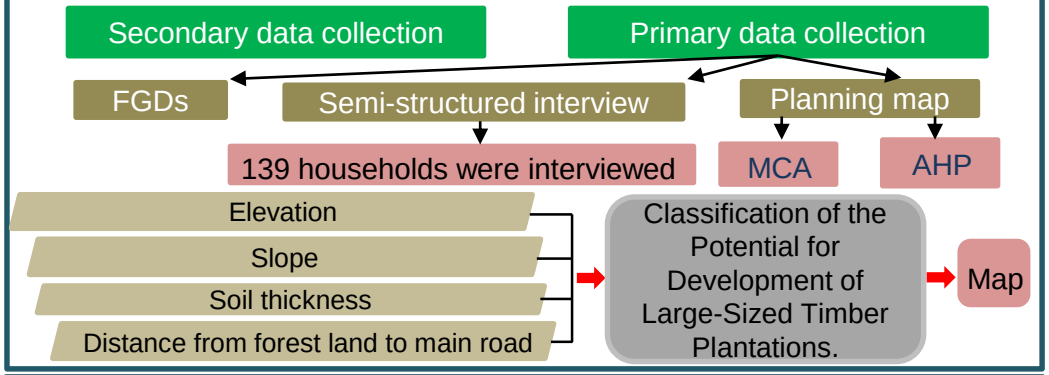
Factors Affecting the Development of Household-Scale Acacia Plantations for Large-sized Timber in Central Vietnam

Authors: Le Thi Thu Ha*,**, Vu Thi Thuy Trang**, Nguyen Duy Phong**, Hoang Phuoc Thoi**, Le Thi Phuong Thao**, Tran Nam Thang**, Hitoshi Shinjo*

* Graduate School of Global Environmental Studies, Kyoto University; **Faculty of Forestry, University of Agriculture and Forestry, Hue University

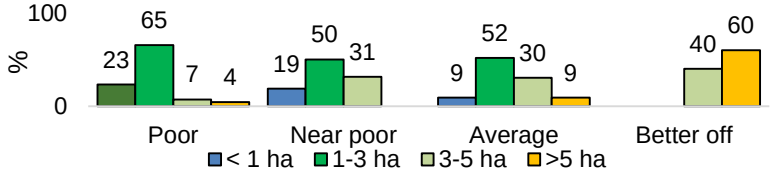
BACKGROUND: Vietnam's 2021–2030 forestry strategy focuses on large-sized timber plantations to align with sustainable development goals. High wood demand leads to imports, attributed to short acacia harvesting cycles. Transitioning to larger timber plantations is vital for optimal sawn timber size and bolstering the wood processing industry. This research assesses household-scale acacia plantings for large-sized timber potential, providing insights for policymakers to foster sustainable forestry development.

METHODOLOGY: Study site: A Luoi district, Thua Thien Hue province



RESULTS & DISCUSSION

Acacia plantation area of different household types (n = 139)

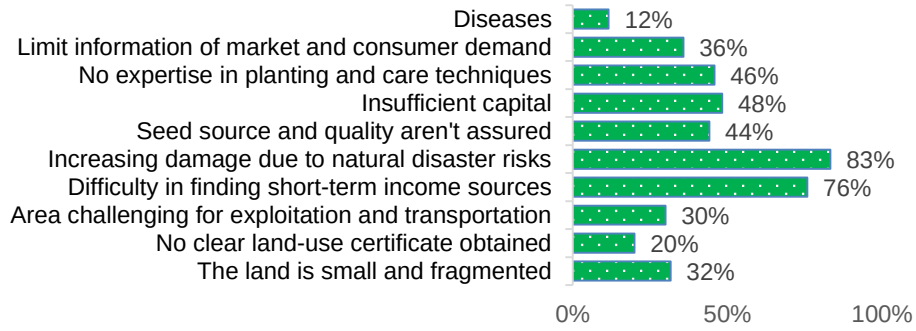


Factors affect the demand for transitioning to large-sized timber in Acacia plantations

n=139	Education level	Household type	Forest area (ha)
Pearson Chi-Square	4.348	8.363*	11.386*

The decision to cultivate large-sized timber Acacia forests is significantly influenced by household type and forest area ($p < 0.05$). Wealthy households with ample land can convert to large-sized timber forests by maintaining short-term and long-term afforestation cycles to stabilize family income.

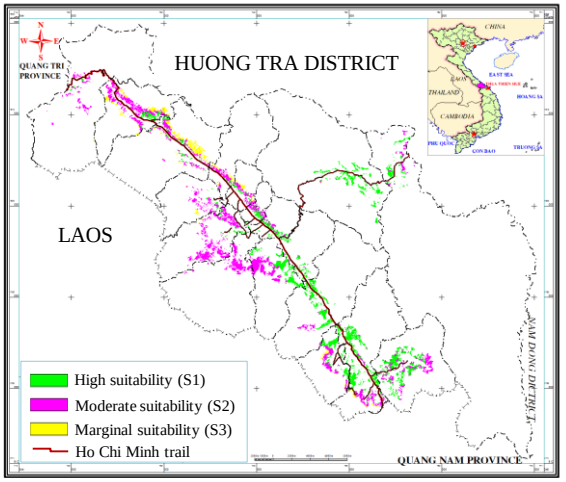
Challenges in deciding to plant large-sized timber for Acacia plantations



Classification factors for developing large-sized timber Acacia plantations

	High suitability	Moderate suitability	Marginal suitability
Soil thickness (cm)	>70	30-70	<30
Elevation (m)	<300	300-700	>700
Slope (degree)	<16	16-25	>25
Distance (km)	<1	1-2	>2

Suitability area	Area (ha)	(%)
High (S1)	2666.70	43
Moderate (S2)	3105.64	50
Marginal (S3)	502.78	8
Total	6275.12	100



Suitability map for cultivating large-sized timber Acacia plantations in A Luoi district, Thua Thien Hue province

CONCLUSIONS: Acacia growers struggle to shift to large-sized timber plantations due to many factors such as limited short-term income and fears of natural disasters. This forest conversion suits wealthier households with more land. It's crucial to assist poor households with alternative livelihoods such as animal husbandry and community tourism. Encouraging joint ventures between wood processing enterprises and households can alleviate capital burdens and ensure market price. Establishing groups of large-sized timber growers to share experiences is necessary.

The research was funded by the FT Viet project.