Grant Proposal

Part 1 - Proposal Submission

Name of Project: Walkers Reserve Currency

Proposal in one sentence: High quality environmental datasets from leading institutions in Barbados on climate change issues to price carbon offsetting tokens.

Which category best describes your project?

Unleash data

Which Fundamental Metric best describes your project?

Data Consume Volume

Description of the project and what problem is it solving:

The issue of climate change and the importance of tackling it immediately is widely publicised by the news and organizations such as Extinction Rebellion. People want to and will pay money to protect cute wildlife such as Bengal Tigers, Turtles or Sea Lions. Organisations are concerned about how their business pollutes the environment with C02 emissions. This is the battle of my generation to avert global warming above 1.5C and runaway climate change resulting in the burning of the Amazon, melting of the ice caps and rises in sea levels flooding major cities. Crypto for the first time allows people to price the value of the natural world they live in - a property which legacy economic systems have failed to address.

Walkers Reserve has been in the hands of a family over generations which has taken responsibility for integrating and developing an ecosystem with the local community in Barbados. This involves working with the local government on critical issues such as preservation of key species such as Hawksbill turtles and environments such as mangroves and corals. As the planet moves towards a net zero carbon economy more companies and individuals are looking to offset their

carbon emissions - not least major bitcoin investors such as Skybridge - who recently spent millions offsetting the emissions from the bitcoin holdings. We would like to develop a token which would accurately price the value of the natural resources on the land which includes endangered species such as Hawksbill turtles, protected habitats such as mangrove forest and land available for reforestation. This and many conservation projects and charities all over the world raise money from charitable individuals as well as companies looking to carbon offset and governments through marketing tactics. We want to use this data to create a model to accurately price these assets using the latest techniques in data science and tokenization provided by the OCEAN platform in order to give this and other organisations a way to price these assets and a token to sell to these stakeholders.

Grant Deliverables:

[X] Professional and Scientific datasets collected over a multi year time frame from Walkers Reserve and other Environmental projects on Carbon Dioxide levels, turtle migration levels and wildlife surveys. These will be sourced from long standing conservation institutions in Barbados and the surrounding areas. These will be made available at high prices on the ocean marketplace.

[X] Blog posts highlighting the environmental issues around specific datasets such as the Hawksbill Turtle population or local species of bird life. This will be used to raise funds from individuals with novel payment methods using OCEAN and contribute to outreach by including the sponsorship of the organisation.

[X] A model will be created which will take the raw data and impose a pricing model based on scarcity of these resources and current costs to the planet along the lines of a carbon credit pricing scheme and marketed to developers of green crypto products which can be provided to green crypto companies seeking this data.

What is the final product?:

The tokenization process would require creating a data model initially from the sources of data - most likely in python to deal with large data sets with data
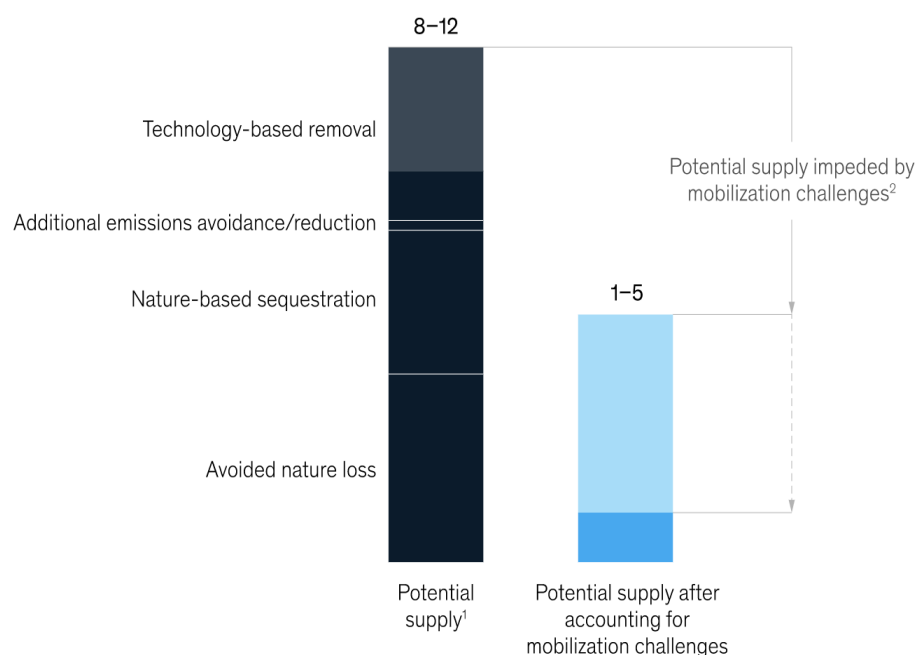
science packages. Bitcoin and other cryptocurrencies emit CO2 so we would like to include these emissions into the calculation. Endangered wildlife has a scarcity level which has been so successful in pricing Bitcoin and we would like to place some increasing value to species and they become more at risk according to authoritative data collecting NGO charities. Reforestation is a typical way carbon offsetting companies offset C02 therefore a calculation around how much certain trees absorb from the environment as well as areas of land or ocean. We would seek to calculate a value of the natural assets of Walkers Reserve from the data collected there on Hawksbill turtles, severe weather events, habitat conservation and as a prototype for other charities produce some valuable model data which could be priced into a token. These datasets are painstakingly collected from government organisations at the cost of hundreds of thousands of pounds. Access to these valuable and siloed datasets would be a key aim in the project to list on the OCEAN marketplace giving access to developers and also funding for these projects.

We would want to do marketing during the process. This would involve writing blogs on specific issues such as the Hawksbill turtle population, legacy climate change, etc around specific core data sets we receive. These would also be published as data tokens on the OCEAN platform and people encouraged to stake on these data sets. We will be approaching numerous established charities whose business is collecting these accurate data sets on wildlife and conservation projects. We would seek collaboration and outreach in order to promote the project and raise money from fundraisers along the way. We would like to find an optimum way to do fundraising in crypto as there are numerous interesting methods such as the subscription model or facebook ads around issues which have yet to be attempted in crypto using perhaps the OCEAN token as a method of exchange or staking. Walkers reserve is familiar with hosting fundraising events for years as a prime source of revenue generation as well as social media interaction.

We would like to produce a token as a proof of concept which Walkers could use to sell to investors and would act as an example to other charities who want to use their data in order to generate a crypto which could assist them in

fundraising. This would be developed with Remix, Solidity and could be deployed as an ERC20 token consuming the model data. This would then be given to Walkers Reserve and perhaps along with a website to market the token and a method of exchange allow this priced token a way of being exchanged to fund actual projects on the site. Crypto also has features of DAO governance which could be incorporated into the allocation of these funds towards specific projects such as severe weather events or bee populations for pollination. These developments on the reserve could then be sent back to stakeholders in the form of a newsletter updating them on the allocation of funding and how the results went. This model could then be rolled out to other environmental charities who monitor endangered species wildlife populations and protect habitats such as coral beds from man made destruction.

Potential supply of carbon credits in 2030, gigatons per year

8–12

Technology-based removal

Additional emissions avoidance/reduction

Nature-based sequestration

Avoided nature loss

Potential supply[1]

Potential supply impeded by mobilization challenges[2]

1–5

Potential supply after accounting for mobilization challenges

How does this project drive value to the "fundamental metric" and the overall Ocean ecosystem?

Expected ROI

We seek to develop data sets and models which will allow the proper pricing of nature into the economic system.

Bang

Aiming at charitable individuals supporting environmental issues through blog posts and online marketing. They would be able to buy ocean or stake ocean for a charitable cause. They will be encouraged to stake on OCEAN pools to promote a certain cause increasing the total value assets staked on the platform. The average charitable donation in the US is $365. Let's assume we can raise 20 donations which are staked in OCEAN from each article. This would make the validity of the dataset more entrenched and allow further fundraising campaigns to be leveraged for other programs such as the Barbados Turtle Project and St Vincent Bird Survey. People generally want to support the protection of endangered species and using new crypto infrastructure, such as OCEAN, this gives new and novel ways to encourage them to subscribe and support in numbers even greater than before. Educating the population in crypto and also developing new payment mechanisms are a critical part in making this project work.

Carbon offsetting companies for flights and houses with an estimated market of $191M in sales last year. We are seeking to provide data to this market therefore this is a conservative estimate of the total addressable market. We are also targeting other environmental issues such as wildlife conservation and habitat protection as well. This data would be to create a model for these companies. We want to make the carbon offsetting data model available as a datatoken to green crypto projects and charities. Let's say we manage to get 20 applications on board to use the data. Pricing the data at 1000 OCEAN per month where the DAO receives 0.2% of that volume that would be 4000 OCEAN. There are existing projects which price carbon into existing ETH projects as well as green cryptos who want data in order to produce their own models which price things like carbon offsetting in terms of reforestation, natural habitat preservation, CO_2 sequestration and protecting endangered species.

We also want to make institutional datasets available publicly. This means approaching institutions in the Barbados area with extensive data on conservation

and making these data sets available to other institutions such as governments. These will be priced higher due to the cost of the compilation. These dataset can be made available through the ocean platform. These datasets will be made available at a high cost on the platform of around $1K due to the high cost of producing these surveys. The cost of a recent wildlife survey of St Vincent and the Grenadines was $20K therefore making this data available at a cost of $5K to the relevant government agencies would allow this organisation some claw back of the money and also stakeholders willing to stake to maintain the data in an open and transparent way. This is the only way that climate sceptics can be addressed. Large scale investors and funds can be targeted to fund the project who already receives grants from philanthropy to charitable causes. We would have several sets of scientifically valuable data collected from surveys with a higher price tag available to government organisations. It is a long standing benefit to society in making governmentally siloed datasets available open source to allow developers to use the data to produce useful tools. Hackathons are a great example of how making data publicly available and applying it to the benefits of a social good can result in some really viral and beneficial projects.

Buck

Green crypto is a lucrative niche in the cryptocurrency market which is seeing significant funding from investors. We are seeking this startup capital to take a long running and successful environmental reserve in Barbados into the crypto world. This is a long term project where carbon credit schemes have been found to be ineffective. Small charities are looking for ways to monetize. Data is being collected here by organisations which are world class and Barbados has been called the epi-centre in the fight against climate change having data of serious natural weather events such as hurricanes, marine life such as coral and engaged wildlife and precious flora and fauna. This model data can be made available to these organisations who want the most authoritative datasets on climate change. They have the resources to pay for high data usage costs and they are familiar with the cryptocurrency ecosystem enough to be able to understand the value in staking. These data sets are already in existence and have been collected by government and charitable agencies which we are in partnership with. Making them available on

the OCEAN marketplace would drive traffic to the site increasing the network volume and also the price of OCEAN.

Chance of Success

The team is experienced, international and well connected to government and NGO's and has been operating over multiple generations to protect the environment in Barbados. We are seeking to leverage a new and breakthrough technology in order to break data out from research institutions in order to stimulate a whole new ecosystem of green crypto projects. Walkers Reserve has been a key reserve on the island of Barbados for generations and has taken its responsibility to the preservation of wildlife in the area as a core mission. The project developer has a wealth of experience in science and technology, possessing a PhD where numerous papers were published as well as a patent being granted. He also has experience delivering numerous open-source and professional software projects such as ROpenSci which focused on delivering packages for the R programming language for data modelling. The other members of the organisation range to about 5 or 6 individuals, all highly experienced individuals in the charity and NGO sector who have successfully delivered regeneration projects, animal welfare projects and fundraising campaigns. This is a multi disciplinary team with a proven track record of delivering conservation projects.

70%

Bang = charitable donations staked in $OCEAN = 365*20

+ Data token consumption by carbon credit model = 100 * 100
+ Data Token purchase by governmental organisations = 2000 * 10

ROI = 37300 / 17500 * 0.7 = 1.492

Funding Requested: $17,500

Proposal Wallet Address: 0xEeEA24010c64c83BA9ac9d1dC4048CB46395B726

Have you previously received an OceanDAO Grant? N

Team Website: https://wirred.org

Project Lead Contact Email: info@wirred.com

Country of Residence: Barbados

Part 2 - Team

Saul Wiggin

- Role: Senior Developer
- Relevant Credentials (e.g.):
    - GitHub: https://github.com/saulwiggin
    - Freelancer: https://www.freelancer.com/u/saulwiggin
    - Medium: https://medium.com/@saul_wiggin
- Background/Experience:
    - Sponsored PhD which was awarded a patent with research paper publications.
    - OpenSource Software development such as ieee.js the official interaction library between IEEE and R for ROpenSci.
    - Founder of Barbados Extinction Rebellion.

Shae Warren

- Role: Project Manager
- Relevant Credentials (e.g.):
    - Lead at barbados turtle preservation agency
    - Manager of reforestation at walkers reserve.
- Background/Experience:
    - Experience in delivering projects on IR scanning of turtles to monitor mating habits for the national government of Barbados and other charities across the Caribbean by drone.

Ian Walker

- Role: Reserve Owner
- Relevant Credentials (e.g.):
    - Corporate work developing industrial application and environmental dye making in India.
    - 10 years experience in private equity and finance
    - Owner of Walkers Reserve - The largest environmental reserve in Barbados.
- Background/Experience:

- ○ Mangrove preservation
- ○ Hawksbill Turtle monitoring program.

Part 3 - Proposal Details

Project Deliverables - Category: Data will be made available on Ocean Market

The technology stack to create the token will be written with solidity and deployed with open zeppelin template libraries to the Harmony or Ethereum blockchain. The data will be analysed using python numerical and scientific libraries such as NumPy and SciPy. The best way to consume this data in the smart contract from the data token will be analysed perhaps using Ocean.js or Ocean.py. I have some experience writing medium tutorials for learning IT resources such as React.js and Angular.js and something similar could be done in consuming the ocean datatoken.

Walkers Reserve has delivered numerous successful social media campaigns for various conservation issues for example the recent slow food Barbados campaign which had excellent facebook and social responses as well as physical events to prompt fundraising activities. These specific issues can have accompanied medium articles as well as some social media presence in attracting funding for the project and also brand awareness and staking potential for OCEAN.

Beyond the completion of this project it would be possible I would hope to apply these techniques to other charities which are prevalent around the Caribbean. There is also a typical expectation in terms of freelance IT to provide maintenance for the completed task which can be done for Walkers Reserve. I am interested in the crypto space and would like to continue to develop my knowledge and work with new developments in the space for example cross collaboration with other new projects such as Moonbeam.

Project Deliverables - Roadmap

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                    │  Collect Data   │
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                             ▽
                          ◇─────◇
                     ╱                 ╲
                   ◇                     ◇          No     ┌─────────────────────────┐
                  │  Is it suitable for   │─────────────▷│ Can it be incorporated into │
                   ◇    marketplace?     ◇               │  the carbon credit pricing  │
                     ╲                 ╱                  │          model?             │
                       ◇─────────────◇                   └────────────┬────────────────┘
                             │                                         │
                          Yes│                                         ▽
                             ▽
    ┌───────────────────────────────┐            ┌─────────────────────────────┐
    │ List the Dataset, write a     │            │  Used data to create a      │
    │ medium article about it       │            │  smart contract which       │
    │ inviting readers              │───────────▷│  prices the natural asset   │
    │ (individuals, charities and   │            │  in terms of a token and    │
    │ companies) to stake ocean     │            │  deploy.                    │
    │ in the data pool to support   │            └──────────────┬──────────────┘
    │ the charitable cause          │                           │
    └───────────────┬───────────────┘                           ▽
                    │                          ┌─────────────────────────────┐
                    ▽                          │ let charities seeking to    │
    ┌───────────────────────────────┐          │ price natural assets such   │
    │ Drive value to the OCEAN      │          │ as forests, wildlife and    │
    │ ecosystem from data usage     │◁─────────│ precious habitats use the   │
    │ increasing the price of       │          │ token to raise funds        │
    │ OCEAN through data            │          │ further generating more     │
    │ usage.                        │          │ demand for the data.        │
    └───────────────────────────────┘          └─────────────────────────────┘
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