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IIT-M Study Advocates Participatory Approach to AI Governance

Context: A study conducted by the Indian Institute of Technology-Madras (IIT-M) advocates for a participatory approach to the governance of Artificial Intelligence (AI) systems, stressing the importance of engaging a broad range of stakeholders throughout the development and implementation process. This inclusive model aims to foster transparency, enhance fairness, and build public trust in AI technologies.

Key Points from the Study:

- **The Need for Stakeholder Involvement:**
  - » AI systems often exclude the perspectives of those most affected by their deployment.
  - » Engaging a wider range of stakeholders—such as affected communities (users of AI), civil society, and legal experts—can help make AI systems more responsible and human-centric.
- **Increased Transparency and Public Trust:**
  - » Stakeholder involvement increases transparency, which fosters public trust.
  - » By involving affected parties during the entire AI lifecycle (design, development, deployment, and oversight), AI systems are more likely to be accepted by society.
  - » Lack of stakeholder input can lead to unfair, biased, and opaque systems. Making AI systems more accountable can reduce risks such as algorithmic bias and privacy violations.
- **Case Studies: Law Enforcement and Healthcare**
  - » **Law Enforcement:** FRT used by police forces may introduce biases that disproportionately affect marginalized groups. Involving civil society groups, undertrials, and legal experts ensures the technology is tested for bias and does not infringe on privacy or discriminate against certain populations.
  - » **Healthcare:** LLMs, used for medical advice or diagnosis, may generate inaccurate or biased information, especially if trained on flawed data.
  - » Involving doctors, patients, legal teams, and AI developers can ensure AI systems are accurate, equitable, and transparent.
  - » Feedback from healthcare professionals can ensure that AI tools are safe, and involvement from patient advocacy groups ensures that the system is not discriminatory.

IIT Madras and Vidhi Centre for Legal Policy study calls for diverse voices in AI governance, highlighting how ethical oversight enhances transparency and fairness across sectors.

Benefits of a Participatory Approach:

- **Improved Fairness and Equity:** Engaging stakeholders reduces biases and fosters a more inclusive design of AI systems.
- **Enhanced Accountability:** Stakeholder participation ensures developers are accountable for the societal implications of their systems.
- **Better Public Trust and Acceptance:** Transparent AI systems are more likely to gain public support and acceptance.
- **Reduced Risk of Harm:** Early engagement can identify and mitigate risks like legal challenges, public backlash, or harm to vulnerable groups.

Accessibility for Disabled Persons: A Human and Fundamental Right – Supreme Court

Context: The Supreme Court of India recently delivered a landmark judgment establishing accessibility for Persons with Disabilities (PWDs) as a fundamental human right. The judgment emphasizes the critical need for inclusive spaces, services, and products that enable PWDs to

participate fully and equally in society.

Key Legal and Constitutional Aspects of the Judgment:

- **Accessibility as a Fundamental Right:**
  - The Supreme Court reinforced that accessibility is an inherent part of the fundamental rights guaranteed under the Indian Constitution.
  - The right to accessibility is essential to ensuring the right to life with dignity (Article 21), right to equality (Article 14), and right to non-discrimination (Article 15) for Persons with Disabilities.
- **Social Model of Disability:**
  - The Court adopted the social model of disability, which asserts that disability is caused by societal and environmental barriers, rather than being an inherent condition of the person.
  - The Court called for systemic changes to remove these barriers and shift the focus from "fixing" individuals to transforming society to be more inclusive.
- **Universal Design as a Constitutional Mandate:**
  - The Chief Justice directed that public and private spaces, services, and products be designed with universal accessibility in mind, ensuring that they are usable by everyone, regardless of their ability, age, or status.
  - This directive aligns with the Directive Principles of State Policy (Part IV of the Constitution), which promotes inclusive growth and social justice for marginalized groups like Persons with Disabilities.
- **Mandatory Standards for Accessibility:**
  - The Court ordered the government to issue mandatory accessibility standards within three months, recognizing that existing guidelines under the Rights of Persons with Disabilities (RPWD) Rules were not binding and had led to poor compliance.
  - Mandatory standards are essential to ensure that both public and private sectors adhere to uniform accessibility norms across the country.

Emotional and Relational Rights of PWDs:

- The Court highlighted the emotional and relational rights of persons with disabilities, including their right to love, intimacy, privacy, and self-expression.
- It criticized the neglect of these aspects and emphasized that PWDs should have access to private spaces to meet their emotional and relational needs, especially those living with families.

Implications of the Judgment:

- The Court referenced examples from cities like Delhi and Mumbai, where accessibility has been incorporated in public transportation and newer facilities.
- The judgment is likely to lead to a national effort to retrofit older buildings and public spaces to meet modern accessibility standards.
- However, states like Tamil Nadu were noted to have significant gaps in accessible transport. The judgment is expected to encourage state governments to expand accessible transportation networks, ensuring PWDs have safe and reliable mobility options.
- The Court emphasized that accessibility should be integrated at the design stage, rather than being added later as an afterthought. This principle should apply to public buildings, digital platforms, and service offerings, encouraging planners, architects, and service providers to prioritize accessibility from the start.

QS World University Rankings: Asia 2025

Context: India has demonstrated significant progress in the QS World University Rankings: Asia 2025, with Indian institutions making notable strides in academic performance, research output, and global competitiveness. Seven Indian universities now rank among the top 100 in Asia, including two in the top 50.

Key Highlights of India's Performance

- **IIT Delhi:**
  - Ranked 44th, achieving its best performance to date.
  - Boasts a 99% employer reputation score and a strong academic reputation.
- **IIT Bombay:**
  - Ranked 48th, recognized for its high academic reputation (96.6%) and employer reputation (99.5%).
  - Maintains its position as one of India's top technical institutions.

- **IIT Madras:**
  - » Ranked 56th, known for being a powerhouse of engineering and research.
  - » Contributes significantly to India's global standing in higher education.
- **IIT Kharagpur:**
  - » Ranked 60th, renowned for engineering excellence.
  - » Plays a key role in strengthening India's global academic reputation.
- **IIT Kanpur:**
  - » Ranked 67th, further solidifying the IITs as leaders in Indian higher education.
- **Indian Institute of Science (IISc):**
  - » Ranked 62nd, focused on cutting-edge research in science and engineering.
  - » Plays a critical role in India's research-driven education system.
- **University of Delhi:**
  - » Ranked 81st, showing significant improvement from 94th to 81st place.
  - » Demonstrates growing academic and research strength.

India's Academic Strengths:

- Indian institutions have shown remarkable performance in several key indicators of academic excellence:
- **Papers per Faculty**
  - » Universities such as Anna University and IITs excel in research output, producing a high number of academic papers per faculty member, underscoring India's growing academic productivity.
- **Staff with PhD**
  - » Over 15 universities in India achieved scores above 99% in the Staff with PhD indicator, reflecting high faculty qualification and teaching standards across the country's top institutions.
- **International Research Network**
  - » The University of Delhi scored 96.4% in the International Research Network, highlighting its growing global research collaborations and increasing international visibility.
- **Faculty-Student Ratio**
  - » Universities like North Eastern Hill University and University of Agricultural Sciences, Bangalore earned a perfect score of 100 in this indicator, which reflects the high quality of education and the personal attention students receive.

About QS World University Rankings: Asia

- The QS World University Rankings: Asia 2025 evaluates 984 institutions across 25 countries in Asia. The rankings consider several critical metrics, such as academic reputation, research productivity, international diversity, and employer reputation. Here's a detailed breakdown of India's standout performance:

Lead Exposure and Its Global Economic and Health Impacts

Context: A recent Lancet Public Health study, "Removing Lead from the Global Economy," reveals the immense costs of lead exposure, particularly in terms of premature cardiovascular disease (CVD) deaths. The study estimates global economic losses at $6 trillion due to CVD mortality linked to lead exposure, highlighting the urgent need for global action to phase lead out of the economy.

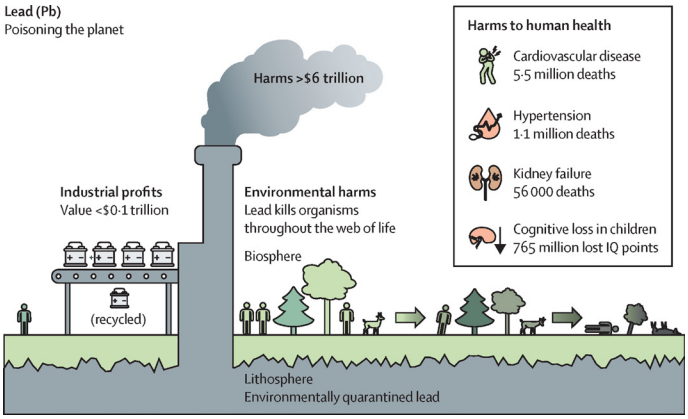
The Lead Industry: Current Scope and Demand

- **Historical Usage:** Lead has been widely used since ancient times and remains prevalent despite some restrictions.
- **Primary Application:** Today, 86% of global lead is used in lead-acid batteries, especially for vehicles and renewable energy storage.
- **Growing Demand:** The demand for lead-acid batteries

continues to rise, leading to increased recycling efforts but also greater environmental contamination risks.

Ecological Impacts of Lead Contamination:

- **Bioaccumulation:** Lead builds up in ecosystems, affecting soil health and infiltrating the food web, posing risks to plants, insects, and animals.
- **Biodiversity Disruption:** High soil concentrations lead to impaired plant growth and reduced insect reproduction, impacting local biodiversity.
- **Food Chain Contamination:** Through bioaccumulation, lead moves up the food web, affecting predators and larger species, thereby disrupting entire ecosystems.



Human Health Risks from Lead Exposure

- **Cognitive Impairment:** Lead exposure is linked to cognitive delays in children, reduced IQ, and developmental impairments.
- **Behavioral Effects:** Elevated lead levels correlate with increased criminal behavior, particularly in young adults.
- **Irreversible Damage:** Even low levels of lead exposure can cause irreversible brain damage, emphasizing the need for worldwide prevention measures.

Economic Impact and Industry Challenges

- **Industry Value:** Global lead production was valued at $10.3 billion in 2022, with the lead-acid battery industry reaching $50 billion in 2020.
- **High Health Costs:** The cost of lead-related health impacts, especially in cardiovascular disease, greatly surpasses its industrial benefits.
- **Alternative Technologies:** Safer options, such as lithium-ion batteries, are becoming both economically viable and technologically feasible, providing a critical alternative to lead.

Issues in Lead Recycling:

- **Regulatory Challenges:** Many countries lack adequate regulations to ensure safe lead recycling, leading to environmental and health risks.
- **Environmental Contamination:** Poorly managed recycling processes contribute significantly to lead contamination in local environments.
- **Need for Stronger Oversight:** Effective recycling management requires robust regulations and systematic monitoring to prevent harm to public health and ecosystems.

Conclusion:

The far-reaching health, environmental, and economic damage caused by lead exposure underscores the critical need to phase out lead from global use. Shifting to safer alternatives like lithium-ion batteries and strengthening recycling regulations are essential to safeguarding both human and planetary health.

Power Packed News

Launch of Uttar Pradesh's First Double-Decker Electric Bus

- Chief Minister Yogi Adityanath recently inaugurated Uttar Pradesh's first double-decker electric bus in Lucknow, introduced at the Aakanksha Haat event held at the Indira Gandhi Pratishthan.
- This initiative marks a significant step toward sustainable urban transportation, aligning with the government's mission to alleviate traffic congestion and promote environmental conservation in densely populated areas.

- The new bus service can accommodate up to 65 passengers, and in a move to promote gender inclusivity, the government offers a 50% fare discount to women passengers. Additionally, passengers making digital payments will enjoy a 10% discount, promoting cashless transactions.
- The environmentally friendly double-decker bus, which emits zero greenhouse gases, represents a green transit alternative aimed at reducing the carbon footprint in urban locales.
- The initiative underscores the administration's commitment to fostering eco-friendly and innovative solutions in public transportation. By embracing green technology, the government hopes to meet both the infrastructural and environmental needs of a rapidly growing urban population while enhancing public convenience.

India's First Space-Based Exercise, 'Antariksha Abhyas-2024'

In response to evolving threats to space assets, India launched its first-ever space exercise, Antariksha Abhyas – 2024, inaugurated in New Delhi. Conducted over three days, this exercise is organized by the Defense Space Agency under the Integrated Defense Personnel Headquarters, with participation from personnel across the Army, Navy, and Air Force.

About Antariksha Abhyas:

- Antariksha Abhyas – 2024 is a pioneering initiative aimed at bolstering India's preparedness for space-related defense operations and understanding the infrastructure dependencies inherent to space-based assets.
- The event underscores India's intent to advance its national strategic objectives in space and integrate its space capabilities more deeply into military operations. Participants will collaborate to identify procedural gaps and strategize responses to potential disruptions in space-based services.
- This special event also provides an opportunity to address process-related dependencies in space and identify procedural responses in the event of an interruption, strengthening the country's defense readiness in the space domain. Through Antariksha Abhyas, India reaffirms its commitment to safeguarding its assets in outer space.