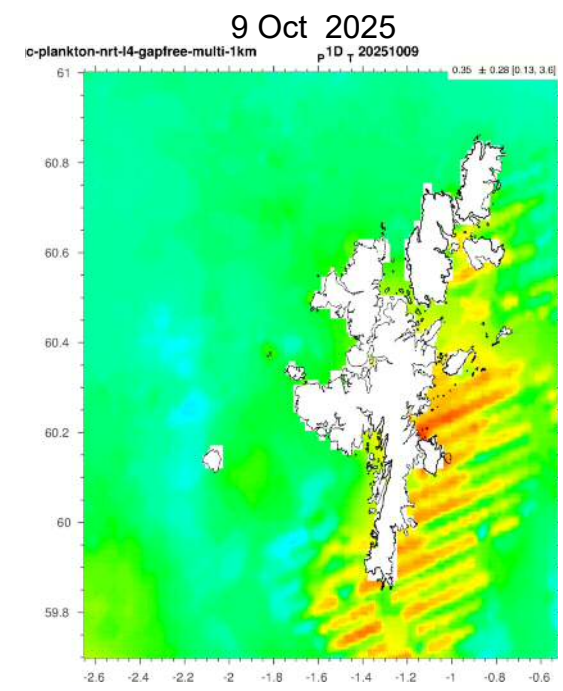
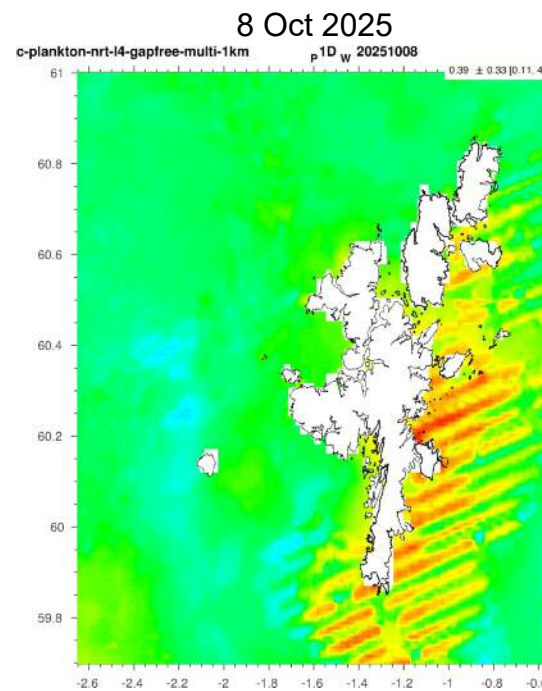
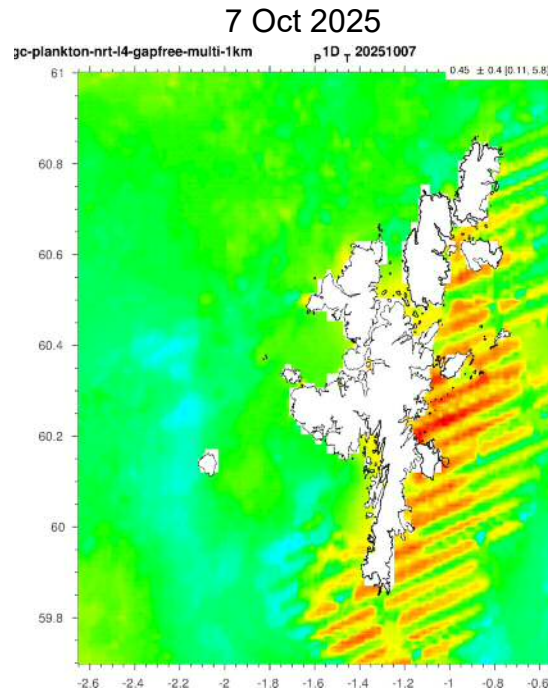


12 Oct 2025



Maps provided courtesy of the Jet Propulsion Laboratory, NASA

Chlorophyll concentrations (mg/m³)



These diagrams show the mass concentration of chlorophyll-a around Shetland. Yellows to reds indicate higher concentrations. However it should be noted that turbidity and the presence of organic material deposited into near shore areas can give false positive readings making the concentrations appear much higher than *in situ* observations would indicate. Blank areas or areas bounded by straight lines on the map are usually the result of data loss due, for example, to persistent cloud cover in which case the data has been interpolated and may not accurately depict the actual concentrations present.

Forecasted Sea Surface currents

These diagrams show the predicted current directions around Shetland for the next couple of days. Greens to reds indicate stronger currents. In general strong currents run parallel to the deep water channel between the Faroes and Shetland. Problems can arise when these currents turn Eastwards potentially carrying *Dinophysis* and *Karenia mikimotoi* blooms, from the shelf edge, into shore.

