

**Appendix 3.** Comparison of all the nested models to determine the best combination of human variables to explain fish biomass. The two first components (Env1 and Env2) of the Principal Component Analysis (PCA) performed with habitat and environmental variables, human population size provided initial model M0. AICc and Likelihood Ratio (LR) test performed against nested reference (ref) model determined the best combination of human variables. The best model (M3B) combined management, travel time from market and travel time from community in interaction with management.

Model	Covariates	Interaction	AICc	LR test
M0 (ref)	Env1 + Env2 + Population	/	25.0	
M1	Env1 + Env2 + Population + Management	/	18.4	0.002 **
M1 (ref)	Env1 + Env2 + Population + Management	/	18.4	
M2	Env1 + Env2 + Population + Management + Market + Village	/	16.3	0.02 *
M2 (ref)	Env1 + Env2 + Population + Management + Market + Village	/	16.3	
M3A	Env1 + Env2 + Population + Management + Market + Village	Management * Market	21.0	0.6
M3B	Env1 + Env2 + Population + Management + Market + Village	Management * Village	14.9	0.02 *