



# Tiête Forests

Mid-year report 2021



# Protecting water resources and connecting forest remnants

By March this year, the very first planting cycle in our Tiete Forests project – WeForest's second project in the Atlantic Forest and a collaboration with energy company AES Brasil – was successfully completed.

More than 60 species grown so far by the project – which protects water resources along the banks of the Tietê river and increases forest cover and biodiversity – are grouped into two types. Filling species quickly promote soil coverage and provide shade, and diversity species ensure the long-term development of the forest with their slower growth and long lives.

Right now, São Paulo state and our restoration areas are being hit by an unexpected and **unprecedented cold snap** with temperatures as low as  $-1.2^{\circ}\text{C}$  ( $29^{\circ}\text{F}$ ). Crops and young trees across São Paulo and neighbouring Minas Gerais were severely affected, and over the next months we will be assessing the impact on our new seedlings.



Our Tiete  
Forests  
project

## Our goals for Tiete Forests:

By March 2021, we had met  
our planting season target of

100 ha

189 072  
tree seedlings planted

61 native species

By 2029:

Protect and restore  
2795 ha  
5 590 000 trees

using  
framework planting



# What's new in Tiête?

## Recent highlights from the field

With a goal for 2020-2021's planting season to restore 100 ha, 44.37 hectares were completed by the end of 2020 and the remaining 55.63 ha by March this year. This 100 ha area is made up of 125 sites clustered around the the twists and turns of the Tiête River. The distance between the northernmost polygon and the southernmost is 35km.

61 different species are being grown across these 100 ha. About two thirds of them are filling species and the rest are diversity species.

The planting went well. We needed 11 000 seedlings fewer than our target of 200 000 because we found patches of natural regeneration where seedlings were naturally sprouting, and needed to account for field conditions like leaving spaces for tractors to turn!

Since planting ended, the field team has been carrying out regular



Our restoration approach does not use herbicide to control invasive grasses. Instead, grass is removed mechanically by mowing, and green manure – guandu or pigeonpea (*Cajanus cajan*) – is used in between native seedlings to help accelerate their growth by creating a temporary canopy that shades the invasive grasses.

January

February

March

April

May

June

Fencing

Ant control

Grass control

Guandu seed sowing and seedling planting

Mortality assessment and replanting

Key:

Restoration activities

Mapping and monitoring, etc



Experiments compare our non-chemical approaches (right) with the usual methods, which rely heavily on herbicides (left). Our approach (right) means slower growth, because even when the invasive grasses are mowed regularly, they still compete with the seedlings for water and nutrients.

maintenance activities, including organic control for ants and invasive grasses, mulching, replanting and assessing the survival rates of the seedlings.

Our assessments six months after planting showed initial seedling survival rates above 80% (average 83%). The planted 'green mulch' guandu or pigeonpea (*Cajanus cajan*) has a lower average survival of 60%. While some of the mortality is due to the poor rainfall at the start of the rainy season, severe ant infestations are causing a major challenge.

The ants – which eat the fresh leaves and kill new seedlings, as well as much older trees – may be finding a home in our sites because they are chemically controlled in neighbouring farmland. Despite the rounds of organic treatment before planting with an organic ant control compound, BIOISCA, and testing some green manure species that should attract them away from our seedlings, they represent a significant threat to seedling survival. As an emergency measure we may need to temporarily use an insecticide (with all precautionary measures) to address this immediate challenge.

July

August

September

October

November

December

Ant control

Grass control

Ant control

Grass control

Post-planting fertilization





# What's next?

- Assessment of seedling survival after the recent frosts.
- Field identification and mapping another 125 ha (for 250 000 trees) of AES Brasil landholdings for ecological restoration (ongoing since May 2021).
- Identification of 15 ha (for 30 000 trees) on private farms within Jau municipality for the 2021/2022 planting season, to support and expand the ecological corridors.
- Define the long-term monitoring methodology for wildlife and other ecosystem services such as carbon and water.

In June, the Tiête Forests project enjoyed worldwide attention when it was featured in the **SER Conference's "Field Trip Fridays"**. Attendees enjoyed a virtual tour of the restoration sites and posed questions about challenges and successes. Our video of some highlights of the tour will be coming soon!

Stay up-to-date with our interactive **Tiête Forests map**, and check out the **photos** on Flickr.

## How do we know our restored forests are growing and making an impact?

Every hectare under restoration is mapped with GPS points to generate polygons (areas on a map) that are assigned to sponsors. Monitoring plots are established in our sites and our forestry and science teams conduct surveys to monitor progress of biomass growth, tree density, survival rate and species diversity, among other indicators. Where social impacts are also critical, we measure socio-economic indicators such as the number of beneficiaries, people trained, and income generated from forest-friendly livelihood activities.

Please visit our **Why and How** webpage for more information.