



drishti

Mains Practice Questions

 drishtias.com/mains-practice-question/question-622/pnt



Q. What do you understand by seismic noise? Discuss its impact on measuring the earth's seismic activities. (150 words)

27 Apr, 2020 GS Paper 1 Geography

Approach

- Discuss the context of the topic in brief.
- Discuss seismic noise and its source.
- Discuss the impact of seismic noise on measuring seismic activities.
- Conclude with its significance.

Introduction

The scientist at **British Geological Survey (BGS)** recently reported a change in the Earth's seismic noise and vibrations amid the coronavirus lockdown. It is observed that there is 30-50 per cent fall in levels of ambient seismic noise.

Body

Seismic Noise and its Source

- **Seismic noise:** It refers to the relatively persistent vibration of the ground. It is the unwanted component of signals recorded by a seismometer which makes it difficult for scientists to study seismic data that is more valuable.
 - This noise includes vibrations caused due to human activity, such as transport and manufacturing.
 - The seismic noise vibrations caused by human activity are of high frequency (between 1-100 Hz), and travel through the Earth's surface layers.
- Seismic noise is also termed as ambient vibrations in other fields of studies such as oil exploration, hydrology, and earthquake engineering.

Benefits of reduction in seismic noise:

- Usually, to measure seismic activity accurately and reduce the effect of seismic noise, geologists place their detectors 100 metres below the Earth's surface.
- However, since the lockdown, researchers have said that they were able to study natural vibrations even from surface readings, owing to lesser seismic noise.

Conclusion

Seismologists around the world are making an collaborative effort to study the fall in seismic noise levels. Due to lower noise levels, scientists are now hoping that they would be **able to detect smaller earthquakes and tremors** that had slipped past their instruments so far.