

Supplementary Material

1 Supplementary Tables

Supplementary Table 1. Comparing demographics of respondents between latent citizen scientists (n=95) and control surveys (n=209). Asterisk indicates a latent sample size of n=82 due to some not answering the question.

	Control	Latent
Highest Education Level		
High school graduate, diploma, or equivalent	28.7%	1.1%
Some college credit, no degree	24.9%	12.6%
Bachelor's degree	24.4%	42.1%
Associate or professional degree	15.3%	0%
Master's degree	5.7%	29.5%
Doctorate degree	1.0%	14.7%
Age		
18-24 years old	7.6%	7.4%
25-34 years old	24.3%	28.4%
35-44 years old	22.4%	23.2%
45 years or older	45.7%	41.1%
Schooling/Job Related to Environmental Research, Conservation, etc.		
Yes	15.3%	29.5%
Maybe	2.4%	6.3%

No	82.3%	64.2%
South Florida Residency		
Yes	100%	82.1%
Seasonal	NA	1.1%
No	NA	16.8%
Total Number of Dives		
0	89.5%	NA
1-10	3.3%	29.3%*
11-25	2.9%	13.4%*
26-50	1.9%	14.6%*
50 +	2.4%	42.7%*
Previous Participation in Environmental Project		
Yes	12.0%	100%
Maybe	2.4%	0%
No	85.6%	0%

Supplementary Table 2. Demographics of latent citizen scientist survey respondents (n=95).

How Long Since First Interaction with Rescue a Reef	
2 years	35.8%
3 years	35.8%

4 years	11.6%
5+ years	16.8%
How They Have Interacted with Rescue a Reef	
Social media	42.1%
Email subscriber	30.5%
Presentation	24.2%
Donated to Rescue a Reef	22.1%
Public event	18.9%
Other	4.2%
How Long Since Last Rescue a Reef Expedition	
1 year	7.4%
2 years	48.4%
3 years	22.1%
4 years	10.5%
5 years	5.3%
6 years	6.3%
Method of Rescue a Reef Expedition Participation	
Scuba diver	81.1%
Snorkeler/topside	14.7%
Both scuba diver and snorkeler/topside	4.2%

Total Number of Rescue a Reef Expeditions Participated in	
1	65.3%
2	18.9%
3	10.5%
4+	5.3%
Interested in Future Expeditions	
Yes	94.7%
Maybe	4.2%
No	1.1%

Supplementary Table 3. Results of Mann-Whitney U Tests comparing Likert-scale self-reported knowledge levels of coral reef-related topics between **(A)** control and pre-expedition **(B)** control and post-expedition, **(C)** control and latent-expedition, and **(D)** post- and latent-expedition. Plus sign superscripts (+) indicate that the shape of the distributions of the Likert scores are similar enough between groups to allow interpretation of results as a significant difference between mean ranks, otherwise differences must be interpreted as stochastic dominance. The sample sizes of post-expedition responses for knowledge of threats and tools are lower as these questions were a later addition to the post-expedition survey. * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ denote statistical significance at increasing levels, with three asterisks indicating the highest significance.

Category	Group	N	Mean	W	p
A.					
Status ⁺	Control	209	2.67	20542	2.505e-05***
	Pre-Expedition	250	2.31		
Ecology	Control	209	2.30	35018	9.546e-11***
	Pre-Expedition	250	3.02		

Threats ⁺	Control	209	2.79	5418	0.5016
	Pre-Expedition	55	2.65		
Tools	Control	209	2.37	11778	2.2e-16***
	Pre-Expedition	63	4.38		
B.					
Status ⁺	Control	209	2.68	21292	0.0005***
	Post-Expedition	248	2.40		
Ecology	Control	209	2.30	44602	2.20e-16***
	Post-Expedition	251	3.85		
Threats ⁺	Control	209	2.79	8828.5	2.50e-06***
	Post-Expedition	61	3.57		
Tools	Control	209	2.37	12425	2.20e-16***
	Post-Expedition	63	4.73		
C.					
Status ⁺	Control	209	2.68	6213.5	2.53e-05***
	Latent-Expedition	84	2.20		
Ecology	Control	209	2.30	13362	6.42e-10***
	Latent-Expedition	89	3.20		
Threats ⁺	Control	209	2.79	13845	1.38e-09***

	Latent-Expedition	93	3.69		
Tools	Control	209	2.37	13120	5.895e-08***
	Latent-Expedition	91	3.08		
D.					
Status ⁺	Post-Expedition	248	2.40	9478.5	0.1856
	Latent-Expedition	84	2.20		
Ecology	Post-Expedition	251	3.85	7356.5	5.43e-7***
	Latent-Expedition	89	3.20		
Threats ⁺	Post-Expedition	61	3.57	2991	0.547
	Latent-Expedition	93	3.69		
Tools	Post-Expedition	63	4.73	500	2.2e-16***
	Latent-Expedition	91	3.08		

Supplementary Table 4. Results of Chi-Square tests of independence comparing **(A)** frequencies of the top ranked conservation method between surveys and **(B)** frequencies of those who assigned each conservation method a top rank of 1 (designated as “Conservation Method #1”) versus 2 or lower (designated as “Conservation Method #2+”) between survey groups, for the most frequently mentioned categories. * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ denote statistical significance at increasing levels, with three asterisks indicating the highest significance.

	Survey	Chi-Square
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A.					
Conservation Method	Control	Latent	χ^2	df	p
Climate Change	44	48	49.449	4	4.706e-10***
Education	18	15			
Land Pollution	63	11			
Restoration	54	7			
Marine Protected Areas	26	3			
B.					
Climate Change #1	44	48	34.306	1	4.708e-9***
Climate Change #2+	164	38			
Reef Restoration #1	54	7	11.635	1	0.001***
Reef Restoration #2+	155	79			
Land Pollution #1	75	11	9.763	1	0.002**
Land Pollution #2+	146	63			

Supplementary Table 5. Results of Chi-Square tests of independence comparing frequencies of respondents who either did (denoted as “Category Name – Yes”) or did not (denoted as “Category Name – No”) mention **(A)** specific services provided by reefs between control and latent groups, **(B)** specific threats faced by reefs between the control and post-expedition groups, **(C)** specific threats to reefs between control and latent groups, and **(D)** specific threats to reefs between post-expedition and latent groups. * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ denote statistical significance at increasing levels, with three asterisks indicating the highest significance.

	Survey	Chi-Square
A. Service		

Category	Control	Latent	χ^2	df	p
Habitat – Yes	55	44	11.896	1	0.001***
Habitat – No	154	51			
Coastal Protection – Yes	13	43	66.251	1	3.97e-16***
Coastal Protection – No	196	52			
Food Webs – Yes	25	19	3.409	1	0.065
Food Webs – No	184	76			
Biodiversity – Yes	38	9	3.789	1	0.052*
Biodiversity – No	171	86			
Food for Humans – Yes	13	16	8.539	1	0.004**
Food for Humans – No	196	79			
Water Filtration – Yes	22	8	0.326	1	0.568
Water Filtration – No	187	87			
Economic Driver – Yes	6	14	14.963	1	1.097e-4***
Economic Driver – No	203	81			
Nursery – Yes	5	14	16.986	1	3.766e-5***
Nursery – No	204	81			
Oxygen – Yes	22	3	4.698	1	0.030*
Oxygen – No	187	92			
Wrong Answer – Yes	27	4	5.408	1	0.020*

Wrong Andrew – No	182	91			
No Response – Yes	46	24	0.390	1	0.532
No Response – No	163	71			
B. Threat	Control	Post			
Pollution – Yes	84	40	5.127	1	0.024*
Pollution – No	125	32			
Climate Change – Yes	24	30	31.427	1	2.071e-8***
Climate Change – No	185	42			
Ocean Warming – Yes	17	26	32.340	1	1.294e-7***
Ocean Warming – No	192	46			
Humans – Yes	63	21	0.024	1	0.876
Humans – No	146	51			
No Response – Yes	33	12	0.031	1	0.861
No Response – No	176	60			
C. Threat	Control	Latent			
Pollution – Yes	33	17	0.099	1	0.753
Pollution – No	176	78			
Climate Change – Yes	24	43	43.375	1	4.520e-11***
Climate Change – No	185	52			
Ocean Warming – Yes	17	46	64.523	1	9.539e-16***

Ocean Warming – No	192	49			
Humans – Yes	63	28	0.014	1	0.906
Humans – No	146	67			
No Response – Yes	33	17	0.211	1	0.646
No Response – No	176	78			
D. Threat	Post	Latent			
Pollution – Yes	40	17	2.969	1	0.085
Pollution – No	32	78			
Climate Change – Yes	30	43	0.215	1	0.643
Climate Change – No	42	52			
Ocean Warming – Yes	26	46	2.531	1	0.112
Ocean Warming – No	46	49			
Humans – Yes	21	28	0.002	1	0.966
Humans – No	51	67			
No Response – Yes	12	17	0.043	1	0.835
No Response – No	60	78			

Supplementary Table 6. Results of Mann-Whitney U tests comparing the total number of **(A)** services and **(B)** issues listed between survey groups and number of Rescue a Reef expeditions. Plus sign superscripts (+) indicate that the shape of the distributions of the number of services and issues listed were similar enough between groups to allow interpretation of results as a significant difference between mean ranks, otherwise differences must be interpreted as stochastic dominance. * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ denote statistical significance at increasing levels, with three asterisks indicating the highest significance.

Category	Group	N	Mean	W	p
A.					
Services	Control	209	1.10	12898	1.06e-05***
	Latent-Expedition	95	1.88		
Services ⁺	1 RAR dive	62	1.77	897.5	0.3181
	2+ RAR dives	33	2.09		
B.					
Issues	Control	209	1.13	11150	8.25e-11***
	Post-Expedition	72	2.22		
Issues	Control	209	1.13	14331	5.59e-11***
	Latent-Expedition	95	2.39		
Issues ⁺	Post-Expedition	72	2.22	3435.5	0.9605
	Latent-Expedition	95	2.39		
Issues ⁺	1 RAR dive	62	2.323	935.5	0.4886
	2+ RAR dives	33	2.515		

Supplementary Table 7. Results of Mann-Whitney U tests comparing confidence communicating about coral reef-related topics, comfort contacting coral conservation organizations/Rescue a Reef, and likelihood of supporting coral conservation organizations/Rescue a Reef between **(A)** control and latent-expedition survey respondents and **(B)** latent respondents who have been on 1 and 2+ RAR dives. Plus sign superscripts (+) indicate that the shape of the distributions of the Likert scores are similar enough between groups to allow interpretation of results as a significant difference between mean ranks, otherwise differences must be interpreted as stochastic dominance. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

0.01, and *** $p < 0.001$ denote statistical significance at increasing levels, with three asterisks indicating the highest significance.

Category	Group	N	Mean	W	p
A.					
Confidence communicating ⁺	Control	209	2.60	12430	2.457e-06****
	Latent-Expedition	89	3.34		
Comfort contacting	Control	209	3.17	13838	1.525e-08****
	Latent-Expedition	95	4.07		
Likelihood of supporting	Control	209	3.32	14148	2.306e-10****
	Latent-Expedition	94	4.25		
B.					
Confidence communicating ⁺	1 RAR dive	57	3.14	661.5	0.0269*
	2+ RAR dives	32	3.69		
Comfort contacting ⁺	1 RAR dive	62	3.89	758	0.0273*
	2+ RAR dives	33	4.42		
Likelihood of supporting ⁺	1 RAR dive	61	4.12	795	0.0675
	2+ RAR dives	33	4.49		