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**Contribution by ESCAP**

to the CSTD 2020-2021 priority theme on “Harnessing blockchain for sustainable  
development: prospects and challenges”

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## **Input of ESCAP IDD to UNCTAD Priority Theme 1 on “*Harnessing blockchain for sustainable development: prospects and challenges*” as of 7 October, 2020**

Asia-Pacific’s ability to capitalise on blockchain technology evolving into a competitive advantage – driven by the private sector. The following key sectors are pioneering the blockchain innovation in the region: the finance sector, supply chain, energy sector, and the blockchain-based digital government. In addition, the technology is used in the education sector, medical sector, culture, and in entertainment. Along with advantages, there are many challenges in adoption of the technology, notably those that are related to policies and regulatory regimes. Compared to the traditional centralized databases, the distributed blockchain ledger usually shares more data with multiple equal peers and is energy intensive. Governments generally lack knowledgeable resources and awareness. There is still a missing regulatory framework on using the blockchain and digital currencies. Governments also face challenges in mobilising stakeholders towards the same goal to support blockchain development and the achievement of SDGs, including start-ups, associations, investors, universities, regulators, etc.

Since 2017, ESCAP has been observing, reviewing, collecting, and documenting examples in the region of where blockchain technology has had the biggest developmental impact. ESCAP has strengthened the awareness of network through delivery of a number of policy sessions at the Global Forum on Human Settlements in Bangkok in September 2019, Seventh Asia Pacific Urban Forum (APUF7) in Jakarta October 2019, and through the expert group meetings (water cycles and the blockchain technology for sustainable development in June 2019). As a way forward, UN may want to facilitate establishment of a framework to encourage partnerships (tokenise the partnership framework through blockchain platforms for real data management) to capitalise on the use of blockchain for development, for example, to lay the foundation for the inclusive digital economy in the region.

### **Input of ESCAP TIID**

United Nations ESCAP is the secretariat of a UN treaty entitled Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific. The treaty aims at accelerating the implementation of digital trade facilitation measures for trade and development, including cross-border paperless trade transactions. Blockchain has a potential to enhance efficiency and security of cross-border paperless trade. ESCAP, in cooperation with IBM, is currently conducting a study on implication of blockchain on cross-border paperless trade. The study focuses on advanced measures for enhancing security, such as Zero Knowledge Proofs (ZKP), which enables one party (the prover) to prove to another party (the verifier) that they know a value  $x$ , without revealing the value  $x$  as well as Secure Multi-Party Computation (SMC), a method for parties to collaboratively compute a special function over their inputs while keeping those inputs private. The study is to be completed by early 2021.