

Chair Report on ISP Meeting 29

1st of November 2018

Project updates

- Almost all 2018 projects have been fully completed, and all data required to complete the 2018 report card have been received.
- Contracts for the 2019 Report Card are being progressively developed.
- One tender for the Social Cultural Economic component has been received, and a recommendation is being developed.
- Two tenders for the Indigenous Cultural Heritage sub-component have been received, and are currently being evaluated by the ISP, one member of the Management Committee and one external expert.

Environmental Scores for the 2018 Report Card

The ISP reviewed the draft scores and grades for the different indicators and indicator groups in the Environmental component of the report card.

Mangroves will be added to the Habitats group for the first time, providing another advance in assessment.

The full report card could not be viewed because the Water and Sediment data was still being processed (it had only recently been received from PCIMP), but draft scores for the different sections could be viewed.

The confidence ratings for the Environmental Component were set at Medium again, although the ISP noted that the report card was continuing to develop and consolidate. Key reasons for maintaining a Medium confidence score were that:

- Fish Health is still to be added (this is scheduled for 2019)
- Mangroves are a relatively new component
- There are some quality assurance issues with the water quality and sediment data, and the guideline values are being reviewed.

Social, Cultural and Economic scores for the 2018 Report Card

The ISP reviewed the draft scores and grades and confirmed the results for the 2018 report card.

The confidence ratings for the Social and Economic Components remained at High, noting that only very minor changes in assessment had occurred.

The confidence rating for the Cultural component was left at Medium, largely because the Indigenous Cultural Heritage sub-component is still to be led by one or more Traditional Owner groups.

Mangroves

An indicator for Mangroves has been developed by Norm Duke and team from James Cook University. The indicator involves three measures:

- Extent – proportion of the area of mangroves relative to the area of tidal wetlands
- Canopy – mangrove canopy cover indicator assessed from satellite data
- Shoreline – condition indicator based on proportion of dead trees assessed from aerial imagery

The ISP recommends that the Mangroves indicator be added to the 2018 report card.

Macroalgae cover on coral

Macroalgae cover on coral is one of four measures that makes up the Coral indicator. It was originally designed to be consistent with the Marine Monitoring Program (MMP) for the wider Great Barrier Reef. However the MMP have changed their methodology so now the thresholds are adjusted by the nutrient levels in the water.

The ISP will source more information about whether the MMP measure is likely to change further with RIMREP before finalising a recommendation in 2019.

QA/QC with Water Quality

A number of issues were identified with the water quality data received from PCIMP. There have been some time delays (nearly two months) to receive the data and the QA/QC report, which has made it difficult to finalise the scores on time.

Quality assurance: A large number of field blanks and laboratory blanks are returning positive results, which makes it difficult to have high levels of confidence in the data. The problems are particularly acute for NO_x, where observations are close to guideline values. **As a result the ISP recommends that NO_x continues to be excluded from the report card.** There are also many positive blanks for Total Nitrogen and Total Phosphorus samples, but the potential variations in measure levels do not justify removal from the Report Card.

Discussions with PCIMP have identified potential reasons for the contamination, including:

- Field sampling procedures (e.g. equipment and filters are not acid washed)
- Lab sampling procedures (e.g. some labs reuse sample bottles)

The ISP will:

- Request PCIMP to provide more information about sampling techniques
- Make recommendations to PCIMP about options to improve QA/QC.

Limits of Reporting:

Limits of reporting are still above the guideline value of 1ug/L for many zones in the harbour. **As a result the ISP recommends that Orthophosphate continues to be excluded from the report card.**

Limits of Detection.

In 2017, Mercury in sediments was added to the report card for the first time because extra laboratory analysis was performed at a lower limit of reporting (LOR) of 0.01mg/kg. However this year the PCIMP analysis was performed at the old level of 0.2mg/kg, which is above the guideline value. **As a result the ISP recommends that Mercury in sediments is removed from the 2018 report card.**

The ISP will request that PCIMP analyses the 2018-19 data with the lower LOR level.

Abnormal measures in water quality data

A number of measures of water quality parameters have been identified where the dissolved values are higher than the total values. The standard ISP approach will be applied to evaluate these, with the more severed cases to be removed from the data.

Water quality guideline values

The ISP are currently evaluating whether it is appropriate to use the 80th percentile as the reference value for Moderately Disturbed waters, despite the recent advice from Department of Environment and Science that GHHP has to remain with the 50th percentile.

The guide for the treatment of the Port Curtis water quality objectives defaults to the *Queensland Water Quality Guidelines* (Appendix D), where it states:

D.2.2 Slightly to moderately disturbed waters For SMD waters, the ANZECC 2000 Guidelines default approach to assessing compliance is defined as: 'A trigger for further investigation will be deemed to have occurred when the median concentration of an independent samples taken at a test site exceeds the eightieth percentile of the same indicator at a suitably chosen reference site.'

The ISP has agreed on the following course of action:

1. Demonstrate how the guideline values are impacting on assessment options
 - a. Access the PCIMP data for the relevant parameters back to 2013
 - b. Calculate the median, 20th, 50th and 80th percentiles
 - c. Compare the current approach (mean to 50th percentile) with the median to 50th percentile, and the 20th, 50th and 80th percentiles against the guidelines.
2. Identify how other report cards are evaluating water quality guidelines
3. Question why some guidelines are set below limits of detection, and identify if this occurs in other regions
4. Organise a joint meeting between the ISP and the Department of Environment and Science

2019 Meetings

It is proposed to have four ISP meetings again in 2019. To reduce the time and travel demands on the ISP members, greater use of Zoom technology is planned.

- A half-day face-to-face meeting is planned for February in conjunction with a half-day workshop on Fish Health
- ISP meetings in May and September may be held by Zoom
- The November ISP meeting will be face-to-face