

Antarctica is rising from the ocean

26th August 2024



The continent of Antarctica is rising. It is due to a geological phenomenon called post-glacial uplift. It will have huge consequences for the whole of Earth. An astronomical volume of ice has melted from Antarctica's glaciers. This has made the

continent lighter. This consequently means it is slowly rising. The melting glacial water is causing sea levels around the globe to rise. Geologist Terry Wilson from Ohio State University wrote: "Our measurements show that the solid earth that forms the base of the Antarctic ice sheet is changing shape surprisingly quickly. The land uplift from reduced ice on the surface is happening in decades, rather than over thousands of years."

Researchers used 3D modelling in an attempt to ascertain how rising sea levels could impact Earth. The team said levels could rise between 1.7 meters to 19.5 meters by 2500. McGill University glaciologist Natalya Gomez wrote: "With nearly 700 million people living in coastal areas, and the potential cost of sea-level rise reaching trillions of dollars by the end of the century, understanding the domino effect of Antarctic ice melt is crucial." She added that post-glacial uplift will unfairly affect countries differently. She said: "This finding highlights the climate injustice toward nations whose emissions are low, while their exposure and vulnerability to sea-level rise is high."

Sources: sciencealert.com / bgr.com / wionews.com

Writing

We should all prepare for rising sea levels by relocating to higher ground. Discuss.

Chat

Talk about these words from the article.

continent / Antarctica / geological phenomenon / melting ice / glaciers / land uplift / 3D modelling / glaciologist / coastal areas / trillions of dollars / climate injustice

True / False

- 1) A phenomenon called glacial post-uplift is making Antarctica rise. T / F
- 2) The article says rising sea levels will only affect South Pacific islands. T / F
- 3) Antarctica is rising because it's getting lighter. T / F
- 4) The melting ice is happening over decades rather than millennia. T / F
- 5) Sea levels could rise by over 19 metres by 2500. T / F
- 6) Sea-level rises could cost quadrillions of dollars. T / F
- 7) A scientist said we need to understand the backgammon effect. T / F
- 8) There is climate injustice towards nations with low emissions. T / F

Synonym Match

(The words in **bold** are from the news article.)

- | | |
|------------------------|-----------------|
| 1. phenomenon | a. foundation |
| 2. consequences | b. pivotal |
| 3. base | c. find out |
| 4. measurements | d. results |
| 5. shape | e. unfairness |
| 6. ascertain | f. form |
| 7. potential | g. occurrence |
| 8. crucial | h. subjection |
| 9. injustice | i. calculations |
| 10. exposure | j. possible |

Discussion – Student A

- a) What do you know about Antarctica?
- b) How worried are you about rising sea levels?
- c) What would you like to know about post-glacial uplift?
- d) What will happen to our world if more ice melts?
- e) How vulnerable to climate change is your country?
- f) How worried are you about climate change?
- g) What will Antarctica look like in two decades from now?
- h) What can you do to help climate change?

Phrase Match

- | | |
|------------------------------------|------------------------------------|
| 1. due to a geological phenomenon | a. of ice has melted |
| 2. It will have huge | b. are low |
| 3. An astronomical volume | c. ice on the surface |
| 4. Our measurements | d. modelling |
| 5. The land uplift from reduced | e. vulnerability to sea-level rise |
| 6. Researchers used 3D | f. called post-glacial uplift |
| 7. ascertain how rising sea levels | g. effect |
| 8. the domino | h. could impact Earth |
| 9. nations whose emissions | i. consequences |
| 10. their exposure and | j. show that |

Discussion – Student B

- What do you think about what you read?
- What state would we be in if sea levels rose by 19.5 metres?
- What will happen during the domino effect?
- Why isn't the world doing more to protect our planet?
- What is climate injustice?
- What adjectives best describe this story?
- Would you like to work as a glaciologist?
- What questions would you like to ask the glaciologists?

Spelling

- The etoitncnn of Antarctica is rising
- due to a geological hemoeonnp
- An scmrantooail volume of ice
- This eugsneotnlcy means it is slowly rising
- Our uesnrseemtma show that
- land uplift from reduced ice on the casruef
- in an attempt to rsciatena how
- McGill University iosaltgicogl
- understanding the doonim effect
- climate istcjniue
- nations whose onissemsi are low
- exposure and aylvuibterlni to sea-level rise

Answers – Synonym Match

1. g	2. d	3. a	4. i	5. f
6. c	7. j	8. b	9. e	10. h

Role Play

Role A – Rising Sea Levels

You think rising sea levels is the biggest environmental problem. Tell the others three reasons why. Tell them why their problem isn't as bad. Also, tell the others which is the least pressing of these (and why): microplastics, biodiversity loss or deforestation.

Role B – Microplastics

You think microplastics is the biggest environmental problem. Tell the others three reasons why. Tell them why their problem isn't as bad. Also, tell the others which is the least pressing of these (and why): rising sea levels, biodiversity loss or deforestation.

Role C – Biodiversity Loss

You think biodiversity loss is the biggest environmental problem. Tell the others three reasons why. Tell them why their problem isn't as bad. Also, tell the others which is the least pressing of these (and why): microplastics, rising sea levels or deforestation.

Role D – Deforestation

You think deforestation is the biggest environmental problem. Tell the others three reasons why. Tell them why their problem isn't as bad. Also, tell the others which is the least pressing of these (and why): microplastics, biodiversity loss or rising sea levels.

Speaking – Environment

Rank these with your partner. Put the biggest problems at the top. Change partners often and share your rankings.

- | | |
|---------------------|---------------------|
| • Rising sea levels | • Biodiversity loss |
| • Deforestation | • Deforestation |
| • Microplastics | • Air pollution |
| • Food waste | • Overfishing |

Answers – True False

1	F	2	F	3	T	4	T	5	T	6	F	7	F	8	T
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Answers to Phrase Match and Spelling are in the text.