

Loss of habitat suitability and distribution range of the endangered Japanese giant salamander under climate change

Supplementary file 1

Table S1: Correlation matrix of the environmental predictors used in the study.

Predictors	Bio8	Bio10	Bio18	Bio19	Mean slope	Urban areas	Agricultural areas
Bio8	1						
Bio10	0.338	1					
Bio18	0.15	0.012	1				
Bio19	0.556	0.02	0.026	1			
Mean slope	0.104	0.516	0.438	0.009	1		
Urban areas	0.148	0.426	0.218	0.124	0.558	1	
Agricultural areas	0.019	0.25	0.23	0.029	0.484	0.026	1

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Supplementary file 2

Table S2: Environmental variables used in the modelling procedure (1 km² grid cell resolution).

Predictor type	Predictor name	Unit	Data source
Climate	BIO8- Mean temperature of wettest quarter	°C	WorldClim v2.1
	BIO10- Mean temperature of warmest quarter	°C	WorldClim v2.1
	BIO18- Precipitation of warmest quarter	mm	WorldClim v2.1
	BIO19- Precipitation of coldest quarter	mm	WorldClim v2.1
Topography	Mean slope	%	MLIT of Japan
Land use	Proportion of agricultural areas	%	MLIT of Japan
	Proportion of urban areas	%	MLIT of Japan

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Supplementary file 3

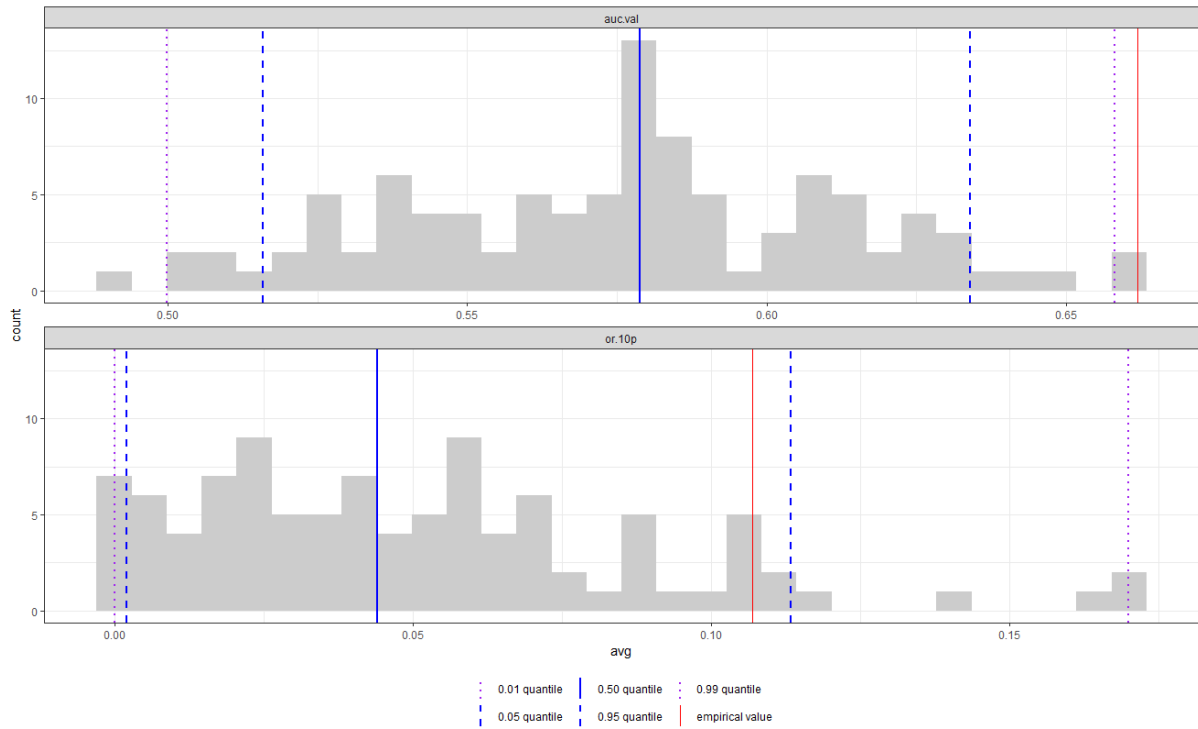


Fig. S1: Null models results. Values from the empirical model selected (red lines) differ from null models averages, indicating a high confidence in performance metrics of the model.

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Supplementary file 4

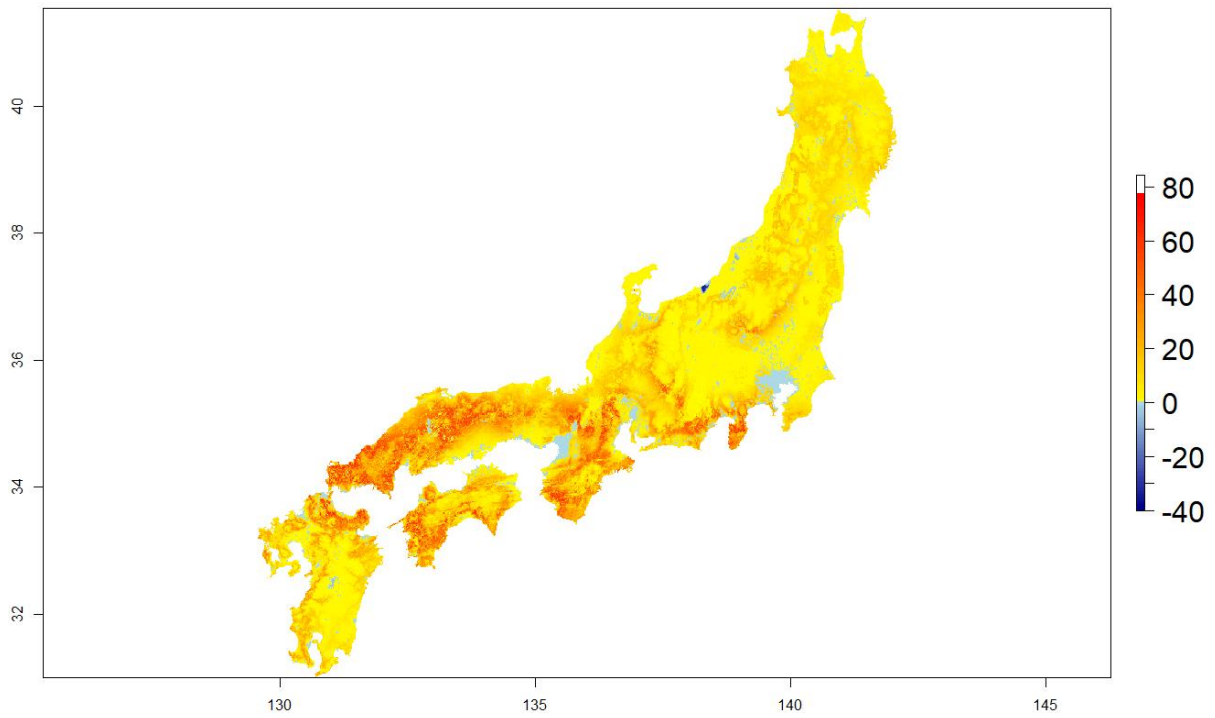


Fig. S2: Results of the MESS analysis comparing the reference climatic variables to the climatic variables of the projection layer (all Japan). Negative values (blue on the map) indicate dissimilarity between the data.