Smallholders and domestic timber markets in Ecuador: Research findings and policy options

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Main research questions

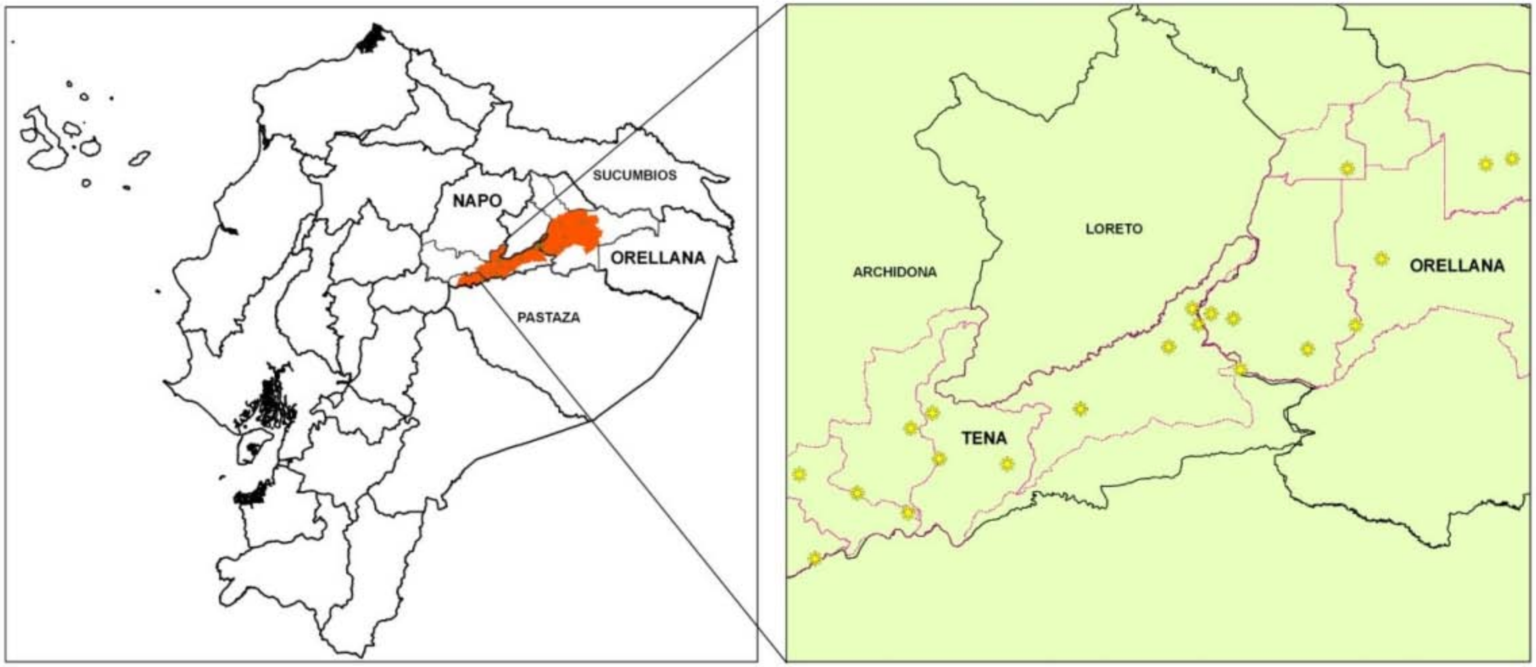
- What institutional conditions affect the involvement and resultant benefits of smallholders in timber harvesting?
- What are the main characteristics of the markets that influence on the land and timber resources use?
- What type of relationships establish the different actors in the timber markets, and what are their implications?
- What are the best options to integrate better the smallholders in the formal timber markets?

Our approach

- Understand the economic and institutional context
- Analyze the dynamics of the domestic timber markets
- Analyze the smallholders’ timber management practices
- Assess the role of timber in the livelihood portfolios
- Understand their implications for the forestry governance

Study sites for case studies

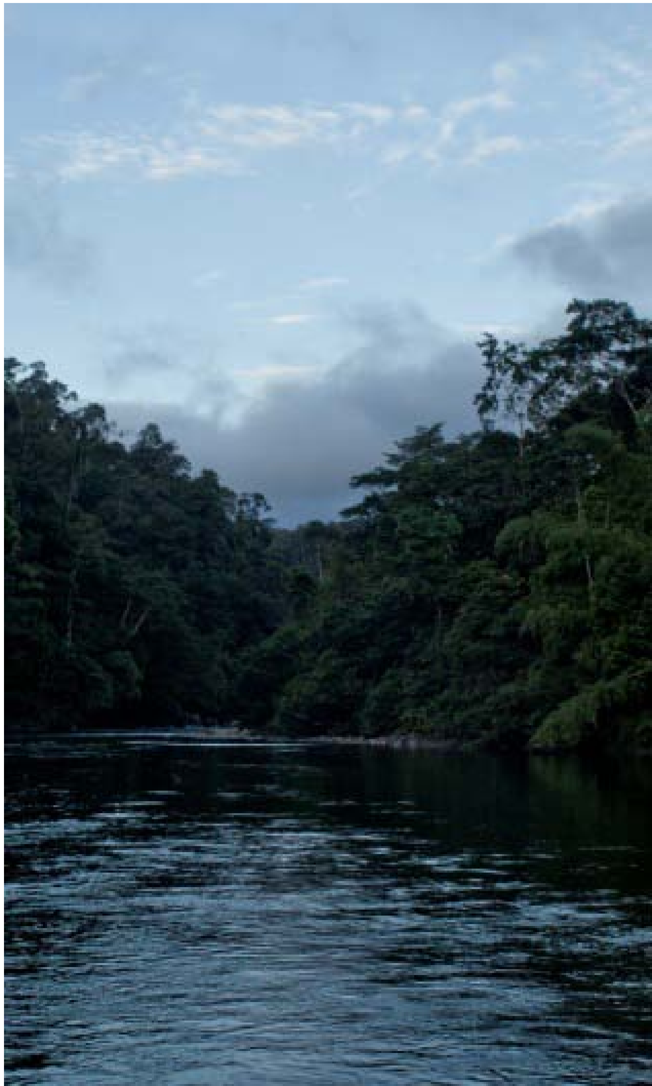
- **Napo Province** in Central Amazonia
- **Orellana Province Orellana** in northern Amazonia



The forestry sector in Ecuador

The institutional context

- Ecuador has taken important steps to enhance forests governance, with emphasis on simplifying norms
- A relatively sophisticated system for verification and control of timber legal supply has been put in place (SAF)
- Legality monitoring is complemented with payments for conservation and incentives for plantations expansion



Timber harvesting in Ecuador

- Most timber for industrial purposes originates in timber plantations in the coast and sierra regions; only 12% of timber originates from smallholders' plots in the Amazon
- Smallholders, however, find difficult to overcome institutional barriers to operate legally and there are in place vigorous informal timber market networks

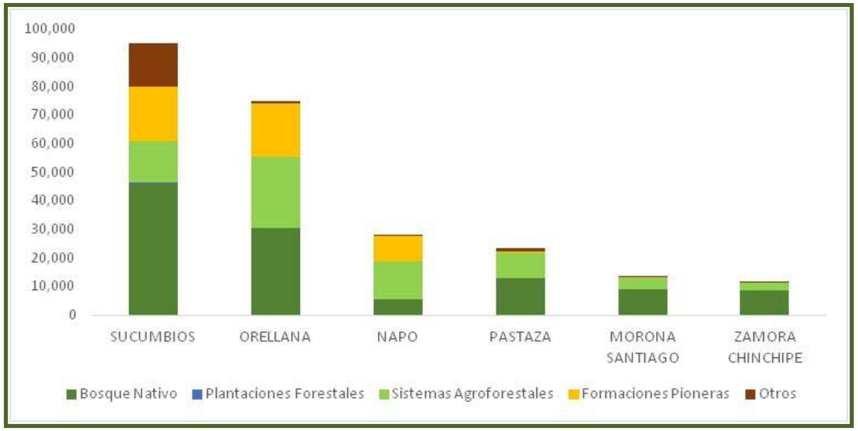


Timber extraction by region (2011)

	Type of forests(thousand m3)					Total
	Native forests	Forestry plantations	Agroforestry systems	Pioneer formations	Legal conversion	
Authorized						
Costa	129	684	535	30	13	1,391
Sierra	1	920	228		0	942
Amazonia	204	1	20	11	15	458
Total	334	1,604	784	41	28	2,791
Mobilized						
Costa	121	547	295	30	7	1,000
Sierra	1	768	115		0.15	780
Amazonia	113	0,4	11	11	7	246
Total	235	1,316	420	41	15	2,026

Source: SAF, Ministry of Environment Ecuador (2011).

Amazon: Timber harvested by forest type and provinces (in cubic meters)

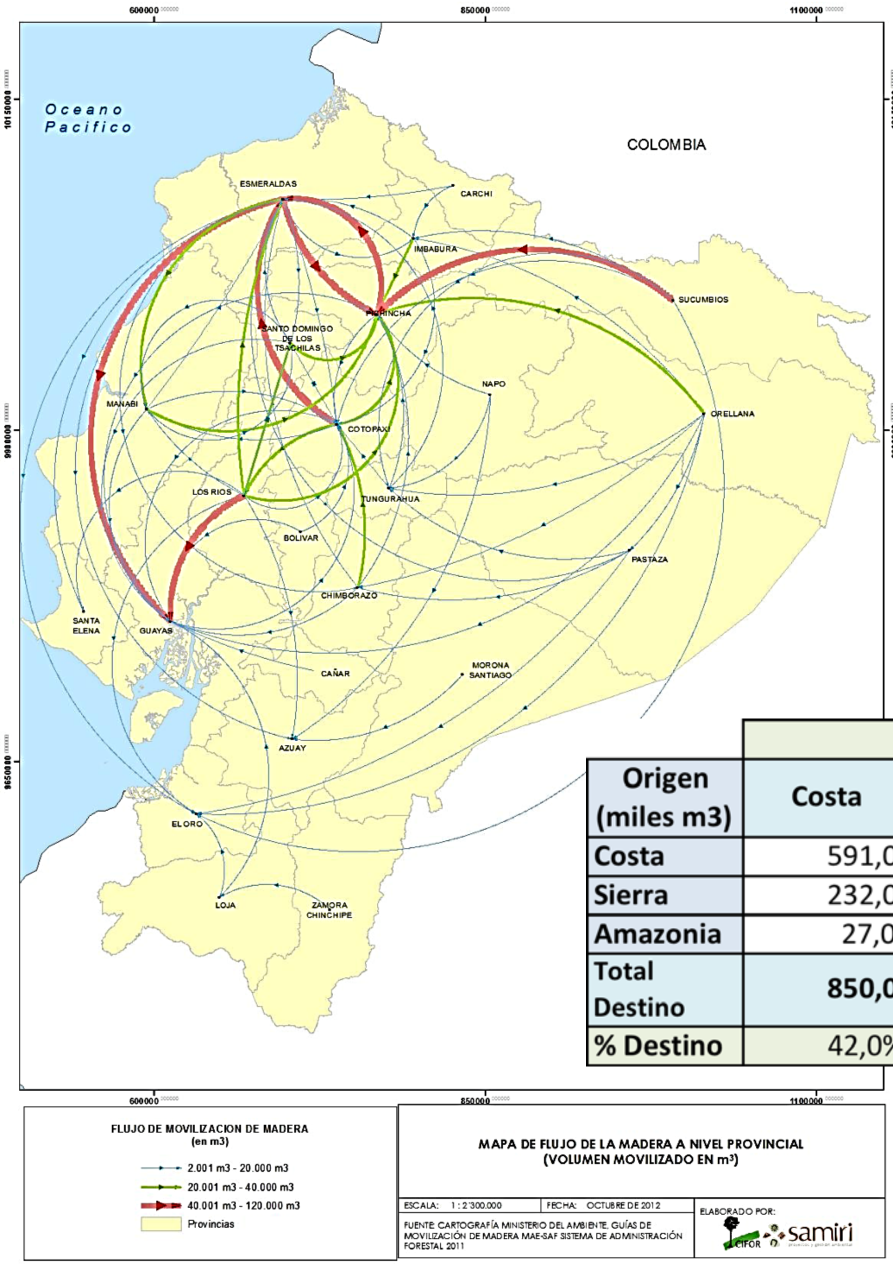


Timber extraction in the Amazon

- Timber extraction in the Amazon has increased from 357,000 m^3 (2007) to 458,000 m^3 (2011)
- In 2011, only 53.7% was timber that was actually mobilized (246,000 m^3) out of the total authorized
- Main market destination is the construction sector and the furniture industry in Quito, Cuenca and Ambato

Domestic timber markets

Main timber flows in Ecuador

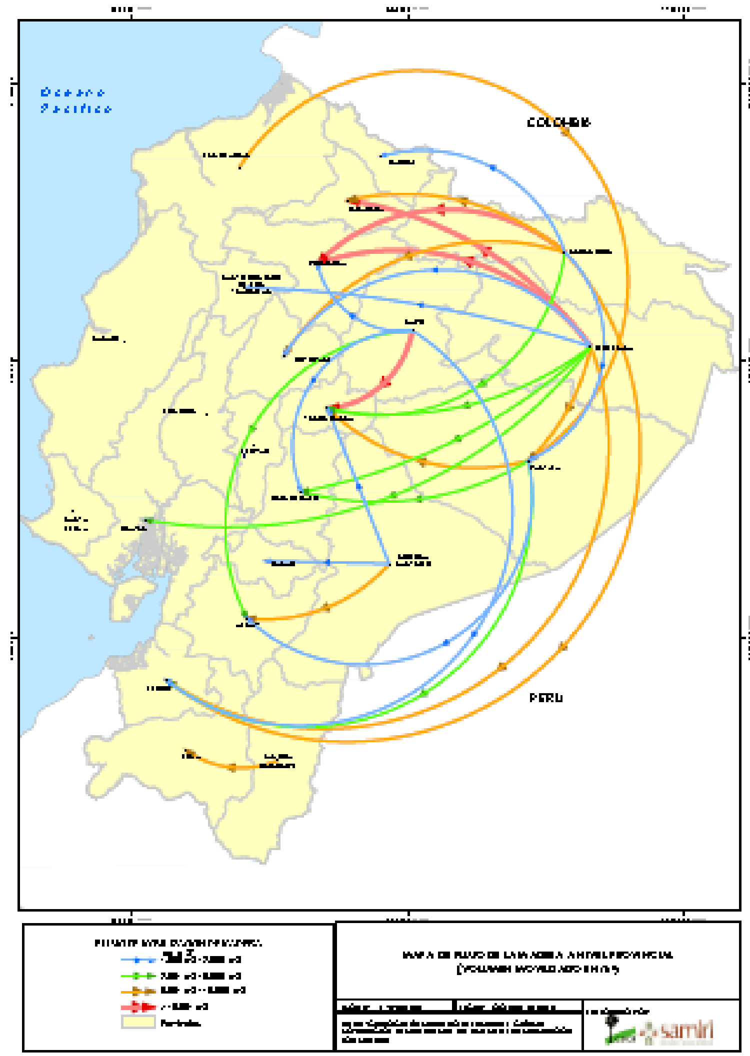


Origen (miles m3)	Destino (miles m3)						% Origen
	Costa	Sierra	Amazonia	Galápagos	No especifica	Total	
Costa	591,0	224,0	7,0	0,1	178,0	1.000,0	49,4%
Sierra	232,0	448,0	1,0	-	99,0	779,0	38,5%
Amazonia	27,0	185,0	19,0	-	15,0	246,0	12,1%
Total Destino	**850,0**	**857,0**	**27,0**	**0,1**	**292,0**	**2.025,0**	
% Destino	42,0%	42,3%	1,3%	0,0%	14,4%		

Source: Produced with information from SAF (2011)

Timber flows from the Amazon

- Major timber trade in the Amazon originates in the province of Sucumbios and Orellana
- Wood supply originates in forest plantations and agroforestry systems followed by pioneer species and native forests
- The Amazon contributes with 12% of total production, but provides 48% of wood from native forests, 81% from small-scale operations



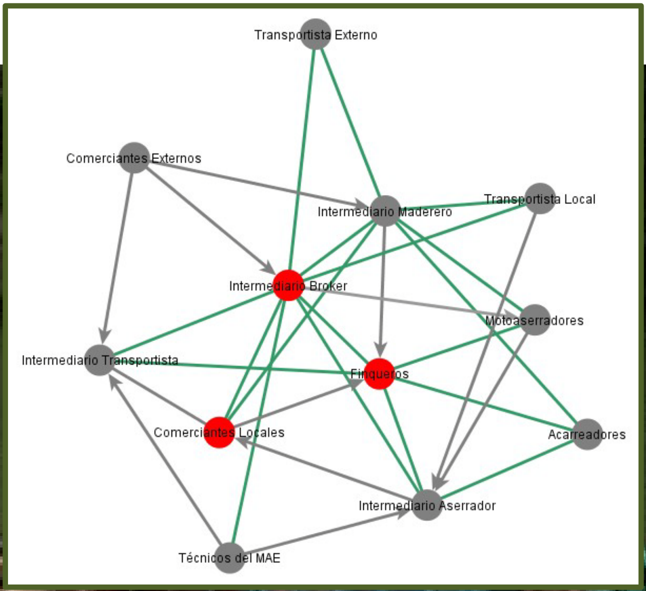
Source: Produced with information from SAF (2011)

Timber markets

- Mid- and large-scale depots intermediate most of the timber and are the providers for industry and construction
- Small and very small depots intermediate only ~4% of total timber placed in the market
- Most of the supplier and buyers are individuals and 12% only are established companies

Timber market networks

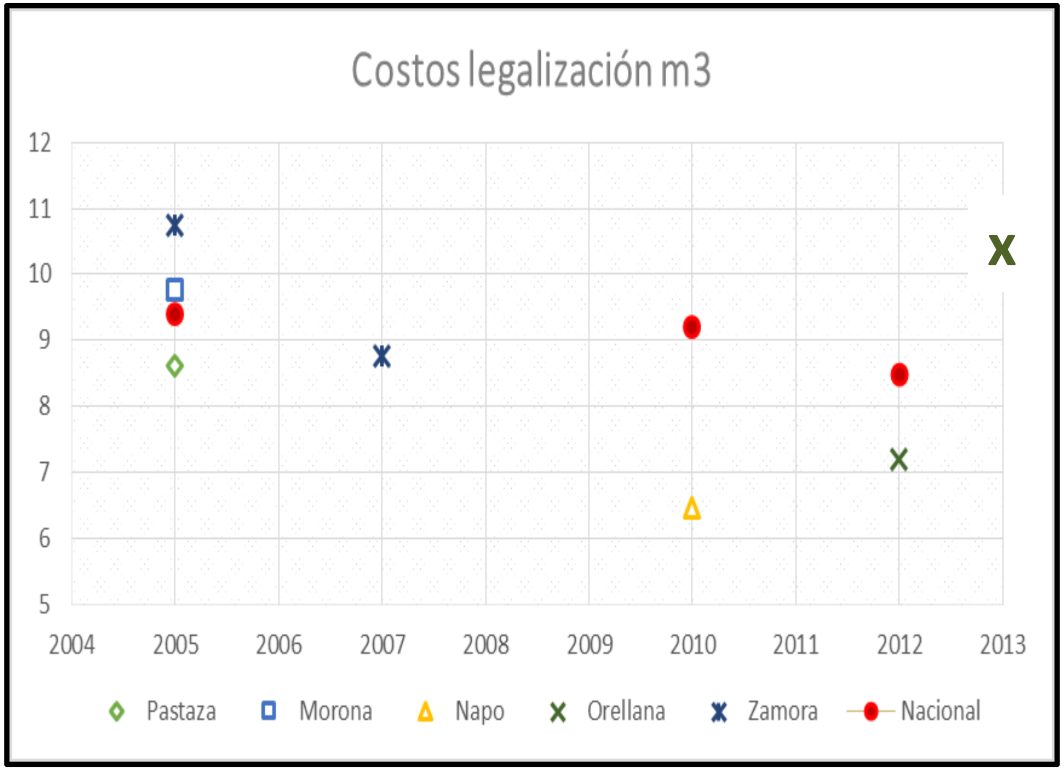
- Forest stakeholders (i.e. foresters, *regentes*, intermediaries and final buyers) establish among them complex interactions
- Local foresters/intermediaries articulate the forest networks playing a key role in services provision and access to markets



Timber harvesting and control

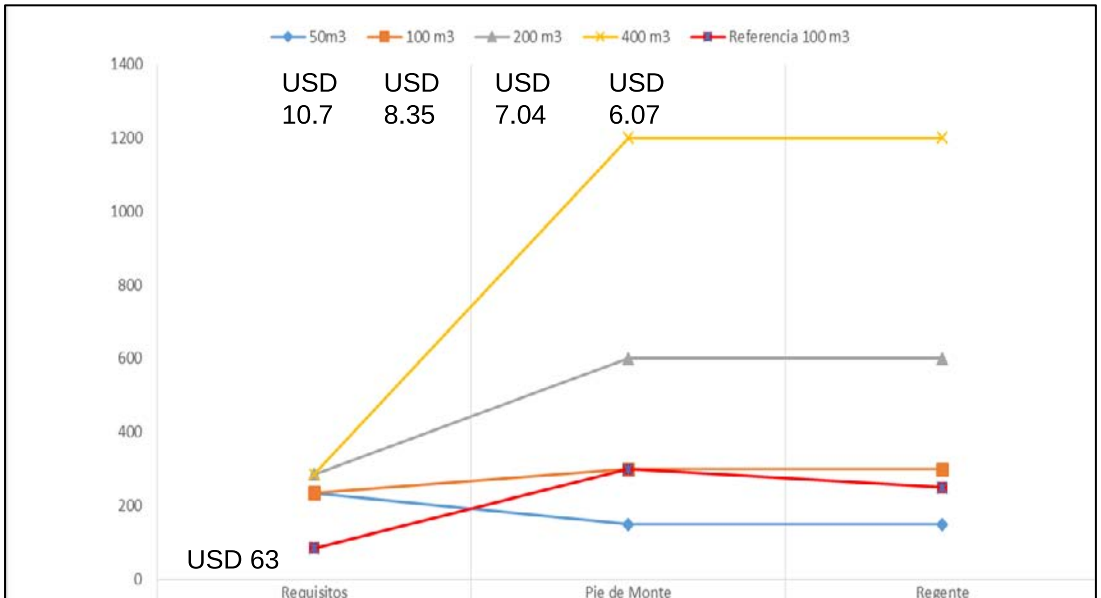
Transaction costs

The costs for legalizing the timber operations tend to vary. Overall, these costs lead to the fact that forestry operations below a volume of 100 m^3/pie are not profitable.



Fuentes: Elaboración de los autores con base en Gatter (2005), Hubenthal (2010), Scholthauzer (2011) FAO (2012), CIFOR (2012)

Different scenarios of costs related to formalization

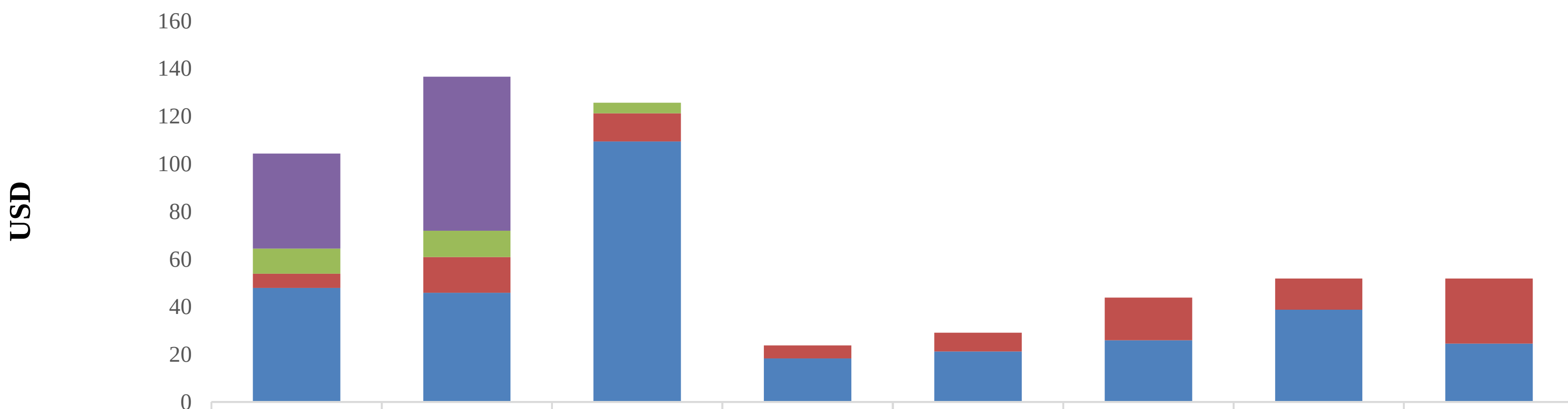


	Requisitos	Pie de Monte	Regente
50m3	235	150	150
100 m3	235	300	300
200 m3	285	600	600
400 m3	285	1200	1200
Referencia 100 m3	85	300	250

Costs related with the compliance of formal requests are independent of volume. This explains that harvesting of higher volumes lead to reduce the costs per m³ of timber harvesting

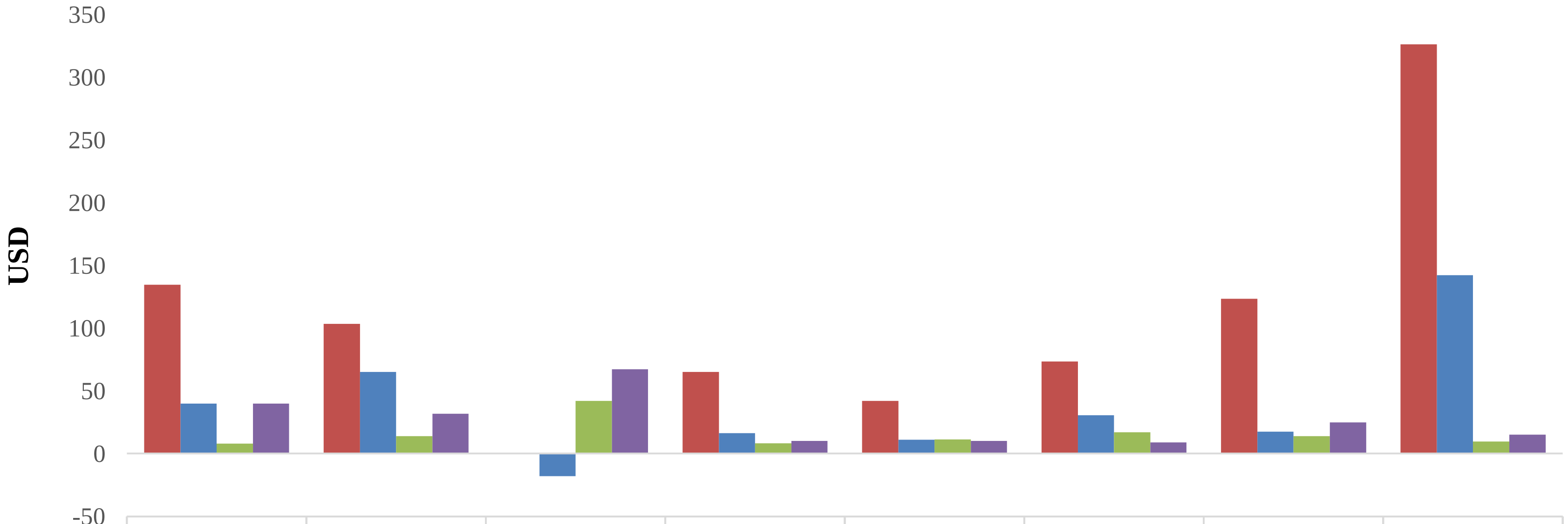
Costs of the forestry operations (formal and informal)

- The costs of the operations depend on the total volume harvested and the species that are harvested
- The costs of the informal timber extraction vary depending on the volumes harvested and labor utilized



	Formal/Caso 1	Formal/ Caso 2	Formal/ Caso 3	Informal/Caso 1	Informal/Caso 2	Informal/Caso 3	Informal/Caso 4	Informal/Caso 5
	Intermediario		Finquero					
Pago de madera	40	65						
Legalización	11	11	5	0	0	0	0	0
Insumos	6	15	12	6	8	18	13	27
Mano de Obra	48	46	109	18	21	26	39	25

Distribution of benefits among actors participating in the forestry operations



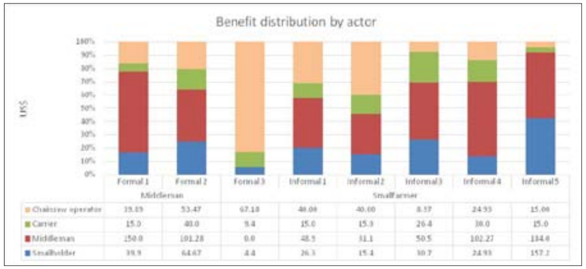
	Formal/Caso 1	Formal/ Caso 2	Formal/ Caso 3	Informal/Caso 1	Informal/Caso 2	Informal/Caso 3	Informal/Caso 4	Informal/Caso 5
	Intermediario		Finquero					
Intermediario	135	103		65	42	73	124	326
Finquero	40	65	-18	16	11	31	18	142
Acarreador	8	14	42	8	11	17	14	10
Moto aserrador	40	32	67	10	10	9	25	15

Timber extraction and income

- In Orellana and Napo, forests are the 2nd source of income of smallholders and indigenous (about 15% respect to the total)
- Bargaining power and access to prices information are poor for all farmers, no matter ethnicity
- The amount of timber sold with a harvesting program is about two or three times larger that without a program in both provinces.
- Timber species differ in the two provinces due to context factors

Small-scale operations

- There is pressure from brokers and farmers on the most commercially valuable species (semi-hard and hard) which allows paying for legality or earning more with less
- Timber incomes from smallholders depend on the scale of logging and how the forestry operations are organized [based on an analysis of eight cases in two provinces]



Obstacles to legality

- Main obstacle is the ability to pay not only for the paper work but the elaboration of ‘forest management programs’
- Working informally allows flexibility for species selection and volumes harvesting, while legal programs tend to lead to larger volumes and higher dependency on middlemen
- The system of control (SAF) tends to reinforce the asymmetries between the different market players, often favoring to those who have control of the markets
- Diverse strategies are put in place to avoid control leading to interactions between the formal and informal sectors; for example, through laundry, smuggling and bribery

Long-term ecological impacts

- Smallholders cannot depend on forests incomes indefinitely
- Hard species often provide more money but tend to decrease more rapidly since are first chosen for logging
- Alternatives are needed in order to ensure that valuable species can provide income in the long run or are combined with fast growth species

Policy recommendations

THINKING **beyond the canopy**

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Areas for policy improvement

- Continue streamlining/adapting forestry norms
- Improve economic incentives for forest management
- More targeted control emphasizing the demand-side
- Develop actions to enhance markets transparency
- Bilateral/regional efforts to monitor timber trade

Streamline and adjust current forestry norms

- Forest fees linked to frequency and intensity of harvesting
- Forest ownership supported by locally recognized tenure rights
- Revisit the system of *regentes*:
  - More emphasis on management than in timber legality verification
  - Expand the assistance of free technical services for smallholders

Incentives for small-scale forests management

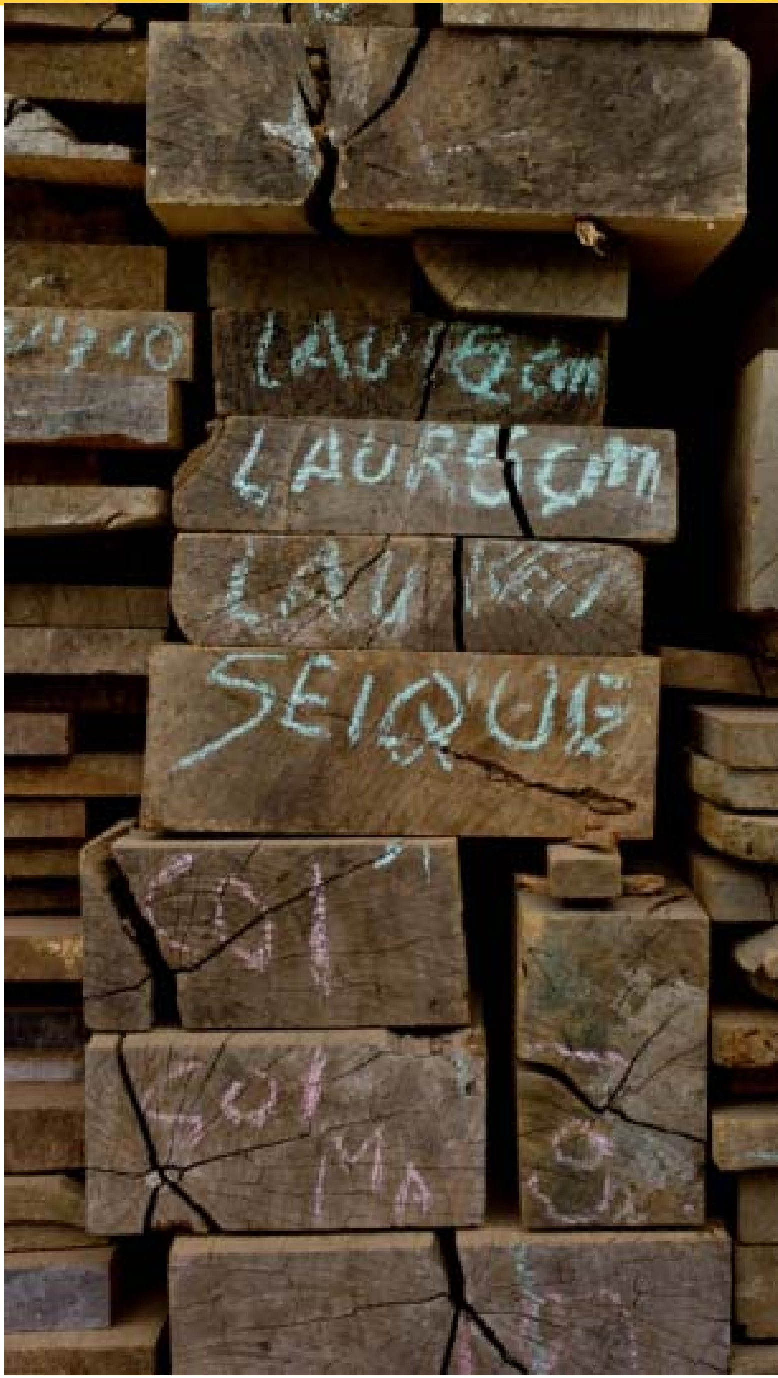
- Economic incentives to manage forests for production vis-à-vis the ones for forests conservation
- Make cheap credit available to smallholders as a way to reverse dependency from informal finance
- Training and assistance to professionalize local forest service providers (e.g. sawn milling)

Targeted control downstream the value chains

- Less attention to controlling smallholders but a handful of large-scale operators
- More emphasis on targeted actions of legal timber control
- More attention to control in downstream activities of the timber value chain (depots)

Measures to make timber markets more transparent

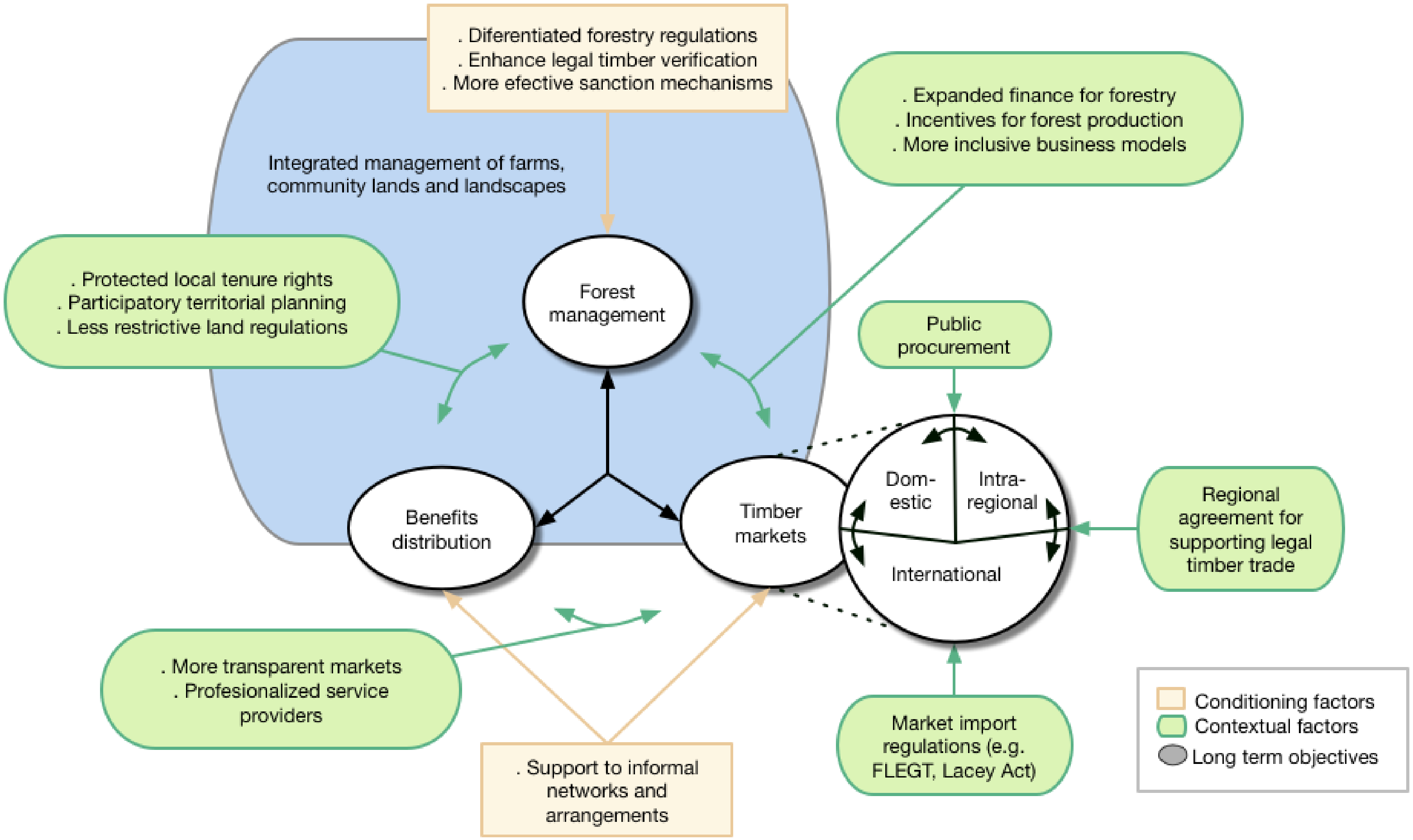
- Explore measures to improve the bargaining power of smallholders (for example, minimum prices)
- Public procurement schemes to promote legal timber extraction and smallholder's operations
- Support more transparent contracts negotiation making available market information



More attention to transboundary timber trade

- Greater attention to monitoring domestic and transboundary timber flows and transactions
- Include transboundary trade of timber as part of bilateral and regional agreements & processes
- Coordinated actions between countries involving approches of integrated law enforcement

A more integrated approach



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