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Natanz: Underground Nuclear Facility of Iran

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Why in News

Recently, a fire broke out at **Natanz**, an **Underground Nuclear Facility of Iran** used for enriching uranium.

Enriched uranium is a type of uranium in which the percent composition of uranium-235 is increased.

Key Points

Natanz:

- Located in Iran's central Isfahan province in Tehran, Natanz hosts the country's **main uranium enrichment facility**.
- It is known as the first **Pilot Fuel Enrichment Plant** of Iran.
 - **Fordow Fuel Enrichment Plant (FFEP)** is Iran's second pilot enrichment plant.
- It is among the sites monitored by the **International Atomic Energy Agency (IAEA)** after **Iran's 2015 nuclear deal with world powers** i.e. the USA, UK, France, China, Russia, and Germany.
- **Controversy:**
 - **IAEA Inspection:** Natanz became a point of controversy as **Iran refused to allow an IAEA inspector** into the facility in October 2019, after allegedly testing positive for suspected traces of **explosive nitrates**.
 - Nitrates are a common fertilizer, however, when mixed with proper amounts of fuel, the material can become an explosive as powerful as **Trinitrotoluene (TNT)**.
 - TNT is also known as **2,4,6-Trinitrotoluene** and does not occur naturally in the environment.
 - It is an explosive used in military shells, bombs, and grenades, and in underwater blasting.
 - **Stuxnet Computer Virus:** The Stuxnet computer virus, believed to be an **American and Israeli creation**, disrupted and destroyed centrifuges at Natanz amid the height of **Western concerns over Iran's nuclear program in 2010**.
 - **USA's Response:** The USA has unilaterally withdrawn from the nuclear deal in May 2018 as Iran has continuously been breaking all the production limits set by the deal.

According to the IAEA Iran enriches uranium to about 4.5 % purity, above the terms of the nuclear deal.

International Atomic Energy Agency

- Widely known as the world's "**Atoms for Peace and Development**" organization within the **United Nations** family, the IAEA is the international centre for cooperation in the nuclear field.
- The IAEA was **created in 1957** in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.
- **Headquarter: Vienna, Austria.**

- The Agency works with its Member States and multiple partners worldwide to promote safe, secure and peaceful use of nuclear technologies.

In 2005 it was awarded the **Nobel Peace Prize** for their work for a safe and peaceful world.

- **Functions:** It is an independent international organization that reports annually to the United Nation General Assembly. When necessary, the IAEA also reports to the UN Security Council in regards to instances of members' non-compliance with safeguards and security obligations.

Source: IE