

## Counting Sunda clouded leopards with confidence: incorporating individual heterogeneity in density estimates

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SUPPLEMENTARY TABLE 1 Log likelihood, AICc,  $\Delta$ AICc and AIC weight values for mixture model, additive models and null model. Parameters are movement parameter  $\sigma$  (km), baseline trap encounter rate  $g\theta$  (photographs per occasion) and density D (individuals/100 km<sup>2</sup>).

Model	Log likelihood	AICc	$\Delta$ AICc	AICc weight
D~session, $g\theta \sim h^2$ , $\sigma \sim h^2$	-455.286	936.172	0.000	1
D~session + g, $g\theta \sim h^2$ , $\sigma \sim h^2$	-470.295	971.446	35.274	0
D~session + g, $g\theta \sim g$ , $\sigma \sim g$	-481.050	987.700	51.528	0
D~session, $g\theta \sim \text{session}$ , $\sigma \sim \text{session}$	-480.135	991.128	54.956	0
D~session + g, $g\theta \sim \text{session} + g$ , $\sigma \sim \text{session} + g$	-479.914	1012.192	76.020	0

SUPPLEMENTARY TABLE 2 Parameters estimated by a sex-specific spatial capture-recapture model with shared parameters across sites: movement parameter  $\sigma$  (km), baseline trap encounter rate  $g\theta$  (photographs per occasion) and density D (individuals/100 km<sup>2</sup>).

Parameter	Estimate $\pm$ SE	95% confidence interval
$\sigma$ (Female)	1.1502 $\pm$ 0.2879	0.7096–1.8645
$\sigma$ (Male)	5.7844 $\pm$ 1.0107	4.1177–8.1258
$g\theta$ (Female)	0.0019 $\pm$ 0.0010	0.0007–0.0055
$g\theta$ (Male)	0.0036 $\pm$ 0.0009	0.0022–0.0058
D (Female)	6.9306 $\pm$ 3.5967	2.6612–18.0491
D (Male)	0.4915 $\pm$ 0.2196	0.2130–1.1343
D (Female)	4.2162 $\pm$ 2.4493	1.4653–12.1318
D (Male)	0.2990 $\pm$ 0.1508	0.1177–0.7599

SUPPLEMENTARY TABLE 3 Summary of the scenarios and spatial capture-recapture analysis using null model for each scenario. D, density (individual/100 km<sup>2</sup>);  $\sigma$ , movement parameter (km); CV (D), coefficients of variation of density; CV ( $\sigma$ ), coefficients of variation of sigma;  $\Delta D$ , difference between density of each scenario with full data set (Scenario 13);  $\Delta\sigma$ , difference between sigma of each scenario with full data set (Scenario 13).

Scenario	Trap polygon (km <sup>2</sup> )	Individuals	Detections	Mean station	$\sigma \pm SE$ (95% CI)	D $\pm SE$ (95% CI)	CV ( $\sigma$ )	CV (D)	$\Delta\sigma$	$\Delta D$
1	135	3	6	1	0.392±0.120 (0.217–0.706)	7.723±6.691 (1.780–33.476)	30.72	86.66	5.599	-6.832
2	137	5	13	1.6	1.918±0.491 (1.171–3.143)	2.558±1.373 (0.954–6.858)	25.58	53.67	4.072	-1.670
3	138	6	11	1.5	8.832 ±8.167 (1.892–41.223)	0.524±1.417 (0.030–9.077)	92.46	270.18	-2.842	0.364
4	141	2	4	1.5	1.445±0.661 (0.615–3.395)	1.445±1.377 (0.299–6.982)	45.72	95.27	4.545	-0.557
5	135	6	17	2.17	5.400±2.938 (1.991–14.649)	0.950±1.163 (0.146–6.201)	54.40	122.46	0.590	-0.062
6	120	5	12	1.6	4.743±1.605 (2.488–9.043)	0.689±0.449 (0.215–2.212)	33.84	65.17	1.247	0.199
7	267	7	16	1.57	5.482±2.875 (2.087–14.405)	0.889±0.921 (0.167–4.743)	52.43	103.71	0.508	-0.0006
8	283	11	27	1.73	4.557±1.117 (2.839–7.315)	1.650±0.759 (0.699–3.895)	24.50	46.00	1.433	-0.762
9	268	9	24	1.89	7.249±2.734 (3.547–14.816)	0.650±0.490 (0.174–2.421)	37.72	75.41	-1.259	0.238
10	274	8	20	1.88	7.887±2.903 (3.922–15.862)	0.467±0.361 (0.122–1.785)	36.81	77.20	-1.897	0.421
11	274	10	27	2.1	6.978±2.490 (3.541–13.752)	0.779±0.542 (0.227–2.668)	35.68	69.60	-0.988	0.109
12	269	8	21	2.13	7.040±2.500 (3.585–13.823)	0.616±0.418 (0.184–2.056)	35.47	67.82	-1.050	0.272
13	424	11	32	2.09	5.992 ± 1.478 (3.720–9.645)	0.888 ± 0.424 (0.365–2.157)	24.67	47.71	0.00	0.00