

Climate-KIC

Decision Metrics and Finance



Climate-KIC started in 2010...



Climate-KIC is the EU's largest public private partnership addressing climate change



Mission: bring together, inspire and empower a dynamic community to build a zero carbon economy



Vision: to enable Europe to lead the global transformation towards sustainability



We drive innovation in climate change through creative partnerships large and small, local and global, between the private, public and academic sectors





Blockchain for climate and finance

- Support of 5 innovation cases as part of Climate Ledger Initiative

Climate-Blockchain Innovation Call-out (CBC) - bringing climate and blockchain communities for innovation to emerge

Clean coin - climate implications of cryptocurrencies and developing prototype tools to calculate and mitigate emissions generated

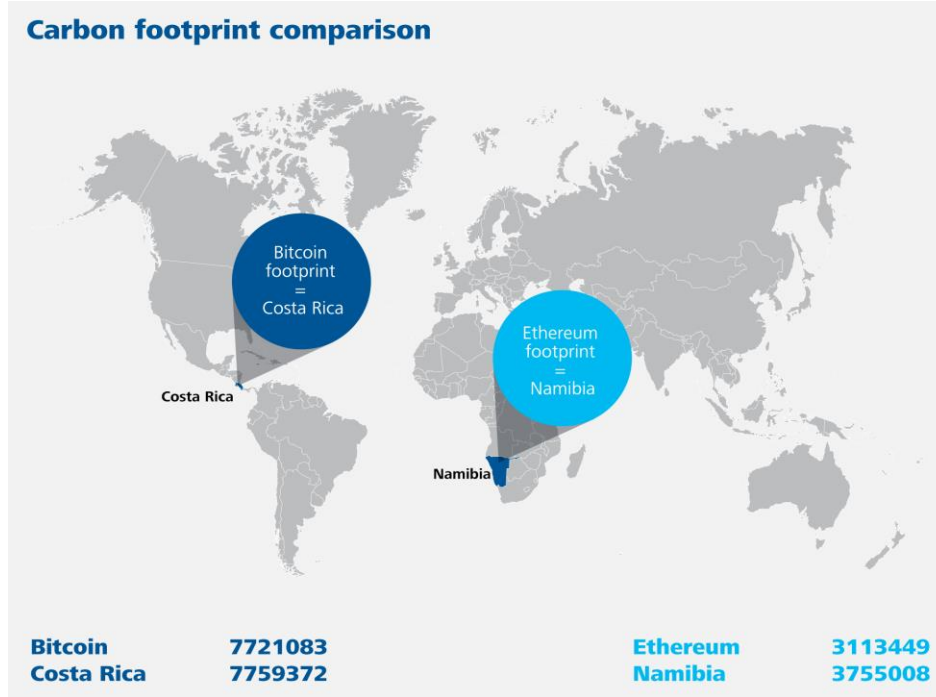
LET Chain - software architecture for designing efficient and transparent mobility policy solutions for governments and businesses.

REDD Chain - innovative monitoring, reporting, and verification (MRV) service linking finance to REDD+ (UNFCCC/LULUCF)

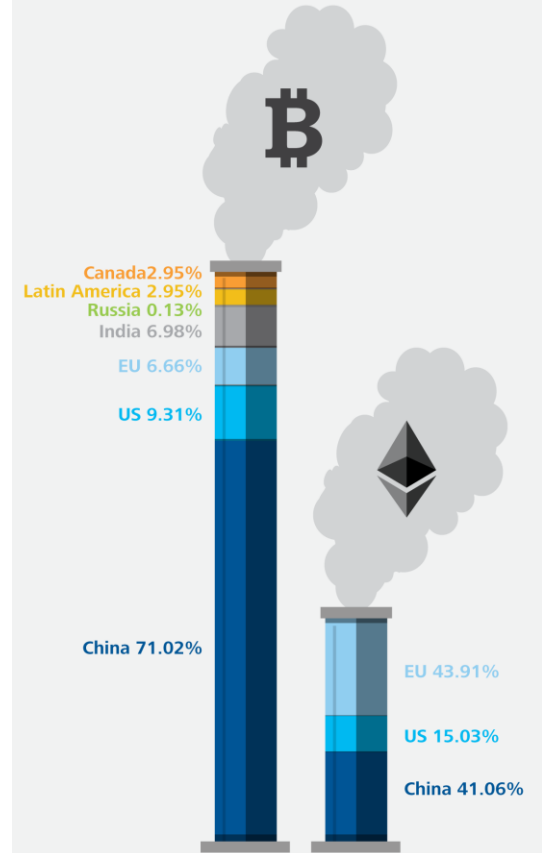
Carbon Cockpit – making corporate carbon management (carbon tracking, reporting, target setting and identification of mitigation options) easier, cheaper and more effective through blockchain.

Clean coin

Carbon footprint comparison



Carbon footprint distribution



Total carbon footprint
Bitcoin 7,721,083.27 tCO₂e
Ethereum 3,113,448.8 tCO₂e

Clean coin

CO₂ per transaction



0.06 tCO₂



0.01 tCO₂

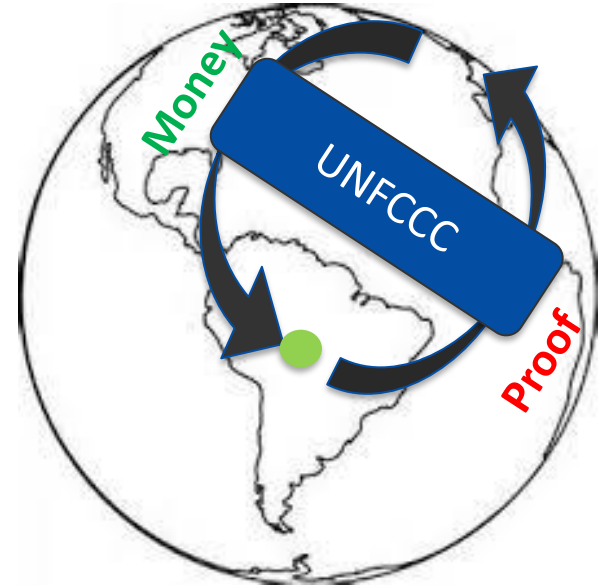
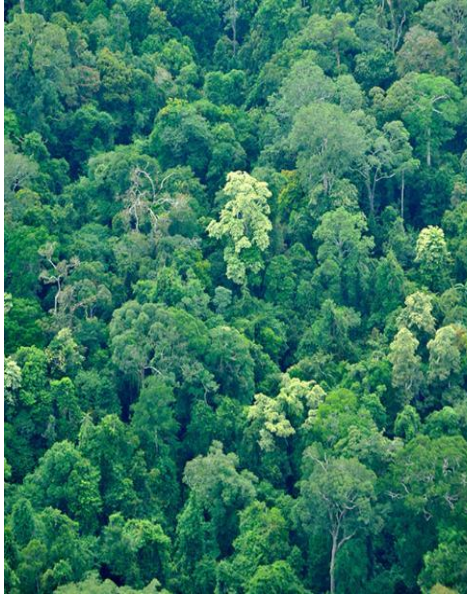


0.00000033 tCO₂

The Solution

- Proof of Stake could be a much more energy efficient alternative to the Proof of Work system now used
- If cryptocurrency and other Blockchain technology users become aware of the problem – changes can be made
- Green labels can be developed for cryptocurrency miners and Blockchain technologies that are driven by renewables or use more energy efficient systems
- Carbon offsetting options for cryptocurrencies can be developed – the cost for the offsetting would be much lower than the value of the coins

REDD Chain



REDD Chain

We want to protect the forest and receive funding for it!

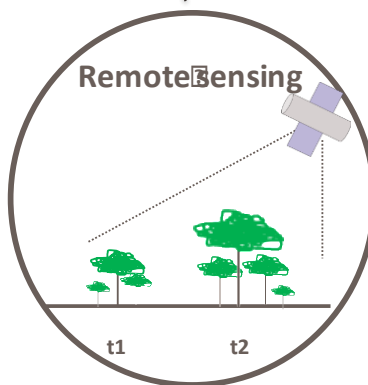


Lets determine the conditions for a payment in a smart contract.

We want to invest in forest protection measures!



Smart contract: a contract written in code

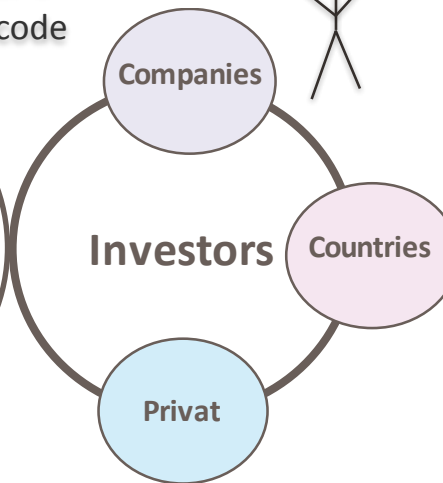


Blockchain

Plot ID	Time ID	Meta-Data	Carbon content
1	t1	Owner, etc.	1
2	t2	Owner, etc.	3
...

Smart contracts

```
if (delta Cstock is > 2tC):  
    authorize payment X to Y  
else:  
    ...
```





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Interim Director: riyong.bakkegaard@climate-kic.org

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