Prelim Bits 10-11-2022 | UPSC Daily Current Affairs

Tibetan Antelope

Pashmina shawl traders filed a plea for modern forensic methods to differentiate between Pashmina and Shahtoosh guard hair.

- Tibetan Antelope (*Pantholops hodgsonii*) is locally known as '**Chiru'**.
- The species is **endemic to Tibetan Plateau** and mainly lives in the northern parts of the Changthang Plateau.
- It is native of China (Tibet, Xinjiang region) and India (North Eastern Ladakh region) and regionally extinct in Nepal.
- **Horns** - Chiru males have thin, long horns that curve slightly forward but females are hornless.
- **Shawls** - Shahtoosh is the 'guard hair' obtained from the Tibetan antelope.
- Shahtoosh shawls are highly expensive commodity for its high levels of smoothness and warmth.
- **Conservation** – Tibetan Antelopes are an endangered species with high protection.
    1. Wild Life (Protection) Act, 1972 - Schedule I
    2. CITES - Appendix I
    3. IUCN - Near Threatened
- **Prohibition** - Their inclusion in CITES in 1979 lead to the prohibition in sale and trade of Shahtoosh shawls and scarves.
- Sale, purchase, and possession of Tibetan Antelope **parts and products** (including Shahtoosh) are strictly prohibited.

Pashmina

- Kashmir Pashmina is a fine type of wool which is obtained from breeds of mountain goats.
- These breeds of **mountain goats** (*Capra hircus*) are found in Tibet and parts of Ladakh.
- The trade of Pashmina shawls is **completely legal**.
- India contributes only about 1% of the world's Pashmina, but the Pashmina produced in India is considered the best
- In 2019, the Bureau of Indian Standards (BIS) published an Indian Standard for identification, marking and labelling of Pashmina products to certify their purity.

References

1. The Hindu - Pashmina shawls have Shahtoosh guard hair, say Customs officials

2. The Indian Express - Pashmina vs Shahtoosh hair
3. WWF – Tibetan Antelope

Compressed Bio Gas plant

The Union Minister of Petroleum and Natural Gas inaugurated Asia's largest Compressed Bio Gas plant at Lehragaga, Sangrur in Punjab.

- This Compressed Bio Gas (CBG) Plant's present production is about 6 Tons per Day CBG.
- This plant will consume 100,000 tons of paddy straw procured within a 10 km radius of the plant.
- This plant generate **additional income for farmers** and also provide a much-needed **alternative to stubble burning**.

Production of CBG

- Bio-Gas is produced from **waste/bio-mass** sources like agricultural, domestic and industrial wastes through the process of **anaerobic decomposition**.
- The Bio-Gas is purified to remove hydrogen sulphide (H_2S), carbon dioxide (CO_2), water vapour and compressed as Compressed Bio-Gas (CBG).
- CBG has methane (CH_4) content of more than 90% and has calorific value and other properties similar to Compressed Natural Gas.
- CBG is used in automotive, industrial and commercial areas.
- Biogas and Natural Gas are similar but with a few differences.

	Biogas	Natural gas
Origin	Biogas is produced in an anaerobic digester from an organic feed-stock.	Natural Gas occurs naturally with petroleum deposits.
Composition	Mainly bio methane and Carbon dioxide.	Mainly Methane.
Energy Type	Renewable Energy	Non-renewable Energy

References

1. PIB - Asia's largest Compressed Bio Gas plant inaugurated in Sangrur
2. India Today - Asia's largest Compressed Bio Gas plant inaugurated in Punjab
3. Live Mint - Compressed bio gas is need of the hour

Sovereign Green bond Framework

*The Union Finance Minister clears the sovereign green bonds framework that was rated '**Medium Green**'.*

> *In Budget 2022-23, the Government proposed to issue sovereign green bonds to mobilise resources for green infrastructure.*

- The Sovereign Green bonds are a part of the scheduled borrowing plan of the government.
- The proceeds from the Sovereign Green bonds will be deposited to the **Consolidated Fund of India** (CFI) in line with the regular treasury policy.
- The funds from the CFI will be made available for eligible green projects.

Proceeds Funding Included Areas	Proceeds Funding Excluded Areas
Renewable energy Energy efficiency Clean transportation Water and waste management Pollution prevention and control Green buildings	Nuclear power generation Hydropower plants larger than 25MW Landfill projects Alcohol/weapons/tobacco/gaming/palm oil industries

Sovereign bond is a specific debt instrument issued by the Government. It is issued to finance the fiscal deficit and manage the temporary cash mismatches of the government.
Green bonds are debt instruments issued by an entity for raising funds from investors and the proceeds of a green bond offering are used towards financing 'green' projects. To know more, click here.

References

1. The Hindu - Finance Minister approves Sovereign Green Bond framework
2. The Indian Express - FinMin clears framework for sovereign green bonds
3. Live Mint - Does India really need to issue sovereign green bonds?

Planet Killer Asteroids

Astronomers have spotted three near-Earth asteroids (NEAs) hiding in the glare of the Sun. One of these asteroids is the largest 'potentially hazardous' object.

Near-Earth objects (NEOs) are asteroids or comets of sizes ranging from metres to tens of kilometres that orbit the Sun and whose orbits come close to that of Earth's.
Most of the asteroids in the solar system are in the 'Asteroid belt' between Mars and Jupiter.

- The 3 spotted near-Earth asteroids (NEAs) are LJ4, 2021 PH27 and 2022 AP7.
- These NEAs are spotted between the orbits of Earth and Venus.
- Amongst the trio, one 1.5-kilometre-wide asteroid called 2022 AP7 is a Planet Killer.

- Any NEA over 1km in size is considered a **Planet Killer**.
- A Planet Killer could have a devastating impact on life and could also potentially lead to a mass extinction event.

Potentially Hazardous Asteroid

- A potentially hazardous asteroid (PHA) is one whose minimum orbit intersection

distance (MOID) with our planet is just 0.05 astronomical units.
- In other words, PHA is a near-Earth asteroid which can pass within 50 million kilometres of Earth's orbit.

- The NEA also needs to be more than 140-metres wide to be classified as a PHA.
- The following asteroids are believed to be the 5 largest PHAs known.

1. (53319) 1999 JM8
2. 3200 Phaethon
3. 4179 Toutatis
4. (89830) 2002 CE
5. 3122 Florence

One astronomical unit (AU) is the distance between the Sun and our planet.

MOID is an astronomical measurement used to assess the chances of close approaches and collision between the two bodies.

References

1. The Indian Express - Massive 'planet killer' asteroid hiding in Sun's glare
2. The Indian Express - 5 biggest 'planet killer' asteroids that pose a threat to our planet

Caspian Seal

More than 130 Caspian seals are found dead on Caspian beaches in Kazakhstan.

- Caspian seal (*Phoca caspica*) is the smallest earless seal.
- They are monogamous and only marine mammal in Caspian Sea.
- **Distribution** - The Caspian seal is **endemic to the Caspian Sea**.
- They migrate in late autumn to the shallow and frozen water in the northern region of the Caspian Sea.

- **Food** - Carnivores (piscivores). They mainly feed on a range of small fish (in particular kilka) and crustaceans.
- **Threats** - Loss of food to commercial fishing, habitat destruction, over hunting, industrial pollution and disease.
- **Conservation**

1. IUCN - Endangered
2. CMS - Appendices I and II

The Caspian Sea, the world's largest inland body of water, is bounded by five countries: Kazakhstan, Azerbaijan, Russia, Turkmenistan and Iran.

References

1. Hindustan Times - More than 130 seals found dead on Caspian beaches in Kazakhstan
2. New Indian Express - More than 130 seals found dead on Caspian beaches

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