Supplement of

An annual 30 m cultivated pasture dataset of the Tibetan Plateau from 1988 to 2021

Han et al.

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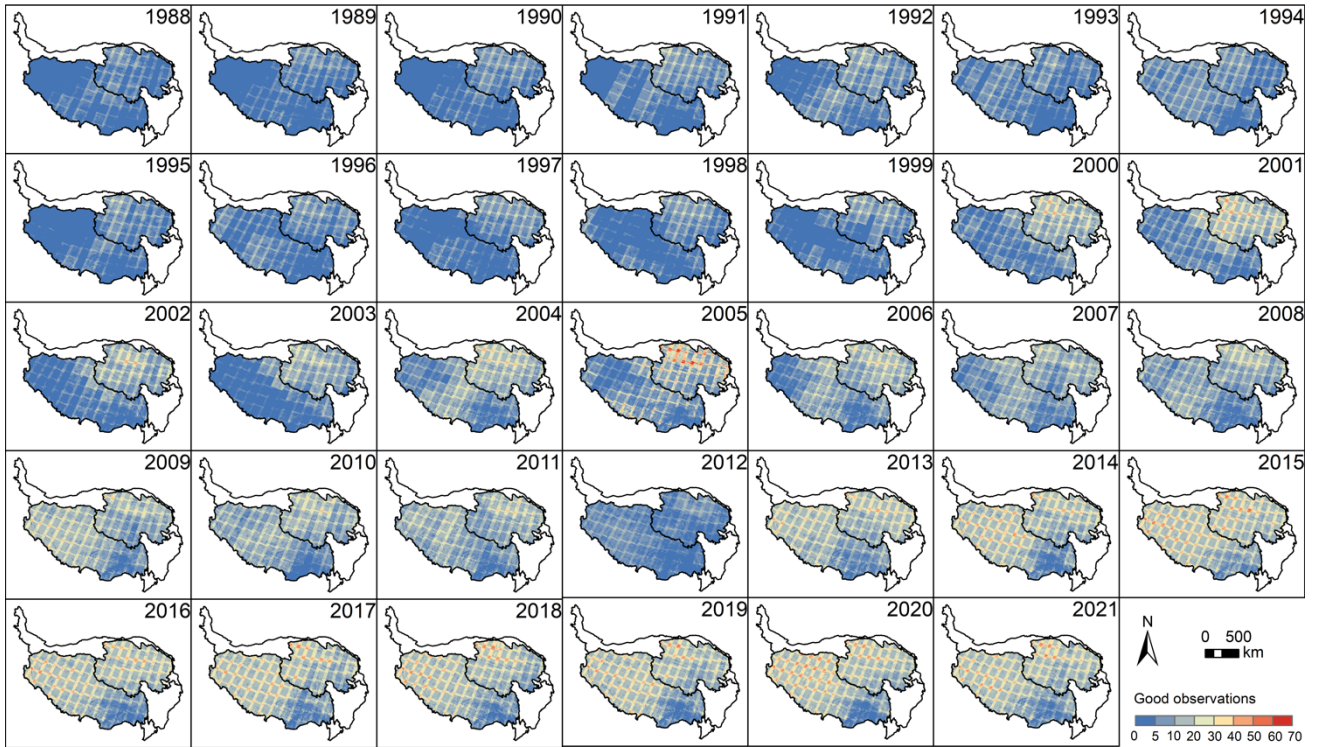
Figure S1. Number of good observations from Landsat satellite sensors in the growing season from 1988 to 2021 for Qinghai Province and the Tibet Autonomous Region.
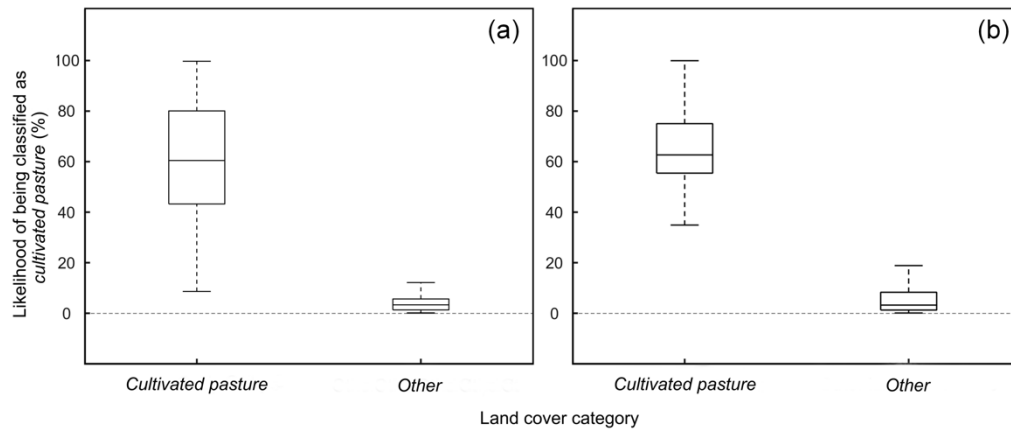
Figure S2. The likelihood of *cultivated pasture* and *other* being classified as *cultivated pasture* in the pilot study regions of (a) Qinghai Province and (b) the Tibet Autonomous Region. The binary RF classification model has a decent ability to discriminate *cultivated pasture* from *other*.
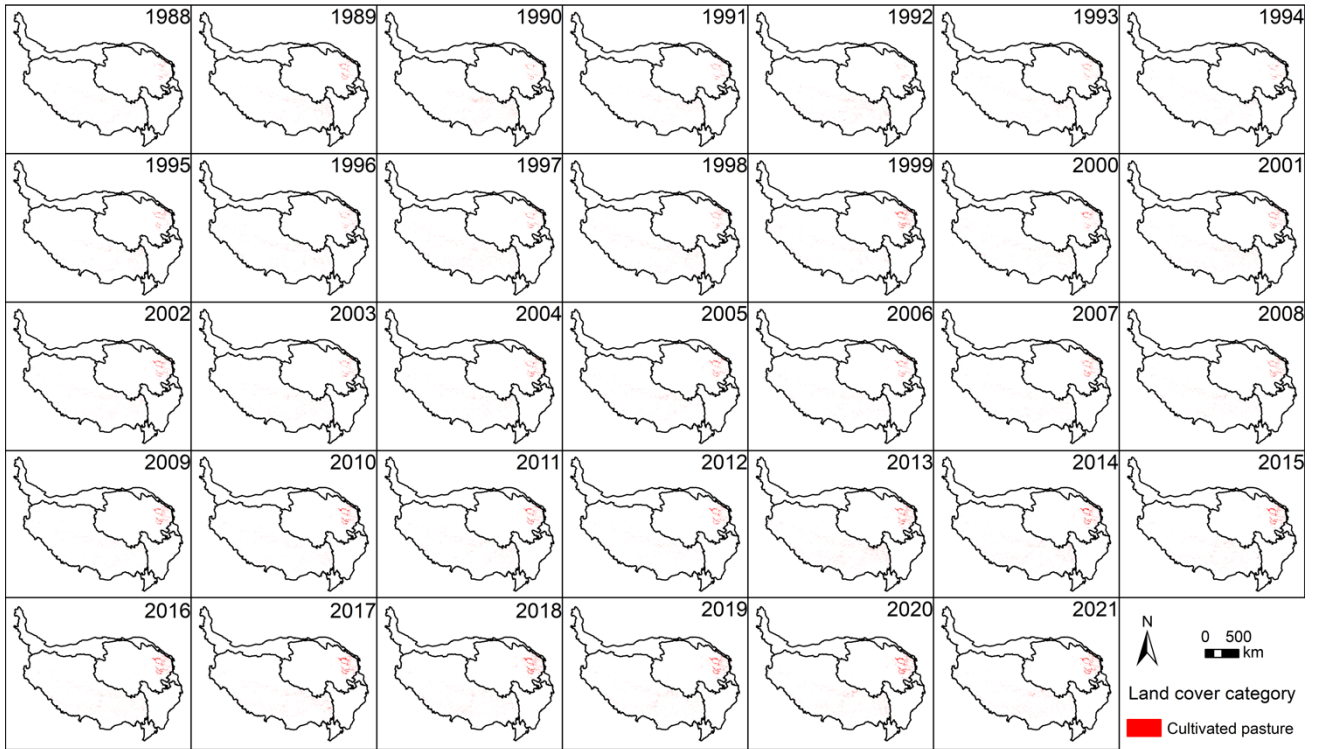
Figure S3. Annual spatial distributions of cultivated pastures in Qinghai Province and the Tibet Autonomous Region from 1988 to 2021.
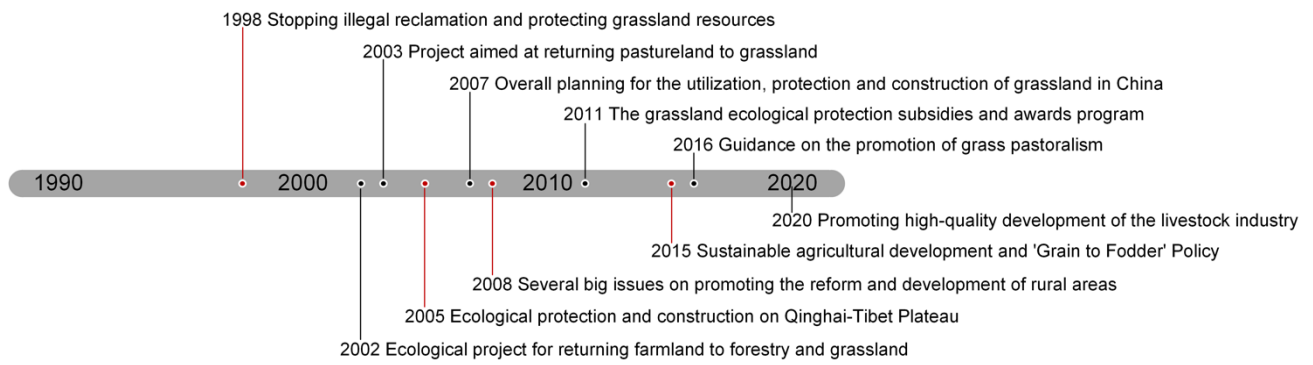
Figure S4. China's major policies related to cultivated pastures from 1990 to 2022.

Table S1. Comparison of the areas of cultivated pastures mapped using remote sensing against those from the government statistics at the county level for 2021. The government statistics of cultivated pasture areas were from the Qinghai Province Bureau of Forestry and Grassland as well as the Bureau of Agriculture and Rural Affairs of the Tibet Autonomous Region.

County	Government statistics (10^4 ha)	Remote sensing (10^4 ha)
Qinghai Province		
Xunhua	7.93	1.60
Gonghe	18.04	18.34
Guide	3.63	4.46
Xinghai	15.00	8.62
Banma	3.20	0.28
Menyuan	13.88	8.64
Qilian	8.67	8.37
Gangcha	11.47	12.73
Dulan	4.67	1.65
Wulan	5.33	1.75
Tianjun	6.56	3.66
Delingca	3.43	0.44
Datong	10.20	4.10
The Tibet Autonomous Region		
Kangma	3.41	3.94
Jiangzi	1.10	1.47
Gangba	0.38	0.71
Sajia	2.56	2.16
Jilong	0.68	1.54
Saga	1.83	2.57
Angren	0.92	1.64
Dingjie	0.12	0.87
Lazi	0.8	1.45
Dingri	1.13	1.28
Bailang	1.33	0.99
Nyalam	1.07	0.83

Table S2. Trend of cultivated pasture areas from 1988 to 2021in each county of Qinghai Province and the Tibet Autonomous Region.

County	Changing rate (ha/year)	County	Changing rate (ha/year)	County	Changing rate (ha/year)	County	Changing rate (ha/year)
Qinghai Province							
Gonghe	5032	Guide	734	Dulan	225	Maduo	2
Gangcha	4321	Datong	705	Wulan	205	Geermu	1
Guinan	3900	Huangyuan	641	Maqin	128	Zaduo	1
Xinghai	3078	Jianzha	419	Banma	99	Jiuzhi	~ 0
Tongde	1813	Huzhu	414	Pingan	81	Chengduo	~ 0
Menyuan	1383	Hualong	407	Minhe	60	Gande	~ 0
Haiyan	1233	Zeku	379	Zhiduo	9	Dari	~ 0
Qilian	1126	Ledu	371	Delingha	6	Nangqian	~ 0
Tianjun	968	Huangzhong	337	Yushu	3	Xining	~ 0
Tongren	776	Xunhua	249	Qumalai	3		
The Tibet Autonomous Region							
Baqing	445	Motuo	65	Cuomei	36	Nielamu	3
Naqu	341	Rikeze	64	Angren	35	Dingjie	2
Biru	244	Nanmulin	63	Dingqing	34	Luozha	-5
Nima	226	Gaer	60	Renbu	34	Milin	-13
Zhongba	179	Dazi	60	Cuoqin	33	Langxian	-18
Linzhou	145	Cuona	55	Gaize	33	Longzi	-21
Nierong	141	Sajia	53	Lasha	32	Changdu	-22
Dangxiong	129	Bange	49	Zuogong	26	Yadong	-22
Gongjue	1149	Mangkang	48	Bailang	24	Bianba	-24
Chayu	114	Nimu	48	Qushui	21	Gongbujiangda	-33
Suoxian	113	Jilong	47	Shannan	21	Jiali	-33
Saga	108	Mozhugongka	46	Duinongdeqing	18	Shenzha	-52
Langkazi	104	Ritu	43	Sangri	17	Leiwuqi	-64
Chaya	101	Zharang	41	Qiongjiexian	16	Linzhi	-68
Basu	92	Kangma	41	Dingri	12	Luolong	-92
Pulan	91	Lazi	40	Gangba	6	Karuo	-122
Geji	91	Xietongmen	38	Jiazha	6		
Zhada	88	Jiangzi	38	Bomi	5		
Anduo	65	Gongga	37	Jiangda	5		