



Connecting the dots – **Interactive Workshop** on Digitalization & Blockchain, Climate Action and Education

Summary Report & Conclusions

On December 4th, 2019 at the occasion of COP 25 in Madrid the [Climate Ledger Initiative \(CLI\)](#) in collaboration with the United Nations University's Institute for Environment and Human Security (UNU EHS) organized the workshop on "Digitalization & Blockchain, Climate Action and Education".



Opening of Workshop - from left to right: Juerg Fuessler (INFRAS), Ana Lucía Moya Mora (Costa Rica), Sven Braden (CLI), Alberto Sanchez (UNU EHS), Owen Hewlett (Gold Standard)

Discussions on **Blockchain for Climate Finance** were kicked off along the common understanding that climate finance is a broad and vague topic. The fact that climate finance is not defined in detail is both advantageous and challenging. A broad definition allows for flexible approaches but also leads to a set of challenges. Climate finance is seen as non-transparent and it is often difficult to ensure accountability along the finance flow. The latter problem can also lead to double claiming of financial

During the event the CLI hosted three roundtable discussions covering Climate Finance, Next-gen Registries and Digitizing MRV. The topics corresponded to information and data gathered by the CLI in its [2nd Navigating Report](#), which was officially launched in the morning of the same day.

The workshop formed part of the [UNFCCC capacity building hub](#) and was attended by more than 40 participants from 15 different countries. For over two hours representatives from the public sector (governments and intergovernmental organizations) as well as from the private

contribution. Another issue is that available climate finance is insufficient which is also due to inefficient channels. IT approaches such as digital online platforms may enable access and deployment of climate finance. The use of social media formats can extend the potential sources of finance and data relevant for climate finance on a new level. Digital platforms that are able to track the need and the disbursement of climate finance can provide the basis for the next generation of result-based finance for both, mitigation and adaptation. Combined with Blockchain technology, financial flows can be managed in a decentralized manner which could add granularity to finance activities and could ultimately contribute to national reporting obligations of countries under the Paris Agreement. Moreover, blockchain based tokenisation of climate finance flows provides for a new form of capital. Under the term “programmable money” such new capital could address financial risks and low monitoring and verification costs of climate finance.



The roundtable discussions on the future of GHG registries started by acknowledging the great potential blockchain technology brings to so called **Next-gen Registries**. Embedding the technology properly can lead to an increase of efficiency and trust into registry operations and enlarges the access to actors and participants of all sectors in the economy. Challenges were identified

around the question on how future registries can be governed. How can truly decentralized registries be operated and at the same time maintain environmental integrity, consistency and trust. Participants agreed that the development of integer and decentralized GHG registries must evolve along common standards, e.g. on data exchange and GHG metrics and standards. Further actions must be taken on the level where data is generated (e.g. at a company level). Here standardized processes of data validation and verification need to be guaranteed and respective controlling institutions will have to be established for auditing purposes. Also at this MRV side of GHG data, digitization can bring numerous efficiency but also trust benefits. Since it will not be possible to establish standards throughout all sectors of the economy it is crucial to allow for flexibility and full interoperability to ensure that the aggregation of data remains possible even if data comes from different systems with varying standards.

The discussions on **Digitizing MRV** started with identifying the reasons for digitizing the processes around monitoring, reporting and verification (MRV). Participants acknowledged that digitizing MRV can lead to more and better climate action. Digitized MRV outcomes can be accessed in real-time (rapid feedback loop on data gathered) while the decentralized data collection can provide access to sectors that haven't had such opportunities before (decentralization allows for a better scaling in the midterm). Overall, digitizing MRV can lead to the creation of intelligence which enables better decision making and empowers climate action on new levels. However, digitizing MRV also faces challenges such as the lack of (technical) knowledge – admitted by policy makers, or static mindsets in administrative bodies of governmental authorities.

Conclusions: The CLI and its implementing organisations Gold Standard and INFRAS have analysed the outcomes of the workshops. Areas of Climate Finance, Next-gen Registries and Digitizing MRV have a high potential to benefit in the near future. For this to happen further work at the crossroads of digitalisation and climate action needs to be concluded. In that context the CLI has identified three

crosscutting fields which need to be explored in order to address challenges and potentials of the future and which stand in the focus of CLI work in 2020:

- *Open Data & Interoperability:* Allowing data to be used for different purposes, to be aggregated and enhanced through standardisation of data principles and accessibility. Enhanced flexibility for proponents to decide which markets and customers to serve and for registries to seamlessly cooperate for maximum transparency and integrity.
- *Automation and Credibility:* Enhance the application of digital technology to automate data collection and assurance to reduce the cost and time associated with monitoring climate action whilst also improving the credibility, accuracy and transparency of key parameters through reduced manual error of fraud.
- *Governance:* The rules and governance of decentralized data management approaches (e.g. via blockchains) define who can access information, change protocol rules or data, mine tokens or coins, as well as setting required levels of transparency. This tends to be developed bottom-up in a setting that does not require a centralised governance. This epitomises the vision to decentralise much of society's social, political and economic infrastructure and eliminate unnecessary intermediaries or rigid institutions that are not fit-for-purpose for a digitally based future.

These observations together with the findings of the 2nd Navigating Report form the bases of CLI's work in 2020 and beyond. This work will influence the execution of real-world use cases which apply digital means for Paris Agreement implementation and the continuation of publishing knowledge products such as the Navigating Report series, workshops, and webinars.

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