

AUGUST 2013  
VOLUME 85 | NO 8

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**Annual subscription rates**  
**UK:** £54, **EUROPE:** £67, **USA:** £76, **REST OF THE WORLD:** £77  
**Newsstand sales and marketing**  
Imagine, London  
**Telephone:** 0845 612 0092  
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Fastmag, Circulation Department  
**Telephone:** 01582 475 333  
**Email:** comments@fastmagltd.co.uk  
© Geographical Magazine Ltd  
Registered No. 07457559  
Printed by Polestar, Colchester, Essex CO4 4HT

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**Geographical**

ISSN: 0016-741X

## A great green project



There's something very appealing about the Great Green Wall project (page 24). Conceived as a way of combating desertification, as well as providing healthy food for impoverished people living on the Sahara Desert's southern border, the plan is to plant enough trees and other vegetation to create a 15-kilometre-wide, 7,000-kilometre-long living barrier across the African continent, from Senegal to Djibouti.

I have a definite personal preference for forest over desert, indeed for forest over most other types of habitat, so I'm a real sucker for revegetation projects of any kind. But the idea of a continuous strip of green that runs across a whole continent is something else again. The creation of a single block of vegetation that covers an area of more than 100,000 square kilometres would be a real statement of intent when it comes to protection and rehabilitation of the African environment. In particular, it could potentially function as a significant wildlife corridor, linking previously isolated patches of habitat.

Of course, it's the ambitious scope of the project that makes one nervous about its viability. Various international development organisations have pledged almost US\$3 billion to make the dream a reality, but there's still plenty that could go wrong in the 20 years it's expected to take. Already there are question marks about long-term logistics, mainly involving maintenance of the infrastructure required to keep the plants alive.

However, as Jane Labous reports, it's off to a good start in Senegal, with some eight million seedlings already planted. And the locals appear to be enthusiastic supporters - pleased to be given assistance to grow fruits and vegetables that will both improve their diets and potentially offer them an income. I will be following its progress intently.

## CONTRIBUTORS



British journalist **Jane Labous** was living in Dakar when she researched the Great Green Wall, a pan-African tree-planting scheme (page 24). She says her biggest challenge was the crickets. 'They got everywhere - including in my bed.' But the region made up for it by introducing her to her future husband. 'I met him later that year while covering the election riots. He was my bodyguard. It's just a shame I didn't meet him sooner so I could have put him on cricket-fighting duty'



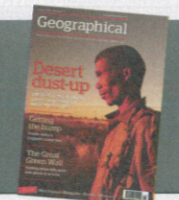
Former *Boston Globe* reporter **David Arnold** has spent three years re-photographing coral scenes taken decades earlier to illustrate their decline (page 36). He says he found it a depressing story to work on. 'Many insults, mostly human, are killing corals.' But he says he finds it enjoyable hearing the audience gasp during his slideshows. 'Okay, perhaps not enjoyable, but it shows the message is getting through. Truly enjoyable is having spare time to go kiteboarding over water the colour of lemonade'



Australian journalist **James Howe** spent two weeks with Botswana's Bushmen, who the government has forcibly removed from their land (page 44). 'I think they'll find a way to stay there - they're very proud and determined,' he says. 'It was wonderful spending time in the desert with them. And the children were beautiful, but they followed me everywhere I went. Once, on my way back from a toilet stop, I surprised a mob of kids who'd been busy tracking me into the bush'

### On the cover:

Botswanan Bushman Panetelas Monwelo recently returned to the Kalahari Desert after spending six years in Kaudwane, a government resettlement camp. Photograph by James Howe



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**OPPOSITE:** Kumba Ka (*left*), head of Mbar Toubab ladies Great Green Wall project, and gardening association member Aissa Ka, tend their plot

# Putting down roots

According to its supporters, the so-called Great Green Wall across northern Africa will stop food shortages, green the desert and even stop Fulani nomads roaming. But so far, it's still largely a grand vision – so can it become reality, asks **Jane Labous** in northern Senegal

PHOTOGRAPHS BY JANE LABOUS

Squinting in the midday heat, former goat herder Samba Ba proudly points to a row of acacia saplings. The metre-high infant trees sprout valiantly amid the fine yellow grasses that are the only other vegetation here in northern Senegal's arid savannah, just 160 kilometres south of the Sahara Desert. 'Planting trees is a blessing,' he says. 'Trees mean life. We call this the Nile River of the Sahel.'

The tiny acacias are one of the first signs that La Grande Muraille Verte, or the Great Green Wall (GGW), is more than just a grand idea. The pan-African environmental project, designed to combat desertification along the borders of the southern Sahara, is certainly no small undertaking. If all goes to plan, 20 years from now, a giant hedge, 15 kilometres wide and 7,000 kilometres long, will stretch across the plains from Senegal in the west to Djibouti in the east, stopping the spread of the desert that today rides the hot winds that rage across the continent every year.

The recent food crises in the Sahel have only made the proposal more attractive – greening the desert is seen by some as a way to decrease local food shortages. But so far, the GGW mostly remains just an idea; could it be that these baby acacias are the sign of something actually happening?

Ba, 42, a Fulani tribe member who has settled in the village of Mbar Toubab to lead its reforestation project, believes so, claiming that the long-term effects of the GGW could put an end to the Fulani's traditional nomadic lifestyle. By making this section of the arid Sahel more habitable and enabling local populations to grow, eat and sell their own fresh vegetables and fruit, the GGW could eventually stop these nomadic

sheep herders from having to constantly travel large distances to find food and water. 'We have fewer trees than anywhere else, so very little rain,' he says. 'The more trees you have in an area, the more you are blessed. If you compare here to the south of Senegal, in the Casamance, which is like a rainforest, they have much more water than here because they have more trees. Having trees is such a great protection from the desert and from windstorms.'

## GROW YOUR OWN

Mbar Toubab is one of five villages in this district that, since December 2010, have received government funds to plant trees on a five-hectare plot. The scheme is also training Fulani women to develop market gardens, teaching them the horticultural skills they need to irrigate and cultivate fruit and vegetables that are currently absent from their diet.

So far, as part of the scheme, Mbar Toubab has received seedlings, a tractor and gardening tools, irrigation systems that connect to a water tower built in 1996, and a live-in horticultural expert. 'The trees are planted five metres apart, in rows ten metres apart,' explains Ba, gesturing lovingly at the row of saplings that stretches into the distance. 'This tree is a sengu [acacia], which will produce black fruits that are good fodder for goats. There's tamarind and sump [desert date], for oil, the Sahel acacia, which provides fodder with the same nutritional value as grass, and *Acacia senegal*, which gives gum used for starch. Another one is *Acacia nilotica* – people use it to treat hides and make leather. They're all thorny trees with small leaves – the only species that can survive the dry conditions here.'

Senegal is the first of the 11 countries involved in





the GGW scheme (the others are Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria and Sudan) to start implementing the project on the ground. The idea was first conceived during the 1980s, but was launched in earnest in 2005 by former Senegal president Abdoulaye Wade – who has spearheaded and advocated for the scheme from the beginning – and the then president of Niger, Olusegun Obasanjo.

Wade, chairman of the New Partnership for Africa's Development's environmental commission, took a leadership role, allocating US\$15million to Senegal's slice of the GGW project. Since 2008, Senegal has planted nearly eight million seedlings for the wall.

In February 2011, the Global Environment Facility confirmed that it would allocate up to US\$115million to support the project, while other international development institutions have made investment pledges of up to US\$3billion. 'Each country allocates its own funding to its own individual GGW investments,' says Matar Cissé, director general of Senegal's dedicated Agence Nationale de la Grande Muraille Verte, from his office in a sandy street in the capital, Dakar. 'All the nations will work together, in synergy, but each country must develop its own system of implementing the GGW, because our environments and ecosystems are all so different.'

#### LADIES WHO GARDEN

Kumba Ka, 52, is head of Mbar Toubab's ladies gardening association. The association comprises 133 local women who cultivate the village's new

## 'I walk ten kilometres to the garden every morning. But it's worth it because I love it'

five-hectare garden under the supervision of 23-year-old horticultural technician Abbas Sow.

Sow has been sent to the village on a six-month government contract. 'So far I've taught the ladies to weed and plant the fruit trees,' he explains. 'We learn on the ground – they see the trees growing and also gain the knowledge. Every year, we're going to train 25 women from villages nearby to garden like this; it's an ongoing project where we take them for a week and they learn about horticultural techniques.'

Once the garden starts producing vegetables, the association members plan to both eat and sell the produce, providing the women with an independent source of income. 'Right now, we're growing tomatoes, salads, onions, potatoes, okra, aubergines, watermelons, carrots, cabbages and turnips, and we've also planted mango and orange trees,' explains Ka, whose lush description is somewhat at odds with the arid red landscape surrounding us. 'We have a drop-by-drop irrigation system that's directly linked by a pipe to the water tower. No water is wasted but all the plants get wet.'

'We're growing so many different types of vegetables that normally only grow where the water table is deep, with lakes and rivers nearby; not in an



area like this,' she continues. 'It just wouldn't have been possible before, so we're all very happy about the project. When the vegetables grow, we won't have so many problems finding food. We would be very happy to settle here and grow our vegetables, and have our own source of money.'

Many of the women travel great distances to fulfil their gardening duties. Ka walks ten kilometres every day from her village to tend the plot, but she says gardening is a passion. 'I walk to the garden every morning,' she explains. 'But it's worth it because I love it. I'm proud of our garden.'

#### DREAM OR REALITY?

It's easy to see the GGW as over-ambitious – the colourful, grandiose bagatelle of an ageing president and his allies, conceived over a long lunch with little consideration of the huge challenges to its completion. Villagers, for example, find it difficult to accept that profit may only come over the long term.

Then there's the question of long-term logistics; who pays for the fuel for the water pumps? If the tractor breaks down, where are the mechanics, and how much fruit do you need to grow to pay for the repairs?

Peter Gubbels is Groundswell International's co-coordinator for West Africa and the author of *Escaping the Hunger Cycle: Pathways to Resilience in the Sahel*. He believes that there's a common misconception about desertification, and that it's a completely separate problem to food shortages. 'I think there's a danger of seeing this as a solution to food insecurity and devoting all these resources to

stopping the desert, when it must go hand in hand with other solutions and recognising that different families need different solutions,' he explains. 'In the popular imagination, desertification is about billowing sand dunes advancing at a rate of two kilometres a year. But desertification is the overuse of natural resources, over-grazing, intensive farming and the subsequent erosion of land – pockets that become completely denuded and then join together. Then people have to migrate.'

Gubbels believes that the project will only succeed if people move past the metaphor of the wall, and see it as simply a framework for funding and a platform for sharing information. Those involved in the Senegalese project agree that the spotlight it puts on local environmental management and improving the lives of locals is just as important as revegetating arid zones.

Cissé, too, sees the vision of a huge, continent-wide hedge as merely a symbol; he believes that the key is addressing the needs of each individual village, in each specific region. 'When people first hear about *la grande muraille*, they think of a wall, but actually, this is just the final result,' he says. 'What we're looking for in the short term is to protect and improve the ecosystems of these Sahel regions, and to improve the diets and the environment of the savannah people. We needed to take into account the fact that the nomadic cattle grazers rely on this land for their livelihoods. We couldn't disturb them. So we felt it was best to start with small areas – protect these areas and make them grow while the people continue their work.'

**OPPOSITE, ABOVE:** It's a challenge to cultivate plants in the arid soil of northern Senegal, particularly following the droughts and floods of the past few years; **ABOVE:** nomadic Fulani shepherds keep an eye on their flocks grazing in the dry savannah of northern Senegal



Key to the project, he feels, is local ownership. 'We want them to understand that it's their project - they direct it and they drive it, so that they feel this sense of leadership,' he says. 'We simply provide the investment. We're in a zone where people have never grown fruit. In a few years, we'll see the population growing fruits they can sell in Dakar. In one or two years, we'll see the first mangoes, papayas, oranges, potatoes, carrots and all this coming from this zone.'

'If we increase the productivity of the earth, we can stop them leaving the villages,' he continues. 'We put in place the investment infrastructure for the people to produce and grow for themselves. We are thus, we hope, developing a system that will help these people help themselves to stay in one place, create jobs and raise their own incomes. For the nomadic peoples, this could fundamentally change the way they live.'

### SETTLING DOWN

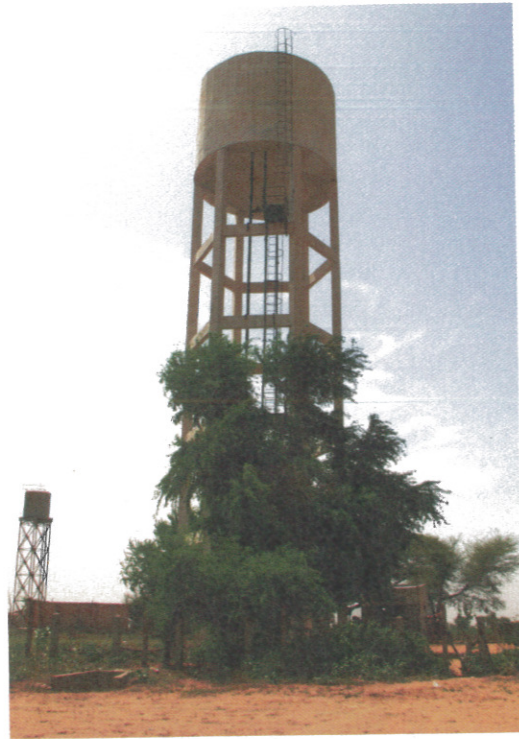
It's this aspect of the GGW that is proving to be the most controversial. Fulanis such as Ba believe that calling time on the nomadic lifestyle will be a good thing. For him, one of the greatest benefits of the GGW in Mbar Toubab will be encouraging young people to stay and find work on the land. 'We are Fulanis and we're nomadic,' he says. 'We travel great distances in search of food and water. If this project is successful, it might not be necessary to travel far away. This area won't be hopeless anymore, so people might stay and settle.'

However, others are concerned that it could create tensions. Yamar Ndiaye is a guide from Dakar who spends considerable time with the Fulanis in the area. The potential problems, he says, aren't to do with any ethnic differences, but simply that cattle could eat someone's peanut or millet field. 'Last week in my village two Fulanis ended up at the police station because their zebras had eaten someone's crop,' he says.

Gubbels also has concerns. 'Mobility for the pastoralists - shifting from one place to another to find pasture and water - is a much better and less risky strategy than staying in one place, which leads to over-grazing,' he says. 'If that area happens not to have much rainfall that year, you make yourself much more vulnerable.'

'All through these areas in the Sahel there's great tension between the settled communities and the pastoralists,' he continues. 'If you're in an area that was used by people coming through, collectively using the natural resources, and then you say, "No, you can't come now because we're settled and it's ours" - that's the basis for major conflict.'

His solution is a mixture of the two - fixed sites with houses and gardens, but continued mobility. 'You go to places, but you come back, making effective use of the range land, but combining it with some degree of sedentary life,' he explains. 'If everyone settles in one place, as the population increases, at some point there won't be enough trees or water for everyone.'



### FOR THE FUTURE

So far, the GGW plantations are still in their infancy, but it's hoped that in a few years, once each five-hectare plot is well established, villagers will plant and cultivate other areas. In this way - or so the vision goes - the forest will connect across the continent. 'We are thus, we hope, developing a system that will help these people help themselves to stay in one place, create jobs and raise their own incomes,' says Cissé. 'For the nomadic peoples, this could fundamentally change the way they live.'

For Ba, the former goat herder and now tree cultivator, the project represents a grand vision, indeed. 'When the trees are fully grown, this whole area will be green - you won't be able to see more than 200 metres ahead,' he says. 'We believe that the landscape, and our lives, will fundamentally change for the better.'

**ABOVE:** the water tower at Mbar Toubab irrigates the new gardening plot and the infant trees of the Great Green Wall



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