

Supplementary Materials for

Tracking changes and preventing loss in critical tiger habitat

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Published 1 April 2016, *Sci. Adv.* **2**, e1501675 (2016)
DOI: 10.1126/sciadv.1501675

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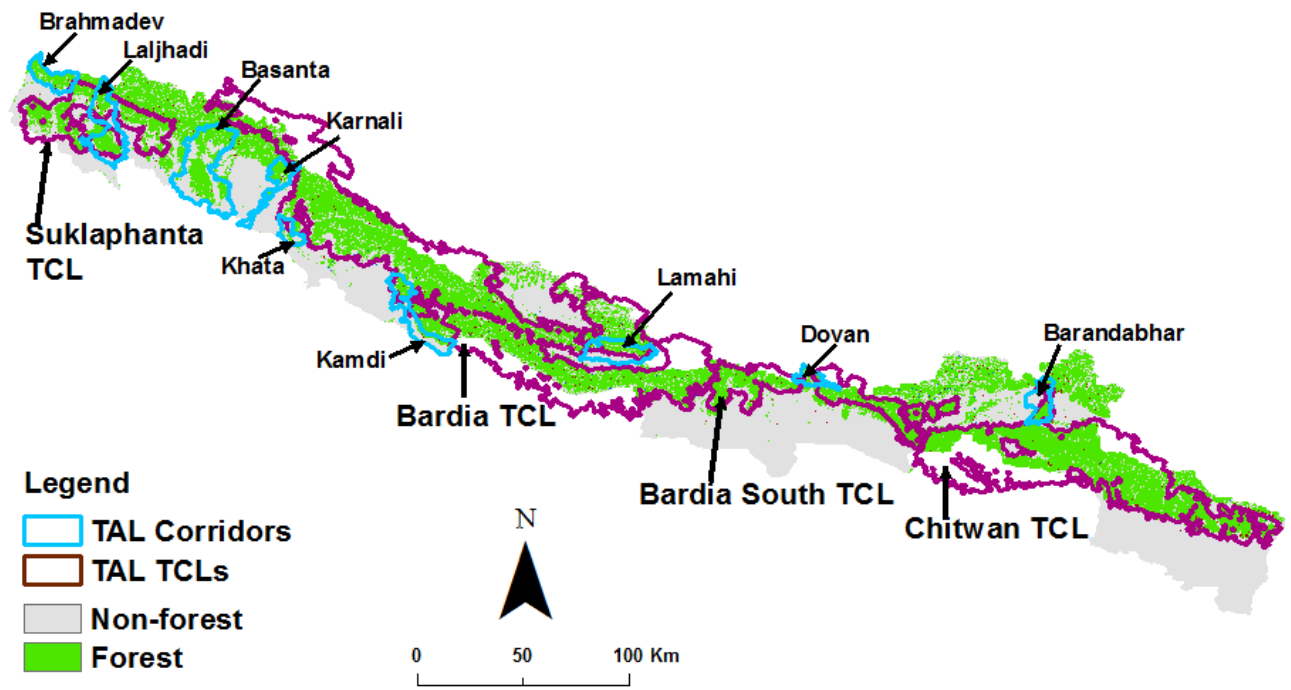
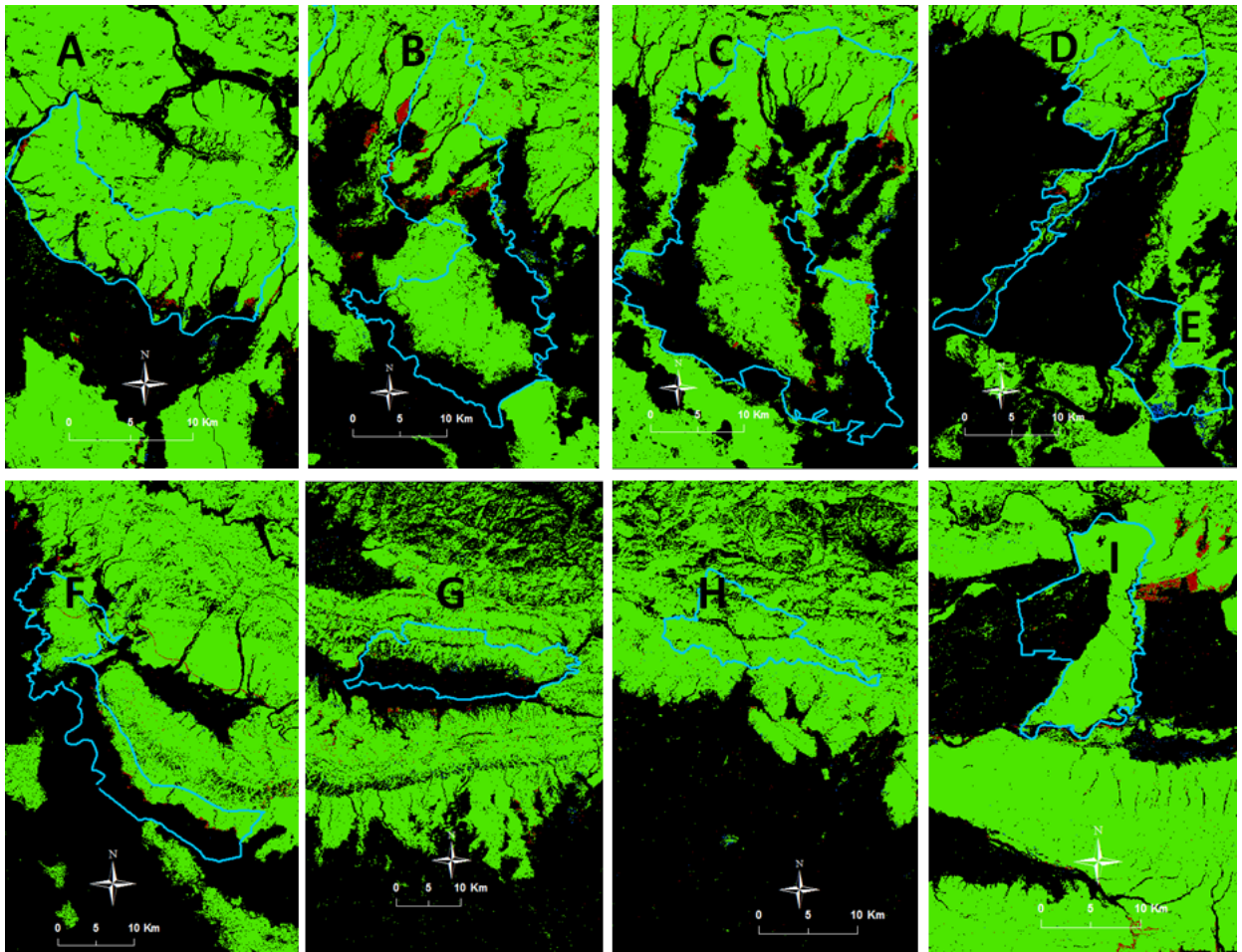


fig. S1. Nine forest corridors connecting core tiger reserves across four Tiger Conservation Landscapes (TCLs) in the Terai Arc Landscape, Nepal.



TAL Corridors
 Forest Loss
 Forest Gain
 Forest
 Non-forest

fig. S2. Zoomed-in images that show forest loss and gain in nine forest corridors connecting core tiger reserves in Terai Arc Landscape, Nepal. Each corridor map has its own scale.

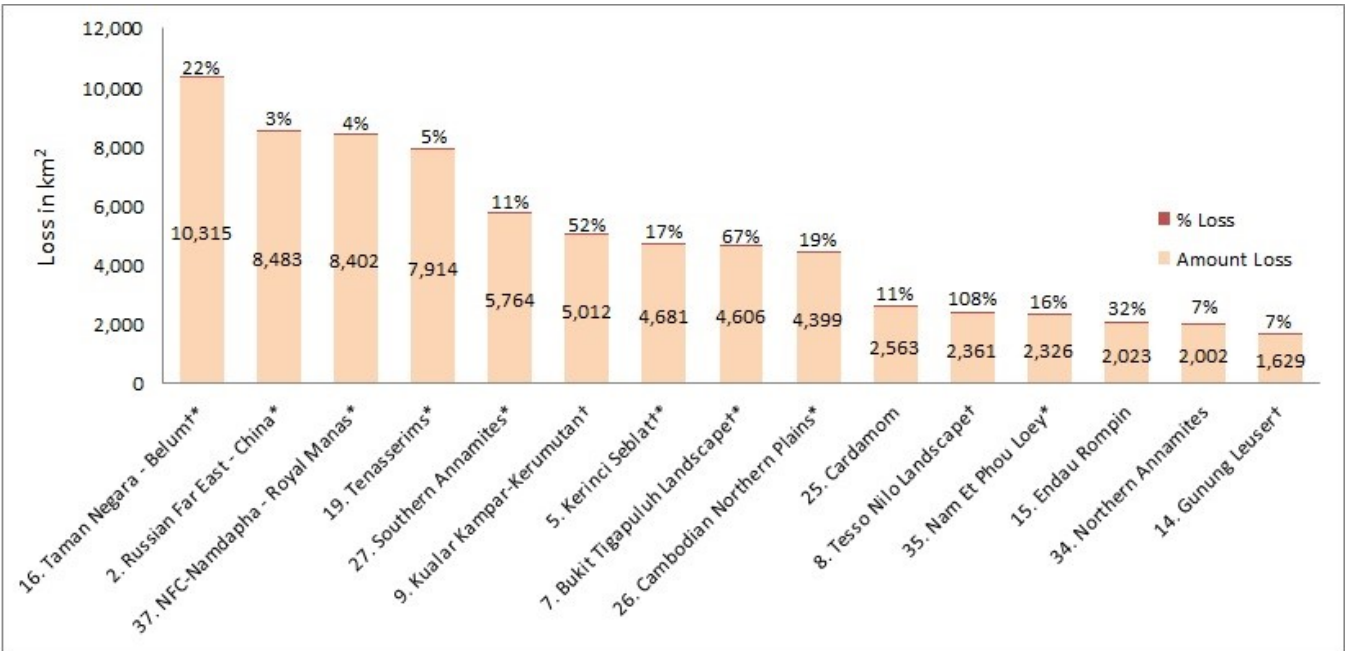


fig. S3. Forest loss (in square kilometers) and percentage of forest loss between 2001 and 2014 in 15 Tiger Conservation Landscapes with highest forest loss, including nine priority landscapes for doubling wild tiger populations.

* Priority Tiger Conservation Landscapes for doubling wild tiger populations

† Tiger Conservation Landscapes overlapping oil palm concessions

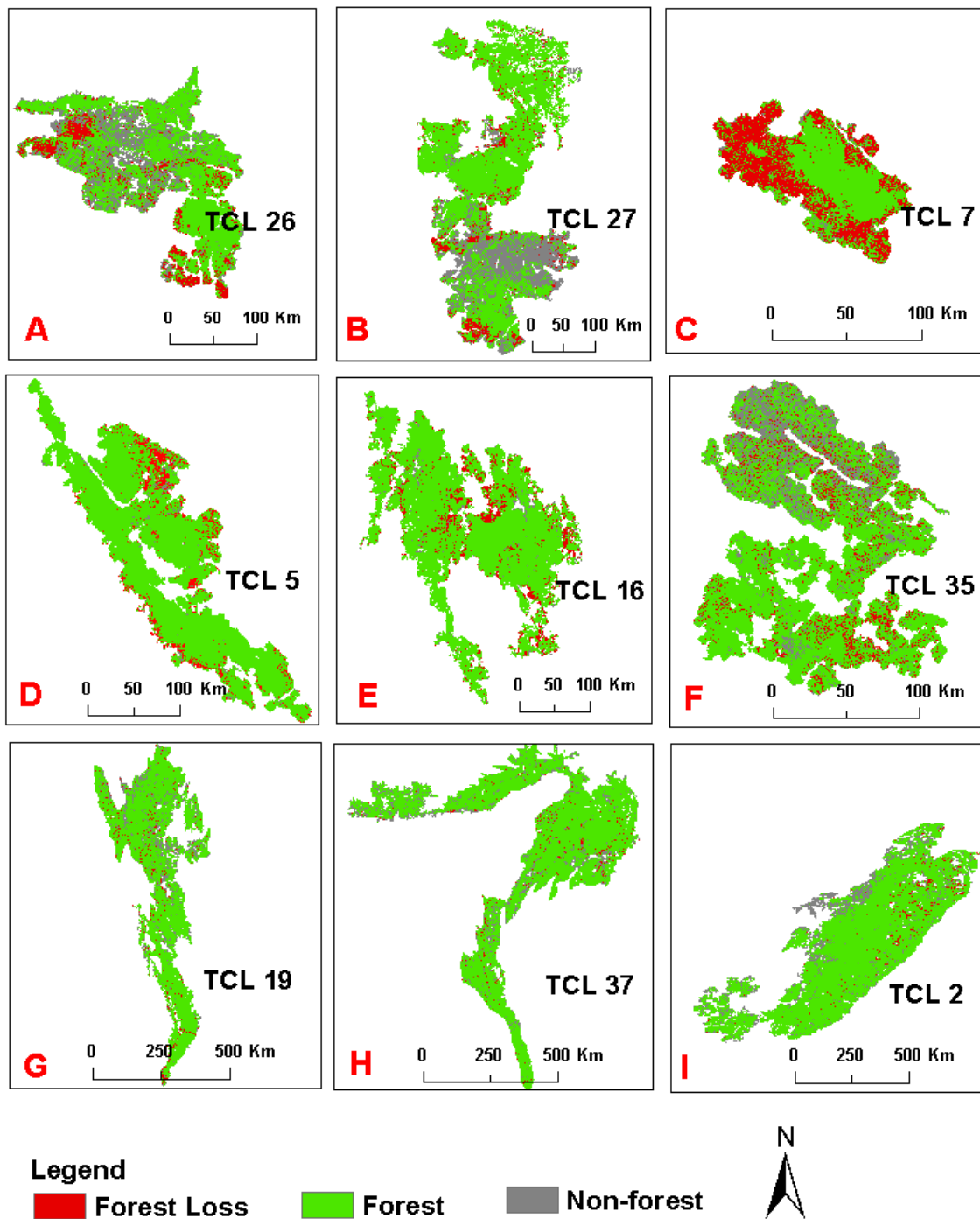


fig. S4. Forest loss in priority Tiger Conservation Landscapes for doubling wild tiger populations, between 2001 and 2014. Forest loss in these nine landscapes could support 375 tigers (Table S1). **A)** Cambodian Northern Plains (Cambodia, Laos, Thailand), **B)** Southern Annamites (Cambodia, Laos, Vietnam), **C)** Bukit Tigapuluh Landscape (Indonesia), **D)** Kerinci Seblat (Indonesia), **E)** Taman Negara – Belum (Malaysia, Thailand), **F)** Nam Et Phou Louey (Laos, Vietnam), **G)** Tenasserims (Myanmar, Thailand), **H)** Northern Forest Complex – Namdapha – Royal Manas (Bhutan, India, Myanmar), **I)** Russian Far East – China (Russia, China).

Table S1. Forest loss in Tiger Conservation Landscapes ($n = 76$) and associated protected areas ($n = 434$). Tiger Conservation Landscapes identified as essential to doubling tiger populations by 2022 (Tx2) are in bold font. Tiger Conservation Landscapes in the Terai Arc Landscape are marked with ‡.

ID	Tiger Conservation Landscape	Forest Loss in Tiger Conservation Landscape (km²)	Forest Loss in Protected Areas (km²)	Number of Tigers Reduced based on Forest Loss	Size of Tiger Conservation Landscape (km²)
16	Taman Negara – Belum (Malaysia, Thailand)	10,315 ± 2,933	6,30 ± 180	14	49,181
2	Russian Far East – China (Russia, China)	8,483 ± 2,412	1,207 ± 344	5	269,983
37	Northern Forest Complex - Namdapha - Royal Manas (Bhutan, India, Myanmar)	8,403 ± 2,389	974 ± 277	7	237,820
19	Tenasserims (Myanmar, Thailand)	7,914 ± 2,250	1,439 ± 409	33	162,726
27	Southern Annamites (Cambodia, Laos, Vietnam)	5,765 ± 1,639	2,541 ± 723	58	61,252
9	Kualar Kampar-Kerumutan (Indonesia)	5,012 ± 1,425	33 ± 10	1	9,835
5	Kerinci Seblat (Indonesia)	4,682 ± 1,331	1,521 ± 433	35	28,162
7	Bukit Tigapuluh Landscape (Indonesia)	4,607 ± 1,310	2,259 ± 643	51	7,106
26	Cambodian Northern Plains (Cambodia, Laos, Vietnam)	4,400 ± 1,251	2,296 ± 643	174	26,835
25	Cardamom's (Cambodia)	2,564 ± 729	10 ± 3	0	26,345
8	Tesso Nilo Landscape (Indonesia)	2,361 ± 671	122 ± 35	3	2,332
35	Nam Et Phou Louey (Laos, Vietnam)	2,327 ± 662	256 ± 73	6	17,866
15	Endau Rompin (Malaysia)	2,024 ± 576	7 ± 2	0	6,505
34	Northern Annamites (Laos)	2,003 ± 570	3 ± 1	0	28,826
14	Gunung Leuser (Indonesia)	1,630 ± 464	8 ± 3	0	22,319
21	Phu Miang - Phu Thong (Thailand)	895 ± 255	3 ± 1	0	16,273

6	Bukit Rimbang Baling (Indonesia)	618 ± 176	8 ± 3	0	4,395
38	Kaziranga – Garampani (India)	501 ± 143	36 ± 11	4	7,514
55	Indravati (India)	500 ± 142	2 ± 1	0	44,238
28	Cat Tien (Vietnam)	492 ± 140	4 ± 2	0	3,359
30	Kon Ka Kinh (Vietnam)	455 ± 130	3 ± 1	0	6,389
31	Yokdon (Vietnam)	414 ± 118	0 ± 0	0	1,787
4	Bukit Balai Rejang – Selatan (Indonesia)	400 ± 114	7 ± 2	0	3,884
11	Bukit Barisan South (Indonesia)	375 ± 107	0	0	2,890
36	Nam Ha (Laos)	298 ± 85	7 ± 2	0	3,217
18	Khlong Saeng (Thailand)	269 ± 77	0	0	4,816
10	Berbak (Indonesia)	257 ± 74	3 ± 1	0	2,543
3	Bukit Barisan Selatan South (Indonesia)	234 ± 67	0	0	2,107
17	Krau (Malaysia)	210 ± 60	3 ± 1	0	1,248
68	Western Ghats - Sharavathi Valley (India)	203 ± 58	2 ± 1	0	321
12	Rimbo Panti-Batang Gadis West (Indonesia)	177 ± 51	10 ± 3	0	1,486
33	Hin Nam Ho (Laos)	137 ± 39	0	0	2,727
50	Kanha – Phen (India)	82 ± 24	2 ± 1	0	10,598
44	Corbett – Sonanadi (India)	81 ± 23	3 ± 1	0	5,996
42	Bardia‡ (Nepal)	66 ± 19	14 ± 4	1	6,777
64	Periyar – Megamala (India)	62 ± 18	2 ± 1	0	5,978
24	Thap Lan - Pang Sida (Thailand)	57 ± 17	51 ± 15	1	4,445
54	Andhari – Tadoba (India)	44 ± 13	0	0	3,680
13	Sibologa (Indonesia)	44 ± 13	19 ± 6	1	1,292
40	Chitwan‡ (Nepal)	41 ± 12	19 ± 6	2	4,055
65	Anamalai- Parambikulam (India)	29 ± 9	2 ± 1	0	3,071
22	Phu Khieo (Thailand)	23 ± 7	0	0	5,760

29	Bi Dup-Nui Ba (Vietnam)	23 ± 7	0	0	1,660
56	Sunabeda-Udanti (India)	18 ± 5	2 ± 1	0	2,287
23	Khao Yai (Thailand)	16 ± 5	12 ± 4	0	2,253
43	Suklaphanta‡ (Nepal)	15 ± 4	3 ± 1	0	1,144
53	Pench (India)	11 ± 4	0	0	2,918
59	Palamau (India)	10 ± 3	0	0	3,209
63	Shendurney (India)	10 ± 3	2 ± 1	0	603
32	Xe Bang Nouan (Laos)	8 ± 3	0	0	657
69	Dandeli – Anshi (India)	8 ± 3	0	0	2,316
51	Pachmarhi - Satpura – Bori (India)	7 ± 2	2 ± 1	0	4,924
41	Bardia South ‡ (Nepal)	7 ± 2	0	0	499
58	Simlipal (India)	7 ± 2	7 ± 2	0	2,412
71	Radhanagari (India)	7 ± 2	0	0	2,945
20	Salak-Phra (Thailand)	6 ± 2	0	0	647
1	Heilongjiang (China)	6 ± 2	0	0	1,315
57	Satkosia-Gorge (India)	4 ± 2	0	0	2,699
39	Sundarbans (Bangladesh, India)	2 ± 1	2 ± 1	0	5,304
45	Rajaji Minor (India)	2 ± 1	2 ± 1	0	1,044
66	Western Ghats:Bandipur - Khudrenukh – Bhadra (India)	2 ± 1	2 ± 1	1	1,8973
61	Nagarjunasagar South (India)	0	0	0	1,699
49	Bandhavgarh – Panpatha (India)	0	0	0	2,020
72	Chandoli (India)	0	0	0	1,682
46	Rajaji Major (India)	0	0	0	322
47	Panna East (India)	0	0	0	1,390
74	Purna (India)	0	0	0	1,002
52	Melghat (India)	0	0	0	2,398
76	Shoolpaneswar (India)	0	0	0	511

70	Dandeli North (India)	0	0	0	517
48	Panna West (India)	0	0	0	539
62	Nagarjunasagar North (India)	0	0	0	915
67	Biligiri Range	0	0	0	278
73	Mahabaleshwar Landscape – South (India)				344
60	Painganga (India)	0	0	0	442
75	Mahabaleshwar Landscape – North (India)	0	0	0	406

Table S2. Tiger Conservation Landscapes overlapping industrial plantations.

ID	Tiger Conservation Landscape	Plantations (km ²)
10	Berbek	101
4	Bukit Balai Rejang - Selatan	47
3	Bukit Barisan Selatan South	2,054
11	Bukit Barisan South	227
6	Bukit Rimbang Baling	1,994
7	Bukit Tigapuluh Landscape*	1,634
15	Endau Rompin	3,260
14	Gunung Leuser	114
5	Kerinci-Seblat*	115
17	Krau	69
9	Kualar Kampar-Kerumutan	551
12	Rimbo Panti-Batang Gadis West	1,084
16	Taman Negara – Belum*	6,339
8	Tesso Nilo Landscape	139

* Priority Tiger Conservation Landscapes for doubling wild tiger populations

Table S3. Forest loss and gain in the forest corridors of Terai Arc Landscape between 2001 and 2014. These corridors link forest in southern Nepal and northwestern India.

Corridor name	Forest loss (km ²)	Forest gain (km ²)	Area (km ²)
Laljhadhi	5.7 ± 1.59	0.52 ± 0.1	354.68
Basanta	5.24 ± 1.46	1.23 ± 0.23	652.36
Kamdi	2.9 ± 0.81	0.43 ± 0.08	254.40
Brahmadev	2.36 ± 0.66	0.55 ± 0.1	160.32
Lamaha	2.19 ± 0.61	1.34 ± 0.25	243.79
Dovan	1.39 ± 0.39	0.21 ± 0.04	79.58
Karnali	1.26 ± 0.35	0.67 ± 0.13	148.94
Barandabhar	0.52 ± 0.15	0.51 ± 0.1	162.56
Khata	0.16 ± 0.05	2.2 ± 0.4	80.62

Table S4. Error matrices (in terms of sample counts) for forest and forest loss maps [Hansen *et al.* (13), version 1.2]. Map categories are rows and reference categories are columns. Accuracy measures are presented with a 95% confidence interval.

Class	Forest			User's	Producer's	Overall
	Forest	Loss	Total			
Forest	0.917	0.025	0.942	0.97 ± 0.031	0.99 ± 0.021	0.93 ± 0.070
Forest Loss	0.006	0.052	0.058	0.89 ± 0.003	0.67 ± 0.021	
Total	0.923	0.076	1.0			

Table S5. Difference between mapped area and sample estimates of forest and forest loss between 2001 and 2014 for Tiger Conservation Landscapes.

	Area (km ²)	
	Forest	Forest Loss
Mapped area (Hansen et al 2013, V1.2)	979,593	60,429
Sample estimate	960,426	79,596
	± 22,630	± 22,630
95% Confidence interval (sample estimates)	(2.4%)	(28.4%)
Difference between mapped area & sample estimate	-2.0%	31.7%