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Building Bureaucrats Since 2006

7. Short News

1. Jal Sanchay Jan Bhagidari (JSJB) Initiative

The union Jal Shakti minister announced that over 1.5 crore artificial groundwater recharge and storage structures have been built across India under this initiative.

1. **What it is** – A nationwide, community-led water conservation campaign launched in 2024 under the "Jal Shakti Abhiyan – Catch the Rain" umbrella.
2. **The Goal** – To turn water conservation into a mass public movement involving citizens, local bodies, industries, and the government.
3. **The 3Cs Mantra** – It is driven by three core pillars – **C**ommunity, **C**orporate Social Responsibility (CSR), and **C**ost-efficiency.
4. **Zonal Targets** – States are divided into 5 zones, and each district is encouraged to build at least 10,000 artificial recharge and storage structures.
5. **Financial Rewards** – To encourage performance, top districts can win cash awards ranging from ₹25 lakh up to ₹2 crore.

2. Mission Senehjori

The Ministry of Development of North Eastern Region (MDoNER) launched this flagship initiative to make Assam's luxury Muga silk sector globally competitive.

1. **The Vision** – Focuses on upgrading the Muga silk sector by improving host-plant cultivation, modernizing weaving infrastructure, and forming Farmer Producer Organisations (FPOs).
2. **Unified Branding** – All products will be promoted internationally under a single, premium brand name – "**Senehjori**".
3. **Teamwork** – Implemented jointly by the Assam Government, Central Silk Board, and the Union Ministry of Textiles.
4. **Assam's Monopoly** – Assam dominates the sector, producing roughly 90% of the entire world's Muga silk.
5. **Global Ranking** – India is the second-largest silk producer globally (behind China), accounting for nearly 25% of global output, and is the only country producing all four major commercial silk varieties (Mulberry, Tasar, Eri, Muga).

3. Central Silk Board (CSB)

Mentioned as a key implementing partner for the newly launched Mission Senehjori.

1. **Legal Status** – It is a statutory body established under the Central Silk Board Act, 1948 (amended in 2006).
2. **Parent Ministry** – Functions directly under the Union Ministry of Textiles.
3. **Role** – Acts as the apex body responsible for formulating policies and managing programs to develop sericulture (silk farming) across India.
4. **Headquarters** – Located in Bengaluru, Karnataka.
5. **The Varieties it Manages** – Oversees all four natural silks, with Mulberry silk dominating India's production at roughly 70%.

4. Heatwaves & India's Dairy Sector

Rising frequencies of extreme summer heatwaves are threatening the long-term growth and sustainability of India's massive dairy industry.

1. **Global & Economic Power** – India is the world's largest milk producer (nearly 25% of global output). The sector contributes 5% to India's GDP and employs over 8 crore farmers.
2. **Drop in Milk Yield** – Extreme heat causes "heat stress" in cattle, which reduces their appetite and forces them to spend energy cooling down rather than creating milk.
3. **Reproductive Issues** – High temperatures lower animal fertility and conception rates, leading to more miscarriages and premature births.
4. **Deteriorating Quality** – Heat stress lowers the fat and Solid-Not-Fat (SNF) content in the milk.
5. **Direct Income Losses** – Because dairy companies pay farmers based on milk fat and SNF levels, lower quality means direct financial losses for rural households.

5. Bolide (Meteor Explosion)

NASA confirmed a bright fireball meteor exploded over the US, creating a massive sonic boom and releasing energy equivalent to 300 tons of TNT.

1. **Definition** – A bolide is a specific type of exceptionally bright "fireball" meteor that explodes in a bright flash at the end of its flight, often breaking into fragments.
2. **The Cause** – When a space rock enters Earth's atmosphere at extreme speeds, intense air friction creates massive heat and pressure build-up, causing it to burst in an "airburst."
3. **The Effects** – It generates brilliant light visible over huge areas, loud sonic booms, and shockwaves that can shake buildings on the ground.
4. **Terminology Check** – A *meteoroid* is the rock in space; a *meteor* is the streak of light it makes in the atmosphere; a *meteorite* is any piece that survives and hits the ground.
5. **Historical Precedent** – The most famous recent example is the 2013 Chelyabinsk meteor over Russia, which shattered windows and injured over 1,000 people.

6. RudraM-II Air-to-Surface Missile

India successfully flight-tested its indigenous RudraM-II missile from a Su-30MKI fighter jet, boosting its precision-strike capabilities.

1. **What it is** – An indigenous air-to-surface Anti-Radiation Missile (ARM) designed for the Indian Air Force's "Suppression of Enemy Air Defence" (SEAD) operations.
2. **The Mission** – It specifically targets and destroys enemy radar, communication networks, and radio-frequency systems to disable their air defences.
3. **Hypersonic Speed & Range** – It is incredibly fast, reaching peak speeds of Mach 5.5 (5.5 times the speed of sound), with a strike range of around 300 km.
4. **Smart Tracking** – Uses a hybrid system combining GPS, Inertial Navigation, and a passive homing head to track hostile radio signals.
5. **Development & Upgrade** – Developed by the Research Centre Imarat (RCI), Hyderabad (a DRDO lab), it will eventually replace India's older, Russian-origin Kh-31 missiles.

7. Summer Air Pollution & Ground-Level Ozone

Severe summer pollution in 2026 forced Delhi and other Indian cities to reimplement emergency environmental restrictions (Stage-I of GRAP).

1. **The Ground-Level Ozone Threat** – Unlike high-altitude ozone which protects us, ground-level ozone is a toxic secondary pollutant that is not emitted directly but forms near the ground.

2. **How it Forms** – It is created when Nitrogen Oxides (from vehicles) and Volatile Organic Compounds (from industries/paints) chemically react under intense sunlight and heat.
3. **The Summer Catalyst** – Extreme summer heatwaves act like an oven, accelerating this chemical reaction and causing daytime ozone spikes.
4. **The "Loo" Factor** – Hot, dry regional dust storms from the Thar desert and West Asia blow into cities during summer, drastically increasing PM10 dust levels.
5. **Health Risks** – High ground-level ozone and dust particles cause severe respiratory illnesses, particularly harming children, the elderly, and asthmatics.

8. Prime Minister Research Chair (PMRC) Scheme 2026

The Ministry of Education launched this flagship scheme to attract top-tier global Indian scientists and researchers back to India's scientific ecosystem.

1. **Target Audience** – Open to Indian nationals working abroad, Overseas Citizens of India (OCI), and Persons of Indian Origin (PIO) with stellar research backgrounds.
2. **The Goal** – Reverse "brain drain" by linking global Indian talent with Indian universities and national labs to support Padmanabhan *Bharat* (Self-reliant India).
3. **Strategic Sectors** – Covers 13 cutting-edge areas including AI, quantum computing, semiconductors, defence, space, and climate change.
4. **Three Fellow Tiers** – Recruits talent across three levels – *Young Research Fellows* (early career), *Senior Research Fellows* (experienced), and *Research Chairs* (global leaders).
5. **Lead Institutions** – Seven premier institutes act as thematic hubs for the program – IIT Delhi, IIT Bombay, IIT Madras, IIT Kanpur, IIT Hyderabad, IIT (ISM) Dhanbad, and IISc Bengaluru.

9. MAHA Water Mission

The Anusandhan National Research Foundation (ANRF) and the Ministry of Jal Shakti launched this mission to drive technology and start-up growth in the water sector.

1. **Full Form** – MAHA stands for *Mission for Advancement in High-impact Areas* Water Mission.
2. **The Concept** – A national platform connecting scientists, colleges, start-ups, and industries to move water tech innovations out of the lab and into real-world use.
3. **Funding Size** – Armed with a budget of ₹200 crore over 5 years, offering up to ₹20 crore per multidisciplinary project.
4. **5 Core Priorities** – Focuses on water resource tracking, drinking water tech, water quality/ecology, water-use efficiency (circular economy), and climate resilience.
5. **Deployment Focus** – Funds are specifically earmarked not just for research, but for testing, validating, and deploying scalable water solutions in fields and cities.

10. Anusandhan National Research Foundation (ANRF)

Co-launched the high-profile MAHA Water Mission alongside the Jal Shakti Ministry.

1. **What it is** – India's apex statutory body established under the ANRF Act, 2023, officially operationalized in February 2024.
2. **The Leader** – The Prime Minister of India serves as the ex-officio President of its Governing Board.
3. **Administrative Setup** – Operates under the Department of Science and Technology (DST), Ministry of Science and Technology.
4. **The Mission** – It provides high-level strategic direction and funding for research, innovation, and entrepreneurship across all sciences, engineering, and agriculture.
5. **The Vision** – Designed to bridge the gap between academic research, private industries, and state agencies to create a unified scientific ecosystem in India.

11. India-Vietnam BrahMos Missile Deal

India formally confirmed the signing of a major defence deal to export supersonic BrahMos cruise missiles to Vietnam.

1. **The Missile** – BrahMos is a supersonic cruise missile jointly developed by India (DRDO) and Russia, traveling at blistering speeds of Mach 2.8 to 3.0.
2. **Propulsion Tech** – Uses a unique two-stage propulsion system consisting of a solid-fuel booster for launch and a liquid-fuel ramjet engine for high-speed cruise.
3. **Export Strategy** – Vietnam is the latest buyer; the Philippines was the first foreign buyer via a \$375 million contract in 2022, and a deal with Indonesia is nearly finalized.
4. **Strategic Significance** – Signals India's transformation from a top global weapon importer to an exporter of highly advanced, strategic military hardware.
5. **Geopolitical Impact** – Strengthens India's strategic "Act East" outreach to ASEAN countries and bolsters maritime security cooperation in the Indo-Pacific region.

12. VYOMA Innovation Challenge

Launched by MeitY's Digital India BHASHINI Division to spark the creation of open-source, voice-first AI solutions for regional languages.

1. **The Platform** – Built on "Sunno Sutra", an open-source, multilingual, handheld AI reference device developed to assist people in underserved areas.
2. **The Organizer** – Managed by BHASHINI in partnership with artificial intelligence groups *Current AI* and *Kalpa Impact*.
3. **Focus Areas** – Prioritizes digital literacy, language accessibility, AI model optimization, and building apps that work seamlessly through local spoken languages.
4. **Real-World Uses** – Targeted toward developing practical voice-AI applications for essential sectors like education, agriculture, healthcare, and public service delivery.
5. **About BHASHINI** – It is India's national AI platform for language inclusion; it already powers over 800 government websites, supporting 36 text languages and 23 voice languages native to India.