

Gateway of Hell: Turkmenistan

Why in News

Recently, Turkmenistan has decided to find a way to extinguish a fire in a huge <u>natural gas</u> (Mixture of methane, carbon dioxide, nitrogen, hydrogen sulphide and helium) the **Darvaza gas crater** also known as the **'Gateway to Hell'**.

- Turkmenistan has been at the **centre of methane leakages.** Out of the 50 most severe methane gas leakages onshore oil and gas operations in 2019, 31 were in Turkmenistan.
- In addition to this, one of these leakages, "had a climate impact roughly equivalent to the annual emissions of all the cars in Arizona".

Severity of Methane Leaks

- Methane is the primary contributor to the **formation of ground-level** <u>ozone</u>, **a hazardous air pollutant and** <u>greenhouse gas</u>, exposure to which causes 1 million premature deaths every year.
- Methane is also a powerful greenhouse gas. Over a 20-year period, it is 80 times more potent at warming than carbon dioxide.

Key Points



- Located in the Karakum desert, 260 kilometres away from Turkmenistan's capital,
 Ashgabat, the crater has been burning for the last 50 years.
- The crater has become a significant tourist attraction in the country. In 2018, the country's president officially renamed it as the "Shining of Karakum".

Origin of Crater:

- The details of the origin are not actually known but it has been said that the crater was created in 1971 during a Soviet drilling operation.
 - Soviet geologists were drilling for oil in the Karakum desert when **they hit a pocket of natural gas by mistake, which caused the earth to collapse** and ended up forming three huge sinkholes.
 - A **sinkhole** is a depression in the ground that has no natural external surface drainage. These are regions formed **when underlying limestone bedrock is dissolved** by groundwater.
- Locals have also said that the crater was formed in the 1960s but wasn't lit on fire until the 1980s.
- It has also been said that since oil and gas were very expensive commodities during Soviet rule, the formation of the crater has remained a confidential piece of information.

Reason for Closing:

- It negatively affects both the environment and the health of the people living nearby.
- **Loss of valuable natural resources** for which they can get significant profits and use them for improving the wellbeing of people.
- Hinders the **accelerated industrial development of the subsoil riches** of central Karakum.

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