



Environmental Science & Other Innovations:

LG's Sustainability Progress: LG Electronics has released its 2024–2025 Sustainability Report, demonstrating strong progress towards its 2030 environmental targets. The company is close to its Scope 1 (direct) and Scope 2 (indirect) greenhouse gas (GHG) emission reduction goals and has made significant headway in cutting Scope 3 emissions (from product use) through AI and energy-saving technologies. LG also achieved a 97.4% waste recycling rate at its global production sites, surpassing its 2030 goal, and increased the use of recycled plastic in its products.

Green Ammonia Certification by Envision Energy: Envision Energy, a global leader in green technology, has achieved the world's first ISCC PLUS certification for green ammonia with verified GHG metrics for its Chifeng Hydrogen Net Zero Industrial Park. This landmark achievement underscores Envision's capabilities in lifecycle carbon management for green hydrogen and ammonia production, setting a new global benchmark for sustainable development. Green ammonia is crucial for decarbonization in shipping, agriculture, and energy storage.

Bihar's New Renewable Energy Policy: The Bihar Cabinet has approved the Bihar Renewable Energy Policy 2025, replacing its 2017 framework. This new five-year roadmap

aims to develop 23,968 MW of renewable energy capacity and 6.1 GWh of energy storage across various technologies like solar, wind, biomass, green hydrogen, geothermal, pumped hydro, and battery storage. The policy introduces incentives to attract private investment and aligns with national climate targets.

Sustainable Concrete Innovation: Researchers, including those from Flinders University, are advocating for more sustainable concrete by replacing synthetic reinforcement materials with natural fibers and materials from waste streams like fly ash and slag. This new type of eco-friendly concrete significantly lowers the carbon footprint of construction projects and reduces waste, making cities more sustainable.

Water Management and Marine Ecosystem Resilience: Research is vital for protecting water sources and marine ecosystems. An online tool, the Reef Adapt initiative, is helping marine managers strengthen the resilience of marine habitat-forming species like kelp and corals against climate change threats by leveraging genetic research.

Global Shapers Innovation Prize Winners: The Global Shapers Innovation Prize 2025, announced today, highlights youth-led solutions for reshaping societies and systems, with several projects focusing on environmental sustainability. Examples include:

Solar Cerrado (Brasilia Hub, Brazil): Bringing affordable solar power to vulnerable communities, while training local professionals and educating residents about clean energy.





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Youth in Aquaponics (Bulawayo Hub, Zimbabwe): Addressing food insecurity and climate stress with sustainable aquaponics systems that use 90% less water and no soil.

OPEC's Oil Consumption Projections: OPEC announced that global oil consumption is expected to continue rising until at least 2050, projecting an 18.6% increase between 2024 and 2050. This position runs counter to international climate goals and highlights ongoing challenges in transitioning away from fossil fuels.

NERC Funding for Ocean Carbon Research: The UK's Natural Environment Research Council (NERC) has opened funding for a project to improve the representation of biological processes in ocean carbon storage models, a crucial area for understanding and mitigating climate change.

SEMICON India 2025 Registrations Open: Visitor registrations have opened for 'SEMICON India 2025 - Building the Next Semiconductor Powerhouse', which will take place from July 23-25, 2025, in Gandhinagar. The event aims to showcase India's growing capabilities and ambition in the semiconductor ecosystem, featuring over 300 exhibiting companies and programs for skilling and workforce development.

AI-Driven Healthcare in Asia Pacific: A new IDC report indicates that Asia/Pacific's healthcare sector is entering a revolutionary era driven by AI and Generative AI, and more recently, Agentic AI. The focus is on balancing efficiency and effectiveness across workflows and workforce productivity, with investments in workflow automation, patient-centric care, GenAI

solutions for clinician efficiency, and cybersecurity.

Valeo's Next-Generation Vehicle Technology: Valeo will unveil its latest technologies at IAA MOBILITY 2025, focusing on accelerating the development of software-defined vehicles (SDVs). Innovations include advanced driver assistance systems (ADAS), electrified vehicle solutions (e.g., Valeo Ineez™ AC charging stations with V2G compatibility, compact powertrains), smart lighting, and next-generation interior experiences. Valeo is also focusing on sustainable mobility by reducing critical material use, creating longer-lasting parts, and incorporating end-of-life management.

Toyoda Gosei Invests in Nuclear Fusion Startup: Toyoda Gosei Co., Ltd. has invested in Helical Fusion Co., Ltd., a startup aiming to achieve practical nuclear fusion power generation. This investment underscores the growing interest in nuclear fusion as a promising clean energy source.

Smart Mosquito Surveillance System in Andhra Pradesh: The Andhra Pradesh government has launched SMOSS, an AI-driven framework leveraging drones, sensors, and IoT to monitor mosquito populations and enable targeted interventions against vector-borne diseases.

Antibacterial Plastic Developed in India: Scientists at GB Pant University have developed a new, non-toxic, and biodegradable antibacterial plastic that resists microbial contamination for up to 72 hours, with wide applications in various sectors.

'Kalaa Setu - Real-Time Language Tech for Bharat' Challenge: The Ministry of Information





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& Broadcasting (MIB) has launched this challenge to foster innovation in media, entertainment, and language-tech startups, aiming to enhance accessibility for India's diverse audiences.

ISRO's Space Tech in Agriculture Course: ISRO has launched a short-term certificate course on 'Essentials of Space Technology in Agriculture' to educate on using space technology for farming transformation.

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1. Which of LG Electronics' environmental targets has the company already surpassed, according to its 2024-2025 Sustainability Report?

- a) Scope 1 GHG emission reduction
- b) Scope 2 GHG emission reduction
- c) Waste recycling rate at global production sites
- d) Increased use of recycled plastic in products

Answer: c) Waste recycling rate at global production sites

The text states, "LG also achieved a 97.4% waste recycling rate at its global production sites, surpassing its 2030 goal..."

2. Envision Energy achieved the world's first ISCC PLUS certification for green ammonia with verified GHG metrics for which project?

- a) A new solar farm in Europe
- b) Its Chifeng Hydrogen Net Zero Industrial Park
- c) An offshore wind power plant
- d) A biomass energy facility

Answer: b) Its Chifeng Hydrogen Net Zero Industrial Park

The text says, "Envision Energy...has achieved the world's first ISCC PLUS certification for green ammonia with verified GHG metrics for its Chifeng Hydrogen Net Zero Industrial Park."

3. What is the total renewable energy capacity that Bihar aims to develop under its new Renewable Energy Policy 2025?

- a) 6.1 GWh
- b) 23,968 MW
- c) 2030 MW
- d) 2017 MW

Answer: b) 23,968 MW

The text states, "This new five-year roadmap aims to develop 23,968 MW of renewable energy capacity and 6.1 GWh of energy storage..."

4. What innovative approach are researchers, including those from Flinders University, advocating for to make concrete more sustainable?

- a) Increasing the amount of cement in the mix.
- b) Replacing synthetic reinforcement materials with natural fibers and waste materials.
- c) Using concrete only for small-scale projects.
- d) Developing entirely new building materials.

Answer: b) Replacing synthetic reinforcement materials with natural fibers and waste materials.

The text indicates, "Researchers, including those from Flinders University, are advocating for more sustainable concrete by replacing synthetic reinforcement materials with natural fibers and materials from waste streams like fly ash and slag."

5. What is the focus of the 'Kalaa Setu - Real-Time Language Tech for Bharat' Challenge launched by the Ministry of Information & Broadcasting (MIB)?





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- a) Promoting traditional Indian art forms.
- b) Fostering innovation in media, entertainment, and language-tech startups to enhance accessibility.
- c) Developing new satellite communication technologies.
- d) Creating a new national language for India.

Answer: b) Fostering innovation in media, entertainment, and language-tech startups to enhance accessibility.

The text states, "The Ministry of Information & Broadcasting (MIB) has introduced this challenge...aiming to drive innovation and accessibility for India's diverse audiences through media, entertainment, and language-tech startups."

