

Limmen Seagrass Research Project



By Emmalena Barrett

Background

- The survey was done from the Rosie creek to the mouth of Limmen To around Beatrice and Maria Island
- The last known survey was done in 2004 from a copper on the intertidal areas.
- The Marra and Yanyuwa have lived and traveled all along the coast to the Limmen river and out to Marie
- The research was to help Marra people to know how many areas have sea grass and if they are healthy how.
- Marra and Yanyuwa only see the shallow bits of sea grass if hunting for dugongs or sea turtles so going out a bit deeper to look was good.
- Seagrass is important to Marra people as sea turtles and dugongs eat the seagrass and sea creatures live in or around seagrass meadows.
 - The sea turtles and dugongs are a way of life for the Marra people not just for eating e.g., dancing, paintings, dreaming's songlines and stories.
 - If country is not healthy then Marra families will not feel good or healthy.
 - The Commonwealth was put in place, but no surveys were done to see what seagrass was on their and if any amount of sea turtles or dugongs were found close could aid for future surveys on them.

Partnership

- ← A partnership with Mabunji and li-Anthawirriyarra sea Rangers
- ← Commonwealth
- ← NTG
- ← CDU
- ← JCU scientists

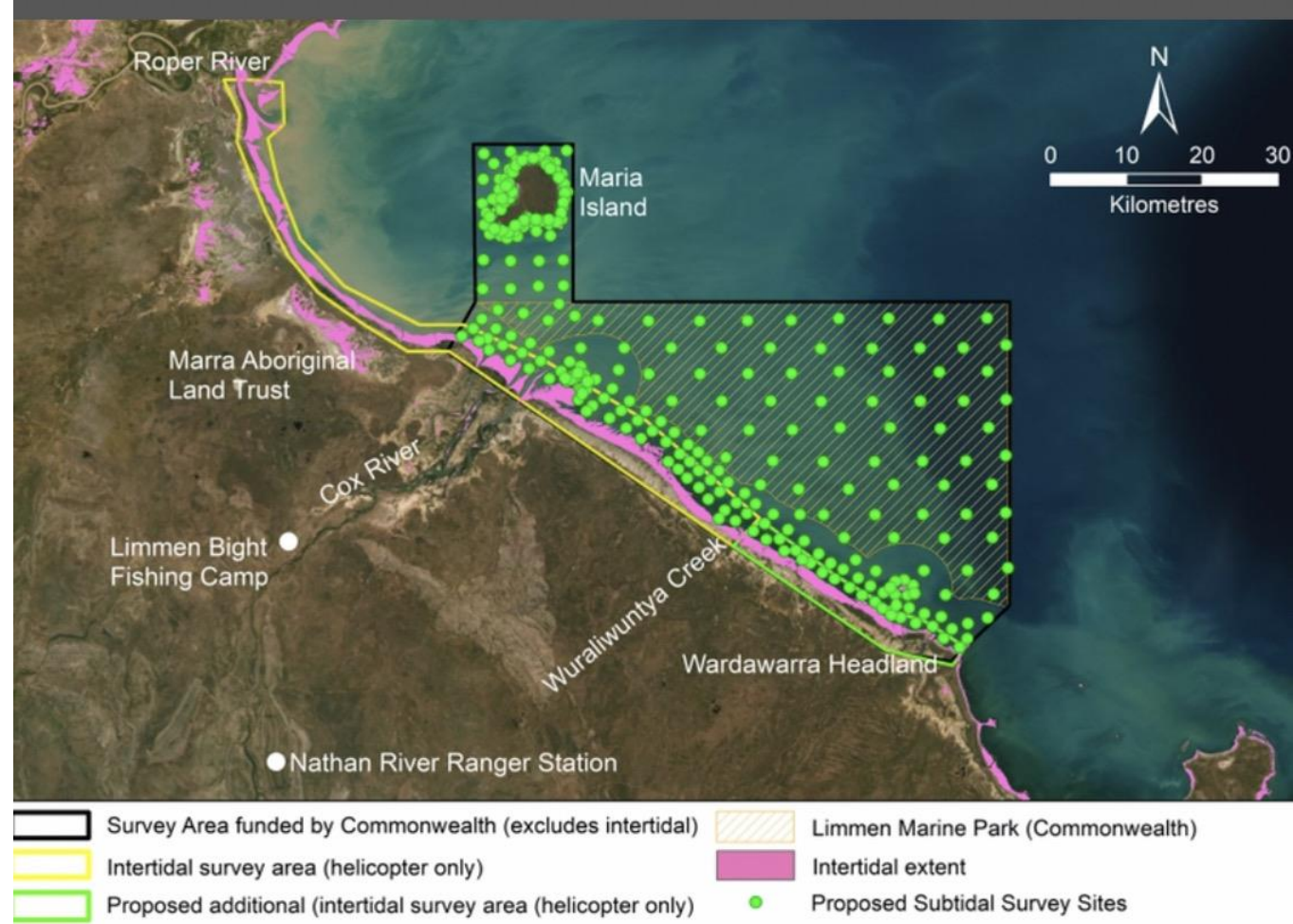
Method

3 boats were used
Large charter boat live aboard
Mabunji sea ranger
NTG Parks and wildlife

Pull data together
Develop survey plan
-helicopter intertidal -biggest low tides to map the most
seagrass possible
2000 sites

Planning

Modelling and mapping
Survey Plan in Limmen area
Yellow area chopper
Green dots sites to do camera drops



Data sheet

The site number

Depth of the water

How many knots

Animal species found in catching bag on sled tow

Grab for seagrass

If any turtles or dugongs were spotted

Benthic Survey Data Sheet

Site #: 55 Time: 1400 Location: Moja Is, Cinn Transect waypoint start: waypoint finish: Grab
Counter: 14:03:59 to 14:09:10 Wind (dir/kts): Sled
Observer: RG Sediment: M/S/S/D Depth: 9.5 m Dugong Turtle Dolphin Exclude from Biomass

Seagrass Species/%: %

ALGAE % Encrusting %
Turf Mat % Erect Calcareous % Taxa present:
Erect Macros % Filamentous %

BENTHIC TAXA (# Taxa / # Individuals):

	Sled Net			Sled Net	
	#Taxa	#Individ.		#Taxa	#Individ.
Annelida:			Echinodermata:		
- Polychaeta.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	- Asteroid.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Platyhelminthes:			- Crinoid.....	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- Unsegmented worms..	<input type="checkbox"/>	<input type="checkbox"/>	- Echinoid.....	<input type="checkbox"/>	<input type="checkbox"/>
Bryozoa:			- Holothuroid.....	<input type="checkbox"/>	<input type="checkbox"/>
- Encrusting.....	<input type="checkbox"/>	<input type="checkbox"/>	- Ophiuroid.....	<input type="checkbox"/>	<input type="checkbox"/>
- Erect.....	<input type="checkbox"/>	<input type="checkbox"/>	Mollusca:		
- Motile.....	<input type="checkbox"/>	<input type="checkbox"/>	- Bivalvia.....	<input type="checkbox"/>	<input type="checkbox"/>
Cnidaria:			- Gastropoda.....	<input type="checkbox"/>	<input type="checkbox"/>
- Anthozoa:			- Cephalopoda.....	<input type="checkbox"/>	<input type="checkbox"/>
Zoantharia:			Pisces:	<input type="checkbox"/>	<input type="checkbox"/>
- Zoanthid.....	<input type="checkbox"/>	<input type="checkbox"/>	Porifera:	<input type="checkbox"/>	<input type="checkbox"/>
Actiniaria:			Pycnogonida:	<input type="checkbox"/>	<input type="checkbox"/>
- Anemones.....	<input type="checkbox"/>	<input type="checkbox"/>	Urochordata:		
Scleractinia:			- Ascidians.....	<input type="checkbox"/>	<input type="checkbox"/>
- Hard corals.....	<input type="checkbox"/>	<input type="checkbox"/>	Others:		
- Solitary corals..	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
Alcyonaria:			-	<input type="checkbox"/>	<input type="checkbox"/>
- Gorgonians.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
- Sea pens.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
- Soft corals.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
+Hydrozoa:			-	<input type="checkbox"/>	<input type="checkbox"/>
- Hydroids.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
Crustacea:			-	<input type="checkbox"/>	<input type="checkbox"/>
- Brachyura.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
- Caridea.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
- Penaeid.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>
- Stomatopoda.....	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS: 1 x transparent white jelly

Small boat data collection

Once at site tag the site on laptop

Turn on camera then drop it down to bottom

Fill out sheet and watch for seagrass

Let the camera drop 2-4 times depends
if seagrass found

If seagrass found do a drop grab with special tool
and bag seagrass



Tow sled data collection

When approaching a site tag it on the laptop

Turn Camera on and drop down to bottom

Fill out data sheet and watch camera for sea grass

Let it drag on the bottom for 100 meters

Pull camera back up and check catching bag for seagrass and marine animals if any found
put info on sheet and take pictures and bag any seagrass for sample testing.

Head to next site



Conclusion

Doing this survey with Rangers was good as they learned how to do the survey so in the years to come they will be able to help out more and conduct the surveys on their own.

Having me out on doing and learning was good experience and hope to be involved in future.