



NEW
GENERATION
PLANTATIONS *platform*

LETTERS FROM ACRE

In July 2016, the New Generation Plantations (NGP) platform held a study tour in Acre in the Brazilian Amazon, to look at the role of plantations in reducing emissions and promoting sustainable livelihoods. Here are some of the things we saw...

1 A GOVERNMENT WITH A VISION

The state government in Acre is walking the walk when it comes to low-carbon development.

A lot of governments talk about protecting the environment – but in Acre, they are actually doing something about it. The state government – now in its fifth term – came to power in 1998 on a platform of improving people's livelihoods while protecting the forest and reducing emissions from deforestation. And it's delivering on both counts.

Models suggest that, if the state followed a traditional development trajectory, 36% of its forests would be gone by 2030. Instead, deforestation rates have fallen by almost two-thirds during the last decade, and Acre retains 87% forest cover. Almost half the land is protected by law – including indigenous peoples' territories, and extractive reserves where people can sustainably harvest forest resources like rubber and Brazil nuts. But the government also offers incentives to communities and landowners to support conservation and restoration, and to use already cleared areas more productively.

Meanwhile, GDP in this historically poor, marginalized state has risen, along with other development indicators. The last decade has brought substantial increases in literacy rates and the number of households with electricity, piped water and garbage collection. Today, 92.2% of children complete at least a primary education – higher than the national average. Acre's score on the UN Human Development Index jumped from 0.402 in 1991 to 0.663 in 2010.

On previous NGP study tours, we've seen the progress made by private companies and civil society, but government is often conspicuous by its absence. That's certainly not the case here. It's inspiring to see how a government with a strong vision and the policies to implement it can shape a better future.





2 PROFITING FROM RESTORATION

Protecting and restoring native forests can provide socio-economic opportunities as well as environmental ones.

Chico Mendes is Acre's most famous son. A rubber tapper and activist, he fought to protect the Amazon rainforest so people could continue to earn their livelihoods from sustainably harvesting its resources. After his murder at the hands of cattle ranchers in 1989, the government set up the first protected reserves for just that purpose – we were lucky enough to visit the Chico Mendes Extractive Reserve on this trip to see it for ourselves.

We also visited a farm belonging to his cousin, Nilson Mendes. Twenty years ago, the whole area was cleared cattle pasture. Nilson planted nearly 50 species of native fruit trees, along with trees for the timber that one day his son could build a house with. Today, the 50 hectare site looks like a true forest – and brings in a better income than cattle would.

CPI, a local NGO that works with indigenous peoples, has also restored an area of native forest near Rio Branco. They've been working with indigenous groups to cultivate the area, which has included incorporating productive species like cacao and its delicious relative cupuaçu.

Brazil has committed to restoring 12 million hectares of forest as part of its national contribution to climate change efforts. As well as sequestering carbon and restoring ecosystems, could there be potential to enhance local livelihoods by including fruit trees and other economically valuable species within this?

3 (RE)DISCOVERING INDIGENOUS KNOWLEDGE

Indigenous peoples have sustainably used the Amazon's resources for generations.

Acre is home to around 18,000 indigenous people from 14 ethnic groups, as well as another four tribes who have chosen to remain uncontacted. Indigenous territories cover just over 3 million hectares – around 20% of the land in the state. While that may sound like a lot to some, indigenous peoples are only too aware that their land and the resources it provides aren't infinite.

CPI has been training indigenous people as agroforestry agents, building their capacity to farm the forest. We saw some of the results on their demonstration site. Vegetables are cultivated in clearings, their yield boosted by homemade organic fertiliser and plant-based pest deterrents, along with crops like urucum, a native shrub which provides a pigment much in demand from food and cosmetics companies. Acai palms are grown around ponds, their fruit feeding fish and turtles. Hives for endemic stingless bees aid pollination and provide a source of honey.

There's a lot of talk in the NGP platform about sustainable intensification – so it's fascinating to see it happening on this local scale too, using entirely natural techniques. Many indigenous people were driven into urban areas in previous decades, and there's a lot of interest in rediscovering and refining traditional knowledge. We were delighted to have indigenous representatives participating in this event, and were honoured to be invited to come and visit their lands on a future study tour. We're already looking forward to it.





4 INTENSIFICATION AND DIVERSIFICATION

Plantations in already cleared areas offer multiple benefits.

While forests may still cover 87% of Acre's land, that other 13% still represents a lot of land. The state government policy is to concentrate and intensify development in these cleared areas, much of which are currently made up of degraded cattle pasture.

From 2000 to 2010, the number of cows in the state tripled from 1 million to 3 million – by improving soil and grazing management, rather than increasing the area of pasture. But Acre is looking to diversify away from beef production, by encouraging activities such as farming Amazonian fish species like the giant pirarucu, fruit and vegetable growing, and raising pigs and poultry.

Plantations also have an important role to play, and we saw a number of examples. José De Faria has turned 300 hectares of his farm into an acai palm plantation. Acai is native to the Amazon. Berries and palm hearts from wild trees provide an important source of income from extractive reserves, but there's a huge local and international market for this superfood: "however much we produce will sell".

Similarly, wild rubber trees provide only a tiny fraction of Brazil's total rubber use, so there's great potential for plantations to take up the slack – like those we visit on the farm belonging to Paulo Sergio. New clones, grafted onto native seed-grown rootstock, grow fast and are resistant to leaf blight that's hampered the development of rubber plantations in the Amazon in the past.

Along with native species, eucalyptus is being grown for timber and bioenergy. Trees can be harvested from as early as 5-7 years here, but bananas, coffee, cacao and other fruit trees grown alongside them can provide farmers with an income in the meantime.

These diversified land uses are more resilient and more profitable than cattle ranching alone, and provide more jobs: acai and aquaculture provide almost ten times as many jobs per hectare as raising cattle. And plantations, when they follow NGP principles on ecosystem integrity and high conservation values, can also provide environmental services such as carbon sequestration and erosion control.

5 MORE WITH LESS

What if planting trees could improve the productivity of cattle pasture...?

As populations and consumption increase globally, competition for land is going to intensify – we've got to learn to do more with less. That's easy to say, and we've been saying it in NGP for years. Not so easy to do in practice... but we saw a great example in Acre.

Joao Paraná is working with Embrapa, the state-owned Brazilian Agricultural Research Corporation, to develop an integrated agriculture-livestock-forestry system on his farm. This involves planting rows of native tree species within cattle pasture, which can also be combined with crops while the trees are growing. It's a system that Embrapa has been piloting across Brazil, and it's a win-win on several counts.

Far from reducing the number of cattle than can be raised, the system can actually support as many animals as the best restored pasture, and considerably more than degraded areas. That's because the trees help to restore the soil and improve the protein content in the grass. They also offer cows much-needed shade from the fierce tropical sun, improving animal welfare and growth rates at the same time. Timber can also potentially offer farmers an extra source of income – though the environmental benefits, such as carbon storage in both trees and soil, are arguably more valuable.

The advantages seem so clear that it's a wonder the system isn't being adopted everywhere. Governments and businesses worldwide will need to do everything they possibly can if they're to meet the ambitions of the Paris climate agreement: increasing production in some of the millions of hectares of degraded pasture in Brazil and beyond in a way that also reduces carbon emissions seems like a no-brainer.



6 BRIDGING THE FINANCE GAP

The ideas and models are there – but how do we take them to scale?

In Acre, we've seen models that work: ways of using the land that bring lasting environmental, social and economic benefits. But there's a long way to go to roll these out at scale. Just as importantly, there's a need to add value within the supply chain: by building local processing facilities, and by connecting this remote Amazonian state with global markets. Good examples exist: a factory in Xaipuri uses wild rubber from the Chico Mendes Extractive Reserve to supply condoms for the federal family planning programme, while WWF and partners have linked rubber tappers directly with international companies like the French shoe manufacturer Veja. Again, the challenge is to build on these examples.

For this to happen, investment is needed – and particularly support for small farmers who can't borrow from the bank or afford to look beyond this year's harvest or cattle sales. Acre has probably the most advanced system of payments for environmental services in the world. It's supported by funds from the Norwegian government and others channelled through REDD+, the international finance mechanism that offers financial incentives to tropical forest countries for reducing emissions

from deforestation and forest degradation, sustainable forest management and enhancing forest carbon stocks. Many communities and landowners in Acre are already benefitting from REDD+ support and incentives – but it can't be the only solution.

At the moment it's still easier for producers in Acre to get finance for conventional cattle ranching than more innovative land uses, but that's beginning to change. International banks have become much smarter in recent years about building sustainability into their lending. And green bonds – which enable investors to support environmentally beneficial projects – are among the fastest-growing financial products. There could be support from the private sector too: for example, members of the Consumer Goods Forum, who include some of the biggest multinational corporations, have committed to “create funding mechanisms and other practical schemes that will incentivise and assist forested countries to conserve their natural assets and enable them to achieve the goal of zero net deforestation.”

All of these offer potential to turn great ideas into thriving businesses that are good for people and good for the planet.





7 PEOPLE POWER

Human relationships are at the heart of everything.

One of the great things about NGP is that, as well as learning from what we see on study tours, participants bring knowledge and experience from their own contexts. Companies in Acre are just beginning to experiment with growing eucalyptus for bioenergy: Glen Asomaning from the Nature and Development Foundation, WWF's affiliate in Ghana, is working on this with NGP participant ASPD. Members of the Consumer Goods Forum are committed to supporting reforestation, particularly in their beef supply chains: Skip Krasny from Kimberly-Clark can explain more. Could forest restoration in Acre be supported through a state-wide voluntary carbon offset scheme? Mrs Li from the Chinese State Forest Administration knows how to make that work; a meeting is swiftly arranged.

But it's not just about sharing knowledge: just as important are the personal interactions. Our final session of the week was a "human library": we took turns being "books" and "readers", exchanging tales of our lives and work and reflections on sustainability in one-on-one conversations (with a bit of help from Felipe and Diego, our amazing interpreters). With 11 nationalities represented, as well as local indigenous peoples, there was a huge range of stories and experiences to discover. But whatever our backgrounds, all of us can discover common ground and relate to each other as human beings. Ultimately, that's the only way that people can ever resolve conflicts and create new solutions – in Acre or anywhere else.

