Using Blockchain Technology to Support Climate Action and Paris Agreement Implementation

**CLI Research**

Jürg Füssler (INFRAS)
CLI side event at COP23 in Bonn, 6 November 2017
The Paris Agreement and Blockchain Technology

**Characteristics of Paris Agreement**
- Transparency as key pillar of PA
- De-centralized, bottom-up approach
- Important role of measuring, accounting, tracking, reporting
- Exchange of information and review
- Important role of private sector players

**Features of Blockchain Technology**
- De-centralized notary, also for small systems
- Brings trust to peer-to-peer interactions
- Accessibility and distributed systems
- Increased transparency
- Permanent ledger
- Efficiency – Smart contracts
- Public or permissioned blockchain

**Risks:** Lack in ambition levels and transparency

**Risks:** Pilot/demonstration stage, complex, high power consumption, only a hype?

Source: Climate Ledger Initiative
Research track: What is the potential of blockchain technology for climate action and the implementation of the Paris Agreement?

Source: Climate Ledger Initiative
## Preliminary mapping of use of Blockchain/ DLT in climate action

<table>
<thead>
<tr>
<th>Bottom-up</th>
<th>Top-down, UNFCCC led, Governmental oversight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring, reporting and verification MRV</td>
<td>BC for national GHG inventories, Nationally Determined Contributions NDCs, registries, ITMO tracking, Art. 6 mechanism</td>
</tr>
<tr>
<td>BC for climate action project cycle management</td>
<td>Crowdfunding for climate</td>
</tr>
<tr>
<td>BC for energy generation, access and use (RE and EE)</td>
<td>Results based climate finance</td>
</tr>
<tr>
<td>BC for financial inclusion and access to services</td>
<td>Tracking attributes connected to goods</td>
</tr>
<tr>
<td>Low carbon B2B, supply chain</td>
<td>Company targets, ESG, carbon pricing</td>
</tr>
</tbody>
</table>

Source: Climate Ledger Initiative
CLI research steps

• What is the current and future architecture of climate action schemes? 
What are their challenges and opportunities?

• What is the status of blockchain technology for applications in climate action? 
What are issues in blockchain technology that need to be solved?

• Where can Blockchain technology deliver new approaches and solutions? 
• How does it all work together?
CLI research approach

**Overview and synthesis** on climate action and blockchain

- In-depth research 1
- In-depth research 2
- In-depth research 3

**Use cases and partners**

- Use case 1
- Use case 2
- Use case 6
Thank you.

Jürg Füssler
INFRAS, Zurich
juerg.fuessler@infras.ch
www.climateledger.org