

## Appendix 6: Marine Algal Bloom Guidance

Algal Blooms in Marine Bathing Areas (not freshwater lakes or rivers, this only refers to saline waters)

- The Marine Institute run a comprehensive national marine phytoplankton monitoring system, for Harmful Algal Blooms (HABs) intended to complement the national shellfish safety programme. This programme analyses in near realtime (2 day turnaround) suite of samples from all coastal areas in Ireland and is year round. <https://www.marine.ie/Home/site-area/areas-activity/marine-environment/phytoplankton-monitoring>
- This current programme provides a sentinel system for a HAB that might have significance in marine bathing water / water for recreational use.
- In general, blooms occurring in the sea in Ireland are not harmful for bathers. There are some species associated with fresh water that may be harmful but these generally only are detected in marine areas following exceptional freshwater runoff. To date there have been no experiences of such a HAB in coastal bathing areas (bloom in Inner Galway Bay last year – identified subsequently to be a non-harmful microcystis species).
- Should an event occur in a marine BW site, that gives cause for concern, the following steps are suggested;
  1. Determine extent of suspect bloom (size of area involved, presence of scum in bathing location) and eliminate obvious cause (turbidity/dischouration due to weather/wave action/localised activity) which could give rise to such characteristics
  2. Get a preliminary laboratory analysis if possible to confirm biological agent rather than suspended matter (suspended sediment, broken up seaweed, detritus, wastewater overflow etc)
  3. Take a photograph of suspected bloom in situ and submit to [joe.silke@marine.ie](mailto:joe.silke@marine.ie) See photos below.



Examples of Blue Green Algae

4. If required, dispatch sample, at least 50ml for analysis, preserved with *lugols iodine* and if possible a second unpreserved sample to Mr Joe Silke, Section Manager, Marine Institute, Rinville, Oranmore, Co. Galway. H91 R673 091 387200 (or his deputy).
5. If confirmed as a Harmful Algal Bloom (HAB), bathing and exposure to contaminated water must be prohibited and the suggested standard warning signs should be

erected. Depending on the nature and extent of the HAB the suggested standard warning may be supplemented with further advice to the public.

6. The decision as to when to remove restrictions should take into account a variety of factors including the species toxicity and presence of scum, and will be dependent on obtaining a favourable environmental risk assessment including;
  - 2 clear samples if possible, ideally a week apart
  - No obvious evidence of algae present
  - No weather and environmental conditions which could cause recurrence of the bloom

### ***Suggested standard warning sign***

#### **WARNING**

- This water contains high levels of blue-green algae which may cause illness in humans and animals including pets
- Avoid contact with scum, visible algae and surrounding water
- Do not swim in water near visible algae
- Do not touch scum on the shore
- Wash hands if you touch the algal material
- Keep children and pets away from the water's edge
- Do not let pets drink the water. Wash pets if they come into contact with water