

4. WASTE MANAGEMENT SECTOR

4.1 CPCB released an updated version of the guidelines for Environmental Laboratory Recognition

In June 2025, CPCB updated guidelines for Environmental Laboratories, making ISO/IEC 17025 accreditation mandatory and introducing stricter quality and ethical standards. This move aims to improve data reliability and unify lab recognition across states, strengthening India's environmental governance.

Refined Reflections:

In June 2025, CPCB issued revised guidelines for Environmental Laboratories under the Environment (Protection) Act. Environmental laboratories are the silent backbone of pollution control in India. For decades, their data has shaped regulatory decisions, whether it's assessing air quality, checking effluent discharge, or certifying industrial compliance. But the standards guiding their recognition haven't seen substantial revisions since 2008–2009, when the CPCB's guidelines primarily focused on basic infrastructure, minimum technical capability, and procedural compliance.

Forward to 2025, and the environmental landscape has changed dramatically. With industrial activity intensifying, climate risks escalating, and environmental litigation rising, the need for scientifically sound, transparent, and verifiable data has become urgent. The earlier guidelines, though foundational, lacked provisions for robust quality assurance, audit mechanisms, and global accreditation alignment all essential in today's regulatory context. Recognizing this, the CPCB has issued a comprehensive revision of the guidelines for recognizing environmental laboratories under the Environment (Protection) Act, 1986. The updated version released in June 2025 makes ISO/IEC 17025 accreditation and ISO 45001 certification mandatory, strengthens provisions for staff qualifications, lab infrastructure, and introduces unannounced inspections and surveillance audits. For the first time, there's also an emphasis on ethical practices and traceable quality control procedures, ensuring that labs are not just operational, but truly accountable.

What's also important is that recognition from the CPCB now directly links to empanelment with State Pollution Control Boards (SPCBs) a significant move that brings uniformity and legal clarity across states. In a country where environmental decisions increasingly depend on real-time and credible data, this step helps close the trust gap that previously existed in lab-reported findings. In essence, these revised guidelines aren't just a bureaucratic refresh they represent a shift toward evidence-based environmental governance. By setting higher standards, the CPCB is enabling a system where industries, regulators, and the public can rely on what the data says. It's a necessary evolution, in line with India's growing socio-economic and environmental complexity, and a step forward in ensuring that the country's green transition is built on a foundation of trust and scientific integrity.

Official Notification: Guidelines for Recognition of Environmental Laboratories under the Environment (Protection) Act

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4.2 CPCB issues guidelines for the management and recycling of solar panel waste

In June 2025, CPCB released draft guidelines for managing solar panel waste, mandating producer take-back systems and stricter storage and transport rules. This aims to prevent toxic pollution and align India's solar sector with global recycling standards, boosting sustainability and safety.

Refined Reflections:

India's rapid growth in solar energy has raised an important question: what happens to solar panels once they reach the end of their life cycle? Until now, there were no detailed technical or operational guidelines to manage solar panel waste. Although the E-Waste (Management) Rules, 2022, assigned responsibility to producers, they did not specify protocols for safe storage, transportation, or handling. Without a formal system, discarded panels often found their way to informal recyclers, where toxic substances like lead, cadmium, and silicon could leak into the environment, threatening health and ecosystems.

The Central Pollution Control Board's draft guidelines released in June 2025 aim to change this by setting clear rules for solar panel waste management. Producers must now establish formal take-back programs for waste from both rooftop installations and large solar parks. The guidelines raise standards for storage and transport, requiring leak-proof and fire-safe warehouses, and covered vehicles that meet hazardous waste certification. Regular inspections, strict inventory tracking, and site labelling will improve transparency and enforcement. These measures directly tackle the problems caused by unregulated dumping and unsafe dismantling in the solar sector.

Globally, countries like the European Union, Japan, and parts of the U.S. already have mature solar waste management frameworks with producer responsibility schemes and recycling targets. India's new draft guidelines bring its policies closer to these international practices, protecting ecosystems and signaling readiness to join the global circular economy for clean energy. The rules offer clarity to developers and manufacturers, encouraging investments in recycling and refurbishing technologies. While smaller players may face initial challenges due to compliance costs, support mechanisms could ease their transition. Most importantly, these guidelines protect workers and communities from toxic exposure, marking a shift from unchecked growth to responsible sustainability in India's solar mission.

Official Notification: Draft Guidelines for Storage and Handling of Waste Solar Photovoltaic (PV) Modules, Panels or Cells