**EXHIBIT E**

*Testing the Waters Communications*

Republic

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|---|---|
| **Company Name** | Terraformation |
| **Logo** | |
| **Headline** | Hyperscaling forest restoration to reverse climate change |
| **Hero Image** |  |
| **Tags** | Eco, Cleantech, B2B, Natural resources, B2G, $10M+ raised, Power Founders, Notable Angel backing |
| **Pitch text** | |

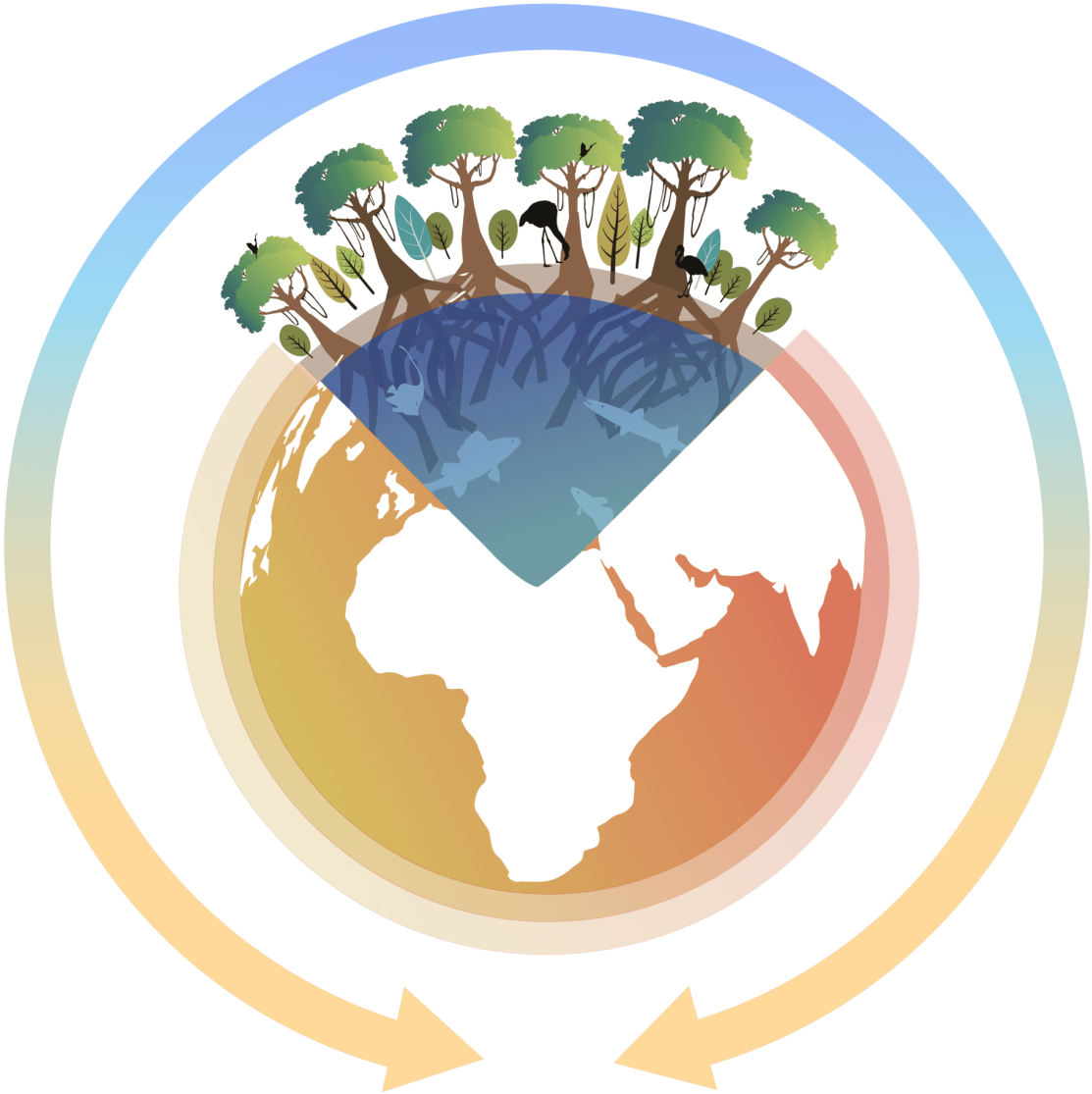


## Summary

- Achieving dry forest restoration at 5x a standard rate
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
- Completed $5M in Series Seed, $30M Series A

## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Head of Forestry**
Director of Hawai'i Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at Terraformation, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**Head of Growth**
Ex-Facebook, Google, TaskRabbit, Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**Former Head of Forest Tech**
Research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Strategic Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

THE INDEPENDENT GreenBiz Forbes

BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe.** Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

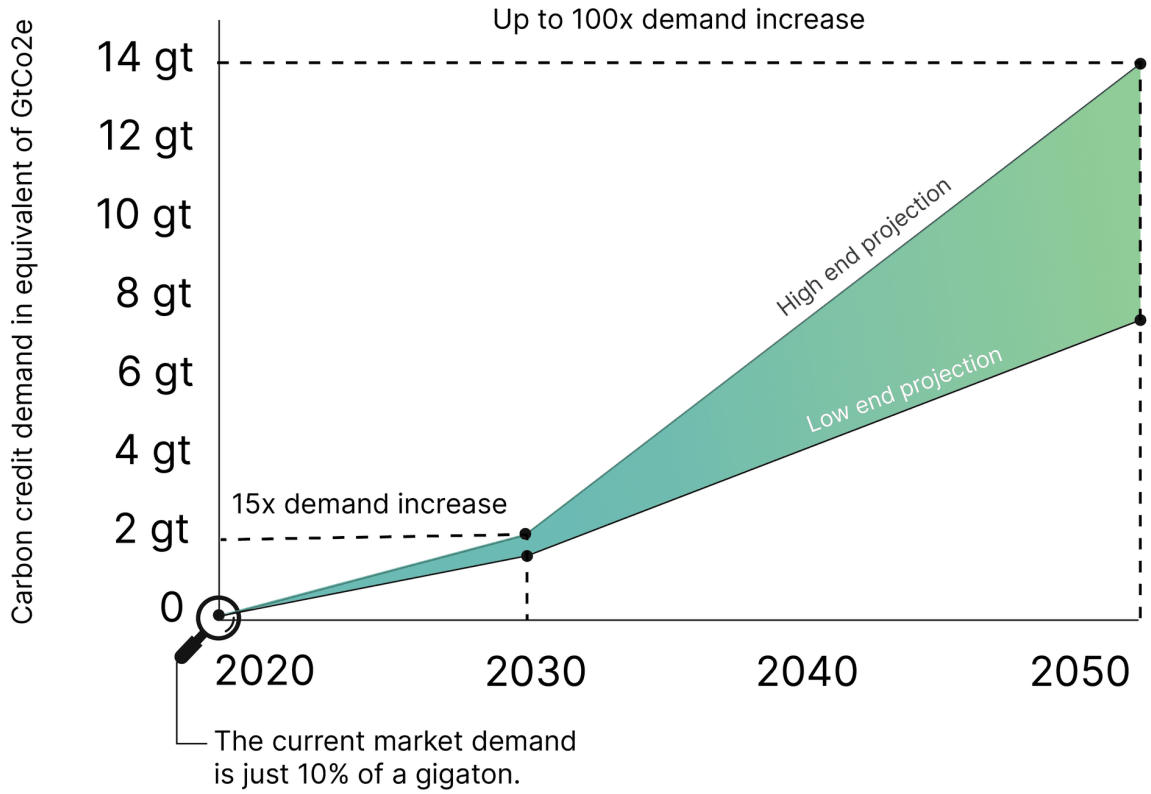
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

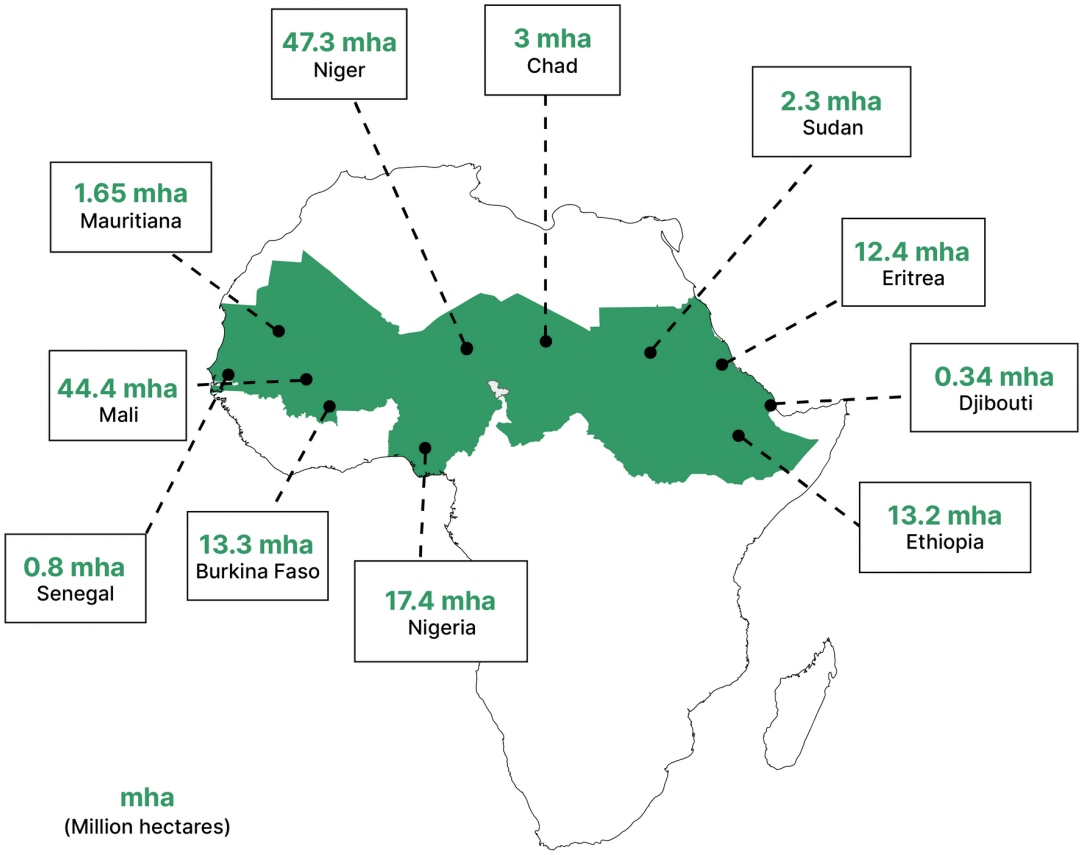
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join those investors at the same terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

**Sundeep Ahuja**
Climate Capital
Founder/Investor/Author

It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

**Apollo is looking to invest in companies that can affect climate change at a massive scale, in a cost efficient manner.** Planting hundreds of millions of trees is one

**Max Altman**
Apollo Projects

of the most effective ways of accomplishing this. It's going to be a huge undertaking, but **we believe Terraformation has assembled the best team to do this.**

**Joe Lonsdale**
Co-founder, Palantir, 8VC

There are no great regulatory, top-down solutions to the challenges we face — only bad choices and difficult trade-offs. But if we turn to entrepreneurs and technology, we see innovative solutions can help the environment and the economy while also lifting up millions of lives — **Terraformation is a great example of the type of thinking we need!**

**Marc Benioff**
Chair & CEO Salesforce
Founder of 1T.ORG

Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

**He founded Terraformation to incubate, inspire, and share solutions to those challenges.**

**Team**

| | | |
|---|---|---|
|  | Yishan Wong | Founder |
|  | Jill Wagner | Head of Forestry |
|  | Yee Lee | Head of Growth |
|  | Huey Lin | Strategic Projects |
|  | Dr. Marian Chao | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
|  | Chris Robinson | Head of Design |
|  | Ethan Cary | Head of Manufacturing |
|  | Margaret Morales | Head of Communications |
|  | Kiffen Hsieh | Head of Customer Communications |
|  | Aubrey Vella | Head of People |
|  | Johannes Seidel | Restoration Manager |
|  | Lehua Todero | Nursery Manager |
|  | Christian Torres | Forestry Partnerships, Latin America |

| | | |
|---|---|---|
|  | Leslie Yim Clark | Business Development, Oceania |
|  | Zara Huseynova | Business Development, Central and Eastern Europe, Middle East |
|  | Dr. Victoria Meyer | Carbon Scientist |
|  | Dr. Yacin Bahi | Head of Forest Technology |
|  | Ben Listwon | Head of Product |
|  | Thomas Bolton | Nursery Operations Lead |
|  | Daniela Angelova | GIS Analyst |
|  | Christina Cervantes | Chief of Staff |

**Perks**

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|---|---|
| **$50** | Limited edition t-shirt for Terraformation Series A investors |

**FAQ**

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

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| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

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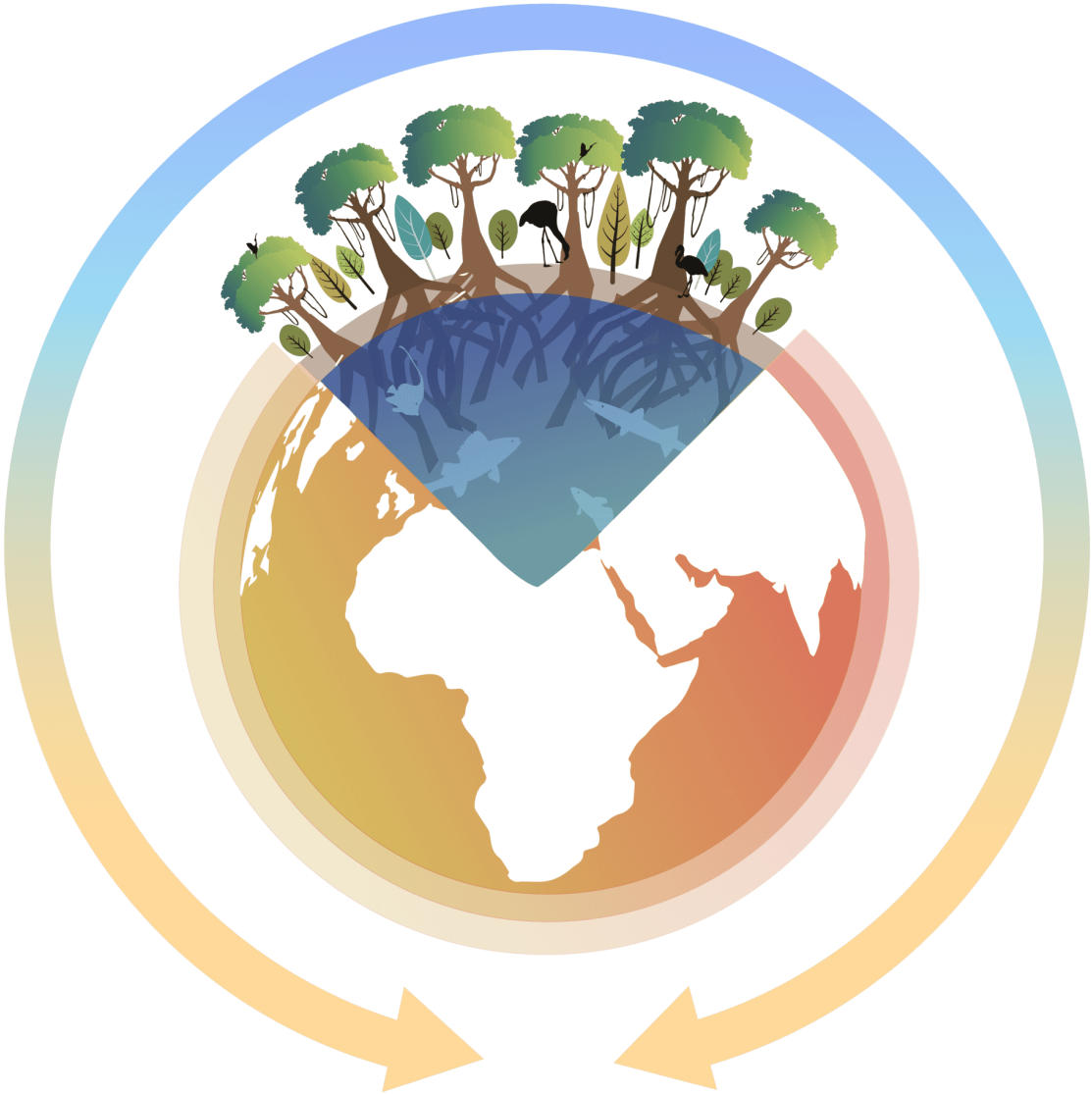

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**Jill Wagner**
**Head of Forestry**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at **Terraformation**, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**Head of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company. It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**Head of**
**Forest Tech**
Previously research
scientist at security, AI,
and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

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I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

THE INDEPENDENT GreenBiz Forbes

BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe.** Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

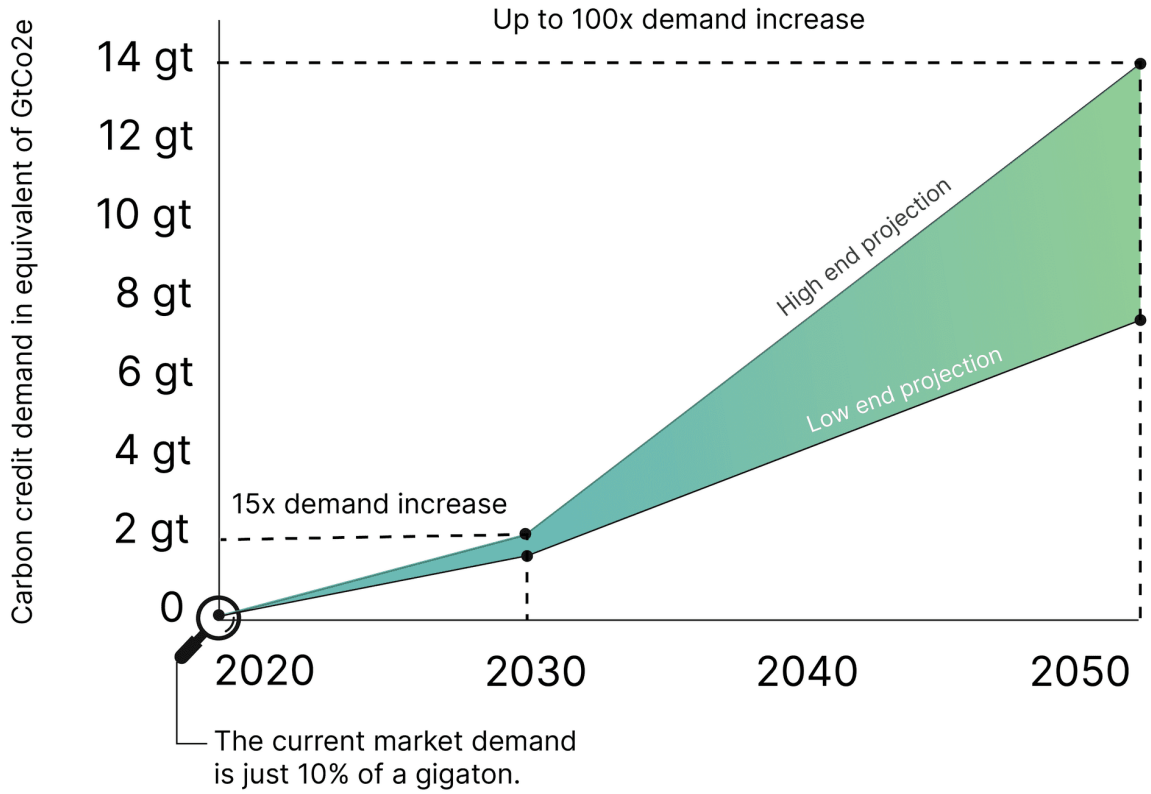
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

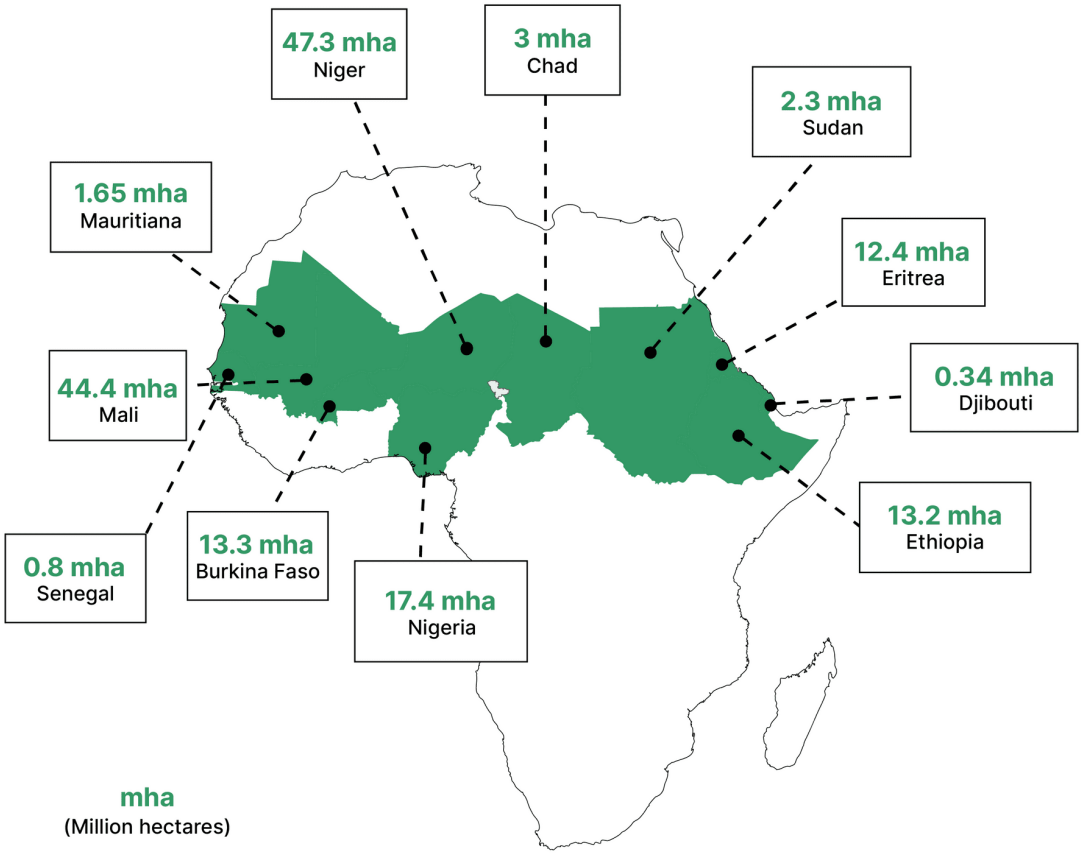
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join those investors at the same terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

**Sundeep Ahuja**
Climate Capital
Founder/Investor/Author

It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

**Apollo is looking to invest in companies that can affect climate change at a massive scale, in a cost efficient manner.** Planting hundreds of millions of trees is one

**Max Altman**
Apollo Projects

of the most effective ways of accomplishing this. It's going to be a huge undertaking, but **we believe Terraformation has assembled the best team to do this.**

**Joe Lonsdale**
Co-founder, Palantir, 8VC

There are no great regulatory, top-down solutions to the challenges we face — only bad choices and difficult trade-offs. But if we turn to entrepreneurs and technology, we see innovative solutions can help the environment and the economy while also lifting up millions of lives — **Terraformation is a great example of the type of thinking we need!**

**Marc Benioff**
Chair & CEO Salesforce
Founder of 1T.ORG

Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

**He founded Terraformation to incubate, inspire, and share solutions to those challenges.**

**Team**

| | | |
|---|---|---|
|  | Yishan Wong | Founder |
|  | Jill Wagner | Head of Forestry |
|  | Yee Lee | Head of Growth |
|  | Huey Lin | Strategic Projects |
|  | Dr. Marian Chao | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
|  | Chris Robinson | Head of Design |
|  | Ethan Cary | Head of Manufacturing |
|  | Margaret Morales | Head of Communications |
|  | Kiffen Hsieh | Head of Customer Communications |
|  | Aubrey Vella | Head of People |
|  | Johannes Seidel | Restoration Manager |
|  | Lehua Todero | Nursery Manager |
|  | Christian Torres | Forestry Partnerships, Latin America |

| | | |
|---|---|---|
|  | Leslie Yim Clark | Business Development, Oceania |
|  | Zara Huseynova | Business Development, Central and Eastern Europe, Middle East |
|  | Dr. Victoria Meyer | Carbon Scientist |
|  | Dr. Yacin Bahi | Head of Forest Technology |
|  | Ben Listwon | Head of Product |
|  | Thomas Bolton | Nursery Operations Lead |
|  | Daniela Angelova | GIS Analyst |
|  | Christina Cervantes | Chief of Staff |

**Perks**

| | |
|---|---|
| **$50** | Limited edition t-shirt for Terraformation Series A investors |

**FAQ**

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

| | |
|---|---|
| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

Republic

| | |
|---|---|
| **Company Name** | Terraformation |
| **Logo** | |
| **Headline** | Hyperscaling forest restoration to reverse climate change |
| **Hero Image** |  |
| **Tags** | Eco, Cleantech, B2B, Natural resources, B2G, $10M+ raised, Notable Angel backing, Power Founders |
| **Pitch text** | |

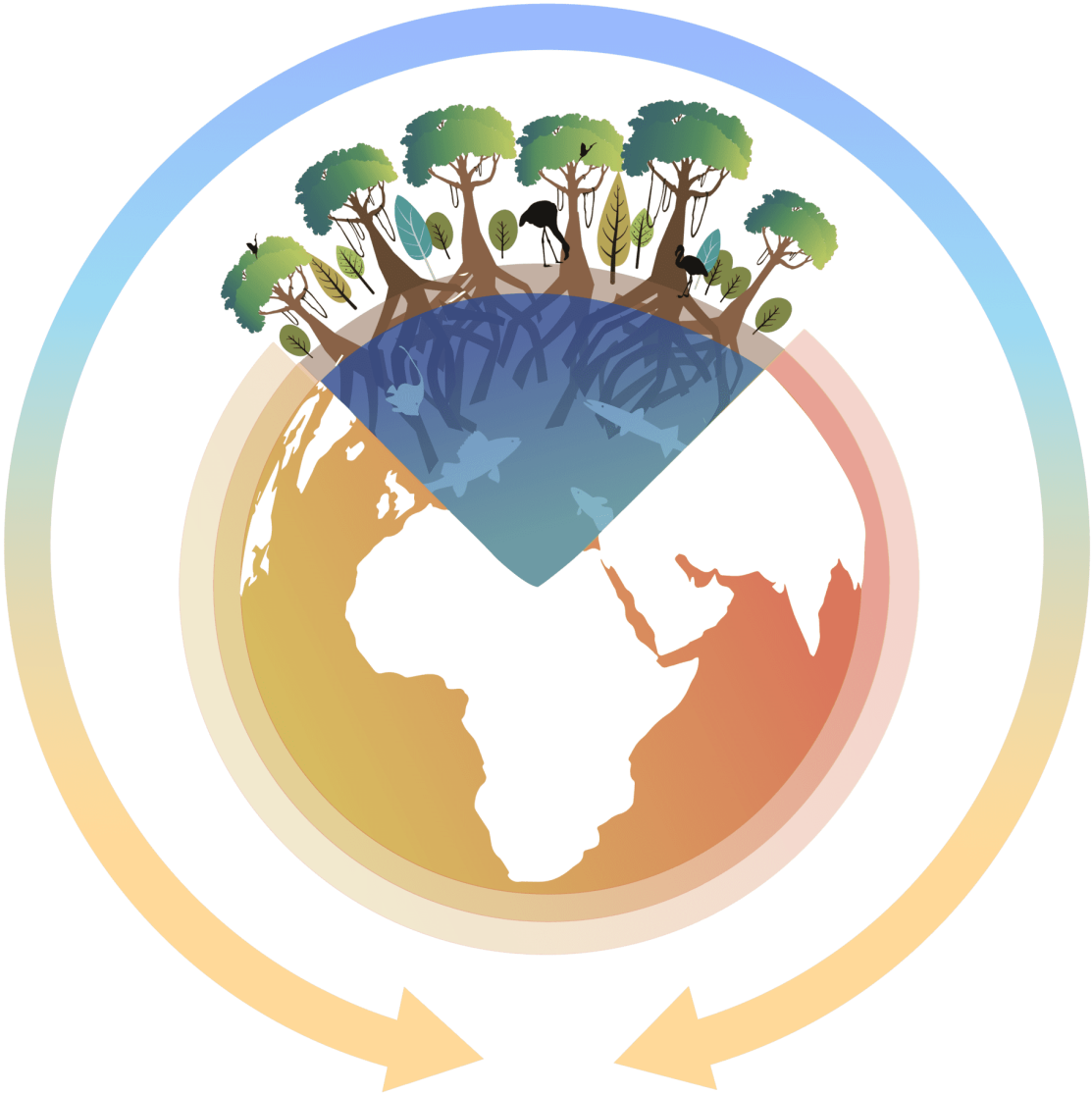


## Summary

- Achieving dry forest restoration at 5x a standard rate
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
- Completed $5M in Series Seed, $30M Series A

## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at Terraformation, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**VP of Research and Development**
Previously research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Special Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

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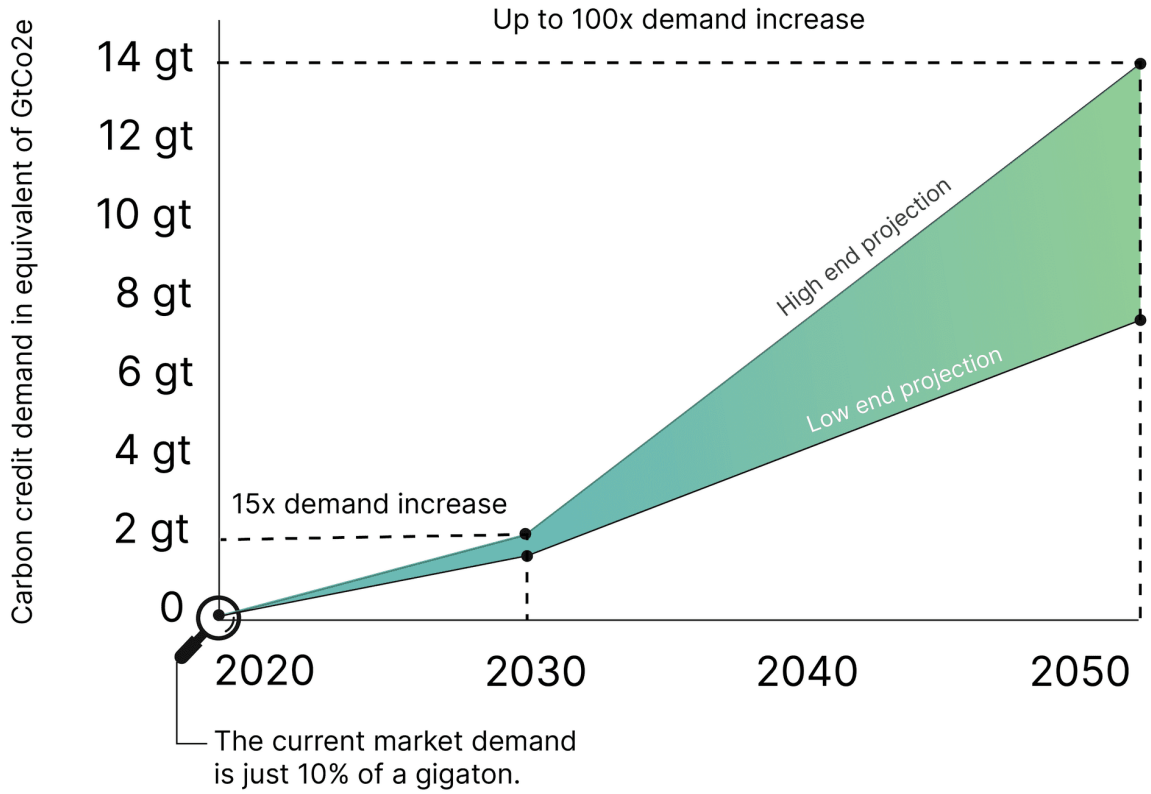


https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

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Over $2.5B in private capital commitments

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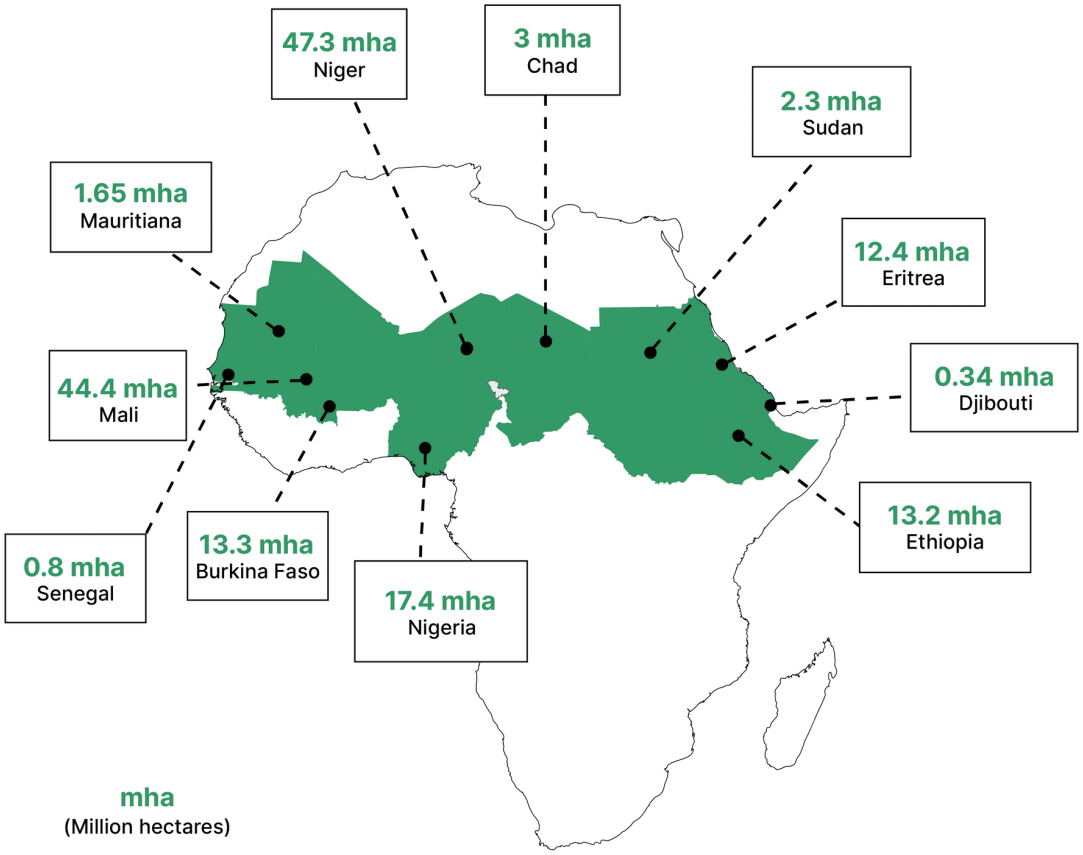


**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

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## Together, we can reverse climate change

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Doing it with everyone else.

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This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join those investors at the same terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

**Sundeep Ahuja**
Climate Capital
Founder/Investor/Author

It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

**Apollo is looking to invest in companies that can affect climate change at a massive scale, in a cost efficient manner.** Planting hundreds of millions of trees is one

**Max Altman**
Apollo Projects

of the most effective ways of accomplishing this. It's going to be a huge undertaking, but **we believe Terraformation has assembled the best team to do this.**

**Joe Lonsdale**
Co-founder, Palantir, 8VC

There are no great regulatory, top-down solutions to the challenges we face — only bad choices and difficult trade-offs. But if we turn to entrepreneurs and technology, we see innovative solutions can help the environment and the economy while also lifting up millions of lives — **Terraformation is a great example of the type of thinking we need!**

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Chair & CEO Salesforce
Founder of 1T.ORG

Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

**He founded Terraformation to incubate, inspire, and share solutions to those challenges.**

**Team**

| | | |
|---|---|---|
|  | Yishan Wong | Founder and CEO |
|  | Jill Wagner | Chief Forestry Officer |
|  | Yee Lee | VP of Growth |
|  | Huey Lin | Special Projects |
|  | Dr. Marian Chao | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
|  | Chris Robinson | Head of Design |
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|  | Zara Huseynova | Business Development, Central and Eastern Europe, Middle East |
|  | Dr. Victoria Meyer | Carbon Scientist |
|  | Dr. Yacin Bahi | VP of Research and Development |
|  | Ben Listwon | Head of Product |
|  | Thomas Bolton | Nursery Operations Lead |
|  | Daniela Angelova | GIS Analyst |
|  | Christina Cervantes | Chief of Staff |

**Perks**

| | |
|---|---|
| **$50** | Limited edition t-shirt for Terraformation Series A investors |

**FAQ**

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

| | |
|---|---|
| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

Republic

| | |
|---|---|
| **Company Name** | Terraformation |
| **Logo** | |
| **Headline** | Hyperscaling forest restoration to reverse climate change |
| **Hero Image** |  |
| **Tags** | Eco, Cleantech, B2B, Natural resources, B2G, $10M+ raised, Notable Angel backing, Power Founders |
| **Pitch text** | |

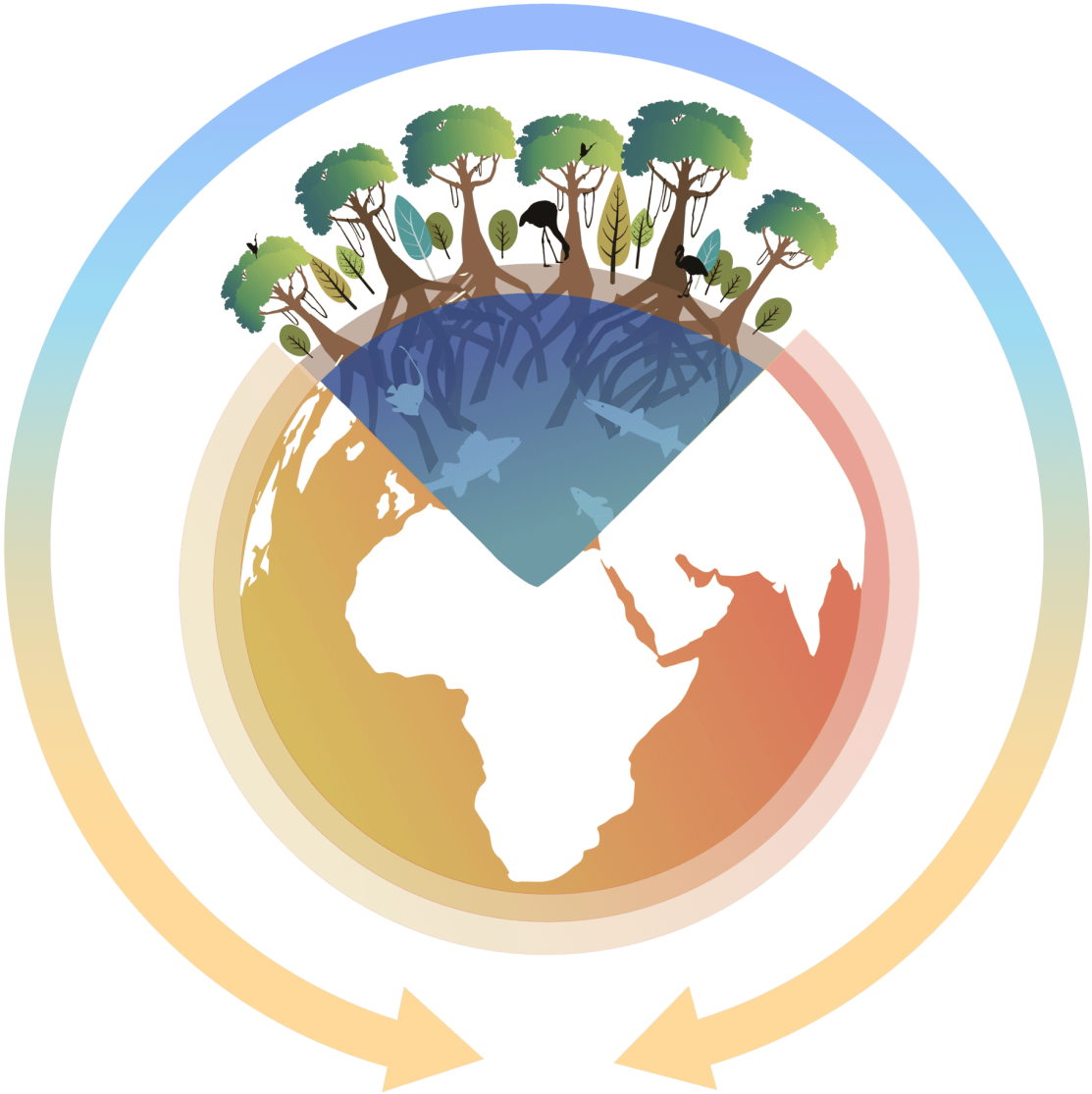


## Summary

- Restoring some of the world's rarest dry forest ecosystems
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
- Completed $5M in Series Seed, $30M Series A

## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at Terraformation, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**VP of Research and Development**
Previously research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Special Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

THE INDEPENDENT GreenBiz Forbes

BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe.** Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

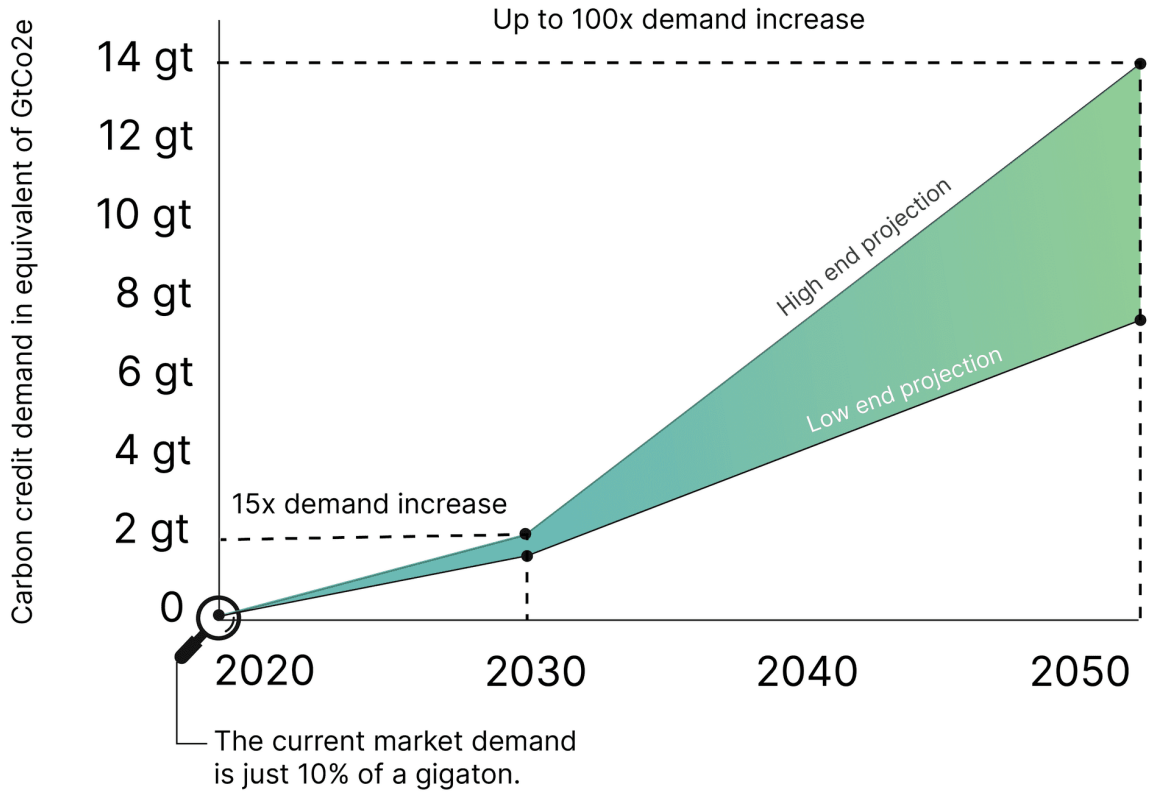
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

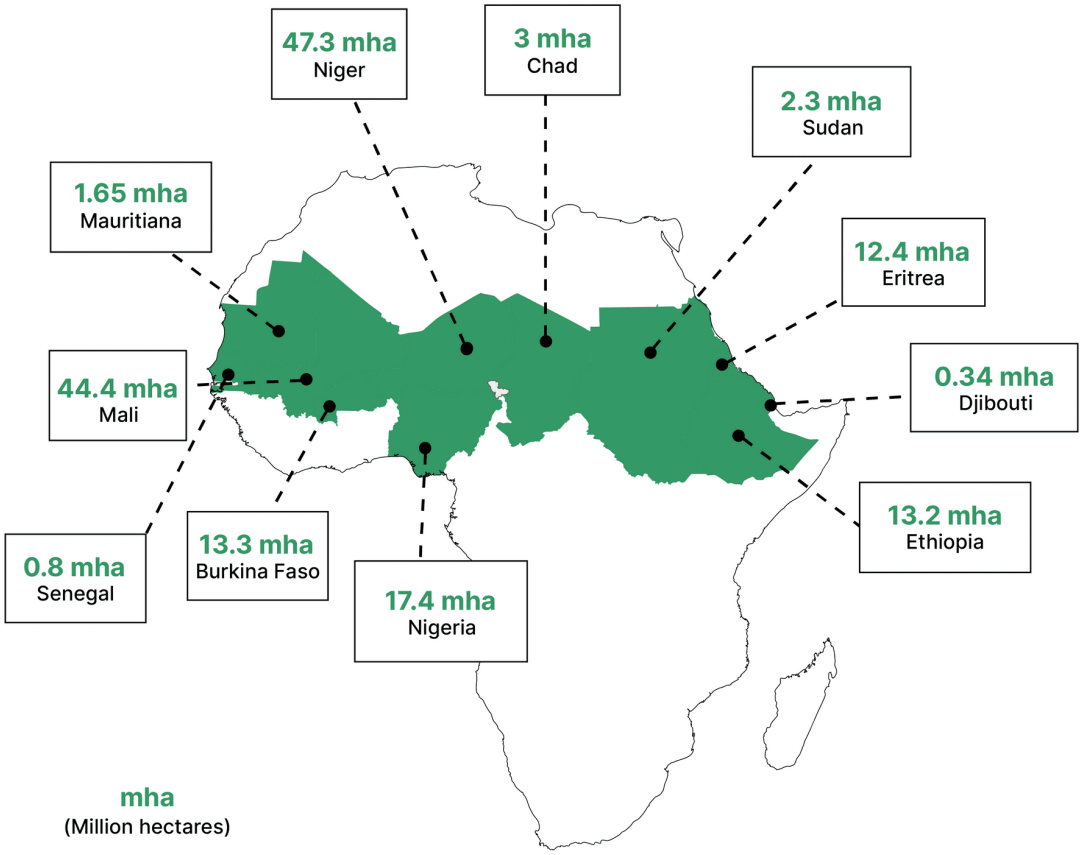
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

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**Max Altman**
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Co-founder, Palantir, 8VC

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**Perks**

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| **$50** | Limited edition t-shirt for Terraformation Series A investors |

**FAQ**

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

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- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

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| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

Republic

| | |
|---|---|
| **Company Name** | Terraformation |
| **Logo** | |
| **Headline** | Hyperscaling forest restoration to reverse climate change |
| **Hero Image** |  |
| **Tags** | Eco, Cleantech, B2B, Natural resources, B2G, $10M+ raised, Notable Angel backing, Power Founders |
| **Pitch text** | |

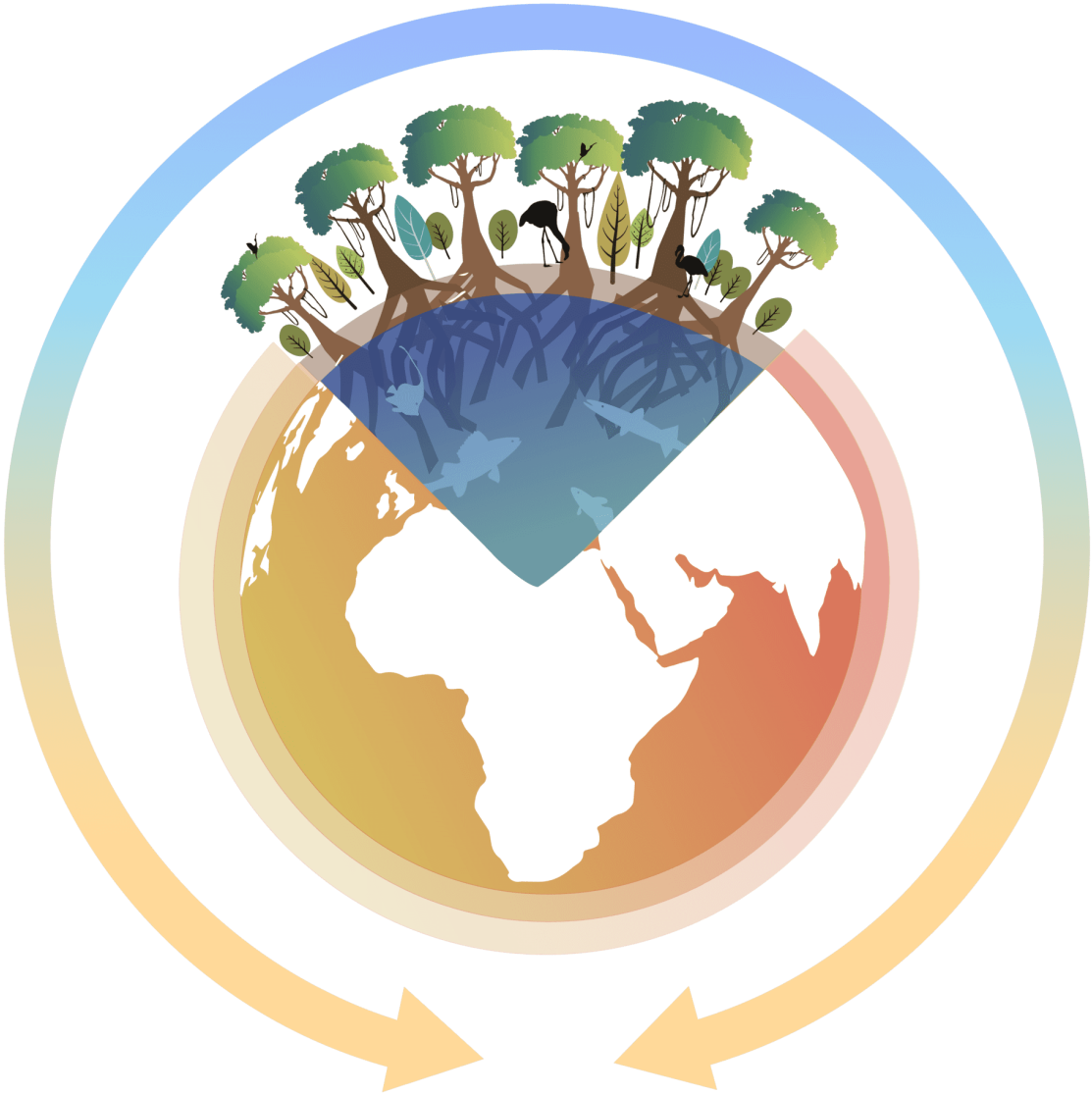


## Summary

- Restoring some of the world's rarest dry forest ecosystems
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
- Completed $5M in Series Seed, $30M Series A

## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at Terraformation, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**VP of Research and Development**
Previously research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Special Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

THE INDEPENDENT GreenBiz Forbes

BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe.** Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

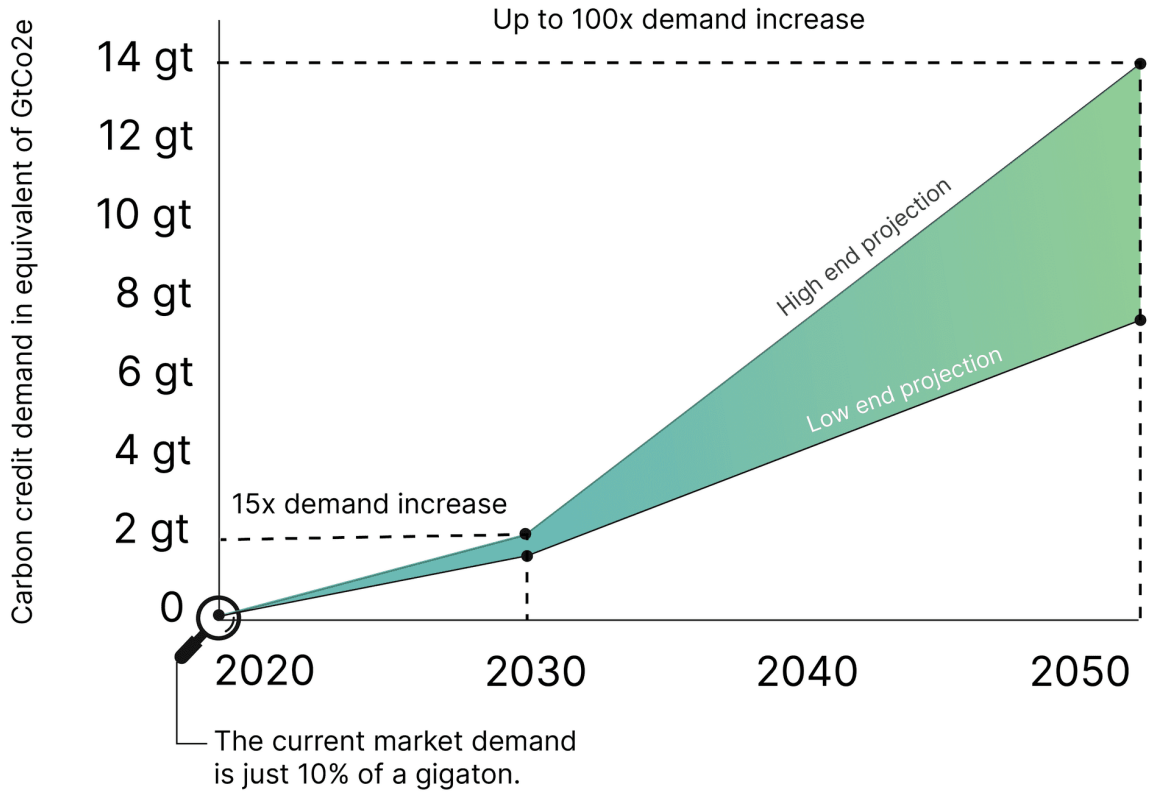
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

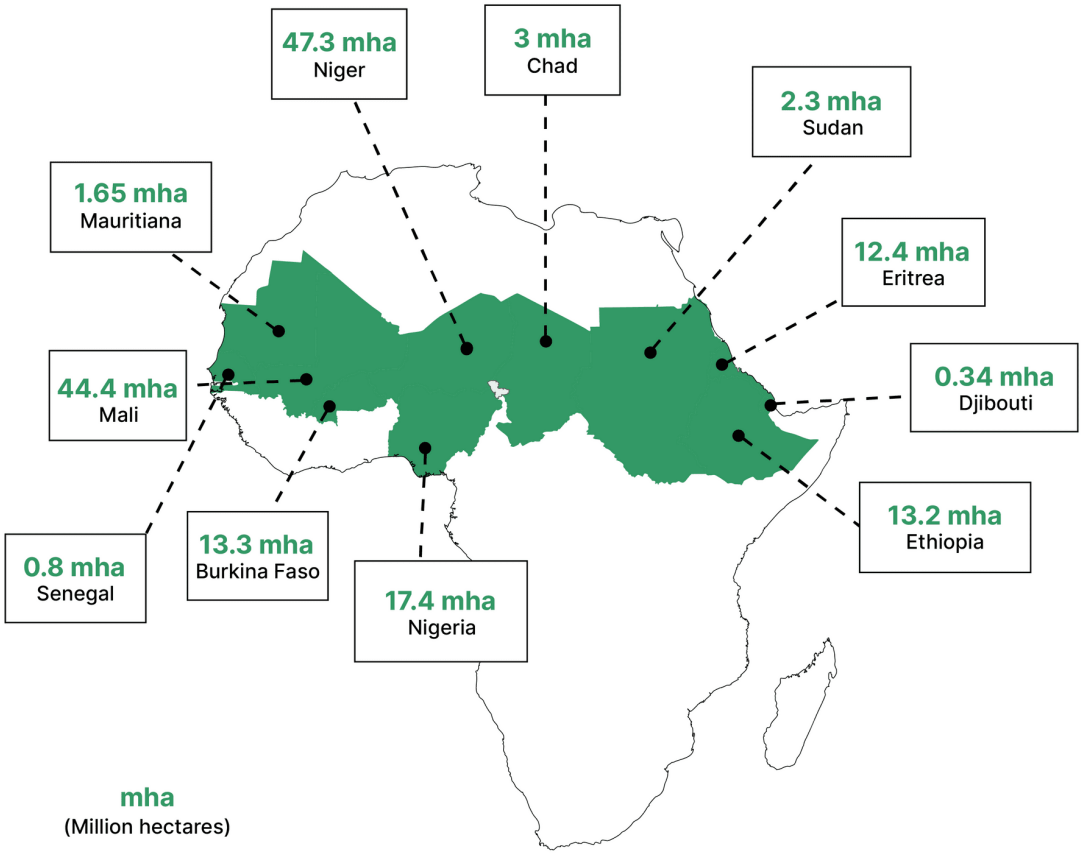
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join those investors at the same terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

**Sundeep Ahuja**
Climate Capital
Founder/Investor/Author

It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

**Apollo is looking to invest in companies that can affect climate change at a massive scale, in a cost efficient manner.** Planting hundreds of millions of trees is one

**Max Altman**
Apollo Projects

of the most effective ways of accomplishing this. It's going to be a huge undertaking, but **we believe Terraformation has assembled the best team to do this.**

**Joe Lonsdale**
Co-founder, Palantir, 8VC

There are no great regulatory, top-down solutions to the challenges we face — only bad choices and difficult trade-offs. But if we turn to entrepreneurs and technology, we see innovative solutions can help the environment and the economy while also lifting up millions of lives — **Terraformation is a great example of the type of thinking we need!**

**Marc Benioff**
Chair & CEO Salesforce
Founder of 1T.ORG

Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

**He founded Terraformation to incubate, inspire, and share solutions to those challenges.**

**Team**

| | | |
|---|---|---|
|  | Yishan Wong | Founder and CEO |
|  | Jill Wagner | Chief Forestry Officer |
|  | Yee Lee | VP of Growth |
|  | Huey Lin | Special Projects |
|  | Dr. Marian Chao | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
|  | Chris Robinson | Head of Design |
|  | Ethan Cary | VP of Manufacturing |
|  | Margaret Morales | VP of Communications and Marketing |
|  | Kiffen Hsieh | Head of Customer Communications |
|  | Aubrey Vella | Head of People |
|  | Johannes Seidel | Restoration Manager |
|  | Lehua Todero | Nursery Manager |
|  | Christian Torres | Forestry Partnerships, Latin America |

| | | |
|---|---|---|
|  | Leslie Yim Clark | Business Development, Oceania |
|  | Zara Huseynova | Business Development, Central and Eastern Europe, Middle East |
|  | Dr. Victoria Meyer | Carbon Scientist |
|  | Dr. Yacin Bahi | VP of Research and Development |
|  | Ben Listwon | Head of Product |
|  | Thomas Bolton | Nursery Operations Lead |
|  | Daniela Angelova | GIS Analyst |
|  | Christina Cervantes | Chief of Staff |

**Perks**

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Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

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Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

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There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

| | |
|---|---|
| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

Republic

| | |
|---|---|
| **Company Name** | Terraformation |
| **Logo** | |
| **Headline** | Hyperscaling forest restoration to reverse climate change |
| **Hero Image** |  |
| **Tags** | Eco, Cleantech, B2B, Natural resources, B2G, $10M+ raised, Power Founders, Notable Angel backing |
| **Pitch text** | |

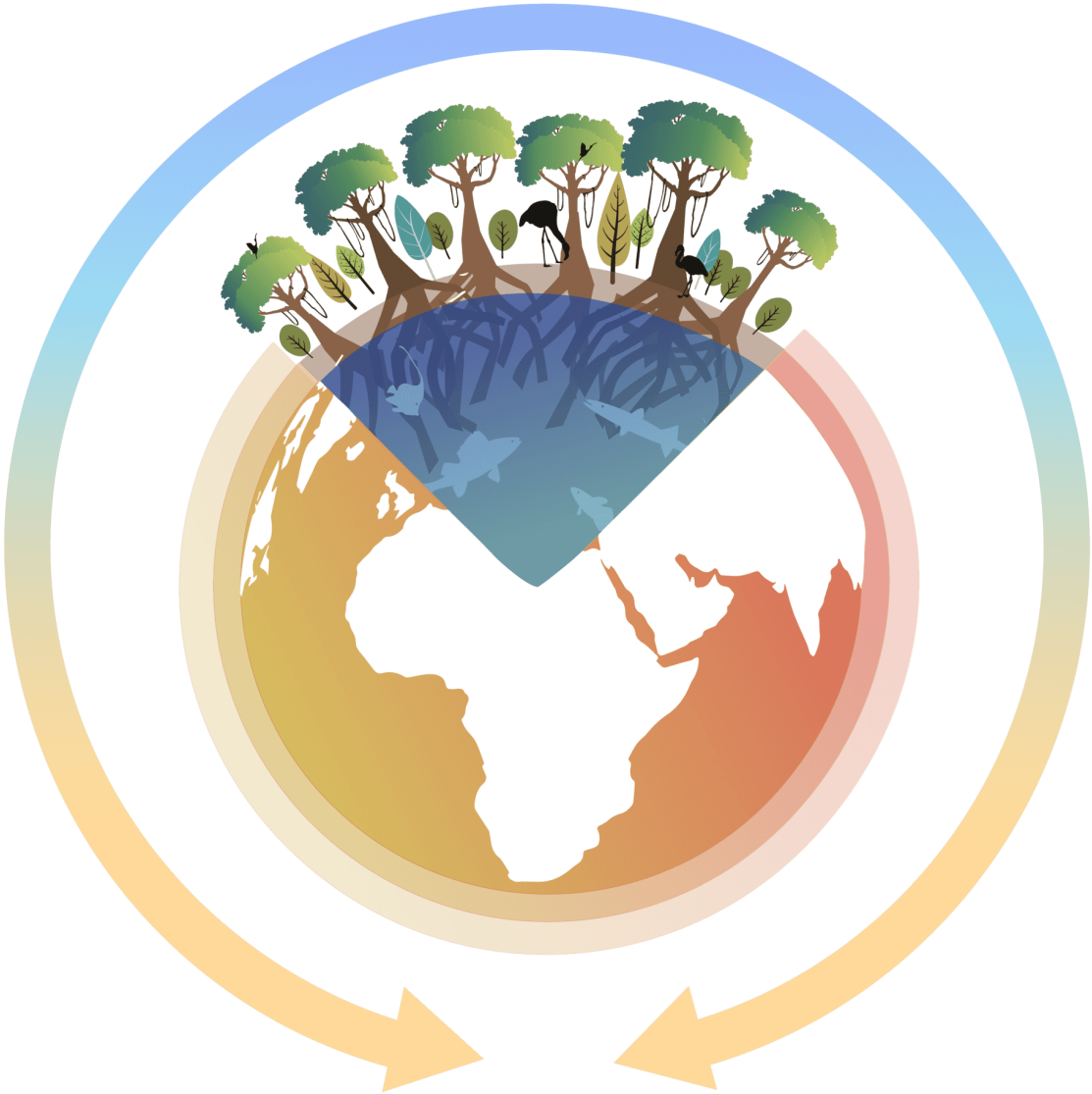


## Summary

- Restoring some of the world's rarest dry forest ecosystems
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
- Completed $5M Series Seed, $30M Series A

## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at Terraformation, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**VP of Research and Development**
Previously research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Special Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

THE INDEPENDENT GreenBiz Forbes

BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe.** Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

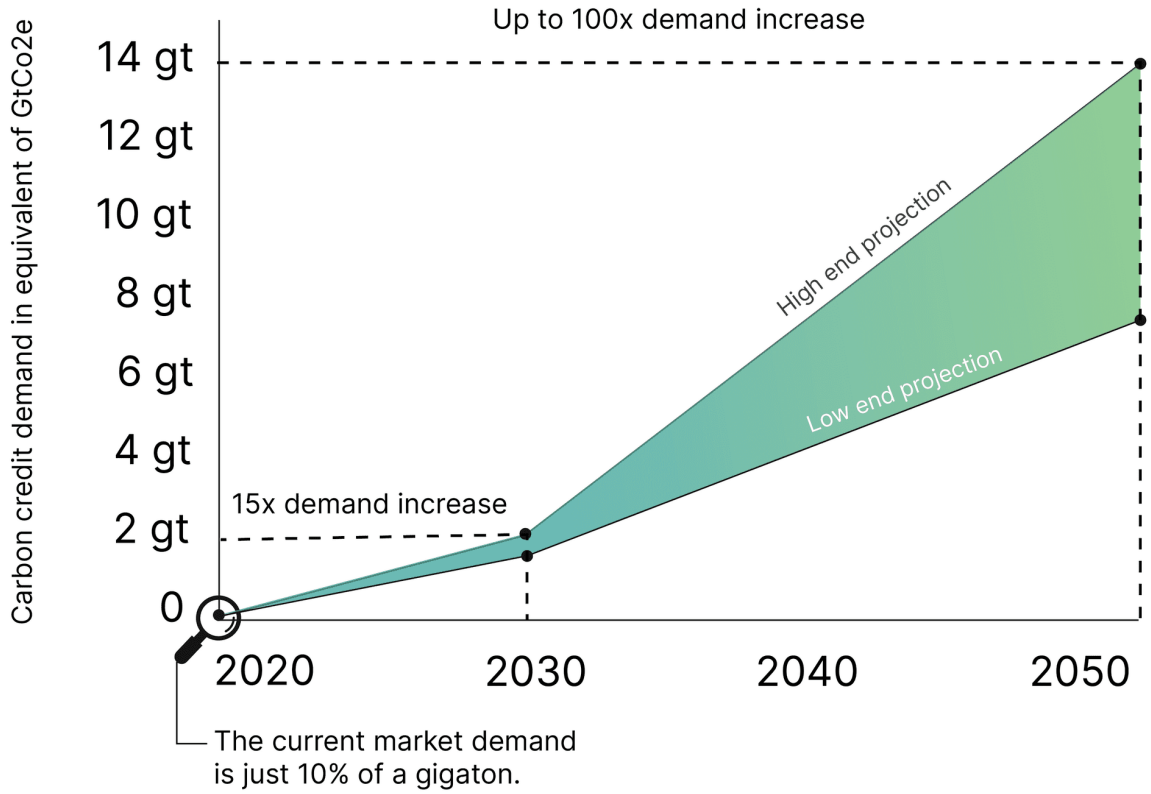
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

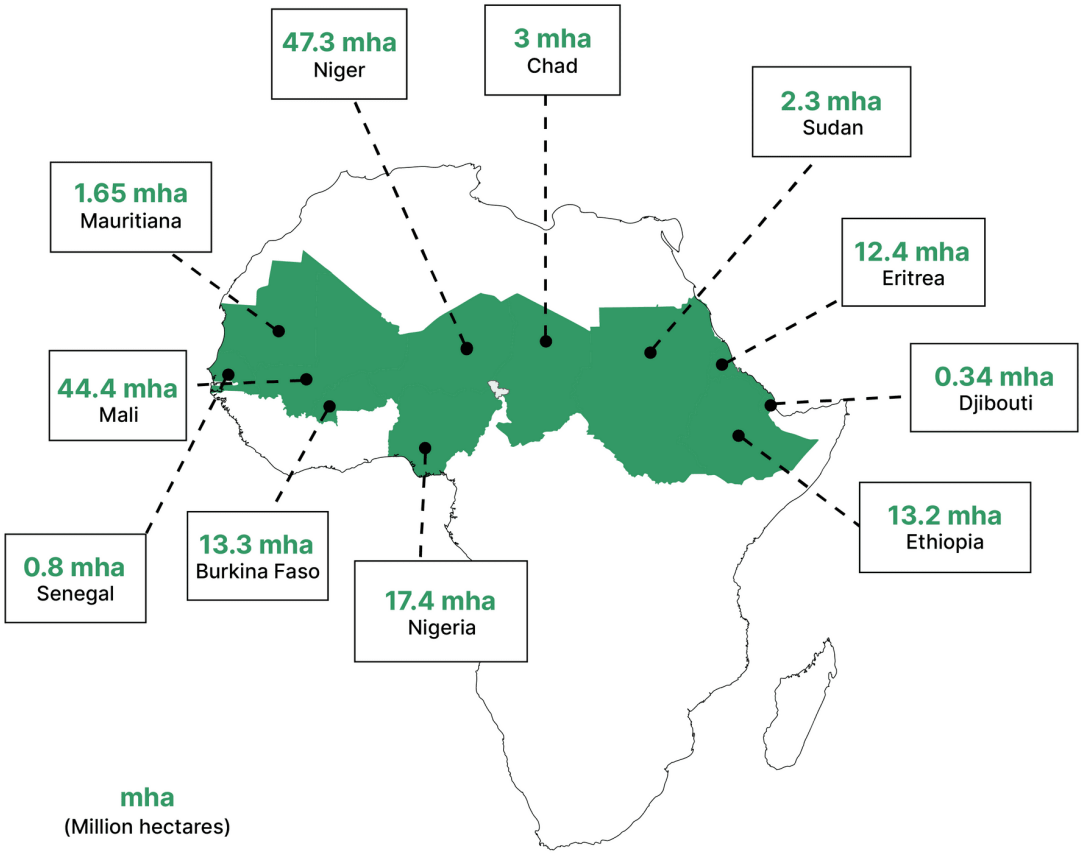
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join those investors at the same terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

**Sundeep Ahuja**
Climate Capital
Founder/Investor/Author

It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

**Apollo is looking to invest in companies that can affect climate change at a massive scale, in a cost efficient manner.** Planting hundreds of millions of trees is one

**Max Altman**
Apollo Projects

of the most effective ways of accomplishing this. It's going to be a huge undertaking, but **we believe Terraformation has assembled the best team to do this.**

**Joe Lonsdale**
Co-founder, Palantir, 8VC

There are no great regulatory, top-down solutions to the challenges we face — only bad choices and difficult trade-offs. But if we turn to entrepreneurs and technology, we see innovative solutions can help the environment and the economy while also lifting up millions of lives — **Terraformation is a great example of the type of thinking we need!**

**Marc Benioff**
Chair & CEO Salesforce
Founder of 1T.ORG

Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

**He founded Terraformation to incubate, inspire, and share solutions to those challenges.**

## Team

| | | |
|---|---|---|
|  | Yishan Wong | Founder and CEO |
|  | Jill Wagner | Chief Forestry Officer |
|  | Yee Lee | VP of Growth |
|  | Huey Lin | Special Projects |
|  | Dr. Marian Chao | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
|  | Ethan Cary | VP of Manufacturing |
|  | Margaret Morales | VP of Communications and Marketing |
|  | Christian Torres | Forestry Partnerships, Latin America |
|  | Dr. Victoria Meyer | Carbon Scientist |
|  | Dr. Yacin Bahi | VP of Research and Development |

## Perks

| | |
|---|---|
| **$50** | Limited edition t-shirt for Terraformation Series A investors |

## FAQ

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

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2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

| | |
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| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

Republic

| | |
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## Summary

- Restoring some of the world's rarest dry forest ecosystems
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
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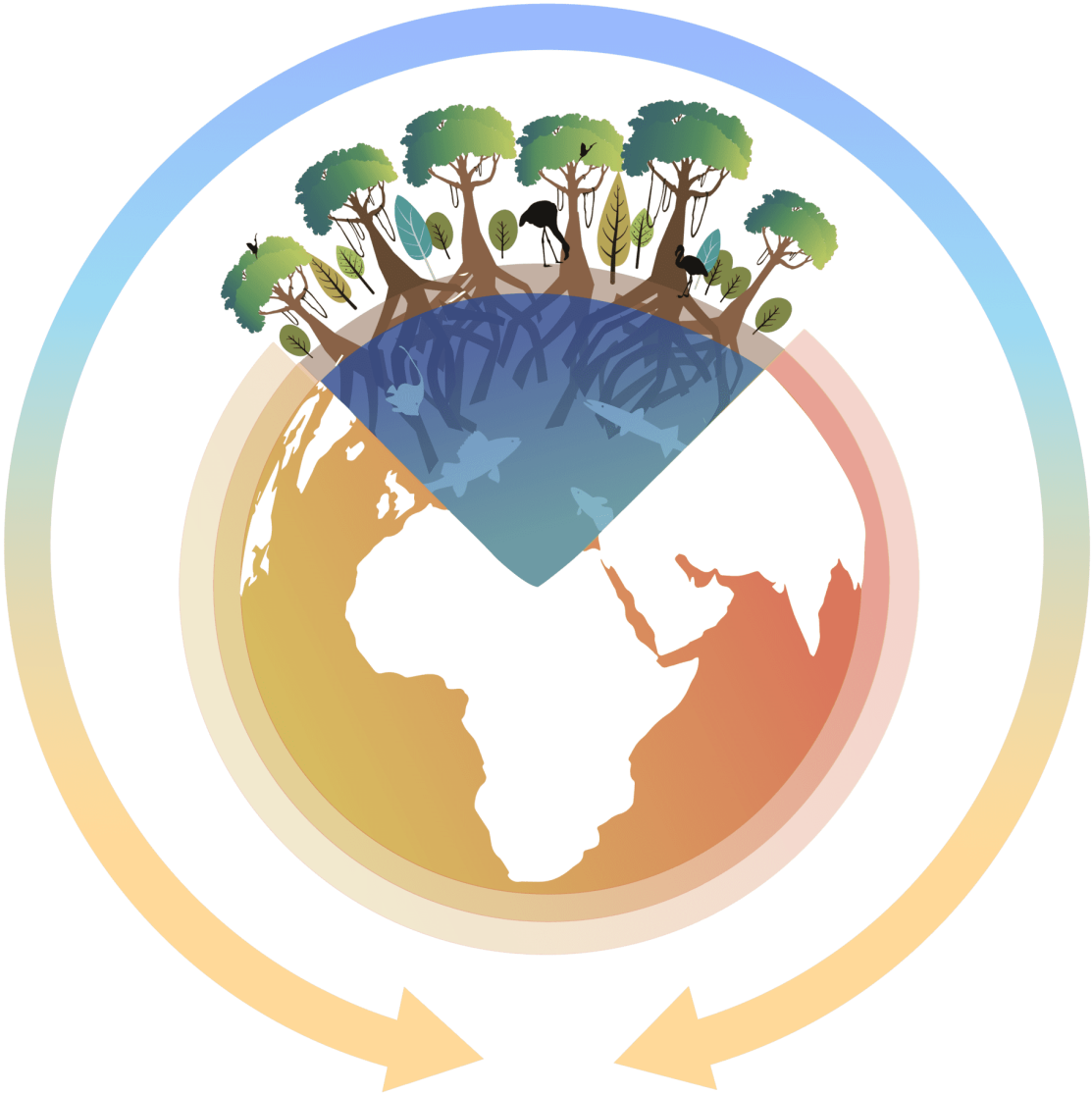
## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at Terraformation, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**VP of Research and Development**
Previously research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Special Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

THE INDEPENDENT GreenBiz Forbes

BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe.** Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

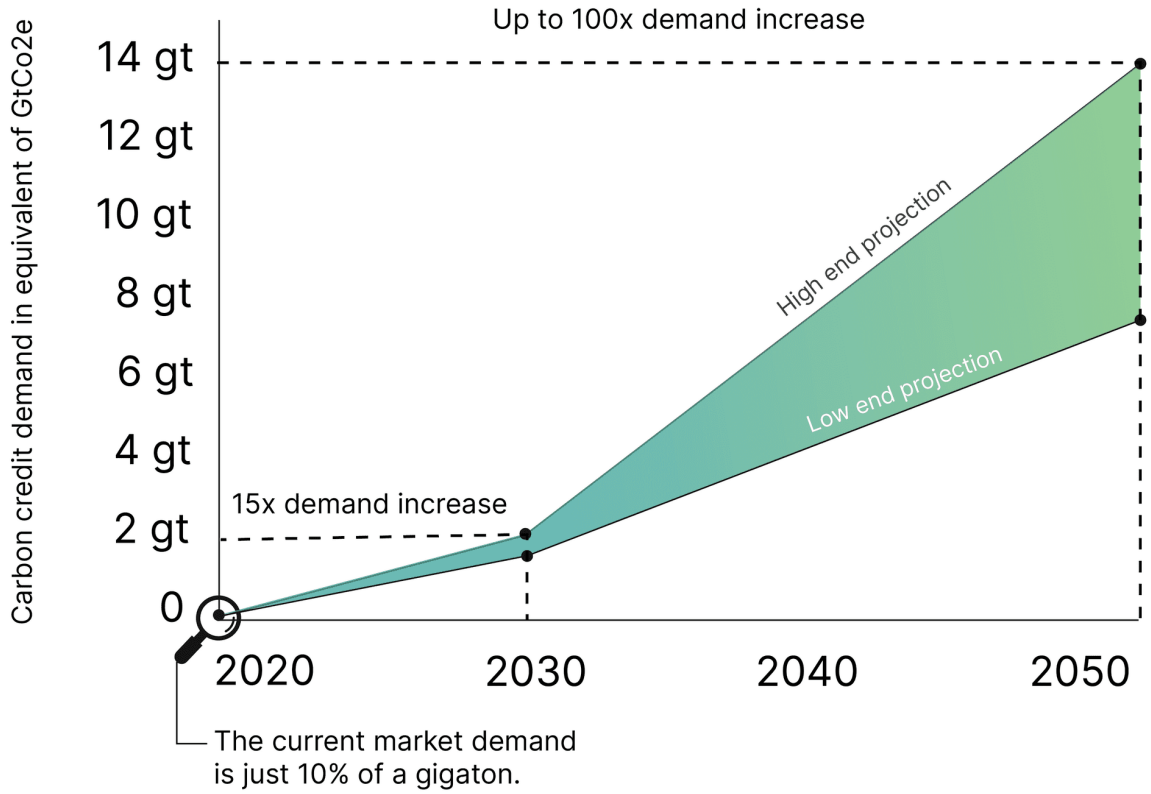
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

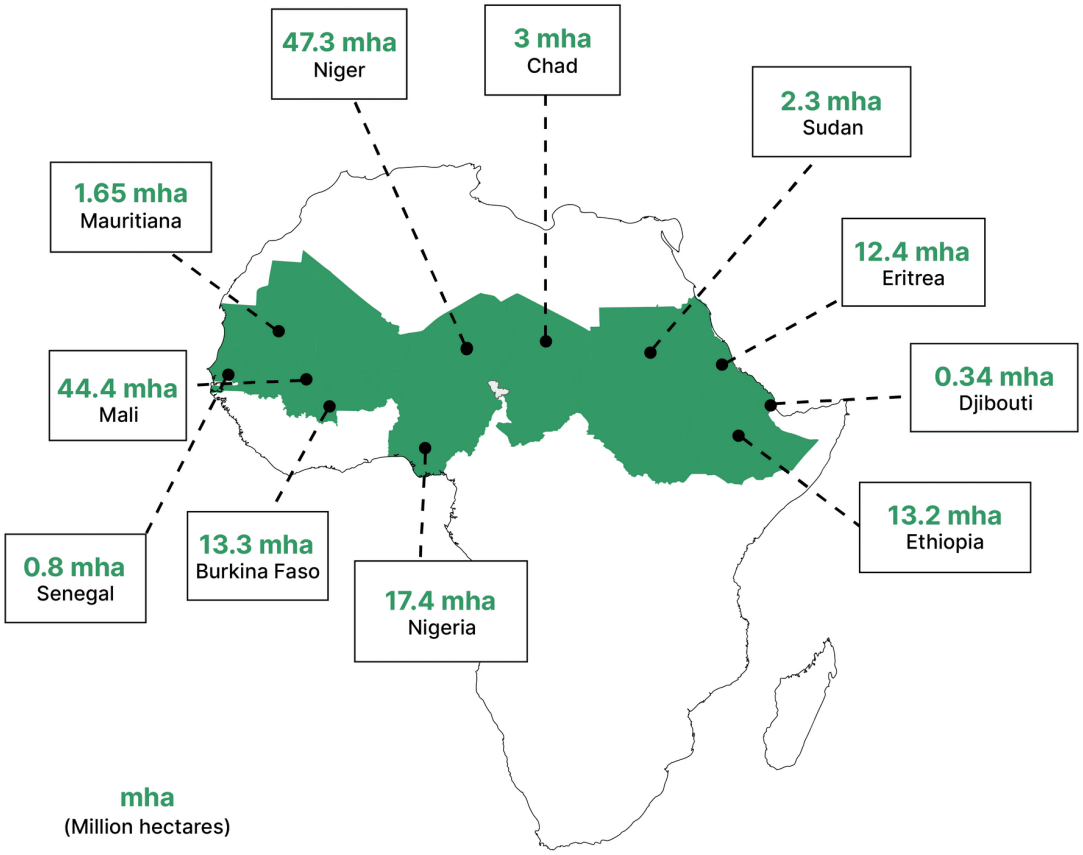
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join those investors at the same terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

**Sundeep Ahuja**
Climate Capital
Founder/Investor/Author

It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

**Apollo is looking to invest in companies that can affect climate change at a massive scale, in a cost efficient manner.** Planting hundreds of millions of trees is one

**Max Altman**
Apollo Projects

of the most effective ways of accomplishing this. It's going to be a huge undertaking, but **we believe Terraformation has assembled the best team to do this.**

**Joe Lonsdale**
Co-founder, Palantir, 8VC

There are no great regulatory, top-down solutions to the challenges we face — only bad choices and difficult trade-offs. But if we turn to entrepreneurs and technology, we see innovative solutions can help the environment and the economy while also lifting up millions of lives — **Terraformation is a great example of the type of thinking we need!**

**Marc Benioff**
Chair & CEO Salesforce
Founder of 1T.ORG

Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

**He founded Terraformation to incubate, inspire, and share solutions to those challenges.**

## Team

| | | |
|---|---|---|
|  | Yishan Wong | Founder and CEO |
|  | Jill Wagner | Chief Forestry Officer |
|  | Yee Lee | VP of Growth |
|  | Huey Lin | Special Projects |
|  | Dr. Marian Chao | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
|  | Ethan Cary | VP of Manufacturing |
|  | Margaret Morales | VP of Communications and Marketing |
|  | Christian Torres | Forestry Partnerships, Latin America |
|  | Dr. Victoria Meyer | Carbon Scientist |
|  | Dr. Yacin Bahi | VP of Research and Development |

## Perks

| | |
|---|---|
| **$50** | Limited edition t-shirt for Terraformation Series A investors |

## FAQ

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
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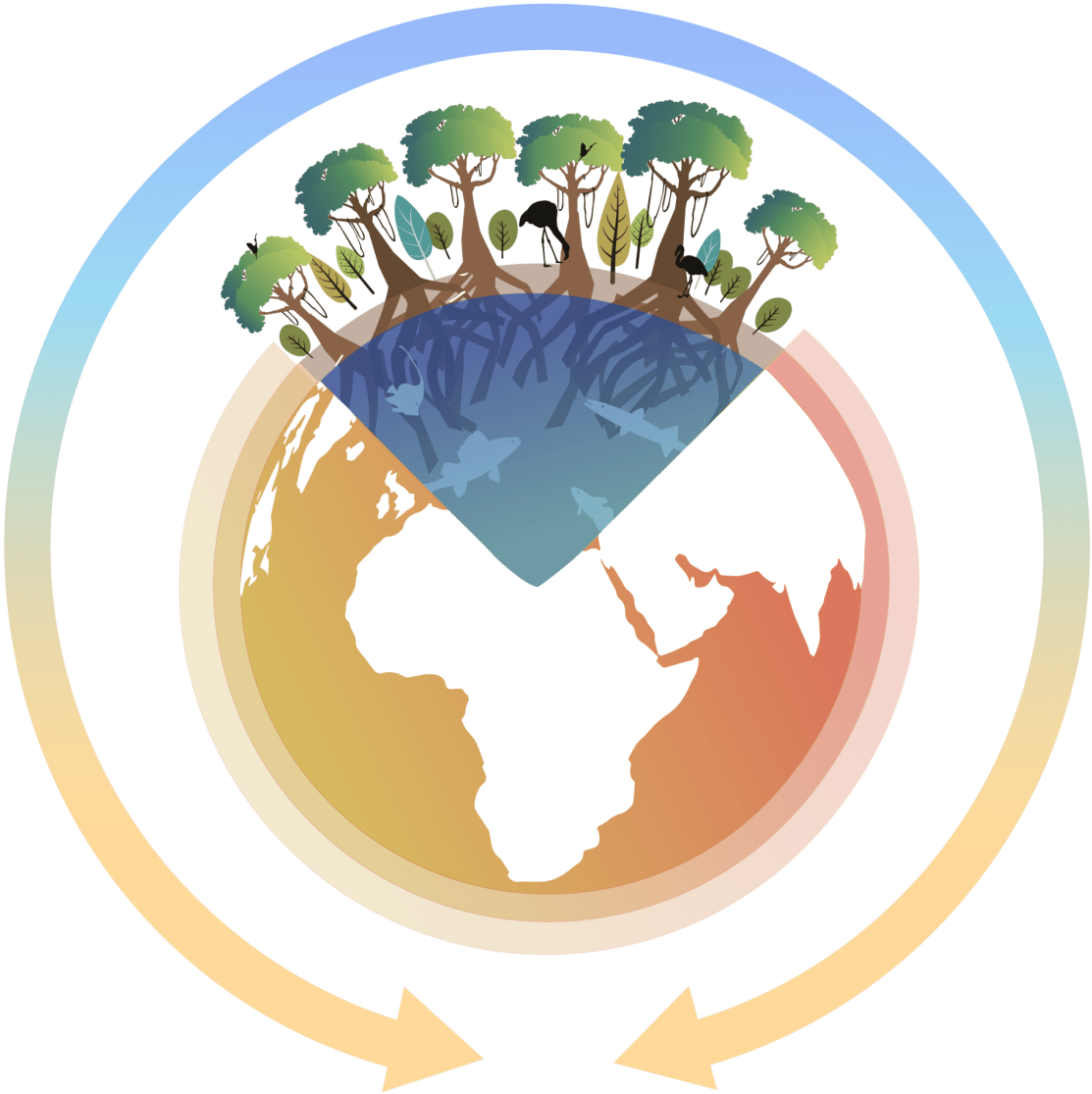

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Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at Terraformation, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**VP of Research and Development**
Previously research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Special Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

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BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe.** Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

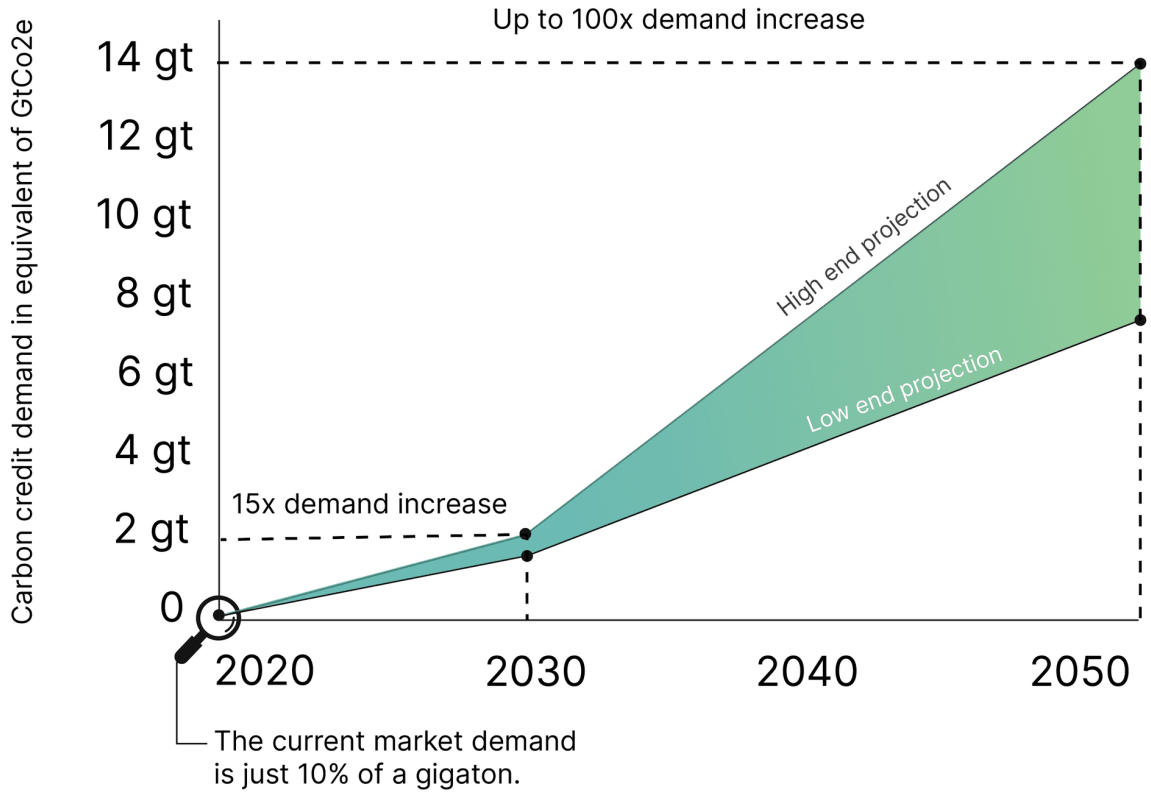
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

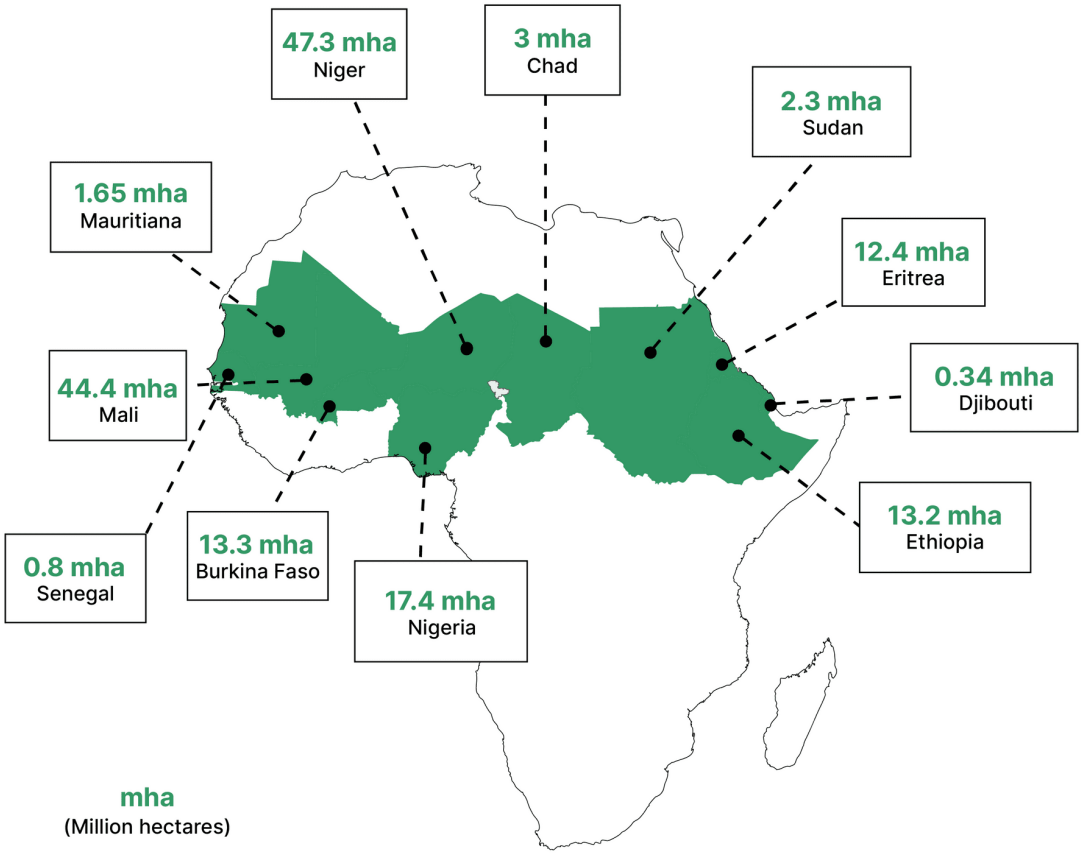
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join current investors at the same valuation terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

**Sundeep Ahuja**
Climate Capital
Founder/Investor/Author

It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

**Apollo is looking to invest in companies that can affect climate change at a massive scale, in a cost efficient manner.** Planting hundreds of millions of trees is one

**Max Altman**
Apollo Projects

of the most effective ways of accomplishing this. It's going to be a huge undertaking, but **we believe Terraformation has assembled the best team to do this.**

**Joe Lonsdale**
Co-founder, Palantir, 8VC

There are no great regulatory, top-down solutions to the challenges we face — only bad choices and difficult trade-offs. But if we turn to entrepreneurs and technology, we see innovative solutions can help the environment and the economy while also lifting up millions of lives — **Terraformation is a great example of the type of thinking we need!**

**Marc Benioff**
Chair & CEO Salesforce
Founder of 1T.ORG

Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

**He founded Terraformation to incubate, inspire, and share solutions to those challenges.**

## Team

| | | |
|---|---|---|
|  | Yishan Wong | Founder and CEO |
|  | Jill Wagner | Chief Forestry Officer |
|  | Yee Lee | VP of Growth |
|  | Huey Lin | Special Projects |
|  | Dr. Marian Chau | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
|  | Ethan Cary | VP of Manufacturing |
|  | Margaret Morales | VP of Communications and Marketing |
|  | Christian Torres | Forestry Partnerships, Latin America |
|  | Dr. Victoria Meyer | Carbon Scientist |
|  | Dr. Yacin Bahi | VP of Research and Development |

## Perks

| | |
|---|---|
| **$50** | Limited edition t-shirt for Terraformation Series A investors |

## FAQ

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

| | |
|---|---|
| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

Republic

| | |
|---|---|
| **Company Name** | Terraformation |
| **Logo** | |
| **Headline** | Hyperscaling forest restoration to reverse climate change |
| **Hero Image** |  |
| **Tags** | Eco, Cleantech, B2B, Natural resources, B2G, $10M+ raised, Power Founders, Notable Angel backing |
| **Pitch text** | |

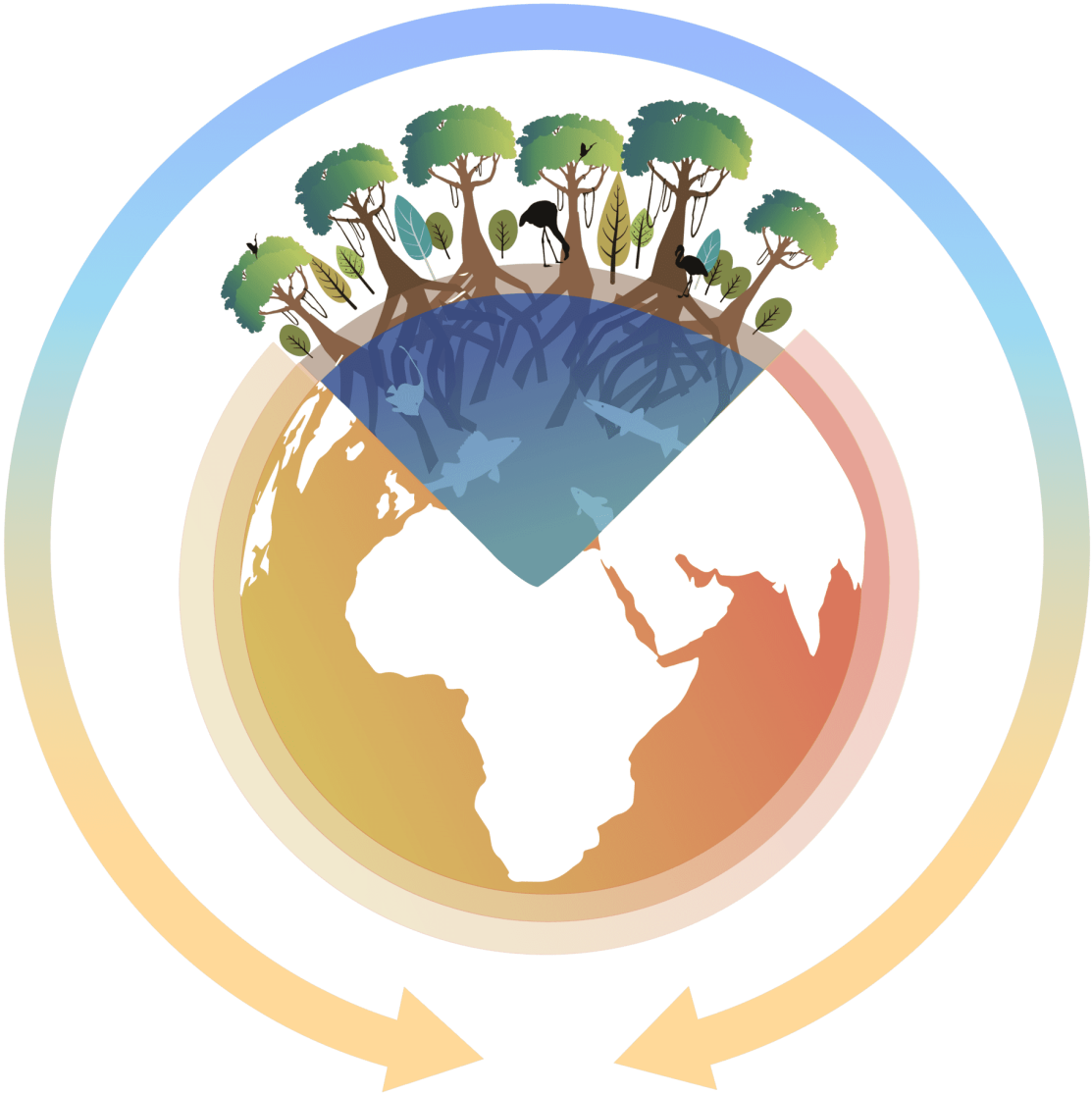


## Summary

- Restoring some of the world's rarest dry forest ecosystems
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
- Completed $5M Series Seed, $30M Series A
- Existing investors incl. Naval Ravikant, Apollo Projects, and Lachy Groom

## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at **Terraformation**, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

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As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

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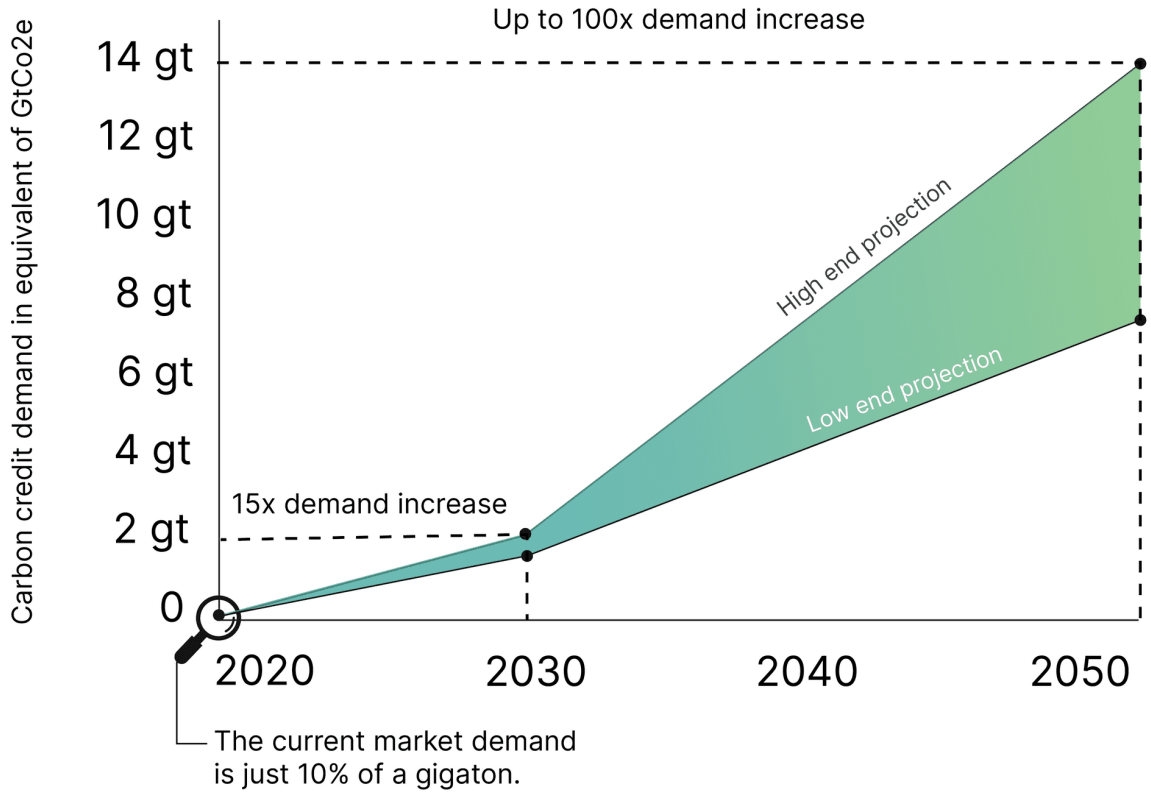


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**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

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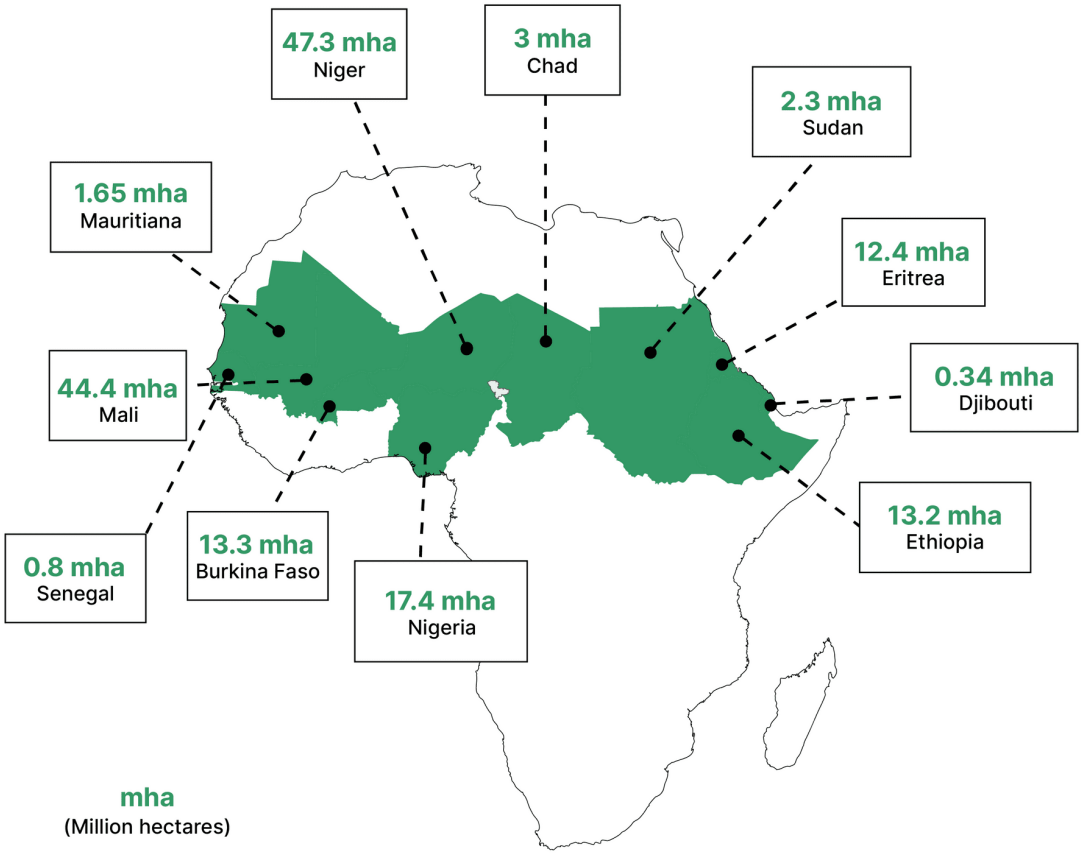


**Competition**

## We can't do it alone

### Cooperation is the key to net zero

In Hawai'i, there is a saying: "A'ohe hana nui ke alu 'ia," which means "No task is too big when done together by all."

To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

Our business is built on collaboration, accessibility, and cooperation. There's more than enough work to go around.

**Vision**

## Together, we can reverse climate change

What's more audacious than re-growing 3 billion acres of forest to save our planet?

Doing it with everyone else.

Ultimately, solving climate change will not be about technology. It will be about cooperation and scalability.

This is our moment.

### Investors

## Join our $30M Series A

Terraformation raised **$5M in Series Seed financing in 2020.** Our goal was to create an organization that could immediately deploy tens of millions into planting trees or creating systems to accelerate the planting of trees within a year.

After reaching that goal, we've raised **$30M in Series A financing** this year prior to our Republic campaign.

Terraformation is a company working for everyone on the planet; and we want as many people as possible to be able to join us in our journey and share in our long-term success.

With this fundraising campaign on Republic, we want to give everyone else the chance to join current investors at the same valuation terms.

**Investor quotes**

**Susan Wu**
Angel Investor/Activist

**Climate change management is the most urgent, existential risk facing humanity and Terraformation is the team best positioned to help address this at scale.** Massive reforestation is one of the most robust and proven solutions for carbon sequestration, as well as a fundamental, incontrovertible building block to ensuring a future for humans on Planet Earth. We can all join forces to support Terraformation — whether it be through grassroots activism, local reforestation efforts, educating our communities, or through equity investment.

**Sam Altman, CEO**
Apollo Projects, CEO Open AI,
Former President Y Combinator

The simplest solutions are often the best ones, particularly when they have sufficient scale. Yishan is a bold leader. **Plant more trees and let's get out of this mess.**

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It's difficult to fathom the scale of climate change, and so it's difficult to conceive of an adequate solution to address it. While there are many efforts underway, each of them needed and important, **I was excited to support the scale at which Terraformation is approaching the problem.**

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Climate change is accelerating not just from emissions but also by the deforesting of 3 trillion trees—over half of the trees on our planet are now gone. We must race to replant 1 trillion trees, which can sequester 200 GT of carbon. That's why **I am so excited about a great Ecopreneur like Yishan, who has taken on the audacious goal of global reforestation.**

**Founders**

## Meet our Founder and CEO: Yishan Wong

**Yishan Wong**

CEO and Founder of Terraformation

> **The unique contribution Silicon Valley brings to solving climate change isn't some fancy gadget or magical new technology. It's scalability – the organizational business practice of quickly and reliably growing small, proven solutions into enterprises that encompass billions.**

Yishan Wong founded Terraformation with a vision to bring Silicon Valley's expertise in rapid growth to the climate movement.

He previously served as **CEO of Reddit, Director of Engineering at Facebook**, and was an early engineer at PayPal.

In 2019, Yishan partnered with forest restoration experts working with some of the rarest dry forest ecosystems in the world to identify key bottlenecks slowing this climate solution.

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|  | Yishan Wong | Founder and CEO |
|  | Jill Wagner | Chief Forestry Officer |
|  | Yee Lee | VP of Growth |
|  | Huey Lin | Chief Operating Officer |
|  | Dr. Marian Chau | Head of Seed Banking |
|  | Dr. Ruth Bone | Forestry Partnerships |
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## Perks

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| **$50** | Limited edition t-shirt for Terraformation Series A investors |

## FAQ

**How does Terraformation help solve climate change?**

Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

| | |
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| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

Republic

| | |
|---|---|
| **Company Name** | Terraformation |
| **Logo** | |
| **Headline** | Hyperscaling forest restoration to reverse climate change |
| **Hero Image** |  |
| **Tags** | Eco, Cleantech, B2B, Natural resources, B2G, $10M+ raised, Power Founders, Notable Angel backing |
| **Pitch text** | |

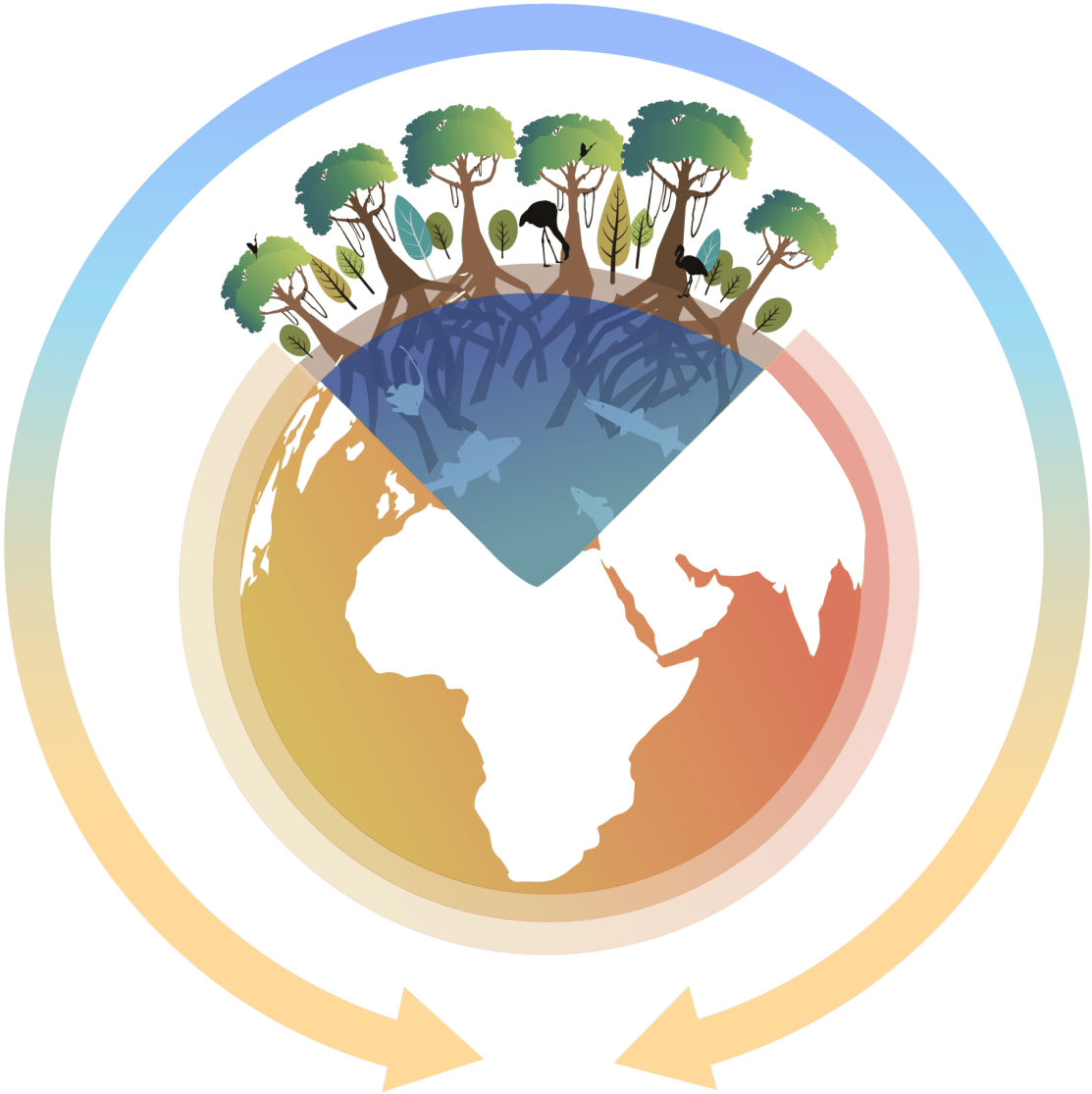


## Summary

- Restoring some of the world's rarest dry forest ecosystems
- Built world's largest, 100% solar-powered, off-grid desalination system
- Featured in Fast Company, New Scientist, and The Guardian
- Completed $5M Series Seed, $30M Series A
- Existing investors incl. Naval Ravikant, Apollo Projects, and Lachy Groom

## Problem

# Climate change is happening now, and we aren't doing enough to stop it



**There's already too much carbon in the atmosphere:** we need a scalable carbon removal solution, and we need it this decade.

But carbon capture technology isn't ready.

Our planet requires a solution with simple, proven components, ready to **scale at a rate we've never seen before.**

### Solution

## Our Earth's natural carbon capture system: forests


Compared with other studied carbon removal systems, native forest ecosystems are the most effective, cheap, and scalable. They pull carbon from the atmosphere, and store it in biomass and soils.

They've undergone millennia of field testing, run on sunlight and water, and come in unique models adapted to nearly every place on Earth.

They work.

But human development has destroyed nearly half of the Earth's native forests. Replanting 3B acres of degraded forest land could capture well over 10 gigatons of CO2 every year, making forest restoration the largest natural carbon sink available.

**We use hyperscaling growth techniques to make this climate solution a reality.**

**Product**

## Forest as a service


Terraformation

We're creating **accessible, low-cost, and off-grid solutions** to the biggest reforestation challenges.

1. **Seed supply:** A trillion trees will require two to three trillion seeds. We're revolutionizing seed banking with modular solutions we can deploy to project sites in off-grid locations.

2. **Training and equipment:** We're developing a global platform that provides project planning, management, and monitoring tools alongside localized learning resources, designed to train restoration specialists and sustain forest ecosystems for the long term.

3. **Funding:** Almost every restoration project is undervalued and underfunded. Our goal is to create standardized financial products that funnel capital towards restoration.

4. **Land and water availability:** Newly affordable solar-powered desalination can purify water in arid regions, making it possible to restore even highly degraded and desertified land.

**Our Team**

## Together, we can change our future

Our international team includes top-level Silicon Valley founders and engineers; foresters with decades of field experience; working PhDs in seed banking, botany, soil, carbon monitoring, applied mathematics and robotics; and entrepreneurs who've built businesses from the ground up.

**Jill Wagner**
**Chief Forestry Officer**
Director of Hawai'i
Island Seed Bank

I believe that we can change the world by planting trees and taking care of the planet. This is our mission at **Terraformation**, and it is **the most life-affirming work I could possibly do.**

**Yee Lee**
**VP of Growth**
Ex-Facebook,
Google, TaskRabbit,
Skype, and PayPal

Terraformation for me is much more than a company.  It's an **expression of hope and confidence in humanity** — that we can accomplish incredibly ambitious plans like growing 1 trillion trees and together overcome the most harrowing global challenges, like climate change.

**Dr. Yacin Bahi**
**VP of Research and Development**
Previously research scientist at security, AI, and music companies

I'm a mathematician. I'm grateful to work alongside forestry experts, engineers, botanists, and finance experts all over the world every day. I believe that together, our team will help support **a global wave of forestry restoration that can plant enough forests to solve climate change.**

As a scientist, I find great joy applying my skills to help solve climate change. **My work at**

**Dr. Victoria Meyer**
**Forestry Carbon Scientist**
Former NASA Jet Propulsion Lab researcher

climate change. **My work at Terraformation allows me to have a direct impact, not only on the planet, but also on communities around the world.**

**Huey Lin**
**Special Projects**
Ex-PayPal, Affirm, Flexport

I am overjoyed to join forces with my friends at Terraformation to **empower communities around the world with the tools, knowledge, and resources to unlock trillions of dollars of economic value by reforesting planet Earth.** We are all feeling the 'heat' and I am elated to get to do something about it.

**Traction**

## Restoring some of the rarest ecosystems on the planet

Our flagship restoration sites on Hawai'i Island prove **it's both possible and affordable to restore forests even in degraded and desertified land.**

We're using new, scalable solutions to make this happen, including long-term native seed collection, rigorous data collection, and innovative freshwater supply solutions.

Dramatic recent improvements in solar panel efficiency make it possible to purify water with off-the-shelf systems deployed on a mass scale.

**We've built the world's largest 100% solar-powered and off-grid desalination system.** Our system creates 34,000 gallons of freshwater every day, enough to support thousands of trees.

Our work has been featured in:

THE INDEPENDENT GreenBiz Forbes

BUSINESS INSIDER

TechCrunch

### Customers

## Invest in a forestry partner today, and they can capture carbon tomorrow

Forests are a carbon capture solution ready to scale now. Our aim is to support restorationists around the globe to plant the forests we need to reverse climate change.

In addition to our 5 pilot restoration sites on Hawai'i Island, we're **developing projects in collaboration with local organizations across the globe**. Locations include Ecuador, Haiti, India, Tanzania, Uganda, and Ukraine.

We welcome partnerships with any entity committed to native ecosystem restoration, including **individuals, communities, non-profits, companies, and governments** across the globe.

### Business Model

## A carbon capture tech that generates revenue

Restored sites yield multiple revenue streams, including:

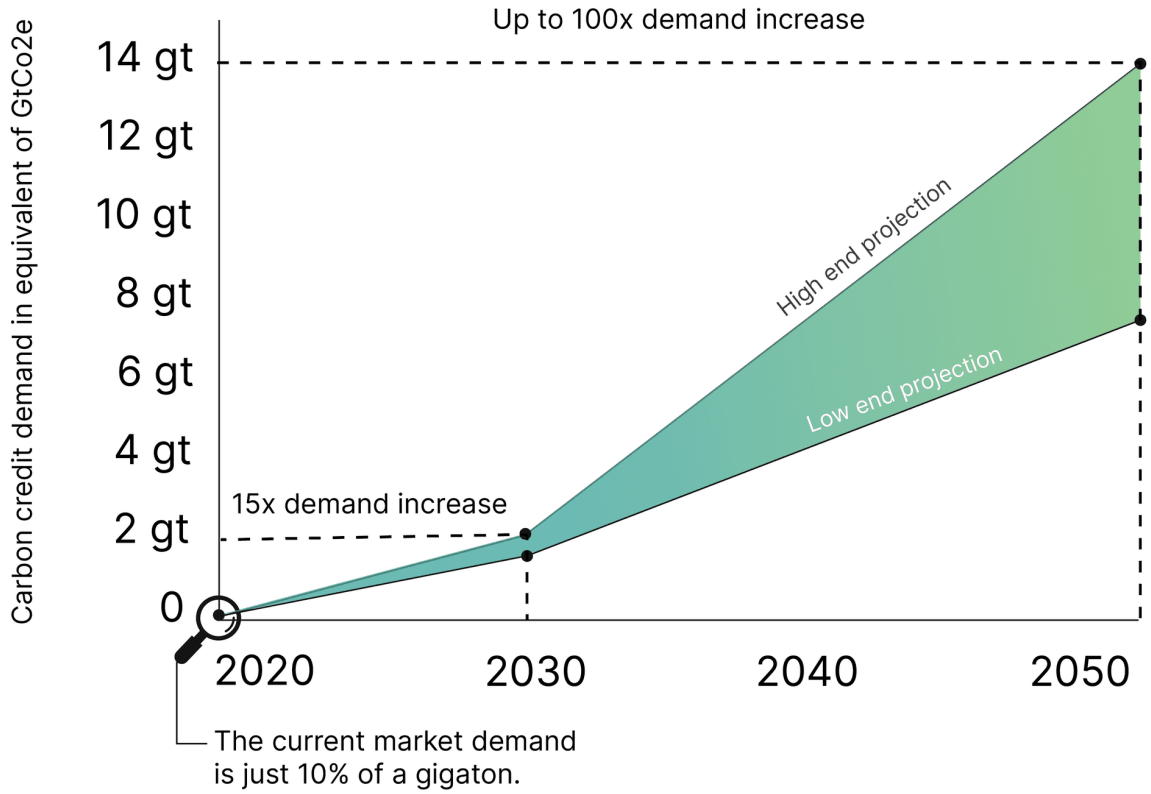
**agroforestry**
**silvopasture**
**sustainable timber**
**carbon credits**
**solar & water utility services**
**real estate subdivision**
**and local employment**

Unlike most carbon capture tech, forest restoration generates revenue through a variety of products and services. We're building a new industry to accelerate the restoration economy.

Our business model combines these revenue streams to help partners acquire financing and establish profitable, standalone sustainable forestry businesses. These businesses, in turn, support local jobs and economic opportunity.

**Global demand for voluntary carbon credits could increase 15x by 2030 and 100x by 2050, expanding revenue opportunities from restoration.**

## Projected 100x increase in carbon credit demand




https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge#

**Market**

## >700M acres committed, and counting

International agreements such as the **Bonn Challenge** and the African-led **Great Green Wall Initiative** create a substantial existing market for forest restoration services. In some nations, such as Brazil, laws require private landowners to restore damaged or degraded land.

**All told, countries around the world have committed to restore over 700M acres of land.**

It's just the beginning.

The benchmarked, time-sensitive nature of these commitments demands a highly scalable approach – **Terraformation's greatest strength.**

## Some existing commitments for restoration around the globe:

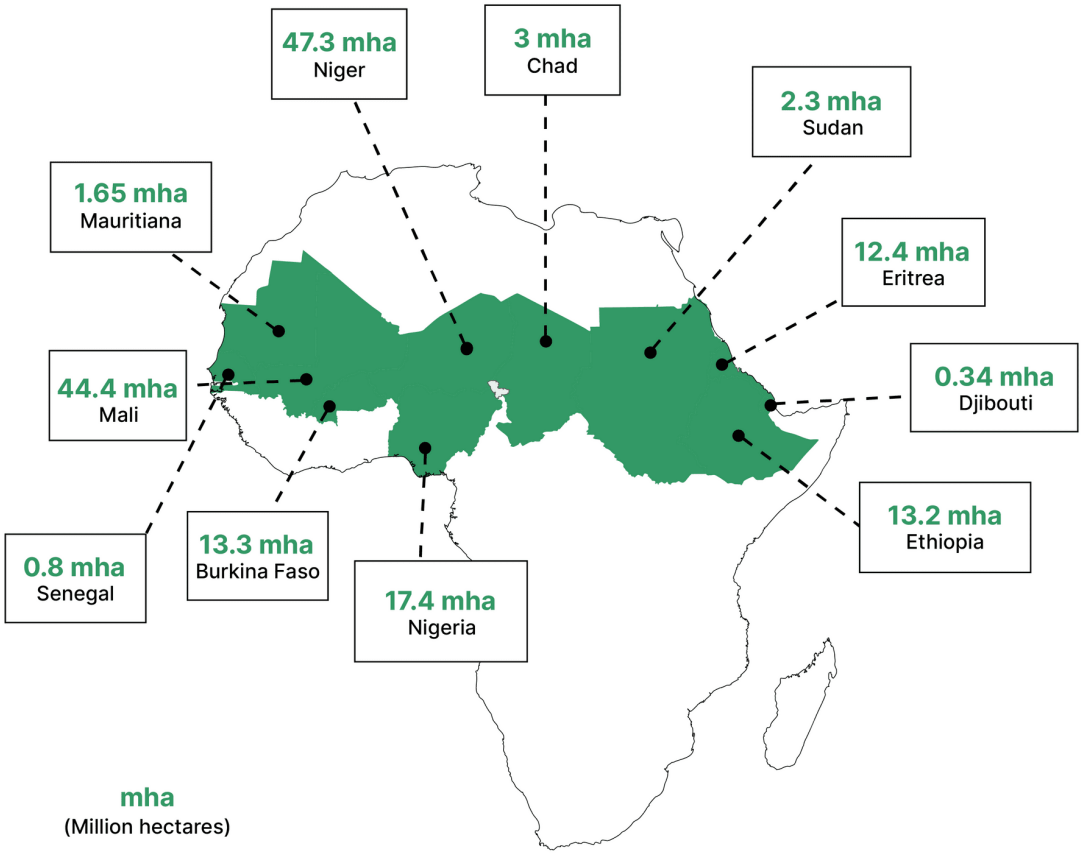
# Initiative 20x20

Restoring 50 million hectares of degraded land in Latin America & the Caribbean by 2030.

Over $2.5B in private capital commitments

# The Great Green Wall of Africa

Restoring 100 million hectares of degraded land in the Sahel by 2030




**Competition**

## We can't do it alone

### Cooperation is the key to net zero

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To pull off a global-scale project, we'll need to inspire thousands of forest-first businesses, all rapidly innovating and pushing forward to supercharge the movement.

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Reforestation is the most cost-effective, safe, and immediately scalable carbon capture solution. Our mission is to catalyze the restoration of 3 billion acres of native forest in the next decade to reverse climate change.

We focus on solutions to the rate-limiting factors that slow restoration and lead to high project failure rates. The five largest bottlenecks are: freshwater shortages, inadequate seed supplies, inefficient workflows, lack of on-the-ground technical expertise, and insufficient financing.

We have developed and tested a suite of tools and services to solve these bottlenecks across diverse locations. These include:

- solar-powered desalination to irrigate desertified regions
- shippable, modular seed banks to safely store seeds and protect viability
- open-source software to optimize team work flows
- technical training and site-specific forestry planning
- project financing
- carbon credit consulting

**Isn't it better to reduce fossil fuel emissions?**

A full climate solution will require **both** a clean energy transition and carbon capture.

Curbing emissions is very difficult. Some technologies, like aircraft, will be particularly challenging to power from renewable energy. Even extremely ambitious national plans only aim to reach net zero by 2040 or 2050. And then, we'll still need to remove the existing surplus of carbon dioxide in the atmosphere to reduce climate impacts.

Carbon drawdown from reforestation can help offset those emissions, closing the gap between current reduction efforts and the rapid climate action we need.

**What about other carbon capture technologies?**

Direct-air carbon capture, bio-energy with carbon capture (BECCS), olivine weathering, and regenerative agriculture all offer promising carbon drawdown opportunities. But none of these technologies are as thoroughly tested, low-risk, or immediately scalable as reforestation.

Time is not on our side. Climate models show that to limit irreversible impacts of global warming, we'll need to massively increase carbon drawdown this decade. That means we must employ every strategy we can, especially those that are immediately deployable, and scale them as quickly as possible, even as we develop new technologies.

**Can't we just find the fastest-growing trees and plant lots of those?**

While plantations of fast-growing trees can grow and sequester carbon rapidly in the short term, in the long term they provide less efficient and resilient carbon sinks than multi-species native forests. Hard-won lessons over the past few decades have taught us that monoculture plantations, especially of non-native species, don't result in long-term, sustainable carbon sinks.

Native tropical and subtropical forests can hold 42x more carbon per hectare than plantation forests. They're also more resilient against pests, disease, and extreme weather conditions than single-species tree plantations. This means that the carbon they sequester is more secure. Native-species forests also support two to three times as much biodiversity as plantation stands.

Non-native species can also disrupt local water cycles by sucking up much more water than native species, which are uniquely adapted to their ecosystems. Overtaxing water supplies can lead to high tree mortality in the long term, as well as hurt communities that depend on local water supplies.

Despite the huge benefits of native species forests, nearly half of current global tropical and subtropical forest restoration commitments are for single-species commercial tree plantations. For a resilient climate solution, we need to shift the mix of restoration projects toward native-species forests.

**Aren't trees too slow?**

It will take about 30 years to plant the forests we need and give them time to sequester billions of tons of CO2 as they grow. Though 30 years may sound like a long time frame, it's much shorter than the time it would take to bring any other carbon capture solution to scale.

Forests are already a proven carbon capture solution. No other proposed carbon capture technology is ready to deploy at scale today. Many of the proposed technological solutions appear to offer quick fixes, but none are yet commercially mature. This process can take decades; once mature, technological solutions will face the same massive scaling challenges that face restoration. In contrast, restoration is already commercially mature, and faces *only* the remaining scaling challenges. For an extended discussion of this technology-deployment timeline issue, see this insightful discussion.

**Is there research on the climate benefits of reforestation?**

Lots! Researchers around the globe continue to refine estimates of the climate and ecosystem benefits of large-scale reforestation. Some of the most compelling recent studies address natural forest regeneration, the potential of global tree restoration, the carbon accumulation potential of natural forests, and priority areas for ecosystem restoration.

Check out some of the most recent studies:

**2017**

- Natural climate solutions. *Proceedings of the National Academy of Sciences*. October 2017. (here)

**2019**

- Regenerate natural forests to store carbon. *Science*. April 2019. (here)
- The global tree restoration potential. *Science*. July 2019. (here)

**2020**

- Carbonshot report. *World Resources Institute*. January 2020. (here)
- A "global safety net" to reverse biodiversity loss and stabilize Earth's climate. *Science Advances*. September 2020. (here)
- Mapping carbon accumulation potential from global natural forest regrowth. *Nature*. September 2020. (here)
- The global forest watch map. *The Nature Conservancy and World Resources Institute*. September 2020. (here)
- Global priority areas for ecosystem restoration. *Nature*. October 2020. (here)

**Most trees in reforestation projects die before they reach maturity. How will you avoid this?**

Many projects focus on planting fast-growing, single-species tree plantations. While these projects offer some short-term economic opportunities, they suffer from high failure rates and a lack of ecological stability.

The early growing years are the most critical for a restoration project. In highly degraded landscapes, the overstory that protects young saplings doesn't exist. This leaves them particularly vulnerable to drought, invasive species, disease, pests, overgrazing, and wildfire. Yet once established, structurally complex native ecosystems are far more resilient than plantations to weather and environmental variations sure to occur over decades of growth.

We provide partners with the tools, training, and financing to properly establish and support native-species projects through the critical early years and beyond. In particular, solar-powered desalination, combined with a focus on native species adapted to a specific location, makes it possible for plants to survive the critical early years and reestablish a self-sustaining ecosystem.

**If it's so simple, why hasn't someone done it yet?**

Planting a tree sounds easy. But restoring an ecosystem is not. It requires specific ecological knowledge, the right tools, early-stage financial support, and long-term management.

Finding native seeds poses the first huge challenge. Centuries of unsustainable land use have rendered many native species extremely rare. That means restorationists have to collect seeds from the wild, often from difficult-to-access locations, and then store them in stable, climate-controlled conditions to keep them viable. Forest creators must carefully tend and monitor the saplings for years, guard against invasive species and pests, and protect the trees from premature harvesting.

Moreover, the ability to irrigate otherwise inhospitable and arid areas was not possible until 2018, when solar prices dropped to a critical threshold that made 100% solar-powered desalination possible. This unlocked the final piece of the puzzle, enabling restoration of potentially billions of additional land acres that had once supported forests but, whether through disaster, drought, or human intervention, degraded to a point that forests could not naturally regenerate. We can now reverse this degradation through active restoration, supported by supplemental freshwater in the critical early establishment years.

It's not simple, but it is possible. Terraformation provides detailed and location-specific training, tools, and resources to overcome each of these challenges, helping partners establish ecosystems that will thrive for generations.

**Don't we have freshwater shortages?**

Yes, and freshwater shortages pose enormous challenges to large-scale forest restoration, particularly in dry regions. Planting swaths of new trees in water-constrained regions can overdraw existing supplies on which local communities depend.

Reverse osmosis (RO) can purify nearby brackish or saltwater sources to provide supplemental water, solving the water shortage and accelerating ecosystem restoration. While previously considered too energy-intensive to be economical, rapidly declining solar prices now make it possible to do this on a very large scale in many parts of the world.

This is exactly what we are doing at our pilot restoration site on Hawai'i Island. We're running the world's largest off-grid, 100% solar-powered desalination system and using it to accelerate the restoration of a Hawaiian dry tropical forest ecosystem. You can read more about how solar-powered desalination is making this restoration possible in this article.

**Isn't reverse osmosis, or desalination, expensive and energy-intensive?**

Until recently, reverse osmosis (RO) was quite expensive, and most systems were coal- or gas-powered, which would have negated most or all of the carbon benefit of the new forests they irrigated. However, in 2018, something really important happened: the cost of solar power dropped below that of coal and gas. This unlocked an opportunity to sustain reforestation projects in areas with freshwater shortages via solar-powered desalination.

Desalination is ideally suited to intermittent renewable power sources like solar and wind. With most residential or commercial projects, users need power around the clock, necessitating expensive batteries to store the generated power. But with desalination, we can simply desalinate water when power is available and store it in inexpensive tanks for irrigation around dusk or whenever appropriate. This enables us to leapfrog the solar energy transition for desalination years ahead of residential or commercial applications.

**Doesn't desalination dump toxic effluent?**

Reverse osmosis filters two gallons of seawater to produce one gallon of freshwater and one gallon of double-salty effluent. Desalinating seawater to irrigate plants produces this effluent, but it contains none of the purifying chemicals required to produce potable water for human consumption. It has only the stuff that was in the water in the first place. Still, dumping the higher-salinity water just off the shoreline can be harmful to near-shore marine life.

Working with brackish water, rather than ocean water, requires less energy and reduces the salinity of the effluent. Instead of sourcing water directly from the ocean, we can drill a shallow well a few hundred feet from the ocean to reach brackish water—sort of like digging a hole in the sand at the beach until you reach water. At our pilot site, the brackish water is about 25% the salinity of seawater and the effluent only 50%.

There are currently two standard ways to safely dispose of this effluent. In some cases, it can irrigate additional forest acres of salt-tolerant species; this is what we do at our pilot site in Hawai'i, but it's not a solution that will work everywhere, as it's highly species dependent. The more scalable option is to build a long pipe and disperse the effluent in deeper water, away from the shore, where marine life is much sparser. Studies from Israel's Ministry of Environment showed minimal ecological damage from this disposal method.

Desalination is becoming increasingly efficient and could resolve this problem in the near future. Some desalination systems can already reach levels of efficiency that consolidate the salts into a solid "puck" for safe disposal (or even commercial use), but this technology is not yet scalable.

**How do you make money?**

We sell five services, each designed to solve a key bottleneck to forest restoration. These services include:

1. **Financing**: We connect partners with sources of financing to cover project startup costs.
2. **Technology**: We sell a suite of tools that scale restoration projects. These include solar-powered modular seed banks to establish local native seed supplies, nursery build kits to optimize project efficiency, and design support using industry-leading solar-powered desalination technology to reduce water constraints. We are also developing a series of free, open-source software applications designed to help partners track progress and align workflows from seed collection through forest maintenance.
3. **Project planning:** We plan site-specific and ecologically appropriate projects based on soil analysis, botanical surveys, and other microclimate and local market data.
4. **Training**: We train teams in seed collection, nursery management, horticulture, and forestry to improve workflow efficiency.
5. **Business consulting**: We help partners plan and establish sustainable forest-product businesses based on revenue from carbon credits, agroforestry, silvopasture, and ecological silviculture.

**Who do you partner with?**

We work with public- and private-sector landowners, including family offices, nonprofit organizations, cooperative landowners, land trusts, corporations, and governments.

**What about indigenous and local communities?**

Community land tenure promotes forest conservation and reduces both clearing and disturbance. Many indigenous cultures have deep knowledge of the unique ecology of their lands, developed over generations, and advanced techniques for managing it sustainably. With respect for this wisdom, Terraformation aims to support these communities and not interfere with their stewardship of their land.

| | |
|---|---|
| **How do partners benefit?** | Partners see tangible environmental and economic benefits from restoring their degraded land. As their stands grow, partners may generate revenue from carbon credit sales, increased agricultural productivity, reduced water-treatment costs, and sustainable harvest of timber and other forest products. The regenerated forests also provide a host of indirect economic benefits in the form of cleaner air and water, flood control, improved property values, and many other ecosystem services. In areas where Terraformation assists in deploying solar power and desalination capability, these systems are likely to produce excess power or freshwater, both of which can supplement local utility services. |

**From:** **Margaret Morales** margaret@terraformation.com
**Subject:** We'll be crowdfunding later this summer! Here's how you can help.
**Date:** July 22, 2021 at 2:30 AM
**To:** all all@terraformation.com

Hi Terraformation!

Later this summer, we'll be launching an equity crowdfunding campaign. This is an exciting opportunity for everyone to invest in our mission, with a minimum investment of just $50.

We've just launched a pre-campaign phase to allow friends, family, and followers to reserve a place in line before the campaign goes live later this summer. At this time, we can't accept investments, only early interest reservations. You can check out our 'test the waters' page here*!

Successful crowdfunding will take the whole team. And we'd love your help in spreading the word. **But to comply with certain legal requirements during this early reservation phase, we have to follow communication guidelines and keep track of every time we publicly share the news.**

📣**So right now, the best way to share the news with your friends and family is to just reshare posts from our social media channels!**
We'll make sure all those posts are 100% compliant. (Below, you can check out the official disclaimer language we need to include in all communications about our pre-sale). **For now, please hold off on writing more personal messages** - we'll ask you to do that in a few weeks' time!

We're thrilled to have this opportunity for folks to support our mission by becoming Terraformation investors. We'll be sending you updates and asking for your help as the campaign progresses.

If you have any questions, please feel free to reach out!
Margaret

A note from Republic on what it means to reserve an investment in equity crowdfunding.

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Terraformation
reversing climate change with forests

**Margaret Morales**
VP of Communications and Marketing
margaret@terraformation.com
Terraformation.com

# It's Getting Hot in Here

Another year, another record. But we're not talking about the latest summer anthem blazing up the music charts. No — it's because 2021 is on track to be one of the hottest in history, *again*, according to NOAA.

Our climate is shifting rapidly. We can alter our future by supporting reforestation, the most effective, safe, and scalable carbon capture solution on Earth. Forests already absorb more than 7 billion tons of CO2 every year. We can massively expand this carbon sink by replanting the planet's forests.

How have we been holding ourselves accountable to our mission of accelerating global progress toward reversing climate change? Read on to find out about:

- The community in India we've partnered with to accelerate and scale their restoration work using durable, rapid-scale solutions.
- How **former NASA Jet Propulsion Lab** researcher — now Terraformation's carbon scientist — Dr. Victoria Meyer measures forest carbon.
- The path to reforesting Africa's Great Green Wall — an 8,000-kilometer band of degraded land across the Sahel — as told by guest authors from the **United Nations Convention to Combat Desertification.**
- Our first prototype low-cost seed blower from our manufacturing team.

## A New Global Partner in India

*SAP Germany technology professionals on a two-week social sabbatical program with Worldview Impact India. They are holding up a pineapple that will one day be harvested from Phase I of the rubber tree and pineapple intercropping system.*

The Eric Bremley Lyngdoh Agroforestry Project in Meghalaya, India looks to restore up to 50,000 acres of native forest throughout the state. Site partner Worldview Impact India is helping communities to replace common slash-and-burn agriculture with regenerative agroforestry systems. This year, we're supporting the restoration of 200 acres as a proof of concept for native forest restoration at this site. The project includes the planting of 20,000 trees in the first phase, reintroducing up to 16 native species.

## Who's Who at Terraformation

[Meet Dr. Victoria Meyer — Carbon Scientist]

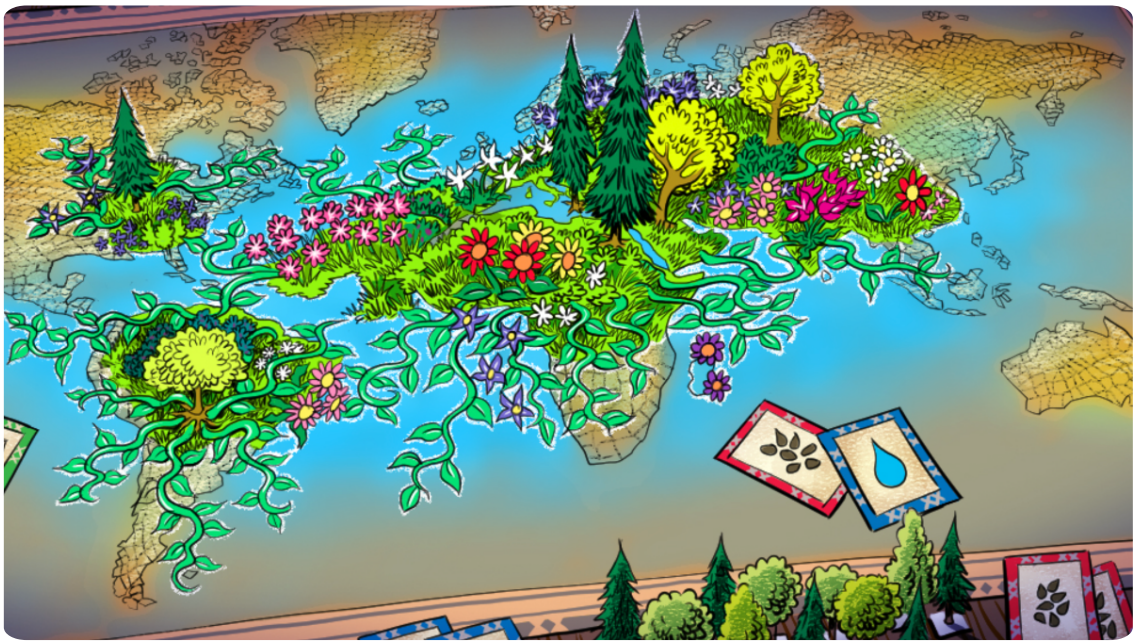
researcher measures forest carbon from the sky.

## Field Notes

### The Path to Reversing Desertification Begins Along Africa's Great Green Wall

By Sarah Toumi and Gilles Ouedraogo

*Monitoring Officers at the Great Green Wall Accelerator, United Nations Convention to Combat Desertification*



## Did You See?

This month, our hardware engineers demoed a low-cost seed blower prototype that could save forestry partners hundreds of hours in seed processing time.

## Join Our Mission

We're a diverse group of problem-solvers with a shared mission: saving the planet. Activating the most massive carbon drawdown effort on Earth will take an amazing team. We invite you to join us.

**Careers**

## What's on the Horizon

- We're launching our crowdfunding campaign next month. Reserve your investment in Terraformation on Republic,* alongside our Series A investors.
- We've been testing our first online forestry training classes with partners across seven countries. This month, we're releasing the first two classes in public beta — Seed Collection and Foundations of Seed Banking. Check them out!

**With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.*

Solving climate change will take more than an environmental movement—it will take a social movement.
Find out what we are up to on our social media channels as we help solve the
largest-scale problem humans have ever faced, together.

**Terraformation Inc.**
PO Box 3470, PMB 15777
Honolulu, HI 96801-3470
Add us to your address book

## Note -

Thank you to everyone who has already shared the news of our upcoming crowdfunding campaign with friends and family. We've gotten lots of reservations and we're off to a great start.

We'll remain in the pre-launch Test the Waters mode for at least a few more weeks. TTW for crowdfunding campaigns is a new feature the SEC rolled out this year, so there's not a lot of precedent for how companies navigate it. And it's especially complicated for us since we're larger than most startups that pursue crowdfunding. So, Ricky and I put together this guide to make it easy for you to share the news of the campaign.

During TTW, focus on direct outreach to your close networks. **This is also the time for any larger dollar investors to get in - we need to know about them now. If you're planning to reach out to anyone who you think would like to invest >$10k, this is the time.**

Once we're live, we'll be asking you to do much broader communications, so you won't be off the hook just yet :D

## The cheat sheet

| | **Stage 1**<br><br>**Test the Waters - now until full launch** | **Stage 2**<br><br>**Live campaign - likely beginning early Aug; we'll keep you posted!** |
|---|---|---|
| **Personal email** | **Ok - see directions below** | **ok!** |
| **Social media posts** | **No** | **ok!** |
| **Social media direct messages** | **Ok - see directions below** | **ok!** |
| **Reddit/community forum posts** | **No** | **ok!** |
| **Text messages** | **No** | **ok!** |
| **Asking others to share the news** | **No** | **ok!** |
| **Talking to media** | **No** | **ok!** |
| **Personal conversations** | **Ok - Limit to: TF will launch a campaign (see template** | **ok!** |

| | | |
|---|---|---|
| | **below)** | |

# Stage 1 - Test the Waters (7/22/21 until full launch)

## Who we're targeting

- Our close network and existing community (newsletter subscribers, your friends and family, etc) - this is our chance to make sure our biggest fans can invest in us before we go fully public;
    - want your daughter/mom/grandma to invest? Now is a great time to invite her.
- Any higher dollar investors in our network (>$10k) - this is their chance to get in; it will be harder later on
- We've shared the news with Terraformation team members
- Finally, we were lucky enough to get some really good podcast coverage last week; we had to handle the comms on that carefully, but it was a great opportunity with our target investor audience.

## What you can say right now:

The easiest thing to do is stay close to the template we made for you here.

If you want the weeds on TTW communications, read on:
1. Limit statement to TF launching a campaign on Republic. No mention of offer / deal terms (i.e. price / valuation etc.). Just mention the upcoming campaign and refer them to the TTW page (with the disclaimer banner at the end of the communication).

2. No forward-looking statements - don't predict what you can't promise
*You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts.*
*Skip words like "anticipate," "estimate," "expect," "project," "plan," "intend," "believe," "may," "should," "can have," "likely" and other words and terms of similar meaning in connection with any discussion of the timing or nature of future operating or financial performance or other events.*

3. Only true stuff - don't brag too much!

## Special things you have to do in Stage 1:

1. Include the disclaimer below, or link to it in Yishan's blog post.

2. We also have to capture it and record what you communicate. Keep in mind that every communications made during TTW will be public record.
--- easiest way to track is to BCC republic@terraformation.com on every email.

Disclaimer language:

**A note from Republic on what it means to reserve an investment in equity crowdfunding.**

*With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.

# Stage 2: We go fully live - here's where it gets easy! (Aiming for early Aug; We'll let you know when this happens)

## Who we'll be targeting:

1. Everyone!

Especially…
2. Traditional media
3. Audiences social media
4. Republic investors
5. And asking all networks to spread the news

## What you can say:

1. Only true stuff (don't brag with indefensible statements :))
2. No forward-looking statements - don't predict what you can't promise

## Special things you have to do:

1. Nothing. No need to include disclaimers, record, or disclose. Just GO FOR IT!

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Fwd: Terraformation

**'Celia Francis' via Republic** <republic@terraformation.com> Thu, Aug 5, 2021 at 9:15 AM
Reply-To: Celia Francis <celiafrancis@yahoo.com>
To: republic@terraformation.com

…

Begin forwarded message:

**From:** Celia Francis <celiafrancis@yahoo.com>
**Date:** 5 August 2021 at 14:15:01 BST
**To:** Brent Hoberman <brent@mydeco.com>
**Subject: Terraformation**

Hi Brent-

I hope your summer is going really well.

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

We're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

All updates and changes during the campaign will be communicated through the Republic campaign page, including an announcement when the campaign officially begins.

Sincerely,

Celia Francis
Celia@terraformation.com

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# # # #

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**'Celia Francis' via Republic** <republic@terraformation.com> Thu, Aug 5, 2021 at 9:12 AM
Reply-To: Celia Francis <celiafrancis@yahoo.com>
To: Tom Adeyoola <tomadeyoola@googlemail.com>, Zheela Quaiser <zheelaqaiser@gmail.com>, Hermione Taylor <Hermione@wearedonation.com>, Michelle You <michelle@gosupercritical.com>, Sammy Fry <sammyfry@technation.io>
Cc: republic@terraformation.com

Hi Tom, Hermione, Michelle, Sam, and Zheela-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

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# # # #

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Monday, July 26th

**Margaret** 7:23 AM

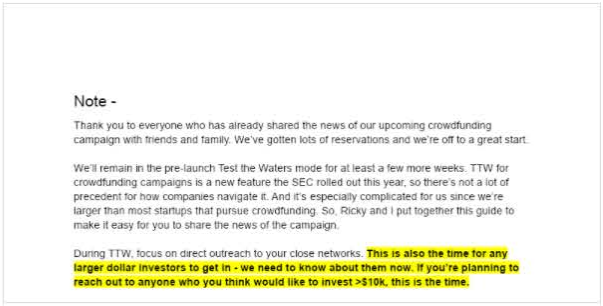
Hi all - I realize communication about our upcoming crowdfunding campaign is a little complicated/nuanced during our current Test the Waters phase. TTW is a new thing the SEC just rolled out this year, so there's not a lot of precedent for how companies handle it.

Ricky and I put together a guide to help answer your questions. Check it out:
https://docs.google.com/document/d/1aQD7ShmI9dnFU-bhXqfTuEHsGu56eARhyAGlCOccUD8/edit?usp=sharing

And thank you to everyone who has already shared the news - you've been great! And the response so far has been very strong and encouraging.

G Suite Document

**The definitive guide to communicating about crowdfunding**
Document from Google Drive



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Terraformation

## Reversing Climate Change Together
## Take This Next Step With Us on Republic

It's an exciting time at Terraformation! This summer, we're launching our crowdfunding campaign on Republic.

Terraformation is a company working for everyone on the planet, and we want as many people as possible to join us in the journey of reforesting our world.

Our crowdfunding campaign will make it possible for anyone to invest in our growth with a minimum investment of $50.

Before we announce this campaign to the world, we want to give you a chance to sign up early. Starting today, you can reserve your investment, and the perks that come with it, on Republic. Click on the button below to find out how you can be on the priority list to invest in us!

**Read More To Reserve Your Investment**

## In this Edition

You know we're on a mission to replant forests, but do you know what we're up against? Read below what four bottlenecks hold back natural climate solutions, meet one of our global forestry partnership leads, and help us hand you the news that you need.

## Curate Your Terraformation News

**Help Us Hand You the News You Need**

Everyone can be a part of restoring our planet's forests. We want to deliver information that can help you do that. Let us know what you want to read about so we can curate news specifically for you. Please take our ten-second survey below.

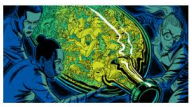
**Design Your News Now**

## Who's Who at Terraformation

**Meet Dr. Ruth Bone — Forestry Partnerships Lead**

Dr. Ruth Bone says partnerships begin with listening — especially when those projects are in diverse locations like Aotearoa New Zealand, Oman, and Zambia.

## Field Notes



**The Four Bottlenecks Holding Back Natural Climate Solutions**

**By Jill Wagner, Head of Forestry**

**The solution to these four bottlenecks: Access**

## Have You Connected With Us?

Climate change is not just an environmental movement — it is a social movement, too. Find out what we are up to daily with social media updates on our channels as we solve the largest-scale problem humans have ever faced, together. Follow us on Facebook, Twitter, Instagram and LinkedIn.

**From:** **Margaret Morales** margaret@terraformation.com
**Subject:** Republic crowdfunding soft launch
**Date:** July 21, 2021 at 8:48 PM
**To:** Yee Lee yee@terraformation.com, Huey Lin huey@terraformation.com, Jill Wagner jill@terraformation.com, Ethan Cary ethan@terraformation.com, Yacin Bahi yacin@terraformation.com, Benjamin Listwon ben@terraformation.com, Prem Lalvani prem@terraformation.com, Ricky Fong ricky@terraformation.com, Aubrey Vella aubrey@terraformation.com, Christina Cervantes christina@terraformation.com, Celia Francis celia@terraformation.com, Yishan Wong yishan@terraformation.com
**Cc:** Angela Jo Tu angela@terraformation.com

Hi all,

This week, we're starting a soft launch of our equity crowdfunding campaign on Republic.*

## Quick refresher:

**Our purpose in crowdfunding is twofold:**
1- to raise money (max of $5M)
2 - to give everyone an opportunity to join Terraformation's climate mission.

We've launched the campaign page in a private 'Test The Waters' mode (check it out!). TTW is an opportunity to gauge interest - **people can't actually invest yet; they can only 'reserve' an investment.** Once the campaign is live, anyone who made a reservation will need to confirm their investment to make it official.

Our actual launch is still several weeks out (we need to complete our audit + handle some other paperwork before we can take investments). Although we're not yet ready to accept money, strong early interest will help us build momentum for our official launch in a few weeks' time.

## So, we're ready for your help

For this campaign to succeed, we'll need all of Terraformation to get behind it.

**We're now ready for you to tell your networks  about our crowdfunding via email and direct messages.** Given that we're still several weeks out from going live, we're not yet ready for broader social media sharing. Save that for later!

Reach out to anyone who you think would be interested in our mission and may want to join us as an investor.
*[There are no investment limits for accredited investors; non-accredited investors can invest between $2k and $107k, depending on annual income and net worth.]*

**Before you start emailing/messaging, there are some things you need to do: (Ricky says: THIS IS VERY IMPORTANT!!! Because our crowdfunding is regulated by the U.S. Securities and Exchange Commission (SEC), we need to strictly comply with the following SEC regulations while we are still in Test the Waters mode)**

When you reach out during TTW, you must always do two things:

1. Include disclaimer language in any communication (it's at the bottom of this note);
2. Capture and record any unique communication about the campaign; our team must file all communications with our Form C.
    a. You can do this in a few ways:
        i. BCC republic@terraformation.com on any email you send directly
        ii. Save a copy of your communications in this folder on Google Drive

We've written a template memo for you to personalize for your networks; see it here.

If you have any questions, please email Angela, who is managing this process for the comms team, and update her on your communication (angela@terraformation.com).

That's it. Please help us spread the word!
We will update the whole TF team on this campaign very soon, but we'll ask folks to hold off on broader activation until we're a little closer to launch.

Warmly,

Margaret & Angela

# # # #

Include this language in all of your communications about our campaign at this time!

**A note from Republic on what it means to reserve an investment in equity crowdfunding.**

*With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.

Terraformation

terraformation.com

# We help plant native forests to reverse climate change.

Everyone can plant a tree. We help you grow a forest.

## What funding means for Terraformation

Learn more

## Join our equity crowdfunding campaign on Republic!

Reserve your spot now to invest alongside our Series A investors, at the same terms, for a minimum investment of $50. Support solving climate change with a simple, proven solution—reforesting our planet.

Learn more | Reserve your investment

**Jonathan Kim** **Author**
Maker

1w •••

https://republic.co/terraformation

Almost forgot to post this 😬. Also, disclaimer:

*With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.

Like · 3 | Reply

# Template: Memo From Execs to Potential Investors

**[NOTE: Please BCC republic@terraformation.com]**

Hi [NAME OF POTENTIAL INVESTOR],

[ENTER YOUR PERSONALIZE MESSAGE HERE, IF YOU CHOOSE]

We're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

All updates and changes during the campaign will be communicated through the Republic campaign page, including an announcement when the campaign officially begins.

Sincerely,
[TF EXEC NAME & EMAIL SIGNATURE]

**A note from Republic on what it means to reserve an investment in equity crowdfunding.**
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# # # #

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Climate Crowdfunding!

1 message

**Christina Cervantes** <christinamargaret@gmail.com> Fri, Jul 23, 2021 at 11:28 AM
To: christinamargaret <christinamargaret@gmail.com>
Bcc: republic@terraformation.com

Hi UU friends who I know care deeply about the environment!

See below for a unique opportunity to get involved as an investor with my current company! Click the link below to learn about what we are up to and let me know if you have any questions. :-)

We're equity crowdfunding on Republic.* We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

All updates and changes during the campaign will be communicated through the Republic campaign page, including an announcement when the campaign officially begins.

Sincerely,

Christina

Terraformation
reversing climate change with forests

**Christina Cervantes**
Chief of Staff
+1 (808) 633-8689
christina@terraformation.com
Terraformation.com

## A note from Republic on what it means to reserve an investment in equity crowdfunding.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Crowdraise reservations for Terraformation are now live

1 message

**Yishan Wong** <yishan@terraformation.com> Sat, Jul 24, 2021 at 8:13 PM
Bcc: republic@terraformation.com

See the blog post:
https://www.terraformation.com/blog/why-terraformation-is-crowdfunding-on-republic

Reservations page:
https://republic.co/terraformation

- Yishan

###

A note from Republic on what it means to reserve an investment in equity crowdfunding:

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Gmail **Angela Jo Tu <angela@terraformation.com>**

# Fwd: Terraformation

5 messages

**Celia Francis** <celia@terraformation.com> Thu, Aug 5, 2021 at 9:08 AM
To: republic@terraformation.com

Meant to copy you!

Begin forwarded message:

**From:** Celia Francis <celia@terraformation.com>
**Date:** 5 August 2021 at 14:08:11 BST
**To:** James Cameron <james.cameron3@me.com>
**Subject: Terraformation**

Hi James-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

We're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

All updates and changes during the campaign will be communicated through the Republic campaign page, including an announcement when the campaign officially begins.

Sincerely,

Celia Francis
Celia@terraformation.com

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**Celia Francis** <celia@terraformation.com> Thu, Aug 5, 2021 at 9:09 AM
To: Roberto Bonanzinga <rbonanzinga@balderton.com>
Cc: republic@terraformation.com

Hi Roberto-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

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Celia@terraformation.com

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**Margaret Morales** <margaret@terraformation.com> Thu, Aug 5, 2021 at 1:50 PM
To: Ricky Fong <ricky@terraformation.com>, Angela Jo Tu <angela@terraformation.com>

I think almost all of Celia's messages have the same text; my understanding from Ingrid is that we only need to submit one copy of each unique text, so we wouldnt need to add these additional messages to the zip file because they are identical to what we already submitted. Is that right?
[Quoted text hidden]

---

**Angela Jo Tu** <angela@terraformation.com> Thu, Aug 5, 2021 at 1:59 PM
To: Margaret Morales <margaret@terraformation.com>
Cc: Ricky Fong <ricky@terraformation.com>

From what I have saved on the drive/ZIP/Dropbox, all of Celia's email messages include the template but she also personalized each one with the exception of 6 emails (two slightly different copy but all have the disclaimer). They are all addressed to different people so I don't know if that would be taken into account as 'unique'.

Let me know so I can update the drive/ZIP/Dropbox, whether I am uploading or deleting files.
[Quoted text hidden]

---

**Ricky Fong** <ricky@terraformation.com> Thu, Aug 5, 2021 at 2:07 PM
To: Angela Jo Tu <angela@terraformation.com>
Cc: Margaret Morales <margaret@terraformation.com>

Andy did advise us to include those emails even if we were using a template. I'd rather err on the side of caution by being more inclusive of these communications than inadvertently missing a sentence here or there.
[Quoted text hidden]

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**'Celia Francis' via Republic** <republic@terraformation.com> Thu, Aug 5, 2021 at 9:13 AM
Reply-To: Celia Francis <celiafrancis@yahoo.com>
To: Terry Angelos <terry.angelos@gmail.com>
Cc: republic@terraformation.com

Hi Terry-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

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Sincerely,

Celia Francis
Celia@terraformation.com

**A note from Republic on what it means to reserve an investment in equity crowdfunding.**
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# # # #

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation crowdfunding

1 message

**'Jill Wagner' via Republic** <republic@terraformation.com> Fri, Jul 23, 2021 at 2:57 PM
Reply-To: Jill Wagner <jillwagner3@icloud.com>
To: Lauren Wagner <Lauren.Wagner@gmx.com>

Dear Friends and Family,

Join the Terraformation team by becoming an investor!

We're equity crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

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Sincerely,
Jill Wagner,
Jill@terraformation.com

We're thrilled to have this opportunity for folks to support our mission by becoming Terraformation investors. We'll be sending you updates and asking for your help as the campaign progresses.

https://republic.co/terraformation

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation Follow-up

1 message

**Yacin Bahi** <yacin@terraformation.com> Mon, Jul 26, 2021 at 6:48 AM
To: dominique@unit.city
Bcc: republic@terraformation.com

Hi Dominique,
It was great catching up with you last week.
I wanted to share more information on Terraformation with you and since we're preparing a campaign on Republic.co, I figured that the landing page would be a great way to update you on the company and our goals.
Let me know if you have any questions.
Looking forward to hearing from you

--YB

---

We're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

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Sincerely,
--YB

Terraformation
reversing climate change with forests

**Yacin Bahi, Ph.D.**
VP of Research and Development
+1 (650) 305 9222
yacin@terraformation.com
Terraformation.com

Terraformation

reversing climate change with forests

**Yacin Bahi, Ph.D.**
Head of Forest Tech
+1 (650) 305 9222
yacin@terraformation.com
Terraformation.com

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation update

1 message

**Yacin Bahi** <yacin@terraformation.com> Mon, Jul 26, 2021 at 7:03 AM
To: Adam Beguelin <beguelin@gmail.com>
Bcc: republic@terraformation.com

Hi Adam,
hope you are well, I wanted to share with you that we're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

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Cheers,
--YB

Terraformation
reversing climate change with forests

**Yacin Bahi, Ph.D.**
VP of Research and Development
+1 (650) 305 9222
yacin@terraformation.com
Terraformation.com

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation update

1 message

**Yacin Bahi** <yacin@terraformation.com> Mon, Jul 26, 2021 at 7:05 AM
To: Charles Fisher <charles.fisher@dreamtoserve.com>
Bcc: republic@terraformation.com

Hey Charles,
hope you are well, I wanted to share with you that we're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

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Cheers,
--YB

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reversing climate change with forests

**Yacin Bahi, Ph.D.**
VP of Research and Development
+1 (650) 305 9222
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Terraformation.com

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation Update

1 message

**Yacin Bahi** <yacin@terraformation.com> Mon, Jul 26, 2021 at 7:09 AM
To: Eric H <fandefranquin@gmail.com>
Bcc: republic@terraformation.com

Hi Eric,
hope you are well, I'm in Europe these days, let me know if we can meet.
Also I wanted to share with you that we're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

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Cheers,
--YB

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reversing climate change with forests

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

1 message

**'Celia Francis' via Republic** <republic@terraformation.com> Sat, Jul 24, 2021 at 9:23 AM
Reply-To: Celia Francis <celiafrancis@yahoo.com>
To: Jules Pancholi <jules@nitro-digital.com>, "Tarek.Abuzayyad@rezayat.co.uk" <Tarek.Abuzayyad@rezayat.co.uk>, Basma Alireza <basma@rezayat.net>, Adrian Cox <adrianncox@gmail.com>, Mike Reid <Mike.Reid@frogcapital.com>
Cc: republic@terraformation.com

Hi Jules, Tarek, Basma, Mike, and Adrian (the RP crew!)-

As you all know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

We're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

All updates and changes during the campaign will be communicated through the Republic campaign page, including an announcement when the campaign officially begins.

Sincerely,

Celia Francis
Celia@terraformation.com

**A note from Republic on what it means to reserve an investment in equity crowdfunding.**
With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.

# # # #

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

1 message

**'Celia Francis' via Republic** <republic@terraformation.com> Sat, Jul 24, 2021 at 9:31 AM
Reply-To: Celia Francis <celiafrancis@yahoo.com>
To: rich@sigmalabs.xyz
Cc: republic@terraformation.com

Hi Rich-

As I mentioned over coffee I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

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# # # #

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

7 messages

**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 9:11 AM
To: Claire Davenport Davenport <claire_davenport@hotmail.com>, Lisa Rodwell <lisa@lisarodwell.co>, Tamara Lohan <tamara.lohan@mrandmrssmith.com>, Alex Mahon <dralexmahon@gmail.com>, Rikke Rosenlund <rikke@borrowmydoggy.com>, Maria Raga <maria@depop.com>, Elaine Safier <elaine.safier@themindgym.com>, Ariane Gorin <agorin@live.com>, Fiona Howarth <fiona.howarth@octopusev.com>, Juliet Bauer <julietkbauer@gmail.com>, Christina Scott <c_j_scott75@hotmail.com>
Cc: republic@terraformation.com

Hi girls-

As you all know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 9:16 AM
To: Barney Pell <barneypell@gmail.com>
Cc: republic@terraformation.com

Hi Barney-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an

effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 9:29 AM
To: Sonja Hoel Perkins <sonjahperkins@gmail.com>
Cc: republic@terraformation.com

Hi Sonja-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 9:32 AM
To: Jeremy Agnew <jeremy@re-source.life>
Cc: republic@terraformation.com

Hi Jeremy-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 10:14 AM
To: Clayton Jones <cjones@ard.global>
Cc: republic@terraformation.com

Hi Clayton-

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**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 10:15 AM
To: Mark Schulze <markschulze01@aol.com>
Cc: republic@terraformation.com

Hi Mark-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 10:15 AM
To: Terry Angelos <terry.angelos@gmail.com>
Cc: republic@terraformation.com

Hi Terry-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

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# # # #

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

5 messages

**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:22 PM
To: Mikkel Bülow-Lehnsby <MILE@nrep.com>, Claus Mathisen <clman@nrep.com>, rasmus <Rasmus@home.earth>, Rickard Svensson-Dahlberg <rickard.dahlberg@nrep.com>, Morten Beck Jørgensen <mbej@novo.dk>
Cc: republic@terraformation.com

Dear Mikkel, Morten, Claus, Rasmus, and Rickard-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

The company secured a Series A last month of $30 million and is now allowing a broader set of investors to participate via a crowdfund.

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# # # #

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**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:24 PM
To: bill.liao@sosv.com
Cc: republic@terraformation.com

Dear Bill-

I hope you are doing alright and enjoying time with your family in Australia.

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:26 PM
To: Obi Nwosu <obi@coinfloor.co.uk>
Cc: republic@terraformation.com

Dear Obi-

I hope that the summer is treating you well. I keep thinking about coming to work from Madeira for a while. Instead I have been locked into a room recovering from mild Covid. Luckily my illness was only three days but Mark and Max are being strict about my quarantine!

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:35 PM
To: Tom Enraght-Moony <enraghtmoony@mac.com>
Cc: republic@terraformation.com

Dear Tom-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

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**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:37 PM
To: mjbennett150@gmail.com
Cc: republic@terraformation.com

Dear Martin-

It was fun to hear your name mentioned the other day when I got a call about the home improvement marketplace space recently. I hope you are well.

I thought I would let you know that I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

1 message

**'Celia Francis' via Republic** <republic@terraformation.com> Sat, Jul 31, 2021 at 1:33 PM
Reply-To: Celia Francis <celiafrancis@yahoo.com>
To: claire.enders@endersanalysis.com
Cc: republic@terraformation.com

Dear Claire-

I hope the summer is treating you well.

We are somewhat stuck in the U.K. until September but surviving. My son has decided to go up to Cambridge in the fall. I remember our chat about that being the best value for money!

The last time we spoke I was also telling you about my interest in how scaling regenerative forestry globally could really help the planet. I never gave up on the idea and after speaking with a large number of people and organisations also focused on paths in this area, I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

The company secured a Series A last month of $30 million and is now allowing a broader set of investors to participate via a crowdfund.

We're crowdfunding on Republic. We've just launched a pre-sale phase so that friends of Terraformation can reserve investments before the campaign goes live in a few weeks. If you reserve an investment in Terraformation, you will not be charged until the offering starts and you confirm your investment. We anticipate this will be later this summer. Reserve your spot now to ensure you can invest when we start the offering.

All updates and changes during the campaign will be communicated through the Republic campaign page, including an announcement when the campaign officially begins.

Sincerely,

Celia Francis
Celia@terraformation.com

**A note from Republic on what it means to reserve an investment in equity crowdfunding.**
With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.

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terraformation.com.
To view this discussion on the web visit https://groups.google.com/a/terraformation.com/d/msgid/republic/13D03EEA-BB60-4DDA-A44E-96A7BDADD386%40yahoo.com.

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

1 message

**'Celia Francis' via Republic** <republic@terraformation.com> Sat, Jul 31, 2021 at 1:34 PM
Reply-To: Celia Francis <celiafrancis@yahoo.com>
To: Greg Jackson <greg.jackson@octoenergy.com>
Cc: republic@terraformation.com

Hi Greg-

I hope you are having as fun as you can in the rain. :)

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Wed, Aug 4, 2021 at 8:45 AM
To: Azeem Azhar <azeem@azhar.co.uk>
Cc: republic@terraformation.com

Hi Azeem-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

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# # # #

Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 9:16 AM
To: Barney Pell <barneypell@gmail.com>
Cc: republic@terraformation.com

Hi Barney-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to what I see as an effective and multifaceted high impact path to securing the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:24 PM
To: bill.liao@sosv.com
Cc: republic@terraformation.com

Dear Bill-

I hope you are doing alright and enjoying time with your family in Australia.

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

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Celia@terraformation.com

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 10:14 AM
To: Clayton Jones <cjones@ard.global>
Cc: republic@terraformation.com

Hi Clayton-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

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Sincerely,

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Celia@terraformation.com

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 9:32 AM
To: Jeremy Agnew <jeremy@re-source.life>
Cc: republic@terraformation.com

Hi Jeremy-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 10:15 AM
To: Mark Schulze <markschulze01@aol.com>
Cc: republic@terraformation.com

Hi Mark-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:37 PM
To: mjbennett150@gmail.com
Cc: republic@terraformation.com

Dear Martin-

It was fun to hear your name mentioned the other day when I got a call about the home improvement marketplace space recently. I hope you are well.

I thought I would let you know that I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

As an exec in the company I am able to share this opportunity with you in advance of the official launch.

The company secured a Series A last month of $30 million and is now allowing a broader set of investors to participate via a crowdfund.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:26 PM
To: Obi Nwosu <obi@coinfloor.co.uk>
Cc: republic@terraformation.com

Dear Obi-

I hope that the summer is treating you well. I keep thinking about coming to work from Madeira for a while. Instead I have been locked into a room recovering from mild Covid. Luckily my illness was only three days but Mark and Max are being strict about my quarantine!

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 9:29 AM
To: Sonja Hoel Perkins <sonjahperkins@gmail.com>
Cc: republic@terraformation.com

Hi Sonja-

I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful chance to honour my passion for securing the stability of the planet including all its wee beasties and plants via high scale regenerative forestry.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 24, 2021 at 10:15 AM
To: Terry Angelos <terry.angelos@gmail.com>
Cc: republic@terraformation.com

Hi Terry-

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Terraformation

**Celia Francis** <celia@terraformation.com> Sat, Jul 31, 2021 at 1:35 PM
To: Tom Enraght-Moony <enraghtmoony@mac.com>
Cc: republic@terraformation.com

Dear Tom-

As you know I formally decided just a few weeks ago to join the Terraformation executive team to run Global Business Development and Sales. For me this represents a beautiful opportunity to honour my commitment to the planet including all its wee beasties and plants.

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Gmail

**Angela Jo Tu <angela@terraformation.com>**

# Upcoming fundraising event - Republic.co / Terraformation - 2021-07

1 message

**Yishan Wong** <yishan@terraformation.com> Fri, Jul 23, 2021 at 10:59 PM
Bcc: republic@terraformation.com

Aloha current investors,

Later this summer we will be launching a crowdfunding campaign on Republic.co, per the new Regulation CF rules that allow private companies to raise up to $5M from non-accredited investors.

Recent notable fundraisings on the Republic platform have included Sahil Lavingia's Gumroad and Arlan Hamilton's Backstage Capital, e.g. https://twitter.com/shl/status/1371491466158075906

People can reserve a spot to invest when we go live:
https://republic.co/terraformation

If you'd like some more information, I also wrote a longer post here:
https://www.terraformation.com/blog/why-terraformation-is-crowdfunding-on-republic

You may feel free to share this with others in your network who may be interested. Later when we go live, we hope you will help publicize it through your own social media channels, as this will also be a significant marketing event for us.

- Yishan

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A note from Republic on what it means to reserve an investment in equity crowdfunding:

*With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.*

Terraformation

Hi!

Thank you for signing up to receive the Terraformation newsletter. We're happy you've joined our community!

You're joining us at an exciting time. **We've just launched our crowdfunding campaign with Republic.** What does that mean? It means you'll have the chance to reserve your investment in Terraformation first, before our announcement to the rest of the world that all investors, small or large, can be a part of Terraformation's growth. If you're interested in learning more, click here.

As a newsletter subscriber, you'll hear special announcements like that one, and also begin to receive our newsletter filled with compelling, data-driven stories about global reforestation and the many ways you can make a difference. Let us know what kind of information you prefer to read by taking our ten-second survey here.

In the meantime, connect with us on social media to follow our journey in helping everyone sprout a forest.

If you have questions, please reach out to our team.

Together we can grow the future of our planet.

Terraformation

ANNOUNCEMENTS

# Why Terraformation Will Be Crowdfunding on Republic

Yishan Wong July 22, 2021

This summer, we'll be launching a crowdfunding campaign. Starting today, you can reserve an investment in Terraformation.

Why are we doing this?

Well, to be frank, I believe everyone, not just the wealthy, should be able to invest in startups such as ours.

Terraformation is a company for everyone. We want to solve climate change by restoring forests around the globe to activate massive carbon capture. We'll build a lot of different things and work with a lot of different people to make this happen, but we are ultimately doing this for everyone in the world.

Solving climate change is a hugely valuable thing to do. It might even be the *most* valuable thing. If we succeed, the company may be worth a lot. And if that happens, I want everyone who backed us early on to share in a piece of that.

We've already been backed by a very large number of angel investors—over a hundred at last count. They put their money on the line because they felt we had a solution worth betting on.

Until recently, securities laws prevented most people from doing the same thing—investing in private companies. But in March of 2021, changes to Regulation CF made it possible for private companies to raise up to $5M from all types of investors, including non-accredited investors. So we decided to make a portion of the offering we had reserved for Series A investors available in a Crowd SAFE offering through Republic. This offering is at the same valuation terms as the Series A, and is for anyone who wants to put money in, with a minimum investment of $50.

I'll be honest with you: Terraformation is a risky investment. Our plan is bold, and the problem is enormous.

But we don't have a choice. We have to try.

We have to try for our families, for our children, for everyone in the future who will look at us and ask, "What did you do to solve the great problems of your age?"

If it all goes bad, you might lose your money. If it makes you feel any better, I'll lose my money right alongside you (I put a bunch of my own money into this). So, don't invest money you can't afford to lose.

But if this plan works, we'll have solved a major problem for the world, and that's worth a hell of a lot. And I wanted everyone who's been cheering us on and sending us messages of support (thank you so, so much) from the beginning to have a chance to benefit financially, too. If you want to be a part of this plan, take that next step on Republic with us, and reserve your investment now.

Reserve now

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A note from Republic on what it means to reserve an investment in equity crowdfunding:

*With regard to communications by an issuer on the Site to gauge interest in a potential securities offering pursuant to the Regulation CF exemption from the registration requirements of the Securities Act, including opportunities to "reserve" securities as indications of interest in the potential offering, please note that pursuant to Regulation Crowdfunding Rule 206 (i) that no money or other consideration is being solicited thereby, and if sent in response, will not be accepted, (ii) no offer to buy the securities can be accepted and no part of the purchase price can be received until the offering statement is filed and only through a registered intermediary's platform, (iii) any such offer may be withdrawn or revoked, without obligation or commitment of any kind, at any time before notice of its acceptance is given after the Form C is filed, and (iv) an indication of interest is non-binding and involves no obligation or commitment of any kind.*

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We're thrilled to announce the first close of our $30M Series A. There's what's next for Terraformation.

Yishan Wong
June 8, 2021



### Trees Are a Faster Solution to Climate Change Than Technology

New technology takes decades to develop and deploy at a global level. Assisted restoration offers a carbon-capture solution ready to scale now.

Yishan Wong
March 8, 2021



### The Best Solution To A Large, Complex Problem Is The One That Uses The Least New Technology

Everyday life doesn't give us predictive training to very large scales. To solve a problem as big as climate change, we need to use highly reliable methodology.



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**Angela Jo Tu <angela@terraformation.com>**

# Fwd: Crowdfunding on Terraformation

**Yishan Wong** <yishan@terraformation.com> Thu, Jul 29, 2021 at 7:27 AM
To: republic@terraformation.com

Begin forwarded message:

> **From:** Yishan Wong <yishan@terraformation.com>
> **Date:** July 27, 2021 at 11:45:06 PM HST
> **To:** undisclosed-recipients:;
> **Subject: Crowdfunding on Terraformation**
>
> Aloha,
>
> Later this summer Terraformation will be launching a crowdfunding campaign on Republic.co, per the new Regulation CF rules that allow private companies to raise up to $5M from non-accredited investors.
>
> We've had quite a bit of local interest regarding how to invest in Terraformation, so this is designed to allow people to do that. I didn't want just a bunch of already-wealthy finance people as investors.
>
> People can reserve a spot to invest when we go live:
> https://republic.co/terraformation
>
> If you'd like some more information, I also wrote a longer post here:
> https://www.terraformation.com/blog/why-terraformation-is-crowdfunding-on-republic
>
> I'm getting this out there to you in case you know people who are interested - we want them to be able to reserve a spot before the campaign goes live and the investor/finance hordes jump in. Feel free to share this personally, although not yet on social media (that'll be later).
>
> - Yishan