Seagrass science report for WN4 (Wynnum - Manly, Moreton Bay, QLD) November 2016.

Introduction

On 9th October, 2016 a small team as part of Reef Blitz undertook seagrass monitoring at Wynnum-Manly at Wildlife Queensland Coastal Citizen Science intertidal seagrass monitoring site WN4. WN4 is located within the Wynnum – Manly seagrass meadow that extends from Manly Harbor to Wynnum West.

Methodology

One methodology was used at WN4, the Seagrass Watch method. The methodology devised by Seagrass- Watch and utilised by citizen scientists in Moreton Bay is ideal as it is a simple and scientifically robust methodology. This methodology is based upon the collection of data about of seagrass, sediment and biological condition examined within a 50cm * 50cm quadrat placed every 5 metres along three parallel lines each 50m long by 25m apart (Figure 1).

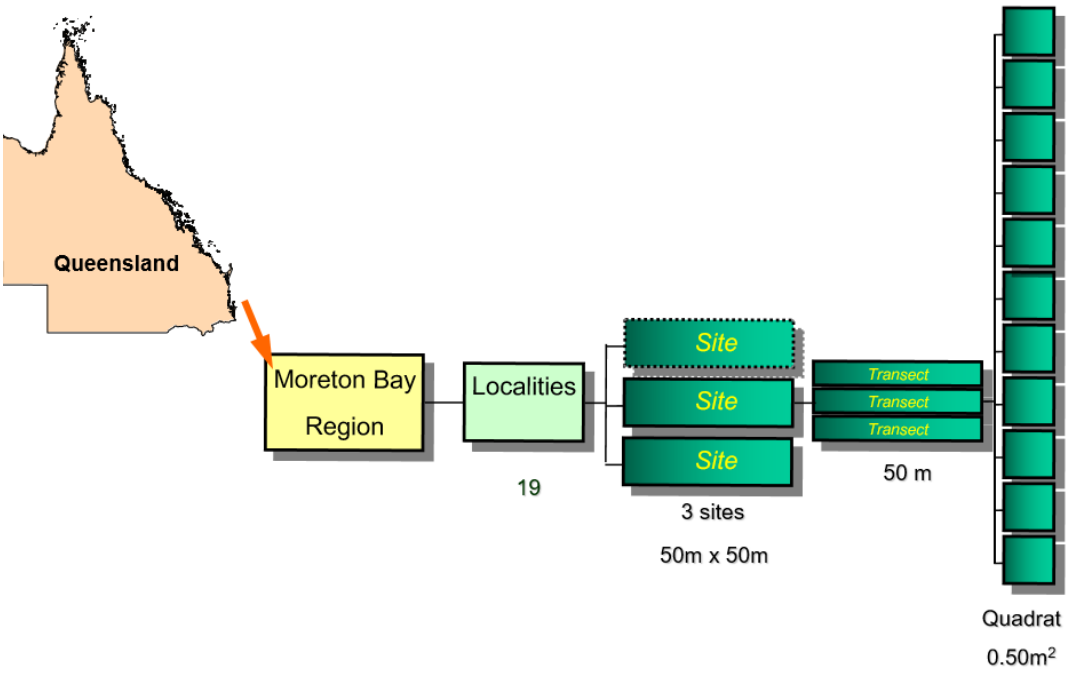

Figure 1: The Seagrass Watch methodology. Available at http://seagrasswatch.org/publications.html

Results

The results are shown in Figure 2: to Figure 4.

Figure 2 shows the area of interest, Manly Wildlife Queensland Coastal Citizen Science (WQCCS) site WN4.

Figure 2: Area of interest. Manly, WQCCS seagrass monitoring site WN4.

Figure 3: Seagrass extent (2016) at site WN4.

Seagrass at WN4 seagrass meadow has varied between 4.68ha and 13.14 ha from 1990 to 2013. The average seagrass cover for the WN4 monitoring site varies between 13.5% to 49% seagrass cover and is predominantly covered by *Zostera muelleri.* In October 2016 WN4 the Reef Blitz showed the site supported 13.52% seagrass cover and it was dominated by *Zostera muelleri.*

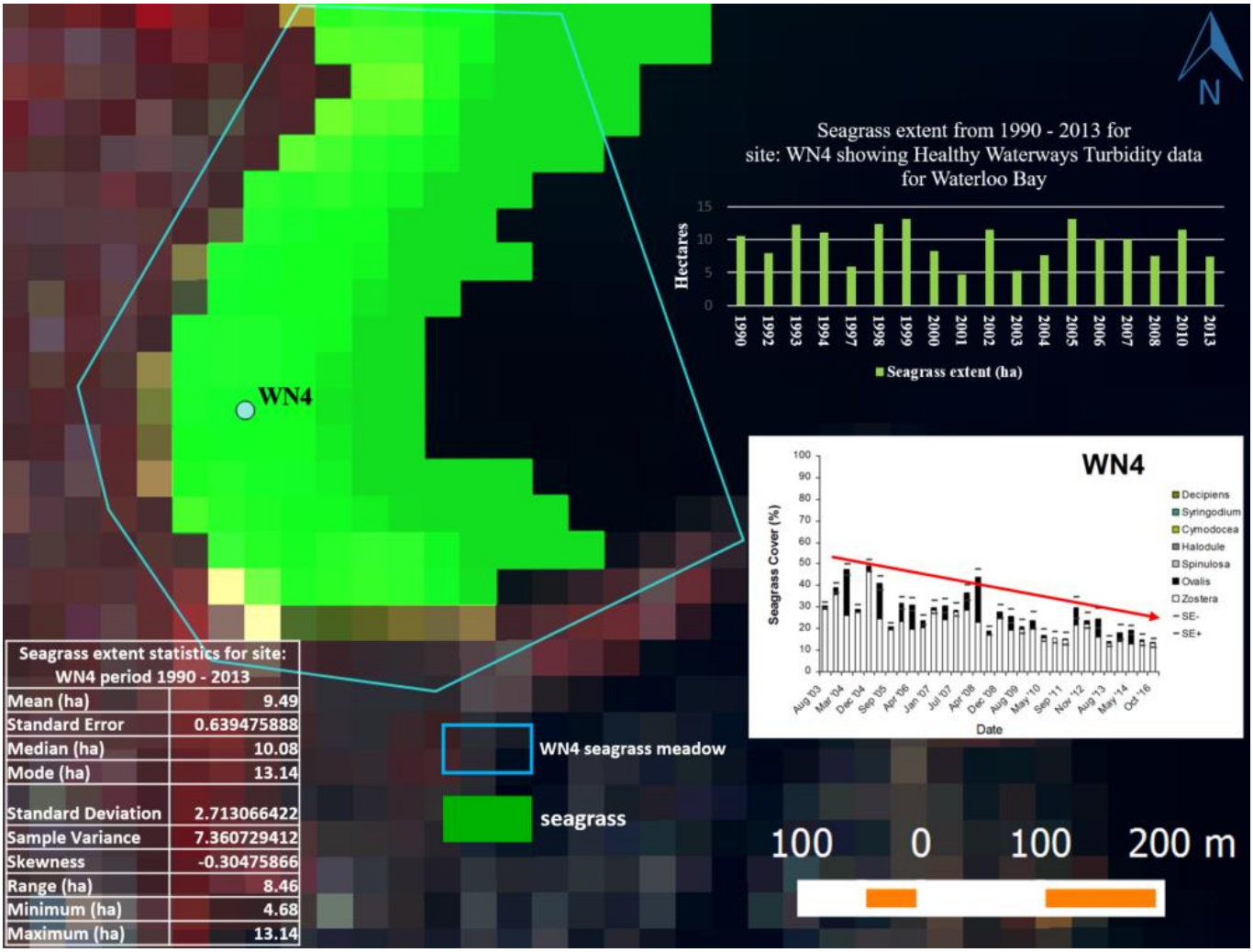

Figure 4: Long-term trend data showing WN4 seagrass meadows (outlined in blue), the WN4 seagrass monitoring site (Blue dot). Historical seagrass cover for WN4 is shown, and seagrass extent (ha) trend data shown. Background imagery from Landsat 8 product of USGS.

Discussion

The extent of the WN4 intertidal seagrass meadow has varied between 1990 and 2013.

The site has been impacted by commercial bait worming at the Northern end of the meadow sometime in early 2009. Seagrass % cover at WN4 has gradually declined from 49% in 2004 to 13% (Figure 4). The cause of the decline is not yet determined but will be investigated.