

Towards bamboo shoot commercialization in Vietnam

Case study: Van Chan district, Yen Bai province, Vietnam

Tran Van Hiep, La Thi Tham, Do Quoc Thai, Nguyen Thi Thanh Huyen, Ta Quoc Truong

Binh Duong, Vietnam, September 16-21, 2022



Full name: Tran Van Hiep

PhD Degree: TU Dresden, Germany, 2021,
title *“upgrading small bamboo enterprises,
case studies: Chuong My, Hanoi and Thanh
Hoa province”*

Expert: Bamboo value chain, livelihood, and
small bamboo enterprise analysis

Position: Researcher and lecturer in HUMG,
and Co-Founder of Vietnam Bamboo
Association



Presentation outline

1. **Bamboo shoot sector**
2. **Methodology**
3. **Results**
4. **Conclusion**
5. **References**



Source: authors' field work

1. Bamboo sector

- National bamboo area: 1.5 million ha, accounting for 15% of natural forest (FSIV, 2009)
- Total export value of Vietnam bamboo industry in 2019: USD 350 million (Vietnam farmer' union, 2018)
- Playing an important role in providing jobs and improving livelihood for people in rural and mountainous areas (Nguyen Minh and Usha, 2011; Marsh and Demestre, 2008a).
- Bamboo shoots: healthy food (rich proteins, vitamins, minerals and low fat, etc)
- Bamboo shoots have not been further processed for higher economic value



Source: authors' field work



Source: internet

2. Methodology

Study area: Van Chan district, Yen Bai Province

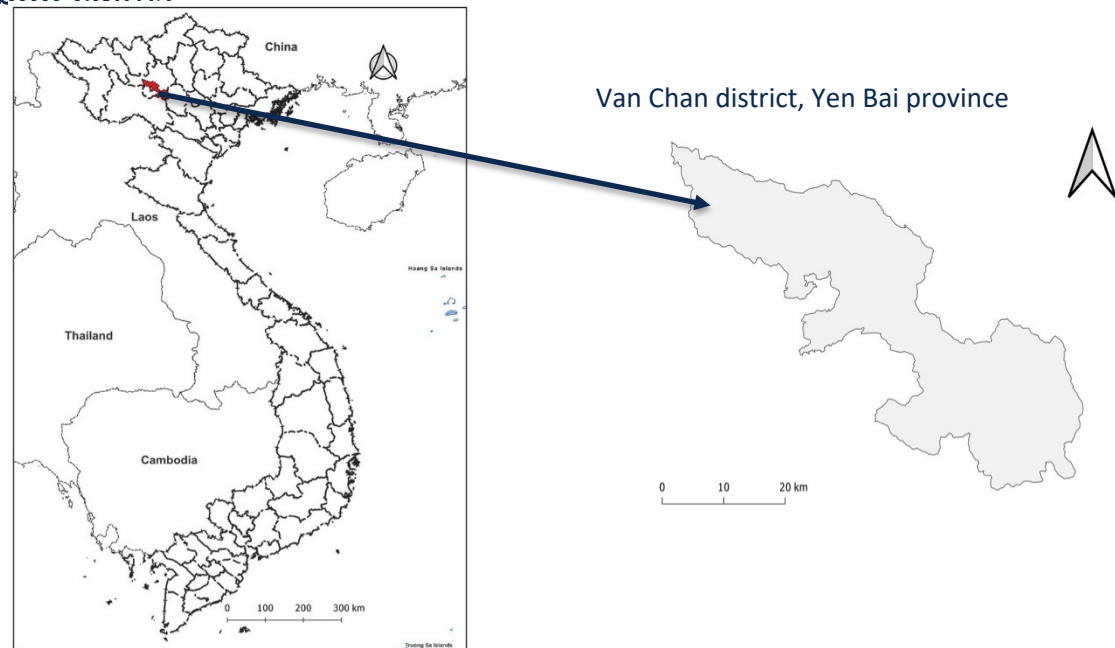
- Bamboo area: 300 ha (*Arundinaria sp.*, known as *Sặt bamboo*)
- Products: Bamboo shoot, bamboo culms

Field visits: February 2022

- Key informant interviews:
 - ✓ 5 village leaders
 - ✓ 8: local traders
 - ✓ 11: Bamboo farmers
- Direct observations

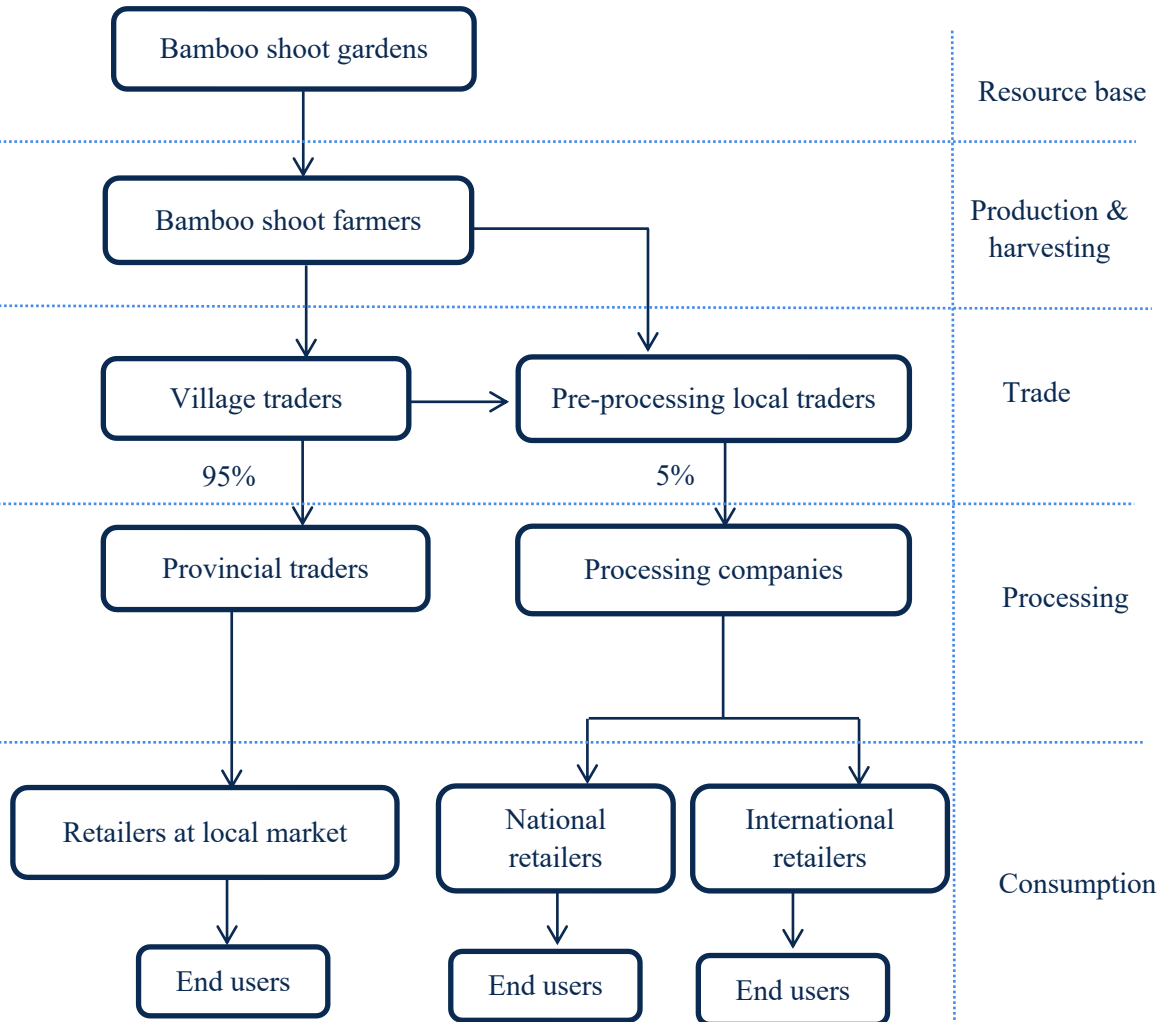
Data analyses

- **Qualitative:** Grouping by themes and interpretation; narrations; content analysis, trend analysis, comparative analysis
- **Quantitative:** financial analysis



3. Results

Structure of bamboo shoot value chain in Van Chan district



Source: authors' field work

04.10.22

Source: Own elaboration

3. Results (cont.)

Bamboo shoot producer performance

Table 1. Costs, profit margin, and value-added of bamboo shoot farmers

No	Description	USD/ton
1	Average garden gate price	638.30
2	Material and services cost	4.26
-	Seedings	0.00
-	Fertilizer	0.00
-	Tools	4.26
3	Labor cost	231.49
-	Land preparation	15.32
-	Planting and replanting	20.43
-	Thinning and weeding	25.53
-	Harvesting	170.21
4	Land tax	0.00
5	Total cost (1+2+3+4)	235.74
6	Net profit (1-5)	402.55
7	Profit margin (6/1) (%)	63.07
8	Valued added (3+4+6)	634.04



Bamboo shoot trader performance

Table 2. Costs, profit margin, and value-added of bamboo shoot traders

No	Description	USD/ton
1	Household gate selling price	680.85
2	Material, equipment and services cost	652.34
-	Purchase of bamboo shoot	638.30
-	Transportation	14.04
-	Interest	0.00
3	Labor cost (<i>Loading and unloading, classification, packing, weight</i>)	19.15
4	Taxes and local duties	0.00
5	Total cost (2+3+4)	671.49
6	Net profit (1-5)	9.36
7	Profit margin (6/1) (%)	1.38
8	Valued added (3+4+6)	28.51

Source: Field data (2022).

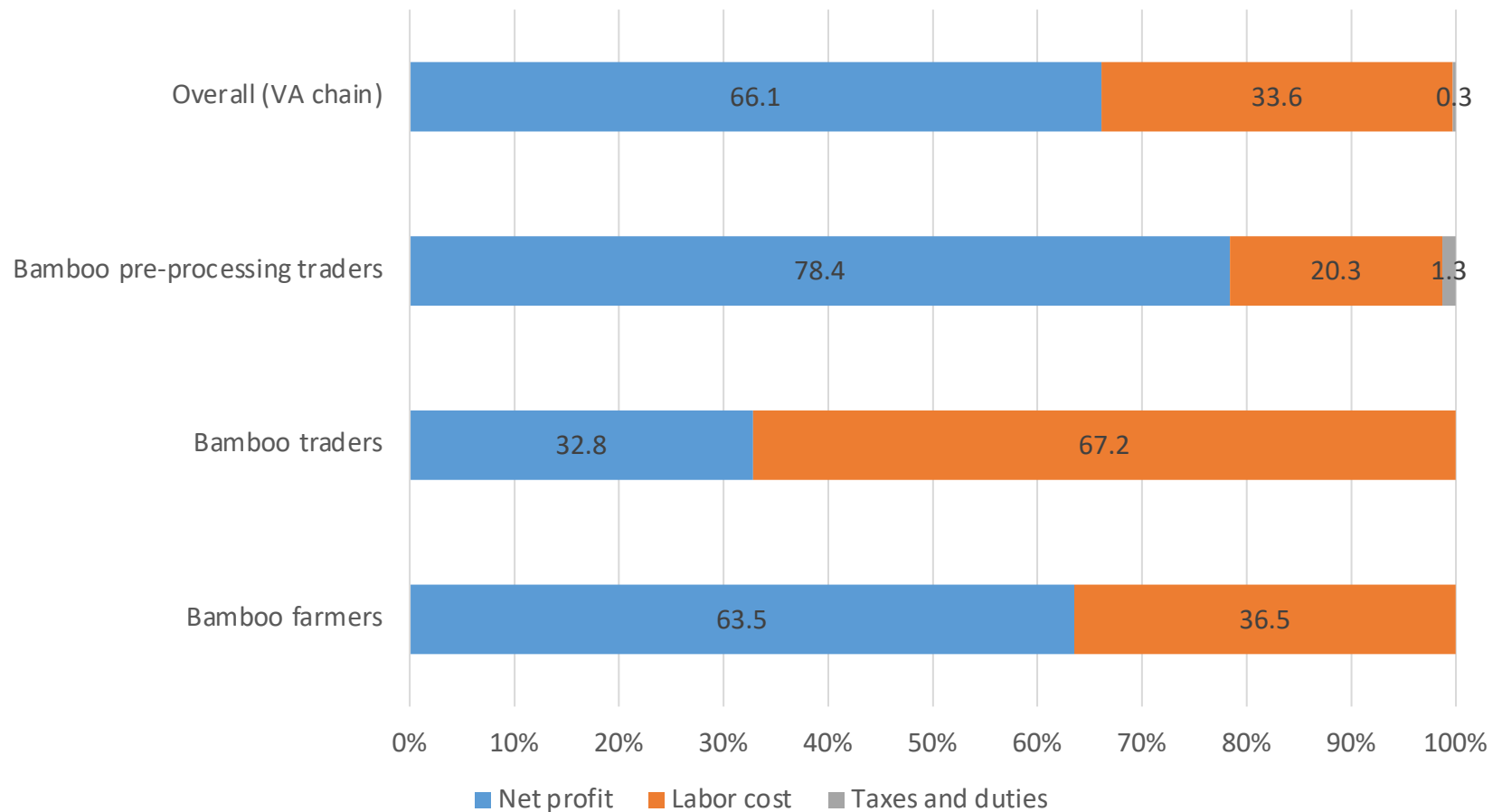
Bamboo shoot pre-processing trader performance

Table 3. Costs, profit margin, and value-added of bamboo shoot pre-processing traders

No	Description	USD/ton
1	Factory gate selling price	1063.83
2	Material, equipment services cost	854.64
	- Purchase of peeled bamboo shoot	765.96
	- Firewood and packaging	29.79
	- Salt	2.21
	- Equipment depreciation	5.11
	- water	0.51
	- Transportation	51.06
	- Interest	0.00
3	Labor cost (<i>Loading and unloading, classification, weight, boil</i>)	42.55
4	Taxes and local duties	2.55
5	Total cost (2+3+4)	899.74
6	Net profit (1-5)	164.09
7	Profit margin (6/1)	15.42
8	Valued added (3+4+6)	209.19

Value-added distribution

Table 4. Distribution of value-added across the bamboo shoot value chain



4. Conclusion

- Bamboo shoot production plays an important role in contributing to socio-economic development in mountainous areas
- Bamboo shoots: healthy food (*rich proteins, vitamins, minerals and low fat, etc.*)
- Unstable income from bamboo shoot production
- Significant barriers for upgrading bamboo shoot value chain (*bamboo shoot plantation area, bamboo shoot investors, and distribution and marketing*)
- Bamboo shoots have not been further processed for higher economic value
- Supportive policies from both government and private sector



Source: internet

5. References

- Abteu, A.A., Pretzsch, J., Secco, L., Mohamod, T.E., 2014. Contribution of small-scale gum and resin commercialization to local livelihood and rural economic development in the drylands of Eastern Africa. *Forests* 5, 952–977.
- Hiep, T.V., 2021. Key Factors Affecting Small Bamboo Enterprises Upgrading in North Vietnam: Case Studies from Chuong My, Hanoi and Thanh Hoa province (Doctoral dissertation). TU Dresden, Tharandt, Germany.
- Macqueen, D., Bose, S., Bukula, S., Kazoora, C., Ousman, S., Porro, N., Weyerhaeuser, H., 2006. Working together: forest-linked small and medium enterprise associations and collective action. *Int. Inst. Environ. Dev.* 125.
- Makosa, D., 2015. Constraints and opportunities to upgrading Ugandas rice markets: A value chain approach. *J. Dev. Agric. Econ.* 7, 386–399.
- Pérez, M.R., Belcher, B., Fu, M., Yang, X., 2004. Looking Through the Bamboo Curtain: An Analysis of the Changing Role of Forest and Farm Income in Rural Livelihoods in China. *Int. For. Rev.* 6, 306–316. <https://doi.org/10.1505/ifor.6.3.306.59968>
- Thuy, V.T., Huyen, N.T., Tu, L.H., Loi, N.K., 2021. Status of bamboos in Binh Duong province, Vietnam: Distribution, species diversity, conservation and utilization. *Trees For. People* 6, 100137. <https://doi.org/10.1016/j.tfp.2021.100137>
- Tran, V.H., 2010. Growth and Quality of Indigenous Bamboo Species in the Mountainous Regions of Northern Vietnam (Doctoral dissertation). Georg-August-Universität Göttingen, Göttingen, Germany.
- Wang, G., Innes, J.L., Dai, S., He, G., 2008. Achieving sustainable rural development in Southern China: The contribution of bamboo forestry. *Int. J. Sustain. Dev. World Ecol.* 15, 485–494. <https://doi.org/10.3843/SusDev.15.5:9>
- Xu, Q.-F., Liang, C.-F., Chen, J.-H., Li, Y.-C., Qin, H., Fuhrmann, J.J., 2020. Rapid bamboo invasion (expansion) and its effects on biodiversity and soil processes +. *Glob. Ecol. Conserv.* 21, e00787. <https://doi.org/10.1016/j.gecco.2019.e00787>

A lush bamboo forest with tall, slender green stalks and dense foliage. A person is walking away on a dirt path in the distance. The scene is brightly lit, suggesting a sunny day.

Thank you for your attention!

Bamboo species can be harvested for shoot production in Vietnam

1. *Dendrocalamus latiflorus* (Bát Độ in Vietnamese)
2. *Arundinaria* sp (Sặt in Vietnamese)
3. *Maclurochloa tonkinensis* sp.nov. (Giang in Vietnamese)
4. *Schizostachyum aciculare* (Nửa in Vietnamese)