Prelim Bits 16-10-2021 | UPSC Daily Current Affairs

Pandora Papers

It is found that there are 380 persons of Indian nationality in the Pandora Papers.

- Pandora Papers are 2021 leak of 11.9 million files that reveal the hidden unethical or corrupt dealings of the global wealthy and elite for tax avoidance and corruption.
- The papers details how such individuals sheltered money in cash, offshore accounts, tax havens, shell companies, and real estate investments that hide the true ownership of billions of dollars of assets.

  While offshore assets and accounts are not always illegal, hiding assets and avoiding taxation is.

- Pandora Papers is the largest such data dump released to date, larger than the previous Panama Papers and Paradise Papers leaks.
- Pandora were compiled by the International Consortium of Investigative Journalists (ICIJ), which is the same group who provided the Panama Papers and Paradise Papers, exposing similar dealings.

Recent Offshore Leaks		
Leak	**Data Size**	**No. of Documents**
WikiLeaks (2013)	260 GB	2.5 million
Panama Papers (2016)	2.6 TB	11.5 million
Paradise Papers (2017)	1.40 TB	13.4 million
Pandora Papers (2021)	2.94 TB	11.9 million

Panama Papers

- They refer to the 11.5 million leaked encrypted confidential documents that were the property of Panama-based law firm Mossack Fonseca.
- They were released in 2016, by the German newspaper Süddeutsche Zeitung (SZ), dubbing them the “Panama Papers.”
- SZ and ICIJ went into deciphering the encrypted files before the revelations were made public.

Paradise Papers

- They are 13.4 million leaked documents of offshore activities of national leaders, wealthy individuals, and companies.
- The leak originated from the Bermudian offshore law firm Appleby.
- Süddeutsche Zeitung obtained the files and then turned them over to the ICIJ, who then shared them with other media outlets.
- The Paradise Papers have prompted governments to conduct audits and investigations, and implement policy reform.

Giloy Herb

Ministry of Ayush said that the Giloy or Guduchi herb (Tinospora cordifolia) is safe to use but similar looking plants in circulation such as T. crispa can be harmful.

- Giloy is a climbing shrub and an essential herb in **Ayurvedic** medicine.
- People have long used it to treat a wide range of issues, including fever, infections, diarrhoea and diabetes.
- Guduchi has well established **hepato-protective properties**.

> Hepatoprotection (Antihepatotoxicity - opposite to hepatotoxicity) is the ability of a chemical substance to prevent damage to the liver. Hepatoprotection offered by the plant extracts was primarily attributed to its anti-hepatotoxic and antioxidant properties.

- The Ministry had a well-established system of **Pharmacovigilance** (for reporting of suspected adverse drug reactions from Ayush medication), with its network spreading across all over India.

i-Drone

Union Health Minister launched ICMR's Drone Response and Outreach in North East (i-Drone), which is a drone-based vaccine delivery model.

- This delivery model will ensure that life-saving vaccines reach everyone, including the remote areas and hard to reach terrains.
- This is for the first time that a 'Make in India' drone has been used in South Asia to transport COVID vaccine.
- It was used to deliver vaccines in Manipur, Nagaland and Andaman and Nicobar.
- It will epitomise the Government's commitment to 'Antyodaya' in health; make healthcare accessible to the last citizen of the country.

Study on Astronomical Observatories

A recent study has shown that the Indian Astronomical Observatory (IAO) at Hanle in Ladakh is becoming one of the promising observatory sites globally.

> Paranal, located in a high-altitude desert in Chile, is found to be the best site in terms of clear skies with around 87% of clear nights in a year.

- The study analysed datasets for the IAO in Hanle and Merak (Ladakh), and Devasthal (Nainital) in India.
- It found that the Hanle site is promising due to its advantages of,
    1. More clear nights (270 in a year),
    2. As dry as Atacama Desert in Chile and much drier than Devasthal,
    3. Minimal light pollution, background aerosol concentration,
    4. Extremely dry atmospheric condition, and
    5. Uninterrupted by monsoon.

Trans-Himalayan region is becoming one of the promising sites globally for the next generation of astronomical observatories, due to the above advantages.

- IAO-Hanle is seen as one of the emerging sites for infrared and sub-mm optical astronomy because water vapour absorbs electromagnetic signals and reduces their strength.
- Night observations at IAO-Hanle from 2m-Himalayan Chandra Telescope (HCT) are possible throughout the year without any interruption due to monsoons.
- Devasthal has a slightly larger number of clear nights compared to the other sites in the sub-continent but are affected by monsoons for about three months in a year.
- Such studies of long-term meteorological parameters help IIA plan for several mega-science projects in the high-altitude Ladakh region such as
    1. National Large Solar Telescope (NLST) of 2-meter aperture at Merak and
    2. National Large Optical Telescope (NLOT) of 8-10 meter aperture at Hanle.

Indian Astronomical Observatory

- Located in Hanle, Ladakh, the Indian Astronomical Observatory (IAO) is operated by the Indian Institute of Astrophysics, Bangalore.
- It has one of the world's highest located sites for optical, infrared and gamma-ray telescopes.
- It is currently the ninth highest optical telescope in the world, situated at an elevation of 4,500 meters (14,764 ft).

Linear No-Threshold Model for Radiation Safety

The U.S. Nuclear Regulatory Commission (NRC) upheld the Linear No-Threshold (LNT) dose-effect model to prescribe radiation safety standards.

- LNT model states that biological effects such as cancer and hereditary effects due to exposure to ionising radiation increase as a linear function of dose, without threshold.
- The petitioners supporting the request to discontinue use of the LNT model has supported the concept of “radiation hormesis”

Radiation Hormesis is a concept that posits that low doses of ionising radiation protect against the deleterious effects of high doses of radiation and result in beneficial effects to humans.

- Petitioners proposed the following to be done saying that ‘‘it makes no sense to decrease radiation doses that are harmless and hormetic’’.
    1. To increase the dose limits to workers;
    2. To raise the public dose limits to be the same as the worker doses;
    3. To end differential doses to pregnant women, embryos and fetuses, and children less than 18 years of age;
    4. To remove the As Low As Is Reasonably Achievable (ALARA) principle entirely from the regulations.
- NRC has determined that the LNT model continues to provide a sound regulatory basis to minimize the risk of unnecessary radiation exposure to both members of the public and radiation workers.
- Therefore, the NRC will maintain the current dose limit requirements.

Source: PIB, The Hindu, The Indian Express, Investopedia

