Supplementary data 3. Results of distance-based linear models (DISTLM) analyzing the diet composition of a dominant prey item (fishes) of *Dissostichus mawsoni* concerning research block, fishing season, sampling depth, total length, and body weight individually (marginal test) and sequentially (conditional test) for a population in subarea 88.3 of Southern Ocean.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Predictor variables** | **Pseudo-F** | **R2** | **P** | **Prop** |
| **Marginal test** | 　 | 　 | 　 | 　 |
| Research block | 20.702  | 　 | 0.001  | 0.032  |
| Fishing season | 6.283  | 　 | 0.001  | 0.010  |
| Depth | 53.027  | 　 | 0.001  | 0.079  |
| Total length | 4.786  | 　 | 0.006  | 0.008  |
| Body weight | 1.716  | 　 | 0.151  | 0.003  |
| **Conditional (sequential) test** | 　 | 　 | 　 | 　 |
| +Depth | 53.027 | 0.079 | 0.001 | 0.079 |
| +Research block | 18.815 | 0.106 | 0.001 | 0.027 |
| +Fishing season | 6.636 | 0.115 | 0.001 | 0.009 |
| +Total length | 4.244 | 0.122 | 0.006 | 0.006 |