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**Harnessing blockchain for sustainable development:
prospects and challenges**

Statement submitted by

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High-level roundtable on harnessing blockchain for sustainable development: prospects and challenges
on 19 May, 14:00-16:00

[24th Session of UN Commission on Science and Technology for Development](#)

TALKING POINTS

by Ms. Ayumi Fujino, Director, Office of Strategic Planning, Coordination and Quality Monitoring, UNIDO

Blockchain technologies offer great potential for **positively impacting the achievement of the Sustainable Development Goals.**

- Blockchain is acquiring greater significance and maturity in areas such as energy, healthcare, agro-industries and supply chain management.
- Blockchain has also laid down the foundations for the establishment of a new paradigm through the token economy. Tokens can be effective tools for incentivizing and remunerating positive behaviours and business models aligned with the attainment of the SDGs through a programmable incentive design. Existing examples include incentives for energy-saving behaviours, collecting plastic and producing solar energy. Although we have witnessed important advancements in cross-ledger interoperability, still more research is needed to enable its full potential.
- Blockchain can be especially useful in improving quality monitoring and trade integration of developing countries, attaining Targets associated with SDG 2 (zero hunger), SDG 3 (good health and wellbeing), SDG 7 (affordable and clean energy), SDG 9 (inclusive and sustainable industrialization) and SDG 16 (peace, justice and strong institutions).

However, we must be aware of the **potential adverse unintended social and economic effects of this technology.**

- If not adequately managed, blockchain's adoption can contribute to perpetuating or even exacerbating existing inequalities among beneficiaries. Therefore, it is essential to carefully consider and assess the needs, adoption readiness, and potential benefits for all actors.
- One potential risk is that the adoption of technology is not focused on developed country needs, leaving behind the needs of developing countries and developing platforms that are not inclusive for farmers and actors upstream from the value chain. Such an approach can negate the direct benefits farmers could gain by implementing blockchain.
- To counter this and other potential issues, UNIDO has developed a methodological framework to assess the readiness of a commodity value chain to adopt blockchain. The methodology aims to inform decisions related to the adoption of blockchain by determining a) if blockchain is needed; 2) the readiness levels and requirements for implementing it, and 3) the potential benefits for all actors across the value chain.

How could governments maximize the opportunities and minimize the risks?

- Besides promoting the adoption of blockchain, governments should also seek to develop the technical capacities for adopting and adapting blockchain systems by facilitating knowledge-sharing with international partners and fostering linkages among and between academia and the private sector. Governments should also play a more active role in the ongoing discussions regarding the development of standards and regulations and adopt current international best practices. This will allow governments to both enable a conducive environment for blockchain adoption and increase their preparedness for enforcing regulations.
- In many developing countries in particular, considerable investments will have to be made in physical infrastructure. At present, electricity access, digital connectivity and energy remain bottlenecks to accessing blockchain and other disruptive technologies.

UNIDO welcomes the recommendations issued in the **Secretary-General's report "Harnessing blockchain for sustainable development: prospects and challenges"**.

- We fully endorse the observed need of developing training programs for raising awareness on the potential and limitations of blockchain and promoting skills development.
- UNIDO commends the commission to foster closer collaboration among UN entities concerning blockchain and to support the adoption of an inter-agency blockchain governance framework as recommended by the Joint Inspection Unit (JIU) in its report "Blockchain applications in the United Nations system".

UNIDO is employing several initiatives to make this technology accessible in developing countries for inclusive and sustainable industrial development.

- UNIDO is currently exploring on the use of blockchain in quality infrastructure ecosystems, ensuring the issue and traceability of certificates for accreditation, inspection, calibration, tracing auditors competences and test results in blockchain.
- UNIDO's methodological framework to assess the readiness of a commodity value chain to adopt blockchain is being piloted in the cocoa value in Ghana and in the coffee and cocoa value chains in Peru. The lessons learned will help to advise Governments on the challenges and benefits of adopting blockchain.
- We also support the harmonization of standards to ensure cross-border operability of blockchain technologies to simplify international exchange and trade and minimize risks.
- UNIDO has also organized a series of 15 awareness-raising webinars to explore the relevance of digital technologies such as blockchain in promoting ISID to accelerate the realization of the Decade of Action. As part of the webinar series, it was explored blockchain's potential, risks and implementation challenges for increasing transparency and traceability across agro-food and minerals value chains.