



Climate Change & Mass Migration

Trees function as the lungs of our planet, but they also serve as footholds. Their roots stabilize and aerate the soil, allowing water to be absorbed. Trees are a powerful antidote to the impacts of overgrazing, which exposes soil to erosion by wind and rain, and also compacts the soil, diminishing its capacity to hold water.

Traveling around the Sahara in 1952, **Richard St. Barbe Baker** saw how the **power of trees** to stabilize the soil could be used to halt desertification. During that journey, he conceived the visionary idea of a Green Front, a band of trees that would act as a front-line barrier to contain the desert.

The idea was put to the test when Algeria and China decided to address desertification in their respective countries. Algeria implemented a vast reforestation project called *The Green Dam* in the early 1970s. China began its own *Great Green Wall* project, also known as the Three-North Shelter Forest Program, in the late 1970s.

Contrary to popular perception, desertification is not caused by sand-dune movement. It occurs during periods of drought, where activities like overgrazing can lead to extreme erosion of topsoil. This is exactly what has happened in the district of Mopti in Mali where recurrent drought, unsustainable land practices, and deforestation have severely degraded the land, leading to poverty and food crises.

In 2002, the idea of a similar barrier to reverse desertification was taken up and approved by the 11 countries south of the Sahara, during a special summit held during the annual World Day to Combat Desertification and Drought. Since then, it's been gathering momentum, funding, and supporters. The African Union endorsed the project in 2007, launching *The Great Green Wall for the Sahara and the Sahel Initiative* (GGWSSI). The GGWSSI has modified and expanded the scope of the project to include boosting food security, and supporting local communities to adapt to climate change. The *Wall* project now consists of a mosaic of projects implemented by over 20 countries in the region with the support of about 24 development partners.

The aim of this *Wall* is to prevent the desertification of the Sahel, the transition zone along the southern edge of the Sahara.

The Great Green Wall may be the most aptly named thing ever. It's great, stretching nearly 5,000 miles across the continent of Africa. It's green, consisting of millions of trees. And it's a wall — not a solid wall, but a wall of trees meant to keep the Sahara from encroaching further into communities as a result of climate change and desertification.

It has been under construction for a decade and is about 15 percent done. Once completed, it will be the largest living structure on the planet at three times the size of the Great Barrier Reef.

The Great Green Wall is rooted in Africa's Sahel region, which is the southern border of the Sahara. It stretches through some of the poorest nations in the world, including:

Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, Eritrea, Ethiopia, Djibouti.

Millions of residents in these nations are hard-hit by the effects of climate change, such as droughts, famine and conflict over natural resources, which has led to mass migrations overseas.

"By 2020 an estimated 60 million people could move from the desertified areas of sub-Saharan Africa towards North Africa and Europe. By 2050, 200 million people may be permanently displaced environmental migrants," according to a report by the United Nations Convention to Combat Desertification.

Some of those migrants die in overcrowded boats attempting to cross into Europe. Others arrive but are immediately arrested and jailed. The hope is that the Great Green Wall will boost food production, limit conflicts over natural resources, and improve job prospects so that people will stay. By 2030, the Wall hopes to restore 100 million hectares (or 247 million acres) of degraded land and create 10 million jobs.

While donors hope the project will encourage would-be migrants to enjoy better conditions at home, some migration experts say such development policies might have the opposite effect. With a little more money in peoples' pockets, migration becomes more tenable.

Because the Wall touches so many nations, it can be tricky to proceed in a unified way. Different nations have adopted their own initiatives to combat desertification and have committed to the Wall in varying degrees. The International Tree Foundation provides these highlights:

- In Ethiopia, 15 million hectares (37 million acres) of degraded land have been restored.
- In Nigeria, 5 million hectares (12 million acres) of land have been restored.
- In Sudan, 2,000 hectares (5,000 acres) of land have been restored.
- Senegal has planted over 12 million trees.
- In Burkina Faso, the tree population has increased by over 3 million.

With more than \$8 billion pledged for the Wall, there are even more trees to come.

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Patricia Lee Harrigan
internationaltreefoundation.org
www.greatgreenwallinitiative.org

SUCK ON THIS, SMALL BUSINESS

I ran a small hiking business in Muir Woods for almost 30 years. The introduction of the internet was a **boon** to me and many other small businesses as we could put our message out and be able to compete with people who had much more money.

Web neutrality meant, if you googled in *Muir Woods Tours*, every tour company would show up on the front page, listed in order of how many reviews, or how many hits you had. Companies like *Google*, *Yelp* or *Trip Advisor* simply listed all your reviews without editorial content. This gave the consumer a **broad choice** of options. You used to be able to click on a business website and get all the pertinent information you needed, like hours, dates and contact information.

Under the new paradigm, when you look for something like a tour, a plane flight, hotel or even a plumber or house cleaner, you get a series of sites that claim to have vetted thousands of companies and pass the results on to you, theoretically giving you a better option to choose from *Angies List*, *Trip Advisor*, *Hotels.com*.

The truth of the matter is that huge companies have **bought up** all the top pages, listing themselves dozens of times over, thereby booting you from your spot. The only way to get something done is to agree to go to one of these sites and **have them book your clients** for you. If you want a listing with one of these booking companies you have to agree to let them do your booking at a rate of between 10 and 20 percent, otherwise you may have one or two reviews of their choice listed, and a box next to it which reads, *"Tom does not book through us but here are some people who do."* You must also agree to join the "Yelp" or "Google" family for a nominal fee and carry all major credit cards. Amazon has a similar set-up.

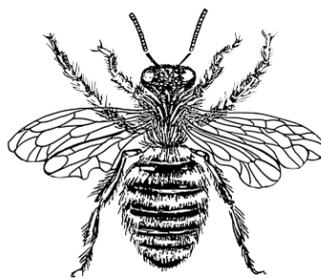
In return, the booking company gets rid of your bad reviews (crank reviews) and only lists your good reviews, even though they might be fabricated. They take a **percentage off the top** and slyly suggest you can add that cost on to the consumer. After much debating and gnashing of the teeth, I decided that 80 percent of something is better than 80 percent of nothing so I called and said I would like to list with *Trip Advisor*. They **flatly turned me down**, insisting I wasn't a real business even though I've been listed

with them for over **15 years**. In my everyday discourse I began to hear **similar stories** from *Lee the Bagel store owner*, *Bob's Donuts*, *Sherman's Plumbing* and realized we all had one thing in common, we were **all small businesses**.

Why should this matter? Once you turn over all your booking rights, the company knows where you get your clients from, how much you charge, what your busy times are and how much your operating costs are. They then **sell that information** to data analytic companies, who use the info to mimic your business and in some cases put you out of business by targeting and offering this data to bigger competitors. Amazon has been doing this for years, listing a company with a good product, then making it themselves.

Small companies are of no use to **vulture capitalists**. By not listing you, you will go broke shortly and your small business profits automatically accrue to the top companies. Your choices are: submit to this blackmail if you're big enough, or go broke without listings. In the end, the consumer pays for **subpar, choice-less, more expensive service** because someone owns an APP that sucks off the working class, **once again...**

Muir Walker



BEES ON YOUR BUS STOP

In the Dutch city of Utrecht, the roofs of hundreds of bus stops were recently covered with low-growing succulent plants called sedum. It's not to make them look good (though it does). It's to create new habitats for bees and butterflies in the middle of the city.

In the Netherlands, as in other parts of the world, insect populations have fallen sharply over the last two decades; in one nature reserve, the number of some insects dropped in half. Many insects are endangered. Adding greenery back into paved-over cities can't fully address the problem, but more urban

biodiversity could help. The city also recognizes that installing green roofs has other benefits.

Heavy rains are becoming more common because of climate change, and extra green space can help soak up some of the water to prevent flooding. During heat waves, greenery has a cooling effect (the Netherlands, like many other places around the world, broke all-time heat records in July). The tiny bus-stop gardens can also help improve air quality. "The sedum filters the air, catches fine dust, and in this way, improves the quality of the air," says Annelies Kieboom from Mobilane, the company that supplied green roof "cassettes" to the bus-stop operators, RBL and Clear Channel. "Even for small areas, it's useful."

The companies designed the stops in response to a request from the city for infrastructure that could help with "healthy urban living." The plants need little maintenance, other than a little fertilizer in the spring and pruning in the fall. They're now in place at 316 stops, while 96 other bus stops have solar panels instead. It's one example—like rooftop housing or housing designed for vacant lots—of taking advantage of urban space that would otherwise be unused. Utrecht also offers homeowners subsidies to install green roofs on houses. The city continues to add better urban infrastructure of all kinds: At the central train station, for example, the largest bike-parking garage in the world is nearly complete, with space for 12,500 bicycles.

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