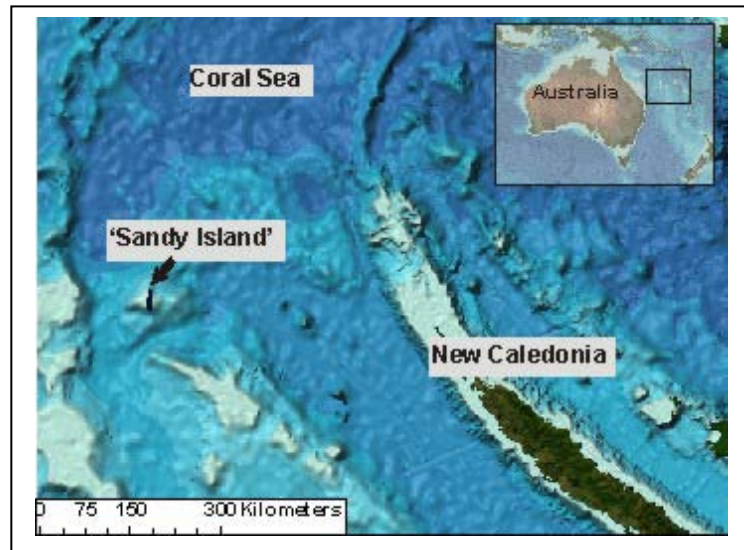# GEBCO_08 Grid errata information – "Sandy Island"

A scientific survey led by the University of Sydney, in part of the South Pacific Ocean between Australia and New Caledonia has reported that "Sandy Island", shown on many scientific maps, does not exist.

Through coastline and terrain model data sets this "feature" has been included in GEBCO's global terrain model. This will be corrected in a future edition.

A Sandy Island has been shown in various positions on a variety of maps from many countries since the 18th century and its location reported by passing ships. The location varied because in those days there were often large errors in ships' navigational positioning. At some point in time the position of the island shown on a particular chart was digitised and became part of a digital database known as the World Vector Shoreline (WVS). Subsequent to the production of WVS, the island has been removed from hydrographic charts of the region.

However, through WVS Sandy Island lived on. Global land elevation data models such as SRTM30 show land at Sandy Island, apparently because they used WVS in the development of their data sets. In turn, GEBCO used SRTM30 to develop its global model and so for this reason Sandy Island appears in the current GEBCO grid.

Traditionally, seafloor depth measurements have been collected by survey ships carrying echo-sounding equipment. However, the oceans cover nearly two thirds of our planet and in the deep ocean there are often large gaps between these survey tracks. Lacking direct depth measurements from ships in this part of the South Pacific Ocean, the builders of the GEBCO global terrain model turned to another source of information to help them determine the shape of the seafloor.

Gravity anomalies, detected with radar satellites, suggest that there is a mountain rising from the seafloor in the region of Sandy Island. However, it apparently does not rise enough to discolour the sea water and so be seen in satellite imagery. The radar satellite gravity technique cannot determine how shallow this feature is, it can only suggest the presence of a "mountain".

The image below shows a model of the seafloor in the region of "Sandy Island" taken from the GEBCO_08 Grid. The tracks showing where measured depth data, collected by ships, were available to generate the model are displayed in black. Gravity anomaly data has been used to help model the shape of the seafloor in this region where measured data are not available. The land data is taken from the SRTM30 data set.