BRUSSELS DEVELOPMENT BRIEFINGS

Opportunities of Blockchain for Agriculture

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On 15th May 2019, CTA organised the 55th Brussels Development Briefing – part of a series of bi-monthly Development Briefings on ACP-EU rural and agricultural issues co-organised by CTA, the European Commission (DEVCO), the ACP Secretariat and Concord. BMZ join as co-organiser of this Briefing. Around 160 participants gathered in Brussels to discuss the opportunities of Blockchain for Agriculture.

A blockchain is a digital transaction ledger, maintained by a network of multiple computing machines that are not relying on a trusted third party. Individual transaction data files (blocks) are managed through specific software platforms that allow the data to be transmitted, processed, stored, and represented in human readable form. Every transaction is disseminated through the network of machines running the blockchain protocol and needs to be validated by all computer nodes. The key feature of a blockchain is its ability to keep a consistent view and agreement among the participants (i.e. consensus).

The Briefing provided an overview on the Opportunities and challenges for blockchain in the agri-food industry by **Mischa Tripoli, Economist, Trade and Markets Division, FAO**.

This Briefing looked at innovations of Blockchain technology for agriculture and the food system across several value chains, new opportunities in finance which can benefit smallholders (i.e. **Moyee coffee** presentation by **Sander Govers**) and ways of upscaling private sector led applications as presented by **Louis de Bruin from IBM** and **Anthi Tsilimeni-Archangelidi** from **Cargill**. Policies and governance, inclusiveness, awareness on the implications of the technology use, partnerships and knowledge sharing about the technology and its implications were listed as key priorities.
The specific applications of Blockchain for ACP sustainable agriculture from CTA's project "Promoting blockchain to increase innovation and business performance in the agrifood sector" were presented by **Chris Addison**.

Blockchain can disintermediate transactions in agricultural supply chains as DLTs and smart contracts provide similar outcomes for trade finance and agricultural financial services (payment services, agricultural insurance, credit and derivatives). This leads to greater access to financial services for smallholders and MSMEs and reduced transaction costs for sellers and banks. It facilitates trade with frictionless and real-time payments. A single ledger for all trade documentation facilitates instantaneous documentation flows. It can also facilitate inclusive Blockchain Insurance as shown by Annette Houtekamer, Expert in Inclusive Insurance, Ibisa.

Digital identity, digital assets, or data, recorded from activity in agricultural supply chains can enhance market information and market transparency, provide supply chain actors with detailed records on their operations. Physical assets can be used as collateral to access financial services. DLTs provide a secure, fast and immutable method to register land titles. As raised by **Árokszállási Erik** from **TE-FOOD International** Blockchain can be useful in tracking livestock diseases and assessing the speed and economic impact of the epidemic.

Several applications in agriculture include supply chain management, food safety, trade finance, agricultural financial services, market information, land registries and international agreements related to agriculture. All these developments have implications for policy in ACP countries. Alice Namuli Blazevic, Expert Blockchain and AI, KATS, Uganda raised the issues being tackled in her country and some of the actions being taken both by government and the Ugandan blockchain association.

From the presentations and discussions, some recommendations emerged:

(i) to look at improving the knowledge base of public sector on the application of DLTs for food and agriculture;

(ii) to address the numerous technical, regulatory, institutional, infrastructure and capacity development related challenges for widespread adoption;

(iii) to create an enabling environment that ensures the productivity gains generated by DLTs are shared by all market participants, including smallholder farmers, processors and MSMEs. This can be achieved by promoting international cooperation through public-private sector partnerships and support to research and development; by providing policy guidance on the use of DLTs in supply chains and developing appropriate regulations and standards with the private sector.

(iv) Finally, there is a need to improve digital infrastructure and skills and ensure inclusive approaches.

Pat Roy Mooney, Founder, ETC Group shared a very inspiring presentation of devil's advocate. His book "Too big to feed" shows corporate concentration in agribusiness and the reason is new technology and blockchain. His second study: "Blocking the chain" is not against the technology per se, but provides a cautionary word on the pace of development and who is regulating and asks if we understand the technologies well enough to regulate them.

Watch his presentation

https://vimeo.com/337777407

Theo de Jager, President, World Farmer's Organisation (WFO), spoke about the *o*pportunities of blockchain for famers in Africa.

Watch his presentation

"The nature of the chain has changed and if you cannot keep up at the cutting edge of the technology, you don't remain in business. A new generation of young farmers understand and love the technology. With Blockchain we can bring the incorruptible flow of into and data into our value chains."

https://vimeo.com/337783515

Presentations