

HARBOUR

INSIGHTS

GLADSTONE HEALTHY HARBOUR PARTNERSHIP | 2023

INVESTING IN
the next generation
NEW EDUCATIONAL
RESOURCES NOW AVAILABLE

MEET OUR **RESEARCH**
OFFICER, KIRSTEN

managing
URBAN WATER WISELY
BIENNIAL UWSF REVIEW

using
CITIZEN SCIENCE TO
MONITOR FISH HEALTH

THE INNOVATIVE METHOD USED TO TRACK FISH CONDITION

CHAIRS' *welcome*

Welcome to the latest edition of the Gladstone Healthy Harbour Partnership Harbour Insights magazine. In this edition, there is a range of articles, insights, and success stories that demonstrate the progress we have made together in support of the harbour's health. From innovative research initiatives to engaging the local community, the GHHP and its Partners continue to drive positive change in the Gladstone region.

I would also like to take this opportunity to welcome Dr Kirsten McMahon, our newest addition to the GHHP team. Kirsten brings a wealth of experience and a passion for science communication, and we are pleased to have her on board as we continue to fulfill our vision of having a healthy, working, accessible harbour.

We firmly believe that achieving this goal requires a collaborative effort, and I want to express my sincere gratitude to our Partners, stakeholders, and the wider community for their continued support and involvement.

Together, we can ensure the continuation of a prosperous and sustainable future for Gladstone Harbour.



Prof. Iain Gordon

GHHP INDEPENDENT CHAIR

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Scientific integrity is of utmost importance to the GHHP, and this magazine highlights some of the methods undertaken to ensure the robustness of monitoring data that is collected.

The GHHP program is designed to gain a comprehensive understanding of the harbour's social, cultural, economic, and environmental health through monitoring programs, other data collection and statistical analysis.

The Independent Science Panel plays a pivotal role in this process, providing independent oversight and impartial scientific advice. Our dedicated group of scientists and experts collaborate with the GHHP to recommend methodologies and scientific programs, and review datasets and reports for incorporation into the annual report card.

We appreciate the value of citizen science. Involving the community in data collection and monitoring empowers locals, enriches our scientific understanding, and fosters a sense of stewardship among the community. The GHHP was proud to be a sponsor of the 2023 Boyne Tannum Hookup and assess fish health with Infofish Australia, drawing on data provided by participants in the event.

I extend my thanks to the scientists, citizen scientists, and the GHHP team for their work together to improve our understanding of fish health in the harbour.



Prof. John Rolfe

ISP CHAIR

meet our newest TEAM MEMBER

Introducing GHHP's new Research Officer, Kirsten McMahon

With a PhD in biochemistry and an extensive background in medical research, analysing and communicating scientific research is something that GHHP's new Research Officer, Kirsten McMahon, has an impressive amount of experience in.

She began honing her passion for scientific research with a Bachelor of Science at the University of Queensland where she graduated with First Class Honours in Microbiology. Having developed an interest in the niche of medical research, she went on to complete her PhD and post doctorate studies, where she dove deep into the world of animal venom, investigating how the venom of the potentially lethal cone snail can be used to treat chronic pain.

After making the move from Brisbane to Gladstone for her husband's career in August last year, it was the unique opportunity to readily communicate meaningful research to the wider community, that piqued Kirsten's interest in the role of Research Officer at GHHP and prompted her to apply.

"While the world of medical research is fascinating, there's unfortunately a wide gap between discovery and public benefit, with the process often taking years to reach a point where it can be widely publicised or you can start to see some real-world impact," Kirsten explains.

"Here at GHHP, we're conducting new research and publicising the results each year, meaning the research is applied in a much shorter time frame."

"I'm excited that I'll be able to combine my passion for data analysis and science communication in my role as Research Officer and help translate highly scientific data to the Gladstone community."

As someone who grew up in Brisbane, Kirsten is loving the relaxed lifestyle that Gladstone offers her and her family and the warm welcome they've received from the community.

"It sounds silly, but I really appreciated how friendly everyone is and that people make the effort to say 'hello' to you as you walk down the street. I also love being just 5 minutes away from the beach – that's a luxury we definitely never had in Brisbane."



using CITIZEN SCIENCE TO MONITOR FISH HEALTH

Explaining the innovative method used to track Fish Condition



Held annually over the Labour Day long weekend, The Boyne Tannum Hook-up is Australia's biggest family fishing competition, attracting thousands of locals and visitors along with a \$400,000 total prize pool. Yet the purpose of the competition extends far beyond simply catching fish, with it playing a vital role in monitoring the health of the region's fish and contributing to GHHP's annual Report Card.

When GHHP first began monitoring and reporting on the health of the harbour via a trial report card in 2013, community workshops established that monitoring fish health should be one of the report's key assessment priorities. However, as GHHP Independent Science Panel chair John Rolfe explains, this proved to be easier said than done.

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“Fish are both an indicator of how healthy the harbour is from an environmental perspective as well as a social one as fishing is vital to the region’s recreation and lifestyle, but when reporting began back in 2013 we discovered that there were no ready-made indicators available for fish health,” John explains.

Since then, GHHP have worked hard to develop an indicator of their own in conjunction with InfoFish, that relies on information collected by members of the public at local recreational fishing events like The Boyne Tannum Hook-up.

“Each year Hook-up participants submit photos of the fish they catch, along with their weight and length measures, using the TrackMyFish app,” John explains.

“The InfoFish team compare the results to historic data and indices for fish condition for each different species, the analysis of which then directly informs the Fish Condition indicator in the Report Card each year.”

Having now been successfully implemented for several consecutive years, the data provided by The Boyne Tannum Hook-up participants has become one of the leading examples of how citizen science data can be used to monitor environmental conditions in the country.

“A total of 896 individual images across the 6 target fish species were submitted via the TrackMyFish app for the 2022 Report Card study period, which were used to calculate the score for visual fish condition and 462 fish length and weight data entries were used to calculate the scores for fish body condition. It’s an incredible effort that people should really be commended for and one that is making a tangible, positive contribution to ensuring the long-term health of our harbour,” says John.



managing URBAN WATER WISELY

Stakeholders meet for biennial
Urban Water Stewardship
workshop



When it comes to looking after our waterways, harbour and ultimately, the Great Barrier Reef, the way that we manage urban water sources such as stormwater run-off, wastewater discharge and erosion in new urban developments, plays a significant role.

To assist local councils and key urban water management stakeholders to reduce the amount of pollution that stems from these sources, the Department of Environment and Science has developed the Urban Water Stewardship Framework; a benchmarking system that sets out the minimum standard, current best practice and optimal practice for urban water management activities. As the framework requires that these activities are reviewed and rated biannually, Gladstone Regional Council and GHHP representatives met on Thursday May 11 to collaboratively discuss and agree upon a score for each.

“The Urban Water Stewardship Framework is important in reviewing areas for improvement and acknowledging the great work that is happening to improve urban impacts on the water quality in our region and the Great Barrier Reef,” explains Gladstone Mayor, Matt Burnett. “It provides an opportunity for Council to monitor progress relating to our activities and services in planning and development, erosion and sediment control, stormwater asset management and sewage asset management and operation.”

While the results of the review will only be published in GHHP’s 2023 Report Card early next year, GHHP Chair Prof. Ian Gordon says the latest workshop brought about many positive outcomes and demonstrates a collective approach to improving environmental stewardship.

“A collaborative discussion like this one is a fantastic example of how stakeholders are actively working together to protect and improve our environment and ecosystems. We thank GRC for their ongoing commitment to the process.”



investing in the NEXT GENERATION

New educational resources now available for parents and teachers

In order to involve more members of the community in caring for the Gladstone Harbour and the environment as a whole, it's important to get the next generation of Harbour Heroes, involved in the effort. As a result, the team has been working hard behind the scenes to create a new suite of educational resources which aim teach children about the importance of looking after our harbour, and the animals who call it home, while reinforcing essential literacy and numeracy skills.

“By fostering a concern for the environment and sustainable habits in our children from an early age, we'll help to raise a generation who are more environmentally conscious, which is why GHHP is so passionate about working with local schools and partner organisations in this area,” explains GHHP's Project Officer, Hannah Russell.

“Our existing resources were starting to become a little dated so we thought it was high time that they were given a refresh.”

The new stand-alone resources have been developed by the GHHP communications team in consultation with relevant partner organisations, including education experts from CQUniversity, and are aimed at children aged from Prep to Year 6.

“While they're primarily intended for use in a classroom setting, they're all engaging and self explanatory enough that they can also be used as weekend or school holiday activities,” says Hannah.

The new resources, which include a colour-by-number, pattern activity and scavenger hunts, are freely available to download and print from [GHHP's website](#).

OUR partners

The work and achievement of the Gladstone Health Harbour Partnership wouldn't be possible without the support of our partners.



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