

# Supporting Information

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## SI Text

**Evidence from the Forest Settlement Reports for Selection of Dense Forest for Inclusion in State Forests.** From Stiffe (1915), pp 5 and 6: “Roughly the District can be made to fall into four categories. For the first, ... such forests as used to exist have been nearly destroyed...policy has been followed to reserve all of the tree forest that is now left; and not to meddle with the rest of the country, with a view to reforestation.” (1). This suggests degraded forest was left out. Some of this would be so for natural, not anthropogenic, reasons.

From Stiffe (1915), p 7: “The second set of conditions to be dealt with...where the settlement has been taken in time, but none too soon, and where there is no difficulty in meeting all of the claims of all of the villages, with something to spare. Here we have reserved all of the tree forest of any value, without going out of the way to take in every clump of trees (to the abandonment of clear and natural boundaries).” (1).

From Stiffe (1915), pp 11 and 12: “...fourth and last class of country which I wish to discuss, to wit the forests of the far North...I have demarcated the best of the tree forest, using broad natural boundaries, rather than artificial lines, and have left large fringes of forest on all sides.” (1). There is no discussion

of demarcation in the third class of country. Stiffe, pp 8–13 (1) discuss the commercial value of the forests, and chir (*Pinus roxburghii*) is the only tree discussed, indicating the preference for pine.

From Clay (1921), p 2: “...it was in many cases necessary to reserve all forest of any value to preserve anything at all for future generations. Elsewhere it was possible to be more generous...” (2).

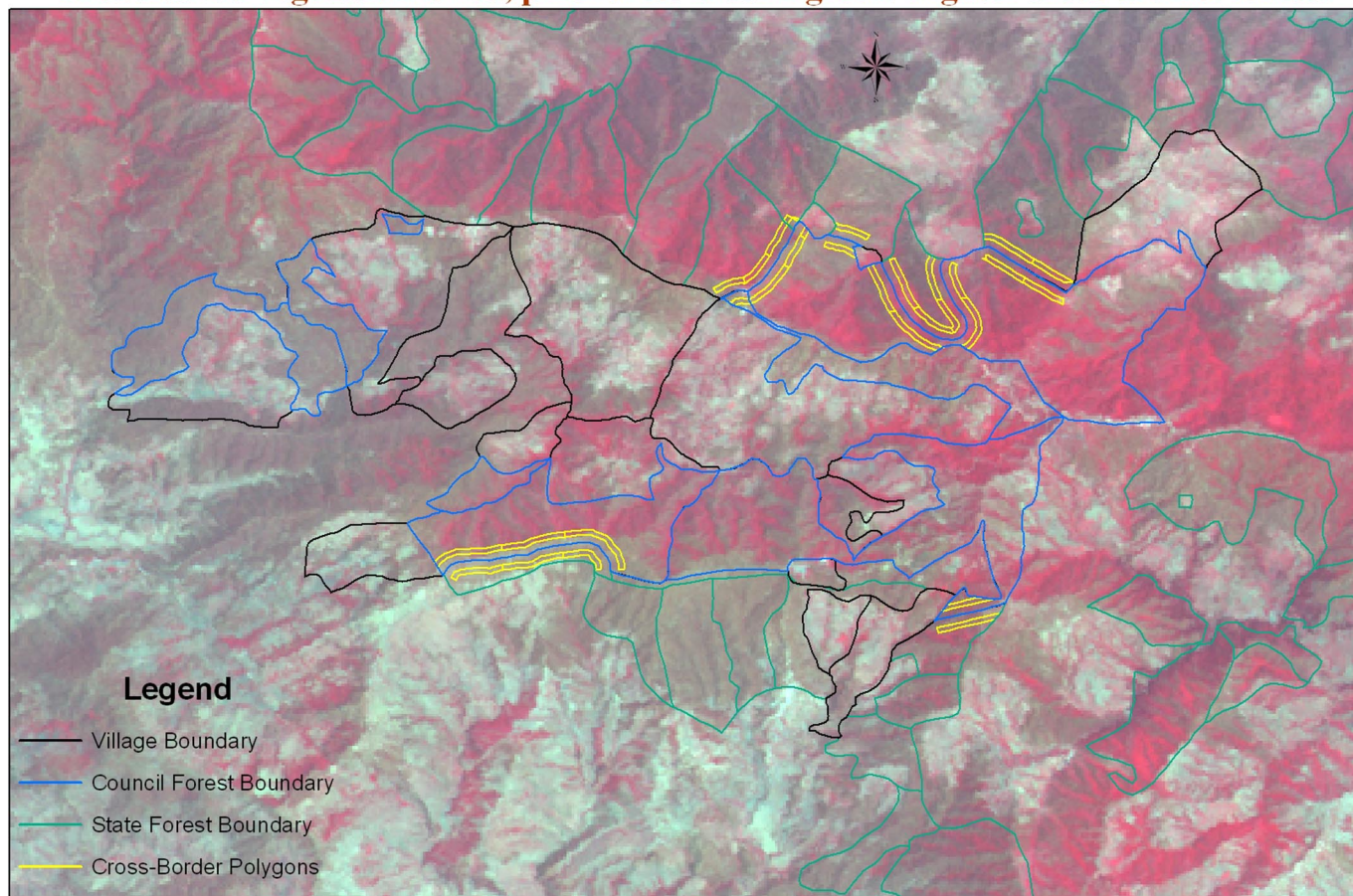
**Importance of Aspect as a Determinant of Crown Cover.** Table S2 shows coefficient estimates from regressions of percent crown cover on aspect and other variables. Note the strong influence of aspect on crown cover. Coefficients in bold type (all not statistically significant at the 10% level) indicate the absence of a positive influence of nearby state forest stocks on council forests (the second and fourth regressions) and the absence of a negative influence of nearby council forest stocks on state forests (the first and third regressions).

Regressions that exclude interactions of the council dummy variable with the control variables are given in Table S3. The effect of being in a council forest on crown cover is not statistically significant at the 10% level.

1. Stiffe NC (1915) *Report on the Forest Settlement of the Almora District* (Anglo-Vernacular Press, Ranikhet, India).

2. Clay JM (1921) *Final Report on the Forest Settlement of the Garhwal District, United Provinces* (Government Press, United Provinces, Allahabad, India).

**False Color Composite of IRS1D LISS3 Image of Jageshwar Area**  
**Broadleaved vegetation is red, pine forest is dark green. Lighter areas are not forest.**



**Fig. S1.** False color composite of IRS1D LISS3 image of Jageshwar area. Broad-leaved vegetation is in red, pine forest is in dark green. The lighter areas are not forest.

**Table S1. Summary statistics**

Variable	State forests, 508 polygons		Council forests, 240 polygons		Village commons, 343 polygons	
	Mean	SD	Mean	SD	Mean	SD
Area, ha	98.4	85.5	75.6	103.6	43.3	84.8
Broad leaved, % crown cover	75.9	22.7	64.9	27.7	49.8	29.3
Pine, % crown cover	33.9	27.3	42.2	31.8	37.9	30.8
Forest, %	97.2	7.6	93.2	13.1	83.4	22.2
Broad leaved, %	67.9	30.3	75.7	23.2	69.07	25.15
Pine, %	29.2	29.6	17.4	21.3	14.3	18.9
Aspect	0.499	0.234	0.487	0.219	0.494	0.223
Altitude, km	1.68	0.47	1.56	0.42	1.44	0.40
Population density	0.673	0.834	1.41	0.93	1.57	1.16
Time to road	2.13	1.93	1.55	1.68	1.45	1.48
Nearby SF stock	2.93	1.79	0.84	1.25	0.91	1.38
Nearby CF stock	0.211	0.549	1.13	1.25	1.21	1.37
Nearby VC stock	0.159	0.431	0.95	1.06	0.71	0.98

SF, state forest; CF, council forest; VC, village commons. Aspect ranges from south-facing (0) to north-facing (1), population density is in persons per hectare, round-trip time to road is in hours, and nearby stocks are in square kilometers. 100 ha = 1 sq km.

Table S2. Estimated multiple regression coefficients on the whole sample with their standard errors in parentheses

Parameter	Dependent variable			
	Broad-leaved crown cover		Pine crown cover	
	State forests	Council forests	State forests	Council forests
Aspect	21.9*** (4.9)	40.9*** (7.01)	14.13** (6.007)	29.9*** (9.06)
Population density	-19.5*** (4.09)	-15.32** (6.58)	-1.14 (4.27)	-10.8 (9.1)
Population density squared	2.55*** (0.67)	2.11 (1.62)	-1.13* (0.59)	0.81 (2.07)
Time to road	-0.54 (1.2)	-2.8 (3.3)	-1.51 (2.51)	-8.2* (4.75)
Time to road squared	0.01 (0.13)	0.48 (0.45)	-0.07 (0.35)	1.32* (0.75)
Nearby council forest stock	<b>-0.87 (2.03)</b>	0.98 (1.01)	<b>1.76 (2.33)</b>	-2.06 (2.10)
Nearby state forest stock	2.60*** (0.67)	<b>1.18 (1.39)</b>	-0.17 (0.98)	<b>0.078 (1.95)</b>
Nearby village commons forest stock	-3.72 (2.44)	-1.20 (1.84)	1.88 (4.34)	-1.65 (2.54)
Observations	355	227	318	186
Villages		140		126
R <sup>2</sup>	0.44	0.47	0.39	0.34

Nearby forest stocks are instrumented by the respective areas of polygons with centroids within a 2-h round trip time. Huber-White robust standard errors clustered by village shown in parentheses; 1, 2, and 3 asterisks denote significance at the 10, 5, and 1% levels, respectively. Regressions include dummies for the 10 areas whose coefficients are not reported.

**Table S3. Regressions of crown cover from the whole sample**

Parameter	Dependent variable	
	Broad-leaved crown cover	Pine crown cover
Nearby council forest stock	1.314 (0.93)	-0.683 (1.61)
Nearby state forest stock	2.019*** (0.57)	0.0941 (0.84)
Nearby village common forest stock	-1.415 (1.66)	0.0910 (2.06)
Council forest = 1	-2.765 (2.88)	-1.197 (3.58)
Aspect	26.12*** (4.17)	21.92*** (5.07)
Population density	-38.30*** (4.26)	-2.320 (3.35)
Population density squared	11.82*** (1.90)	-0.730 (0.54)
Population density cubed	-0.948*** (0.19)	
Time to road	-0.668 (0.54)	
Constant	54.02*** (6.63)	20.45** (10.3)
Observations	582	519
R <sup>2</sup>	0.47	0.31

Note: Nearby forest stocks are instrumented by the respective areas of polygons with centroids within a 2-h round-trip time. Huber–White robust standard errors clustered by village shown in parentheses; 1, 2, and 3 asterisks denote significance at the 10, 5, and 1% levels, respectively. Regressions include dummies for the 10 areas whose coefficients are not reported.