**Ice-loss making Earth move 250 miles down**

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Washington, May 12 (ANI): Researchers have explained why the upward motion of the Earth's crust in the Northern Antarctic Peninsula is currently taking place so quickly.

Previous studies have shown the earth is 'rebounding' due to the overlying ice sheet shrinking in response to climate change.

This movement of the land was understood to be due to an instantaneous, elastic response followed by a very slow uplift over thousands of years.

But GPS data collected by the international research team, involving experts from Newcastle University, UK; Durham University; DTU, Denmark; University of Tasmania, Australia; Hamilton College, New York; the University of Colorado and the University of Toulouse, France, has revealed that the land in this region is actually rising at a phenomenal rate of 15mm a year - much greater than can be accounted for by the present-day elastic response alone.

And they have shown for the first time how the mantle below the Earth's crust in the Antarctic Peninsula is flowing much faster than expected, probably due to subtle changes in temperature or chemical composition. This means it can flow more easily and so responds much more quickly to the lightening load hundreds of miles above it, changing the shape of the land.

Lead researcher, PhD student Grace Nield, based in the School of Civil Engineering and Geosciences at Newcastle University, said because the mantle is 'runnier' below the Northern Antarctic Peninsula it responds much more quickly to what's happening on the surface. So as the glaciers thin and the load in that localised area reduces, the mantle pushes up the crust.

She said at the moment we have only studied the vertical deformation so the next step is to look at horizontal motion caused by the ice unloading to get more of a 3-D picture of how the Earth is deforming, and to use other geophysical data to understand the mechanism of the flow.

The study has been published in the journal Earth and Planetary Science Letters. (ANI)