

# FOREST FIRES AND LANDSCAPE RESTORATION: AN AGENDA FOR CHILE





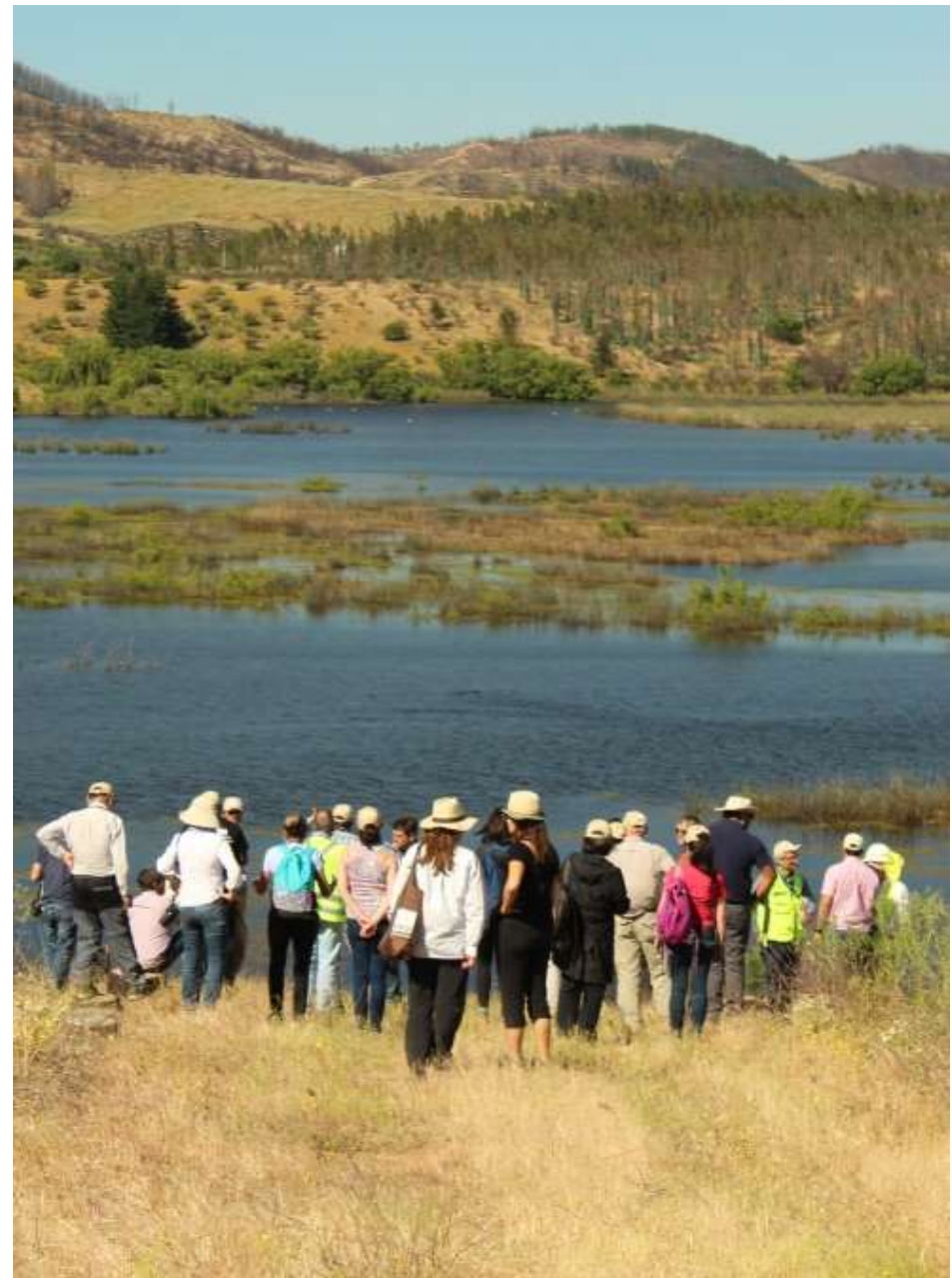
In November 2017, the New Generation Plantations (NGP) platform organized a study tour in Chile to discuss the process of landscape restoration and resilience following the catastrophic fires of the previous summer. The event included a public seminar in Santiago, followed by four days of field visits and discussions in Maule and BioBio, the regions worst affected by the fires.

Around 40 participants from more than 10 countries took part. They included representatives from forestry companies, including Chile's largest companies, Arauco and CMPC; NGOs including WWF; academics; and government officials.

During the week, participants discussed the question:

## **How can landscape restoration after large-scale forest fires improve socio-ecological resilience?**

The following document summarizes the main proposals put forward by participants on the study tour. We hope government agencies, forestry companies, NGOs and others working in Chile will consider these proposals and take them forward in order to strengthen landscape resilience.



## GOVERNANCE

### What policies and stewardship practices can enable the effective governance of fire-prone landscapes?



### Coordinate a public agenda for restoration

The new Chilean government must make the restoration of burnt areas and forest landscape planning a national priority. We want to see closer coordination between the restoration agendas of the Ministry of Agriculture and the Ministry of the Environment, the private sector and civil society. Landscape-scale planning to increase resilience to fire and other potential climate impacts should be an integral part of this. Companies, NGOs and academia are all keen to work with government on this issue.

Government has an important role to play in coordinating and implementing the restoration agenda, both through enforcement (e.g. to ensure adequate firebreaks, minimum areas of native vegetation and conservation of riparian areas) and through incentives such as tax breaks and subsidies to encourage restoration of native vegetation and mosaic landscapes.

## Develop a shared vision through a multistakeholder platform

To complement the restoration agenda, participants identified the need for a multistakeholder platform to develop a vision of what landscapes should look like in 20-50 years, and a common roadmap to get there. Platforms could operate at both the national level and on a smaller regional/landscape scale. This would help to plan and coordinate activities, identify areas for collaboration and shared value creation between different parties, and clarify responsibilities. Such a platform would also facilitate communication and improve information sharing.

Many of the building blocks are already in place. Participants on this study tour included large forestry companies, NGOs, researchers and government staff, while Arauco and CMPC have both invested in forums and processes for engaging their neighbours. And other initiatives already exist, including those run by government departments. Whatever form of platform emerges, it's important that the response is coherent, coordinated and comprehensive.

## Strengthen regulations for fire mitigation

Arauco and CMPC have been working with communities affected by fire to negotiate arrangements for firebreaks and low-fuel zones, where trees are pruned and excess vegetation cleared. Building on these experiences and scientific evidence, best practices should be developed to determine, for example, the size and structure of firebreaks around settlements and water sources, and within plantations.

Current protocols are voluntary, and the existing National Forest Corporation (CONAF) has no power to enforce them. However, the expected creation of the new Chilean National Forest Service provides an opportunity to change this by formalizing regulations and ensuring their implementation. There is also a role for regulation in ensuring that communities don't illegally build within firebreaks – although strong engagement and communication between companies and communities ought to prevent this from happening.



## FINANCE

**What forestry/agriculture economic models will promote and accelerate landscape restoration, and what financial instruments/investors will fund the implementation of landscape restoration?**



## Bring landscape restoration into the economy

Landscape restoration is expensive, but it can also be seen as a business opportunity. Arauco and CMPC are already working with communities to support projects and new business opportunities that create shared value for the company and the community. An example would be the *maqui* (*Aristotelia chilensis*) juice drink marketed by Arauco. Made from wild berries gathered within the company's native forest areas, it's created employment and income for local people as well as a successful business stream for the company, adding economic value to conservation areas.

Companies need to work with communities to create similar shared value initiatives based around landscape restoration. These might involve agroforestry projects, non-timber forest products, beekeeping, ecotourism and other revenue streams that complement or provide an alternative to timber production – although before this can happen, investment is needed to restore the forests that provide these resources. Another area to look at is working with smaller private forest owners, who may not have the resources to restore native vegetation or to properly manage fire risk on their property – which creates a risk for everyone. Companies could mitigate this risk by supporting them to diversify their land uses and create more resilient mosaics.

## Make the links with non-traditional sources of finance

While restoration is expensive, various sources of finance exist that can help to fund it:

- Both WWF and the World Resources Institute (WRI) run initiatives that aim to link impact investors to landscape restoration projects, which could enable ideas like those above to be piloted and scaled up. NGP participants in Chile should consider developing a joint proposal that could be taken forward in partnership with WWF, WRI and others.
- The rapidly growing market for green bonds offers opportunities for those that can package restoration “products” in a way that offers clarity and certainty to investors. Chilean companies could follow the lead of Brazilian NGP participant Suzano, which has used green bonds to raise finance at a low rate of interest to invest in projects that bring positive environmental and sustainable development returns.
- Payments for ecosystem services were also identified as an important potential source of finance for restoration. These include carbon markets; the potential to access REDD+ funding to support landscape restoration should be explored.

## Create a restoration “marketplace”

Even before this year’s fires, Arauco and CMPC had committed to restoring around 25,000 and 8,700 hectares of native forest respectively to compensate for forest conversion in the past. They are not the only companies carrying out mandatory or voluntary forest restoration: mining companies, for example, must compensate for any natural forest they clear. In addition, various NGOs are also promoting forest restoration projects.

A marketplace or clearing house should be set up to manage these efforts. This would enable restoration to be planned in a coordinated way that maximizes the environmental and social benefits, including in the context of fire prevention. To take a simple example, it makes more sense to reforest a 150-hectare corridor that restores connectivity between areas of high conservation value than to plant three separate 50-hectare fragments. Better coordination could also reduce costs and improve sharing of best practices and resources.

## MANAGEMENT

**What changes are needed to re-design and re-develop new management practices, improving landscape resilience in an uncertain future?**



## Deepen community engagement

When communities have a stake in the success of the forestry business, they are far less likely to start fires deliberately or carelessly. They are also more likely to respect and maintain firebreaks, to raise the alarm quickly and to help put out fires. It's encouraging to see that collaborating with local communities is a part of the response to the fires from both Arauco and CMPC, but this could be taken further. Shared value projects, benefit sharing mechanisms or even options such as giving local communities equity in the business need to be explored further. Paying communities for successfully reducing the incidence of fire is another option, which has been used by the New Forests Company in Uganda.

NGP participants in Brazil and Uganda, for example, have enjoyed considerable success in reducing forest fires as a result of close community engagement. In China, meanwhile, forest fires are rare, largely because starting fires deliberately is socially unacceptable.

## Allocate more resources to fire prevention

Prevention is better than cure: 99% of forest fires in Chile are started by humans, so reducing this is by far the most effective – and the most cost-effective – way to limit future fire damage. Companies and government need to question how they allocate their resources. Equipment such as planes and helicopters to combat fires is very expensive, and may still be powerless against the kind of megafires experienced last summer. A fraction of the cost of one helicopter could pay for a comprehensive programme of education and behaviour change interventions, incentives and community investments with the potential to stop fires from occurring in the first place.

An example of this type of work was seen in Santa Olga – a town completely destroyed by the fires, which is now being rebuilt. A community-led fire prevention network has been established, with support from Arauco and CMPC; government and other actors have also come on board. This provides a potential model that could be scaled up and institutionalised in other towns across Chile.

## Diversify the landscape

Mosaic landscapes, with a diverse range of land uses and vegetation types, are likely to be more resilient to fire than monocultures where fire can spread easily through a continuous canopy. Restoration should ensure there are breaks within and between plantations. Equally, diverse economies are likely to be more resilient to other potential shocks.

Companies, other land owners, communities and government should collaborate to develop new high value crops (berry orchards, for example) that can serve to slow fires while also providing employment and income. Protection zones, for example around water courses, could be restored to native vegetation.



## TAKING ACTION IS URGENT

At the time of writing, more wildfires are raging: in California, more than 200,000 people have had to evacuate as fires head for the heart of Los Angeles. Yesterday's climate risks are becoming today's reality.

A new drier climate paradigm has arrived in Chile and many other parts of the world. In our new normal, we're seeing fires with greater intensity and our counter-measures need to increase in scope as well. Otherwise, it's all too likely that Chile will experience the phenomenon suffered in Portugal where mismanagement of the impacts of large-scale fires led to a repeat of this tragedy 13 years later.

The NGP concept offers solutions. Through a system-wide, cross-sectoral approach to planning and zoning in mosaics, we can build new ecological infrastructure where agriculture, industry, forestry, infrastructure and settlements coexist with nature. Where well-placed and well-managed plantations provide opportunities and value for people living alongside them, opportunities to restore degraded ecosystems and build resilience, opportunities to increase the supply of renewable raw materials while sparing natural habitats.

This study tour provided valuable opportunities for learning and sharing experience as we seek to understand the new normal, and collectively develop solutions for restoring landscapes and strengthening their resilience.

**We hope the ideas collected here will provide a platform on which different partners in Chile can build to restore and safeguard fire-affected landscapes. And we commit to return in the near future with the full hope of seeing a thriving landscape.**

