



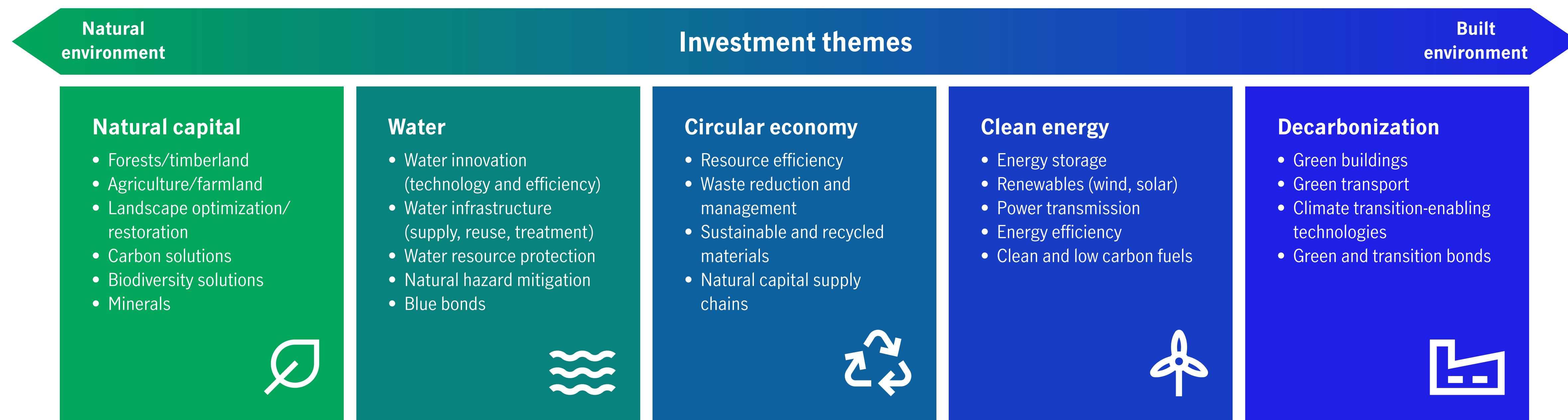
Investing in the nature and climate transition

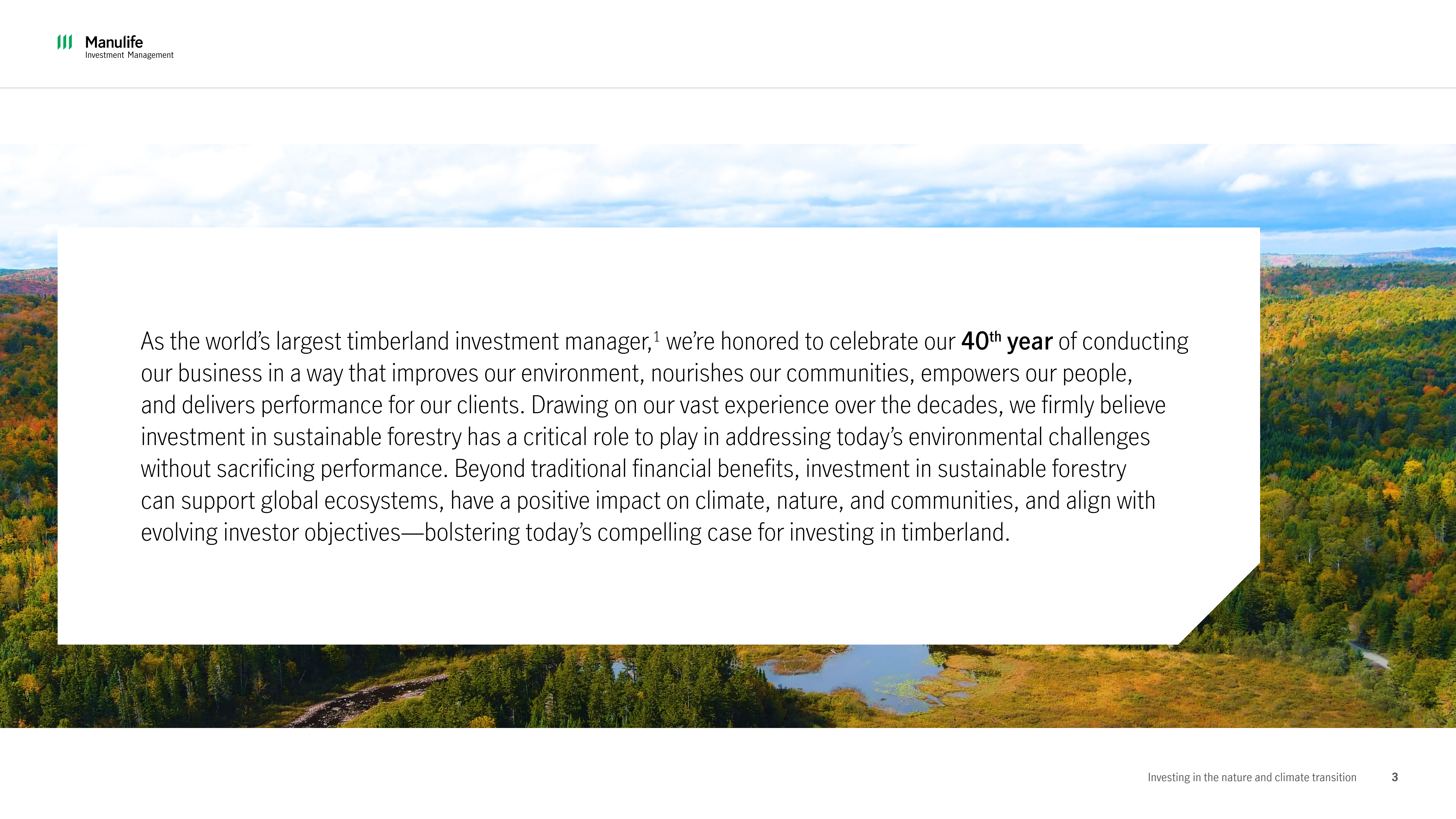
Creating value beyond traditional
sustainable timberland management

There's a growing consensus that the inexorable nature and climate transition taking place across the globe will have profound implications for the world economy. From where we sit as a global asset manager, this ongoing, multifaceted transition also implies a vast and rich spectrum of possibilities—many of them still emerging—for discerning asset allocators.

With that in mind, we've identified five investment themes that we think encompass the various challenges and opportunities arising from climate change and nature loss. We believe the investable universe associated with these five themes is enormous, cuts across the global capital markets, and offers a long-term runway that all investors should explore.

Five themes for investing in the nature and climate transition





As the world's largest timberland investment manager,¹ we're honored to celebrate our **40th year** of conducting our business in a way that improves our environment, nourishes our communities, empowers our people, and delivers performance for our clients. Drawing on our vast experience over the decades, we firmly believe investment in sustainable forestry has a critical role to play in addressing today's environmental challenges without sacrificing performance. Beyond traditional financial benefits, investment in sustainable forestry can support global ecosystems, have a positive impact on climate, nature, and communities, and align with evolving investor objectives—bolstering today's compelling case for investing in timberland.

Value beyond forest products

Timberland investments have traditionally focused on the production of forest products, such as timber, which are essential to a wide range of industries, including construction, paper, and furniture manufacturing. However, as the global focus shifts toward sustainability and environmental stewardship, the value proposition of timberland has expanded far beyond these traditional confines. Today, timberland's traditional investment fundamentals are increasingly augmented by the value created through sustainable forest management, which not only ensures the long-term productivity and health of forests but also generates a host of additional benefits that are increasingly recognized and valued in today's investment landscape.

We believe that good stewardship is good business, and that effective stewardship of both people and the environment is critical for long-term timberland productivity. In addition to the sustainable production of timber for use in forest products, this approach also supports global ecosystems through its positive impact on climate, nature, and people. These environmental and ecosystem benefits, which have long been associated with sustainable timberland investments, are increasingly being assigned tangible value, strengthening returns, adding optionality to timberland management, and bolstering the compelling case for investing in timberland today.

This optionality isn't new but is becoming more fully realized given rising recognition of the economic and societal value intrinsic to natural capital. In our view, this not only offers an opportunity to diversify and strengthen

revenue streams but also expand capabilities to create individualized timberland portfolios to meet varied investor objectives. It could also attract a wider and more diverse set of investors and investment strategies that may broaden demand and enhance performance.

Recognizing the value timberland produces beyond wood products, Manulife Investment Management (Manulife IM) has established a value-added services (VAS) team to actively identify investment opportunities from these additional environmental and ecosystem benefits for our clients and stakeholders. Consequently, we've expanded our sustainable timberland management practices to explicitly include investments in carbon sequestration, wetland mitigation, and other ecosystem services.

As a result, the VAS team has enabled Manulife IM to unlock additional value for our timberland clients. The following case studies were selected as the VAS projects that are furthest along their respective regulatory pathway and closest to being implemented as part of the timberland operational management plan for each property. These examples showcase the potential positive financial and environmental impact of the projects identified and implemented by our VAS team on the timberland properties we manage for our investors.



Case study 1

Camp Azalea gopher tortoise conservation project

On a client investment property in Florida, Manulife Forest Management (MFM) identified an area with unique attributes. This area offered an opportunity to create a long-term recipient site for gopher tortoises, providing a permanent home for tortoises in need of relocation due to real estate development, and was designated as a VAS project named Camp Azalea in 2022. The Camp Azalea project represents roughly 2% of the larger timberland property and presents a unique opportunity to support a threatened keystone species, realize strong returns for our clients, and continue to operate the remaining property under traditional sustainable timberland management practices. The VAS team developed a management plan to permit the project in two phases: Camp Azalea North and South. This initiative requires permitting from the Florida Fish and Wildlife Conservation Commission (FWC).

The gopher tortoise is one of the oldest living species on Earth, originating 60 million years ago, and is the only native North American tortoise east of the Mississippi. Its traditional habitat has been encroached on as real estate development has expanded in Florida. As a keystone species, this also affects many other animals that depend on the gopher tortoise for their survival. More than 350 species of invertebrates, birds, reptiles, amphibians, and mammals have evolved to rely on the tortoises' multichambered, sandy burrows. These burrows, which average 15 feet long and 6 to 7 feet deep, provide moderate temperatures during hot or cold days, protection from fire and storms, and numerous other ecosystem benefits. Residents include the endangered eastern indigo snake, gopher frog, and even a species of burrowing owl.

The Camp Azalea footprint comprises approximately 1,052 acres, primarily dominated by pine plantation with minor components of mesic flatwoods, mixed hardwoods/conifers, and wetlands. The parcels are adjacent to land under conservation easement managed by the Suwannee River Water Management District.

Based on an assessment of the two parcels, MFM estimates the optimal tortoise density to be up to 1,800 tortoises, which requires aggressive thinning, fire management, and supplemental planting of native groundcover. These management actions would convert existing mesic plantation to more open canopy upland flatwoods, meeting the FWC's desirable vegetative criteria throughout both parcels. Based on these estimates, the implementation of the Camp Azalea conservation project could generate an estimated gross revenue of between \$6.0 to \$8.5 million, based on the mitigation bank parameters.

Despite Camp Azalea representing only about 2.3% of the broader investment property's total acres, we believe the project could have a meaningful positive financial impact on the overall property.

Camp Azalea North is currently undergoing authorization review by the FWC, with anticipated permitting in Q2 2025. Phase II (Camp Azalea South) is slated for authorization in 2026. Permitting the projects in distinct phases allows for revenue to be spread over a broader timeline, while achieving optimal habitat conditions.

Impact of the project

1,000 acres

under conservation easement

1,777 tortoises

estimated to be protected



Case study 2

Virginia stream mitigation bank conservation project

In Pittsylvania County, Virginia, the MFM VAS team has identified approximately 285 acres of streams, wetlands, and other aquatic resources within a 1,958-acre area of client-owned timberlands as suitable for developing a stream mitigation bank.

Following the development and approval of its design by mitigation authorities, MFM will facilitate the sale of a conservation easement from a Manulife IM client across these 285 acres for the implementation of the restoration plan. The plan includes restoring the watercourse and riparian areas for predetermined ecological mitigation credits and is expected to take several years to complete, with mitigation credits available to developers on an ongoing basis. The plan also includes a perpetual monitoring program to ensure long-term success. The conservation easement is being sold for approximately \$2.4 million, monetizing an area of the timberlands that otherwise contributes minimally to the property's revenues.

The primary objective of a stream mitigation bank is to restore, enhance, and/or preserve streams and their surrounding environment, thereby creating a reserve of ecological credits. Entities with an impact on streams can purchase these credits to offset their impact by supporting

the stream and riparian restoration and protection efforts and ensuring no net loss of aquatic resources. This system promotes more efficient and effective environmental restoration and conservation by concentrating mitigation efforts on larger, more ecologically meaningful projects.

Manulife IM has established a strategic partnership with Resource Environmental Solutions, LLC (RES), the nation's leading provider of nature-based solutions. RES focuses on transforming impaired lands and waters into fully functioning ecosystems. Through this partnership, Manulife IM leveraged its extensive acreage under management to identify project areas with the potential to significantly enhance the ecology and health of stream ecosystems through the development of stream mitigation banks.

The closing date for the conservation easement sale has been scheduled for the end of May 2025, and we believe that this project, which dedicates less than one percent of the property to ecological enhancement, has the potential to enhance near-term financial performance of the overall property while having a positive impact on the environment.

Impact of the project

285 acres

of streams, wetlands, and aquatic resources conserved



Case study 3

Carbon optionality in timberland investments

With climate change and nature loss identified as two of the most pressing challenges of our time, innovative investment strategies are needed to address these issues while providing financial returns. Timberland, as an asset class, offers a unique opportunity to align investment with sustainability goals. By prioritizing carbon sequestration, investors can contribute to climate change mitigation, support environmental and community welfare, and generate attractive risk-adjusted returns.

The continuous buildup of greenhouse gas emissions in the atmosphere requires urgent action. Public policy initiatives and corporate commitments are increasingly aimed at emissions reduction, carbon removal, and transitioning to a net-zero emissions future. The challenge lies in finding investment opportunities that not only offer financial returns but also contribute meaningfully to these global sustainability goals.

In response to these challenges, Manulife IM has launched its forest climate strategy, which provides investors with the opportunity to support climate change mitigation by prioritizing carbon sequestration in sustainably managed forests over traditional timber production.

In 2021, Manulife IM acquired the 89,000-acre Blueback timberlands in the U.S. state of Maine as part of its commitment to a net-zero journey. Blueback is a contiguous block of timberland with diverse tree species, including naturally regenerated spruce fir and northern hardwoods.

The management strategy for Blueback prioritizes carbon sequestration, aiming to use the forest primarily as a carbon sink and producing high-quality carbon credits. Manulife IM's forest climate strategy allows investors flexibility in how the high-integrity carbon credits generated are used: Investors can either sell these credits as offsets or use them internally as insets to meet their net-zero commitments. This optionality provides strategic flexibility when determining how best to meeting individual investment and climate objectives.

Additionally, Blueback is subject to a working forest conservation easement, ensuring long-term ecological and recreational value. The forest offers unique opportunities for the wider community to enjoy its scenic lakes, rivers, and ecological features. Portions of the land are managed to balance carbon sequestration with sustainable timber production. By prioritizing carbon sequestration along with other sustainable timberland management practices, Manulife IM's forest climate strategy not only contributes to global climate goals but also enhances biodiversity, supports local communities, and delivers financial returns. This model serves as a blueprint for aligning investment strategies with broader environmental and social objectives, demonstrating the multifaceted benefits of carbon-focused sustainable timberland management.

Impact of the project

Potential to issue over 1.3 million carbon credits over 20 years.¹ Carbon sequestration equivalent to:

275,000

passenger vehicles driven for one year

132

million gallons of gasoline consumed



Case study 4

Conserving sensitive lands for future generations

The need to protect sensitive lands with critical habitats for threatened or endangered species, as well as areas with significant scenic, cultural, historical, or recreational value, has never been more pressing. Preserving these areas is crucial for maintaining biodiversity, cultural heritage, and natural beauty. However, achieving effective conservation requires strategic collaboration with public agencies and environmental groups, as well as navigating complex land ownership and management dynamics. Our sensitive lands program actively seeks out partnerships with public agencies and environmental organizations to identify and protect lands that hold significant ecological and cultural importance. This collaborative approach ensures that conservation efforts are comprehensive, sustainable, and beneficial to both the environment and local communities.

For 37 years, our sensitive lands program has been at the forefront of conservation efforts, successfully conserving over 490,000 acres of land best suited for preservation. This case study highlights our commitment to conservation through collaborative partnerships, focusing on the Minam River Valley project in Oregon.

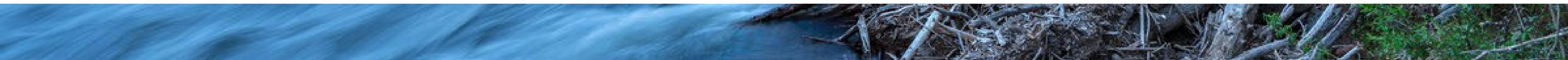
Key actions

- 1 Partnership building**—Over the years, we’ve cultivated strong partnerships with various stakeholders, including public agencies and environmental groups, to facilitate the conservation of over 490,000 acres of sensitive land.
- 2 Strategic land transactions**—In the Minam River Valley, we executed two significant land sales to transfer ownership into public conservation. In 2021, we sold 4,600 acres, followed by an additional 10,900 acres in 2023, marking the completion of the Minam Forest sale (Minam II).

In the Minam River Valley, our focus was on conserving a unique block of timberland with exceptional ecological and scenic value. Through sustained relationship-building with the Rocky Mountain Elk Foundation and the Oregon Department of Fish and Wildlife, we facilitated the sale of 15,500 acres into public conservation ownership. These transactions resulted in the establishment of the Minam River Wildlife Area.

The successful transfer of 16,670 acres to the Oregon Department of Fish and Wildlife ensures permanent conservation of this unique landscape, which now forms the fifth largest wildlife area in Oregon. The Minam River Wildlife Area includes a wild and scenic designated river, another beautiful but non-designated river, and a public wilderness area with snow-capped peaks. This conservation effort not only preserves critical habitats and ecological integrity but also enhances public access and enjoyment of these natural resources.

The Minam River Valley project exemplifies the power of collaboration for achieving conservation goals. By working closely with public agencies and environmental groups, we’ve secured the long-term protection and public ownership of this unique and ecologically significant area. Our sensitive lands program continues to demonstrate the importance of strategic partnerships and our long-term commitment for conserving lands that are vital to biodiversity, cultural heritage, and public enjoyment. This case serves as a model for future conservation efforts, highlighting the benefits of collaborative, strategic, and values-driven land management.



Impact of the project

19

sensitive land sales over the past
5 years, including Minam

29,400

acres sold

Creating value through the sustainable management of timberland assets

At Manulife IM, we believe that sustainably managed natural capital assets can enhance portfolio diversification, provide a proven inflation hedge, and boost long-term return potential while promoting healthier ecosystems. Our depth of experience, size, and scale has honed our ability to drive added ecological, social, and financial value on behalf of investors through additional value-added strategies, such as recreation and renewable energy leases, conservation, and carbon projects. These strategies can help investors meet their financial objectives while contributing positively to a better future.

Addressing the challenge

Investors today face the dual challenge of achieving financial objectives while contributing to a sustainable future. Traditional investment strategies may not fully address the need for diversification, inflation protection, and long-term growth potential, particularly in a rapidly changing world affected by climate change and biodiversity loss. The challenge lies in identifying and managing assets that can deliver financial returns while supporting environmental and social goals.

The solution: sustainable natural capital investment

Manulife IM's solution lies in the sustainable management of natural capital assets. Our vertically integrated teams, comprising skilled portfolio managers and professional farm and forest managers, work collaboratively to enhance value through innovative strategies. These include recreation and renewable energy leases, conservation initiatives, and carbon projects, all designed to meet investors' financial objectives while contributing positively to the environment.

- 1 Recreation and renewable energy leases**—Leveraging land assets for recreational purposes and renewable energy projects provides additional revenue streams while promoting sustainable land use.
- 2 Conservation initiatives**—Actively engaging in conservation projects helps protect biodiversity, preserve critical habitats, and maintain the ecological integrity of the land.
- 3 Carbon projects**—Implementing carbon sequestration projects allows us to generate carbon credits, providing both financial returns and environmental benefits.

Our journey over the past 40 years has been defined by a steadfast commitment to sustainable investing. We've continually expanded our expertise, size, and scale, enhancing our ability to deliver value to investors worldwide. This commitment is rooted in the understanding that our clients' financial success is closely linked to the health of the natural assets we manage.

Outcome: enhanced portfolio diversification and sustainable impact

Our sustainable natural capital investment strategy has delivered significant benefits to our investors:

- **Portfolio diversification:** Investing in natural capital assets provides diversification benefits, reducing portfolio risk and enhancing stability.
- **Inflation hedge:** Land-based assets have historically served as a reliable hedge against inflation, preserving purchasing power over time.
- **Long-term return potential:** Sustainable management practices enhance the productivity and value of natural assets, boosting long-term return potential.
- **Positive environmental and social impact:** Our strategies contribute to healthier ecosystems, support biodiversity, and foster positive relationships with local communities.

As we proudly celebrate our 40th anniversary, marking four decades dedicated to natural capital investment, our commitment to sustainable investing—good stewardship is good business—is as relevant and true today as it was when we started out in 1985. We've always believed that our clients' financial success directly depends on the health of the farms and forests we manage on their behalf, and our global vertically integrated farmland and timberland management teams—from portfolio managers to professional farm and forest managers—are set up to help us achieve both objectives.

Important Disclosures

1 IPE research as of 1/24/25. Ranking is based on total Natural Capital AUM, which includes forestry/timberland and agriculture/farmland AUM. Firms were asked to provide AUM and the as of dates vary from 12/31/23 to 12/31/24.

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