

7. Shortnews

1. Antibody Therapy for Myeloma

A new bispecific antibody therapy, linvoseltamab, showed remarkable early results by eliminating detectable multiple myeloma cells in all 18 trial patients.

Key features of the linvoseltamab

Deep Remission Achieved- The therapy produced “no detectable disease” on highly sensitive tests, indicating strong potential to suppress residual myeloma cells.

Transplant-Free Approach- Linvoseltamab may help patients avoid high-dose chemotherapy and bone marrow transplantation, which currently remain standard frontline interventions.

Immune-Targeted Precision- Linvoseltamab works by binding to CD3, a protein on T cells that attack cancer cells, and myeloma-cell B-Cell Maturation Antigen (BCMA) BCMA, a protein found on multiple myeloma cells. By bringing these cells into contact, the antibody stimulates the body's immune response against the cancer.

About Multiple Myeloma

Introduction- Multiple myeloma is a cancer of plasma cells in the bone marrow that produce abnormal M-protein, disrupting normal blood cell formation.

Health Impact- Patients commonly present with Calcium elevation, Renal dysfunction, Anemia, Bone lesions (CRAB) symptoms leading to fractures, pain, and organ damage.

Diagnosis and Staging- Diagnosis relies on M-protein tests, bone marrow biopsy, and imaging; staging uses the International Staging System based on beta-2 microglobulin and albumin levels.

Treatment- Treatments include chemotherapy, immunomodulators, targeted therapies (e.g., Pomalidomide), and autologous stem-cell transplant, though no permanent cure exists.

About Antibody Therapy

Introduction- Antibody therapy uses engineered antibodies to precisely target cancer cells or immune markers, becoming a cornerstone of modern oncology.

How It Works- Monoclonal antibodies bind to specific antigens, block growth signals, trigger immune destruction, or deliver toxic payloads for targeted killing.

Applications- They are widely used against cancers, autoimmune diseases, and viral infections, offering high specificity with improved treatment tolerance.

2. India's Energy Targets

India has reached 50% of its installed power capacity from non-fossil sources in 2025, achieving the Panchamrit target five years before the 2030 deadline.

Key Achievement in Energy Sector

50% Non-Fossil Capacity Reached- India installed 243 GW of non-fossil capacity out of 485 GW total, driven by schemes like the National Solar Mission and National Wind Energy Mission.

Components of India's Energy Mix

485 GW, of which 243 GW, or roughly 50 per cent, originated from non-fossil energy sources. India has 116 GW of solar capacity, with an ambitious target of 292 GW to be reached by 2030.

Factors Contributing to the Achievement

Policy Push by MNRE & MoP (Ministry of Power)- Policy measures such as the Green Energy Corridor, Renewable Purchase Obligations (RPOs), and Production-Linked Incentive (PLI) Scheme for High-Efficiency Solar Modules accelerated renewable installation.

Large-Scale Solar Implementation- Progress was enabled by Solar Park Development Programme, Ultra Mega Renewable Energy Power Parks (UMREPP), and Standalone Solar Pumping under PM-KUSUM.

Technological and Market Expansion- Improved grid integration through the Green Energy Open Access Rules 2022, storage pilots under National Green Hydrogen Mission, and competitive solar auctions reduced costs and boosted deployment.

Institutional Oversight- The Standing Committee on Energy and the Central Electricity Authority (CEA) ensured monitoring, timely review, and alignment with national renewable targets.

India's Panchamrit target

Non-Fossil Energy Capacity- Achieve 500 GW of non-fossil fuel energy capacity by 2030.

Renewable Energy- Meet 50% of energy requirements from renewable sources by 2030.

Emission Reduction- Reduce total projected carbon emissions by 1 billion tonnes by 2030.

Carbon Intensity- Lower the carbon intensity of the economy (emissions per unit of GDP) by less than 45% by 2030 (from 2005 levels).

Net-Zero- Achieve net-zero emissions by 2070.

3. Japan Earthquake

A powerful 7.5-magnitude earthquake struck off north-eastern Japan, injuring residents and triggering a tsunami along Pacific coastal areas.

About the Tsunami

It is a Japanese term meaning “**harbour wave**,” is a series of large ocean waves caused by underwater earthquakes or volcanic eruptions.

The sudden displacement of a substantial water volume leads to the formation of tsunami waves.

Tsunami Formation Process

Earthquakes can displace large sections of the seabed, sending shockwaves through the water and creating towering waves.

Similarly, underwater volcanic eruptions can displace water with explosive force, triggering tsunamis.

Characteristics of Tsunami Waves- Tsunami waves can be hundreds of feet tall and travel as fast as jet planes over deep waters. However, they slow down upon reaching shallower waters.

Factors Influencing Tsunami Formation- The formation of tsunamis depends on various factors, including the shape of the ocean floor, the distance, and direction of the earthquake or volcanic eruption.

Japan Prone to Earthquakes and Tsunamis

Japan is situated along the ‘Pacific Ring of Fire,’ the most active earthquake tectonic belt globally, featuring the Pacific, Eurasian, and Indo-Australian Plates.

The continuous meshing and colliding of these plates result in frequent earthquakes, volcanic eruptions, and tsunamis

About the Site

Location- The quake occurred off Aomori, near Japan’s north-eastern Pacific coastline.

The region is close to the site of the 2011 Tohoku 9.0 earthquake-tsunami, prompting heightened preparedness and nuclear safety checks.

Ring of Fire- Japan lies on the Pacific Ring of Fire, a highly active tectonic zone responsible for frequent quakes and tsunamis.

4. Sanctuary Wildlife Service Award 2025

BNHS scientist Parveen Shaikh received the Sanctuary Wildlife Service Award 2025 for her ‘Nest Guardian’ initiative.

The ‘Nest Guardian’ initiative is a community-led conservation program focused on protecting the vulnerable Indian Skimmer bird and other ground-nesting species from threats like predation and human disturbance.

Key Achievements of Nest Guardian

Community-Led ‘Nest Guardian’ Success- The initiative raised nest survival rates from near zero to 60%, protecting vulnerable sandbar colonies from predators and disturbances.

Long-Term Skimmer Conservation Impact- Her sustained monitoring, habitat assessment, and ringing studies contributed to India’s Indian Skimmer population rising to 1812 by January 2024, with 544 in Chambal.

Livelihood Integration- The programme generated meaningful income for marginalised river-dependent families, aligning conservation with community welfare.

About Sanctuary Wildlife Service Award

Introduction- The Sanctuary Wildlife Service Award honours individuals demonstrating outstanding

grassroots conservation impact in India.

Establishment- Instituted by the Sanctuary Nature Foundation, which also publishes Sanctuary Asia (first issue- 1981). It recognises frontline conservation heroes annually.

Purpose and Criteria- It celebrates science-backed, community-integrated conservation efforts addressing ecological, wildlife, and climate challenges across India.

Significance- The award enhances national visibility for field-based conservation work and strengthens support for species-recovery programmes.

About Bombay Natural History Society (BNHS)

BNHS is India's premier conservation research institution dedicated to biodiversity protection.

Establishment- Founded in 1883 in Mumbai by naturalists, BNHS is recognised as a Scientific and Industrial Research Organisation (SIRO) by the Government of India.

Role & Activities- BNHS conducts nationwide ecological research, runs education programmes, leads conservation projects (mangroves, wetlands, grasslands), and coordinates citizen science initiatives.

Global Partnerships- It collaborates with international bodies such as BirdLife International, expanding scientific and conservation outreach across ecosystems.

5. UK Treasury Sanctions on Extremists

India welcomed the UK's decision to sanction anti-India extremist entities.

About the Sanctions

Targeting Extremist Networks- The sanctions blacklist individuals and organisations promoting anti-India extremism and violence.

Financial and Operational Restrictions- It introduced asset freezes, funding blocks, and travel bans to disrupt extremist activities.

The Counter-Terrorism (Sanctions) (EU Exit) Regulations 2019 (the Regulations) allow the UK Treasury to freeze assets and impose restrictions on individuals and entities suspected of involvement in terrorism.

India's Stance on the Sanctions

Support for UK Action- India affirmed that these entities endanger global security and welcomed the UK's move as a decisive counterterrorism step.

Importance of Curbing Illicit Flows- India highlighted that the sanctions help choke financial channels and dismantle transnational criminal networks supporting extremism.

Reinforcing Bilateral Cooperation- The action is seen as deepening India-UK strategic alignment against terrorism and violent extremism.