Green Paper 2022
Introduction

This document describes our hopeful emergency plan. It outlines Climate Cleanup Foundation’s practice of reversing global warming, in order to avert the worst outcomes of the climate crisis. It contains our mission, vision, change theory and strategy, objectives for the coming years, and how we organise ourselves.

We call it not a white paper but Green Paper, which typically denotes a government proposal. We do this because we organise, like governments, for the common good: a new type of global economic order. Everybody, from governments to individuals can copy and adopt the ideas and practices in this paper – plus essentially, we chose green because we need a greener world.

Our goals with this paper are both to align our own strategy and activities, as well as to share them with others, like investors and partners. This Green Paper is a living document, meant to be updated annually. It will be regularly published on our website at climatecleanup.org.

We thank all who support our work and mission, not in the least the members of the 1500 Club and all daring and creative entrepreneurial people who actually shape the sector of natural carbon removal solutions, or what we call NatureTech in the new nature economy.

We dedicate this plan to our children and future generations, as it is for them and their prosperity that we work, together, shaping our future. If you haven't yet, feel free to join us. We need you and each other, as this might be the biggest challenge of our lives.
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## Work plan 2021 – summary

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<td><strong>Open Carbon Removal Accounting Framework</strong> – a holistic standard offering verification and conditions for full carbon finance</td>
<td>Verification standard written out and applied to three pilot projects with first carbon credit trades done. Report with PCAF to be presented at COP26, November 2021.</td>
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<td></td>
<td><strong>Update roadmap towards 1500Gt CO₂ removed</strong></td>
<td>Database with CO₂ removal potential and realisation by company and method, published as a visual roadmap on our website</td>
</tr>
<tr>
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<td>1500 paying club members for the Climate Cleanup <strong>1500 Club</strong></td>
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Climate Cleanup

Climate Cleanup is a group of entrepreneurial people\(^1\) with a dedication and strategy to reverse global warming and regenerate nature. Climate Cleanup Foundation nurtures and carries out a plan, described in this paper, to realize massive carbon drawdown. We curate social business for a beautiful world: humanity as nature thriving on a living earth.

We start from 1500 Gt which is the amount of CO\(_2\) that needs to be removed, and work towards that goal by closing the loop. Carbon has been taken from the earth (as coal, oil and gas) and burnt, releasing carbon dioxide, and by taking it out of the air and using it (in natural ecosystems and materials), we restore the cycle and keep our planet liveable. As Greta Thunberg and George Monbiot have put it: we need to Protect, Restore, and Fund.

Climate Cleanup operates as a caring family. We consider Climate Cleanup initiatives and companies to be a family of organisations and businesses, and both the executive team, the Foundation’s board and the group of 1500 (financial and moral) supporters function like families, which means: we care\(^2\) and we connect. We strive to be an organisation and movement where anyone\(^3\) can relate and belong to. We act collaboratively because we feel our house, planet Earth, is in grave danger: the crises of climate and nature breakdown\(^4\) are threatening us all.

To deal with these crises, three things need to be done:

1. Stop emissions
2. Remove the excess carbon
3. Restore natural ecosystems

For removing the excess carbon, regenerating nature is by far the most effective way. First because it is much cheaper than current technological methods,\(^5\) but second if we do not focus on nature based solutions we’ll be living in a completely desertified society in which we as human beings might perhaps somewhat survive but certainly not thrive.

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\(^1\) With ‘entrepreneurial people’ we mean independent entrepreneurs and people with an entrepreneurial spirit working in companies, governments or non-governmental organisations. Where in this paper we write ‘entrepreneurs’ we refer to this broader group.

\(^2\) In practice this means, for example, someone taking an entrepreneur who is ‘between houses’ for whichever reason into the family house for some time.

\(^3\) That is to say, anyone who adheres to the goal of reversing global warming and averting climate breakdown, and/or ecosystem collapse; we are a family of people working to avert the climate crisis, but in our actions we focus on removing CO\(_2\) by regenerating nature. See also section on Organisation Structure, Climate Cleanup Entrepreneurs and Network.

\(^4\) With the breakdown of nature we mean both biodiversity loss and ecosystem degradation.

\(^5\) Also, thermodynamically it will most probably be cheaper.
There is also a huge opportunity. Natural Climate Solutions are heavily underfunded. While these solutions can provide over 30% of the solution\(^6\) to climate change until 2030, they receive just 3% of funding.\(^7\)

The natural climate solutions we develop need to be both (distributedly) scalable and economic;\(^8\) the challenge is enormous, and for solutions to develop swiftly they need to add value – make money – in the current financial economic system, creating a new economic reality on/along the way.

We live under an economic paradigm which evolves around money and growth. However the value of what people and other life forms need in order to thrive is found in many other factors: health, well being, biodiversity, happiness. Life creates the conditions for life.\(^9\) The problem is that only the solutions which add monetary value, or support the status quo,\(^10\) are getting the attention and funding to scale up. We need to break this cycle and create regenerative and restorative\(^11\) business models, that do not involve money alone as a system for measuring value.

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\(^6\) See https://www.naturalclimate.solutions/full-rationale and Bronson (2017), Natural Climate Solutions at https://www.pnas.org/content/114/44/11645.


\(^8\) Economic in the sense of 1) Moving us towards the future we envision, 2) Providing a flexible platform towards this future (i.e. no lock-ins, no side effects, doughnut proof) and 3) Offering an adequate return on investment (not only financial).

\(^9\) Charles Eisenstein, Club of Rome event in Doorn, December 2019.

\(^10\) Think CCS (Carbon Capture and Storage) projects, in large part developed because injecting CO\(_2\) in oil and gas fields increases their outputs. See for example https://www.scientificamerican.com/article/enhanced-oil-recovery/

Climate Cleanup proves viability and organises trust, support, scientific knowledge, communication, empowerment and a sense of urgency about natural carbon removal solutions. We take the lead in an entrepreneurial way (but not further than proof of concept), nurturing inclusive ecosystems and seeing to their rapid and synergetic implementation in the form of a new sector: the New Nature Economy. The prevailing sense is one of climate despair (aren’t we too late?) which we counter with entrepreneurial and creative spirit and a celebration of human collaboration, ingenuity, and focus on what actually can be done. And we do.

**Context – vested interests vs natural climate solutions**

We live under a climate and extinction emergency.\(^1\) There is a perhaps final chance\(^2\) to avert catastrophe: natural climate solutions (NCS). And while awareness is rising, the creation of a sector of climate cleanup entrepreneurs actually implementing natural climate solutions severely lags behind what is needed. Climate Cleanup is changing that.

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\(^2\) According to Prof. Tim Flannery, our scientific advisor, the window to remove enough carbon to avoid runaway climate change is rapidly closing (personal conversation).

We need to act swiftly though, as the climate crisis is starting to spiral out of control. Parts of our world are literally burning. Life is under threat, as a sixth mass extinction is increasingly exacerbated by actual climate impacts. The most important solutions work fundamentally against the world’s largest vested interests: fossil fuels will have to make way for renewable energy, big agriculture has to make space for regenerative food producing practices, and all kinds of industrial processes and real estate developments will have to stop polluting and start to radically include nature and restorative practices in their operations. In all these changes constituencies need to be radically included or gilets jaunes and populists may topple democracies before the necessary changes are put in place.

For all these reasons, climate change indeed is a ‘hyperobject’, touching almost everything we do. Creating a new economy and overcoming vested interests is a hyper complex puzzle, that needs all tools and wisdom available, not in the least from the complex systems sciences and tools that fully harness extreme forms of creative force that humanity has so well embodied and expressed in centuries past.

The public and scientific debate has been (and still is) severely influenced by the named vested interests. Upto some years ago, and even now, the very existence of climate disruption is being intensively debated (climate change denial). As a result, the development and implementation of solutions has been forcefully and deliberately prevented by active advocacy and doubt-mongering funded by mainly fossil fuel companies; the power structures have been and are a solid barrier to progress.

In this current decade, the 2020s, several of our socio-ecological systems are expected to collapse. The Club of Rome models predict so, and although there has been critique they have been criticized more on basis of the interpretation of their results than on the accuracy of their predictions. As figure 1 shows the model results have been perhaps somewhat pessimistic but are generally to the point. Resources are becoming increasingly scarce, with biodiversity and a stable climate collapsing – although the framing of ‘biodiversity’ as a ‘resource’ vastly strips the multitude of life on earth of its perhaps sacred uniqueness and value. Perhaps more accurate would be to state that life is collapsing because the conditions under which life thrives – like a stable climate and a rich web and cycle of living beings – are deteriorating fast. Some red flags to illustrate this: insect populations have declined 60-70% in several European countries over the past half century, and one of the few studies about insect populations in rainforest ecosystems showed that in the instance, a Puerto Rican rainforest, insect populations have declined over 90%. Effects higher in the

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14 https://www.nature.com/articles/d41586-019-03595-0
15 Rockström et al now have the position that runaway is ‘dangerously close’. Tim Flannery says ‘the window to avert catastrophe is closing fast’ (personal conversation, paraphrased). Roger Hallam and extinction rebellion are being criticized for being fact free here, as is Guy Mcpherson; although both may be right. We follow rockstrom, also as ‘we are over the cliff’ is just too scary. And we might have a last chance, that we choose to take. https://www.nature.com/articles/d41586-019-03595-0
16 https://en.wikipedia.org/wiki/Holocene_extinction

food chain are imminent, as the decline in bird populations over Europe\textsuperscript{19} does not give much reason for optimism.

![Diagram of Boom and Bust scenario](image)

**Figure 1.** Converging crises ‘boom and bust’ scenario based on World3 model run. Source: New Scientist

However, at this moment, an important shift is happening in three areas simultaneously. This is hopeful as, observing history, humanity has shown to react late but potentially fast.

**First, actual climate impacts are being felt around the world.** Burning forests, deadly storms, rising sea levels, melting permafrost and other effects are driving constituencies to worry a lot, which makes political action more feasible. Even Russia recently signed the Paris Agreement,\textsuperscript{20} as permafrost, the foundation of all its northern infrastructure, is melting.

**Second, prices of renewable energies simply dive under that of fossil fuels**\textsuperscript{21} in most places; the energy transition is practically unstoppable economically. The transition is starting to

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\textsuperscript{19} The Independent: [https://www.independent.co.uk/environment/europe-bird-population-countryside-reduced-pesticides-france-wildlife-cnrs-a8267246.html](https://www.independent.co.uk/environment/europe-bird-population-countryside-reduced-pesticides-france-wildlife-cnrs-a8267246.html)


progress, so now removing the excess carbon in the air and oceans should start, along with stopping fossil fuel emissions.

Third, the **potential of natural climate solutions is becoming more evident**. The full array of solutions has been largely under the radar (except for tree planting, lately), for several reasons. Scientists were reluctant to propose natural carbon removal solutions apparently, because having these options could act as an argument not to stop emissions (the ‘free card’ argument). Additionally, removal strategies have been confused with geo-engineering practices like bringing sulphur particles in the atmosphere, and thus with the inherent dangers and fears associated with these methods.

As a result these natural carbon removal methods have been underestimated. But because of their immense potential we as humanity may still have a chance to avert the very worst of climate crisis scenarios – thereby also enhancing survival chances of other species. The time we have left to avert total collapse is inherently uncertain, as tipping points in the climate system show chaotic behaviour: they can not be predicted. Science tells us however that tipping points may be already happening, and can feed on each other. There is no time to lose, and the world is waking up to that. Change is in the air. This is where Climate Cleanup enters.

**Mission**

Our mission is to remove 1500 gigatons of CO₂ by doubling nature. We scale nature based businesses to foster the sector of climate solutions we call NatureTech, creating the circular, doughnut-based new nature economy.

**Vision 2025, 2050**

By 2050, we envision **humanity as nature thriving on a living earth**. A **regenerative sector of Climate Cleanup companies** is well underway removing the 1500 gigatons of CO₂ that need to be sequestered to restore the global carbon balance, and stabilize the climate into a healthy state. The sector of nature based solutions provides our world with food, meaningful work and healthy natural ecosystems, as we have co-created a doughnut-based New Nature Economy that is preventing climate breakdown and is revitalising life on earth. All around the world nature is starting to thrive in harmony with people, because we are realising that humans, other life and nature are intimately connected – we are a power of restoration for what we call the natural world, and therefore a power of restoration for ourselves.

Our economic paradigm has shifted from extractive to regenerative, and the Climate Cleanup sector is a key foundation of the regenerative doughnut economy. The doughnut concept\(^\text{22}\) is the leading compass into the previously uncharted territory of a distributed and regenerative nature-based economy.

By 2025, the groundwork for the new sector has been laid by an intimate and caring collaboration between the Climate Cleanup Foundation, the sector’s pioneering entrepreneurs and all other necessary parties: governments, policy makers, financials, funders, scientists, (environmental) NGO’s, engineers, business and others. Business models and carbon accounting are holistically developed based on doughnut-economic principles. Three bold and imaginative ‘earthshot’ projects have been developed, in the most potent ‘Cleanup’ solution spaces: seaweed, (agro)forestry and soil, and the use of olivine. The sector’s necessary basics, like business models, funding, communication, accounting standards and financial frameworks, have been collaboratively established. Hope is restored in the highly threatening climate discourse, in the first place by replacing the problem-minded doom-scenario narrative with a solution-oriented one; a complete change of paradigm. Natural climate solutions are the logical ‘go-to solution’ for addressing our climate crisis. A realignment between nature, people and our economy is beginning to show around the world.
Theory of Change

The core of our change theory is that if we develop a NatureTech sector of Climate Cleanup entrepreneurs, we create a regenerative New Nature Economy that will restore both nature and the carbon balance. This New Nature Economy will gradually displace the subtractive and destructive fossil fuel and gdp-growth based economic system. We follow Buckminster Fuller here, who famously claimed that "you never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." 23

The core of our working process for the development of the sector is summarized in five iterative steps:

1. select climate cleanup initiatives, entrepreneurs and businesses
2. ask them what they need
3. provide the conditions for success for the sector
4. evaluate with entrepreneurs and others
5. back to one

Our theory of change describes why our actions lead to fulfilling our mission. It is the theoretical basis of our work, and was derived from the work of Project Drawdown and other research, and complex systems theory, building on the work of Bateson, Dennis and Donella Meadows, and others. Tim Flannery, as our scientific advisor, and Kate Raworth provided other building blocks. A systemic core of our change theory lies with the special features found with a special kind of people: innovative social entrepreneurs. These entrepreneurial people combine two distinct character traits: they take risk, and they create something new. Because of this, they are ideally placed to circumvent and displace the conservative powers of the vested interests as analysed above (see under ‘Context’). The central position of entrepreneurial people is explained in more detail below (‘Why Entrepreneurs’).

How to remove 1500 gigatons of CO₂ while regenerating nature?

The goal of removing 1500 gigatons of CO₂ while regenerating nature holds a magnificent challenge of scale. How to both make large impact and enable nature to thrive, not doing unintended damage? A key insight is that restoring ecosystems needs honoring their inherent diversity, which needs to be reflected in the organisational approach: distributed scaling. 24 In a model of distributed growth a great number of relatively small initiatives adds up to large-scale impact, just like a great forest grows through the millions of trees, plants and other life that comprises it.

In essence, the way to develop the level of scale and exponential growth needed for removing 1500 Gt of CO₂ is to build and scale an almost completely new sector, using a comprehensive, holistic and inclusive approach that starts from enabling others to grow.

23 L. Steven Sieden, „A Fuller View - Buckminster Fuller’s Vision of Hope and Abundance for all“, p. 358), Divine Arts Media (2011)
24 See also Raworth (2017), Doughnut Economics, pp 163-205.
Mainly we need to provide the conditions for distributed growth. These may include the following, some of which are taken up in the year plan further on.

- Supporting innovative entrepreneurs, the frontrunners
- Sharing and distribution of knowledge on nature based solutions
- Attracting capital and means of funding for new initiatives and ventures
- Ensuring key criteria for selecting the appropriate nature based solutions
- Incubator (‘co-cubator’) programmes based on nature based value systems for entrepreneurs to thrive in
- Ecosystems of entrepreneurs and partners building on each others strengths
- Combining ancient old and indigenous wisdom on how we work with and as nature together with deploying the latest technologies supporting these nature based solutions
- Arranging for supporting policies
- Arranging for removing public support for vested interests opposing development of the sector (either direct, like cement production sector prevents the development of building with wood or indirect by attracting a majority of public funds, think fossil fuel subsidies)
- Providing open carbon accounting frameworks with effective verification mechanisms, high levels of trust and wide international adoption.

Why Entrepreneurs

Entrepreneurial people are central to our change theory – and therefore in our work. The reasons are fundamental. As the climate crisis is a hypercomplex phenomenon, transcending it asks for an approach that embraces complex systems theory. The strong gravitational pull of vested interests (such as fossil fuels, big agriculture, construction industry) means that simple cause-effect (policy) changes are extremely difficult. Ways out of this catch-22 are to search for leverage points and intervene in the fringes of the system. Furthermore, following Buckminster Fuller’s analysis that one never changes things by fighting the existing reality, we need ‘edge riders’, and the creation of new things. This is where (innovative) entrepreneurs come in.

Entrepreneurs are people with special character traits: they take risk and create something new. Innovative entrepreneurs operate in the fringes of the system. For example, they experience exactly which fiscal rules, policies, or banking practices (financial risk assessments) prevent their businesses from taking off. They know what should be done because they constantly navigate the boundaries of what is, in search for what can be. They are perfectly suited to circumvent and replace structures of vested interests because they replace them with something better and are not afraid to work against the status quo. A famous recent example of such an entrepreneur is Elon Musk, who has succeeded in creating a car company that already is valued higher than Volkswagen, although they have

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25 Edge riders are change agents operating in the fringes of complex systems. See also https://edgeryders.eu
26 By ‘entrepreneurs’ we mean throughout: entrepreneurial people. They do not necessarily need to drive a for profit business, but can also work for NGOs, governmental organisations or elsewhere.

only a fraction of VW’s turnover. Climate Cleanup entrepreneurs are potential disruptors, and together we organise for collective success.

In the confusion of the systemic changes that are materializing, these entrepreneurs are an interface to reality in all its aspects; the physical (the actual tree, seaweed, olivine mine, carbon atoms), as well as the social, financial, legal and so forth. In every step we take we talk with, listen to and try best to understand the needs and wants of the entrepreneurs connected in our network. They are our hands, eyes and ears, and it is through their success that we reach our collective goals.

How we select entrepreneurs: Flannery Doughnut Frame

For the selection of entrepreneurs and businesses we combine the work of mainly Flannery and Raworth, applying our ‘Flannery Doughnut Frame’. This holds that businesses should be scalable (gitagon CO₂ order of magnitude) and have regenerative and distributed doughnut-proof business cases in sight. Only with these criteria we maximise the chances of having collective impact at a scale big enough to actually reverse global warming, while moving beyond carbon-reductionism into a holistic and connected socio-economic world. In other words: only if we embrace both people and nature we can be successful. The focus on scale given by Tim Flannery, and the holistic economic models developed by Kate Raworth allow us to work as inclusive as possible. A list of climate cleanup entrepreneurs and companies can be found in the chapter Organisation Structure under People, and at http://climatecleanup.org/people/. An in depth market analysis to be carried out this year will grow and structure this list.
Complexity and Chaos – just do

The climate puzzle is, as we argued, perhaps hypercomplex. Navigating the domain of the complex requires appropriate tools. The celebrated Cynefin framework helps us translating strategy into tactics by adding understanding of the domain of the chaotic. Actual climate impacts bring chaos, but also in the financial and political domain chaotic dynamics are seen (like in the Dutch context recently could be observed in the nitrogen case, when the high judges decided on laws for nitrogen emissions effectively stopping part of the construction industry and forcing car-minded political parties to impose a strict speed limit; from one moment to the other, everything was different).

The big lesson from the model is that while in complex systems one should work from probing, chaotic situations demand for action as a starting point: just do, and then sense, respond, and evaluate. This is a fundamental strategic argument for our earthshot-pilot approach: just start, at the actual, physical impact level (sink actual seaweed; plant an actual agroforest), and always present these actions in the context of the potential distributed large-scale impact they promise.

![Cynefin Framework](https://hbr.org/2007/11/a-leaders-framework-for-decision-making)

Interventions

We operate through interventions, as in the current chaotic times of complex systemic change, chances to hit leverage points will reveal themselves in unexpected ways. Interventions can be projects, publications, secret collaborations, movies, court cases; whatever it takes as long as it serves the swift development of the business of natural
carbon removal as a sector. A number of interventions can be found in our year plan, further on in this green paper. However, all interventions are constantly evaluated within our Objectives and Key results envisioned in our yearly working plans.
Strategy

NatureTech – a new sector

Our main strategy is to **collaboratively build a new sector of natural carbon removal with the aim of collectively removing 1500 gigatons this century**. The basic building blocks of our strategy are summarized below.

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<th>Situation</th>
<th>Vision</th>
<th>Insights</th>
<th>Mission</th>
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<tr>
<td>Humanity encounters converging crises. Economic paradigm of fire and steel: mass species extinction, pollution, global warming and climate disruption. Social systems start to collapse. Doom, disonance, denial, confusion and despair.</td>
<td>Humanity as nature thriving on a living earth: New Nature Economy. Love. Empathy over competition. From working against nature to being nature. A flourishing world that benefits all beings.</td>
<td>CO₂ removal is essential to restore the carbon balance and rebuild nature at the same time. CO₂ removal is possible, wonderful and a whole new market. CO₂ is a source for good (business). We can solve global warming. We now know how; we have a plan.</td>
<td>Remove 1500 gigaton by creating the New Nature Economy. We collect, connect, catalyze, create and communicate CO₂ removing businesses as a sector that regenerates nature and restores the global carbon balance.</td>
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We develop the business of natural carbon removal, as natural climate solutions tackle the two extremely interconnected global challenges at the same time: the climate crisis as well as the ecosystem collapse / extinction crisis.

We develop a new business sector, as this allows us to start from and use current economic systems to our collective benefit. The global market economy has many shortcomings, but markets also allow us to cooperate in highly complex and creative ways. We use it to our advantage and reform by embracing new economic rules (like the Doughnut), and actually demonstrating what can be done. Specifically the definition of value needs to be expanded, from purely monetary to valuation systems that include planetary boundaries and social factors. Our doughnut-based Open Carbon Accounting platform will be a first step.

We define a New Nature Economy as the economic sector that is developing five crucial methods for carbon removal and nature restoration: seaweed, trees, sand, soil and materials (see below). Taken together, these form the actual activities in our emergency plan. From an investment point of view, we call this emerging sector: NatureTech.

**Carbon Removal with Natural Climate Solutions**

To reverse global warming we must stop emissions and remove greenhouse gases from the atmosphere and oceans. Our initiative originated mostly from the work of Tim Flannery, who was one of the first to define what he then called ‘third way methods’ for carbon

removal: accelerated rock weathering (ie. olivine), ecosystem restoration (trees and other plants, soils, wetlands), Bio-CCS, biochar, storing carbon (as wood or other materials) in building structures, and most potently but least developed: seaweed. Flannery immediately flagged the Big Challenge: scale. The scale at which these methods need to be deployed in light of the very short timeframe we have to avert cascading climate catastrophe is huge. Just planting trees will not cut it; we need to focus on a full range of **distributedly** scalable methods. And as explained in the introduction to this paper, section Climate Cleanup, natural climate solutions have much potential that currently is not being developed at scale. Developing them is a huge chance and effective addition to what already is being done to reverse climate change (energy transition efforts).

From this starting point, and with the extensive research from Project Drawdown and others, we set off to list the most scalable natural climate solutions. Our first criterion is the physical potential; if it is not **physically** possible to scale far and fast then no money or policy in the world can make it happen (however, distributed scaling is a prerequisite; see below). After assessing potential scale, we made an analysis of possible business models. The result is the following short summary of methods, or solutions, that is leading in the process of selection of Climate Cleanup entrepreneurs and companies.

*Typology of methods of the New Nature Economy (where carbon removal meets nature regeneration), with the potential to remove carbon relative to what needs to be done to restore the global carbon balance. The New Nature Economy matrix on the right maps the methods to the current economy: bio-based, energy, food, buildings, products. These are estimates based on a scenario model. Sources: Flannery (2017), Nyteurt (2012), Hawken (2017), others.*

<table>
<thead>
<tr>
<th>Selection criteria</th>
<th>Method</th>
<th>Potential (Gt CO₂)</th>
<th>% Goal (1500 Gt)</th>
<th>New Nature Economy</th>
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<tr>
<td>Flannery Frame</td>
<td>Seaweed</td>
<td>1060</td>
<td>71%</td>
<td></td>
</tr>
<tr>
<td>1. Scale</td>
<td>Trees</td>
<td>500</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>2. Doughnut</td>
<td>Sand</td>
<td>400</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>3. Business</td>
<td>Soil</td>
<td>300</td>
<td>20%</td>
<td></td>
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<tr>
<td></td>
<td>Materials</td>
<td>200</td>
<td>13%</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2460</td>
<td>164%</td>
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The scientific exploration of natural climate solutions as a category is relatively new. Bronson Griscom et. al. published a seminal paper in 2017 titled Natural Climate Solutions, now famously finding that while these solutions can provide about 37% of the solution, they receive under 3% of available funding. Oxford University started a Nature Based Solutions group, to be found at

**Trees, Sand and Seaweed**

The five methods named above are simplified into three categories, for reasons of strategic focus and effective communication: trees, sand and seaweed. This simplification allows for connected understanding, as they map perfectly on the natural global carbon cycle.

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28 [https://www.drawdown.org/](https://www.drawdown.org/)
The three categories cover indirectly all of the natural climate solutions as defined by among others Flannery (2015) and Bronson W. Griscom et al (2017). Below a non-exhaustive list.

<table>
<thead>
<tr>
<th>Category</th>
<th>Included Natural Climate Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trees / Soil Stored Carbon</td>
<td>Agroforestry (trees in croplands)</td>
</tr>
<tr>
<td></td>
<td>Afforestation, Reforestation</td>
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<tr>
<td></td>
<td>Conservation Agriculture</td>
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<td></td>
<td>Silvopasture (trees in meadows)</td>
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<tr>
<td></td>
<td>Biochar</td>
</tr>
</tbody>
</table>

29 Bronson W. Griscom et al 2017. Natural Climate Solutions. PNAS October 31, 2017 114 (44) 11645-11650. [https://www.pnas.org/content/114/44/11645](https://www.pnas.org/content/114/44/11645)
<table>
<thead>
<tr>
<th>Nutrient management</th>
<th>(Building with wood (CLT) and other biobased materials)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand/ Rock Stored Carbon</td>
<td>Olivine in coastal areas</td>
</tr>
<tr>
<td></td>
<td>Enhanced weathering of Olivine on land (in soils)</td>
</tr>
<tr>
<td>Seaweed / Ocean Stored Carbon</td>
<td>Blue Carbon methods like:</td>
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<tr>
<td></td>
<td>Mangrove restoration</td>
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<td></td>
<td>Wetland and peatland restoration (ie paludiculture)</td>
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<tr>
<td></td>
<td>Seaweed cultivation in coastal areas</td>
</tr>
<tr>
<td>Construction Stored Carbon</td>
<td>Restoring the ocean carbon sink on open sea</td>
</tr>
</tbody>
</table>

Building with wood (CLT) and other biobased materials

### Tactical pillars

We have five tactical pillars guiding us in how we operate. The reasons behind these pillars are explained in our Theory of Change, above.

1. NatureTech capital: growing the sector of Cleanup entrepreneurs
2. Narrative: Communication & lobby
3. Earthshot projects (bold business development upto proof of concept)
4. Doughnut Carbon Accounting
5. Roadmap towards distributed scaling

### Roadmap towards Capital flow

Our sector roadmap and capital transition planning are central to our strategy. In four stages we will work towards the removal of 1500 gigatons of carbon by regenerating nature. In our first year of existence, we reframed carbon removal and have built a leadership network. Our year plan and objectives for 2020 are derived from this roadmap. A number of the Key Results defined for our objectives should be mapped upon this roadmap, including the amount of carbon removed in gigatons and indicators for restored ecosystems to be developed, perhaps based on the doughnut and probably mostly qualitative.
Communication

Communication is a crucial success factor for reaching our objectives, as we are creating a sector that is just in its infancy; we have to forge the physical, social, financial and other concepts that make up the new sector into a comprehensible narrative, for the different key decision makers who have the power to actually build the new sector. This ranges from the actual entrepreneurs via policy makers, philanthropists and investors towards institutional investors and electorates later on.
As we operate under conditions of complex and sometimes chaotic change (see above), the communication plan must develop in an agile way. The website and social media channels will be constantly under change, which conflicts at times with the necessity of consistency in order to build trust. All elements in this strategic plan offer some form of scaffolding to provide this sense of consistency. Here we suffice with listing some basics in our emerging communication strategy in bullet form.

- **goals**
  - create sense of belonging, to our organisation and the ‘movement’ of entrepreneurial climate ‘solvers’ at large: become a climate-entrepreneur yourself
  - increase understanding of natural climate solutions (how soil, seaweed, olivine and trees remove carbon dioxide and what the benefits are)
  - grow the number of club members
  - seduce people and companies to become climate positive, which is: clean up their carbon footprints many times over, through strengthening the climate cleanup sector with money (carbon credits) or through other means

- **messaging**
  - inclusive: anyone who wants to reverse climate change can relate
  - positive: we focus on solutions and solutions only
  - human: we put humans, entrepreneurial people, first as role models
  - action: we do, and encourage others to join and start doing as well
  - social business minded: we create a new nature economy
  - we are nature
  - science based: everything we do is based on science

- **channels**
  - free publicity, news papers, television, websites etc
  - Climate Cleanup website
  - social media
  - personal communication (conversations)
  - influencers: Harm Edens, Maurits Groen, Doutzen Kroes, et cetera
  - events are a kind of channel, their communication value is detailed below

- **events**
  - events are crucial for the cohesion of the Club
  - we actively collaborate with others and join events of others

**Earthshots and take first steps**

As the climate cleanup sector is still in its infancy, delivering **proof of concept** for natural carbon removal methods is crucial. We need both large scale visions (earthshots) and pilots. Pilots both map onto the earthshot visions and offer actual proof of concept: it can be done. Earthshots-with-pilots amount to bold business development, in highly visible super-ambitious projects which have all reasons of existence as we are working under crisis.
circumstances and will do what must be done. Think: sinking off 20 million tons of
sargassum seaweed that since some years covers the Atlantic ocean between Africa and
the Caribbean – and starting with a pilot near the Bonaire shores, and in the Markermeer. Or
think all global coastal protection with sand carried out with olivine – and a pilot beach on
Texel, or in Costa Rica. Or think 100,000 hectares of degraded land transformed into
regenerative agroforestry – with a food forest right before our doorstep in Amsterdam.30

The main reasons we develop earthshots-with-pilots are:
1. sparkle imagination
2. connect partners (consortia)
3. find out what is actually needed
4. attract free media attention
5. it’s cool and fun to do – creates a sense of belonging

However, the projects, like large scale seaweed sinking or global olivine beaches, are
developed until proof of concept. Before the business cases become viable, we make sure
the business model is both protected against monopolistic exploitation and is easily
licenced to enable rapid distributed growth. Once that starts to happen, we leave it to the
entrepreneurs around the world to scale rapidly. First earthshot activities have been
described in our year plan, which follows below.

Offsets and Compensation
The market for ‘compensation’ is growing. This is both an opportunity and risk for our sector.
Carbon credit trading poses a publicity risk. The market for compensation carbon credits
seems to grow very fast, as increasingly companies have a demand for offering so called
climate neutral products and services. The caveat of course is that compensating say a
flight doesn’t stop its emissions, and to avoid climate breakdown the world must both stop
emissions and remove the excess. So offering ‘compensation’ provides polluters and
consumers with the excuse to continue business as usual.31

Our solution is to frame offsets or compensation as ‘removal’ and ‘voluntary carbon tax’,
preparing the way for large scale government funded carbon removal. Simply put,
compensation and actual removal have to be decoupled. In the meantime, we do not oppose
the use of compensation funding for the development of the NatureTech sector. We do
however are very picky on whose funds we take. Fossil industry related money will not be
accepted, although a clear distinction is not easily made, as almost all aspects of our current
economy are still fossil related. We need to rely on the wisdom of our board and team to
make decisions that will both kickstart the sector and not prolong old industries. One
solution is to focus on direct consumer-to-entrepreneur carbon credit trading. That way there
is no industry in between the consumers spending and the actual carbon removing activities.
We frame these direct removal payments as voluntary carbon tax.

30 This small scale food forest is something we are actually doing, a tangible result of a first workshop
organised with Tolhuistuin where we hold an office, just behind Amsterdam Central Station.


23/36
Risk assessment

The risks of cascading climate tipping points and resulting runaway global warming can hardly be overstated. However, quickly growing the NatureTech sector at scale carries considerable risks as well, that should not be attenuated in the light of the unfolding catastrophe.

Large scale impact is not the same as massive projects. Distributed scaling is the approach for mitigating a range of risks that emerge when intervening at scale in natural systems. What is the impact of bringing a new kind of agroforestry into a region? Find out by doing ten different pilots and distill a multi-faceted approach. What is the impact of a 100km olivine beach on a coastal ecosystem? Find out by starting on one beach, measure impact and scale in iterations.

The distributed scaling approach is best understood as a bio-mimicry strategy, as this is how natural ecosystems grow at scale. A forest is not a massive chunk of wood; it consists of trees that are all more or less different from each other. Large ecosystems like rainforests are made up of a multitude of species, who all have different approaches to growth and balance each other. Some are more successful than others, but when one species tends to take over the ecosystem collapses to perhaps return later in more diversity.

The NatureTech entrepreneurs are the diverse species in the new nature economic ecosystem. We do not promote one seaweed or olivine company; we create the conditions under which a multitude of entrepreneurs can thrive and create a multitude of approaches. When we mobilise capital we make sure the fund structure is ready to facilitate a range of smaller projects instead of the classic €50 million tickets found in the current institutional investment ecosystems. For all these reasons, our first objective in our work plan is to create the elementary conditions for distributed growth, like the open carbon removal accounting framework that operates in such a way that a multitude of smaller farmers, wood-builders, seaweed cultivators and so on can use it. Distributed scaling is at the core of our growth and risk mitigating strategies.

Another risk is in the actual earthshot-pilots and our entrepreneurs’ activities: how long will trees live and do they stay on the land? Who has land ownership and how to secure that into the future? What happens when an ocean carbon sink is restored or created, like when we start sinking off sargassum seaweed? Don’t we destroy existing sea life when we clean up this sargassum weed?

These risks are real and form both actual risks to living systems and publicity risks for our activities. We manage them mainly by intimately connecting with organisations whose speciality lies in conserving nature. As examples: we have in our board the director of Friends of the Earth Netherlands. In our seaweed sinking earthshot-pilot we work both with the nature park organisation on Bonaire and with the WWF Netherlands. In all ‘intervention teams’ we involve biologists and people with thorough knowledge of the natural ecosystems we work on. People who have the ability to assess both positive and negative effects.
The publicity risks we manage by facing the challenges openly from the very beginning, and by always taking the bigger perspective. The first research question in our seaweed earthshot-pilot, for example, is about the effects on marine life. Our olivine beach pilots include both ecosystem impact assessments and, in our communication, the argument that if we do not use olivine for strengthening the beaches, sea level rise will make sure that the shoreline at hand will not be there at all in not too long.

More systematically we manage ecosystem damage risks by using the doughnut-economy concept as an assessment tool for both selecting intervention methods and for creating investment frameworks (due diligence rules). We apply the doughnut almost as a filter: if the outer (planetary) boundaries are pushed further outwards, we hold our horses. If the social foundations of the people connected in the ecosystem are voided, projects will not be investable. All these aspects are anchored within our organisation, mainly by having the right people in our board, wisdom council, intervention teams and as connected NatureTech entrepreneurs and investors. We feel confident that while moving as fast as we can we will cope with most risks, and we will not break things beyond repair. We are willing to take some risks, because as things are actually rapidly breaking around us, we feel confident that this is most of all the time to act.
Year Plan and Objectives for 2020

In 2020 we will expand on the work done in our first year (see Long term roadmap, above). After reframing carbon removal, understanding success criteria and building a leadership network (including our Foundation) we now move towards delivering proof of concept and quickly broadening our support base. We have seven distinct objectives for this year.

Objectives and Key Results for 2020

<table>
<thead>
<tr>
<th>Objective</th>
<th>Key Results</th>
<th>Output(s) 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Create elementary conditions for distributed growth of the new nature economy <em>(life creates the conditions for life)</em></td>
<td><strong>Open Carbon Removal Accounting Framework</strong> – a holistic standard offering verification and conditions for carbon credit trade</td>
<td>Verification standard written out and applied to three pilot projects with first carbon credit trades done. Report with PCAF to be presented at COP26 in Glasgow, November 2020.</td>
</tr>
<tr>
<td></td>
<td>Unlocking capital</td>
<td>One ‘Reversed Roadshow’</td>
</tr>
<tr>
<td></td>
<td>Lobby for supporting and enabling policies</td>
<td>Policy brief delivered to Dutch political parties</td>
</tr>
<tr>
<td>2. Deliver proof of concept and scale with local pilots</td>
<td>Three <em>Earthshot</em> plans: Bold imaginative business development upto proof of concept, and do pilots</td>
<td>-Olivine Beaches o/t World -Great Sargassum Cleanup -Agroforestry the Norm + pilots to visit</td>
</tr>
<tr>
<td>3. Super cool narrative on natural carbon removal: <em>NatureTech</em></td>
<td>A written definition and <strong>narrative on the sector</strong> and what ‘climate cleanup companies’ in the New Nature Economy are</td>
<td>Video on our unique story Visualisation of goal and potential of solutions Explainer videos on all three methods</td>
</tr>
<tr>
<td></td>
<td>A quantitative and qualitative <strong>selection framework</strong></td>
<td>Selection framework *(‘Flannery Doughnut Frame’) worksheet v1.0</td>
</tr>
<tr>
<td>4. Map the sector and its necessary development</td>
<td>A rough <em>market analysis</em> of ocean-based, olivine and (agro)forestry initiatives</td>
<td>Three concise reports, mostly referring existing sources</td>
</tr>
<tr>
<td></td>
<td><strong>100 companies listed</strong></td>
<td>Companies (entrepreneurs) on the website</td>
</tr>
<tr>
<td></td>
<td>Update <strong>roadmap</strong> towards 1500Gt CO₂ removed</td>
<td>Database with CO₂ removal potential and realisation by company and method,</td>
</tr>
</tbody>
</table>
5. Secure finance and support for the Foundation and its operations

1500 paying club members for the Climate Cleanup

1500 Club

Club Pitch and organisation structure; Launch event; 1500 €30/month payments

Explanation of Objectives and Key Results

1. Create conditions for distributed growth: the ‘clockwork’ under the emerging sector needs to be created. This means effective measuring and calculation (accounting), capital streams, supporting policies and communication around it all. We will develop a doughnut carbon accounting method that is useful for cleanup entrepreneurs.

2. Deliver proof of concept at scale: earthshots. Earthshots are imaginative and bold business development initiatives that will be initiated and carried out by the Foundation until proof of concept. Once viable business cases start emerging the Foundation will stop its involvement and focus on creating licencing models to avoid purely commercial exploitation and enable distributed growth because entrepreneurs can take over. An excellent example of this strategy can be found with the US based organisation GreenWave, developed by Ben Smith. GreenWave “supports a new generation of ocean farmers feeding the planet and building a blue-green economy in the era of climate change,” deliberately choosing not to develop commercial business themselves but to enable and promote other entrepreneurs. We embrace much of this strategy. Our Earthshot approach is a typical Blue Ocean Strategy, which focuses primarily on the creation of new markets over developing existing ones, as for most of the New Nature Economy we develop markets still have to be developed.

3. Define the sector / phenomenon: we need a compelling narrative about what the climate cleanup sector / new nature economy is and will be, and we need a rationale for which companies and entrepreneurs apply and which do not.

4. Map the sector: Now we know which companies apply, we can map them and make them visible on our website and other places. Expand the network of cleanup companies / entrepreneurs from the current 15 (mainly Dutch) towards 100 globally (developing the CO₂ Open platform). A market analysis needs to be done to get better insights in how Climate Cleanup business (ocean based, olivine and agroforestry / afforestation (profit and non-profit)) is developing.

5. Secure finance and support for the Foundation and its operations. By finding and connecting 1500 Club members we will secure both finance of our operations and independence, with a €0,5 mln budget to sustainably fund the Foundation.

Earthshots

Earthshots are crucial objectives as they demonstrate and communicate what climate cleanup at scale looks like, mostly because they are cool and daring plans. All earthshots are

32 https://www.greenwave.org/our-model
33 https://en.wikipedia.org/wiki/Blue_Ocean_Strategy

accompanied by actual pilots, where we take physical first steps towards success. We envision for this year three earthshots:

1. Seaweed Sinking: a catchy and media-savvy plan that will work towards proof of concept for turning Sargassum seaweed from the Great Atlantic Sargassum Belt into a natural carbon sink.
2. Olivine Beaches: an effective, large scale and imaginative collaboration for the use of olivine in coastal areas. First beaches: Costa Rica, Texel (the Netherlands).

The first two Earth Shots are described below, taken from a short pitch for new Club Members and with committed (and some potential) partners.

The Grand Atlantic Sargassum Cleanup. Removing CO2 and restoring nature through helping the Sargassum Bloom resume its natural carbon cycle. Goal: removing carbon and learning how to harvest and sink seaweed into the ocean, while strengthening and restoring sea life. Develop process until proof of concept.

Green Beaches of the World. Using olivine sand to protect coastlines will at the same time de-acidify the oceans and clean up many tons of CO2. Partners: GreenSand, Project Vesta. Potential partners: RWS (Dutch government), Deltares, Nioz. Develop process until proof of concept.

Interventions and Events

We carry out smaller interventions that have leverage because they provide critical resources and learning points supporting our Objectives, leading to Key Results as defined above. Interventions differ in what may be called ‘projects’ in that they have a clear systemic effect and a definition of done – they are not open ended. Interventions include:

- A reversed roadshow for Cleanup Entrepreneurs with MVO-Nederland
- The development of an Open Carbon Accounting framework with PCAF (Platform Carbon Accounting Financials) and selected cleanup entrepreneurs
- an Olivine Beach on the Dutch island of Texel, which will teach us a lot on both carbon accounting and developing the Olivine earthshot.
- Museum of the Future & seaweed innovation centre in Prodock
- Lobby for Natural Climate Solutions with Dutch government
- ‘Fonteinkruid Markermeer’ which will teach us how to process wet biomass
- Azolla to clean up nutrient runoff from golf courses
- Groene Hart Lab in Cabauw, NL
- Set up an operation of carbon equity fund investing in certificates based on the ONCRA system

The executive team decides on which events and interventions are carried out, reports these to the board, keeps track in a shared Trello, and coordinates in weekly standup meetings.

We also organise **events**, and participate in events of others, to create a kind of framework or canvas for the development of our network, interventions and earthshots. These events enable us to work in connection and collaboration. Events may include:

- A new year’s workshop in collaboration with the Earth Charter foundation on Feb 9
- Premiere of the film 2040, with launch 1500 Club, organised in Amsterdam on the 18th of March.
- Co-creation of Springtide International / circular economy platform with Club of Rome member Wouter van Dieren
- Our bi-yearly Weele strategy weekend

The Executive Team chooses coordinates and monitors interventions and events in such way they lead to reaching our objectives. Our key interventions are explained in more detail below.

**Open Doughnut Carbon Accounting**

In addition to three earthshots, in 2020 we work on one crucial, pivotal intervention: the development of a doughnut based Open Carbon Removal Accounting Framework (OCRAF). In other words: we will not only be able to measure and calculate how much \( \text{CO}_2 \) is removed but also have a simple system for validation that enables the direct trade in carbon credits. NatureTech entrepreneurs all voiced strong demand for such a framework. If they can effectively validate how much carbon they remove (sequester), it is much easier to monetize their carbon removal whether through voluntary carbon markets (directly or through agencies like VCS or Gold Standard), or taxation / government revenue streams (like the 45Q tax rule in the US, or perhaps future ‘negative carbon’ policies under policies like the ETS (European Emission Trading Scheme). An effective accounting mechanism for natural carbon removal will greatly improve and enable business cases for thousands of cleanup entrepreneurs and businesses, making this a systemic intervention with leverage.

A main problem with current accounting mechanisms is their methodological complexity and associated costs. Typically a project (like a wind farm, or reforestation) has to go through an advisory process costing in the order of magnitude of $100.000 before a credit organisation like VCS lists it. For many smaller projects, who collectively can reach distributed scaling, this process is inaccessible both through lack of finance and capacity. This is a fundamental problem, because often a useful estimation of the amount of carbon sequestered is readily available. The general approach favored by consultancy firms is focused on making very precise and heavily verified measurements instead of ‘ballpark’
order-of-magnitude estimates that fit much better with inherent uncertain growth processes in natural ecosystems. We aim to develop such lightweight methodology and deliver the necessary trust by smartly designing distributed verification mechanisms.

We develop a doughnut based carbon removal accounting standard (we do not use the term ‘negative emissions’), as we think that removing carbon while destroying natural or human ecosystems will not lead to a thriving earth. Luckily, over the last year we have been finding out that natural climate solutions provide ample opportunities for multiple and cascading additional benefits. The doughnut is our compass pointing towards those multi-potent solutions.

The development of the doughnut accounting standard will be a convergence of three separate methodologies, for seaweed, olivine and agroforestry, into one internationally accepted framework. The international ‘uptake’ will be provided by the Platform Carbon Accounting Financials. The collaboration with this global Platform started already last year, and a roadmap has been drafted leading towards presentation of the standard at COP26, this November in Glasgow.

The standard is developed open source and open access in a collaborative process. We will work in close contact with two emerging trading platforms coming from the same values of open development: the Californian Nori platform and the Finnish Puro.earth.

The three methodologies34 are developed starting from the best practices in the industry. For agroforestry we work from and with the open source methods developed by Nori. For olivine, the Dutch government is soon publishing a methodology within a ‘Green deal national carbon market’ initiative. Seaweed standards will be developed from zero in collaboration with our founding partners at The Seaweed Company, and others.

The accounting standard might lead towards a ‘Cleanup Credit’, which takes advantage from the credibility of our Team, Board and Wisdom Council to deliver the trust that the market needs to accept such a credit and associated accounting methods. Climate Cleanup might work as a clearing house, but it remains to be seen if the Foundation should act as a trading platform. It might be better to be stewards of an ecosystem where other parties, like Puro,35 take the role as traders. A small fee might be charged for issuing credits, but the Foundation nor the executive team should not take on the (systemic) economic role as consultants, as this creates an incentive to keep things complicated – while simplification will be crucial to create the necessary economic financial structures that will scale fast as well as distributedly.

34 See for an explanation of why three methods the chapter on Strategy, section ‘Trees Sand and Seaweed’, above.
35 http://puro.earth
Organisation structure

The hypercomplex nature of the climate crisis asks for an agile and lean, learning organisation that works and grows distributed and in close collaboration. Our goal always comes first. As we develop business, it should always contribute to our mission. This should be guarded, because as soon as money can be made, companies tend towards profit maximization instead of the rapid scaling of natural carbon capture and nature regeneration. We secure these principles in our organisation structure.

1. Climate Cleanup Entrepreneurs; a growing distributed network of people
2. Executive Team, organised as a social enterprise within the Foundation
3. Wisdom Council, advising both Board and Team
4. The Board members of the Foundation serve as mission stewards. The ‘legal personality’ of the Foundation embodies the goal and mission of our work
5. The 1500 Club: 1500 people who fund the Foundation and ensure its independence

Climate Cleanup Entrepreneurs
Executive Cleanup Team
Wisdom Council
Foundation
1500 Club

Climate Cleanup Entrepreneurs and Network

Climate Cleanup evolved specifically as a two-tiered collaboration between entrepreneurial people. This distinction is critical for the inclusive and connected, family-like structure of belonging we strive to embody:

We are a group of people working together to reverse climate change and restore nature.
We do develop natural climate solutions that remove carbon dioxide while regenerating ecosystems.

This means that in our broad network, the Club members and ‘Contributing Network’ as published on our website, we also welcome people who work on solutions like renewable energy, sustainable transport and so forth. In our objectives and operational activities though we focus solely on removing carbon with natural methods. In our communication we focus on carbon removal and nature restoration, but in principle everybody who adheres to the goal of mitigating climate change is welcome to join in appropriate ways.

Executive Team: Cleanup Collaborative

The collaboratively organised executive team is in charge of operationalizing the tactical pillars (connect entrepreneurs, communication, earthshots, doughnut accounting and licencing models) and delivering the Objectives by creating the Key Results (see above under ‘Objectives and Key Results’). Entrepreneurial spirit underpins this structure. The collaborative operates not as a workforce under the Foundation, but as an independent group of professionals joining forces within the Foundation to deliver its goals and objectives. The collaborative operates as a social enterprise, not with profit as an end goal but with the ultimate and deeply understood goal of reversing climate change by regenerating nature. As argued earlier, the Cooperative will not take on a role as consultants, charging just for advise: we will take on a much more active role, taking responsibility for output and thus remove the incentive to keep things complicated and protect our knowledge, so our advice becomes indispensable. It shouldn’t.

The executive team is organised as a social enterprise collaborative within the Foundation and has a basic fee provided by the Foundation and the 1500 Club members. Interventions are legally and financially driven under the Foundation. All team members explicitly strive to raise funding for Interventions and Earthshots, thereby creating income to complement their fees to a maximum amount, to be set by the Board. Members are compensated equally, based on estimated time spent on the Foundations’ work. Project income above this threshold stays in the Foundation.

The members of the cooperative report to the Board of the Foundation. The founding director is appointed as representative and takes care of reporting. An impact producer / administrator coordinates the Club and the network as part of the Executive Team. The team decides on its composition in a democratic way, with the Board having the final veto.

The foundation itself has no personnel. Through this way of team organisation we maximise both independence and entrepreneurial, creative spirit. The mission will always be leading, because the support team has freedom to explore create and collaborate without having to worry about basic financial compensation; but financial gain will not easily become a leading motivation.

Governance

The work of the Executive Team is overseen by the Board of the Foundation. The Wisdom Council advises both board and cooperative executive team, however the Board decides if and what about their advice is communicated outside of our organisation. The basis funding provided by the 1500 members of the Club of 1500 secures financial independence, so no vested interests will be able to steer or influence our work. The Club members have no legal position, but form a strong moral and ethical anchor as they connect their good names and will hold us accountable. Any intellectual property (IP) developed will be cherished, and licenced out, by the Foundation and proceeds will be put to work for the mission. The
foundation has the status of **Public Benefit Organisation** (ANBI) under Dutch fiscal law, and currently resides in Amsterdam, The Netherlands.

**People**

The people in the team, board and council are listed at climatecleanup.org/people.

**The 1500 Club**

The 1500 Club is a group of 1500 supporters who establish the Foundation, and keep it independent, by donating at least € 30 per month. Each member takes moral responsibility for a gigaton CO$_2$ to be removed.

The 1500 members bring in about € 540,000 per year. After deduction of costs for the Club (members event, footprint removal, administration), this leaves perhaps € 400,000 income from donations; a firm financial basis. The support that the members give in other ways (network, publicity, knowledge and so on) is going to have a multiplying effect in many ways.

An entrepreneurial spirit is central to our approach. While the NatureTech sector of natural climate solutions is still in its infancy, we hope and expect it to grow swiftly. Within five years we want to reduce the membership fees towards zero and run our Foundation's operations based on returns on investments in the new nature economy.

Benefits for members are:
- Yearly club meeting
- Updates on our progress
- Establish Climate Cleanup Foundation
- Priority position when Cleanup Companies raise capital
- Remove your emissions and invest in natural carbon removal

The membership invitation page can be found at [www.climatecleanup.club](http://www.climatecleanup.club).

**Business model**

The members of the Club of 1500 provide for the basic income to run the Foundation and its operations. This provides a steady income of about €400,000 per year (after costs for the Club). Interventions and earthshots are developed as social enterprises in the Foundation, where per project partners are sought to help carry the costs or provide the capital. The Foundation can be a partner in wider project consortia. Revenues from successful interventions can be used to supplement the Executive Team's basic fees towards median incomes and to kickstart new initiatives, all overseen by the board.
Network

The following list of partner organisations is a living ecosystem, a network that is constantly evolving.

- Climate Cleanup entrepreneurs: see www.climatecleanup.org/people
- Drawdown as leading climate solutions platform; Climate Cleanup is founding member of the Drawdown Europe Research Association (DERA)
- Platform Carbon Accounting Financials (pcaf) – partners in our Carbon Accounting intervention
- Climate-KIC in sharing success and Drawdown Europe Research Association
- Port of Amsterdam – Partner in Seaweed Scaling Lab
- Springtide International – partner bij (inter)national network meetings and extended circular economy approach (include climate and biodiversity as resources)
- Sponsors of Drawdown publication: Eosta, Royal Lemkes, Arcadis, Ekoplaza, Greenchoice, Accell Group, Innax, Eneco, ENGIE Nederland, ABN AMRO, Universiteit Twente, Lidl Nederland, Port of Amsterdam, Renewi, Niebla, Interface, HvA, TenneT, Nectar Marketing, KLM, DNV GL, IJhallen, Klimaatplein.com, DJI, Climate Neutral Group, Climate-KIC, VDL Groep BV
- Urgenda in CO₂ Open / 50 punten plan
- ClimateWorks Foundation: seed finance ‘reframing CO₂-removal’ intervention
- Hogeschool van Amsterdam: studentenprojecten Digital Society School werken aan onze specifieke communicatievragen. Contact Kate Raworth, intervention Donometer.
- Utrecht University: divers student projects in Seaweed Scaling Lab
- Metropoolregio Amsterdam: verkenning locaties Scaling Labs
- Province of Gelderland in 2020 movie screenings and strategic land-use interventions

Organising values & principles

Eventually everything connects - people, ideas, objects. The quality of the connections is the key to quality per se — Charles Eames

Values

- We love and cherish life
- We relate to each other as a family
- We care for each other and act from trust
- We move gracefully in the global emergency
- We value empathy and collaboration over competition
- We embrace love and stewardship, are strong and social
- We operate collaborative and inclusive
- We work as connectedly as possible
Principles

- Our dream: heaven on earth for the entire world population, by 2050
- Our goal: regenerate nature and remove 1500 gigatons of CO2
- Everyone guards dream and goal – with the Board as legal custodians
- We work as crisis managers, which means: stay calm, focus, act.
- We realise solutions and have a plan
- We work in interventions – with definition of done
- We recognize the grave ecological crisis, and choose to stay focused on solutions
- Everyone is in the lead
- Making mistakes is a necessity
- We do not know exactly what needs to be done (but have a hunch)
- The Board has no financial stake (equity of other) in climate cleanup companies
- The board in the end decides who can join the network
- We embrace the two pizza rule: teams larger than 8 people have to split
- Think systemic, work holistic
- Collaboration is key – both internally and externally
- We work radically open source and open access
- We build upon what already exists
- We never wait, for no one, if there is no excellent reason
- We are guided by science and work fact based
- When in doubt: meditate

Our view on humanity and what we call the real

Finally, we share some philosophical foundations as they critically determine both our motives as our actions. As our perception of reality and who we are can be deceptive at times, we want to be explicit about some of our basic assumptions. Elaboration of this position can be found for example in Schumacher’s treatise A Guide for the Perplexed, written short before his death in 1977. Our view on humanity is summarized in five statements.

1. **Humans are social beings.** We thrive only when we experience the safety of a peer group. Most of our decisions are made under (subconscious) social pressure.

2. **Life has inherent value.** Living organisms and systems are much more than, and entirely different from, the material they are made of (the map is not the territory). Our reality can be described as a progressive mapping of phenomena onto matter: mineral → plant → animal → human. Each progression adds a layer of consciousness in action: cause → stimulus → motive → will. There might be next,

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36 An excellent review can be found here: https://www.brainpickings.org/2014/08/05/a-guide-for-the-perplexed-schumacher/

37 As a small example: the most prominent factor explaining if people have solar panels on their roof, is whether or not the neighbors have them.

38 Gregory Bateson also very clearly made this anti-reductionist argument (Bateson, Gregory (1979). Mind and Nature. A Necessary Unity.)
uncharted steps in our collective mental development (often called god, or the sacred). Humans thrive when their higher faculties are invoked. We strive to embrace these higher faculties.

3. **Everything is connected.** We reject reductionism and embrace holism; life and the non-living in all its forms are intimately related. The distinction between humans and nature is false; humans and nature are inseparable.

4. Science is mostly focused on solving convergent problems; problems that have a single answer or outcome. For divergent problems, like the climate crisis, we need science as well as tools from for example religion and philosophy.

5. **We have a moral duty to be hopeful;** history has proven time and again that what humans perceived as insurmountable threats can be overcome in unexpected ways. Despair is counterproductive and we can actively work on a positive attitude.

It is with this basic conception of reality in mind that we embrace our mission. It can all be summarized as our co-founder and board member Ruurd Priester paraphrased Charles Eames: in the end, everything connects.

*Sven Jense & team – March 2020*