



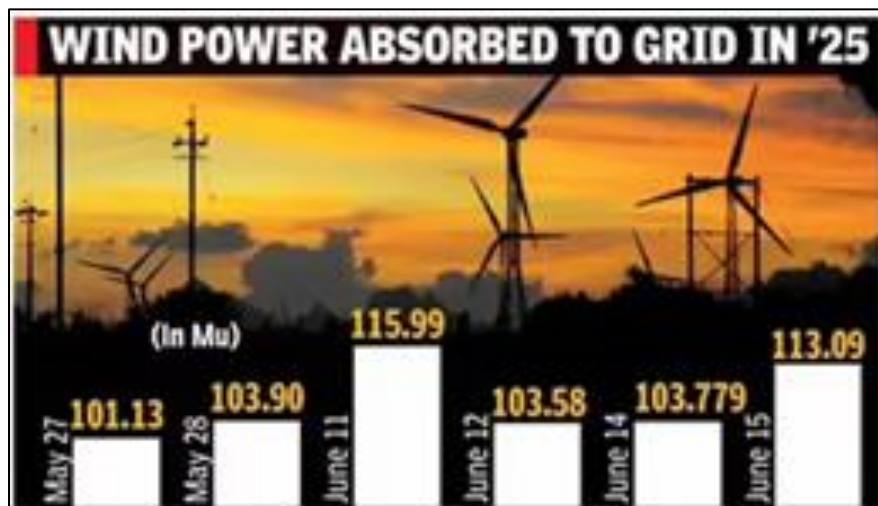
June - 21

TNPSC BITS

- ❖ Tamil Nadu state health department launched a special scheme to offer a protein-rich diet, including milk, eggs, and chickpeas, to dialysis the patients in state-run hospitals.
- ❖ 'Achal', the fifth Fast Patrol Vessel (FPV) in a series of eight, being constructed by Goa Shipyard Ltd (GSL) for the Indian Coast Guard (ICG) was launched recently.
- ❖ The Ministry of Ayush hosted the global summit 'Yoga Connect' in New Delhi on "Yoga for One Earth, One Health" theme.
- ❖ India launched 'Operation Sindhu' to evacuate Indian nationals from Iran as fears of an all-out Israeli-American military strikes.
- ❖ City Union Bank was selected as one of the winners for overall digital payment performance during the financial year 2024-25.
- ❖ James Beard Awards, one of the most coveted culinary awards in the US, has honoured Chef Vijay Kumar of Semma restaurant as the Best Chef in New York State, USA.
- ❖ International Picnic Day is celebrated every year on June 18th.

TAMIL NADU NEWS

Wind power generation in Tamilnadu 2025












- ❖ The Wind power generation in the state crossed the 100-million-unit (Mu) mark (113.09) for the sixth time this year.

- ❖ The maximum daily generation of 111.174 Mu was recorded on July 18, 2024.
- ❖ Tamil Nadu has an installed capacity of 11,361 MW of wind power and produces 13,000 Mu of power annually.

INTERNATIONAL NEWS

India and G7 2025 Summit

WHAT IS THE G7?	WHY INDIA INVITED?	DIPLOMATIC CONTEXT
<p>Group of Seven: Intergovernmental forum of advanced economies</p> <div></div> <p>America Canada France Germany</p> <div></div> <p>Japan UK U.S.</p> <p>Formed as the G6 in 1975 became G7 in 1976</p>	<ul style="list-style-type: none">• 5th largest economy globally• Essential for supply chains, AI, energy infrastructure 	<ul style="list-style-type: none">• Strained India-Canada ties: Canada accused India of links to Sikh separatist leader's killing (2023)• Canada's G7 chair. India's presence "made sense" despite tensions 

- ❖ Indian Prime Minister participated in the G7 Summit in Kananaskis, Canada.
- ❖ He has addressed a session on 'Energy Security: diversification, technology and infrastructure to ensure access and affordability in a changing world'.
- ❖ India and Canada agreed to designate new High Commissioners for the first time since 2023.
- ❖ Prime Minister also made a four-day, three-nation tour covering Cyprus, Canada and Croatia.

SCIENCE AND TECHNOLOGY NEWS

SPArc therapy

- ❖ The U.S. has successfully used a technique called step-and-shoot spot-scanning proton arc therapy (SPArc) to treat a patient's adenoid cystic carcinoma (ACC) for the first time.
- ❖ The SPArc works by targeting tumours with protons while sparing surrounding tissue.


- ❖ The ACC is a relatively rare form of cancer that most commonly develops in the salivary glands or other regions of the head and neck.
- ❖ But these technologies are very expensive one and are often suitable for a small patient population.

Step by step

SPArc works by targeting tumours with protons in a near-continuous manner

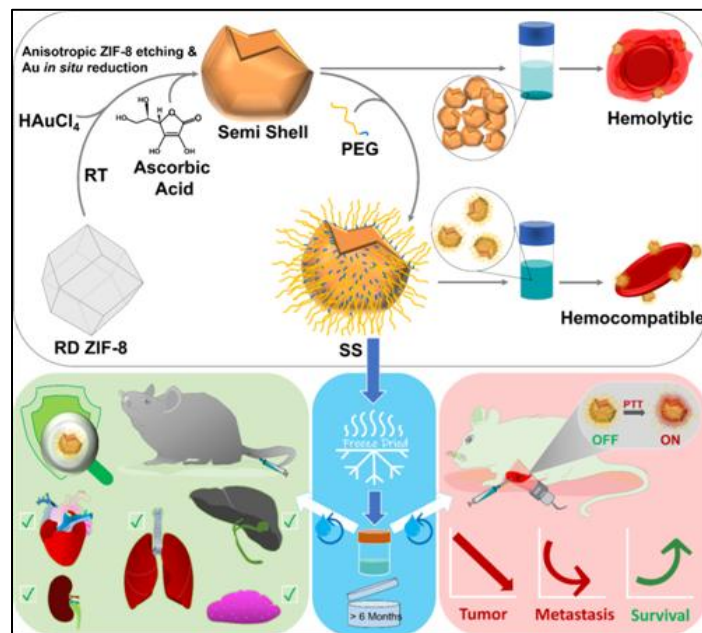
A woman receives radiation therapy to treat her cancer. GETTY IMAGES

- A team has used step-and-shoot proton arc therapy to treat a parotid gland cancer for the first time
- The therapy significantly minimised damage to nearby organs over SFO-IMPT, the current standard of care
- A 46 y.o. woman received step-and-shoot SPARC after her parotid-gland cancer had spread towards the base of her skull



- In June-August 2024, she completed 33 sessions with step-and-shoot SPARC and received 66 grays of radiation
- In this time, the woman reportedly had "minor skin irritation" and no issues eating or continuing working
- Synthetic CT scans were used to track dose delivery, the therapy's performance, and develop adaptive treatment plans

Heat-based cancer therapy

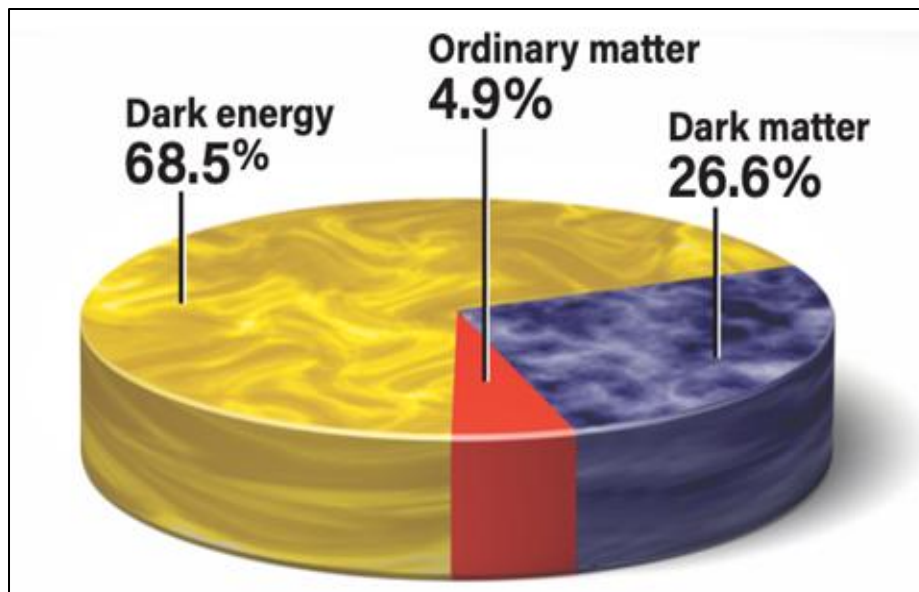


- ❖ Indian researchers have developed an innovative one-step method to synthesize nano-sized particles with a unique cup-like shape.

- ❖ The technique simplifies the creation of PEGylated semi-shell nanoparticles - commonly known as nano-cups.
- ❖ It can be used to burn cancer cells through heat-based therapy.

Detection of ordinary matter

- ❖ For the first time, the researchers detected the universe's missing ordinary matter using powerful cosmic signals known as Fast Radio Bursts (FRBs).
- ❖ Previously, the scientists have known that at least half of the universe's ordinary, or baryonic matter was unaccounted for.
- ❖ Dark matter and dark energy make up most of the universe.
- ❖ But the rest of the universe is made of cosmic baryons, or ordinary matter.



ENVIRONMENT NEWS

Two new species of earthworms

- ❖ Two new species of earthworms - *Kanchuria tripuraensis* and *Kanchuria Priya Shankari*, have been officially discovered in Tripura.
- ❖ The genus *Kanchuria*, which is endemic to Northeast India, now comprises 10 species with these new additions.
- ❖ This also increases the total number of the recorded megadrile worm species in Tripura to 38.

- ❖ Kanchuria Priya Shankari is named in honour of Priya Sankar Chaudhuri for his lifelong work in earthworm taxonomy.



Portulaca Bharat in Aravalli hills



- ❖ A new flowering plant species, Portulaca Bharat, has been discovered in the rocky and semi-arid landscape of the Aravali hills near Jaipur, Rajasthan.
- ❖ Currently, it is assessed as data deficient under IUCN guidelines.
- ❖ Portulaca Bharat belongs to the genus Portulaca.



- ❖ Portulaca Genus comprises about 153 species worldwide, with 11 known species in India, including four endemics.

REPORTS AND INDICES

QS World University Rankings 2026

- ❖ Globally, the Massachusetts Institute of Technology (MIT) of USA has retained the 'best institute in the world' position for the 14th time this year.
- ❖ A total of 54 universities is featured this year, including 12 Indian Institutes of Technology (IITs).
- ❖ Eight universities have made their debut.
- ❖ India is now the fourth most represented country.
- ❖ Only the United States (192), the United Kingdom (90), and Mainland China (72) have more universities ranked than India.
- ❖ IIT Madras (180) has achieved the third spot in India after IIT Delhi (123) and IIT Bombay (129).



	2026 RANK	2025 RANK	LOCATION
Massachusetts Institute of Technology (MIT)	1	1	United States
Imperial College London	2	2	United Kingdom
Stanford University	3	6	United States
University of Oxford	4	3	United Kingdom
Harvard University	5	4	United States

STATES' NEWS

Kanha Tiger Reserve 2025

- ❖ The Wildlife Institute of India (WII), Dehradun in Uttarakhand released a report titled "Status of Ungulates in Tiger Habitats of India".

- ❖ The Kanha Tiger Reserve (KTR) in Madhya Pradesh has emerged as the leading tiger habitat in India in terms of ungulate (hoofed herbivore) population.
- ❖ As per the report, "Kanha Tiger Reserve boasts the highest ungulate population (1,02,485) among India's major tiger reserves."
- ❖ The total available biomass surpasses 12.6 million kilograms, making Kanha the most resource-rich tiger habitat in the country.

Species	Groups Detected	Encounter rate (SE)	Detection probability (SE)	Mean group size (SE)	Group density (SE)	Individual density (SE)
Barking Deer	207	0.173 (0.012)	0.29 (0.02)	1.18 (0.03)	3.15 (0.28)	3.75 (0.33)
Chital	421	0.3 (0.018)	0.29 (0.01)	9.29 (0.45)	3.52 (0.26)	40.29 (1.85)
Gaur	134	0.074 (0.008)	0.36 (0.03)	4.94 (0.51)	0.95 (0.13)	6.42 (0.58)
Sambar	284	0.183 (0.013)	0.36 (0.02)	2.81 (0.11)	2.56 (0.23)	8.21 (0.54)
Wild pig	161	0.134 (0.01)	0.29 (0.02)	6.07 (0.34)	1.9 (0.2)	11.19 (0.88)

PERSONALITIES, AWARDS, AND EVENTS

Bonn Climate Change Conference 2025



- ❖ The June Climate Meetings of the United Nations Framework Convention on Climate Change (UNFCCC) held in Bonn, Germany.
- ❖ It is also known as the 62nd meeting of the Subsidiary Bodies (SB 62).
- ❖ There are two permanent SBs of the UNFCCC,
 - The Subsidiary Body for Implementation (SBI) and
 - The Subsidiary Body for Scientific and Technological Advice (SBSTA).

- ❖ UNFCCC is an international agreement, signed in 1992, that has provided a basis for climate negotiations.

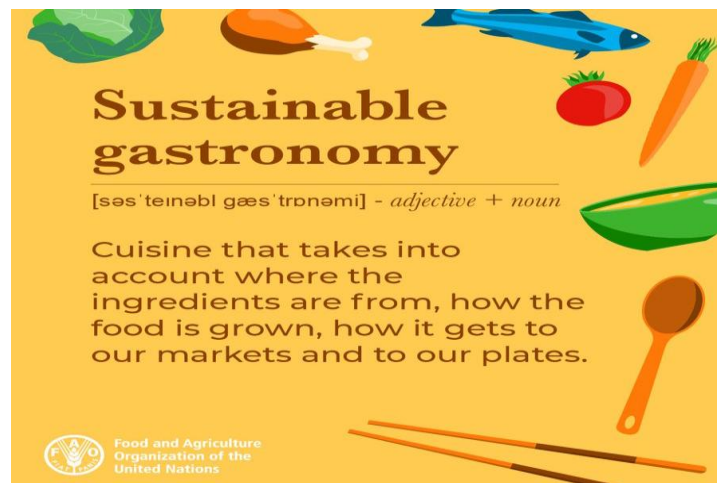
IMPORTANT DAYS

Autistic Pride Day 2025 - June 18

- ❖ This day highlights the very unique identities, strengths, and the perspectives of individuals on the autism spectrum.
- ❖ An Autism Spectrum Disorder (ASD) is a developmental condition that affects the communication, social interaction, and how individuals process information.
- ❖ This year's theme is "Unapologetically Autistic".



Sustainable Gastronomy Day 2025 - June 18

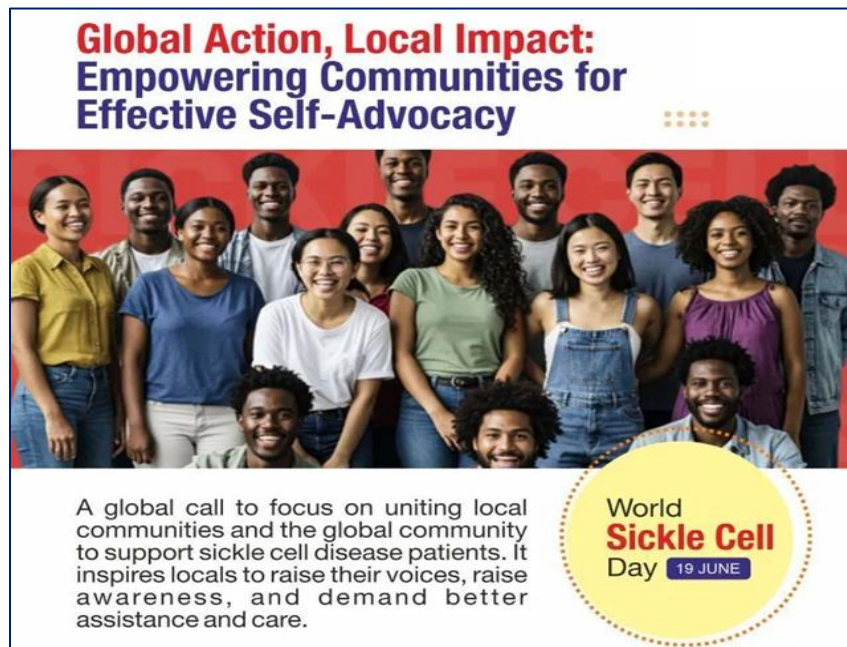


- ❖ This day recognizes gastronomy as an important cultural expression tied to the natural and cultural diversity of our world.

- ❖ As of 2025, 56 cities have been recognized as Creative Cities of Gastronomy, each promoting local food heritage and sustainability.
- ❖ Hyderabad is the lone Creative City of Gastronomy in India.

World Sickle Cell Awareness Day 2025 - June 19

- ❖ This day aims to increase the public awareness about sickle cell disease.
- ❖ A Sickle cell disease is caused by an inherited gene mutation that results in the disfigured red blood cells (RBCs).
- ❖ The disfigured RBCs lack the flexibility required to move through the very blood vessels in a normal manner.
- ❖ India has the world's second-greatest sickle cell disease burden.
- ❖ The theme for 2025 is "A Global Action, Local Impact: Empowering Communities for Effective Self-Advocacy".



MISCELLANEOUS NEWS

Rinderpest Holding Facility in Bhopal

- ❖ The ICAR-National Institute of High Security Animal Diseases (NIHSAD), Bhopal in Madhya Pradesh has been designated as the "Category A Rinderpest Holding Facility".



- ❖ It is designated by the World Organisation for Animal Health and the Food and Agriculture Organization.
- ❖ The announcement was made during the 92nd General Session of the WOA H held in Paris.
- ❖ Rinderpest is once known as 'cattle plague'.
- ❖ It was destructive livestock disease before its global eradication in 2011.

