

Gladstone Healthy Harbour Partnership (GHHP) Independent Science Panel (ISP)

Chair's report from ISP meeting #18 held on 9 February 2016

The objectives of the ISP meeting were to provide ISP members with an update on GHHP activities, and to review progress against the GHHP Science Program milestones. In addition the ISP: completed a review of the lessons learned from the 2015 Report Card; developed candidate scenarios for Gladstone Harbour Atlantis Model; discussed how connectivity should be presented in future years; finalised the scope of fish health literature reviews and recommendations for potential contractors; discussed the draft 2016/17 science work plan; discussed options for developing mud crab indicators; finalized the statistical tasks for 2015/16 and new tasks for 2016/17; discussed a potential GHHP coral coring project in Gladstone Harbour; discussed the ISP input into the GHHP Stewardship Reporting Project; and agreed on the timetable for 2016 ISP meetings.

The Science Program is on track to deliver the required science inputs into the 2016 Pilot Report Card and overall the milestones are on track. Although in consultation with the GHHP Management Committee there have been some revisions of deadlines for data agreements and contracting of projects.

The ISP review of the lessons learned from the 2015 Report Card was based around three questions. What went well? What needs to be improved? What issues that emerged in the report card process need to be addressed in the 2016 Report Card? There was input from the GHHP Science Team and GHHP science contractors. The review process has been approved by the MC, which also approved the moving of the annual report card public release date to February of the following year (e.g., 2015/16 Gladstone Harbour Report Card to be released to the public in February 2017). The draft annual report card would still need to be approved by the MC in November following the reporting year (e.g., 2015/16 Gladstone Harbour Report Card to be approved by the MC in November 2016). The ISP identified improvement actions that will be discussed with the MC.

The ISP continued their discussion about recommending that connectivity would be reported as an environmental driver in 2016. The suggestions to date are some connectivity indicators should move to pressures and drivers, but that flushing could remain as an indicator. The ISP discussed different ways of presenting connectivity results in future report cards. There was some support for leaving flushing rate in the report card. However, it was noted that under the current structure, connectivity contributes 1/3 of the environmental score and that would be comprised of flushing rate alone if that was the only connectivity indicator in the report card. It was also noted that flushing rate could generally not be influenced by human intervention. ISP considers connectivity be reported as a driver of the system, but not to contribute to the environmental score. There may be the opportunity to report connectivity on the map of environmental grades in the report card brochure, and in the report card website and technical report. This will be discussed with connectivity contractor and GHHP Communications team prior to ISP finalising a recommendation to MC.

The ISP has decided the Fisheries Queensland QFish mud crab database was not suitable for GHHP's purposes. The ISP decided to investigate the potential of using data from a subset of commercial crabbers to provide reliable catch and effort data. GHHP would then develop its own techniques for collecting and recording mud crab data.

The ISP supported going ahead with the coral coring project following clarification of how the results of the project will be able to address questions that will contribute to improved interpretation of report card results. The ISP will develop a set of questions to be addressed by the coral coring project, discuss them with AIMS to ensure they can be addressed in the project and then seek a proposal form AIMS for consideration by the ISP prior to a recommendation to the Management Committee.

The stewardship work is not oversighted by the ISP but noted concerns regarding the Stewardship report, in particular the reliance on industry self-assessment and the fact that poor governance of recreational fishing made the assessment of stewardship in that sector questionable. These concerns will be conveyed to the stewardship-working group.

Dr Beth Fulton (CSIRO) joined the ISP by teleconference to discuss scenario testing of the Gladstone Harbour Atlantis Model. This will be undertaken at a joint meeting of the ISP and MC in April 2016. The ISP identified the following candidate scenarios for model testing:

- Closure of a major industrial plant in Gladstone Harbour.
- A 30-50% reduction in coal exports (noting current overcapacity and the need to service debt).
- Channel duplication & dredge spoil dumping (related to industrial growth).
- The effects of a reduction in nutrient inputs on GH nutrient levels.
- What management changes could improve habitat grades? (e.g., what changes would lead to an increase in seagrass from a D to a C?).
- Improvements to water quality sampling design (e.g., monthly rather than quarterly sampling, having a minimum number of sites per zone).
- The effects of a major oil spill (e.g., through ship grounding).
- The effects of a major flood &/or rainfall event.
- Reduction in fish catch (e.g., closure of commercial fishing, or 50% reduction).

Ms Toni Cannard (CSIRO) delivered a Skype presentation on the ISP005 Social, Cultural and Economic project. The ISP members discussed the report and its results with Toni, and clarified the methodology used in the project.

Gladstone Region Environmental Advisory Network (GREAN) representatives joined the ISP for lunch. This included a presentation by Dr Emma Jackson (CQU) on her seagrass restoration research currently underway in Gladstone Harbour. We discussed the results of the 2015 Report Card with a particular focus on the economic component. GREAN members were asked what they thought about a reduction in the number of Harbour zones through merging. They showed a preference for the current zonation as it gave local relevance to the results. It was also noted it would be of value to be able to compare indigenous to non-indigenous responses to the questions on 'sense of place' in the cultural component.

The ISP acknowledged the significant amount of work the science team had completed since our last meeting, thanked them for their dedication and noted the ongoing high quality of their work. The next ISP meeting is scheduled for the 4 May 2015 in Gladstone.