MAP: This is a map of sea level using local tide gauges. You move to the Swedish coast and are puzzled to find the people there are not worried about Sea Level Rise...Why not?

Overview of topics
- Where is sea level changing now? >
  - Tide stations >

First let's explore around the coast of the eastern United States. Click on some of the tide station dots. What is sea level doing here?

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Now let's go over to your new home in Sweden. Click on one of the purple or blue dots by Scandinavia. What is happening to sea level in this location? How can this be? Hypothesize...

OK let’s travel back in time to see what might have happened

Overview of topics
• Where is sea level changing now?  >
• Tide stations  >

We are back ~20,000 years. What is going on in this area?

Overview of topics
• What about climate in the past?  >
  • What about cold periods?  >
  • Eurasian Ice Sheet 20,000 years ago  >
The last map showed how ice covered this whole area, this is ice thickness. Touch to see how thick the ice was. Seems like a lot, but how much is that really? Can you think of a comparison?

Stay on this map but toggle the arrow on the bar on the bottom of the map.

Overview of topics
• What about climate in the past?
• What about cold periods?
  • Eurasian Ice Sheet 20,000 years ago

Lets return to the present, and visit Greenland’s ice sheet. Click around to see how high the ice is on top of Greenland right now. How does this compare to the amount of ice that was over Sweden 20,000 years ago?

Overview of topics
• What about the Polar Regions?
  • Greenland Ice Sheet Thickness

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Now let’s take off the ice and look at the Greenland surface below the ice? The center of the ice sheet is where the ice is the thickest. See how it is pressed down below sea level – that is from all the ice layered on top of it.

What would happen if the ice were to melt? Very slowly over thousands of years the land would come back up. This is what is happening in Scandinavia right now. The land is rising several times faster than the sea is rising...
What do you think is going on?
Underneath the hard outside layer the earth is soft and the ice is heavy and pushes it down. This is 20,000 years after Sweden was under ice – wow the land is still rising back up!
To learn more go to http://polarexplorer.ccnmtl.columbia.edu
Select ‘Sea Level and Glacial Rebound’

www.ldeo.columbia.edu/polareducation
Now you can understand why the people along the Swedish coast are not worried about Sea Level Rise...at least for now!

Touch on the interactive map to get information

Overview of topics

• Where is sea level changing now? 
• Tide stations