

Aquatic Sciences

Aquatic and Littoral Vegetation



Jason Nicol, Susan Gehrig, Arron Strawbridge, Luciana Bucater
and Rod Ward

SARDI Aquatic Sciences



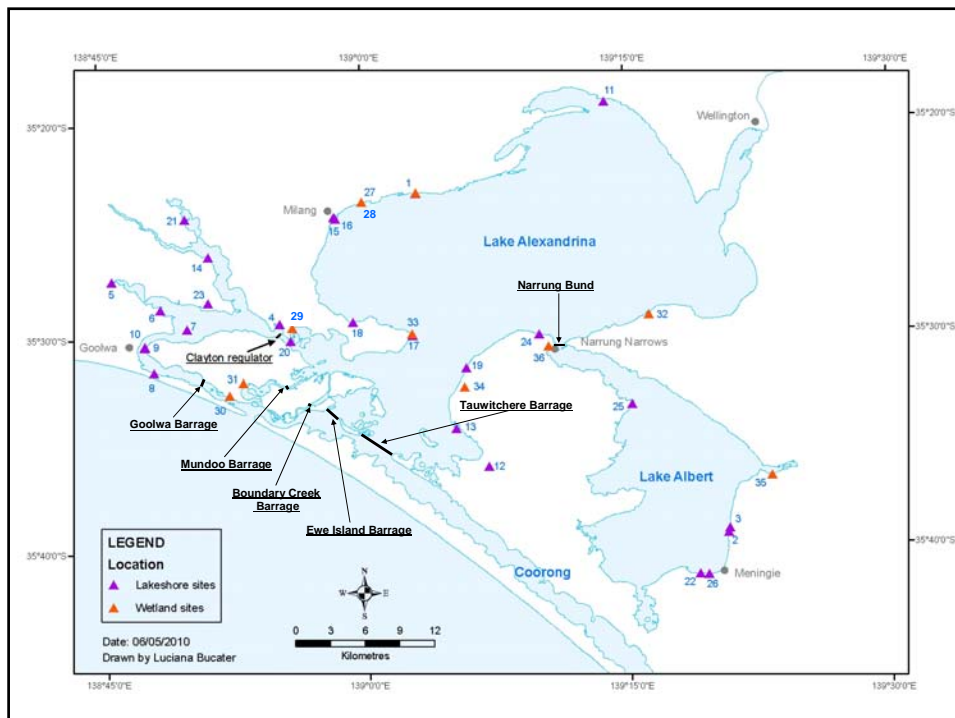
Introduction

- TLM vegetation condition for the Lower Lakes (evaluate target V3)
- Monitor response of plant communities in Goolwa Channel to interventions
- Focus on changes in the plant community over the last three years



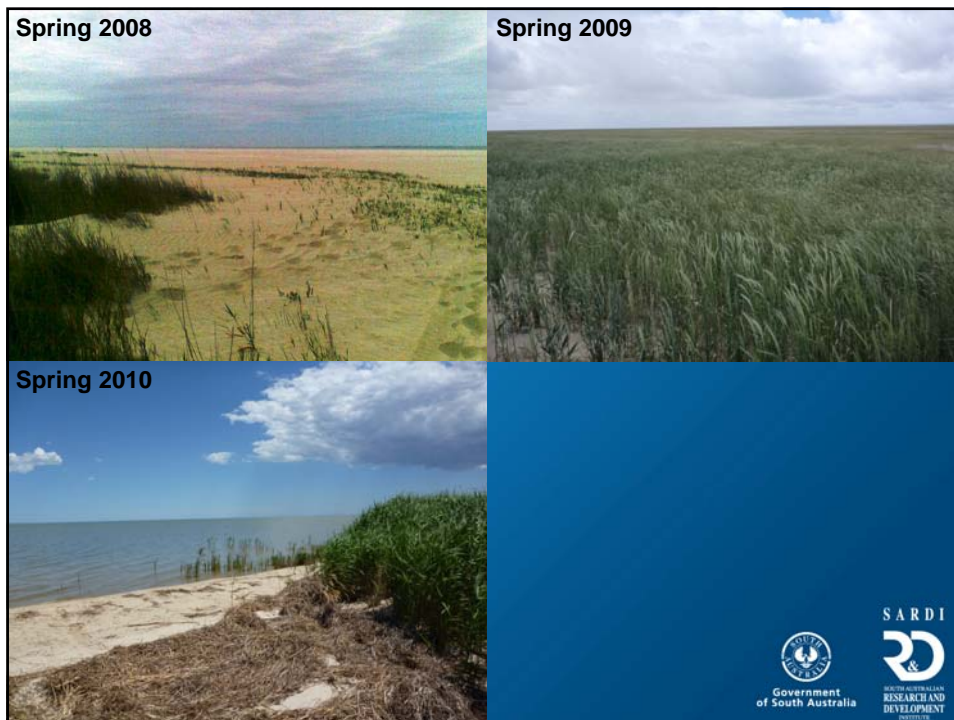
Methods

- Quadrat based quantitative vegetation surveys every spring and autumn
- Qualitative mapping of plant communities in Goolwa Channel in spring 2010 and autumn 2011



Results

- 160 taxa were recorded
- 74 exotics (46%)
- One species listed as rare in South Australia (*Ceratophyllum demersum*)



Lakeshores

- Fringing vegetation persisted during low water levels
- Terrestrial taxa recruited on exposed lake beds
- Terrestrial taxa extirpated when water levels were restored
- Fringing vegetation increased in abundance and condition improved
- Submergent taxa generally absent



Wetlands

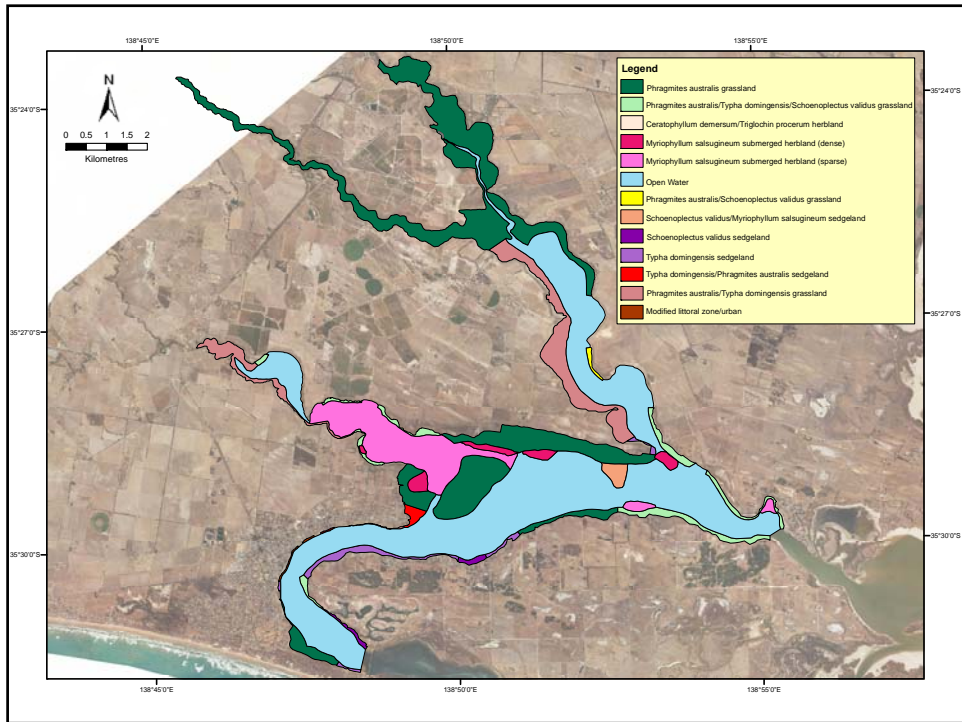
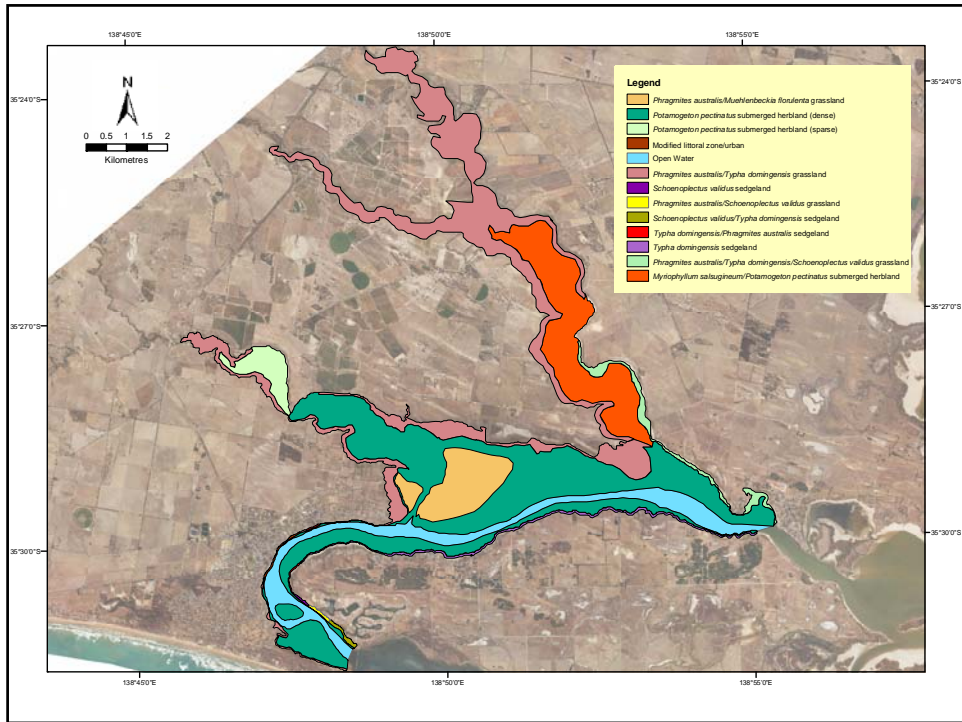
- Changes in fringing vegetation similar to lakeshores
- Terrestrial species recruited on exposed wetland beds
- Terrestrial species extirpated when water levels rose
- Limited recruitment of submergents at some sites



Goolwa Channel

- Prior to August 2009 the plant community was similar to wetlands and lakeshores
- Emergents persisted despite elevated salinity
- *Potamogeton pectinatus* the dominant submergent from autumn 2010 to spring 2010





Discussion

- Main drivers of plant community are water level and salinity
- Regulated and natural inundation will result in submergent plant recruitment
- The plant community is recovering but not to pre-drought condition

