

Svalbard Global Seed Vault

Why in news?

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Svalbard Global Seed Vault (SGSV) facility in Norway has recently faced a grave existential threat.

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What is SGSV?

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- SGSV facility lies 360 feet inside of the 1,500-foot Platåberget mountain in Nordenskiöld Land on the island of Spitsbergen in Svalbard, Norway.

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- It is a vault that contains humanity's ultimate food security.

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- Millions of seeds of various crop varieties are locked in airtight boxes at minus 18 degrees Celsius.

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- It is built to withstand manmade and natural disasters.

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- It is theoretically protected against conventional bombs, and sits out of reach of rising sea levels.

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- Norway's government owns the vault.

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- Depositors retain ownership rights.

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- India has sent around 9.5 crore seeds to Svalbard.

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Doomsday seed vault

A global arctic vault that houses seeds from all known varieties of food crops opened Feb. 26, 2008.

Why needed?

Protect seeds against plant diseases and catastrophes such as nuclear war, asteroid strikes and climate change



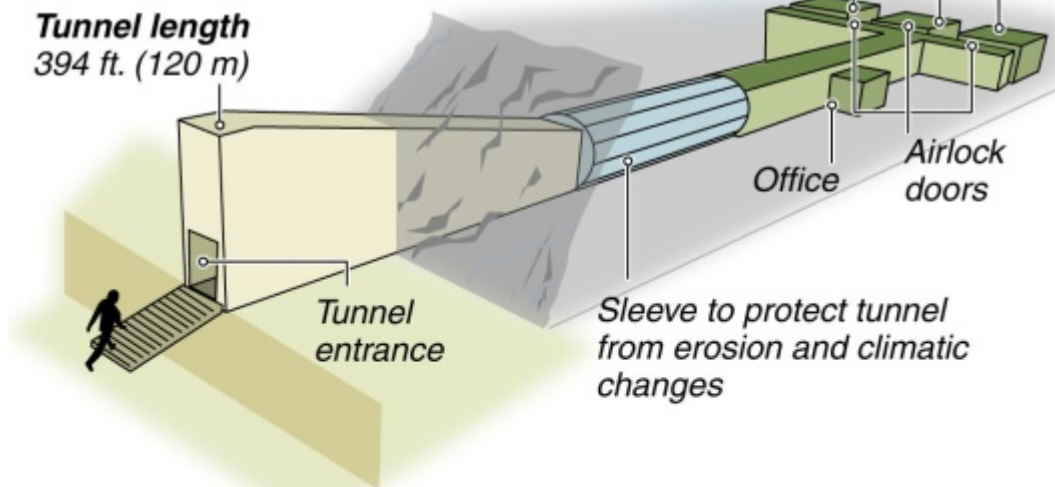
Storage

In-rock facility, situated 394 ft. (120 m) above present sea level, will remain above sea level even if ice sheets melt due to global warming

Site of seed vault



Tunnel length
394 ft. (120 m)



Capacity
Up to 4.5 million seed samples

Permafrost
Temperature kept stable at 0°F (-18°C) by electrically powered freezer unit; in case of technical breakdown, temperature will never exceed 25°F (-4°C)

Construction
Began in March 2007 in a mountainside near Longyearbyen

Source: Statsbygg Norway

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What is the threat?

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- Permafrost refers to the perennially frozen soil found in the Earth's higher latitudes.
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- Technically, it is ground that remains at or below a temperature of 0°C for at least 2 consecutive years.
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- The permafrost around the entrance of the vault melted, flooding the access tunnel with water.
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- The thaw in the permafrost around the entrance of the facility is likely the result of consistently rising global temperatures.
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- The builders of the SGSV announced that repairs were under way at the facility, and that water had reached no seeds.
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Source: The Indian Express

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