



# Melting Antarctic Glacier's Global Impact on Millions

## Description

Scientists began the year with an expedition to Antarctica to study Thwaites Glacier, which is melting quickly. If it fully breaks apart, it could raise global sea levels by two feet over several decades, impacting millions of people worldwide.

Maps show some coastal cities at risk, especially areas that could be affected if the glacier collapses soon. This melting will increase sea levels further as global warming continues to affect ice melting in Greenland and expands ocean water.

Thwaites Glacier currently acts as a barrier, keeping other glaciers in Antarctica from entering the sea. If it collapses, those glaciers might follow, worsening sea level rise. Richard Alley, a geosciences professor, warns that this could lead to significant impacts on all of West Antarctica.

Cities, especially in Asia, are at the highest risk. Many of the world's biggest urban areas are near coastlines. For example, Shanghai has over 600,000 residents already living below sea level. A rise of two feet could expose an additional 4.7 million people.

Protecting these cities from flooding and storm surges would be very costly. In New York City, a proposal for coastal protection could exceed \$52 billion. In contrast, cities like Dhaka may struggle to prepare as they grow rapidly yet lack sufficient resources for protection.

## Comprehension Questions

### Multiple Choice

1. What is the potential sea level rise if Thwaites Glacier breaks apart?

- Option: 1 foot
- Option: 2 feet
- Option: 3 feet
- Option: 4 feet

2. Which glacier is being studied during the expedition?

- Option: Greenland Glacier
- Option: Thwaites Glacier
- Option: West Antarctica Glacier



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Option: Antarctic Peninsula Glacier

3. Who is Richard Alley?

- Option: An astronaut
- Option: A geosciences professor
- Option: A politician
- Option: A climate activist

4. Which city is mentioned as having over 600,000 residents living below sea level?

- Option: New York City
- Option: Shanghai
- Option: Dhaqa
- Option: Tokyo

5. What is the estimated cost for coastal protection in New York City?

- Option: \$10 billion
- Option: \$25 billion
- Option: \$52 billion
- Option: \$100 billion

6. What is the main reason for the increase in sea levels according to the text?

- Option: Melting snow
- Option: Global warming
- Option: Ocean currents
- Option: Earthquakes

### True-False

7. Thwaites Glacier helps keep other glaciers from entering the sea.

8. All coastal cities are at equal risk from rising sea levels.

9. The rise of two feet could expose an additional 4.7 million people.

10. Rich countries will not need to spend money on protecting their coastal cities.

11. Global warming only impacts glaciers in Antarctica.



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12. Cities like Dhaka have abundant resources to prepare for rising sea levels.

### Gap-Fill

13. Thwaites Glacier is melting \_\_\_\_\_ quickly.

14. A complete collapse of Thwaites Glacier could raise sea levels by \_\_\_\_\_ feet.

15. Shanghai has over 600,000 residents already living below \_\_\_\_\_ sea level.

16. Richard Alley warns about significant impacts on all of \_\_\_\_\_ Antarctica.

17. Protecting cities from flooding would be very \_\_\_\_\_ costly.

18. In New York City, a proposal for coastal protection could exceed \_\_\_\_\_ billion.

### Answer

**Multiple Choice:** 1. 2 feet 2. Thwaites Glacier 3. A geosciences professor 4. Shanghai 5. \$52 billion 6. Global warming

**True-False:** 7. True 8. False 9. True 10. False 11. False 12. False

**Gap-Fill:** 13. very 14. two 15. sea 16. West 17. costly 18. 52

### CATEGORY

1. Sci/Tech - LEVEL3

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