Table S3. Test of independence for response variables within each treatment in the natural factorial experiment and across all sites. The unit of measure for abundance of benthic taxonomic groups is percent cover and for fish trophic groups is mT ha^{-1}.

| Dependent | Moran's I | | | |
	Expected	Observed	SD	p-value
Low Fishing, Low Chla				
Coral	-0.2	-0.18	0.19	0.92
CCA	-0.2	-0.46	0.22	0.23
Macroalgae	-0.2	-0.6	0.29	0.17
Turf	-0.2	-0.11	0.18	0.63
Top Predators	-0.2	-0.03	0.17	0.32
Carnivores	-0.2	-0.41	0.26	0.44
Planktivores	-0.2	-0.25	0.19	0.78
Herbivores	-0.2	-0.41	0.27	0.44
High Fishing, Low Chla				
Coral	-0.2	-0.18	0.17	0.90
CCA	-0.2	0.09	0.16	0.07
Macroalgae	-0.2	-0.28	0.15	0.60
Turf	-0.2	-0.07	0.19	0.48
Top Predators	-0.2	-0.05	0.15	0.31
Carnivores	-0.2	-0.02	0.18	0.24
Planktivores	-0.2	-0.05	0.18	0.40
Herbivores	-0.2	0.20	0.18	0.03
High Fishing, High Chla				
Coral	-0.2	-0.02	0.21	0.38
CCA	-0.2	-0.04	0.15	0.29
Macroalgae	-0.2	-0.09	0.18	0.54
Turf	-0.2	-0.31	0.18	0.55
Top Predators	-0.2	0.17	0.19	0.051
Carnivores	-0.2	-0.10	0.12	0.42
Planktivores	-0.2	-0.05	0.10	0.15
Herbivores	-0.2	-0.07	0.18	0.47
Low Fishing, High Chla				
Coral	-0.2	-0.12	0.13	0.54
CCA	-0.2	-0.30	0.13	0.41
Macroalgae	-0.2	-0.02	0.13	0.16
Turf	-0.2	-0.28	0.08	0.34
Top Predators	-0.2	-0.17	0.06	0.58
Carnivores	-0.2	-0.20	0.06	0.96
Planktivores	-0.2	-0.29	0.06	0.46
Herbivores	-0.2	-0.25	0.11	0.64
All Sites				
Coral	-0.03	0.12	0.07	0.03
CCA	-0.03	0.31	0.07	<0.001
Macroalgae	-0.03	0.21	0.07	<0.001
Turf	-0.03	0.17	0.07	0.004

Top Predators	-0.03	0.21	0.06	<0.001
Carnivores	-0.03	-0.10	0.03	0.66
Planktivores	-0.03	0.12	0.06	0.016
Herbivores	-0.03	0.11	0.07	0.01