

Table S1. White-tailed Eagle diet investigated from prey remains found in different nests or seasons in North-Eastern Poland in 2011-2018.

Group	Species	Number	Prey biomass (g)	Average prey biomass (g)	Frequency of occurrence (%)	Prey biomass (%)
Fish	<i>Esox lucius</i>	8	2632	329	7.1	1.5
	<i>Cyprinus carpio</i>	3	1479	493	2.7	0.9
	<i>Rutilus rutilus</i>	1	187	187	0.9	0.1
	<i>Tinca tinca</i>	1	299	299	0.9	0.2
	<i>Perca fluviatilis</i>	1	123	123	0.9	0.1
		2	614	307	1.8	0.4
	Group total	16	5334	290	14.2	3.1
	<i>Anas platyrhynchos</i>	16	15312	957	14.2	8.9
	<i>Fulica atra</i>	12	8628	719	10.6	5.0
	<i>Ciconia ciconia</i>	10	39800	3980	8.8	23.1
Birds	<i>Gallus gallus domesticus</i>	8	22400	2800	7.1	13.0
	<i>Anas sp.</i>	6	5400	900	5.3	3.1
	<i>Grus grus</i>	6	30900	5150	5.3	18.0
	<i>Anser anser</i>	4	2988	747	3.5	1.7
	<i>Columba livia</i>	3	1080	360	2.7	0.6
	<i>Chroicocephalus ridibundus</i>	3	390	130	2.7	0.2
	<i>Spatula querquedula</i>	2	824	412	1.8	0.5
	<i>Ardea cinerea</i>	2	3000	1500	1.8	1.7
	<i>Corvus frugilegus</i>	2	1014	507	1.8	0.6
	<i>Pluvialis sp.</i>	2	400	200	1.8	0.2
	<i>Anas crecca</i>	1	305	305	0.9	0.2
	<i>Vanellus vanellus</i>	1	260	260	0.9	0.2
	<i>Aythya fuligula</i>	1	705	705	0.9	0.4
	<i>Meleagris gallopavo domest.</i>	1	5000	5000	0.9	4.1
	<i>Anas platyrhynchos domest.</i>	1	2850	2850	0.9	1.7
	<i>Mareca strepera</i>	1	915	915	0.9	0.5
	<i>Corvus corax</i>	1	1100	1100	0.9	0.6
	<i>Perdix perdix</i>	1	350	350	0.9	0.2
	<i>Spatula clypeata</i>	1	630	630	0.9	0.4
	<i>Chlidonias leucopterus</i>	1	70	70	0.9	0.0
	<i>Chlidonias sp.</i>	1	102	102	0.9	0.1
	<i>Limosa limosa</i>	1	287	287	0.9	0.2
	<i>Anas acuta</i>	1	1049	1049	0.9	0.6
		1	393	393	0.9	0.2
	Group total	90	148152	1273	79.6	86.1
Mammals	<i>Lepus europaeus</i>	3	9750	3250	2.7	5.7
	<i>Capreolus capreolus</i>	1	2340	2340	0.9	1.4
	<i>Vulpes vulpes</i>	1	6200	6200	0.9	3.6
	<i>Mustela nivalis</i>	1	120	120	0.9	0.1
	<i>Arvicola amphibius</i>	1	183	183	0.9	0.1
	Group total	7	18593	2419	6.2	10.8
TOTAL		113	172079			

Table S2. Differences in general prey composition of White-tailed Eagles from North-Eastern Poland, studied by examination of prey remains from nests (2011-2018) and identification of prey from the photos taken by trail cameras recording nests (2013-2018).

	Prey remains		Trail cameras	
	number	share	number	share
Fish	16	14%	556	74%
Birds	90	80%	161	21%
Mammals	7	6%	32	4%
Sum	113	100%	749	100%

Table S3. Results of statistical comparisons between diet characteristics of White-tailed Eagles in optimal (n=6) and suboptimal (n=6) habitats in North-Eastern Poland, studied with trail cameras at the nest and tested with Wilcoxon test. Significant p-values (rounded to two significant digits) are bolded. P-values regarded as close to significant are given in bold and italic.

	W	<i>p</i>
Daily prey biomass	19	0.94
Prey deliveries per day	20	0.81
Prey richness (number of prey species)	15	0.70
Share of fish in prey	26.5	0.20
Share of birds in prey	8	0.13
Share of mammals in prey	29.5	0.076
Share of large prey (>3000g) in prey	7.05	0.10
Share of large prey (>3000g) in prey biomass	13.5	0.51
Share of avian predators in prey	6	0.028
Share of avian predators in prey biomass	6	0.028

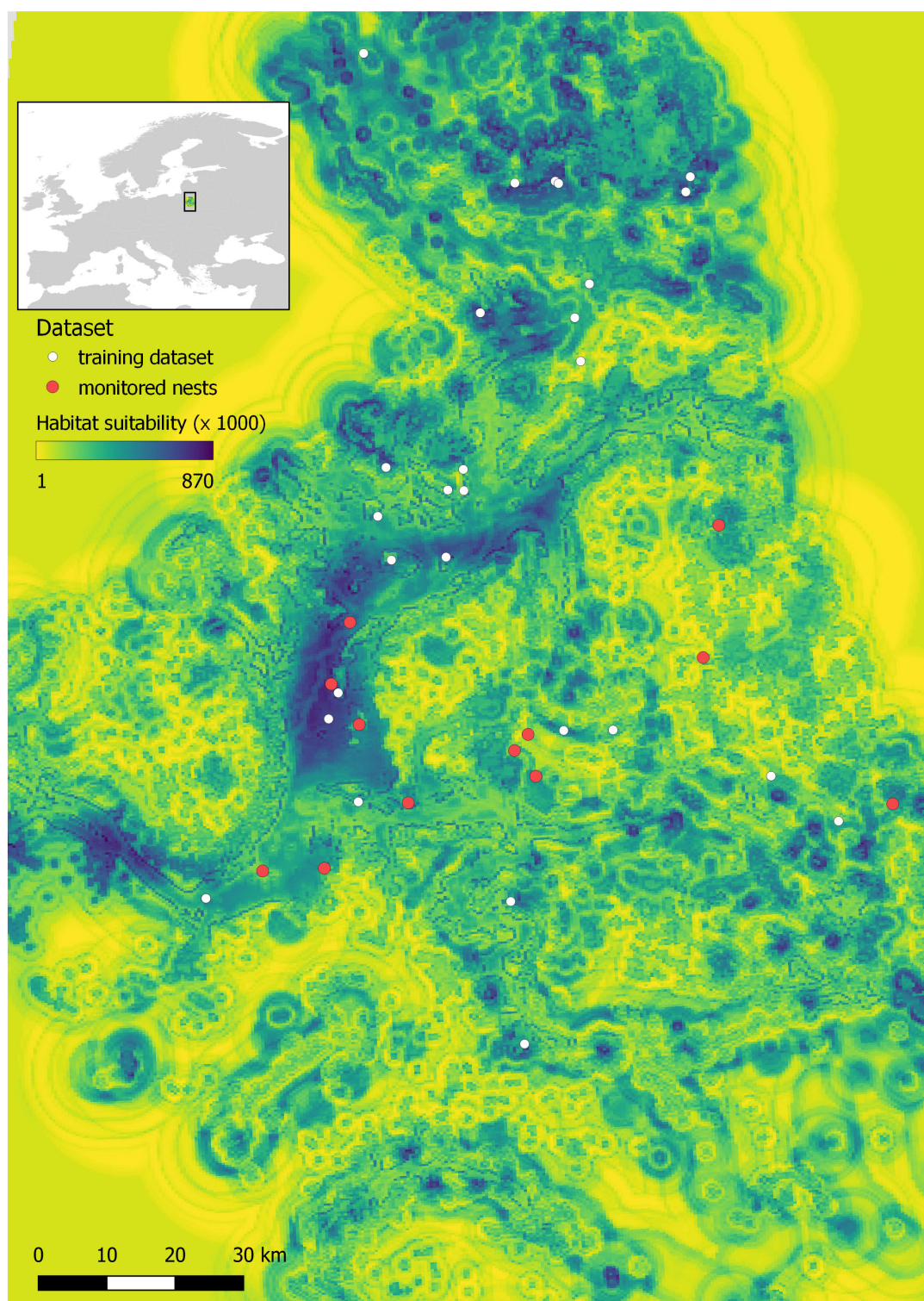


Figure S1. Habitat suitability (Random Forest model) for the White-tailed Eagle in North-Eastern Poland.



Figure S2. Proportions of main prey groups in White-tailed Eagle diet in territories of optimal and suboptimal habitats in North-Eastern Poland.

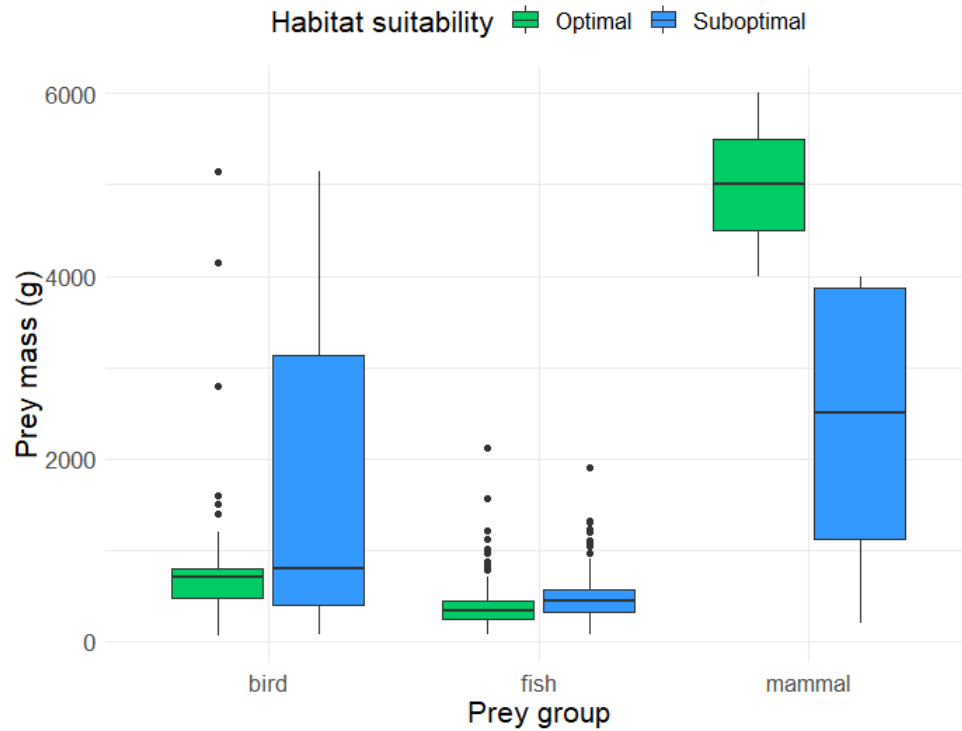


Figure S3. Prey size of main prey groups of White-tailed Eagles, measured from trail camera images recording their nests in optimal and suboptimal habitats in North-Eastern Poland. Bold, horizontal

line represents median, the lower and upper hinges correspond to the first and third quartiles, whiskers show largest value limited by 1.5 of inter-quartile range.

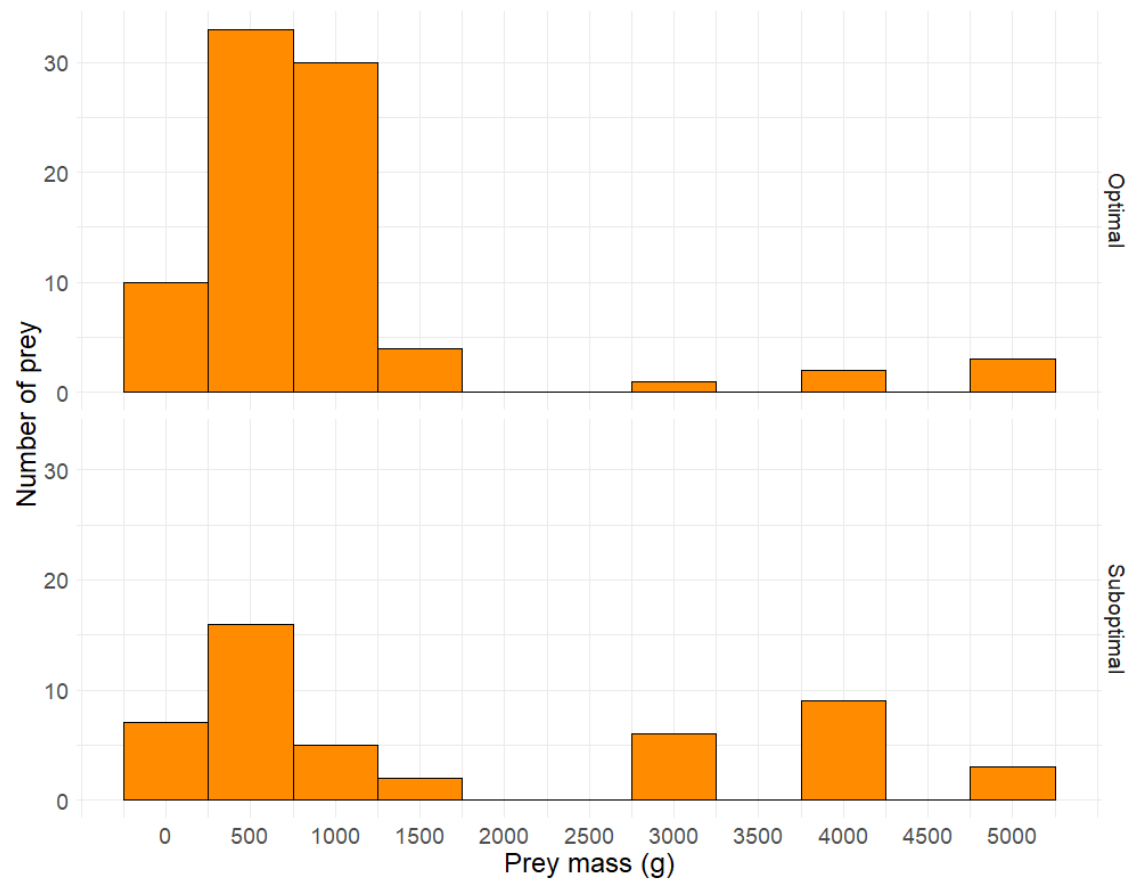


Figure S4. Frequency of different prey sizes in 484 prey items from White-tailed Eagle nests in North-Eastern Poland, identified and measured from trail camera images in the nests located in optimal and suboptimal habitats.