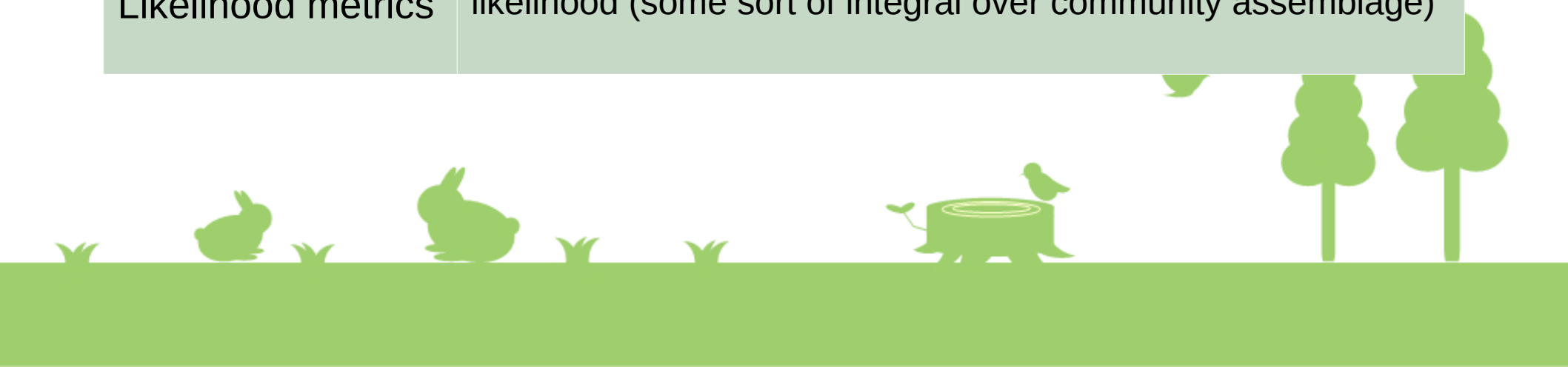
Evaluation Metrics for sjSDM (JSDM)

Threshold-independent metrics	AUC, RMSE, Spearman rank correlation coefficient
Community dissimilarity indices	Bray-Curtis dissimilarity, Jaccard distance
Species richness metrics	Species richness difference
Likelihood metrics	Independent log-likelihood (Nagelkerke's R^2), joint log-likelihood (some sort of integral over community assemblage)



Spearman rank correlation coefficient	$\frac{cov\left(r_{obs}, r_{pred}\right)}{\sigma_{r_{obs}} \sigma_{r_{pred}}}$	-1-1 >0 more correct predictions <0 more incorrect predictions
Bray-Curtis dissimilarity	$\frac{A+B-2J}{A+B}$ A: # obs presences, B: # pred, J: # correctly pred	0-1 0 = same composition 1 = opposite composition Lower = more correct assemblage prediction
Jaccard distance	$\frac{2D}{1+D}$ D: Bray-Curtis	
Species richness difference	pred richness – obs richness	-∞ - ∞ >0 overpredicts species richness <0 underpredicts species richness
Nagelkerke's R^2	$L_p = \prod_i \left(p_i y_i + \left(1-p_i\right)\left(1-y_i\right)\right)$ $\frac{1-\left(L_0 / L_p\right)^{2/N}}{1-L_0^{2/N}}$	$R^2 = \frac{\log L_p - \log L_0}{1 - \log L_0}$