

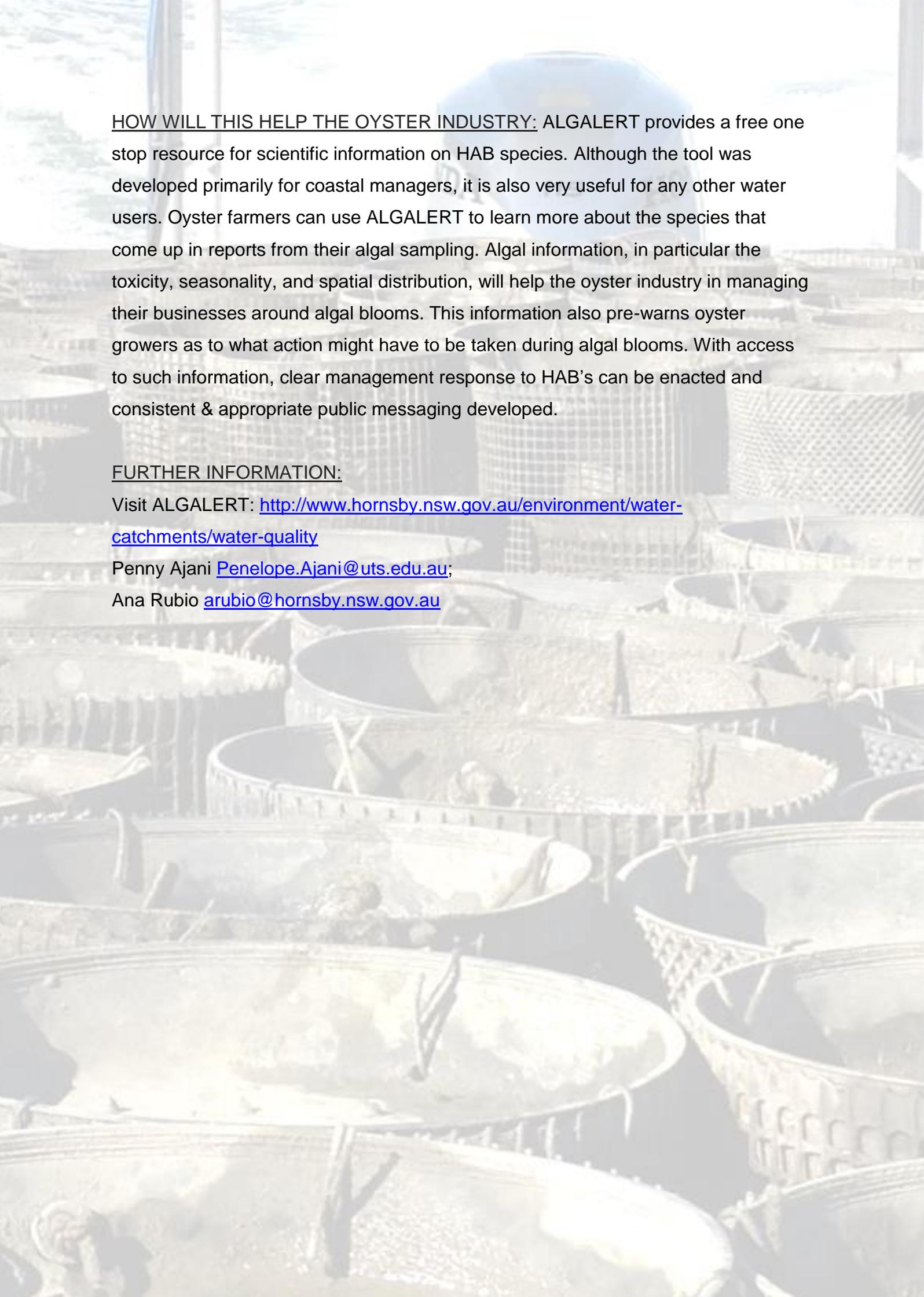
WHAT & WHO: 'ALGALERT'- A decision support tool to manage Harmful Algal Blooms in NSW (won the 2016 NSW Coastal Management Innovation Award)

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BACKGROUND: Over the past few decades Harmful Algal Blooms (HAB's) have increasingly impacted commercial shellfish production, public health, recreational activities, and overall ecosystem health. The NSW Food Authority is responsible for providing advice on opening & closing commercial shellfish harvesting. Their considerable knowledge, in particularly related to HAB's, assists with reducing the risk of seafood related illnesses. However waterway stakeholders have had limited access to scientific information regarding HAB species distribution, ecology and the thresholds over which HAB's can impact recreational activities in coastal waterways.

WHAT WAS FOUND: ALGALERT is a collection of one-page fact sheets for toxic algal species recorded on the NSW coast. Fact sheets contain information on which toxins are present and how harmful they are, distribution, seasonality and potential human health impacts. The sheets include thresholds at which different management decisions should be made. These thresholds can provide an early warning of the potential for marine biotoxin contamination and/or other harmful effects in order to minimize the risk of human illness. Lastly, the fact sheets include information about the impact of each harmful species (e.g. red tides, fish kills, etc) and an appropriate warning message (e.g no swimming, no shellfish harvesting, etc).

A literature review and analysis of algal data revealed harmful species richness was latitudinally graded for rivers, with increasing number of taxa southward. There were significant differences (within an estuary) in harmful species abundance and richness for 11 of 21 estuaries tested in NSW. Where differences were observed, these were predominately due to species belonging to the *Pseudo-nitzschia delicatissima* group, *Dinophysis acuminata*, *Dictyocha octonaria* and *Prorocentrum cordatum* with a consistent upstream versus downstream pattern emerging.



HOW WILL THIS HELP THE OYSTER INDUSTRY: ALGALERT provides a free one stop resource for scientific information on HAB species. Although the tool was developed primarily for coastal managers, it is also very useful for any other water users. Oyster farmers can use ALGALERT to learn more about the species that come up in reports from their algal sampling. Algal information, in particular the toxicity, seasonality, and spatial distribution, will help the oyster industry in managing their businesses around algal blooms. This information also pre-warns oyster growers as to what action might have to be taken during algal blooms. With access to such information, clear management response to HAB's can be enacted and consistent & appropriate public messaging developed.

FURTHER INFORMATION:

Visit ALGALERT: <http://www.hornsby.nsw.gov.au/environment/water-catchments/water-quality>

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