Table S1. The detection functions, adjustments and values of Akaike information criterion (AIC) in the distance sampling for the Tibetan wild ass at the Three-River Source National Park.

ID	Key	Adjustment	AIC	ΔAIC
5	unif	herm	1263.690	0
4	unif	cos	1276.605	12.915
6	unif	poly	1276.961	13.271
1	hn	cos	1278.443	14.753
2	hn	herm	1278.443	14.753
3	hn	poly	1278.443	14.753
7	hr	cos	1278.659	14.969
8	hr	herm	1278.659	14.969
9	hr	poly	1278.659	14.969

Table S2. Variables used in the species distribution model for the Tibetan wild ass in the Three-River Source National Park. The variable names used in the models are in parentheses.

Variables	Parameters				Unit	Citation
	Mean	Minimum	Maximum	SD		
19 variables for temperature and precipitation (bio_1 to bio_19)	/	/	/	/	/	[33]
Elevation (elev)	4374	2569	6358	621	m	[34]
Human footprint index (footprint)	11.38	4.00	43.12	5.63	/	[35]
Solar radiation in Januray (solar1)	8516	7956	11771	569	kJ m^{-2} day^{-1}	[33]
Solar radiation in July (solar7)	19829	16822	22918	1115	kJ m^{-2} day^{-1}	[33]
Water vapor pressure in Januray (vapor1)	0.08	0.03	0.14	0.015	kPa	[33]
Water vapor pressure in July (vapor7)	0.67	0.35	1.04	0.11	kPa	[33]
Wind speed in Januray (wind1)	3.35	1.5	6.7	0.65	m s^{-1}	[33]
Wind speed in July (wind7)	2.83	1.4	6.1	0.44	m s^{-1}	[33]

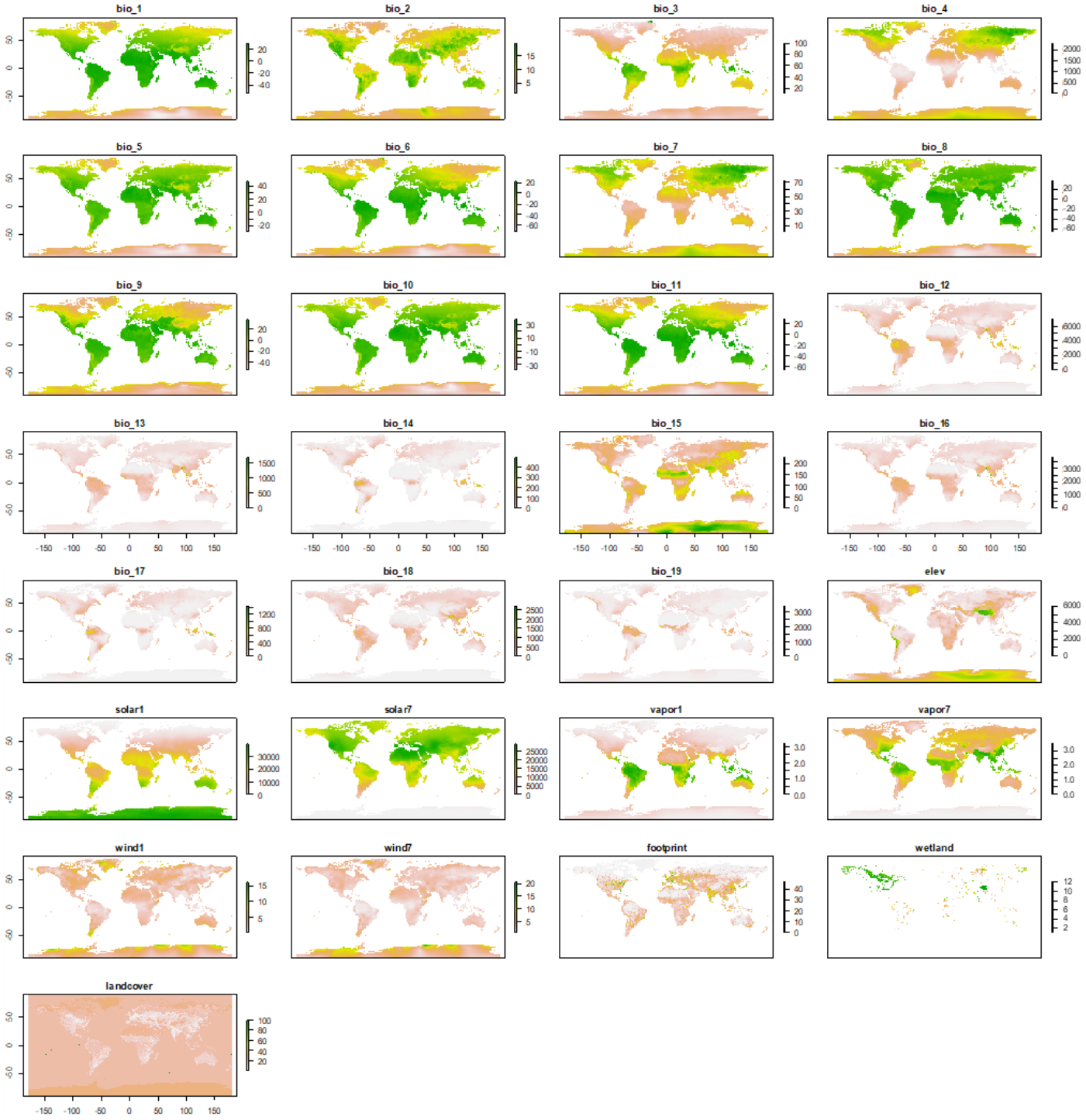

Figure S1. The 29 environmental variables for species distribution modelling. The variables include the 19 climate variables [33], elevation [34], human footprint index [35], and solar radiation, wind speed, and water vapor pressure for January and July, respectively, as well as land cover [36] and wetland [37]. All the 29 layers have the spatial resolution of 1 km^2.

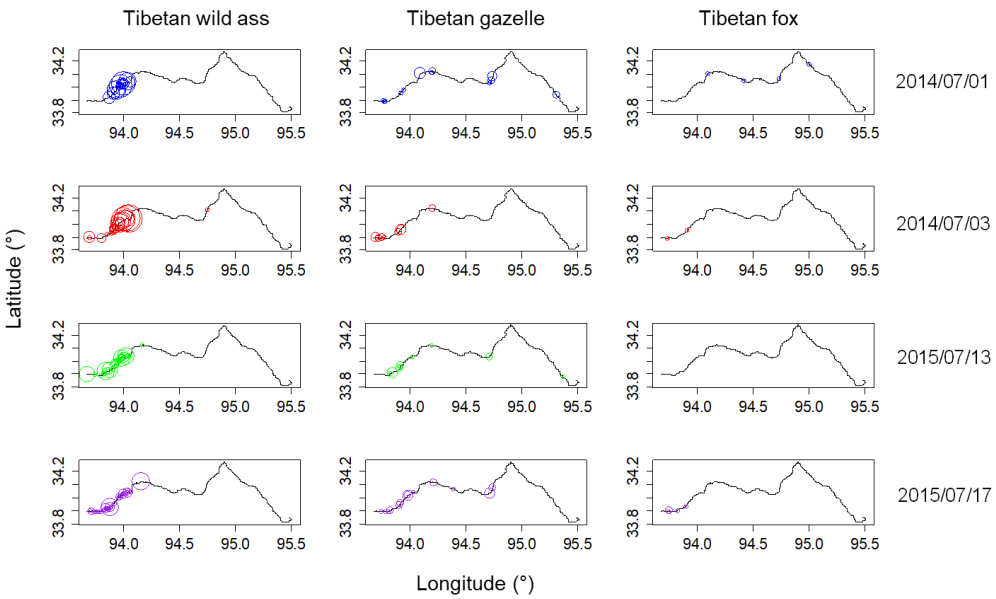

Figure S2. The occurrences and group sizes of the Tibetan wild ass, Tibetan gazelle, and Tibetan fox surveyed on four different days on a 250-km road in the Three-River Source National Park.