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Plantations in grasslands

An NGP think piece



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It's generally agreed that we need to protect the world's forests. NGP is totally opposed to the idea of converting natural forests to plantations, and, thankfully, the practice is becoming increasingly rare. There's a danger, though, that a focus on forests leads us to overlook the importance of other biomes – such as grasslands.

WWF's *Living Forests Report* projects that up to 250 million hectares of new timber plantations could be needed by 2050 in order to meet the world's needs for fibre and fuel while conserving natural forests. With smart land-use planning, much of this planting could take place on degraded land, accompanied by restoration of natural vegetation – as is happening in many parts of Brazil, for example.

Nevertheless, we're likely to see a significant expansion of plantations within grassland biomes, especially in South America and Africa.

Argentina and Uruguay have both experienced rapid growth in tree plantations in grasslands. This brings opportunities for economic and social development, but also potential environmental and social risks.

So what are NGP participants doing to minimize the potentially negative impacts on people and nature, and to maximize the shared benefits? And what lessons can we learn?

Grasslands: an introduction

Grasslands cover around a quarter of the Earth's land surface. They provide vital habitat for wildlife and grazing for livestock, control erosion, attract pollinators and pest-controlling predators, detoxify and decompose waste, mitigate droughts and floods, and store large amounts of carbon. Dominated by grass species – of which there are more than 10,000 globally – they also support high levels of biodiversity: from mammals and birds to insects and plants, including the genetic ancestors of many of the most important crops for food security.

Despite their importance, grasslands are the least protected biome in the world, with just 0.7% of temperate grasslands enjoying any form of official protection. In South America, the proportion is even lower at 0.3%. As global demand for food and fibre grows, this leaves grasslands, their biodiversity and the ecosystem services they provide increasingly vulnerable.

The Rio de la Plata grasslands

All of Uruguay and large parts of Argentina are dominated by grasslands, from the subtropical *Campos* savannah in Uruguay to the temperate *Pampas* plains in Argentina. In total, the grasslands around the Rio de la Plata cover around 75 million hectares. This region contains unique biodiversity, with thousands of species of plants, including more than 550 species of grass – in fact, some areas can match tropical forests for plant species richness. It also supports up to 500 birds species, 60 of them unique to grasslands, and nearly 100 mammals, including the endangered pampas deer.

Since European colonization, this region has become one of the most important producers of beef and grain in the world. The Spanish settlers introduced cattle in the 16th century and sheep in the 18th century, drastically changing the landscape and species composition of the pristine grasslands. In Argentina, just a third of the original grasslands remain; Uruguay retains around 70%. In both countries conversion is continuing at a rapid pace.

Tree plantations are a relatively new player on the scene, but have expanded fast in recent years. In Uruguay, eucalyptus and pine plantations cover around 1 million hectares. Grassland plantations are also increasingly important to the forestry industry in Argentina.

Plantations have undoubtedly brought economic benefits. In Uruguay in 2013, the forest industry accounted for 10% of the country's exports and 16,500 direct jobs, with many more jobs created in related areas like transport and logistics. By the end of

2015, the industry is expected to account for 4.5% of GDP. Uruguay also generates 12% of its electricity from biomass waste.

However, this development has not come without environmental and social changes. Eucalyptus and pine plantations are very different from complex grassland ecosystems, and this can have impacts on biodiversity, water cycles and stream flow, and soil structure and quality. They are also alien and potentially invasive species. As well as changing the visual appearance of the landscape, plantations can compete with grazing land, posing a threat to the traditional rural way of life.

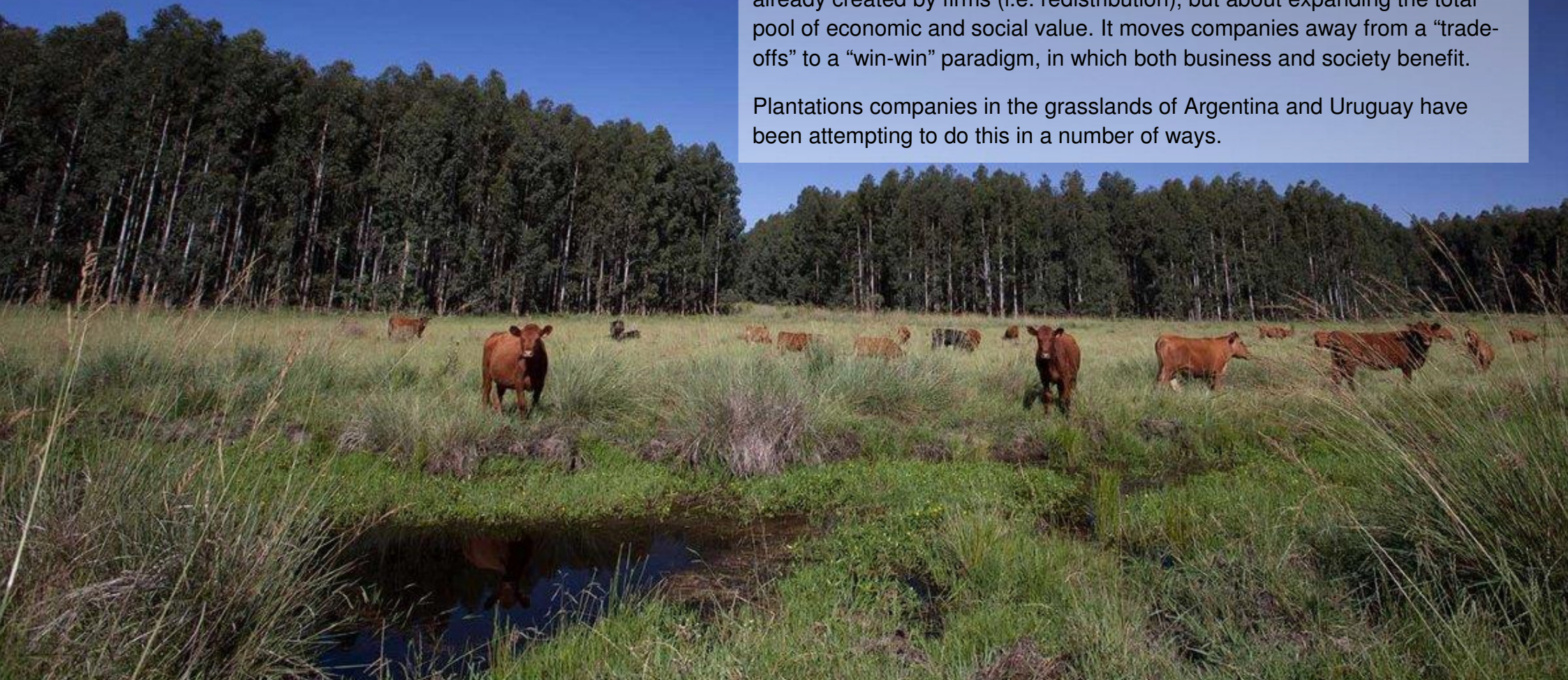
So how can these trade-offs best be managed? Is it possible for plantations to be developed in harmony with grassland landscapes? Can more be done to ensure they make a positive contribution to the well-being and prosperity of those who live alongside them?

Creating shared value

A key concept here is the idea of “creating shared value” (CSV) – *generating economic value in a way that also produces value for society by addressing its challenges* (as defined by Micheal Porter and Mark Kramer in the Harvard Business Review: hbr.org/2011/01/the-big-idea-creating-shared-value).

CSV links the interests of corporate stakeholders in the agriculture and forestry value chains to farmers and local communities, and the ecosystems and catchments in the landscape that production depends upon. It’s about enhancing the competitiveness of a company while simultaneously enhancing economic, social and environmental conditions in the landscapes and communities in which it operates. CSV is not about “sharing” the value already created by firms (i.e. redistribution), but about expanding the total pool of economic and social value. It moves companies away from a “trade-offs” to a “win-win” paradigm, in which both business and society benefit.

Plantations companies in the grasslands of Argentina and Uruguay have been attempting to do this in a number of ways.



Environmental value

The Rio de la Plata grasslands receive very little official protection. In order to conserve the most important areas for biodiversity and crucial ecosystem services, Fundación Vida Silvestre Argentina (WWF's sister organization in Argentina) mapped out valuable grassland areas (VGAs) in 2004. VGAs are "considerable area of natural grasslands under good conservation conditions" that meet at least one of a number of criteria, similar to the high conservation value (HCV) concept widely used in certification schemes such as FSC:

- 1. Biodiversity:** species richness, representative plant communities, presence of endemic or endangered species, presence of indicator species of good grassland conditions.
- 2. Landscape issues:** size of the area, scenic conditions, environmental functions and services provided.
- 3. Legal status & conservation status:** present degree of protection, trends in habitat degradation and habitat loss.
- 4. Conservation opportunity:** recent efforts for conservation, NGO activity.
- 5. Land use/tenure:** present status of land tenure, land use
- 6. Human/cultural relevance:** value for local communities due to their traditions, history, etc.

Over 3.5 million hectares of VGAs have been mapped in the Rio de la Plata grasslands. More than half are on privately owned land. If these areas are to be conserved, then it's up to private landowners to take the initiative.

The study identified tree plantations as a threat to more than a third of VGAs. NGP participants aim to conserve and manage valuable grasslands on their property, in keeping with the NGP principles of protecting areas of high conservation value and maintaining ecosystem integrity. In Uruguay, companies are working with NGOs Vida Silvestre Uruguay and Aves Uruguay on grassland management and conservation.

The challenge now is to cross farm boundaries and work with neighbouring landowners, such as cattle ranchers, to extend and connect conservation areas and to take collective action to safeguard vital ecosystems, such as wetlands and watercourses, at a landscape scale.

By maintaining and managing these important areas, companies can maintain and enhance the supply of valuable ecosystem services and benefits for the common good they provide to society.

Socio-economic value

While plantations create jobs and revenue, plantation companies can also play a more proactive role in supporting social and economic development. This can be seen in Uruguay in the interaction with cattle production, where a potential negative impact (competition for land) has been turned round into a mutually beneficial relationship.

Cattle ranching is a hugely important industry in Argentina and Uruguay – ranked second and third in the world for beef consumption per capita (only Hong Kong consumes more). It's deeply ingrained in the culture, particularly in rural areas. Cattle graze extensively and feed on grass all year round; for centuries, good husbandry has enabled cattle to be produced more or less in balance with the natural grassland environment.

But this way of life is changing. In recent years, there's been huge foreign investment into large-scale agriculture (such as soy production) and plantation forestry in the region. Millions of hectares of rangelands have made way for crops and trees, and land prices have shot up. Small wonder that there's been bad blood between cattle farmers and the forestry industry.

Now, NGP participants are changing that. UPM and Montes del Plata (a joint venture between Arauco and Stora Enso) have both reached agreements with cattle ranchers to offer grazing rights within the open areas around plantations, which

make up around 30% of the companies' landholdings. Meanwhile, UPM and Montes del Plata are also assisting ranchers to grow trees on areas of their own land, providing them with an additional source of income.

Grazing around forest plantations has significant advantages for both activities. The trees provide shade and shelter for cattle, increasing productivity and animal welfare, while keeping down the weeds and vegetation through grazing reduces the risk of fires spreading to plantations.

It's a model that offers the potential to enhance local people's livelihoods, use land more efficiently and improve relationships, opening the possibilities for wider cooperation on conservation and development at a landscape level.

Nevertheless, rural unemployment and migration from rural to urban areas remain high. In Argentina, Masisa aims to create socio-economic value by supporting the development of a stronger timber products industry through business development and workers' education programmes. In particular, the company links small, community-owned saw mills with furniture manufacturers, adding value at both ends of the chain. A thriving timber products industry will create direct and indirect jobs, and will be good for Masisa too.

To protect grasslands, think as a grassland...

The above examples show that we have enough intuition about where to direct our steps to achieve the long-awaited model of sustainable development. Yet although we've never had a better understanding of the reality and how to move forward, these examples are still isolated cases. What is the missing piece of the puzzle? What are we failing to consider?

The South Korean documentary film-maker Sooyong Park, who devoted part of his life to tracking Siberian tigers in the forests of the Russian Far East, states that if you want to find a tiger, you have to think as if you were a tiger. We are not looking for tigers, but in our search for sustainability, this is advice we could consider. If we want to save grasslands, we have to think and behave as if we were grasslands.

The three dimensions of sustainable development (the economic, the ecological and the social-cultural) need not be conflicting, yet they are at odds with one another in practice and that is what makes our goal unattainable.

Systems thinking – seeing connections, relating functions to one another, making use of diversity and creating synergy – may offer support in realizing a society that is more sustainable and capable of combining the three dimensions into one.

We can learn a lot from ecosystems. An ecosystem is based on networks, mutual dependency, flexibility, resilience and, if we add it all up, sustainability. It is not about the individual principles and elements, but rather about the system as a whole: constantly in motion and developing, and making up more than the sum of its parts.

“Healthy” ecosystems are actually learning systems; our social learning system should be one in which people learn *from* and *with* one another and collectively become more capable of withstanding setbacks and dealing with insecurity, complexity and risks. Such learning requires that we not only accept one another's differences but are also able to put these to use.

During the study tour, we will invite you to explore this possibility: we will invite you to think and behave as a grassland!

Looking ahead

Plantations in grasslands are set to expand in Argentina and Uruguay in the years ahead, as well as in other parts of South America and Africa. During this study tour, we'll be asking:

- How can plantation companies work with other land-users to create resilient, productive landscapes in grasslands?
- What are companies doing to create shared environmental and social value? How could these efforts be strengthened and extended?
- What lessons from other biomes and other parts of the world can be applied in the Rio de la Plata grasslands? And vice versa?
- Can ecosystem-thinking help us create a learning system capable of meeting the challenges of moving towards genuinely sustainable development? What role can NGP play in the social change needed?

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