Initial observations of surface deformation accompanying the recent M 8.1 Solomon Islands megathrust rupture

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pre-earthquake → post-earthquake

pre-EQ HLS

alive

post-EQ ELT

alive

subsidence

pre-EQ HLS
-0.45 m

+0.1 m?

+0.8 m

+1.81 m

+2.25 m

-0.5 m max

-0.45 m

0 km

50 km

uplift

subsidence
Sea Level - Tectonic History

Vertical Motions Required to Account for Rendova Reefs

Uplift

Subsidence

Present Sea Level

Sea Level History

Rendova Terrace Sequence

Much older reefs

Corals totally Calcitized

Well preserved Holocene Reef

Marine Sediments

Underlying Coral Limestone

Borehole: 21 ka
coral at 55 m BSL;
older coral limestone
55-70 m BSL

Age, Ka

Altitude, m