

BUILDING THE INFRASTRUCTURE FOR REGENERATIVE FINANCE

ESIP JULY 2022 - DATA FOR ALL PEOPLE

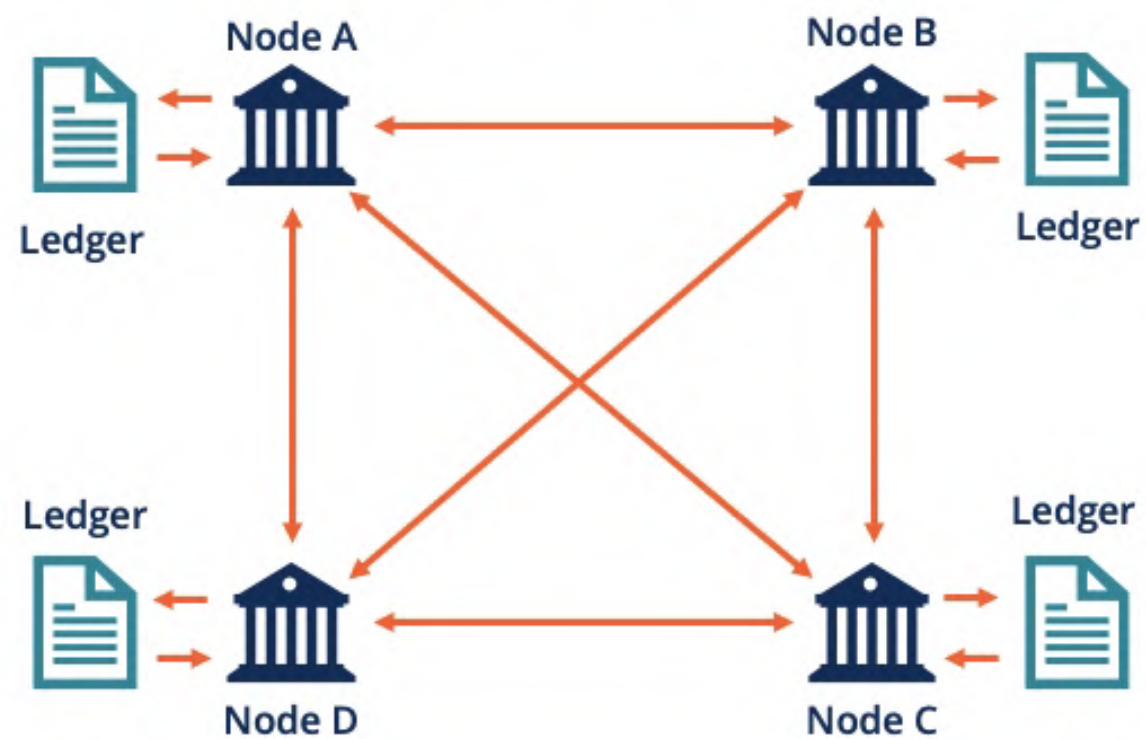
Presented by David Phelan

david@dclimate.net

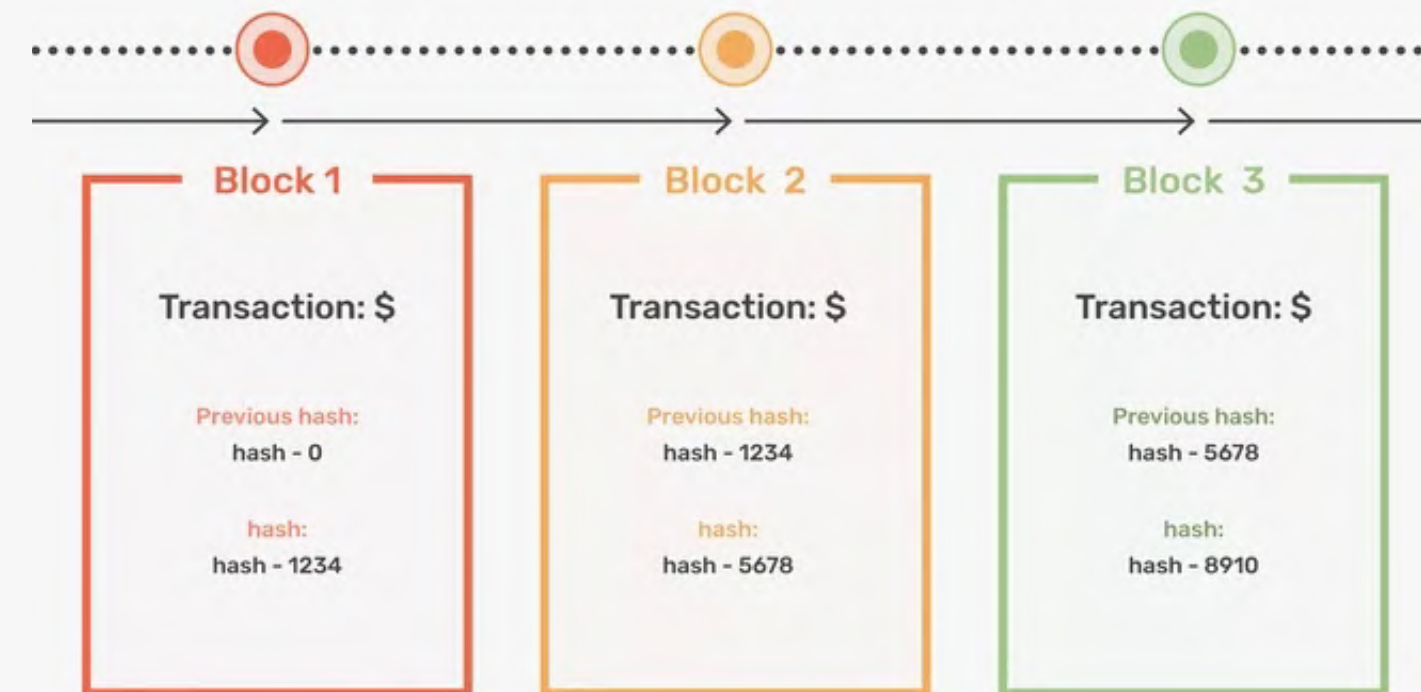


What is Blockchain?

Distributed Ledgers



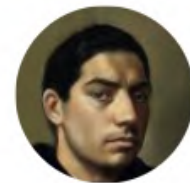
How Does a Blockchain Work?



the balance

Corporate Finance Institute

What is Web3?



him.eth
@himgajria

Web 1: Read

Web 2: Read-Write

Web 3: Read-Write-Own

1:06 PM · May 29, 2020 · Twitter for iPhone

Web3 is a suite of technologies that enable a distributed group of agents (people or machines) to agree and act on shared truths (state).

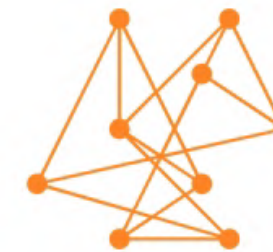
Decentralization



Centralized



Partially Decentralized



Decentralized

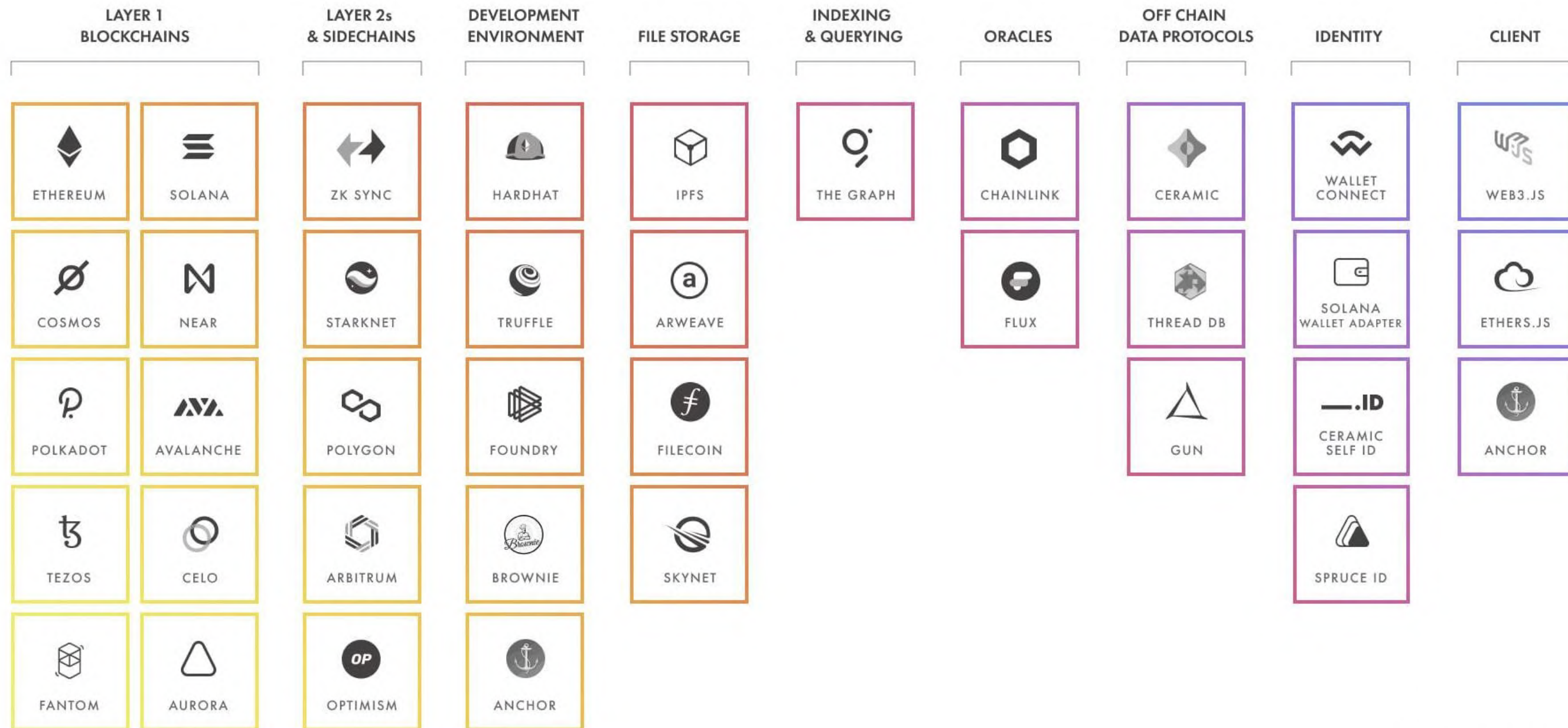
https://medium.com/@aakash_70466/the-decentralization-spectrum-3fb3160f5124

Composability



<https://academy.shrimpy.io/post/what-is-defi-composability-an-introduction-to-money-legos>

Web3 "Stack"



Edge & Node

Regenerative Finance (ReFi)

"Regenerating means restoring, renewing and replenishing in addition to conserving."

<https://corporate.walmart.com/newsroom/2020/09/21/walmarts-regenerative-approach-going-beyond-sustainability>

"Regenerative finance **uses money as a tool to solve systemic problems and regenerate communities and natural environments**. Its goal is to heal and create shared value. Profits are not the end, but rather a means to further progress."

<https://impactentrepreneur.com/event/regenerative-finance-is-no-longer-the-future-it-has-arrived>

ReFi lives at the intersection of climate and crypto, it means leveraging the open source nature, composability, permissionlessness of Web3 technologies to direct capital effecting real-world positive climate impact.

ReFi Ecosystem



Gitcoin ImpactDAO Book

Problem (meta)

You can't solve a problem you can't measure or understand

Unlocking the Power of Data



Blockchains are good at valuing public goods



Traceability and verifiability



Accessible and accountable data is the foundation of meaningful climate action

What is dMRV?

Measure / Monitor

Collecting and recording data and information on regenerative actions. This may, for example, entail direct physical measurement of emissions & carbon content / change over time using sampling & sensor equipment, and or estimating carbon levels by utilizing satellite imagery, LIDAR and other technologies. Monitoring also involves calculating changes relevant to sustainable development and collecting data on ecosystem restoration, biodiversity protection, carbon sequestration in oceans, soil, biomass, & rock.

Report

Compiling the data & information that is measured into inventories and other standardized formats to make it accessible to a range of users and facilitate public disclosure of information.

Verify

Periodically subjecting the reported information to some form of review or analysis or independent assessment to establish completeness and reliability. Verification helps to ensure accuracy and conformance with any established procedures, and can provide meaningful feedback for future improvement.

Why is dMRV important?

"There is a growing amount of capital flowing into climate solutions such as carbon offsets, carbon removal, afforestation, blue carbon, renewable energy, biomass, regenerative agriculture, and more. When someone funds these activities, they want to know that their money is actually having the desired effect. There must be proof. Evidence of tangible, real world change. The many different & specific ways in which to create that source of truth are called *methodologies*. Methodologies are standards & systems for measuring, reporting, and verifying impact. In order for projects that are making an impact to have their actions valued, they must follow an MRV methodology. The current state of MRV is very complex & nuanced, but ultimately it is a single point of friction that restricts the new supply carbon / eco credits & other payments for ecosystem services."

TIDr; it's one of the main bottlenecks to scaling climate action

What is dClimate?



A transparent, decentralized marketplace that allows participants to buy and share data and contribute to an open ecosystem of data-driven climate resilience applications.

The Problems We Solve



Large gaps in climate data

Many parts of the planet lack high-res coverage for weather, pollution & crop output data, hampering economic development



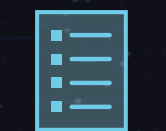
No technical standards

Consuming the data is confusing and specific, requiring large amounts of work by specialists to prepare the data for applications



No marketplace

There is currently nowhere for data publishers to monetize their data. An expensive, opaque, direct-to-consumer models the only option



No immutable record

Data releases are often changed after the fact and the integrity of the data then becomes questionable

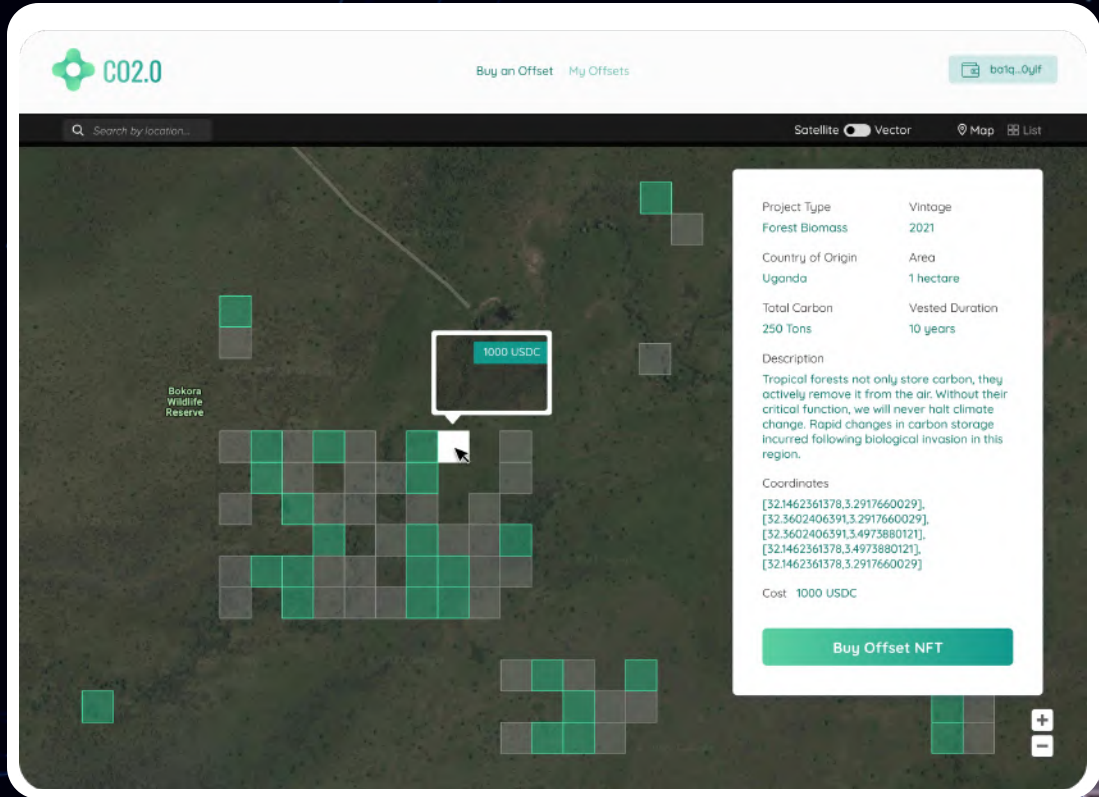


Lack of incentive for innovation

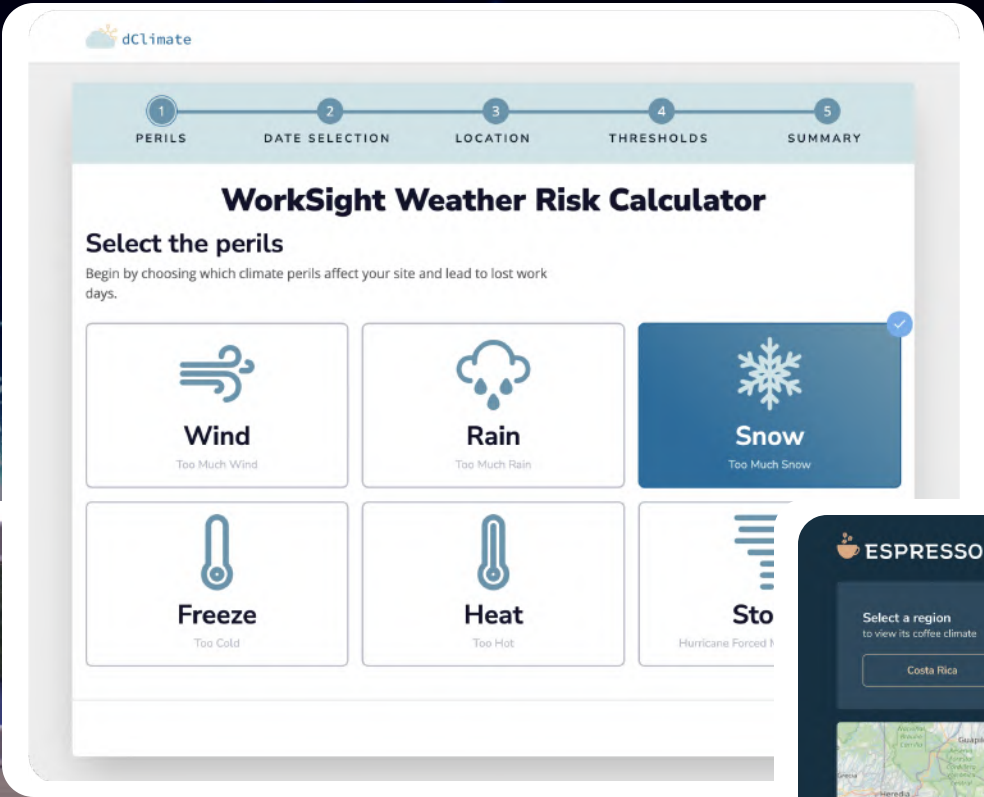
Hard to compensate contributors in different countries some without bank accounts

dClimate Ecosystem

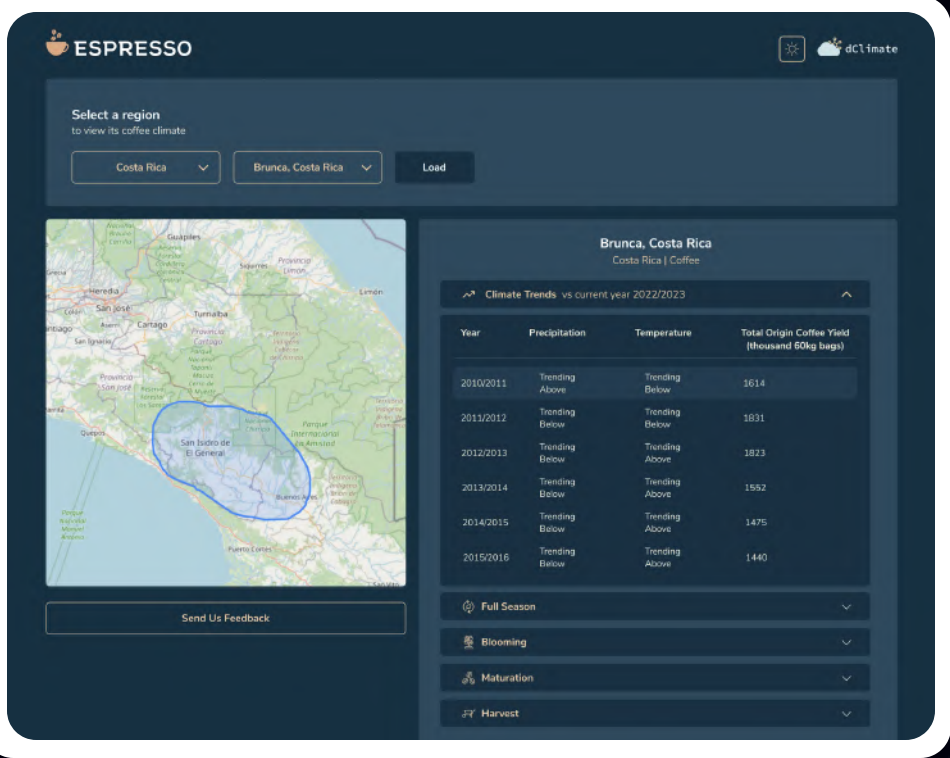
CO2.0



Worksight




Stormbroker



Espresso

It Starts with a Marketplace

dClimate
DATA MARKETPLACE

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What are you looking for?

Search

Sort by: Skill Score: High to Low

Climate Prediction Center Global Maximum Temperature

Historical precipitation/temperature data compiled by the Climate Prediction Center (CPC), a branch of the National Centers for Environmental Protection (NCEP).

Temperature

Precipitation

CPC

Free

Climate Prediction Center US Precipitation

Historical precipitation/temperature data compiled by the Climate Prediction Center (CPC), a branch of the National Centers for Environmental Protection (NCEP).

Temperature

Precipitation

CPC

Free

CHIRPS Preliminary 0.05 Resolution Precipitation

Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS) is a 35+ year quasi-global rainfall data set. Spanning 50 degrees south to 50 degrees north (and all longitudes) and ranging from 1981 to near-present, CHIRPS incorporates [UCSB] in-house climatology, CHPclim, 0.05 degree resolution satellite imagery, and in-situ station data t...

Precipitation

CHIRPS

Free

CHIRPS Final 0.25 Resolution Precipitation

Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS) is a 35+ year quasi-global rainfall data set. Spanning 50 degrees south to 50 degrees north (and all longitudes) and ranging from 1981 to near-present, CHIRPS incorporates [UCSB] in-house climatology, CHPclim, 0.05 degree resolution satellite imagery, and in-situ station data t...

Precipitation

CHIRPS

Free

Filters

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Select a region from the dropdown
Press enter or tap + to add your location

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☐ Precipitation

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Date Range

Feb 28, 2022

+

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☆☆☆☆☆

Rating of 0 or higher


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< Back

Climate Prediction Center
Global Maximum Temperature

4.8

Description

Historical precipitation/temperature data compiled by the Climate Prediction Center (CPC), a branch of the National Centers for Environmental Protection (NCEP).

Latitude Range
[-89.75, 89.75]

Longitude Range
[0.25, 359.75]

Period
daily

Precision
0.01

Resolution
0.5

Free

Download

ORGANIZATION
Climate Prediction Center (CPC)

AUTHOR/PUBLISHER
Climate Prediction Center (CPC)

DATA DATE RANGE
19 January 1970 - 19 January 1970

PUBLISHED
19 January 1970

Temperature

Precipitation

CDC

View related datasets

PRISM Minimum Temperature

The PRISM Climate Group gathers climate observations from a wide range of monitoring networks, applies sophisticated quality control measures,...

4.9

PRISM Maximum Temperature


The PRISM Climate Group gathers climate observations from a wide range of monitoring networks, applies sophisticated quality control measures,...

4.6

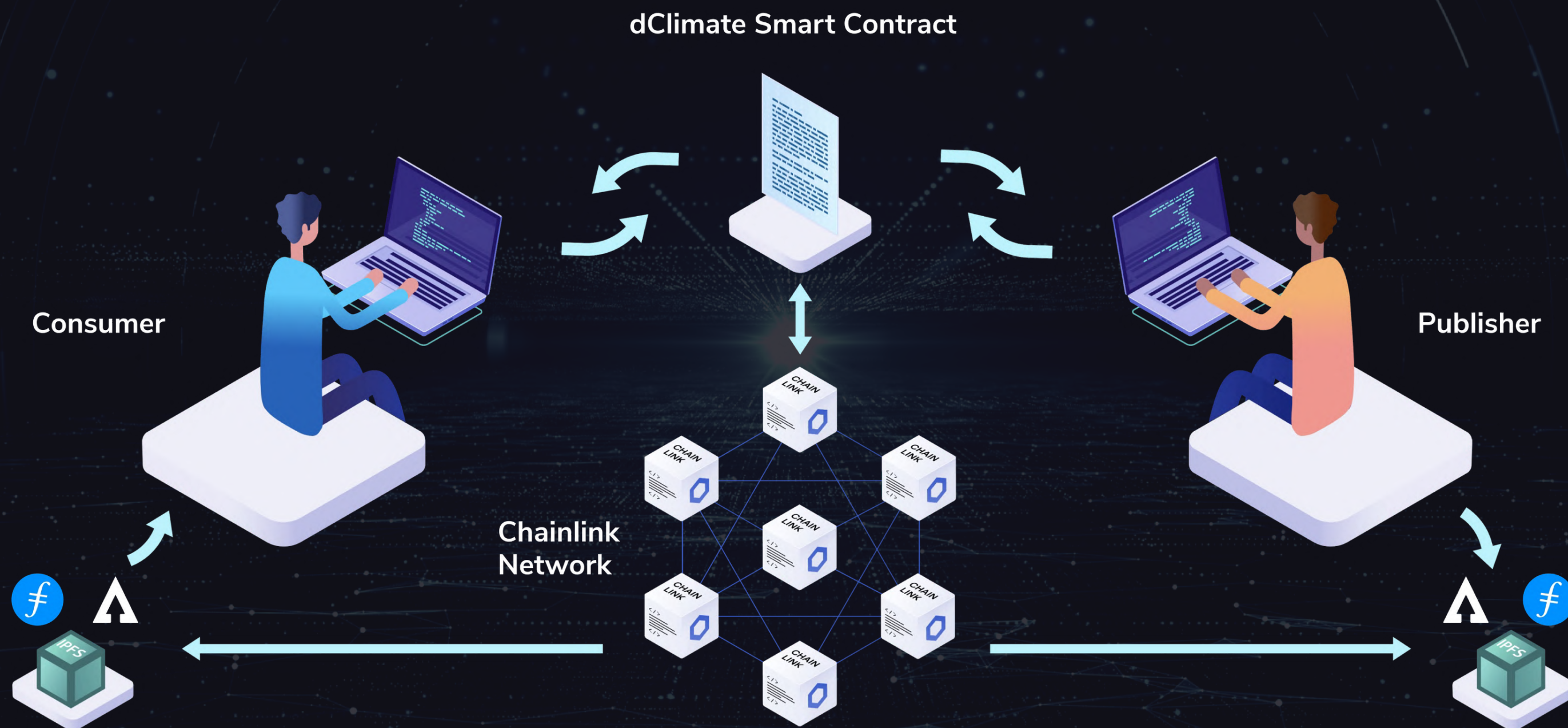
Climate Prediction Center Global Minimum Temperature

Historical precipitation/temperature data compiled by the Climate Prediction Center (CPC), a branch of the National Centers for Environmental Protection (NCEP).

5.0

 dClimate

dClimate Data Infrastructure



On-Chain Carbon Verification

Instant verification/generation of offsets

Ability to estimate the amount of carbon stored in old-growth tropical forests using advanced satellite imagery and machine learning algorithms

Open-source, accountable data and models for estimating carbon sequestration and biodiversity

Traditional Carbon Markets

5-10 year process
(to gather ground truth and certify projects)

Relies on ground truth to estimate carbon amounts

Closed-source models not available to public

Espresso

Espresso pulls multiple standardized data-sets across 18+ countries and 150+ growing regions to analyze weather trends and potential on Arabica and Robusta coffee production.

Espresso provides coffee production focused weather-intelligence covering annual, custom, and phenological cycle (flowering, cherry maturation and harvest) time-frames.

Our analytics allow clients to better understand and manage weather impacts allowing for precision day-to-day business operation along with improved risk management



ReFi Opportunities

- Parametric Insurance (Arbol)
- dMRV (Open Forest Protocol, Shamba, Pachama, Nori, Regen Network, dClimate)
- Carbon Offsets (Toucan, Moss, Senken, FlowCarbon, dClimate)
- Natural Capital Assets
 - Nature Backed Stablecoins (Celo)
 - Carbon Backed Stablecoins (Kumo)
- Sustainability Linked Bonds (Astral)
- Financing (Solidworld, EthicHub)

Build on dClimate

Visit <https://api.dclimate.net/> to get started

Any Questions?



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