Restoration Barometer

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Krystal

2022 Pledge Implementation Progress Report

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2022 1T.ORG PLEDGE IMPLEMENTATION PROGRESS REPORT

Krystal

Krystal's Billion Tree Pledge: Conserve, Restore, Grow 1 Billion Trees

Reporting period

July 2021 – July 2022

Pledge status

Fully on track

Progress summary

To date, we have planted 2.5 million trees through both Ecologi and veritree.

Starting July 2022, we uplifted our commitment with veritree to plant and protect 200,000 trees each month.

These trees will be predominantly planted and protected in Kenya and Madagascar initially, and every single one will be verified and protected by veritree's local employment and partnership monitoring programs. veritree's tool assesses and confirms that the right trees are being planted in the right place to balance positive impact with natural biodiversity, and track their growth. Currently, the majority of the trees planted are mangroves, as they are fast-growing, great at sequestering carbon and are indigenous to the local area.

This monthly total is currently divided equally with 100k per month being planted in Kenya, and 100k per month in Madagascar. Planting sites will also include Indonesia (as well as further locations as required) going forward. Krystal's monthly commitment will then double into 2024 and continue to increase from 2025 onwards.

Current veritree impact stats (https://krystal.veritree.com/dashboard):

- Total planted so far = 1,270,920.
- Total currently ordered = 1,770,920.
- 177.1 hectares under restoration
- 274,026 tonnes of CO2 sequestered
- 146 people employed
- 3,542 work days provided

veritree current and future planting sites include (with current ordered tree totals):

Kenya:

- Mtwapa Creek – 163,670 trees ordered (projected area of 640.3 hectares)
- Kiongwe – 207,250 trees ordered (projected area of 1319.7 hectares)
- Mbuguni – 500,000 trees ordered (projected area of 504.8 hectares)

Madagascar

- Mahabana – 279,000 trees ordered (projected area of 388.7 hectares)
- Kandrany – 421,000 trees ordered (projected area of 2,305.3 hectares)

Indonesia

- Mnurwar – 200,000 trees ordered (projected area of 148.9 hectares)

Alongside this, we will investigate other options to acquire land and conserve existing trees.

Implementation method

Financial support to:

- veritree

Ecosystems and restoration interventions concerned

Coasts and mangroves

- Planting of mangroves
- Conserved Areas / Protected Areas

Farmlands and mixed-use areas

- Facilitate and create habitat for pollinators (e.g. hedgerows, increasing availability of nesting spaces and materials)

Forests and woodlands

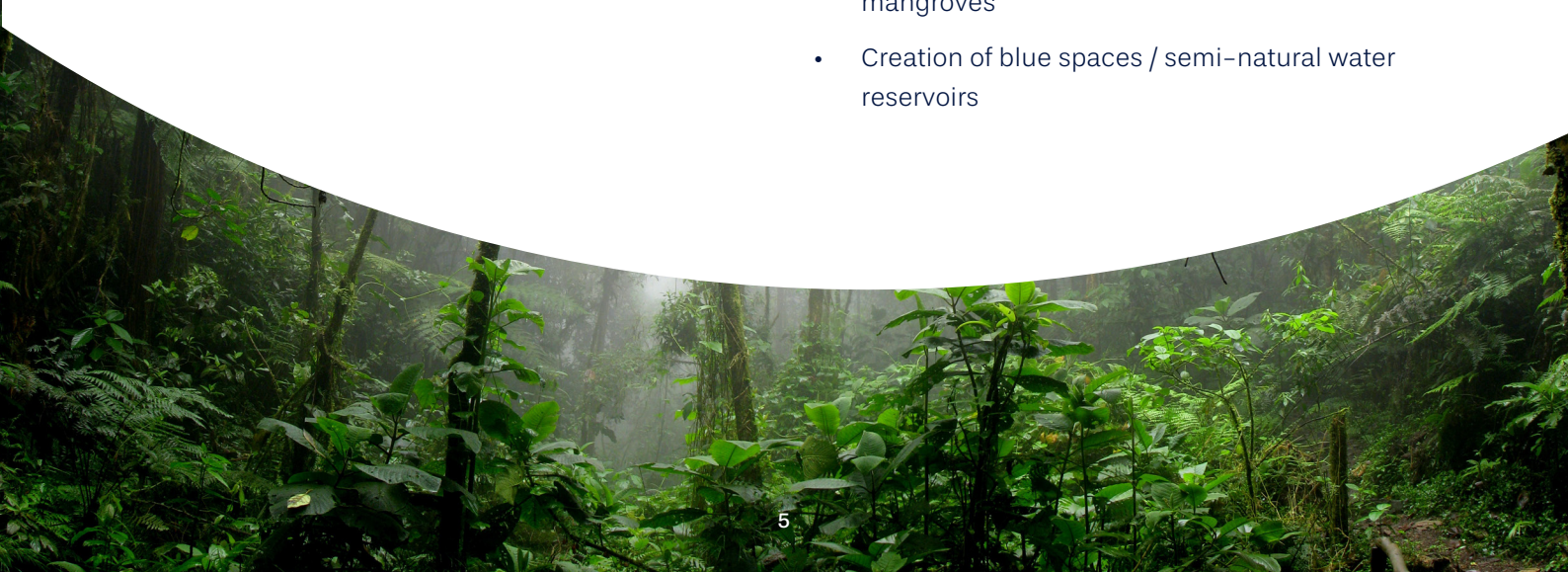
- Land / water protection / Conservation actions
- Planting/seeding/natural regeneration of buffers (mixed stands of native species
- Planting/seeding corridors of mixed stands of native species
- Restoring cultural forest ecosystems
- Planted forests and woodlots

Grasslands, shrublands and savannahs

- Passive natural regeneration

Urban areas

- Conversion of gray infrastructure to green e.g. de-paving roads, removing sea walls and restoring mangroves
- Creation of blue spaces / semi-natural water reservoirs



Funding

USD 320'000, disbursed towards:

- Financing of implementing partner(s)
- Carbon finance, including for insetting and/or offsetting
- Purchases of inputs e.g. seeds or saplings
- Development or purchase of planning or monitoring tools

The financial support Krystal has provided through veritree, Ecologi and Trees for Life, our original partner, has kickstarted our efforts.

We understand that the full audibility of our planting efforts is critical to ensure that we can meet our targets, hence our decision to use veritree for tree monitoring and to disclose our progress via the Restoration Barometer.

Supporting documentation

- 100% Green Hosting

Monitoring Process

We use veritree.com to track that tree planting is successful.

Metrics monitored

- Restoration intervention progress
- Area under restoration
- Effects on climate
- Impact Measurement Overview:
- Climate –> Mitigation –> Biomass & Carbon Sequestration (CMB)
- Income –> Benefits –> Income from restoration activities (IBI)
- Biodiversity –> Quality –> Community Composition (BQC)
- Energy –> Management –> Sustainable sourcing of energy (EMS)

veritree Monitoring Methodologies

Listed below are a group of methodologies that veritree will be implementing at varying project sites.

1. Stereoscopic Vision Sensors

Stereo vision technology is deployed on the ground for change detection within the project site. This includes wildlife presence monitoring, deforestation activity, and species survivability/growth progress.

Applicable Impacts: **B**iodiversity –> **C**onnectivity –> **C**onnectivity Between Habitats (BCC), **E**nergy –> **M**anagement –> **S**ustainable sourcing of energy (EMS), **B**iodiversity –> **P**rotection –> **P**rotected Area Coverage (BPP), Remote Survivability Analysis.

2. eDNA – Soil & Water

Environmental DNA is a relatively new way of gathering baseline and change data for species that are present before and after project completion. Sample locations are strategically identified throughout the project site and monitored over a minimum 3 year period. eDNA results are processed in one of veritree's partnering labs in the operating country.

Applicable Impacts: **B**iodiversity –> **Q**uality –> **C**ommunity Composition (BQC)

Action indicators

3. Socioeconomic Surveys

The Veritree Collect application is available in several languages in the project operating countries. Surveys are customized and carefully crafted to reduce potential bias in each location. Each survey is specific to the associated impacts being measured.

Applicable Impacts: **E**quity –> **A**ccess –> **I**ndigenous Access to Restored Area (EAI), **I**ncome –> **B**enefits –> **I**ncome from restoration activities (IBI)

4. Custom Drone / ROV

Veritree helps project stakeholders deploy drone-based monitoring for surveying and survivability analysis in difficult to reach areas. This approach takes advantage of custom drone attachments to conduct random spot checks (based on planting gps waypoint tracks), species identification, growth progress measurements, above ground biomass, etc. At certain sites, hyperspectral drone imagery may be used for more in-depth reporting. Underwater ROV's are also used at select ocean sites.

Applicable Impacts: **C**limate –> **M**itigation –> **B**iomass & Carbon Sequestration (CMB), Survivability Reports/ Evidence.

5. Environmental Sensors

Project sites equipped with Stereoscopic Vision Sensors are often accompanied by supporting environmental sensors such as soil moisture/ temperature/ec, air quality/temperature/humidity, rainfall accumulation, visible/infrared light, etc. The pairing of these measurement devices are due to the deployment of our LoRa gateway installations. Measurements are recorded and published weekly to track the effects of climate change on the growth progress of the newly planted forest. In underwater environments, environmental sensors may also include nitrogen, clarity/turbidity, oxygen, salinity, etc.

Applicable Impacts: **C**limate –> **A**daptation –> **C**limate Resilient Species Planting (CAC)

6. Bioacoustic Sensors

Our approach to acoustic monitoring of species has been quickly evolving from capturing and storing large audio recordings, to live edge analysis and real time transmission of detected species to the Veritree platform. While the edge-based monitoring is still in beta, the results are providing significant insights into biodiversity change in terrestrial ecosystems.

Applicable Impacts: **B**iodiversity –> **C**onnectivity –> **C**onnectivity Between Habitats, **B**iodiversity –> **Q**uality –> **C**ommunity Composition (BQC)

Supporting documentation

- 1 Billion Trees by 2030
- Krystal.veritree.com/dashboard

Area of land

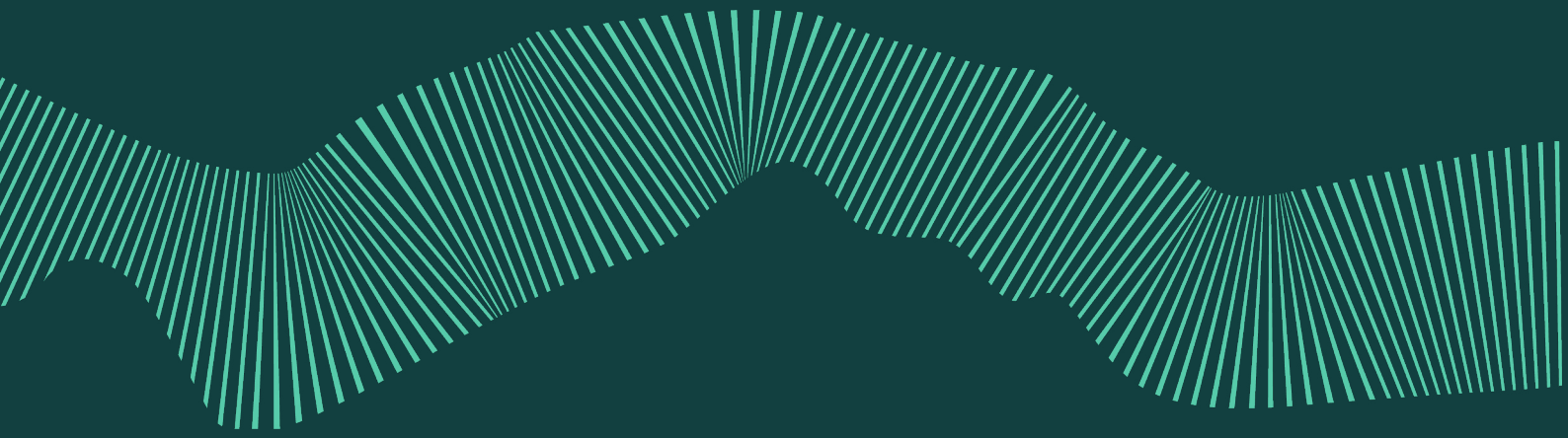
veritree will steer the decisions initially based on projects they are performing as they are our primary partner.

We are currently planting 200,000 trees per month with veritree, split between Madagascar and Kenya.

As we progress toward our target, we will investigate other initiatives and options with other partner organisations in other locations.

Supporting documentation

- veritree



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