

Table S1. Detection thresholds of C-PODs. Sound pressure level (SPL) of detection thresholds and C-PODs (C-POD ID #) used to survey harbour porpoise activity at the six survey sites (1–6). Reported SPL values are mean values and range (min-max) from four C-POD angles.

Survey site	1 st deployment period		2 nd deployment period		3 rd deployment period	
	SPL (dB re 1 Pa pp)	C-POD ID #	SPL (dB re 1 Pa pp)	C-POD ID #	SPL (dB re 1 Pa pp)	C-POD ID #
1	116 (112-119)	1190	116 (112-119)	1190	117 (115-119)	1193
2	116 (113-118)	1205	119 (115-121)	1259	114 (110-118)	1224
3	118 (116-120)	1229	114 (110-118)	1224	119 (115-121)	1259
4	119 (115-121)	1259	116 (113-118)	1205	116 (114-117)	1256
5	117 (115-119)	1193	116 (114-117)	1256	116 (113-118)	1205
6	116 (114-117)	1256	117 (115-119)	1193	118 (116-120)	1229

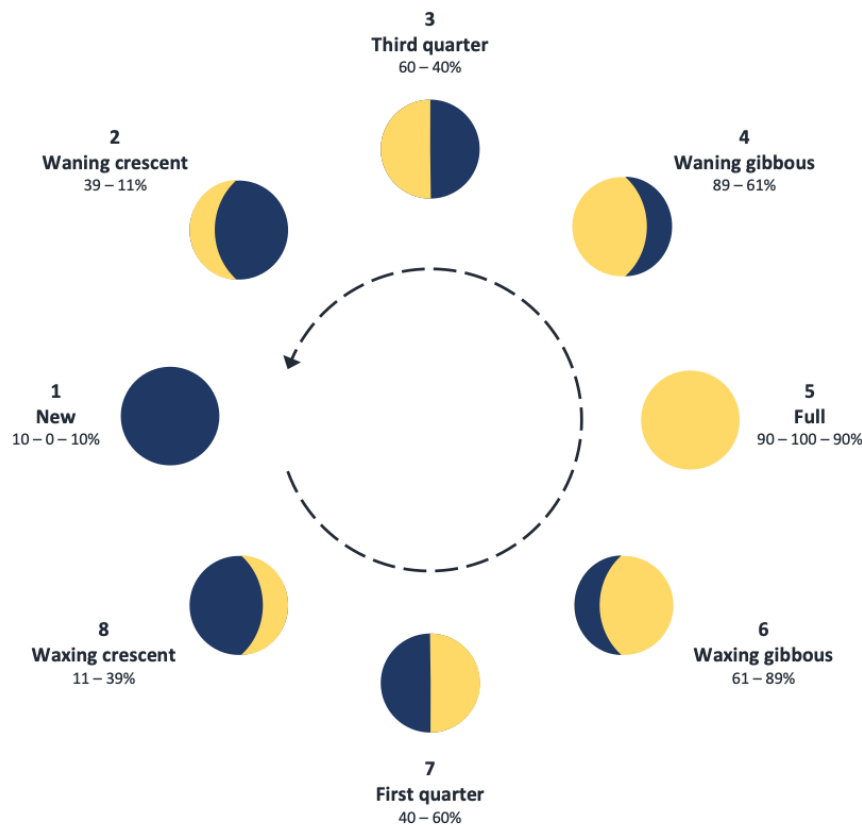


Figure S1. Lunar phase classification. The eight lunar phases (1-8) used for classification and their respective lunar illumination value (% of surface illuminated) and illumination progress (increasing and decreasing illuminated surface).



Figure S2. Lunar phase differences. Harbour porpoise activity for each lunar phase (1-8) for both variables; (a) presence (detection positive minutes (DPM h⁻¹, 0-60)) and (b) foraging (forage-to-presence percentage (FPP, %)), and all survey sites (1-6). Lower and upper box boundaries represent 25th and 75th percentiles and lower and upper error lines represent 10th and 90th percentiles. Black line inside each box represents the median value. Note that the scales on the y-axes are different.

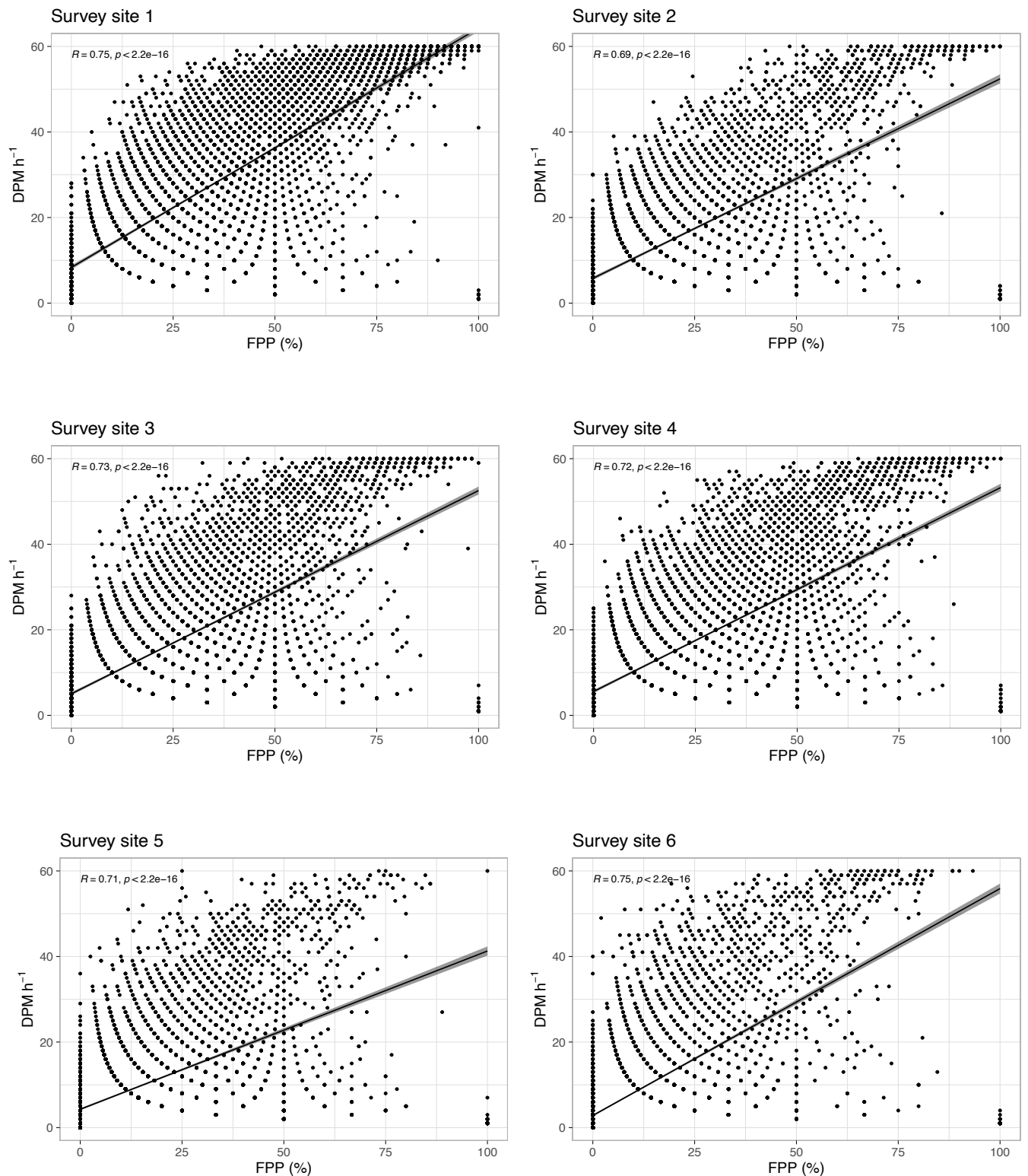


Figure S3. Scatter plots of DPM h⁻¹ and FPP. Relationship between presence (detection positive minutes (DPM h⁻¹, 0-60)) and foraging (forage-to-presence percentage (FPP, %)) for all survey sites (1-6). Regression lines illustrate results from Spearman rank correlation tests (see also Table 4).

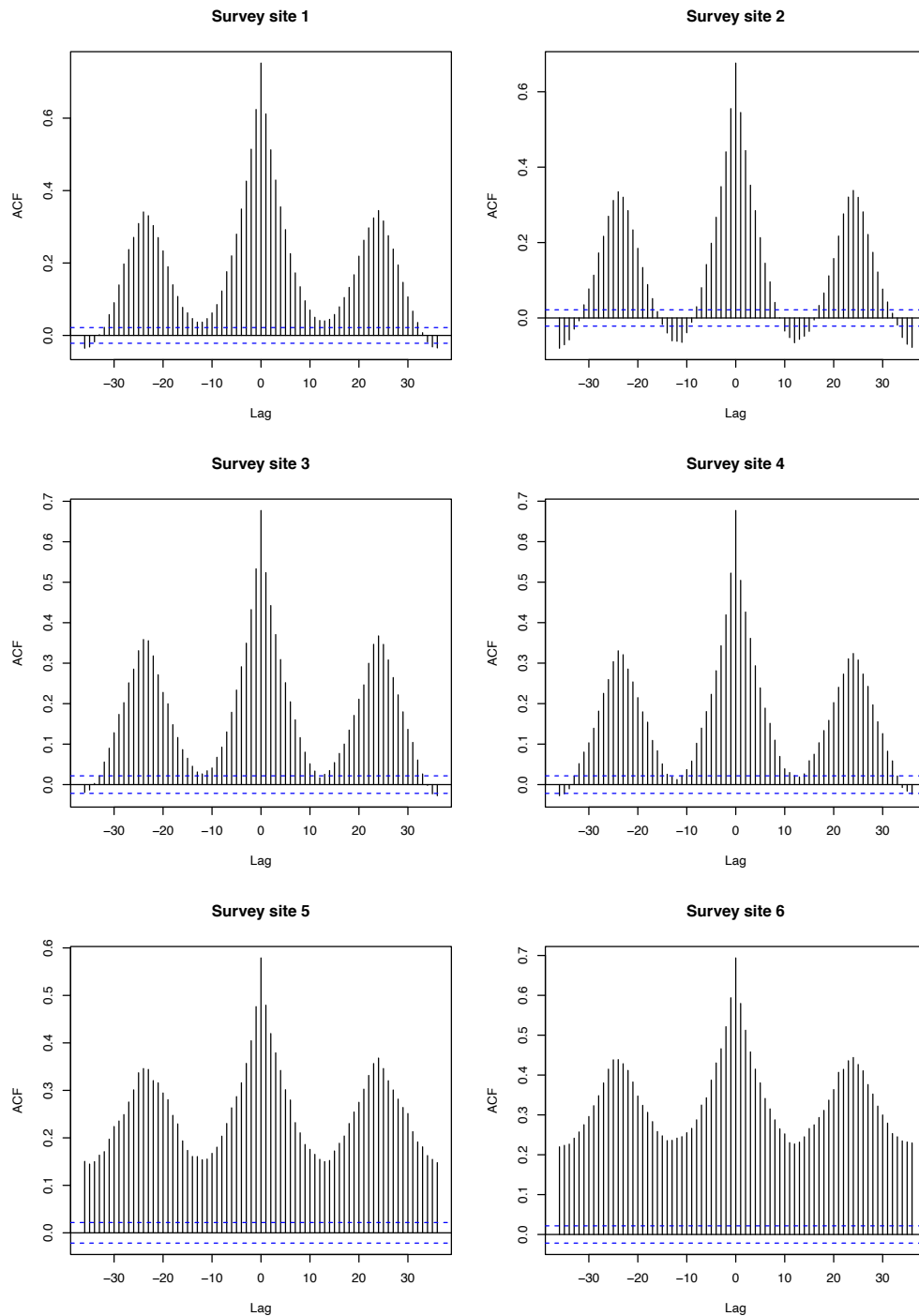


Figure S4. Cross-correlation plots of DPM h^{-1} and FPP. Correlation between presence (detection positive minutes (DPM h^{-1} , 0-60)) and foraging (forage-to-presence percentage (FPP, %)) at different lags and for all survey sites (1-6). The correlation in the y-axis is significant for almost all lags as the correlation coefficient (ACF) exceeds the noise level (blue dashed horizontal line) computed on a random walk. Note that the correlation at lag = 0 corresponds to the scatter plots in Supplementary Figure S2. The maximum in correlation at lag = 24 hours demonstrates the cyclic signal in the high frequency range detected by spectral analysis of DPM h^{-1} and FPP time series data (Table 2, Figure 3).