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06 December 2023

National and International News

### Six exoplanets found orbiting a nearby bright star

#### Context

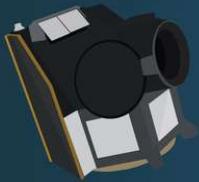
- Six exoplanets orbiting around a nearby **bright star (HD 110067)** in the Coma Berenices constellation has been discovered.

#### Key points

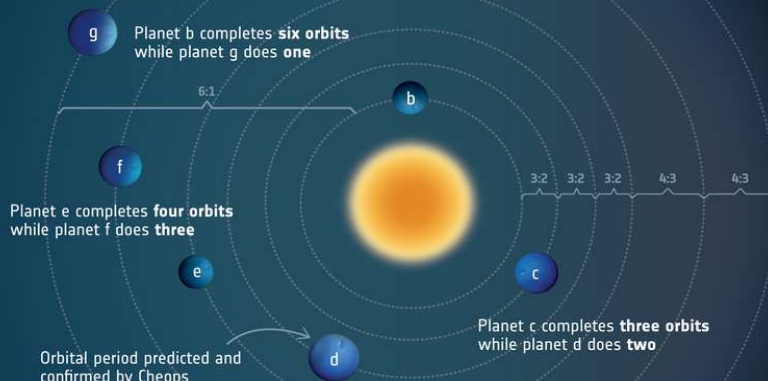
- HD 110067 is the bright star in the **Coma Berenices constellation** (around 100 light-years away), which is visible from Earth's Northern Hemisphere
- The masses of the planets and estimated **densities are relatively low**
- The low densities could be explained by large, hydrogen-rich atmospheres.
- All six planets are in **resonant orbits**, in which the planets exert regular forces on each other as they orbit.
- This feature suggests that the system remains practically unchanged since its birth, at least four billion years ago.
- **Scientific Significance:** Enhances understanding of exoplanetary systems.

### ESA'S CHEOPS HELPS UNLOCK RARE SIX-PLANET SYSTEM

An uncommon family of six exoplanets has been unlocked with the help of ESA's Cheops mission.



The six planets orbit their central star HD 110067 in a harmonic rhythm with planets aligning every few orbits.



All planets are smaller than Neptune and have large atmospheres  
\*Star and planets not to scale



#CHEOPS



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<p><b>Visa-free entry to Indian citizens</b></p>	<p><b>Context</b></p> <ul style="list-style-type: none"><li>● <b>Malaysia</b> has become the latest country to extend the advantage of visa-free travel to Indian citizens.</li><li>● The facility will be extended to Indian travellers till December 31, 2024 and will be <b>valid for 30 days</b> from the date of entry.</li></ul> <p><b>Key points</b></p> <ul style="list-style-type: none"><li>● The initiative is aimed at ensuring <b>hassle-free travel for Indians</b> who have emerged as one of the major tourist groups visiting Malaysia in the recent past.</li><li>● At present there are <b>around 26 countries</b> that extend visa-free entry to Indian citizens for various reasons.</li></ul>
<p><b>One-third of all 2022 suicides were of daily wage earners, farmers, says NCRB report</b></p>	<p><b>Context</b></p> <p>India reported a total of over <b>1.7 lakh suicides</b> in 2022, nearly <b>one-third of whom were daily wage earners, agricultural labourers</b>, and farmers, according to the <b>National Crime Record Bureau's (NCRB) Accidental Deaths and Suicides in India (ADSI) 2022 report</b></p> <p><b>Key points</b></p> <ul style="list-style-type: none"><li>● The suicide data published in the <b>ADSI-2022 report</b> showed that the <b>maximum suicides</b> in the year were reported <b>from Maharashtra (22,746)</b>, Tamil Nadu (19,834), Madhya Pradesh (15,386), Karnataka (13,606), Kerala (10,162), and Telangana (9,980).</li><li>● Apart from daily wage earners, and agricultural workers and farmers, the ADSI data showed that <b>9.6% of the suicides in 2022</b> were of persons who were <b>self-employed or salaried professionals</b>.</li><li>● This was followed by unemployed persons, who comprise <b>9.2% of all suicides reported in India in 2022</b>.</li><li>● Among all suicides reported in the year, over <b>12,000 were of students</b>.</li></ul>

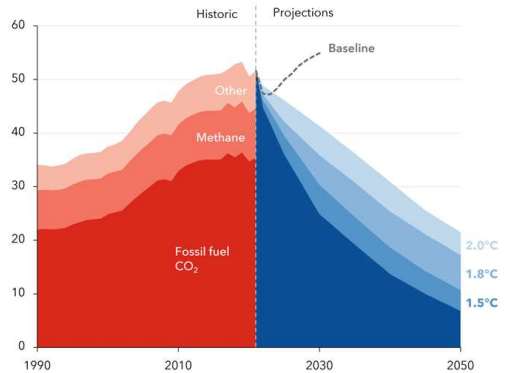


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### Methane

#### Methane matters

Methane is second only to CO<sub>2</sub> emissions from fossil fuels as a cause of global warming. (global GHG emissions, GtCO<sub>2</sub>e per year)



Source: IMF staff calculations.  
Note: Excludes emissions from land use and changes to land use.

IMF

#### Context

At the ongoing COP-28 climate talks in the United Arab Emirates, a group of well-endowed philanthropic bodies, including the **Sequoia Climate Foundation** and the **Bezos Earth Fund**, announced that they would collectively invest **\$450 million** in solutions to tackle methane emissions.

#### About

- Methane is an **organic compound**.
- Its molecule consists of carbon and four hydrogen atoms (CH<sub>4</sub>).
- It's in the news of late because of its character as a **potent climate pollutant**.
- Methane has a **greater global warming potential (GWP) than carbon dioxide**.
- However, while carbon dioxide lasts for several decades at a time in the atmosphere before breaking down, methane breaks down in a matter of years. That is, it's a **short-lived climate pollutant**.
- Its sources include cattle-farming, landfills, wastewater treatment facilities, rice cultivation, and some industrial processes.

#### What is GWP?

- The GWP is a **measure of the warming caused by a substance relative to that due to the same mass of carbon dioxide**; the GWP100 measures this over a century at a time.
- If carbon dioxide has a GWP100 of 1, methane is 28, nitrous oxide is 265, and sulphur hexafluoride is 23,500.

### RS passes Post Office Bill

#### Context

The Rajya Sabha passed the Post Office Bill, which repeals and replaces the **Post Office Act of 1898**.

#### Key points

- The bill will ensure the **effective functioning of the postal department** as a messenger service and as a provider of banking facilities.
- **Section 9** of the Bill gives the power to intercept, open or detain any item or deliver item to customs authority by the post office officials.
- The provisions **empowering any officer to intercept, open or detain any postal item** in the interest of the security of the State is also a concern that giving such a free hand to officers will harm the right to privacy.



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ADDAPEDIA

## Daily Current Affairs Encyclopedia

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