Supplementary Material

A Big Data Approach for Regional-Scale Spatial Pattern Analysis of Amazonian Palm Locations

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Figure S1: Results of quadrat count test for complete spatial randomness for AOI-1. In all ZOI, the p-value for the χ^2 test is below 95% significance and the null hypothesis is rejected. Each over-plotted box is 100 by 100 meters, or 1 hectare.

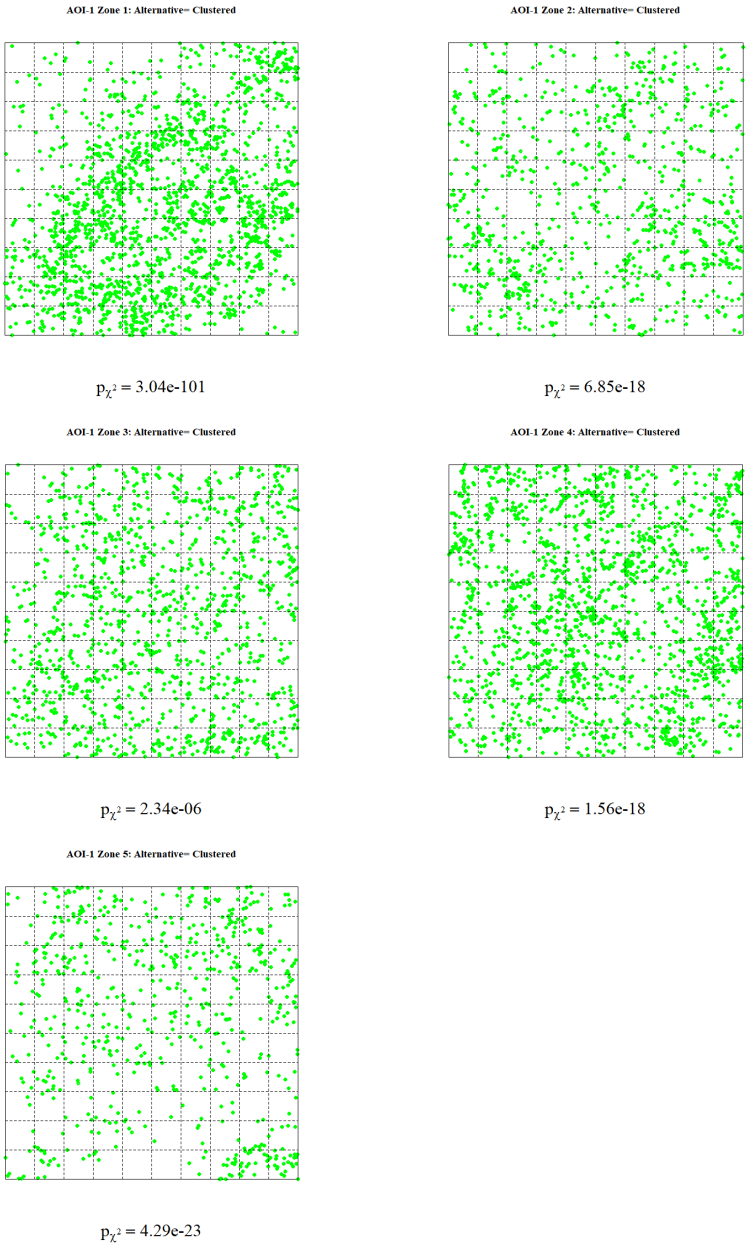


Figure S2: Results of quadrat count test for complete spatial randomness for AOI-2. In all ZOI, the p-value for the χ^2 test is below 95% significance and the null hypothesis is rejected. Each over-plotted box is 100 by 100 meters, or 1 hectare. Plots with p-values of exactly 0.001 were calculated using 1,999 Monte Carlo simulations due to quadrats with counts less than 5.

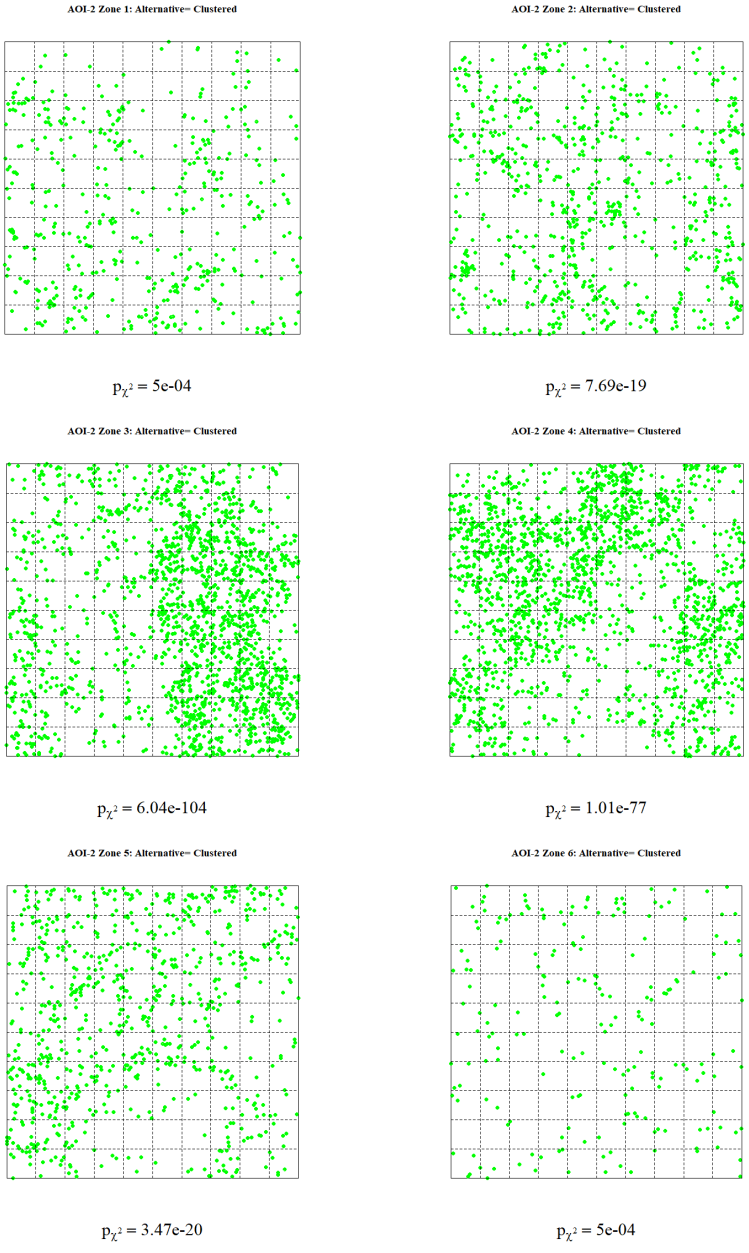


Figure S3: Morista Index plots for each ZOI in AOI-1. While the statistical summaries of the HDBSCAN clusters are not an exact match to the Morista Index, it is important to note that the scales vary proportionately across the zones. That is, the HDBSCAN cluster geometries are reflecting similar scales of interaction as the Morista Index on a per zone basis.

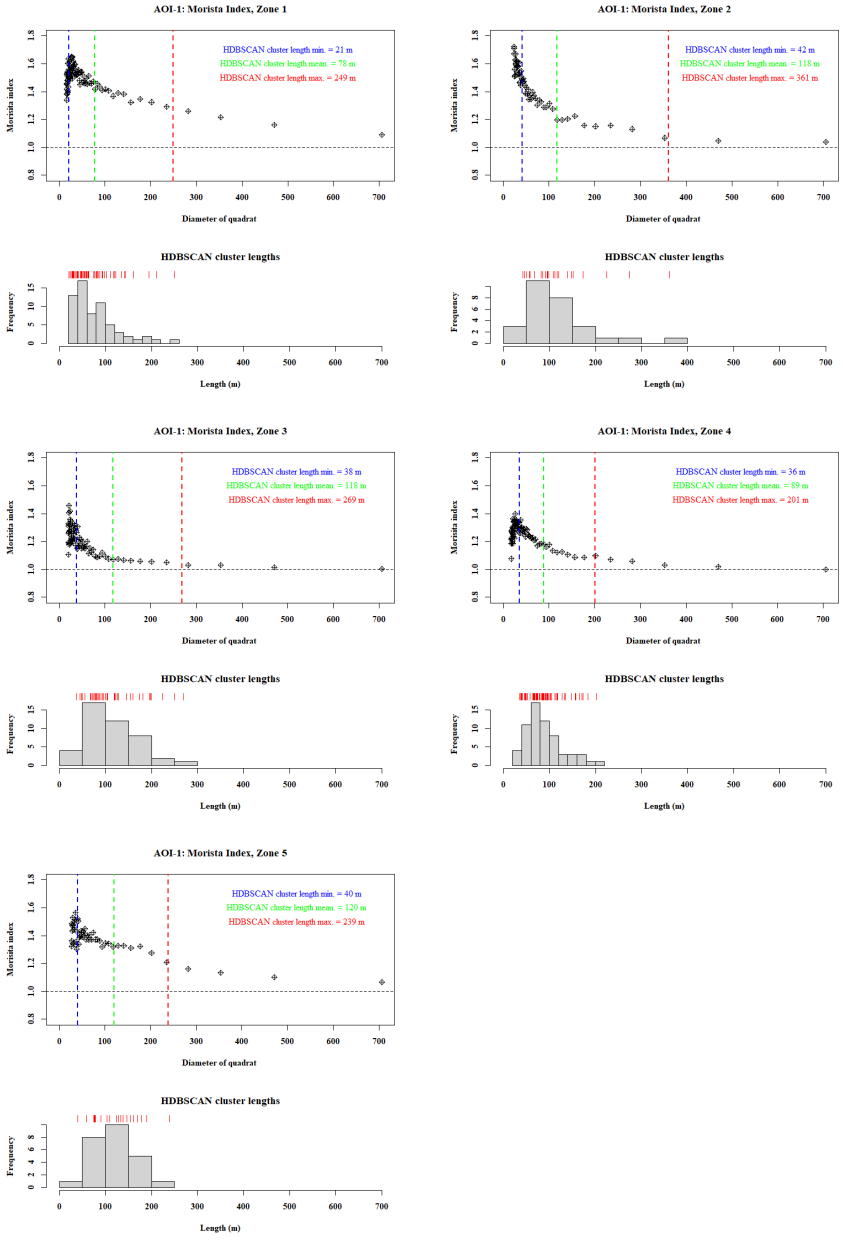


Figure S4: Morista Index plots for each ZOI in AOI-2. While the statistical summaries of the HDBSCAN clusters are not an exact match to the Morista Index, it is important to note that the scales vary proportionately across the zones. That is, the HDBSCAN cluster geometries are reflecting similar scales of interaction as the Morista Index on a per zone basis.

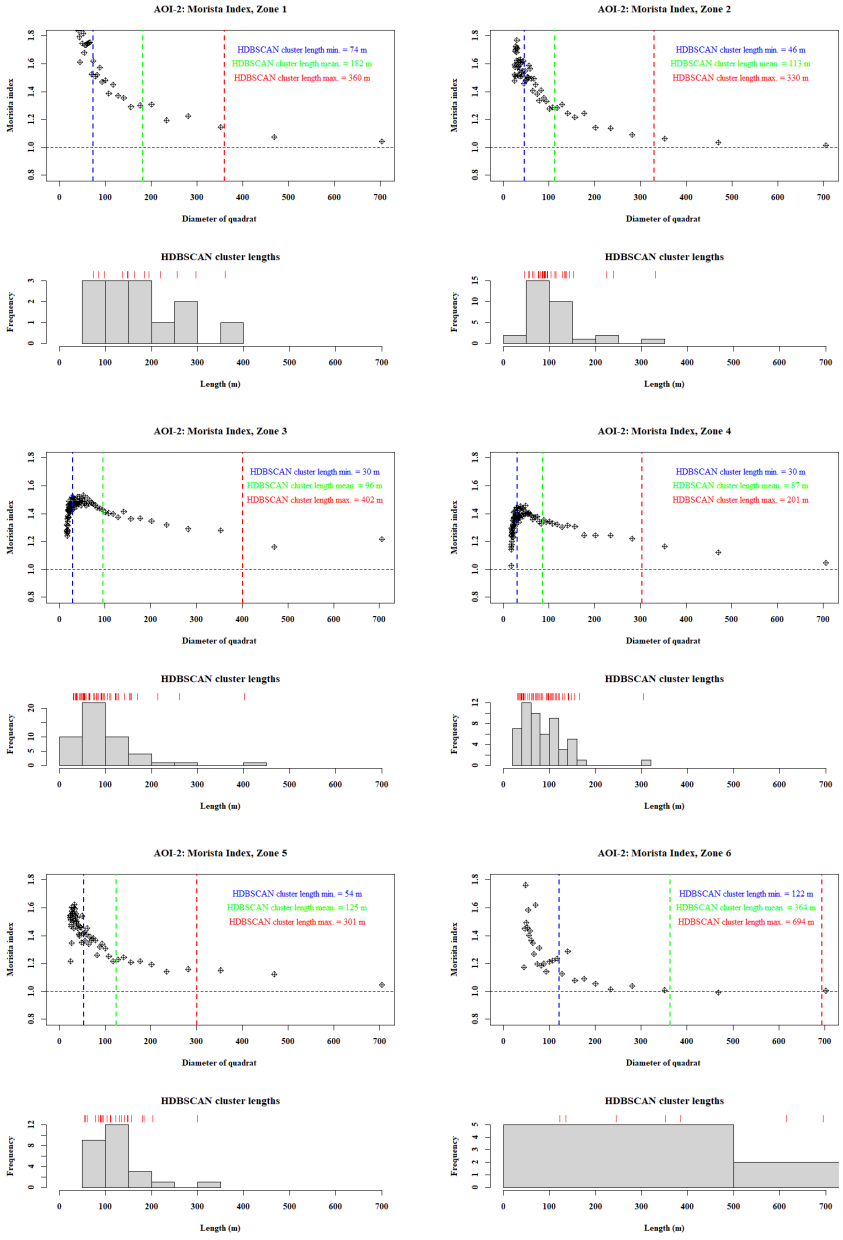


Figure S5: AOI-1: inhomogeneous Ripley's L-function (centered) with 99 simulations envelope for significance. The $\frac{length}{2}$ of the largest HDBSCAN cluster in each ZOI in superimposed, as the L-function is a radius based calculation.

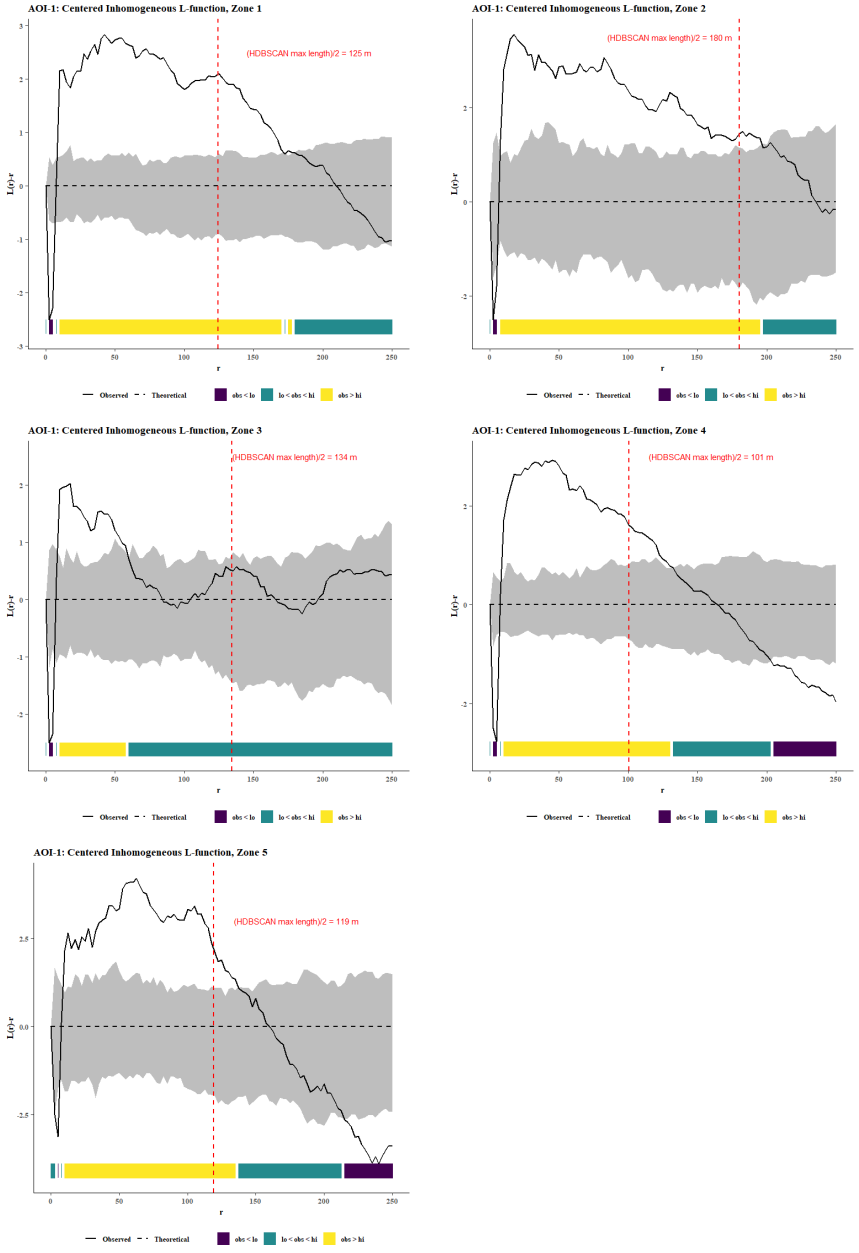


Figure S6: AOI-2: inhomogeneous Ripley's L-function (centered) with 99 simulations envelope for significance. The $\frac{length}{2}$ of the largest HDBSCAN cluster in each ZOI in superimposed, as the L-function is a radius based calculation.

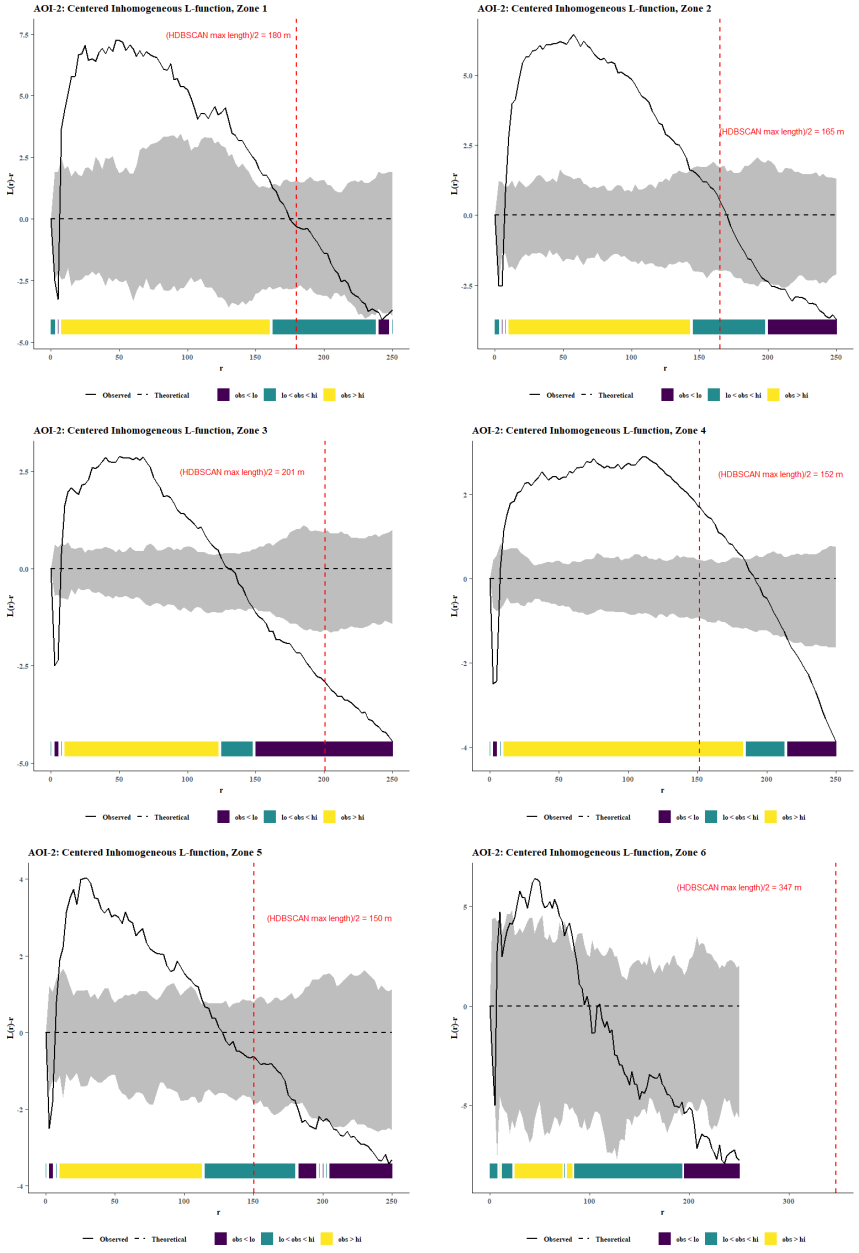


Figure S7: Inhomogeneous pair-correlation function for AOI-1 compared to dis-tribution of nearest-neighbor distances from HDBSCAN clusters in each ZOI. The maximal peak and the mean of the nearest-neighbor distributions is anno-tated.

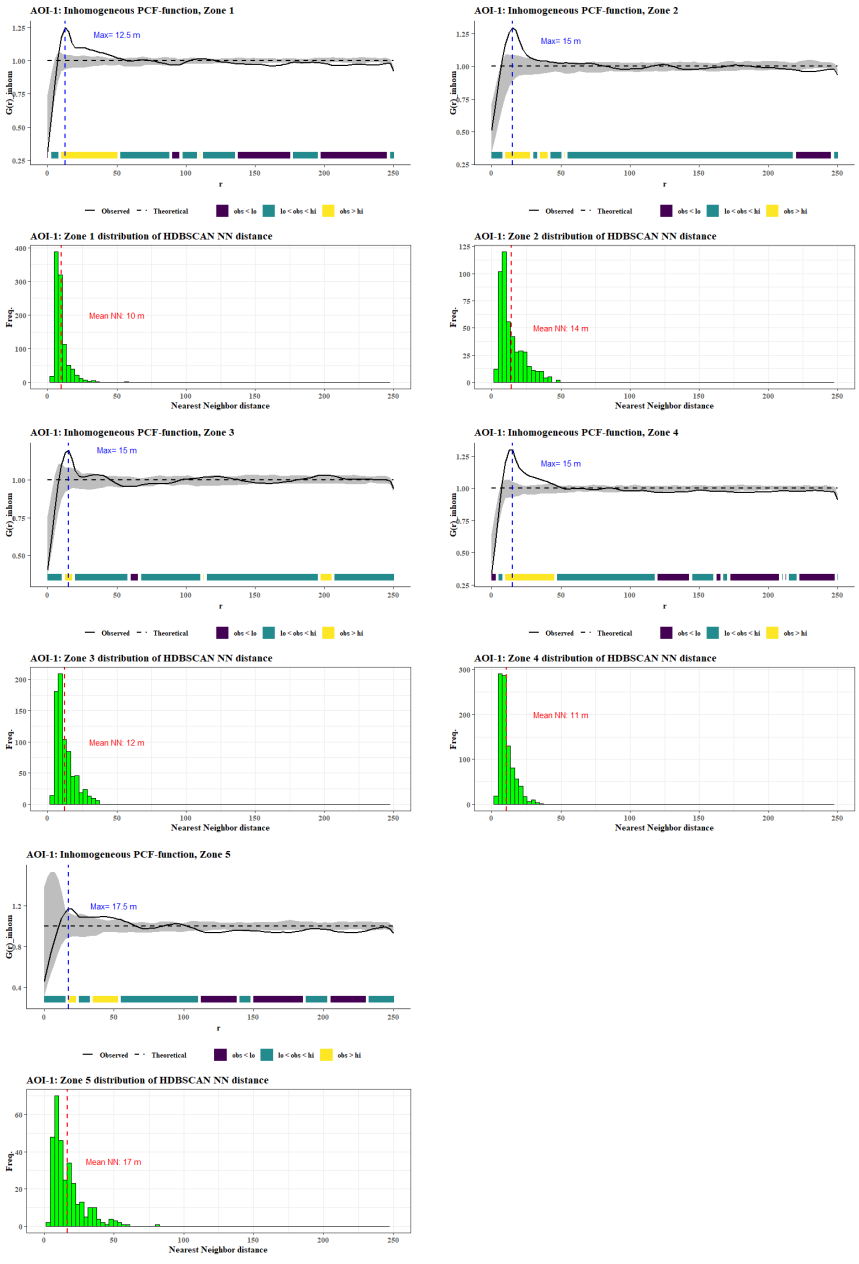


Figure S8: Inhomogeneous pair-correlation function for AOI-2 compared to dis-tribution of nearest-neighbor distances from HDBSCAN clusters in each ZOI. The maximal peak and the mean of the nearest-neighbor distributions is anno-tated.

