

Table 1. Power functions describing simulated declines in nutrient recycling as fish species richness is reduced under alternative extinction scenarios

Site	Extinction scenario	Nutrient	<i>a</i> (95% CI)	<i>b</i> (95% CI)	R ²	Figure 1 panel	
RLM	Random, No compensation	N	1.38 (1.34-1.42)	1.01 (1.00-1.01)	0.69	A	
		P	0.04 (0.04-0.05)	1.00 (0.99-1.00)	0.89	B	
	Random, Energetic compensation	N	19.51 (19.28-19.74)	0.39 (0.38-0.39)	0.64	G	
		P	1.18 (1.17-1.18)	0.24 (0.24-0.24)	0.58	H	
	Population size	N	17.56 (17.39-17.73)	0.43 (0.43-0.44)	0.77	M	
		P	0.70 (0.70-0.70)	0.38 (0.37-0.38)	0.89	N	
	Best-case	N	50.34 (50.19-50.49)	0.17 (0.17-0.17)	0.85	M	
		P	1.09 (1.09-1.10)	0.27 (0.27-0.27)	0.86	N	
	Trophic position	N	1.66 (1.61-1.71)	0.96 (0.95-0.97)	0.68	S	
		P	0.05 (0.05-0.05)	0.99 (0.99-0.99)	0.89	T	
	Body size	N	0.01 (0.01-0.01)	2.13 (2.12-2.14)	0.85	Y	
		P	0.05 (0.05-0.05)	0.98 (0.98-0.98)	0.94	Z	
	Fishing pressure	N	0.00 (0.00-0.00)	4.92 (4.84-5.00)	0.63	AE	
		P	0.00 (0.00-0.00)	2.40 (2.38-2.42)	0.80	AF	
	Worst-case	N	0.00 (0.00-0.00)	8.24 (8.21-8.28)	0.92	AE	
		P	0.00 (0.00-0.00)	6.56 (6.54-6.57)	0.98	AF	
	LT	Random, No compensation	N	3.06 (3.01-3.10)	1.02 (1.01-1.02)	0.93	D
			P	0.09 (0.09-0.09)	1.02 (1.01-1.02)	0.92	E
Random, Energetic compensation		N	62.04 (61.13-62.95)	0.21 (0.21-0.22)	0.35	J	
		P	1.60 (1.58-1.63)	0.24 (0.24-0.25)	0.42	K	
Population size		N	15.68 (15.59-15.77)	0.59 (0.59-0.59)	0.95	P	
		P	0.54 (0.54-0.54)	0.54 (0.53-0.54)	0.95	Q	
Best-case		N	19.66 (19.56-19.76)	0.53 (0.53-0.53)	0.96	P	
		P	0.68 (0.68-0.68)	0.48 (0.47-0.48)	0.95	Q	
Trophic position		N	4.87 (4.81-4.93)	0.90 (0.90-0.90)	0.93	V	
		P	0.11 (0.10-0.11)	0.96 (0.96-0.97)	0.93	W	
Body size		N	2.18 (2.15-2.21)	1.12 (1.12-1.12)	0.95	AB	
		P	0.12 (0.12-0.12)	0.94 (0.93-0.94)	0.93	AC	
Fishing pressure		N	1.95 (1.90-2.00)	1.17 (1.16-1.17)	0.87	AH	
		P	0.13 (0.13-0.13)	0.92 (0.92-0.93)	0.88	AI	
Worst-case		N	0.04 (0.04-0.04)	2.24 (2.23-2.24)	0.98	AH	
		P	0.00 (0.00-0.00)	2.64 (2.63-2.65)	0.98	AI	

Coefficients (*a*) and exponents (*b*) were fitted to a power function describing simulated nutrient recycling (NR) as a function of fish species richness (*S*): $NR = aS^b$. Extinction scenarios are described in the text, and separate analyses were conducted for nitrogen (N) and phosphorus (P).