

executive summary

In developing countries like Thailand, reforestation plays a crucial role in ensuring ecosystem sustainability, generating income, and storing carbon. However, factors such as increased forest encroachment by commercial crops like maize, illegal logging, and human resettlement have made it challenging to combat deforestation and achieve the target forest coverage of 40 percent of the total land area in Thailand using only public resources and the government budget. Relying solely on the government budget for reforestation efforts in an area as vast as 4.2 million hectares would take Thailand up to 150 years to reach the 40 percent target.

The Forest Bond Initiative is an innovative fiscal instrument that can help Thailand unlock resources needed for reforestation. Through bond issuance, this mechanism can efficiently mobilize resources and inject capital into investment in commercial forest plantations. Our research shows that the revenue from forest plantation is derived from 1) rotational timber harvest and non-timber products, 2) carbon credit, 3) sale of water to commercial water users, 4) government contribution as forest reduces the severity of floods and droughts, and 5) ecotourism. The Cost Benefit Analysis of the Forest Bond Initiative demonstrates that for a 20-year forest rotation timeframe, such investment can generate a Social Internal Rate of Return (IRR) of 20.41 percent with a Cost Benefit Ratio (B/C) of 2.19.

This profitability is key in sustaining long-term forest protection as it will continue to attract investors in forest bonds. More importantly, this profitability will safeguard the forest coverage against illegal forest encroachment. When the profits generated from reforestation are dissipated to all the stakeholders, such as forest keepers, loggers, wood industry workers, and all the investors and savers in the forest bond it inevitably creates inclusiveness.

Our research shows that provinces in Thailand are suitable for commercial teak plantations. These provinces are located in the lower northern region of Thailand. Based on the Social Internal Rate of Return (IRR), it is recommended to the government that an Economic Teak Zoning should be implemented in this area. This will enhance the economies of scale of teak plantations and further accelerate reforestation efforts.

The Forest Bond Initiative has been launched and has attracted interest from government agencies, such as the Royal Forestry Department (RFD) and the Forest

Industry Organization (FIO). The Research Division and the Commercial Forestry Division of the Royal Forestry Department are exploring opportunities where commercial forestry and forest bonds can play a key role in increasing forest coverage in Thailand.

However, Thailand needs to overcome obstacles before we can enjoy the benefits of reforestation. Laws and regulations need to be liberalized. The current Thai forest laws put constraints on private investment in forest plantations. This research argues that people should have the "rights and freedom" to plant, harvest, process, transport, and export timber. Liberalizing the forest sector will enable the public to play a role in forest management, strengthen forest governance, and help maintain our forest ecosystem in the long run.

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