

SUPPLEMENTARY MATERIAL: WEIGHTED PSEUDO-ABSENCES RESULTS

Emilie Roy-Dufresne^{1*}, Frédérik Saltré^{1,2}, Brian D. Cooke³, Camille Mellin^{1,4}, Greg Mutze⁵,
Tarnya Cox⁶, Damien A. Fordham¹

¹ The Environment Institute and School of Biological Sciences, University of Adelaide,
Adelaide, SA, Australia

² College of Science and Engineering, Flinders University, Adelaide, SA, Australia

³ Institute for Applied Ecology, University of Canberra, Canberra, ACT, Australia

⁴ Australian Institute of Marine Science, Townsville, QLD, Australia

⁵ Biosecurity SA, Department of Primary Industries and Regions South Australia, Adelaide, SA,
Australia

⁶ Vertebrate Pest Research Unit, NSW Department of Primary Industries, Orange, NSW,
Australia

* CORRESPONDING AUTHOR: Emilie Roy-Dufresne / roydufresne.emilie@gmail.com

Results from the predictive accuracy analysis at continental and regional scale for models with *Weighted Pts* pseudo-absences.

Table 1: Number of physiographic regions per *Weighted Pts* models with greater AUC and Kappa scores. The results were obtained from the out-of-region analyses (see the methodology section of the article / model construction and evaluation).

Datasets	Models algorithms	AUC		KAPPA		Response curves weighted scores
		Mean	SD	Mean	SD	
<i>Expert</i>	BRT	0.887	0.001	0.500	0.003	40.27
	MaxEnt	0.864	0.001	0.445	0.004	29.6
	Quadratic GLM	0.844	0.001	0.431	0.003	34.82
<i>Citizen</i>	BRT	0.888	0.002	0.488	0.007	25.22
	MaxEnt	0.869	0.002	0.464	0.007	36.53
	Quadratic GLM	0.829	0.002	0.423	0.006	22.36
<i>Combined</i>	BRT	0.880	0.001	0.524	0.004	36.75
	MaxEnt	0.858	0.001	0.480	0.003	30.79
	Quadratic GLM	0.839	0.001	0.455	0.003	37.81

No attribution was given when the region had the same highest score for two different datasets.

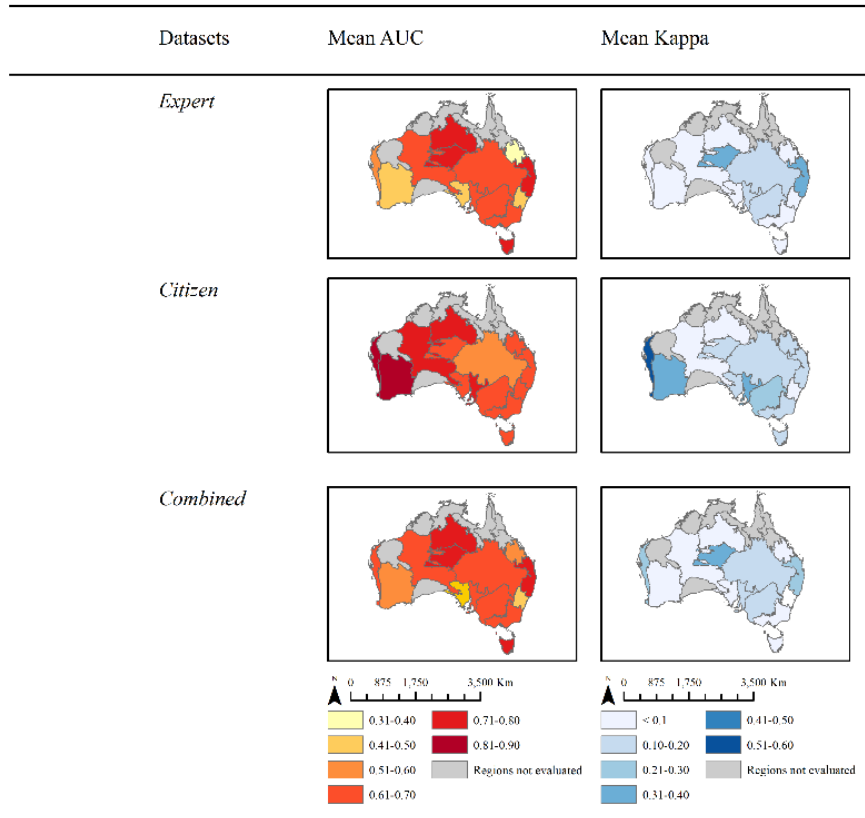


Figure 1: AUC and Kappa results from the out-of-regions analyses based on three different sources of dataset (i.e. *Expert*, *Citizen*, and *Combined*) for the *Weighted Pts* pseudo-absence strategy. The figures were obtained by taking the mean of the results across all algorithms. The land divisions represent the locations of the physiographic regions of Australia and the regions in grey were not evaluated due to low number of occurrence points ($n < 25$).

Key climatic and environmental variables for model with *Weighted Pts* pseudo-absences.

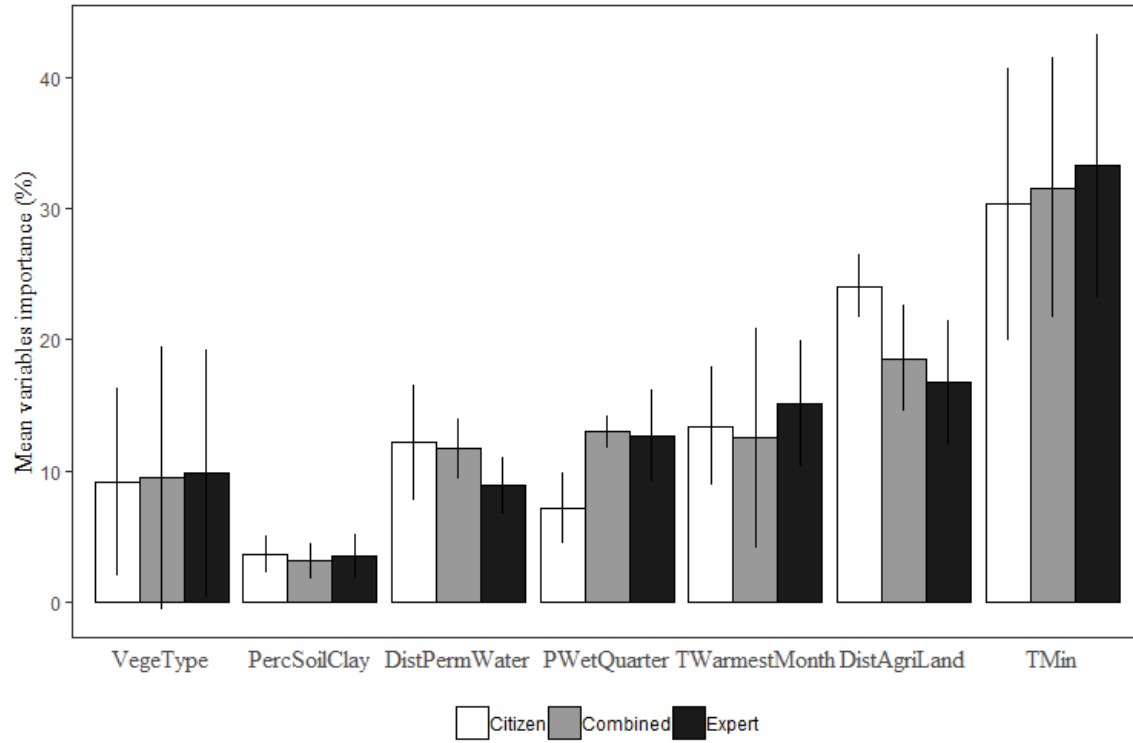


Figure 2: Mean of the variables importance (%) and their corresponding standard deviations (line range) for the *Weighted Pts* pseudo-absence strategy based on three different sources of dataset (i.e. *Expert*, *Citizen*, and *Combined*).