

Supplementary Information (SI)

Endo, Mameno, Kubo in Ambio

“Online trade of wild game meat: Implications for public health and conservation”

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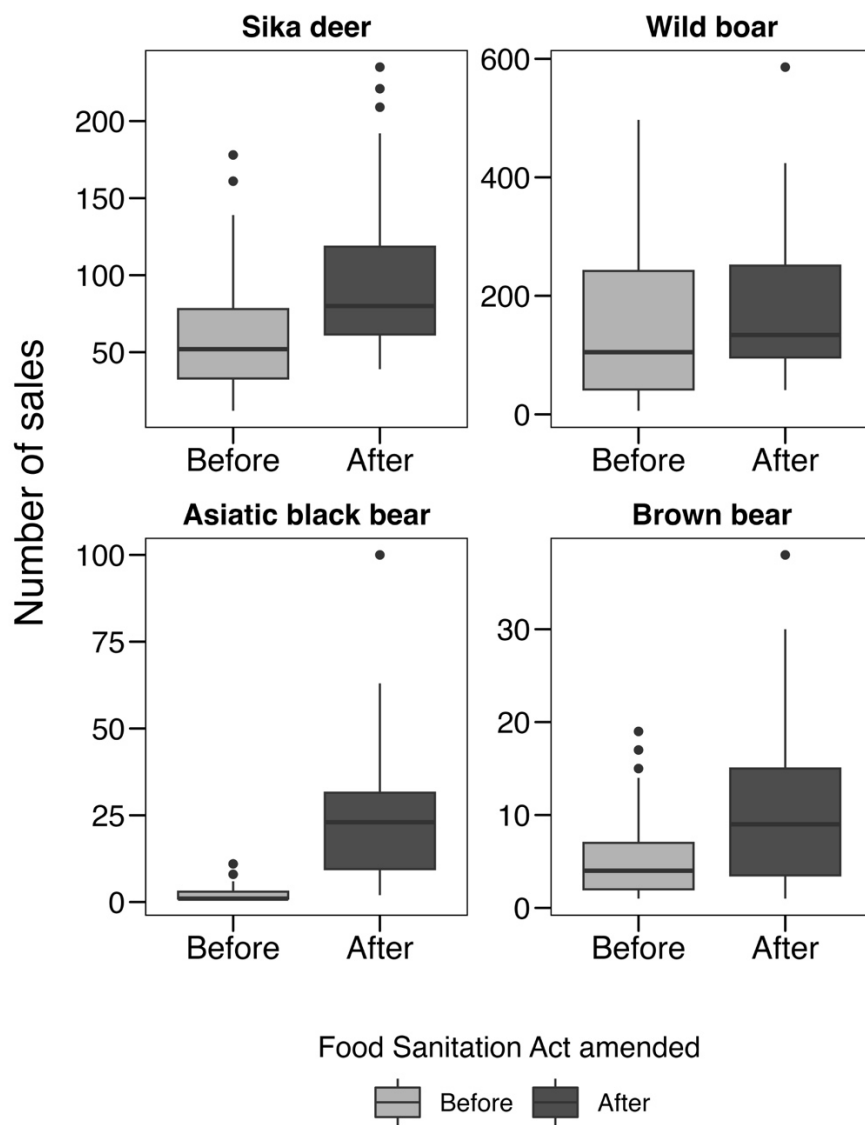


Fig. S1. Comparison of monthly sales before and after the amendment to the Food Sanitation Act.

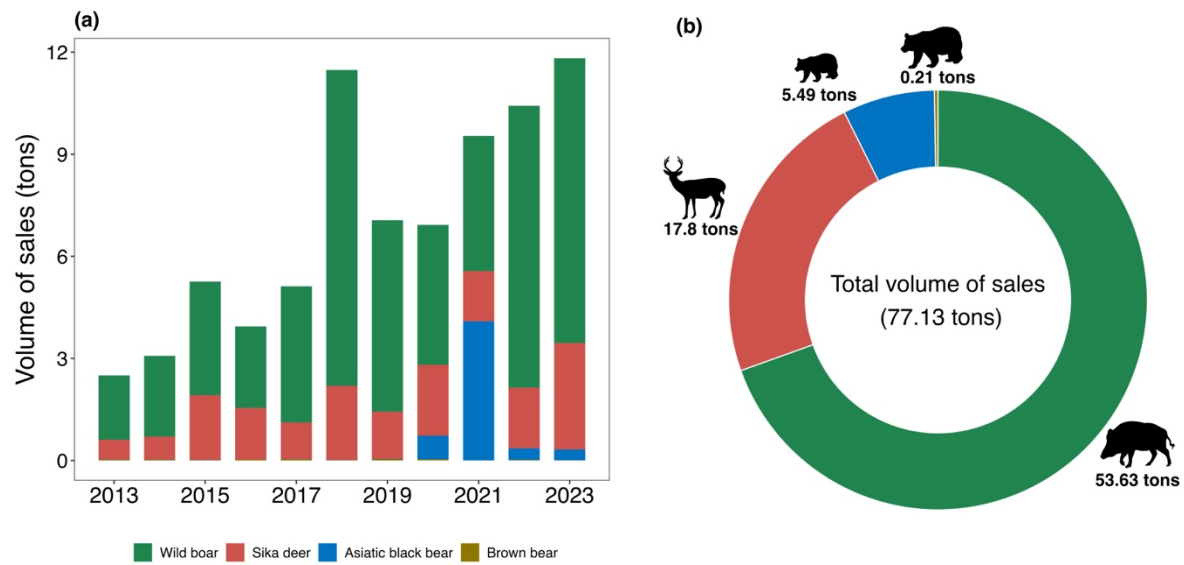


Fig. S2. Total annual sales volume of each WGM.

Note: All products with weights shown in the sales title were calculated (n = 29803).

Table S1. Numbers and percentages of wildlife meat traded in online sales.

Body part	Sika deer		Wild boar		Asiatic black bear		Brown bear	
	n	%	n	%	n	%	n	%
Head	12	0.13	61	0.28	7	0.61	3	0.39
Neck	229	2.40	688	3.19	0	0.00	0	0.00
Shank	777	8.13	159	0.74	9	0.79	8	1.04
Shoulder	456	4.77	612	2.84	32	2.79	55	7.13
Loin	2085	21.82	4334	20.10	184	16.07	175	22.70
Leg / Rump	2761	28.90	4411	20.46	187	16.33	222	28.79
Rib	1568	16.41	3259	15.11	140	12.23	105	13.62
Hand / Foot	0	0.00	0	0.00	198	17.29	88	11.41
Edible offal	399	4.18	543	2.52	132	11.53	11	1.43

Table S2. Detail data on the trade of edible offal in wild boar and Asiatic black bears.

Type of offal*	Wild boar		Asiatic black bear	
	n	%	n	%
Heart	116	16.52	38	27.74
Kidney	23	3.28	16	11.68
Liver	160	22.79	29	21.17
Stomach	16	2.28	28	20.44
Intestine	1	0.14	18	13.14
Testicle	62	8.83	5	3.65
Gallbladder	118	16.81	0	0.00
Diaphragm	17	2.42	0	0.00
Others	189	26.92	3	2.19

* Categorized and summarized based on sales description. "Others" indicates sales that were not identified (e.g. offal sets)

Table S3. Estimation results of a generalized linear mixed model for the number of WGM parts sales.

Species	Variable	Coefficient	SE	z value	95%CI		<i>P</i> value
					Lower	Upper	
Sika deer	Head	-0.185	0.125	-1.475	-0.431	0.061	0.140
	Neck	0.047	0.025	1.866	-0.002	0.096	0.062
	Shank	0.017	0.013	1.330	-0.008	0.042	0.184
	Shoulder	0.109	0.020	5.561	0.071	0.148	<0.001 ***
	Loin	0.038	0.007	5.178	0.024	0.052	<0.001 ***
	Leg & Rump	0.069	0.006	11.338	0.057	0.080	<0.001 ***
	Rib	0.052	0.011	4.830	0.031	0.073	0.000 ***
	Edible offal	0.037	0.019	1.966	0.000	0.074	0.049 *
Wild boar	Head	0.083	0.064	1.297	-0.042	0.208	0.195
	Neck	-0.059	0.018	-3.368	-0.094	-0.025	<0.001 ***
	Shank	0.126	0.043	2.942	0.042	0.210	0.003 **
	Shoulder	0.032	0.019	1.669	-0.006	0.070	0.095
	Loin	0.025	0.006	3.802	0.012	0.037	<0.001 ***
	Leg & Rump	0.025	0.007	3.749	0.012	0.038	<0.001 ***
	Rib	0.047	0.010	4.685	0.027	0.067	<0.001 ***
	Edible offal	0.124	0.021	6.024	0.084	0.164	<0.001 ***
Asian black bear	Shank	-0.052	0.136	-0.380	-0.319	0.215	0.704
	Shoulder	-0.006	0.040	-0.163	-0.084	0.071	0.871
	Loin	0.092	0.021	4.476	0.052	0.133	<0.001 ***
	Leg & Rump	0.105	0.024	4.379	0.058	0.152	<0.001 ***
	Rib	0.073	0.027	2.683	0.020	0.126	0.007 **
	Hand & Foot	-0.010	0.014	-0.753	-0.037	0.017	0.452
	Edible offal	0.091	0.020	4.565	0.052	0.130	<0.001 ***
	Head	0.337	0.143	2.361	0.057	0.618	0.018 *
Brown bear	Shank	0.192	0.102	1.883	-0.008	0.392	0.060
	Shoulder	0.139	0.038	3.630	0.064	0.215	<0.001 ***
	Loin	0.051	0.024	2.138	0.004	0.098	0.033 *
	Leg & Rump	0.115	0.019	5.974	0.077	0.152	<0.001 ***
	Rib	0.108	0.024	4.415	0.060	0.156	<0.001 ***
	Hand & Foot	0.144	0.037	3.929	0.072	0.216	<0.001 ***
	Edible offal	0.003	0.099	0.034	-0.191	0.197	0.973

Asterisks indicate significant differences by the Wald test (* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$)

95% CI: 95% confidence interval

SE: standard error

Table S4. Estimation results of a generalized linear mixed model for the price of WGM parts sales.

Species	Variable	Coefficient	SE	z value	95%CI		P value
					Lower	Upper	
Sika deer	Head	-0.010	0.028	-0.342	-0.064	0.045	0.733
	Neck	-0.009	0.032	-0.275	-0.072	0.054	0.784
	Shank	0.029	0.014	2.110	0.002	0.056	0.035 *
	Shoulder	-0.032	0.020	-1.551	-0.072	0.008	0.121
	Loin	0.031	0.036	0.854	-0.040	0.102	0.393
	Leg & Rump	0.005	0.031	0.168	-0.056	0.067	0.867
	Rib	-0.034	0.038	-0.882	-0.108	0.041	0.378
	Edible offal	0.009	0.019	0.498	-0.027	0.046	0.618
Wild boar	Head	-0.009	0.017	-0.519	-0.043	0.025	0.604
	Neck	-0.022	0.026	-0.853	-0.073	0.029	0.394
	Shank	-0.050	0.055	-0.906	-0.158	0.058	0.365
	Shoulder	-0.059	0.024	-2.490	-0.105	-0.013	0.013 *
	Loin	0.070	0.026	2.647	0.018	0.121	0.008 **
	Edible offal	-0.075	0.025	-3.023	-0.123	-0.026	0.003 **
Asian black bear	Head	-0.064	0.082	-0.781	-0.224	0.096	0.435
	Shank	0.242	0.443	0.545	-0.627	1.110	0.586
	Shoulder	0.333	0.201	1.656	-0.061	0.726	0.098
	Loin	-0.830	0.375	-2.214	-1.565	-0.095	0.027 *
	Leg & Rump	-0.643	0.386	-1.668	-1.399	0.113	0.095
	Rib	-0.297	0.317	-0.939	-0.918	0.324	0.348
	Hand & Foot	0.155	0.034	4.513	0.088	0.222	<0.001 ***
	Edible offal	-0.091	0.072	-1.263	-0.233	0.050	0.207
Brown bear	Head	0.039	0.151	0.258	-0.257	0.335	0.797
	Shank	0.035	0.420	0.084	-0.787	0.858	0.933
	Shoulder	-0.196	0.169	-1.159	-0.527	0.135	0.247
	Loin	-0.083	0.406	-0.205	-0.879	0.712	0.837
	Leg & Rump	-0.364	0.411	-0.886	-1.170	0.441	0.376
	Rib	-0.727	0.340	-2.142	-1.393	-0.062	0.032 *
	Hand & Foot	0.701	0.084	8.397	0.538	0.865	<0.001 ***
	Edible offal	-0.695	0.431	-1.611	-1.541	0.151	0.107

Asterisks indicate significant differences by the Wald test (* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$)

95% CI: 95% confidence interval

SE: standard error