

# Additionality and conditionality of PFES in Vietnam

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## Outlines

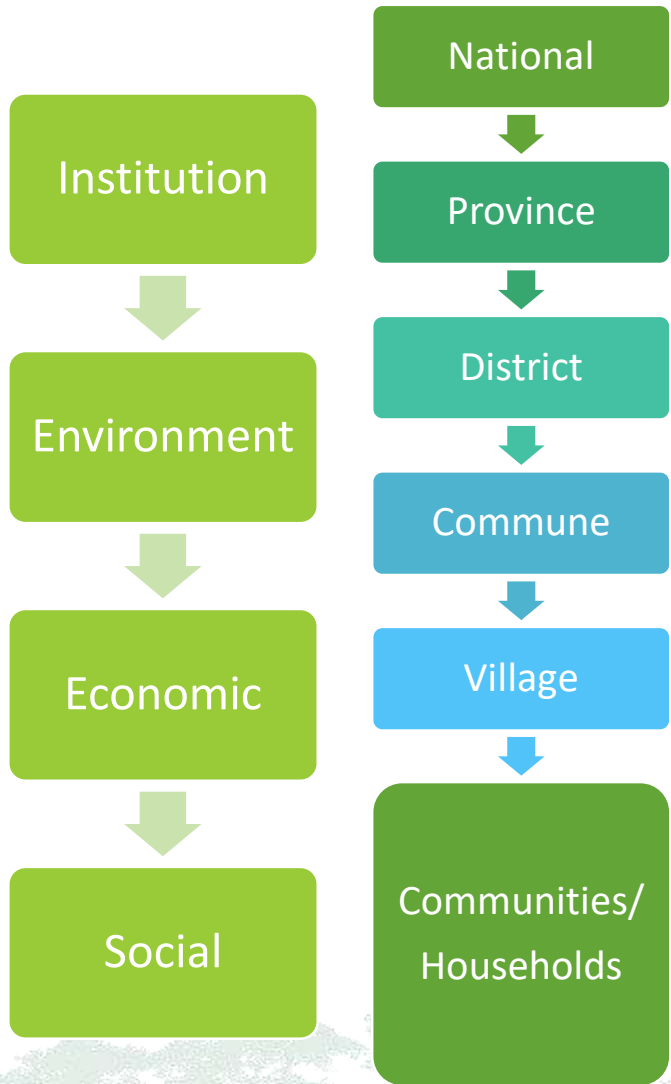
- Analytical framework
- Methods
- Environmental impacts
- Economic impacts
- Social impacts
- Key messages

## Analytical framework

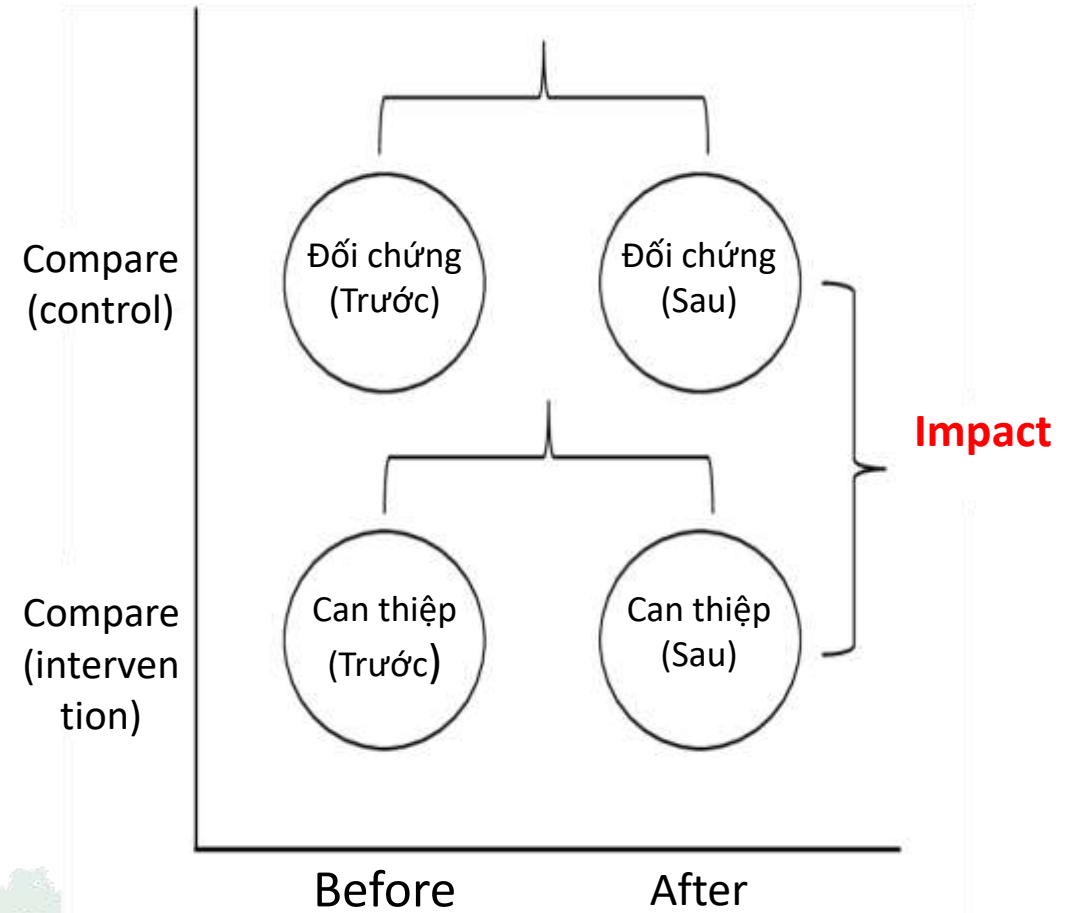
1. **Additionality:** Impact of PFES compare with business as usual or in the absence of PFES
2. **Conditionality:** Environmental services (ES) providers are only paid if actual ES are delivered







# Methods



# Methods: 2991 people interviewed + 60 researchers involved

Literature review



Remote sensing and network analysis



## Key informants interviewed

	No.
Son La	36
Đắc Lăk	50
Huế	31
VQG Cát Tiên	37
<b>Tổng</b>	<b>154</b>



## Focus group discussions

	Men	Women	Mixed
Son La		119	117
Đắc Lăk	200	200	200
Huế (ước tính)	132	132	121
VQG Cát Tiên	110	112	
<b>Tổng</b>	<b>442</b>	<b>563</b>	<b>438</b>



## Households surveyed

	Men	Women
Son La	142	98
Đắc Lăk	417	63
Huế	131	112
VQG Cát Tiên	161	113
<b>Tổng</b>	<b>851</b>	<b>386</b>



## Consultation workshops

	No.
Son La	32
Đắc Lăk	25
Huế	38
VQG Cát Tiên	62
<b>Tổng</b>	<b>157</b>

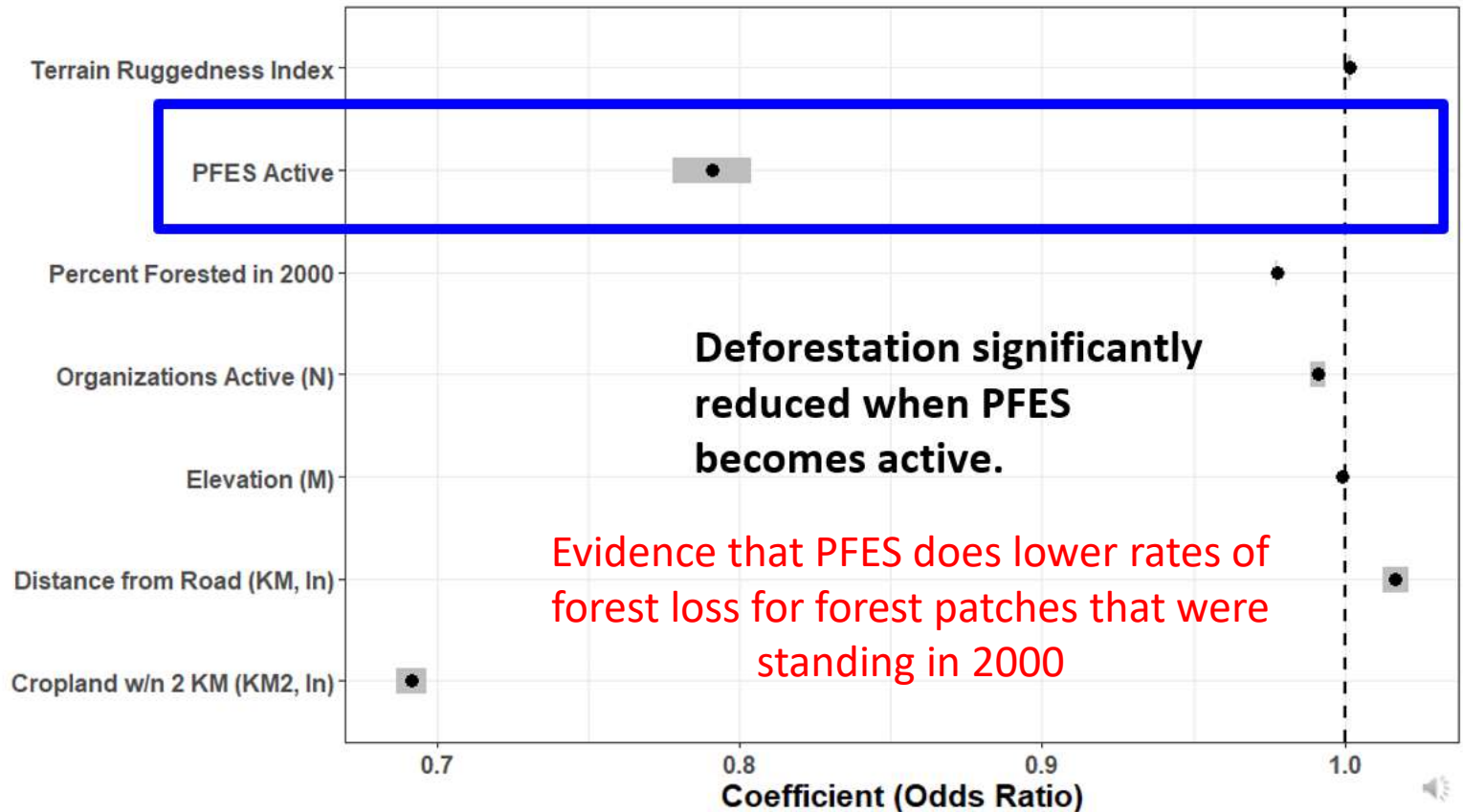


# Environmental impact – National and regional impact

## Apply Cox Proportional Hazard Models:

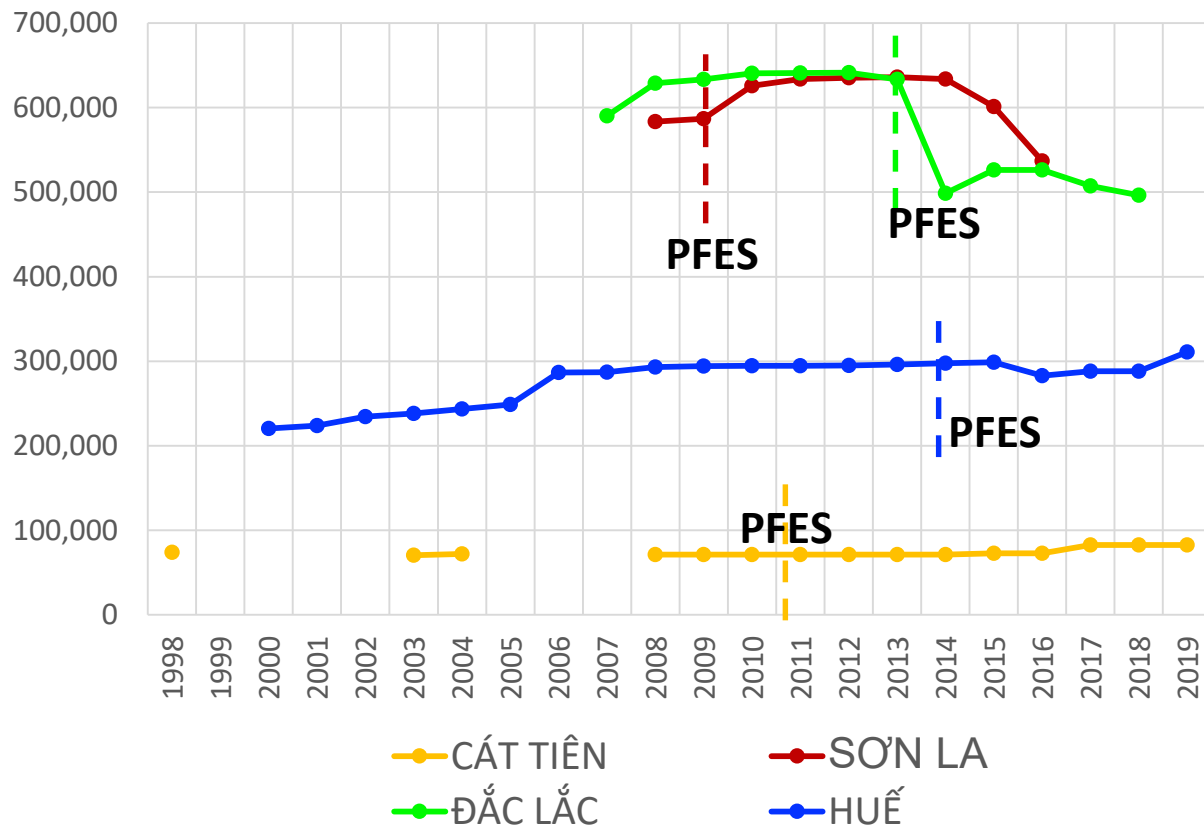
- Random nation-wide sample of 250,000 pixels that were forested as of 2000
- Random sample of 250,000 pixels that were forested in 2000 but deforested by 2018
- 30 x 30 pixels Hansen/ Global Forest Watch
- Control variables: distance from roads, croplands, elevation, topography, % canopy closure
- Possibility of deforestation before and after PFES

## Cox Proportional Hazards Model, Deforestation Odds

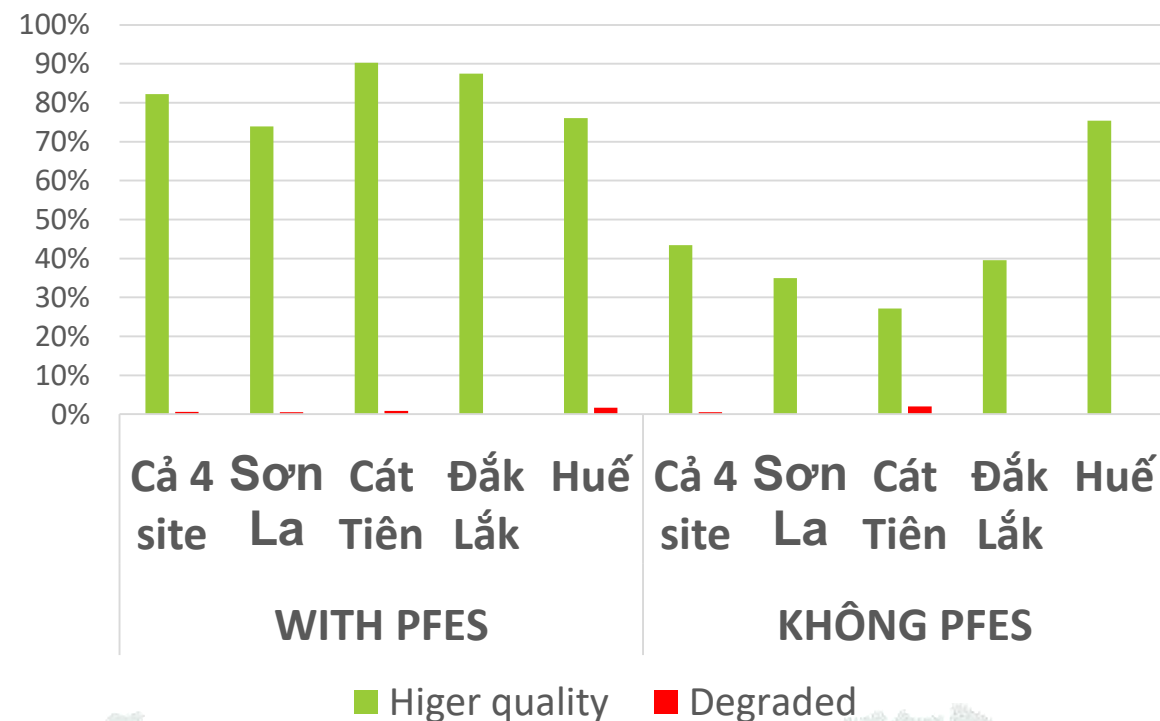


# Environmental impacts

## Forest area before and after PFES

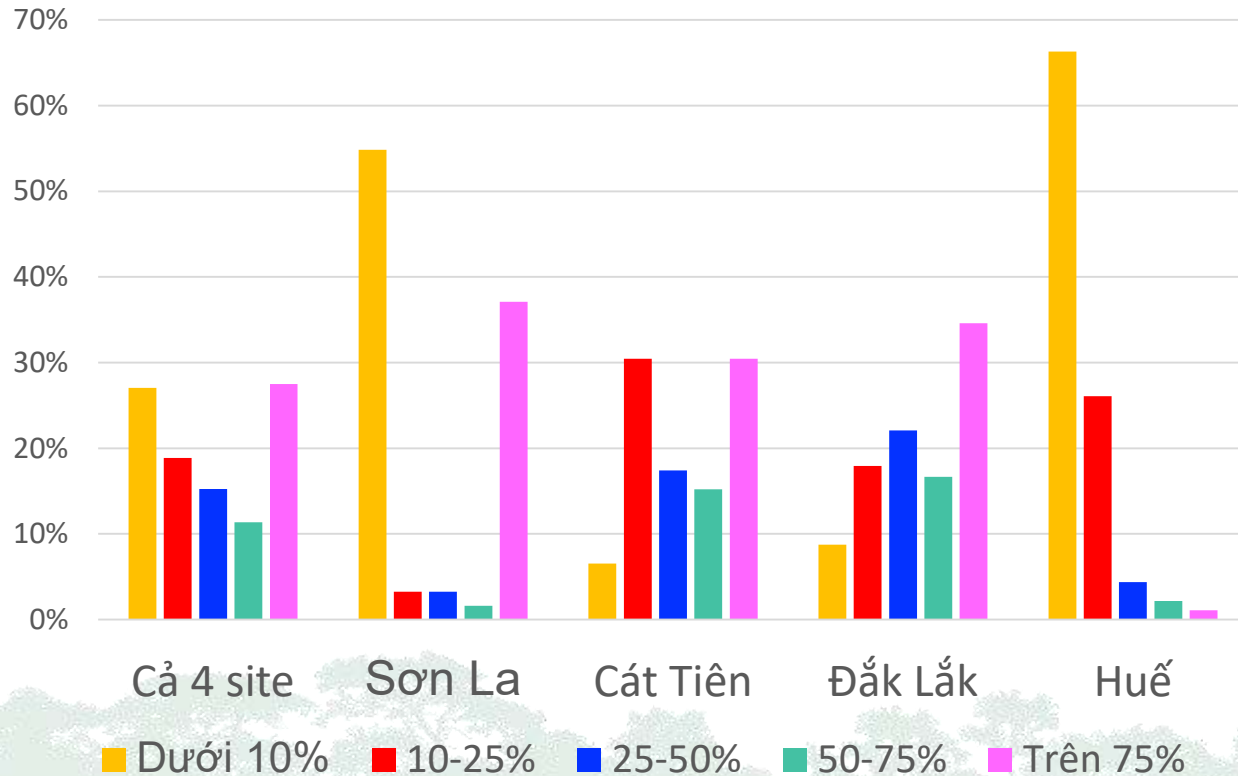


## Local perceptions on PFES impact on forests

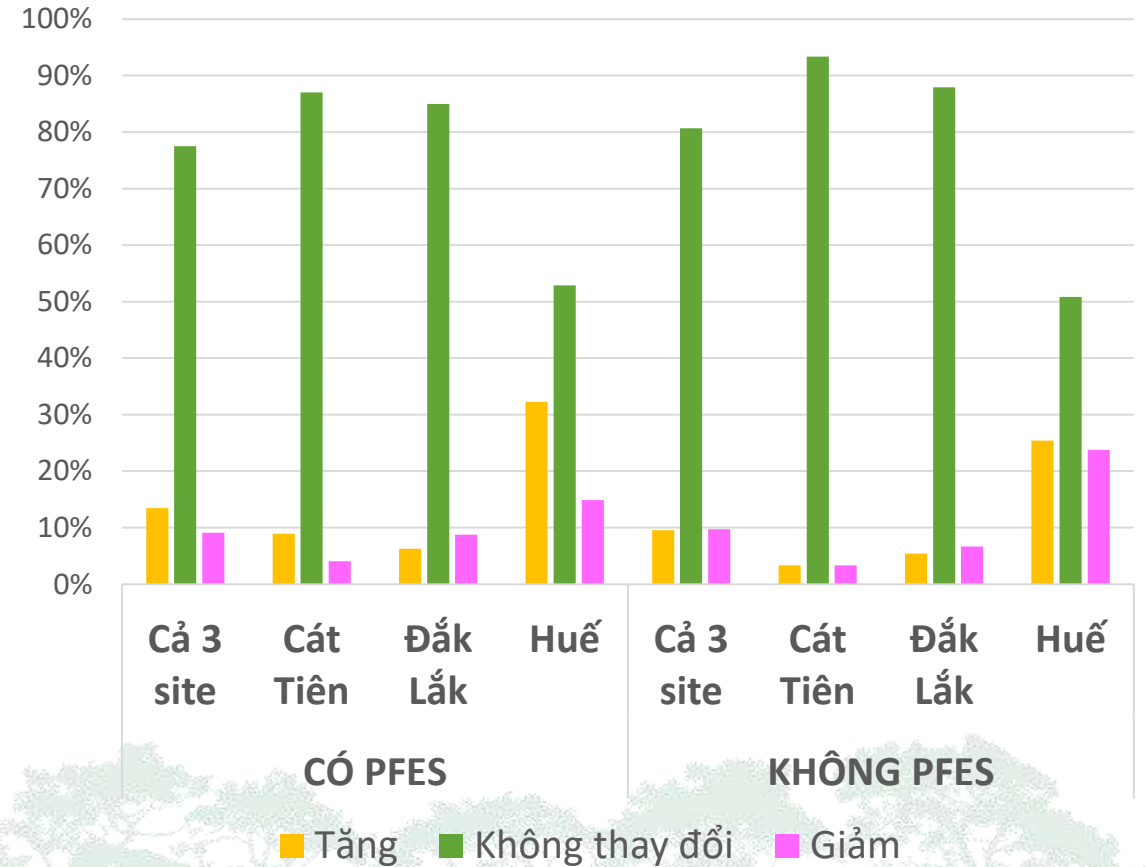


# Economic impacts

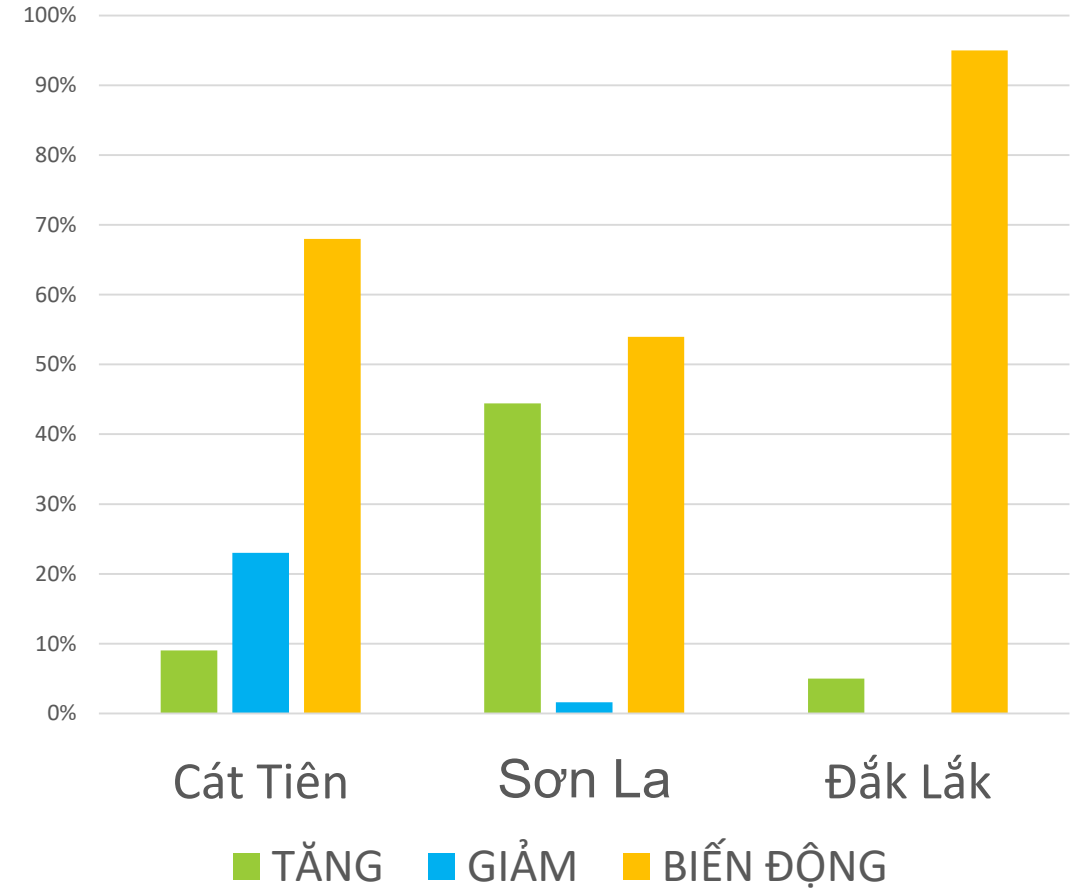
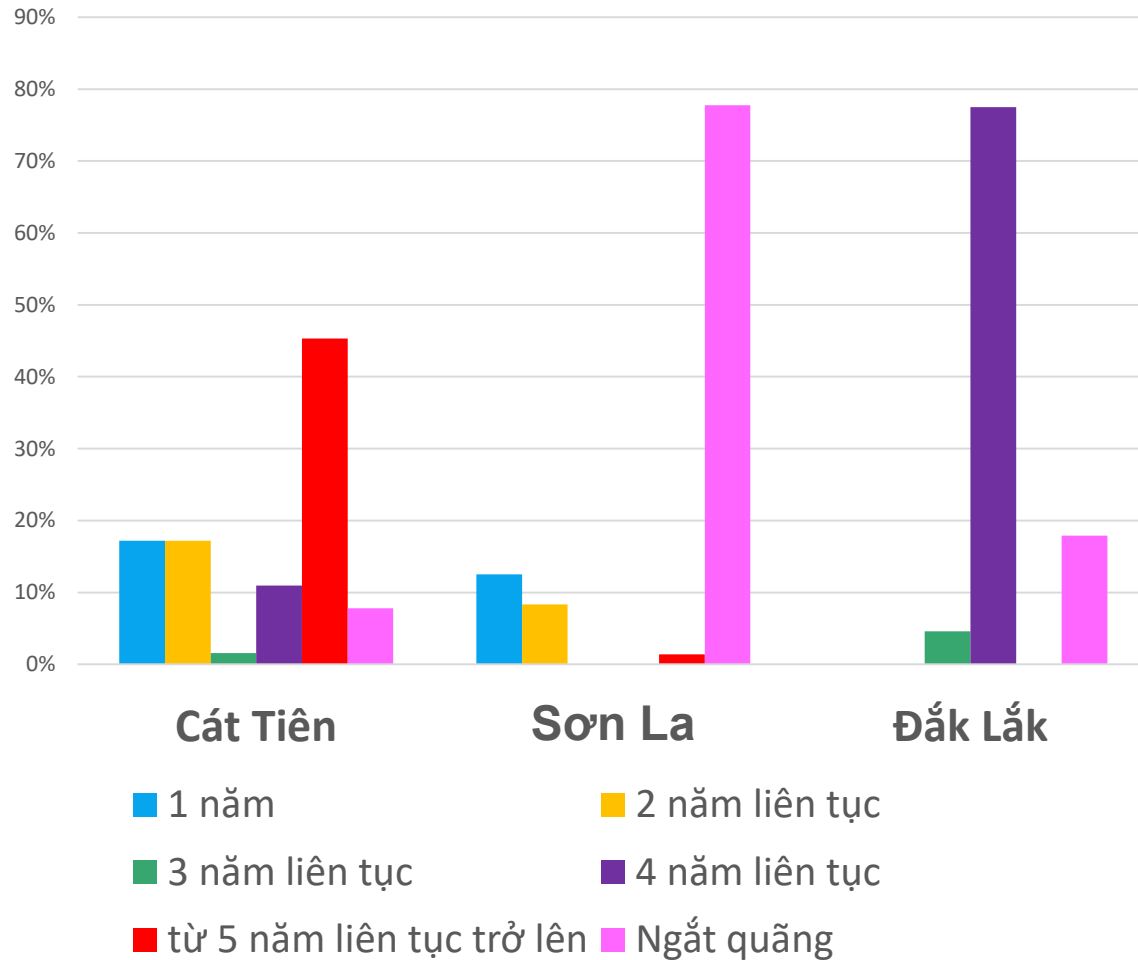
## % PFES contributes to HH incomes



## HH incomes before and after PFES in control and intervention sites



# Sustainability of PFES payment





## Social Impacts

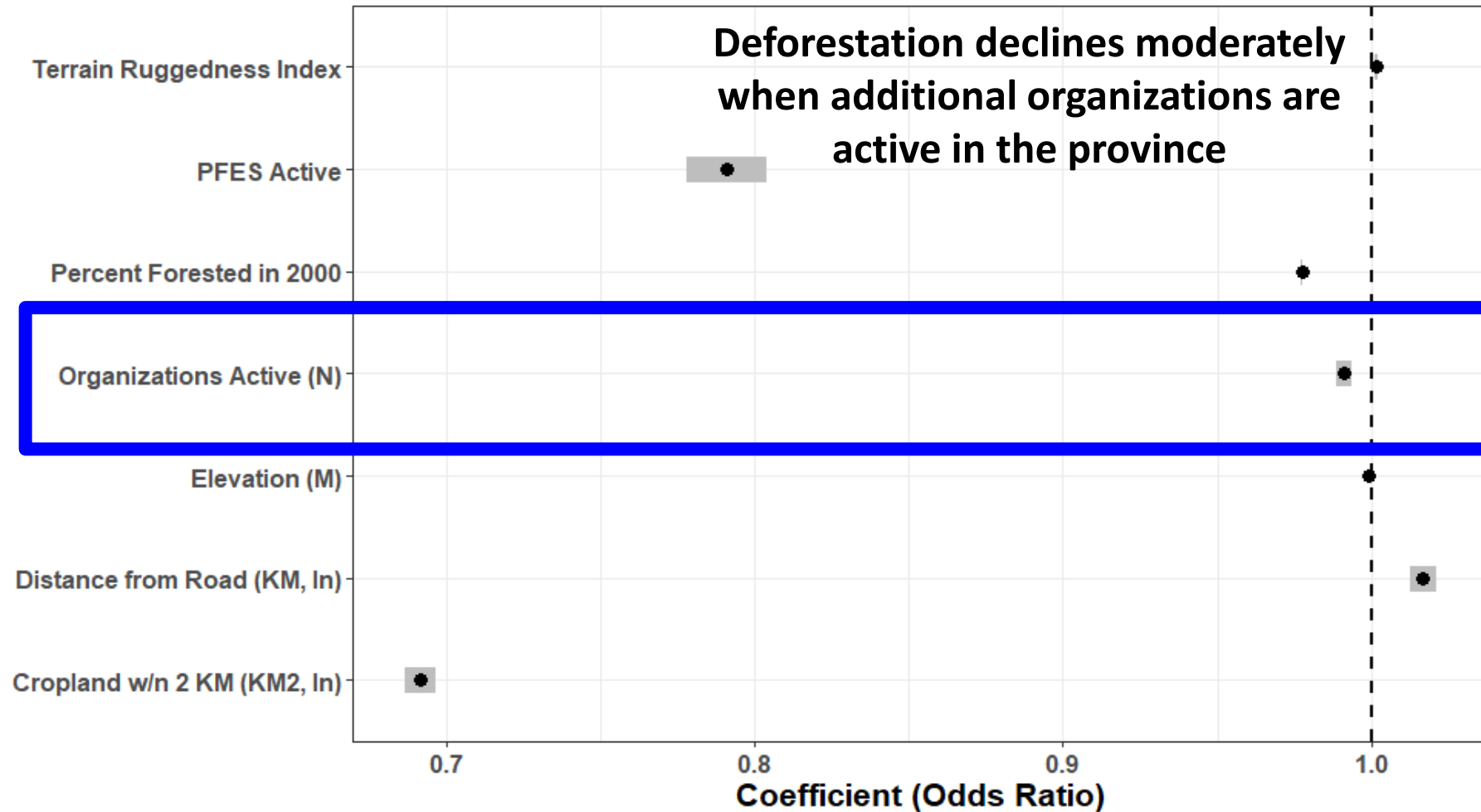
	No. of poor HH/Total PFES recipients	No. of poor households get out of poverty thanks to PFES/Total poor PFES recipients
<b>Total</b>	<b>57%</b>	<b>11.24%</b>
Sơn La	68%	0%
Cát Tiên	59%	81.4%
Đắk Lắk	53%	5%
Huế	58%	3.93%

\* Poverty and poor households are defined based on local definition



# Social impact

## Cox Proportional Hazards Model, Deforestation Odds



**Workshops may also catalyze collaboration**, and better collaboration between government agencies which can contribute to more cohesive forest governance **BUT.... Organizations seem to avoid one another when working in the same areas.**

	Model 1
Rate parameter period 1	7.39 (0.49) <sup>***</sup>
Rate parameter period 2	5.58 (0.45) <sup>***</sup>
Outdegree (density)	-1.61 (0.18) <sup>***</sup>
Reciprocity	-0.00 (0.20)
Organizations co-attended workshops in prior time period	0.53 (0.22) <sup>*</sup>
Organizations work in the same place	-0.31 (0.15) <sup>*</sup>
Governmental organization	0.51 (0.33)
Collaboration between governmental organizations	0.56 (0.20) <sup>**</sup>
Iterations	2669

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



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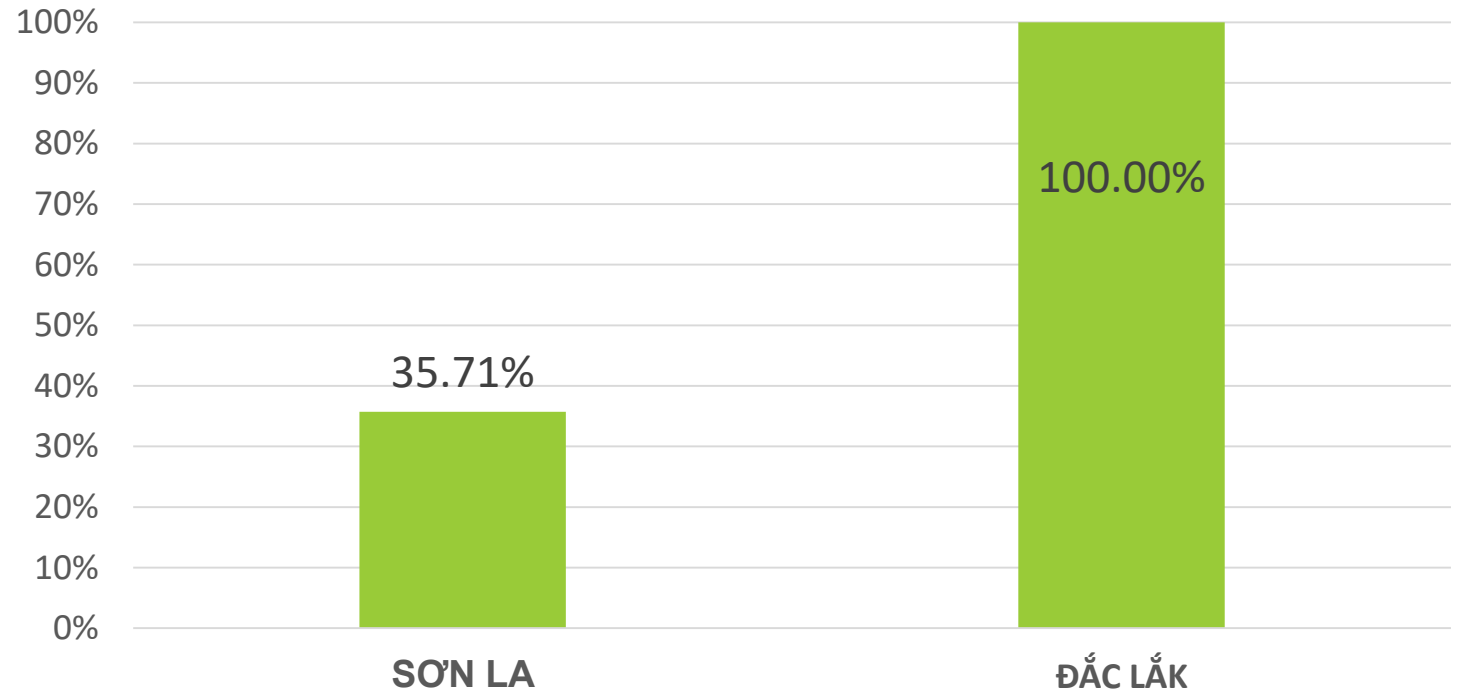
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# Conditionality

- Weak law enforcement
- Lack of evidence for payment
- Social objectives come at the costs of environmental objectives

## Forest area decreased but still received higher payment



% HH continuously received PFES payment for more than 2 years but continuously has reduced number of forest areas



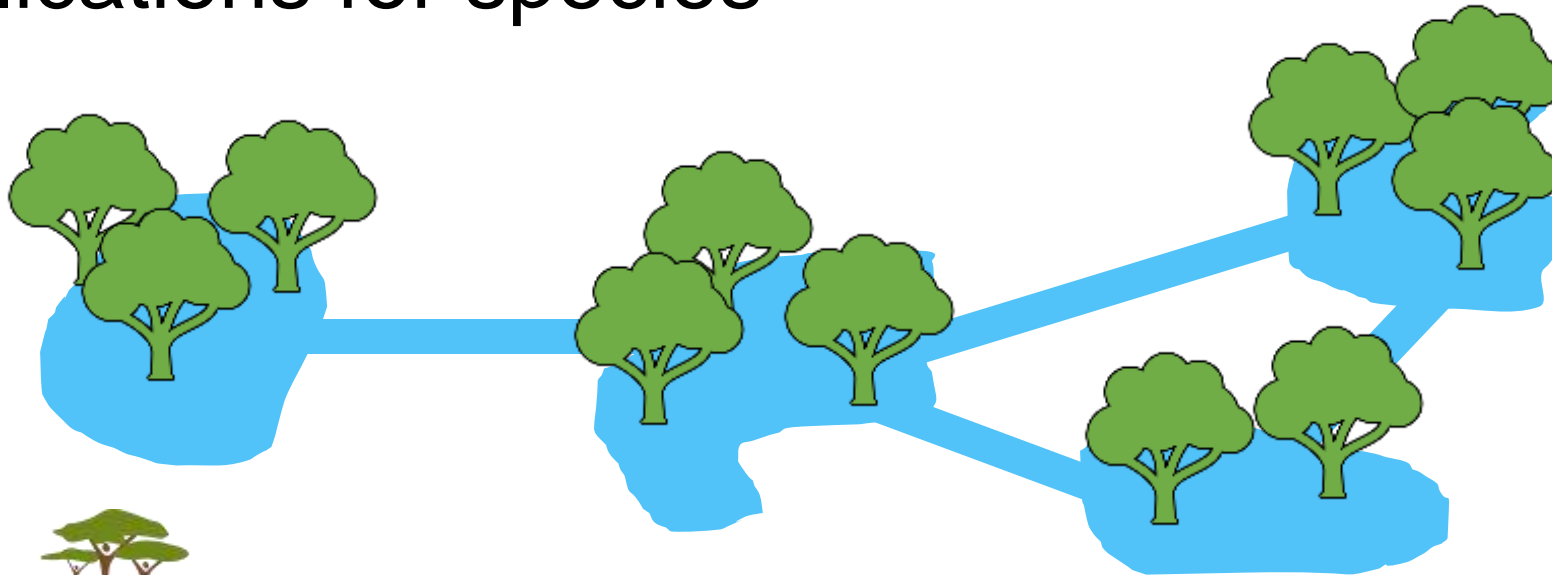
# Key messages

- **Additionality:**
  - Scale matters
  - More data is needed to confirm PFES additionality
  - Challenges in attribute PFES's impact in a policy mix
  - Forest quality
  - Funding and political commitment
- **Weak Conditionality** might threaten the sustainability of PFES scheme



# Additional on-going and future

- Measure increase in forest cover (along with forest loss) and effects of PFES on net change in forest cover
- Measure effects of PFES on forest connectivity, and implications for species



# THANK YOU FOR YOUR ATTENTION

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[foreststreesagroforestry.org](http://foreststreesagroforestry.org) | [globallandscapesforum.org](http://globallandscapesforum.org) | [resilientlandscapes.org](http://resilientlandscapes.org)

