



# Coastal Digital Elevation Models (DEM) Fact Sheet

## What is a coastal DEM?

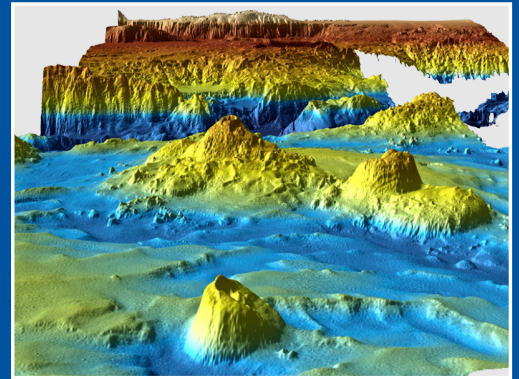
A coastal DEM depicts Earth's land surface and seafloor in an integrated digital map of a coastal region. It is made from public land and seafloor elevation data collected by federal, state, and local governments, universities and research institutions, and private companies.

## How are they used?

DEMs help us plan, prepare for, and better understand ocean and coastal processes and their impact on the environment, economies, and societies.

Uses include:

- real-time tsunami and storm-surge forecasting and warning
- hazard mitigation and community preparedness
- ecosystem management and habitat research
- coastal change, sea level rise, and terrain analysis
- pollution monitoring and contaminant dispersal
- map creation and Earth visualization
- long-term community planning



After Malaysia Airlines Flight MH370 mysteriously disappeared over the Indian Ocean in 2014, survey teams generated a digital elevation model of the seafloor to better visualize it in trying to locate the missing plane's wreckage.

Picard, K., B. Brooke, and M.F. Coffin (2017), Geological Insights from Malaysia Airlines Flight MH370 Search, *Eos*, 98, <https://doi.org/10.1029/2017E0069015>. Published on 06 March 2017.

## Where to find them?

NOAA's National Centers for Environmental Information (NCEI) is an international leader in coastal DEM development and freely distributes a wide variety of DEMs online from global to community scale. DEMs built by other U.S. and international agencies can also be accessed via NCEI's website, [www.ngdc.noaa.gov/mgg/coastal/coastal.html](http://www.ngdc.noaa.gov/mgg/coastal/coastal.html).

