

# AQUILA CAPITAL TIMBER INVESTMENT FUND

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### 1. Fund

### Theory of change

Long-term investments in forests and their sustainable management form an important contribution to maintaining and improving the functionality of diverse and valuable ecosystems. The reconciliation of economy and ecology through sustainable forest management, which gives equal consideration to the productive as well as protective functions of a forest, is a key objective of the Aquila Capital Timber Investment Fund S.A., SICAV-SIF (ACTIF or "the Fund"). The Fund's investment and management processes combine internationally recognised certification, ESG (environmental, social and governance) criteria and impact targets.

The **integration of ESG criteria** serves to consider environmental and social factors as well as the principles of good governance in the



context of investment processes. Many investors, such as signatories to the UN Principles for Responsible Investment initiative (UN PRI), Aquila Capital being one of them, integrate ESG criteria into their analysis of investments.

Investing in ESG-oriented strategies is also a key component of the Paris Agreement to combat climate change, which aims to limit the increase in global temperature to 1.5 degrees Celsius above pre-industrial levels and align financing flows with climate targets. ACTIF's investments contribute to the achievement of the objectives set out in the Paris Agreement in the context of climate change mitigation and adaptation, as well as several of the 17 sustainable development objectives developed by the United Nations.

All investments of the ACTIF are **impact investments**. These are investments aimed at achieving manageable and measurable goals to solve defined problems. ACTIF is geared to the UN's 17 sustainability goals in order to ensure sustainable development at an economic, ecological and social level. Goal 15, which aims to protect and restore terrestrial ecosystems and promote their sustainable use, is particularly relevant for forestry investments. Proof of the sustainable management of forest areas held by ACTIF is provided through certification schemes which label economically, socially and ecologically sustainable forest products, such as the PEFC (Programme for the Endorsement of Forest Certification Schemes) and FSC (Forest Stewardship Council). The Fund's investments are also managed in accordance with internationally recognised standards that exceed the requirements of local laws.

The destruction of forests causes about one fifth of the world's annual greenhouse gas emissions. At the same time, more than a quarter of all CO<sub>2</sub> emissions are sequestered in forests each year. The contribution to CO<sub>2</sub> sequestration made by a sustainably operating forest and timber industry consists of maintaining or building up the carbon storage in forests and removing part of the carbon from the cycle through the production of long-life wood products.

Forest areas are most effectively protected from deforestation and land-use conversions through sustainable management. In this respect, forestry is the form of land use that can sequester the most carbon. It removes  $\mathrm{CO}_2$  from the atmosphere long-term by storing it in biomass and soil and through the use of wood as a raw material. Against this background, ACTIF prefers to invest in forests whose strong tree growth sequesters large volumes of  $\mathrm{CO}_2$ , and in countries whose wood-processing industries allow for the highest possible proportion of wood to be used as a raw material (e.g. as construction timber) as opposed to a source of energy.

The technological advantage gained through the development of engineered wood products in countries such as Finland allows for the comprehensive use of harvested trees, so that hardly any woody material is wasted. In addition, this form of management maximises the carbon storage function and makes it superior to the contribution of unused forest areas over the long term. This does not mean that all land is used for timber production. In every forest enterprise in which ACTIF invests, partial areas are also reserved for environmental protection and are generally not managed.

ACTIF also aims to **transfer and exchange know-how** within its internationally diversified portfolio and through Aquila Capital's globally experienced management team so that forest operations, though small in an international context, can be developed and managed efficiently. Among other things, innovative technologies for optimisation and forest-protective management are applied, which can be subsumed under the term "precision forestry". The principle of precision forestry consists of the use of modern tools, machines and technologies, such as remote sensing, navigation and geo-information systems, to improve decision-making processes on the basis of comprehensive information to ensure the objectives of forest management are met.

In this respect, sustainable forestry investments offer an opportunity to sensibly combine economy and ecology - for the **preservation of the creation.** 

#### Key achievements 2020



AFFORESTATION: 150,500 Approximately trees have been planted in the year 2020. This corresponds to approximately two to three trees for every cubic metre of timber harvested.

REFORESTATION: 1 km<sup>2</sup>
Approximately have been reforested in the year 2020.







ENVIRONMENTAL PROTECTION:

97 ha are protected by law, but three times this area (275 ha) is voluntarily protected and not used for forestry.







# AQUILA CAPITAL TIMBER INVESTMENT FUND

#### **Investment targets**

The investment objective of ACTIF is to enable its investors to participate primarily in the performance of timberlands and forestry assets and in the income from renting out or leasing out these properties.

The Fund's economic guidelines only allow investments in:

- Countries that offer adequate legal and political stability and an appropriate level of taxation;
- Countries with suitable **site conditions** for timber production;
- Assets with balanced risk/return structures and reasonable valuations.

In accordance with these economic guidelines, investments in forestry companies are made exclusively in regions with a sufficient availability of

- Suitable forest areas,
- Selection of qualified management companies;
- Good infrastructure.

The Fund's ethical guidelines allow investments that

- Take account of their environmental impact. Negative environmental impacts from the projects are actively reduced and generally avoided;
- Create fair working conditions. Child labour and forced labour are prevented and high safety standards are applied to protect the health and safety of the people employed in the operating companies;
- Preserve cultural heritage. Cultural heritage is protected from the possible negative impacts of an investment project.

The investment company aims to prove the **sustainable management** of all investments through appropriate third-party **certification systems**.

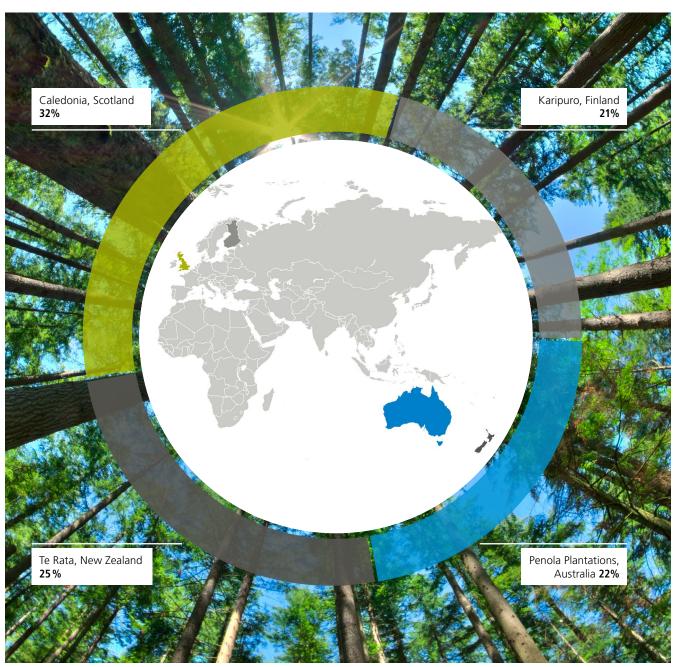
The **value drivers of forestry investments** are essentially the biological growth of trees and management techniques to steer value development through sustainable forestry. In this respect, optimisation and know-how transfer across the forest enterprises can be decisive, for example, in the securing of timber sales through long-term purchase contracts with regional and international customers; or the diversification of income streams through alternative forms of use with a positive influence on the risk profiles of assets. A further prerequisite for sustainable value development is a favourable timber supply to demand ratio in the target countries.

### Description of the fund's portfolio

The ACTIF's forestry investments are currently spread over four geographies in Finland, Scotland, Australia and New Zealand covering a total area of around 8,835 ha. They comprise three direct investments (in Finland, Scotland and New Zealand) and one fund investment in the Green Triangle region of south-east Australia. This distribution features diversification across different countries and locations with

varying vegetation zones and silvicultural systems. Various timber markets in different currency zones are being supplied. The fund can invest in three economically well-developed regions: Europe, Oceania and North America. Possible future ACTIF target countries, in addition to those already mentioned, are New Zealand, Canada and the USA.

### World map with investment locations





# Finland: Key data

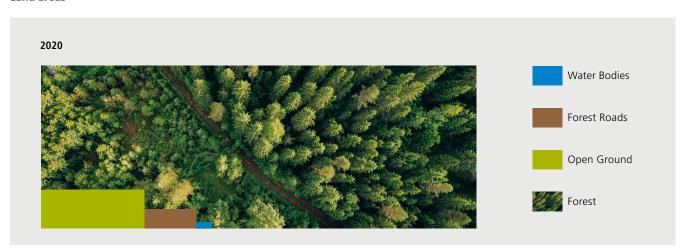
# Number of trees planted



### Afforested area



### Land areas



### Finland: Insights into local operations

The assets in Juuka and Rautavaara are already close to the ideal Aquila Capital is pursuing, with native flora and fauna and near-natural forest management. Over the next few years, the asset management team would merely like to improve the existing, legally mandated system of complete shelterwood removal during harvesting, where possible. In this way, the potential of natural regeneration should be fully realised. In 2020, seeding was carried out in advance of planting out an area of seven hectares; the asset management team would like to expand this in future. Ongoing efforts to use

seeding instead of planting are focused on managing forests in a more natural way. Snow and ice damage to the exotic coastal pine tree species shows how important it is to use native plants or plants with local genetic material. This is especially important in extreme climatic conditions with very cold winters and occasionally very hot



summers, which are becoming more extreme owing to climate change. It is planned that areas with low yields are increasingly taken out of use to allow nature to recover and thrive.



Two-year-old pines with natural regeneration of birch



Biodiversity in the Finnish natural forest, here a capercaillie



Harvester in a thinning operation



Sparse mixed pine forest becoming a continuous cover forest



# Scotland: Key data

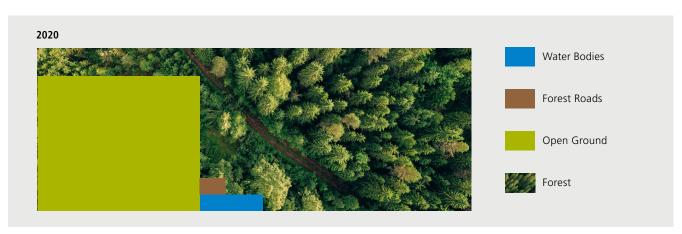
# Number of trees planted



### Afforested area



# Land areas



### Scotland: Insights into local operations

Forestry in Scotland is characterised by a comparatively simple silvicultural system, with two main tree species: Spruce (Picea sitchensis) and pine (Pinus contorta), which are not indigenous to Scotland, but both of which show above average growth rates there. These species account for approximately 80% of Scotland's annual roundwood production. After harvesting, the areas are usually reforested with the same tree species.

Efforts outlined in the previous Impact Report to build a rail loading point at the Strathmore asset for use in upcoming large-scale harvesting projects were pursued in 2020. These efforts will have a positive impact on expanding local infrastructure, while reducing the wear and stress on roads. In addition, they will make the transport of the sustainable product wood more environmentally friendly. Movements on the British market for voluntary carbon offsets are being closely monitored. Through peatland restoration on parts of the assets, carbon can be actively stored. The carbon benefit is certifiable under a peatland restoration scheme and the  $\mathrm{CO}_2$  certificates generated in this way are tradable on the voluntary compensation market.

Active asset management in form of a full inventory by aerial survey of the forest stands in Strathmore carried out at the end of 2019 had a particularly positive impact in 2020. The use of the most advanced drone technology in conjunction with a topographic map of the terrain made it possible to precisely determine tree heights, which is often not possible with such precision from the ground in very dense forest stands. As a result of this evaluation, growth differences in the stands were identified and planned harvesting measures could then be precisely adjusted from an environmental and resources point of view. This demonstrates how new approaches can lead to the gathering of improved data and significant advances in forest management.









Track connection of the forest



Scottish forest in the morning haze



Red deer in November 2019



Four-year-old spruce and pine trees at the Strathmore asset

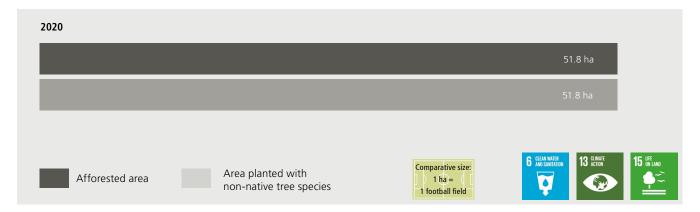


# Australia: Key data\*

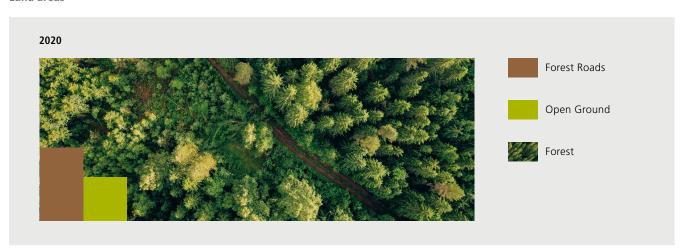
# Number of trees planted



# Afforested area



### Land areas



<sup>\*</sup> These figures refer only to the share owned by ACTIF.

### Australia: Insights into local operations

The previous owner of this forest enterprise had reduced the amount of thinnings over several years and finally terminated some of them completely. Following acquisition, the thinning programme was resumed, in order to improve the management of the qualitative development of younger forest stands. In the meantime, the necessary entrepreneurial resources were no longer available. Therefore,



a "preferred partner program" was created, which allowed entrepreneurs to purchase machines for thinning work and hire labour on the basis of an almost guaranteed capacity utilisation. These advantageous conditions helped create long-term local jobs.

In Australia, non-native plant species that sometimes spread invasively have major negative effects on the native flora. In this forest enterprise, areas which had been affected by invasive plant species and predominantly bore native trees, have been improved by eliminating plant species that were harmful to the local ecosystem.

In heathland areas, the control of four woody grasses was completed in a test trial. This is important because the removal of these grasses, which slow down the growth of trees, entails a high level of effort each year. The pilot project is intended to determine how to minimise labour, and therefore resources, as well as herbicide use in the future.

After consultation and planning with a local non-profit environmental organisation, a four-year project was initiated to improve the environmental values of Ascot Park. Initial work included weed control, the removal of uncontrolled pine growth and the planting of 400 seedlings of native tree species in June 2020.



Penola Plantations tree nursery with pine seedlings



Old and young radiata pines



Rare heath species in Australia



### New Zealand: Insights into local operations

The Te Rata asset in New Zealand is located on the east coast of the North Island on former agricultural land planted primarily with Monterey pine (Pinus radiata) and Douglas fir. The asset largely supplies the softwood sawlog export market to China, which is characterised by steady or increasing demand. The forest stands were mainly planted between 1993 and 1994 and are now close to harvest maturity.



In New Zealand, there is a unique opportunity to meet obligations under the National Emissions Trading Scheme (NZ ETS) through the purchase of carbon credits generated on forest land. In line with regulatory requirements to achieve CO<sub>2</sub> neutrality under the

Paris Climate Agreement, the amount of greenhouse gas emissions allowed is being steadily reduced. At the same time, the price of a New Zealand Unit (NZU), which corresponds to one tonne of  $CO_2$  equivalents, has risen steadily and was at around 35 NZD at the end of 2020. This scheme means alternative ecosystem services provided by a forest can be monetised. The New Zealand market thus allows Te Rata to make sustainable forestry and  $CO_2$  storage as a natural by-product accessible to and profitable for investors. In New Zealand, in particular, the asset management team sees great potential in bringing the benefits of the additional functions of a forest to the market, which have not yet been priced in elsewhere. The  $CO_2$  component can significantly alter the characteristics of forestry investments.

For younger forests, in particular, early revenues from the sale of  ${\rm CO_2}$  certificates lead to a significant smoothing of the earnings profile, which would otherwise show a strong downstream income from harvesting at the end of the rotation period. In view of the development of the NZU price, the asset management team sees great potential for complementing portfolios based on traditional log production with forestry projects focused on carbon storage – not least from a yield perspective.



Asset Te Rata



Harvest of mature pine stands

### 3. Portfolio impact

#### **Review and outlook**

The certification of sustainable management of all areas is an important objective of ACTIF, which will be achieved over the Fund's duration, unless forest land is already certified by the time of acquisition by ACTIF. Currently, about one third of the land in Scotland is not yet certified. Such certification requires a management plan



approved by the forestry authority. Plans were either not in place at the time of the acquisitions or have to be adjusted due to objectives differing from those of the previous owner. However, all areas will be managed in the same sustainable way, regardless of whether

they are already certified or not. In this respect, all ecological and social aspects of certification are taken into account, but the formal achievement of certification status takes time.

Environmental aspects of management often concern the management and protection of surface waters. In Australia and Scotland,



areas close to watercourses have already been restored. In Finland, the focus was primarily on the protection and conservation of biodiversity, as the forest areas in the region were already close to nature.

Many assets in Scotland contained areas that were unstocked at the time of purchase and needed to be reforested to restore the ecolog-



ical and productive functions of the forest. As a result, approximately 100 ha (1 km²) in Scotland were replanted shortly after acquisition. A slight increase in biodiversity has been achieved by using additional tree species.

In commercial forests, the new generation of forest stands is usually established by planting. In Finland, a certain proportion of reforested areas was established by the closer-to-nature seeding method. The



management of ACTIF intends to promote the use of near-natural methods such as sowing (or preferably natural regeneration) and increase the diversity of tree species.

Social factors have so far mainly concerned people employed in the respective forest enterprises. In Australia, the resumption of a thinning programme created additional long-term jobs.



Fund management maintains close and trusting relationships with local service providers. In future, it's expected social considerations will extend to more stakeholders.

Every cubic metre of timber sold by the Fund's forestry operations



has been certified and has originated from sustainably managed forests. For every cubic metre of timber harvested, about five new trees have been planted.

At present, we cannot make a definitive statement about the CO<sub>2</sub>



balance of the Fund's forestry operations, as not all of the operations are yet able to report their CO<sub>2</sub> emissions. Reporting requires consideration of the quantities of carbon stored above and below ground, as well as withdrawals and releases during manage-

ment and timber harvesting. In the future, management intends to develop and report a  $\rm CO_2$  balance for all the Fund's forest operations and assets.

# **ACTIF Portfolio Impact Parameters**













Parameter	IRIS Code	Unit	2020	6.3	6.6	8.2	8.3	9.1	9.4	12.2	12.4	13.1	15.1	15.2	15.3	15.5
Area of Land Deforested	PI1489	ha	0.0		х	_		_				_	х	х	х	_
Area of Land Reforested	PI4907	ha	110.3		х							х	х	х	х	
Area of Trees Planted: Native Species	PI3848	ha	20.9		х							х	х	х	х	
Area of Trees Planted: Total	PI4127	ha	110.3		х							х	х	х	х	
Ecological Restoration Management Area	PI9556	ha	16.3		х					х		х	х	х	х	х
Forest Management Plan	012622		yes		х								х	х	х	
Land Directly Controlled: Cultivated	OI1674	ha	7,140.3		х	х					х		х	х	х	
Land Directly Controlled: Sustainably Managed	OI6912	ha	8,944.0		х	х				х	х		х	х	х	
Land Directly Controlled: Total	OI5408	ha	8,944.0		х	х				х	х		х	х	х	
Length of Streams Present	PI3239	m	39,780		х								х			х
Length of Streams Restored	PI6885	m	0.0		х								х			х
Number of Trees Planted		n	150,495		х								х	х	х	
Product/Service Certifications	PD2756	%	100%	x		х	х	х	х	х	х					
Protected Land Area: Permanent	PI3924	ha	97.3		х					х			х	х	х	х
Protected Land Area: Total	PI4716	ha	274.3		х					х			х	х	х	х
Type of Land Area – barren	PD3922	ha	1,495.1		х					х			х	х	х	х
Type of Land Area – roads	PD3922	ha	134.5		х					х			х	х	х	х
Type of Land Area – water	PD3922	ha	66.9		ж					х			х	х	х	х
Type of Land Area – forest	PD3922	ha	7,139.1		х					х			ж	х	ж	х
Units/Volume Sold: Total	PI1263	m³	44,952.3	x		х	х	х	х	х	х					
Units/Volume Sold: Certified	PI7289	m³	44,952.3	x		х	х	x	х	х	x					
Water Quality Practices	017365		yes	х					х	х	х	х				

# AQUILA CAPITAL TIMBER INVESTMENT FUND



- **6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- **6.6** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes



- **8.2** Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors
- **8.3** Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services



- **9.1** Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- **9.4** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities



- **12.2** By 2030, achieve the sustainable management and efficient use of natural resources
- **12.4** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment



**13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries



- **15.1** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
- **15.2** By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
- **15.3** By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world
- **15.5** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

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