



## High resolution spatial imagery (QuickBird) acquired for Australia's coastline

Monitoring coastal habitat extent and condition is now easier due to the strategic investment in high resolution images for priority areas around Australia's coastline.



Example of a QuickBird scene suitable for benthic habitat mapping. The image demonstrates the level of pattern and texture that can be observed from this product (DigitalGlobe® image courtesy of SKM and DigitalGlobe, Inc.).

In collaboration with state agencies, a number of priority coastal areas were identified for habitat mapping. CSIRO, with significant input and assistance from Sinclair Knight Merz (SKM), assessed the suitability of all archived QuickBird scenes for benthic habitat mapping in these areas and 72 suitable scenes were acquired.

Geoscience Australia (GA) is the custodian and will distribute the data. This aligns with GA's role as an Australian government leader in the acquiring, storing and distributing satellite imagery.

Proposed mechanisms are still being approved by DigitalGlobe, however, the intention is to provide 2 main methods for access and delivery:

1. Colour composite images at 10 metre spatial resolution provided to the general public via the OzCoasts website (hosted by GA) [www.ozcoasts.org.au](http://www.ozcoasts.org.au).
2. Imagery data at full spatial and spectral resolution distributed by GA, most likely on external hard drive for a small handling fee. Data may only be distributed to organisations who have agreed to the DigitalGlobe End User Licence and GA will help facilitate this process.

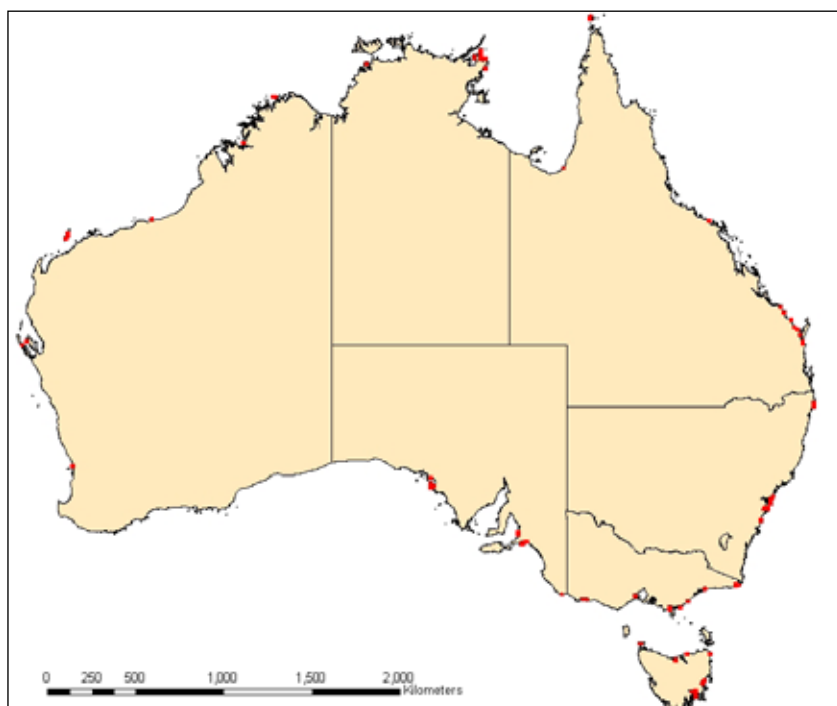
More than one hundred organisations have registered their interest concerning access to the full resolution data. These organisations are currently being approved by DigitalGlobe, Inc. If additional organisations require access to the data, they should contact [acres@ga.gov.au](mailto:acres@ga.gov.au). Note that detailed delivery mechanisms are still being determined and are subject to approval by DigitalGlobe.

## Background

Due to the size of the Australian coastline and the often remote locations of sensitive habitats, monitoring coastal habitat extent and condition through conventional field surveys (that rely on field data, collected from point samples), is not always feasible. Satellite imagery offers spatially extensive information that can form the basis for quantifying species richness, abundance, diversity and biomass on a habitat scale. It also offers a basis for continued trend assessment while limiting the need for frequent field trips.

CSIRO Land and Water developed (and is continually improving) a standardised approach for using multispectral satellite imagery to assess coastal habitat extent and condition. Fine scale habitat classification can now be achieved by using these high spatial resolution satellite products in conjunction with image processing analysis and expert knowledge.

DigitalGlobe's QuickBird satellite—delivering multispectral image products with a ground resolution of 2.44m to 2.88m and an image archive dating back to October 2001—was identified as the current source of highest resolution data for this purpose.



Locations of QuickBird scenes purchased by the NLWRA for coastal habitat extent and condition assessment

State allocations of QuickBird scenes purchased by the NLWRA for coastal habitat extent and condition assessment.

State	No of scenes	Area covered (km <sup>2</sup> )
Queensland	11	3833.53
Northern Territory	10	3347.60
Western Australia	11	3530.79
South Australia	10	3453.12
Victoria	10	3286.16
Tasmania	10	3283.54
New South Wales	10	3616.41
<b>Total</b>	<b>72</b>	<b>24351.13</b>

### For further information contact

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Product Number: PN21568