

# Trait Model Selection

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## Model Selection for Trait Model using GJAM

The most appropriate model is selected using a model selection approach and based on the Deviance Information Criterion (DIC) and a Bayesian score. The model with the highest score or the lowest DIC value is selected.

## Predictors

The proposed models may consist of climatological variables (including mean winter temperature, soil moisture, hydrothermal deficit and hydrothermal surplus), soil data, topographical data (slope and aspect) and their interactions. The table below shows how different models explain the response variables throughout the dataset.

No	Predictors	DIC	xScore	yScore
149	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:temp, moisture:soil5, temp:soil5, deficit:soil5, deficit:temp	0	-6.13	146168
150	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:temp, moisture:soil5, temp:soil5, deficit:soil5, deficit:temp	3.36e+32	-6.38	144863
148	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:soil5, temp:soil5, deficit:soil5, deficit:temp	4.49e+32	-6.09	146142
144	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:soil5, temp:soil5, deficit:soil5, deficit:temp	1.07e+33	-5.83	144904
147	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:temp, temp:soil5, deficit:soil5, deficit:temp	1.43e+33	-5.9	145070
142	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:temp, moisture:soil5, temp:soil5, deficit:temp	1.58e+33	-6.1	144608
134	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:soil5, temp:soil5, deficit:temp	1.93e+33	-5.64	145423
145	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:temp, moisture:soil5, temp:soil5, deficit:temp	1.97e+33	-6.25	144373
78	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:surplus, moisture:deficit, moisture:temp, moisture:soil5, temp:soil5, deficit:soil5	2.04e+33	-8.49	145350

No	Predictors	DIC	xScore	yScore
138	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:temp, temp:soil5, deficit:temp	2.23e+33	-5.67	144968
140	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:soil5, temp:soil5, deficit:temp	2.54e+33	-5.88	143736
74	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:surplus, moisture:deficit, moisture:soil5, temp:soil5, deficit:soil5	2.55e+33	-8.39	144727
141	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:soil5, deficit:soil5, deficit:temp	2.74e+33	-5.76	144685
146	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:deficit, moisture:temp, moisture:soil5, deficit:soil5, deficit:temp	2.79e+33	-5.9	143712
73	~ temp, moisture, deficit, surplus, soil5, u1, u2, u3, moisture:surplus, moisture:temp, moisture:soil5, temp:soil5, deficit:soil5	2.8e+33	-8.37	144674