



SUSTAINABLE INVESTMENT IN SOUTHEAST ASIAN PLANTATION FORESTRY

Case Study from the Tropical Asia Forest Fund in Laos



Plantation Forestry in Southeast Asia

Many Southeast Asian countries are attractive for institutional investment in plantation forestry as a result of the following factors:

- Proximity to existing and fast-growing major markets such as China, Vietnam, Thailand, Indonesia, India, and Malaysia;
- Increasing pan-Asian Gross Domestic Product (GDP) and growing middle classes driving timber and wood fibre demand for both domestic consumption and wider re-export markets;
- Development of processing infrastructure, including opportunities for new investments relating to plantation assets;
- Competitive land and direct cost structures compared to those in other prominent forestry markets, such as Brazil, New Zealand, and the United States;
- Favourable growing conditions, including productive soils, rainfall, and climate; and
- Potential to generate significant Environmental, Social, and Governance (ESG) related benefits, including climate mitigation and adaptation, biodiversity conservation, and support for communities and rural livelihoods.

New Forests believes that Southeast Asia offers institutional investors an opportunity for competitive forestry returns compared to more established markets, diversification into new markets, and the capacity to support the region's

transition to a sustainable, responsible forest industry. New Forests sees opportunities to add value to investments through disciplined forest management, a leading approach to responsible investment, and the strengthening of timber marketing and supply chains.

SUSTAINABLE DEVELOPMENT GOALS



New Forests has been actively developing its forestry investment program in Southeast Asia since 2008. In 2012, New Forests launched its Tropical Asia Forest Fund (TAFF), the first institutional investment fund with a dedicated focus on sustainable forestry in Southeast Asia. Through the creation and successful deployment of TAFF, New Forests has developed an existing portfolio of businesses in Malaysia, Indonesia, and Laos covering approximately 150,000 gross hectares. In addition to focusing on improvements in forestry, timber markets, and governance, New Forests has implemented comprehensive Environmental and Social (E&S) programs, aligned with the UN Sustainable Development Goals, for each TAFF investment.

This case study focuses on New Forests' active management of Mekong Timber Plantations Company Limited (MTP) in Laos, a portfolio company of TAFF.

Since TAFF's investment in 2017, MTP has grown by a Compound Annual Growth Rate (CAGR) of 53.1% based on annual valuations. The MTP asset has also reached significant milestones since New Forests' investment, including:

- achieving forest management certification under the Forest Stewardship Council (FSC)^{®1};
- adhering to and operating in compliance with the IFC Environmental and Social Performance Standards;
- starting the harvest and sale of MTP wood products; and
- completing feasibility assessment and business plan development for an integrated veneer, saw, and chipping mill, with anticipated construction and operation in 2021 (subject to financing).



¹ New Forests is FSC non-certificate license holder FSC-N002114. FSC is dedicated to the promotion of responsible forest management worldwide. FSC is not responsible for and does not endorse any financial claims on investments. MTP is FSC certificate holder FSC-FM/COC-003208.

Mekong Timber Plantations Company Limited

The business now known as Mekong Timber Plantations Company Limited (MTP) was initially established in 1999 as a joint venture between BGA Holdings of New Zealand and the Government of Laos. In 2005, a Japanese pulp and paper company purchased BGA Holdings' shares and expanded the estate.

On behalf of TAFF, New Forests completed the purchase of an

85%

HOLDING IN MEKONG TIMBER PLANTATIONS COMPANY LIMITED IN MARCH 2017.
The Government of Laos is the minority shareholder in MTP



MTP Facts & Figures

50-year concession license allowing development of up to

50,000 hectares

of plantation forestry



Currently 26,000 hectares gross and 10,900 hectares net planted with potential expansion planned to

16,500 hectares net



New Forests' Investment Strategy:

- ✓ **Liquidate pre-acquisition plantation areas that contained poorly performing acacia and eucalyptus crops and to re-plant them with high-quality, more valuable *Eucalyptus pellita x E. camaldulensis* hybrids**
- ✓ **Expand the planted estate in an environmentally and socially responsible manner**
- ✓ **Build a processing facility to maximise the value of the logs**
- ✓ **Implement improvements in operations, governance, and risk management**
- ✓ **Develop shared value with local communities by revitalising the smallholder forestry program and introducing a local contractor training program**

Governance and Risk Management

Since investing in 2017, New Forests has appointed four directors to the MTP Board of Directors and added an independent director with strong local legal experience. The MTP Board also includes two directors from the Government of Laos, the minority shareholder. Board and audit committee meetings are conducted with simultaneous translation facilities, and there are regular site trips to facilitate the Board's overall understanding of the business. Through the Board of Directors and the direct support of New Forests' specialist staff, MTP has implemented policies that enhance corporate governance and risk management, including policies around workplace health and safety and E&S management. Alongside these policies, New Forests partnered with a specialist consultant to support MTP with the development of comprehensive business, risk, and Environment, Health, and Safety (EHS) monitoring systems, enabling MTP to systematically track compliance across these topics.

For example, MTP has implemented a cloud-based system for capturing and managing workplace health and safety, risk, and compliance issues to strengthen its performance in the following areas:

-  improving safety management via an integrated incident, equipment, and risk management tool;
-  supporting voluntary certification standards;
-  capturing checklists and reports from employees and contractors where non-conformances and trends are easy to see and manage; and
-  demonstrating that employees and contractors are compliant with policies.

The senior management team of MTP was further strengthened with the recruitment of an experienced general manager and key senior positions for planning and operational management. Human resource management has improved though an emphasis on efficiency, succession planning, training, and remuneration aligned to key performance indicators.

Forestry Management and Planning

New Forests supported MTP's introduction of a company-wide forest management information system, Microforest, that links the company's spatial Geographic Information System (GIS) with its accounting information system to produce a more seamless coordination throughout several parts of the business. Microforest also provides greater information security and streamlines portfolio company reporting to TAFF.

Microforest is used to assist with the operational management of the asset. The system programs the activities over the entire life cycle of forestry operations and stores the data collected on the growth of the forest through various inventory procedures, allowing for the estimation of future tree growth and derivation of log product type forecasts. As Microforest also links to the GIS, data can be produced as detailed maps.

Information held in Microforest can then be used by New Forests for longer-term strategic planning of the forest resource. New Forests utilises specialist forest management software that employs linear programming to optimise realistic future management strategies and enables us to integrate forest management data and forecasts with our portfolio modelling approach.



Research and Development (R&D)

New Forests assists the companies it manages in developing and using advanced R&D approaches. These support greater plantation productivity and enhanced timber characteristics to meet market demands, and create efficiencies in silviculture and plantation management to reduce cost structures and improve yield over time. For example, plantation productivity may be improved rapidly through a combination of R&D and better operational supervision and management.

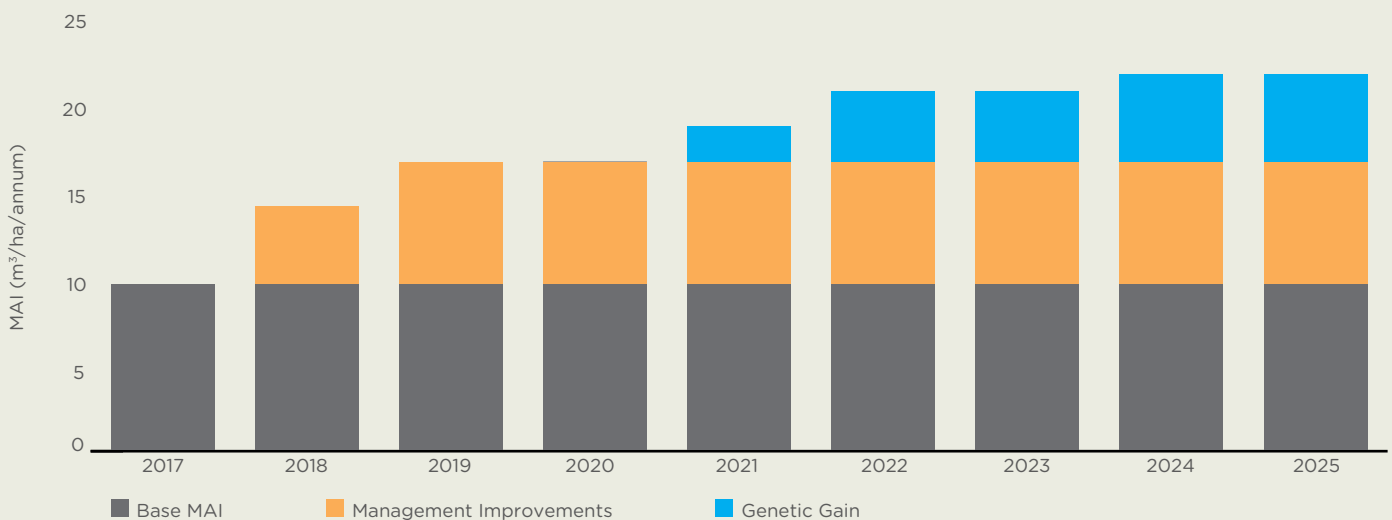
In 2017, MTP shifted from developing acacia and eucalyptus pulp plantations to planting eucalypt hybrids for veneer and sawlog products. The investment in eucalypt hybrids has been driven by their higher growth rates and better marketability. Compared to the acacia species, eucalypts have greater genetic plasticity to more rapidly counter disease threats, can be used in a wider variety of end-markets (e.g., sawlog, veneer, and pulp), and enable access to larger, more liquid markets across China and other parts of Asia.

New Forests also introduced an advanced genetics R&D program at MTP, building on MTP's existing pool of R&D. Through a partnership with Gondwana Genomics, a molecular genetic technology company, and with another TAFF portfolio company, MTP has deployed Marker

Assisted Selection (MAS) technology to expedite genetic selection with the expectation of accelerating plantation productivity. MAS does not involve genetic modification but rather helps rapidly identify the genes that support desired traits in the trees and enables the company to selectively breed for those traits in a more directed, data-driven approach to tree breeding.

In plantation forestry, biological growth rates are commonly measured as a Mean Annual Increment (MAI), an indication of tree volume growth per annum. The following chart shows how MAI is expected to increase at MTP. Under the previous management regime, the MAI of the eucalypt crops averaged approximately 9 m³/hectare/year. TAFF's investment included building a new nursery, analysing the best planting options from genetic material, and investing heavily in plantation maintenance. The MAI for 2018 plantings - the first full planting year after the TAFF investment - is now estimated at 14 m³/hectare/year, a 56% improvement of the MAI prior to TAFF's investment. New Forests expects this level of productivity to increase slightly with the 2019 plantings and then remain constant until the first generation of the genomics selections from the MAS R&D project are planted in 2021; thereafter, New Forests expects the MAI will likely continue to increase marginally with genetic gain, silvicultural measures, and nutrition.

ESTIMATED PRODUCTIVITY GAINS FOR MTP (EXPRESSED AS MAI FOR EACH PLANTING YEAR GENERATION)



Plantation Establishment and Silviculture

New Forests has undertaken several activities to improve plantation establishment and management in order to increase productivity across the MTP estate:

- Investment in and improved management of the MTP nursery, which has led to higher quality seedlings with greater vigour and higher survival rates post planting.
- Development of clonal cuttings, which are the result of crossing two “parent” genotypes or species to combine desirable traits from each, and further propagation of them to create identical clones from cuttings.
- Improvement in seedling supply chain and handling to limit the risk of “seedling shock”, where poor handling can lead to stunted growth or even death of the seedling.
- Enhancement of land preparation and cultivation techniques, such as larger planting pits with more soil loosened around the seedling at establishment, which enables better root growth and structure.
- Implementation of systematic weed control and site-specific weeding strategies to reduce competition with the young trees.

Log Marketing, Timber Processing, and Logistics

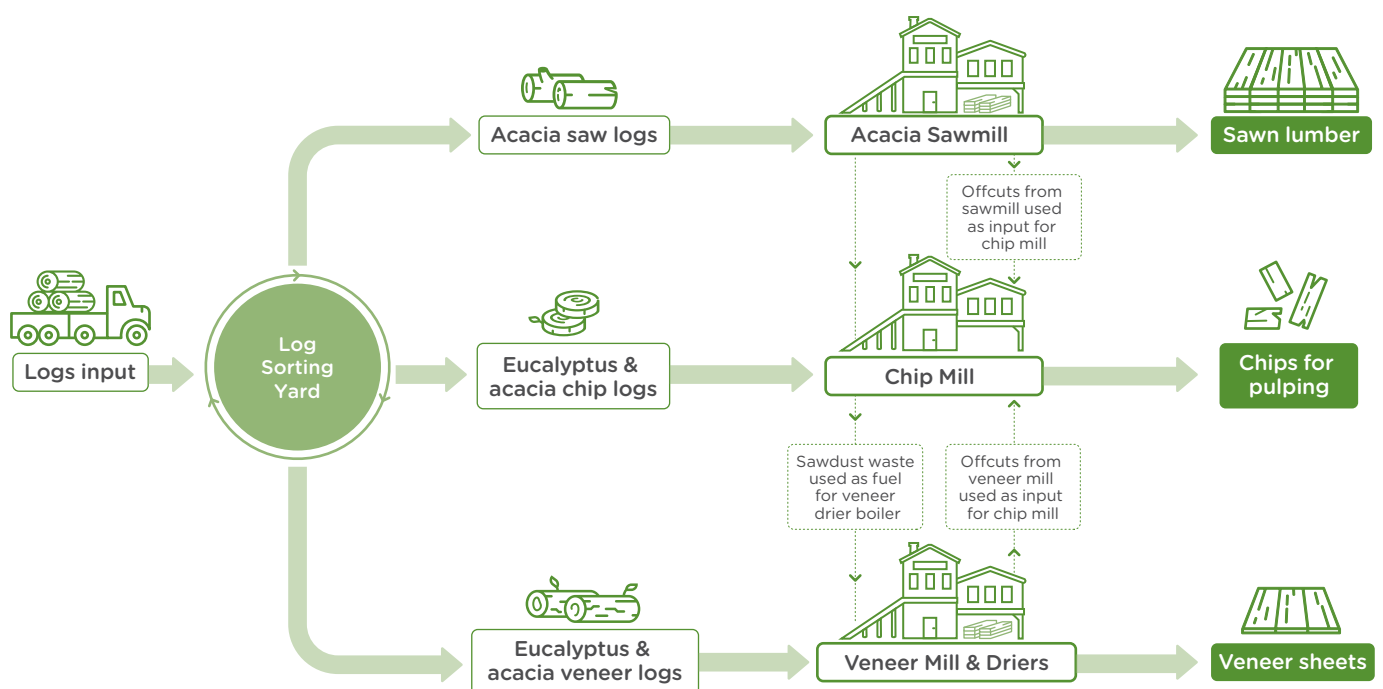
With plantation timber, there is strong incentive to position primary processing close to the plantation wood fibre source. This facilitates sale of a higher-value processed product to established end-markets with a reduction in logistics costs. An additional benefit of this strategy is that it offers access to local markets and reduces export dependency.

Laos is well situated between two significant timber markets, Thailand and Vietnam. The Laotian domestic market is small, and transport distances make the export of round logs too expensive except for higher-value large sawlogs. New Forests and MTP have recognised the opportunity for a domestic processing facility intended to generate products that can more efficiently be transported into Vietnam and Thailand.

With the support of New Forests, MTP is in the process of developing such a facility, introducing vertical integration to capture greater value from the harvested wood products.

New Forests anticipates that the processing facility will increase the value of the plantation’s harvest by converting the eucalypt crop into veneer and the maturing acacia stands into both veneer and sawn timber to be used within the Vietnamese export furniture and flooring industries, which are heavily dependent on supply chains where FSC certification is paramount. In addition, MTP expects that processing lower-quality logs and waste from the saw and veneer mill into woodchips for the local wood pulp market will produce better margins for MTP than pulp logs. Wood waste may also be used to generate heat for veneer drying.

MTP estimates that its gross profit from plantation logs could more than double when processed into veneer by an integrated mill when compared to outsourced third-party processing.





Environmental and Social Management

New Forests is focused on supporting capacity development in E&S management at MTP.

MTP has implemented several initiatives that have fostered trust and a good rapport with the local communities. A major focus has been the expansion of stakeholder engagement and planning, including the completion of a revised Environmental and Social Impact Assessment (ESIA) and the development of the resulting Environmental and Social Action Plans (ESAP) in line with the IFC Performance Standards and FSC requirements.

Youth Inclusion Program

Youth in Laos are legally entitled to work from the age of 15; however, many employers adhere to an 18+ hiring policy, thereby excluding a significant proportion of the young workforce. Many youths who do find jobs could potentially end up in unregulated sectors and may be at risk of exploitation or hazardous working conditions.

MTP has been working closely with the Center for Child Rights and Corporate Social Responsibility (CCR CSR), an advisory organisation specialised in child rights in Asian countries, to empower youth through skill- and career-building opportunities. MTP and CCR CSR created a four-day training program allowing participants to learn about their rights as young workers and which positions would be suitable for their age group. Following the kick-off of the program in 2019, MTP directly hired two young workers, employing them in the nursery department.

As part of their commitment to empower Laotian youth, MTP also reached out to local communities to encourage more young people to join the training program. An additional fourteen people aged 15-17 years were recruited from nearby villages via the village administration and advertisements in the community.

Capacity Training of Independent Contractors

In 2019, New Forests implemented a series of training sessions to help support local businesses providing contract-based services to MTP in developing the required skills and expertise to meet their compliance and business objectives. Funding of the project was sourced from from the Dutch development bank (FMO) and the US Agency for International Development (USAID) as well as contributions from MTP. A leading forestry training firm from South Africa, the CMO Group, designed the course content and recruited consultants to conduct training sessions.

The course was broken into several modules covering a range of topics including Microsoft Excel, human resources management, financial analysis and cost accounting, environmental management, forest certification, and compliance as well as silviculture and harvesting operations management.

Outgrower Program

The previous owner of MTP created an outgrower scheme involving 3,500 local households and covering an approximate area of 5,000 hectares. At this scale, the program had the potential to deliver direct benefits to a substantial portion of the local community through tree farming activities and the sale of timber. However, the program was poorly managed with suboptimal areas selected for plantation. That scheme generated minimal overall benefits for local farmers, creating a sense of disillusion among the local communities.

MTP has since worked to develop a new, redesigned outgrower scheme, the Mekong Smallholder Development Program (MSDP), leveraging technical assistance resources and the experience of local NGOs, with a view to achieving a more inclusive model. Stakeholder engagement sessions, focus groups, and best-practice guidance for gender inclusion were integrated into MSDP and support its design and implementation.

MSDP's primary purpose is to align MTP's strategic and business plan objectives with its social obligations as well as reduce social risks within the communities where MTP operates. As the program scales up, it is expected to support the planned processing mill with additional fibre supply, delivering joint value to scheme

participants and MTP. In the meantime, MTP has a strong focus on relationship and capacity building with the current smallholders in the outgrower scheme. Ultimately, the scheme aims to promote economic development by engaging with local communities and offering them opportunities to financially profit from their land through sustainable forestry.

Forest Stewardship Council (FSC) Certification

MTP achieved FSC certification in October 2019, building on the successful implementation of the E&S management capacities supported by New Forests. Along with achieving FSC forest management certification, MTP has an extensive program to demonstrate compliance with the IFC Performance Standards, which are international best-practice guidance for managing E&S impacts. The MTP business now sets regular targets for improving its compliance rating under the IFC Performance Standards and for maintaining FSC certification. This compliance and management approach, focussed on FSC forest management certification, is also financially beneficial as it contributes to MTP's timber marketing strategy, providing access to better market opportunities including new markets and higher prices for some products.



New Forests, as the only institutional forestry investment manager with a dedicated presence in the region, is well positioned to expand its investment program in Southeast Asia. New Forests continues to target investments where active management can add value with a focus on senior management and resourcing, silviculture and operations, market development, information and business systems, and ESG. Based on its experience, New Forests expects these will help in the establishment and maturation of the timber and sustainable forestry industry in Southeast Asia and allow for an increase of institutional ownership in the sector.

ABOUT NEW FORESTS

As global demand for resources grows, there is a need to increase productivity while ensuring the conservation of the world’s remaining natural forests. New Forests seeks to create investment strategies that provide lasting solutions to this challenge. Through responsible management of forests and other real assets, we create shared benefit for investors and local communities alike. We believe that meeting the needs of a broad range of stakeholders will provide better returns over the long term.

New Forests has international reach, with offices and assets in Australia, New Zealand, Southeast Asia, and the United States. This gives us a global perspective combined with local expertise that allows us to understand and manage our assets more effectively. Wherever we operate in the world, our strength lies in our people and their drive to make investments that create the best possible outcomes. By investing with integrity and transparency we aim to generate strong returns while helping tackle some of the world’s great sustainability challenges.

To learn more, visit us at www.newforests.com.au or contact us at info@newforests.com.au.

For more information about forestry investment opportunities contact clientservices@newforests.com.au.

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New Forests is also part of the Certified B Corp community, a global movement of people using business as a force for good.



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