Blockchain 101

1. Ecological Agreement
2. Network Broadcast
3. Network Verification

2. Verified Information Added to Blockchain

3. Ecological Agreement Verified and Approved
Data Verification Model

DATA PROVIDERS

COMPUTE SERVICES
Run algorithms and protocols

SMART CONTRACTS
Set requirements between land steward and funder

POSITIVE RESULT

MANUAL REVIEW
Field scientists conduct calibration inspections on-site, which continually improve algorithm

NEGATIVE RESULT

REWARD

REGEN LEDGER
Find consensus, timestamp results to the blockchain
Ecological Agreements are context specific contracts between stakeholders to achieve clear and measurable outcomes.

Who + What + How = Agreement
Ecological Agreements

An ecological agreement contains a protocol (what is being measured, when, by whom and how), and digital signatures from two parties. It can also contain information about what happens when a certain outcome (e.g., avoided deforestation in a defined location for a set amount of time) is achieved (e.g., payments/rewards).
Walkers Sand Mine

**INITIAL STATE**
- Define land area (GIS coordinates)
- Set regenerative goals
- Change practices

**CHANGE OF STATE**
- Work towards regenerative goals
- Track change of state
- Receive rewards for changed state

GIS COORDINATE
13°15'04.5"N
59°33'18.3"W

GIS COORDINATE
13°14'53.8"N
59°33'48.7"W
Walkers Sand Mine
The ESPs assessed so far...

**Land conversion**
Land cover change assessments for the Time of Interest (TOI). Which land covers were replaced with what?

**Landscape diversity**
Landscape composition analysis through diversity, richness and evenness indexes.

**Carbon sequestration**
Potential changes in the Carbon sequestration rates (ton C/ha.yr), according to land cover changes and data from similar systems.

**Land regeneration**
Trends of steady changes in quantity, quality and development of vegetation through time, based on NDVI time series.
Land CONVERSION
Land CONVERSION
Land CONVERSION

The overall net increase in vegetation cover estimated for the study area has been 3.6ha (8% of the area) between 2017 and 2018 wet seasons, due to:

- An increase in 3.4 ha of vegetated dunes
- An increase of 1 ha of herbaceous cover
- An increase of 1 ha of agroforestry
- Decrease in bushy/forest vegetation of 1.5 ha
- Water cover increased in 1 ha, mostly due to wetlands enlargement and restoration.
virgin atlantic + Walkers Reserve + REGEN NETWORK