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Collapse of Maya Civilisation

A new study has unveiled the mystery behind Maya civilisation's sudden fall from glory.

- The new study has revealed that the long suspected theory that drought pushed Maya people towards starvation is not correct.
- It says that the Maya civilisation may have had access to nearly 500 edible plants, many of which were highly resistant to drought.
- The new study made a list of 497 indigenous food plants of the Maya lowlands. These plants have been identified through paleoethnobotany.
- [Paleoethnobotany is a branch of science dealing with behavioural and ecological interactions between past humans and plants.]
- Next, they examined the drought tolerance of the 497 plants under 3 different scenarios: Short-, medium- and extreme-drought.
- They found that even in the most extreme drought situation, 59 species of edible plants would still have persisted.
- The Maya people could have turned to chaya and cassava to meet their carbohydrates and protein needs.
- Still, the question of what drove the downfall of the Maya civilisation remains unanswered. This study think social and economic upheaval likely played a role.

Maya Civilisation

- The Maya civilisation originated in the Yucatan Peninsula.
- This civilization was a Mesoamerican civilization developed by the Maya peoples.
- They are noted for its logosyllabic script as well as for its art, architecture, mathematics, calendar, and astronomical system.
- [Logosyllabic script is the most sophisticated and highly developed writing system in pre-Columbian Americas.]
- Known for its monumental architecture and an advanced understanding of mathematics and astronomy, it flourished between 600 and 800 AD.
- But then, suddenly, between 800 and 950 AD, many of the southern cities were abandoned.
- This period is called the collapse of the Classic Maya civilisations.

Reference

1. https://www.downtoearth.org.in/news/agriculture/why-did-the-maya-civilisation-collapse-we-don-t-know-yet-but-drought-was-likely-not-the-cause-study-81023
2. https://www.britannica.com/topic/Maya-people

Draft National Aerosports Policy 2022

The Ministry of Civil Aviation releases draft 'National Air Sports Policy (NASP)' for public feedback.

- NASP 2022 covers sports like aerobatics, aeromodelling, amateur-built and experimental aircraft, ballooning, drones, gliding, hang gliding and paragliding; microlighting & paramotoring; skydiving & vintage aircraft.
- It seeks to leverage India's huge potential for air sports given its large geographical expanse, diverse topography and fair weather conditions.
- The vision is to make India one of the top air sports nations by 2030.
- The mission is to provide a safe, affordable, accessible, enjoyable and sustainable air sports ecosystem in India.
- Air Sports Federation of India (ASFI) will be established as the apex governing body.
- Associations for each air sport will handle day to day activities. These air sports associations shall be accountable to ASFI.
- ASFI shall represent India at Fédération Aéronautique Internationale (FAI) and other global platforms related to air sports.
- [Headquartered in Lausanne, Switzerland, the FAI is the world governing body for air sports.]

Reference

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2. https://www.hindustantimes.com/india-news/india-readies-first-aerosports-policy-proposes-an-ambitious-target-for-2030-101641100159755.html

India to be Asia's 2nd Largest Economy by 2030

IHS Markit in a report said that India is likely to overtake Japan as Asia's second-largest economy by 2030 when its GDP is also projected to surpass that of Germany and the U.K. to rank as the world's No.3.

- Currently, India is the sixth-largest economy, behind the U.S., China, Japan, Germany and the U.K.
- India's nominal GDP is forecast to rise from $2.7 trillion in 2021 to $8.4 trillion by 2030.
- **Factors** - Long-term outlook for the Indian economy is supported by its large and fast-growing middle class, which is helping to drive consumer spending.
- IHS Markit has forecasted that the country's consumption expenditure will double from $1.5 trillion in 2020 to $3 trillion by 2030.
- For the full fiscal year 2021-22, India's real GDP growth rate is projected to be 8.2%, rebounding from the severe contraction of 7.3% year-on-year in 2020-21.
- The Indian economy is forecast to continue growing strongly in the 2022-23 fiscal year, at a pace of 6.7%.
- The rapidly growing consumer market and its large industrial sector have made India an important investment destination for multinationals in many sectors, including manufacturing, infrastructure and services.

Reference

1. https://www.thehindu.com/todays-paper/tp-business/india-to-surpass-japan-as-asias-2nd-largest-economy-by-2030/article38181945.ece
2. https://www.ndtv.com/business/india-to-overtake-japan-as-asias-2nd-largest-economy-by-2030-ihs-markit-2694541

Quito Adjustment

- In 2018, the Quito Adjustment is the adjustment made to the Montreal Protocol. It aims high to avoid 1ºC of future warming.
- In this, the decision to strengthen enforcement mechanisms of this accord in response to an unexpected rise in global emissions of the banned chemical trichlorofluoromethane or CFC-11 was adopted.
- Practical arrangements were made to implement the Kigali Amendment by approving technologies for destruction of substances controlled under the Protocol & adopting new data reporting requirements.

Reference

1. https://www.unep.org/pt-br/node/23842
2. https://www.ccacoalition.org/en/news/montreal-protocol-aims-high-quito-avoid-1%C2%BAc-future-warming

Binary Star

- Binary stars are pair of stars in orbit around their common centre of gravity.
- A high proportion, perhaps one-half, of all stars in the Milky Way Galaxy are binaries or members of more complex multiple systems.
- The brighter star is officially classified as the primary star, while the dimmer of the two is the secondary (classified as A and B respectively).
- In cases where the stars are of equal brightness, the designation given by the discoverer is respected. Our Sun is a solitary star.
- Although binary stars are sometimes called double stars, the latter refers to any two stars that are close together in the sky.
- Thus, double stars include true binaries as well as stars that look close together when viewed from Earth but which are actually quite far apart.

Classification

- **Wide Binaries** are stars that have orbits that keep them spread apart from one another.
- These stars evolve separately, with very little impact from their companions.
- They may have once contained a third star, which booted the distant companion outward while eventually having been ejected themselves.
- **Close Binaries** evolve nearby, able to transfer their mass from one to the other.
- The primaries of some close binaries consume the material from their companion, sometimes exerting a gravitational force strong enough to pull the smaller star in completely.
- **Visual Binaries** - Two stars with a wide enough separation that both can be viewed through a telescope, or even with a pair of binoculars.

Reference

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2. https://www.space.com/22509-binary-stars.html



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