# Table 32 Hydro-optical Properties - Euphotic Depth

| | **DATA OPTION 1: MERIS** | **DATA OPTION 2: Lansat ETM** |
|---|---|---|
| ***Spatial Dimensions*** | | |
| **Area to cover** | Swath width 572 km | 185 km x 185 km per scene |
| **Mapping unit** | 300 m | 15 m panchromatic<br>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** | Euphotic Depth | Euphotic Depth |
| **Environmental / Sensor Restrictions** | Optically shallow areas<br><br>Clouds, strong winds and breaking waves. | Optically shallow areas<br><br>Clouds, strong winds and breaking waves. |
| **Processing technique**<br><br>**(Output)** | Image based deterministic (inversion of radiative transfer model).<br><br>(Map showing CDOM concentration in each pixel) | Image based deterministic (inversion of radiative transfer model). |
| **Resources – Hardware and Software** | PC<br>Image processing software with Hyper-spectral analysis capabilities, including sub-pixel mapping techniques. | PC<br>Image processing software GIS with image classification module (e.g. ARCGIS Image Analyst) |
| **Resource – Personnel** | Trained in hyper-spectral data processing.<br>Knowledge of area to be mapped | Trained in image modellling<br>Experience with Landsat data<br>Knowledge of area to be mapped |
| **References:**<br>Note these are some example references | Kratzer et al (2003) | Kratzer et al (2003) |

Kratzer, S., Håkansson, B., and Sahlin, C., (2003). “Assessing secchi and photic zone depth in the Baltic Sea from satellite data.” AMBIO: A Journal of the Human Environment, 32: 577-585.