This lidar-derived submarine topography map was produced as a collaborative effort between the U.S. Geological Survey (USGS) and the National Park Service (NPS) as part of the U.S. National Park Service Coastal and Marine Science Program. The map was generated from the lidar data tile and incorporated into this map product. The data were organized as 2 km by 2 km data tiles in 32-bit floating-point integer GeoTiff format. Contour line and hillshade layers were created from the lidar data tile and incorporated into this map product.

DATA DESCRIPTION

The laser soundings used to create this map were collected during July and August 2004 by the NASA Experimental Airborne Advanced Research Lidar (EAARL) system mounted on a Cessna 310 aircraft. The EAARL uses a waveform-resolving green laser capable of mapping submarine and subaerial land topography in a single overflight. The EAARL system is typically flown at 300 m altitude AGL, resulting in a 240 m swath width.

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DATA COLLECTION

Data collection occurred with approximately 50% overlap between flightlines, resulting in about one laser sounding per square meter. The data were processed by the USGS Center for Coastal and Watershed Studies to produce 1-meter resolution raster images that can be easily ingested into a Geographic Information System (GIS). The data were generated from the lidar data tile and incorporated into this map product.

PROJECT DESCRIPTION

This lidar-derived submarine topography map was produced as a collaborative effort between the U.S. Geological Survey (USGS) and the National Park Service (NPS) as part of the U.S. National Park Service Coastal and Marine Science Program. The map was generated from the lidar data tile and incorporated into this map product. The data were organized as 2 km by 2 km data tiles in 32-bit floating-point integer GeoTiff format. Contour line and hillshade layers were created from the lidar data tile and incorporated into this map product.

FURTHER READING


PROJECTIONS

The data used in this map were collected using the Universal Transverse Mercator (UTM) projection. The data were projected using the North American Vertical Datum of 1988 (NAVD 88) as the vertical datum. The data were gridded using a grid spacing of 1 meter. The data were then transformed into the Universal Transverse Mercator (UTM) projection using the World Geodetic System 1984 (WGS84) as the reference ellipsoid.

MAP LOCATION AND CORRESPONDING 2X2 KILOMETER DATA TILE INDEX

The map location is shown on the accompanying map of the U.S. and is also shown on the accompanying map of the Dry Tortugas National Park. The map location is also shown on the accompanying map of the Dry Tortugas National Park.

ACKNOWLEDGMENTS

This project was funded by the U.S. National Park Service Coastal and Marine Science Program and the U.S. Geological Survey Coastal and Marine Science Program. The data were collected and processed by the USGS Center for Coastal and Watershed Studies. The map was produced by the USGS Coastal and Marine Science Program.

REFERENCES