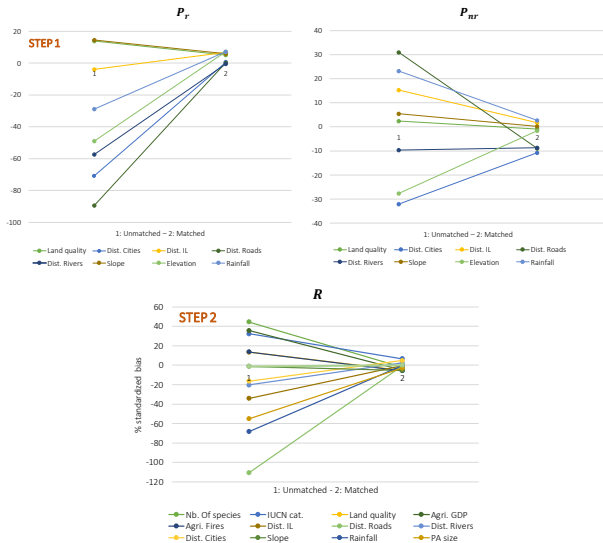




Covariate Balance



Impact of PAs on 2001-2008 FCL

	Entire sample		Near roads		Far from roads	
	P_r	P_{nr}	P_r	P_{nr}	P_r	P_{nr}
Diff. unmatched	-0.00	-.06***	-.03***	-.05***	.08***	-.05***
ATT PSM	-0.00	-.04***	-.02***	-.06***	.09***	-.03***
Av. remaining bias	2.5	4.8	1.7	2.4	-	4
Mantel-Haenszel bounds	-	6.7	1.3	4	2.6	>10
Obs.	437748	492527	151698	183403	290059	309034
Obs. off support	5	4994	8	7	2	5257
Robustness: 1:2 Covariate Matching - caliper 0.1 - With replacement						
ATT	-0.02	-.03***	-.04***	-.05***	.01***	-.02***
Av. remaining bias	2.3	1	1.6	1.1	3.5	1.1
Treated off support	2316	44043	2513	11691	620	36039
Regression coef. on the CS	-0.28**	-.72***	-.46*	-.54***	1.01***	-1.35***


- Never reduced PAs have a robust impact, lower than expected. Higher near roads.
 - ▷ Positive OC after d, lower enforcement?
- PAs that will be reduced later have a - impact near roads, and a + impact farther away.

Impact of PA reductions on 2010-2015 FCL

	Entire sample	Near roads	Far from roads
Diff. unmatched	.026***	.025***	.104***
ATT PSM	.023***	.017***	.091***
Av. remaining bias	3.2	3.8	15.6
Mantel-Haenszel bounds	4.6	2.6	
Obs.	91101	19480	12009
Obs. off support	305	684	164

Robustness: 1:2 Covariate Matching - caliper 0.5 - With replacement

ATT	.008***	.009***	.0
Av. remaining bias	1.8	2.2	4.3
Treated off support	3229	1671	324
Regression coef. on the CS	0.38**	-	0

- Reducing protection seems to  FCL overall, lower than expected.
- The impact seems robust near roads, where they previously had a - impact.
- No robust impact far from roads, where FCL had already occur.

Discussion and Conclusion

- Enacted PA reductions from 2009 to 2012 seem to ↗ FCL
 - ▷ Near roads: robust + impact. They had a - impact on 2001-2008 forest cover losses.
 - ▷ Far from roads: no robust impact. They a + impact on 2001-2008 forest cover losses
- Our measure of d_i does not catch location where the land rent=0.
 - ▷ No forest cover losses observed above 161km of roads.

Limitations:

- Temporal shocks and unobservable biases could overstate impacts
- New data reveals new enacted size reduction before 2015
- Sensitivity to thresholds

Going further:

- We don't observe leakages and LT effects
- What would have been forest cover losses in reduced PAs without protection?