Volcanic ash could fight climate change

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Dumping volcanic ash into the ocean could boost the rate at which carbon is drawn out of the atmosphere and locked into sediments. The process is simple to do and requires no changes to land usage – unlike reforestation programmes. It is also cheaper than other geoengineering approaches.

The deposition of volcanic ash supplies nutrients for marine algae. It increases the rate at which carbon dioxide is taken up by algae to help create their calcium carbonate exoskeletons – many of which sink to the seafloor and are buried. The ash can also become physically joined to plankton debris, increasing sinking rates. There is, however, a concern that volcanic ash could harm marine ecosystems. In addition, marine dumping in general is currently banned under an international convention.

Volcanic eruption, Redout, Kennay Peninsula, Alaska, USA

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1. Give two effects of global climate change.
2. Explain how algae can lock up carbon dioxide.
3. Describe two other ways of reducing carbon footprint.

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