

Large Supply of Rare-Earth Metals Found Near Japanese Island

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Category : Science/Environment

Unlocking Word Meanings

Read the following words/expressions found in today's article.

1. **abundant** / əˈbʌn dənt / (adj) – having large amounts, more than enough
Example: Our country has an **abundant** supply of natural resources.
2. **infinite** / ˈɪn fə nɪt / (adj) – unlimited or immeasurable
Example: Many people think that the world's resources are **infinite**.
3. **hurdle** / ˈhɜr dl / (n) – anything that makes something difficult
Example: Many scientists face several **hurdles** like lack of funds and technology when exploring the ocean.
4. **seafloor** / ˈsi flɔr, - flɔʊr / (n) – the ground at the bottom of the sea
Example: Researchers find it difficult to explore the **seafloor** because it is too deep.
5. **devastate** / ˈdev ə stert / (v) – to destroy
Example: In the past, many forests were **devastated** due to illegal logging.

Article

Read the text below.

驚くべきほどの供給量のレアアース金属が深海の泥の中に在る(abundant : 豊富、たくさん,supply : 供給,mud : 泥)

Researchers have discovered an **abundant** supply of rare-earth metals in the deep-sea mud near an island in Japan.

レアアースが発見された

東京から南西に1800km離れた領土内

これらの金属は～の製品を作成する為に使用される

The research, which was published in the journal *Scientific Reports*, revealed that rare-earth metals were found near Japan's Minami-Torishima Island—a territory located around 1,800 kilometers southeast of Tokyo. These metals are used to create products like smartphones, detection devices, and electric vehicles.

探知装置、そして電気自動車

発見されたレアアース金属は

～は電気自動車や発電装置生成の為磁石に活用される(magnet : 磁石,generators : 発電機)

その一方で

Among the rare-earth metals found are dysprosium /disˈprɔʊ si əm/, europium /yʊˈrɔʊ pi əm/, yttrium /ɪ tri əm/ , and terbium /ˈtɜr bi əm /. Dysprosium is utilized to produce magnets for electric vehicles and generators. On the other hand, europium is used in creating information-storing memory chips and in the production of the red color in television screens. Camera lenses make use of yttrium, while lasers use terbium.

メモリ媒体や、テレビスクリーンの赤色の発光(information-storing memory chips : メモリ、production : 産出、製造、生産)

カメラレンズは～を利用する(lenses : レンズ、make use of : ～を利用する)

Based on the research findings, the amount of these metals is equivalent to 16 million tons. This suggests that they have an almost **infinite** supply.

発見した物に基づいて

これらの金属の量は、1.6千万トンに相当する(be equivalent to : ～に相当、匹敵する)

無限の供給量を示唆している(infinite : 無限、suggest : 示唆する、提案する)

Despite the metals' abundance, mining them has a number of **hurdles**. At the moment, there is no available technology for deep-sea mining and it might take decades for such technology to be developed. Geologist John Wiltshire also pointed out that the development of technology needed for processes like scraping and cutting the **seafloor** might amount to billions.

豊富な量にも関わらず

それらの発掘は幾つかのハードルがある(mining : 発掘、hurdle : 障害)

深海発掘の技術が存在しない(no available : 有効な物が無い)

その様な技術が開発されるには数十年掛かるかもしれない

指摘した

技術開発の必要な削る、および海底を切り取る様なプロセスには莫大な金額が必要かもしれない(billions : 莫大な、無数の、seafloor : 海底)

In addition, several environmental groups strongly oppose deep-sea mining as it can **devastate** marine ecosystems. In fact, the International Seabed Authority is now developing rules and regulations against deep-sea mining.

それに加えて

幾つかの環境グループはそれが海の生態系を荒らす可能性が有るとして深海発掘に強く反対している(strongly : 強く、devastate : 荒らす、ecosystem : 生態系)

Viewpoint Discussion

Enjoy a discussion with your tutor.

Discussion A

- Would you support the mining of rare-earth metals despite its potential harm to the environment? Why or why not?

- Do you think the Minami-Torishima Island should be further explored? Explain.

Discussion B

- In your opinion, should experts put more effort into studying bodies of water? Why or why not?

- Would you be interested to participate in ocean explorations? Explain.