Table 28 Water Quality - Suspended Sediment Concentration

	DATA OPTION 1: MERIS	**DATA OPTION 2: Landsat ETM**
Spatial Dimensions		
Area to cover	Swath width 572 km	185 km x 185 km per scene
Mapping unit	300 m	15 m panchromatic 30 m multi-spectral
Positional accuracy	Dependent on Geo-referencing process	Depends on level of Geo-referencing
Temporal Dimensions		
When	1030 hrs	Approx 09:45 am
How often	Every 3 days	every 16 days
Variable to map	Suspended sediment concentrations	Suspended sediment concentrations
Environmental / Sensor Restrictions	Optically shallow areas	Optically shallow water
Processing technique **(Output)**	Image based deterministic (inversion of radiative transfer model). (Map showing suspended sediment concentration in mg/m^3 in each pixel)	Image modelling using empirical or process radiative transfer models.
Resources – Hardware and Software	PC Image processing software with Hyper-spectral analysis capabilities, including sub-pixel mapping techniques.	PC Image processing software GIS with image classification module (e.g. ARCGIS Image Analyst)
Resource – Personnel	Trained in hyper-spectral data processing. Knowledge of area to be mapped	Trained in image modelling Experience with Landsat data Knowledge of area to be mapped
References: Note these are some example references	Brando et al. (2006)	Brando et al. (2006)

Brando, V., A. Dekker, A. Marks, Y. Qin and K. Oubelkheir. (2006) “Chlorophyll and suspended sediment assessment in a macrotidal tropical estuary adjacent to the Great Barrier Reef: spatial and temporal assessment using remote sensing” Coastal CRC Technical Report. Brisbane, Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management: 17.
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