

Table 1 Seagrass (Presence/absence)

	DATA OPTION 1: Quickbird 2	DATA OPTION 2: Landsat 7 ETM
<i>Spatial Dimensions</i>		
Area to cover	12 km x 12 km per scene	185 km x 185 km per scene
Mapping unit	068m panchromatic 4.0 m multi-spectral	15 m panchromatic 30 m multi-spectral
Positional accuracy	Dependent on georeferencing process	Dependent on Georeferencing process
<i>Temporal Dimensions</i>		
When	Approx 10.45 am	Approx 9.45 am
How often	Minimum every 4 days	every 16 days
Variable to map	Seagrass (Presence/absence)	Seagrass (Presence/absence)
Environmental / Sensor Restrictions	For sub-tidal vegetation to depth limited by water clarity. Inter-tidal and supra-tidal vegetation can have water on top. Not possible for turbid water Clouds, strong winds and breaking waves.	For sub-tidal vegetation to depth limited by water clarity. Inter-tidal and supra-tidal vegetation can have water on top. Not possible for turbid water Clouds, strong winds and breaking waves.
Processing technique (Output)	Image classification or feature detection using segmentation and classification (Vegetation type map and target features) Note: The ability to map seagrass will depend on their growth form, percent cover, substrate colour and extent.	Image classification or feature detection using segmentation and classification (Vegetation type map and target features) Note: The ability to map seagrass will depend on their growth form, percent cover, substrate colour and extent.
Resources – Hardware and Software	PC Image processing software GIS with image classification module (e.g.	PC Image processing software GIS with image classification module (e.g. ARCGIS Image Analyst)

	ARCGIS Image Analyst)	
Resource – Personnel	Trained in image classification Experience with high spatial resolution data Knowledge of area to be mapped	Trained in image classification Experience with Landsat data Knowledge of area to be mapped
References: Note these are some example references	(Phinn et al., 2008)	(Roelfsema et al., 2009)

Phinn, S., C. Roelfsema, A. Dekker, V. Brando and J. Anstee (2008). "Mapping seagrass species, cover and biomass in shallow waters: An assessment of satellite multi-spectral and airborne hyper-spectral imaging systems in Moreton Bay (Australia)." Remote Sensing of Environment 112: 3413-3425.

Roelfsema, C. M., S. R. Phinn, N. Udy and P. Maxwell (2009). "An Integrated Field and Remote Sensing Approach for Mapping Seagrass Cover, Moreton Bay, Australia." Journal of Spatial Science 54(1): 45-62.