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**Digital technologies as enablers of chemicals and waste management in alignment with UNEP/SPP-CWP/OEWG.3/7**

The UNEP/SPP-CWP/OEWG.3/7 recommendations to the governing body of the Science-Policy Panel highlight the importance of improved access to reliable, science-based knowledge and inclusive mechanisms to address the global challenges posed by chemicals, waste, and pollution. The Foundation notes digital technologies are emerging as transformative enablers of effective and equitable chemicals and waste management, providing innovative pathways for data collection, policy formulation, public engagement, and monitoring. Real-time sensors, mobile applications, artificial intelligence (AI), blockchain, and open data platforms, have the potential to fill knowledge and capacity gaps that hinder sound chemicals and waste governance. The tools can support the generation of disaggregated and high-quality data, a priority area identified in the recommendations, by enhancing surveillance systems, facilitating rapid assessments, and enabling stakeholder reporting at local and national levels.

Significantly, digital platforms also enable more inclusive stakeholder participation by making information accessible and understandable. Through online dashboards, visualizations, and AI-assisted translations, communities including those in remote or underserved regions can better engage with technical information and policy discussions. This aligns with the recommendations' emphasis on improving transparency and co-production of knowledge, when addressing the needs of vulnerable populations.

Furthermore, AI and machine learning can enhance decision-making by analyzing complex datasets to identify pollution hotspots, predict chemical risks, and recommend safer alternatives on one hand. On the other hand, for regulators and policymakers, such insights support evidence-based interventions in alignment with precautionary principles and risk management strategies outlined under the Strategic Approach to International Chemicals Management (SAICM) and the Global Chemicals Outlook.

Moreover, blockchain technology presents additional opportunities in tracking chemical supply chains, promoting accountability and traceability from production to disposal. This is relevant in preventing dumping, monitoring compliance, and promoting extended producer responsibility (EPR) schemes. It also supports the circular economy by providing transparency on material flows, ensuring that waste is viewed as a resource rather than a liability.

Importantly, digital learning and e-capacity building platforms also support implementation by equipping stakeholders especially in developing countries with requisite skills and tools to adopt safer chemical practices and waste disposal methods. These platforms can foster cross-sectoral and intergenerational learning vital for advancing science-policy interfaces.

Conclusively, digital technologies are not just technical solutions; they are enablers of inclusive, efficient, and responsive chemicals and waste management. We recommend the Science-Policy Panel to leverage on the evolving digital ecosystem to accelerate progress toward pollution prevention, environmental health, and sustainable development.

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