How TerraQuest Provides End-to-End Traceability for Carbon Credits

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Overview

TerraQuest utilizes UPCO2 tokens to create carbon challenges for 3 three reasons:

- Retiring UPCO2 tokens tangibly reduces carbon through verified REDD+ projects
- End-to-end traceability
- Fungibility

More people ask about the second reason, end-to-end traceability, than anything else. So, we prepared this document to explain how it works.

TerraQuest adds another layer of traceability by providing users transaction receipts for the carbon offsets they earn.

Read on to see how it works.
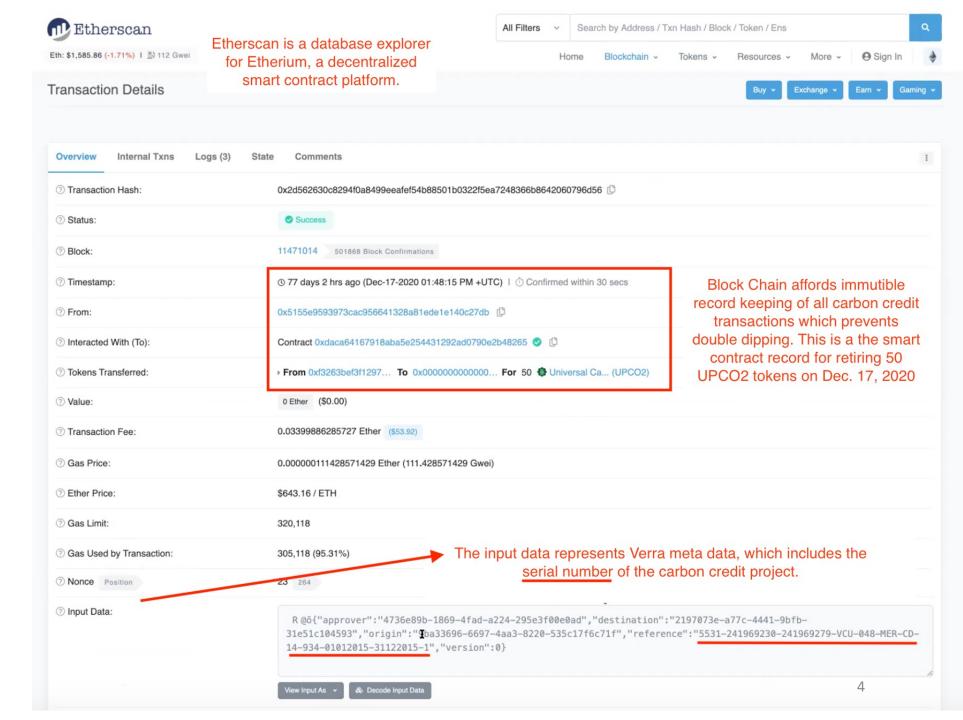
The basic three layers of traceability

While a little oversimplistic, there are three key layers:
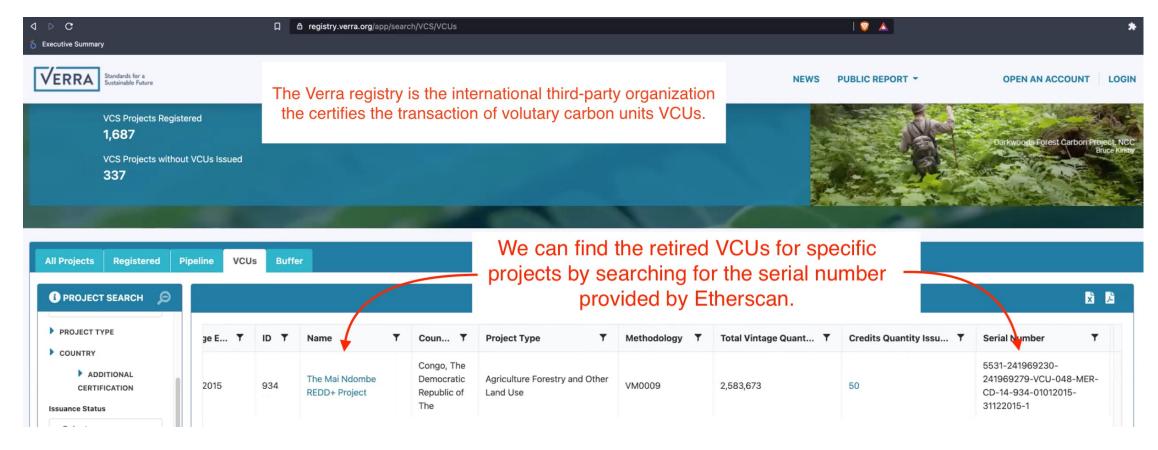
1. **Etherium Blockchain** - immutably records carbon token transactions
2. **Verra** - independently registers the exchange of tokens for verified carbon units the and the retirement of the carbon offsets
3. **TerraQuest** – provides carbon offset transaction receipts

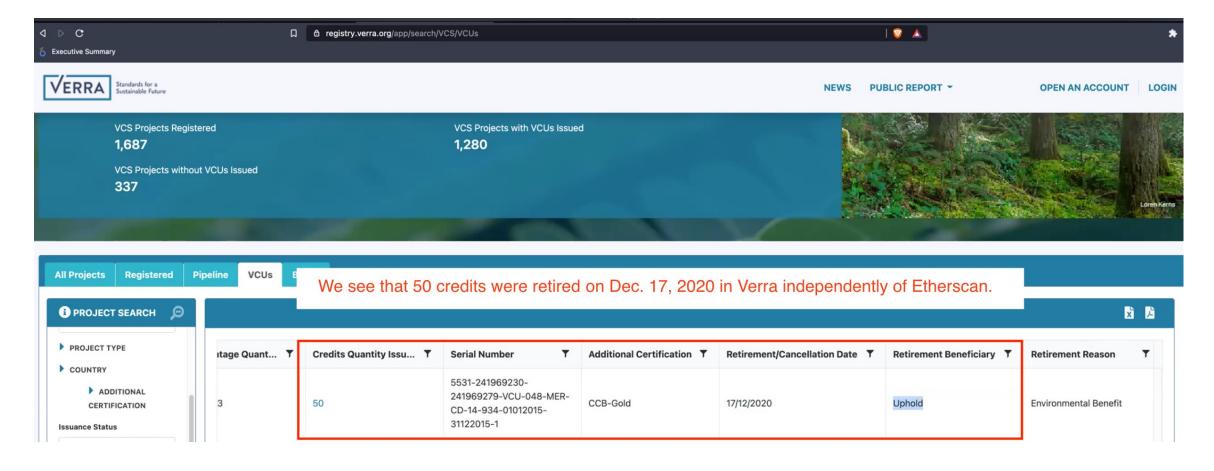Each is discussed in more detail below.

Etherium Blockchain

Anyone can view UPCO2 transactions in the Etherscan smart contract database. Carbon offsets are achieved by retiring tokens which is recorded in the smart contract and tied to Verra meta data.

Eth: $1,585.86 (-1.71%) | ▲ 112 Gwei

Etherscan is a database explorer for Etherium, a decentralized smart contract platform.

All Filters ⌄ Search by Address / Txn Hash / Block / Token / Ens 🔍

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Transaction Details

Buy ⌄   Exchange ⌄   Earn ⌄   Gaming ⌄

Overview   Internal Txns   Logs (3)   State   Comments

⑦ Transaction Hash:	0x2d562630c8294f0a8499eeafef54b88501b0322f5ea7248366b8642060796d56 📋
⑦ Status:	✔ Success
⑦ Block:	11471014 501868 Block Confirmations
⑦ Timestamp:	⊙ 77 days 2 hrs ago (Dec-17-2020 01:48:15 PM +UTC)	⊙ Confirmed within 30 secs
⑦ From:	0x5155e9593973cac956641328a81ede1e140c27db 📋
⑦ Interacted With (To):	Contract 0xdaca64167918aba5e254431292ad0790e2b48265 ✔ 📋
⑦ Tokens Transferred:	▸ From 0xf3263bef3f1297... To 0x0000000000000... For 50 ◆ Universal Ca... (UPCO2)
⑦ Value:	0 Ether ($0.00)
⑦ Transaction Fee:	0.03399886285727 Ether ($53.92)
⑦ Gas Price:	0.000000111428571429 Ether (111.428571429 Gwei)
⑦ Ether Price:	$643.16 / ETH
⑦ Gas Limit:	320,118
⑦ Gas Used by Transaction:	305,118 (95.31%)
⑦ Nonce Position	23 264
⑦ Input Data:	R @õ{"approver":"4736e89b-1869-4fad-a224-295e3f00e0ad","destination":"2197073e-a77c-4441-9bfb-31e51c104593","origin":"▮ba33696-6697-4aa3-8220-535c17f6c71f","reference":"5531-241969230-241969279-VCU-048-MER-CD-14-934-01012015-31122015-1","version":0}

View Input As ⌄   ⚙ Decode Input Data

Block Chain affords immutible record keeping of all carbon credit transactions which prevents double dipping. This is a the smart contract record for retiring 50 UPCO2 tokens on Dec. 17, 2020

The input data represents Verra meta data, which includes the serial number of the carbon credit project.
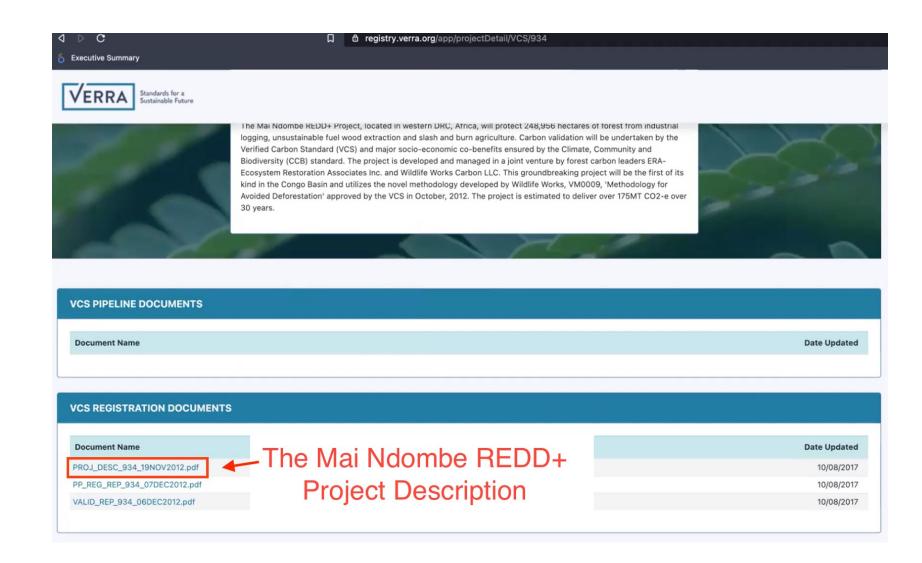
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Verra

Verra independently records the retirement of a credit in its registry. Shown above is the project name and the project serial number, the same number recorded in the blockchain.

Verra

By looking up the serial number in Verra that was supplied by the blockchain, we see the 50 credits were retired when the UPCO2 tokens were retired. The value of the tokens goes to UPCO2, the organization that purchased the carbon offsets from the project.

Verra

In Verra, we can also look up which projects produced the verified carbon offsets purchased by UPCO2 when they created the tokens, in this case, the Mai Ndombe REDD+ Project.

Verra

Detailed project descriptions are openly available through Verra.

Project Title	The Mai Ndombe REDD+ Project
Version	1.63
Date of Issue	19 November 2012
Prepared By	Wildlife Works Department of Carbon Development
Contact	Jeremy T. Freund, VP Carbon Development, Wildlife Works Jeremy@wildlifeworks.com

https://www.everlandmarketing.com/wp-content/uploads/2019/12/Mai-Project-Description.pdf

TerraQuest

TerraQuest Carbon Credit Retirement Transaction Record

Oxdaca64167918aba5e254431292ad079022b48265

View this Etherium record in Etherscan

Once UPCO2 adds wallet support for retiring tokens to its Application Programming Interface, TerraQuest will provide users transaction records for their carbon credit offsets (ETA June 2021).