

'Wave of silence' spread around world during coronavirus pandemic

Level 2 • Upper intermediate

1 Warmer

Close your eyes for 30 seconds and listen to all the sounds around you. Afterwards, compare what you heard with other students and say which of the noises you heard were the loudest.

2 Key words

Match the key words with the definitions. Then find them in the article to read them in context. The paragraph numbers are given to help you.

faultline	unprecedented	high frequency	substantial	vibration
lockdown	rumbling	seismic	field	restriction

1. never having happened or existed before _____ (para 1)
2. a very small, fast and continuous shaking movement _____ (para 1)
3. a time when large numbers of people are ordered to stay at home either most or all of the time _____ (para 1)
4. relating to earthquakes _____ (para 2)
5. a high-pitched sound _____ (para 2)
6. a rule that limits or controls what people are allowed to do _____ (para 2)
7. large in amount or degree _____ (para 4)
8. a crack on the Earth's surface where layers of rock have become separated from the main layer of rock and where earthquakes sometimes happen _____ (para 8)
9. a continuous deep sound _____ (para 8)
10. a particular area of study or interest _____ (para 11)

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- 1 An unprecedented wave of silence spread around the world during the coronavirus pandemic, according to researchers who found that vibrations from human activity greatly reduced under national lockdowns.
- 2 Records from seismic stations all over the planet show that high-frequency noise caused by factories, traffic and other activities fell as much as 50%, as country after country brought in restrictions that grounded planes, emptied roads and closed shops and businesses.
- 3 "You can almost see it as a wave," said Stephen Hicks, a seismologist who worked on the study at Imperial College London. "It started in China in late January and then moved on to Italy and beyond in March and April."
- 4 The scientists analysed data from 268 seismic sensors in 117 countries and found substantial falls in noise made by humans in 185 of them. The largest falls were in busy cities such as New York and Singapore, but even remote stations in Germany's Black Forest and in Rundu, Namibia, became quieter as human activity reduced.
- 5 Around universities and schools in the UK and US, seismic vibrations fell 20% more than the reduction in noise usually noticed during school holidays. In Barbados, high-frequency noise fell by 50% in the weeks before lockdown as flights stopped and tourists already on the island took the final few flights home.
- 6 "The quietening is unprecedented, at least as far as we can go back in time with continuous seismic data," said Thomas Lecocq, first author on the study at the Royal Observatory in Belgium. Digital records of seismic activity exist from the 1970s, but paper records go back further.
- 7 The research reveals that vibrations from human activity spread further than scientists expected, reaching seismometers in remote places or deep underground. "We normally try to put seismometers in quiet places, but this shows that it's hard to escape the noise," said Hicks.
- 8 For researchers, the sudden global quietening presents an unexpected opportunity. As the global population increases and cities grow, more people are at risk from earthquakes, volcanoes and landslides. Human activity increasingly hides the weak seismic waves that indicate movement on geological faultlines or early rumblings in a volcano. But during lockdown, these signals are easier to spot.
- 9 "It's important to hear those small signals because it tells you if a geological fault, for example, is releasing its stress in lots of small earthquakes or if it's silent and the stress is building up over time," said Hicks. "It tells you how the fault is behaving."
- 10 Without the human noise, seismologists can more easily spot "micro-earthquakes" caused by increasing movement along geological faults. Once they have recorded a quake from a fault, they can use its "fingerprint" to look back over records and see if the fault has moved before. The same goes for monitoring volcanoes near towns and cities.
- 11 "In cities with geological hazards, such as earthquakes, volcanoes and landslides, we want to monitor and get a warning of what's going on. But with human noise increasing, it has become very difficult to hear those small signals," Hicks said. "We hope this will lead to a whole new set of studies in this new field of human noise."

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3 Comprehension check

Answer the questions with information from the article.

1. Why is the word *wave* used in the title?
2. What changes to noise levels did the scientists see as a result of restrictions and national lockdowns?
3. Where did the data come from?
4. Where were the changes most noticeable?
5. What opportunity has the quietening presented to seismologists?
6. When was the last time that there was so little noise made by humans?

4 Vocabulary

a. Find six collocations in the article that start with the word *seismic*. What do the collocations mean?

1. seismic _____
2. seismic _____
3. seismic _____
4. seismic _____
5. seismic _____
6. seismic _____

b. Find two related words with the following meanings.

1. a professional person who studies and monitors earthquakes _____
2. an instrument used for measuring the strength of an earthquake _____

5 Discussion

- Before the pandemic, what noises would you expect to hear from your window, balcony or garden at the following times?
 - o rush hour, e.g. 5 pm on a Monday
 - o 6 am on a weekend day, e.g. Sunday
- How would you describe these noises?
 - o e.g. loud, continuous, annoying, comforting, welcoming, rumbling
- How did the noises at these times change during lockdown?

6 A silent video

Watch the video graphic here. Can you see the wave of silence?

www.theguardian.com/science/2020/jul/23/wave-of-silence-spread-around-world-during-coronavirus-pandemic