

All seafood that is supplied for human consumption must meet national standards for suitability and food safety. Safe Food Production Queensland monitors to ensure all seafood supplied for human consumption meets national standards for suitability and food standards.

Key results

- ▶ No link was identified between the conditions found in fish and reported human health issue, or between water quality and public health.
- ▶ The cases described did not form a single outbreak of disease.
- ▶ Seafood available through retail outlets is from regulated and wide-ranging sources and continues to be safe to purchase and eat.

About the response

The Queensland Government's response was coordinated across several agencies, including departments responsible for environment, health, fisheries, biosecurity, workplace health and safety and safe food production.

As well as scientific testing, a key part of the response involved working closely with industry, local government and community groups, including frequent engagement through reference groups and committees, publication of test results, and communication with interested parties through bulletins and regular media updates.

In September 2011, the Gladstone Fish Health Scientific Advisory Panel was established to provide independent scientific advice to the government. The panel reviewed the government's monitoring regimes, results and analysis. It was not able to provide a conclusive view on the cause of fish conditions, and recommended that the government undertake further research and monitoring.

The government set up the Integrated Aquatic Investigation Program for Gladstone Harbour in February 2012, to build on and expand previous scientific work undertaken to understand the causes of fish health issues and implement the panel's recommendations. All recommendations have since been implemented or investigated, and the scientific investigations undertaken as part of this program were completed in September 2012.

Further results

Samples of a wide range of fish, crustacean and mollusc species have been sent for more detailed studies. When all results have been received, reports incorporating all information from the 12-month period September 2011 to September 2012 will be completed and published.

More information

To read the full Gladstone Harbour Integrated Aquatic Investigation Program 2012 Report visit the Department of Environment and Heritage Protection's website www.ehp.qld.gov.au/gladstone.

The website also contains background information, and relevant links, about the Queensland Government's investigation and monitoring of Gladstone waterways and will be updated as further results are received.



#30245

www.ehp.qld.gov.au

Gladstone Harbour Integrated Aquatic Investigation Program 2012 Report

Great state. Great opportunity.

Introduction

In August 2011, commercial fishers raised concerns over the health of fish in Gladstone waterways with reports of barramundi and other species being caught with obvious signs of illness such as cloudy eyes, skin discolouration and lesions. Health concerns were also subsequently raised by local fishers or people associated with the industry.

In response, the Queensland Government set up an investigation program, working closely with key interest groups, to understand the extent and nature of the issue and identify any specific causes.

Gladstone Harbour and surrounding areas were also closed for a three week period due to concerns about human health.

The extensive investigation program commenced in September 2011, and included sampling and testing of fish, water quality and sediment in and around Gladstone Harbour, and investigations into human health concerns. In early 2012, in response to an independent scientific panel's recommendations, the investigation program was expanded.

The formal scientific investigations were completed in September 2012 and a program report was released in January 2013. The key findings in the report are consistent with the extensive information made public throughout 2012 and includes summaries of fish health, water quality and human health investigations. The report also includes information about the government's response and next steps to be taken for the health of Gladstone waterways.



Findings

Fish health

In response to the initial reports, the Queensland Government scientifically examined nine barramundi. The majority were found to have parasitic flatworm affecting the eye and skin.

In September 2011, in cooperation with commercial fishers, monthly surveys and testing of a wide range of species—including fin-fish, shark, prawn and crab—were commenced across a number of sites in the Gladstone area.

The sampling program was expanded in early 2012, using a new conceptual model and with several 2-3 week sampling trips held throughout the year across 10 locations.

Samples of a wide range of fish, crustacean and mollusc species have been sent for more detailed studies.

Key results

- ▶ No single cause has been identified for all fish health issues.
- ▶ The conditions that have been identified are naturally occurring organisms that have been seen elsewhere in Queensland.
- ▶ Fish health was much improved in 2012.
 - Most barramundi were in good condition and did not display lesions, eye conditions or *Neobenedenia* infections.
 - Sharks continued to display redness and the presence of parasitic flatworm *Demophthirus maccallumi*.
 - Crustaceans displayed a low incidence of shell erosion.
 - No significant signs of ill health were observed in any other focus species.

Water quality

A review of all existing water quality data for the Gladstone area was initially undertaken in order to determine if there were any changes in water quality which could cause or contribute to fish ill-health.

Additional investigations included testing for dissolved metal concentrations and metals in sediments, and looking for any pattern in water quality which could be explained by dredging or other causes. This included monthly water quality monitoring which involved measuring levels of 21 metals as well as levels of turbidity, dissolved oxygen, salinity, temperature, pH and chlorophyll-a.

This sampling program was also expanded in early 2012 to examine potential contributions of contaminants from industrial discharges, including expanded sediment sampling and testing. Investigations into the potential of chemicals and/or species of algae to cause the signs observed in fish were also conducted.

Key results

- ▶ Results do not suggest that water quality in Gladstone Harbour and related waterways present a threat to fish health, with the possible exception of sites around South Trees Inlet. Further investigation of the water quality in this area is being conducted.
- ▶ It is unlikely that metals are at a level that would cause any ongoing suppression of the immune system or increased susceptibility to disease in fish and other aquatic organisms throughout Gladstone Harbour.
- ▶ There is no evidence that dredging increases dissolved metal concentrations or leads to acidic conditions.
- ▶ The micro-algae *Pfiesteria* is unlikely to have caused the reported illnesses in fish and people.

Human health

Investigations were conducted throughout the response period as a result of reports received from 37 people—mostly commercial and recreational fishers—who were concerned that a range of health issues they were experiencing were a result of contact with diseased fish or sea water.

Queensland Health has continued to investigate any reported human health issues reported by commercial and recreational fishers in the Gladstone area.