Active management drives sustainable forest value & returns

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For generations, forests have been recognised by land managers and local communities for the benefits they provide: clean water, biodiversity, wildlife habitat, microclimate stabilisation, aesthetic beauty, and, when actively managed, the sustainable generation of forest products. Since the 1980s, timberland has also garnered institutional investor attention because of the portfolio enhancing characteristics of low correlation with other assets, inflation hedge, and exposure to the benefits of a forest's biological growth as a value driver. Forest Investment Associates ("FIA") believes investors can utilise active management to harness biological growth for targeted investment outcomes, including cash yield and total return, while also maximising the option value of the forest estate for other components of value.

Active Forest Management

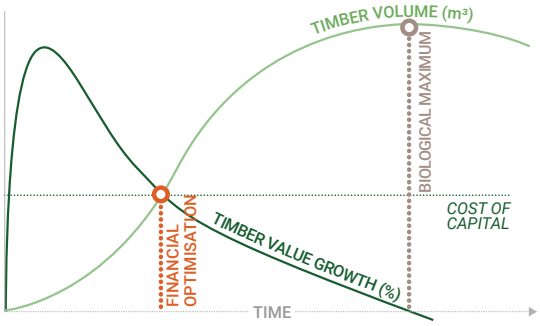
Silviculture, the art and science of growing trees, is essential to sustainable forest investments. Unlike past extractive practices, modern forestry utilises silviculture and long-term management planning to achieve specific outcomes. Today's working forests benefit from hundreds of years of forest management knowledge and a century of industrial research and development for key commercial species, including loblolly pine, Douglas-fir, radiata pine, and various eucalyptus species.

Through targeted interventions such as forest thinning, timber stand improvement, pest and weed control, and optimised planting techniques, investors can manage forests to yield higher-quality timber, accelerate growth rates, and increase overall biomass. These interventions not only enhance the quality of forest assets but also positively influence forest valuation metrics such as productivity, high-quality log yield, timber value, and total volume accumulation. Furthermore, active management enhances sustainability outcomes – it contributes to biodiversity, carbon stock enhancement, and can serve as a risk mitigation strategy against climate fluctuations, pests, diseases, and market volatility.

Active forest management involves understanding forest growth and optimising management to meet investor goals, as shown on the simplified graph (left). Financial optimisation happens when the rate of forest value growth is less than the cost of capital (orange point and dotted line). Maximum timber volume occurs at a biological maximum before tree mortality begins to lower total volume (grey point and dotted line). Investors optimise along this curve by understanding the relationship between forest growth, productivity, timber value, and biological asset value. As non-timber values gain financial importance, such as carbon sequestration, the optimisation point can shift along the growth curve.

Furthermore, the forest growth curve is not static and can be influenced by genetic, environmental, and management factors. FIA deploys intensive silvicultural approaches that are site specific, accounting for the characteristics of the forest, soils, landscape, and the product markets it serves. Our experience has shown these factors are dynamic over time as forests respond to biophysical conditions and environmental changes. Therefore, we must apply an ongoing, stand-specific, and granular approach to silvicultural decisions, mindful of where we are on the forest growth curve in terms of value accretion and timber volume as well as any other objectives, such as carbon storage.

Optimising Forest Growth for Return



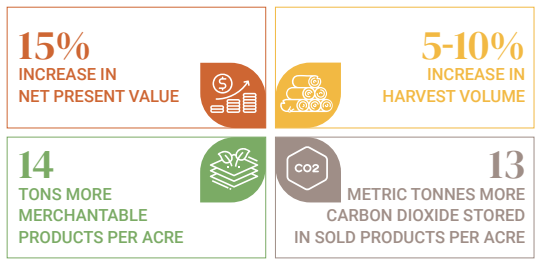
Site Index as a Productivity Case Study

FIA believes we have experienced tangible benefits from our active management approach, notably reflected in the metric of site index. Measured by the average height of dominant trees at age 25 in the U.S. South, site index signifies the land's productive capacity for tree growth. Over the past decade, FIA's southern portfolio has demonstrated a noteworthy 5% increase in site index, highlighting substantial productivity gains. This improvement stems from a combination of active management practices and strategic portfolio construction, focusing on acquiring highly productive sites.

FIA's emphasis on high-quality sites, which we believe to be most responsive to active management, has resulted in a 3.6% uplift in site index for properties continuously managed over the last decade. This enhancement arises from several factors, including improved stand establishment, tree genetics, land preparation, planting techniques, and silvicultural activities such as competition control and fertilisation. FIA anticipates sustained increases in site index, given the gradual nature of this metric's change as new plantations are established and reach the initial inventory age at 12 years.

While the increase in site index hovers in the mid-single digits, the consequential rise in value and volume is significantly higher. A 5% lift in site index for a loblolly pine plantation in the U.S. South, for instance, could elevate the total value of a timber rotation by up to 15%, driven by increased harvested volumes and a higher proportion of more valuable sawlogs. Higher site index indicates not only greater timber volume and potential cash flow but can also increase the bare land value. FIA's active management strategy, coupled with careful site selection, aims to maximise forest productivity and overall value.

5% Increase in Productivity
FROM SITE INDEX



Increased timber volume also supports the role of working forests in climate mitigation. Enhanced productivity brings forward the growth curve of the forest, so that biomass accumulates at a faster rate with greater total volume over the forest rotation. As biomass directly correlates with carbon sequestration, the forest sequesters carbon dioxide at a faster rate and stores more carbon. Taking the same loblolly pine example above with a 5% site index improvement, the incremental volume growth is equivalent to an additional half log-truck load of merchantable timber per acre over the rotation. The larger grade sawlogs also go into longer lived wood products, such as lumber, that keep carbon stored over decades. Looking at both carbon accumulation in forest biomass and that which remains stored in wood products, the dual contribution of working forests to climate mitigation is a valuable tool in climate solutions. FIA works with some investors who are interested in increasing the role of their forest assets in climate mitigation, allowing us to leverage productivity and active management to pursue dual carbon and financial outcomes.

Growing Value Through Management

As we reflected, forests are widely recognised as a real asset with unique and attractive investment attributes. Understanding how to deploy incremental capital into silvicultural investments through active management can unlock additional value and meet bespoke portfolio objectives. The incredibly complex and technical aspects of this asset class must be understood for any successful investment program in sustainable forestry, leveraging both investment and technical forestry acumen.

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