



Q-Sort Concourse and Data for the Human Dimensions of Large MPAs project

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About this document:

This document provides data collected using Q-method as part of the Human Dimensions of Large Marine Protected Areas project (visit <https://humansandlargempas.com/>), led by Rebecca Gruby (Colorado State University), Noella Gray (University of Guelph), and Lisa M. Campbell (Duke University). The research was approved by Colorado State University IRB (protocol number: 14–55508 H). For more information about the project, please visit: <https://humansandlargempas.com/>.

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Part 1: Introduction to the Data Archive

We conducted a Q-sort with stakeholders associated with large marine protected areas (or efforts to establish them) in 5 locations: Bermuda, Commonwealth of the Northern Mariana Islands (CNMI, USA), Kiribati, Rapa Nui (Easter Island, Chile), and Palau. Q-method was designed to better understand human subjectivity and we used the method to identify 5 different viewpoints on large marine protected areas across these research sites. This archive makes available the concurrence of statements compiled for the sort and the data recording sheets from 40 completed Q-sorts.

Data were collected by research assistants Leslie Acton (Bermuda), Robbie Greene (CNMI), Evan Artis and Lillian Mitchell (Kiribati), Sarah Bess Jones Zigler (Rapa Nui), and Peter Howson (Palau).

Interviewees sorted 47 statements related to large-scale marine protected areas according to their level of agreement with each statement (from least agree [-5] to most agree [+5]). Statements were printed on cards and interviewees laid them out on an 11-point distribution board. Interviewees were asked to indicate breaks between statements they disagreed with, were neutral about, and agreed with. Researchers recorded sorts in a data recording form and noted the break lines. Final sorts were photographed and checked against data recording forms for accuracy. Data recording sheets also note the location, respondent code, stakeholder group of the respondent, and date the Q sort was conducted.

Q-sorts are accompanied by interviews to help researchers understand the overall response to the sort and the rationale for particular sorting choices; interviews help researchers interpret results of the Q-sort. Because interviewees participated with the understanding that their views are confidential (as per Colorado State University IRB protocol number 14–55508 H), and interview transcripts can reveal identity, these interview data are not included in this data archive.

Sort Prompt:

To what extent to you agree or disagree with these statements about Large Marine Protected Areas (large MPAs), based on your experience with them?

Part 2: Q Sort Concourse

Concourse derived from statements found in academic publications about large scale MPAs, media coverage of large scale MPAs, and websites related to large scale MPAs.

1. Large MPAs have little effect on food production because they aren't fished much.
2. Large MPAs should allow cultural practitioners to conduct traditional and spiritual activities.
3. Effectively managed networks of small MPAs are just as likely to achieve conservation objectives as a large MPA.
4. Most large MPAs are virtually empty of people.
5. Large MPAs are a poor way to spend limited conservation funds.
6. Large MPAs provide global benefits, like protecting important fishing grounds and fish habitat.
7. Large MPAs are less expensive to implement per unit area than small MPAs.
8. The recent increase in global MPA coverage achieved via the establishment of large MPAs gives a false sense of achievement.
9. Large MPAs may be better able than small MPAs to withstand unpredictable pressures caused by climate change.
10. Without effective enforcement, large MPAs provide a false sense of success.
11. Large MPAs are best suited for pristine ecosystems where exploitation is low and governments can protect them for the long term.
12. Comprehensive zoning is more likely to succeed at achieving conservation in the long-run than large MPAs.
13. Most large MPAs provide little or no protection for the species and ecosystems that are most threatened.
14. Large MPAs provide an opportunity for the awakening and claiming of local or indigenous community rights.
15. Large MPAs protect large-scale ecosystem processes that cannot be protected with small MPAs.
16. Large MPAs alienate stakeholders.
17. All relevant stakeholders, including opposing voices, should be engaged early in large MPA planning processes.

18. Even in remote and pristine large MPA sites, there are still relevant stakeholders of one kind or another.
19. The cost of large MPAs cannot be justified when compared with providing for the immediate social and economic needs of citizens.
20. Large MPAs help to conserve large, migratory species.
21. Large MPAs are put forth by coastal states to reinforce their sovereignty over sea spaces.
22. Large MPAs attract support from non-governmental and other conservation partners and donors.
23. Large MPAs unfairly harm hard working fishers.
24. Countries that establish large MPAs will be able to promote tourism as an alternative way to grow the economy.
25. Large MPAs with no fishing are easier to monitor and enforce than complex fisheries regulations.
26. By placing large parts of the ocean “off limits” for commercial activities, large MPAs are economically too costly.
27. Large MPAs will result in greater fishing effort and environmental harm elsewhere.
28. Equal weight should be put to ecological and socioeconomic considerations in the design of large MPAs.
29. The ability to enforce large MPA rules is going to get much better through new and advanced technologies.
30. Large MPAs in places with no local stressors are valuable as natural laboratories for scientific research.
31. Global conservation targets are the main incentive for establishing large MPAs.
32. Large MPAs are most useful for protecting pristine marine wilderness.
33. Large MPAs fail to serve the basic purpose of conservation if they do not limit extractive uses.
34. Large MPAs represent the interests of political elites and international NGOs, rather than local people.
35. Large MPAs are better at regenerating fish stocks than small MPAs.
36. Local residents perceive the designation of large MPAs as a loss of their inherent right to control those ocean spaces.
37. Large MPAs reconnect people with their cultural legacy.
38. Large MPAs voluntarily throw away, for free, a country’s assets.

39. Large MPAs further magnify existing global inequities based on class, ethnicity, and geopolitical position.
40. Large MPAs in remote areas divert resources from efforts to address more seriously threatened areas.
41. Large MPAs protect geological, chemical, and oceanographic diversity. .
42. Large MPAs aggressively address wide-scale, pervasive threats.
43. Large MPAs provide a safeguard against the threat of deep-sea mining.
44. Large MPAs contribute little in terms of ecosystem service protection.
45. If large MPAs are established, then international donors must provide funding to offset lost revenue from extractive uses.
46. Large MPAs are a precautionary approach to protect marine biodiversity.
47. Governments use large MPAs as an opportunity to look good politically in the global community.

Part 3: Q-Sort Data Recording Forms

Q sort record sheet

Country CNMI	No. 1
-----------------	----------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					16					
				33	42	2				
			38	20	35	46	18			
		11	25	43	1	15	28	30		
	23	26	3	12	29	13	31	34	47	
7	37	24	32	45	19	44	5	4	17	40
21	27	22	14	39	41	36	8	6	9	10

CNMI
Government
June 26, 2015

Q sort record sheet

Country CNMI	No. 2
-----------------	----------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					32					
				6	1	2				
			19	40	9	46	41			
		5	12	3	13	4	7	10		
	45	21	16	28	8	25	37	22	33	
27	23	44	26	36	11	18	14	20	24	15
34	39	17	38	31	43	30	42	47	29	35

CNMI
NGO
July 5, 2015

Q sort record sheet

Country CNMI	No. 3
-----------------	----------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					34					
				33	24	22				
		38	1	14	9	17				
	27	39	3	25	37	31	32			
44	35	16	45	7	18	10	15	20		
26	5	8	21	23	4	29	41	2	42	6
13	40	19	12	47	36	28	43	30	46	11

CNMI
 Researcher / contractor
 July 10, 2015

Q sort record sheet

Country CNMI	No. 4
-----------------	----------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					43					
				12	9	20				
			7	32	35	17	29			
		40	23	37	44	28	15	10		
	42	16	1	13	19	3	41	18	36	
38	14	11	4	45	27	31	46	30	47	25
5	39	26	22	24	6	8	21	2	34	33

CNMI
Government
July 14, 2015

Q sort record sheet

Country CNMI	No. 5
-----------------	----------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					3					
				13	7	46				
		42	19	26	30	25				
	23	11	5	37	32	20	10			
	47	39	41	36	24	4	22	18	35	
38	34	27	44	33	40	9	29	31	12	17
21	45	16	8	1	14	43	2	28	6	15

CNMI
Government
July 25, 2015

Q sort record sheet

Country CNMI	No. 6
-----------------	----------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					13					
				38	19	44				
		32	43	12	23	28				
		35	4	31	46	45	30	3		
	25	15	36	41	47	34	22	6	8	
1	11	14	37	24	29	7	16	2	27	17
20	42	5	26	9	18	39	40	33	21	10

CNMI
Government
July 22, 2015

Q sort record sheet

Country CNMI	No. 7
-----------------	----------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					19					
				45	23	16				
			3	9	15	5	4			
		28	33	44	20	40	11	47		
	30	35	39	43	13	22	38	2	25	
37	7	41	1	32	6	17	18	34	8	36
42	27	24	14	46	26	12	21	31	29	10

CNMI
 Researcher / consultant
 June 29, 2015

Q sort record sheet

Country	No.
B	1

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					46					
				1	33	18				
			39	41	11	30	38			
		20	26	21	13	32	8	40		
	43	7	5	28	15	14	25	34	31	
45	6	37	35	24	4	29	47	19	10	17
42	3	9	44	16	23	27	2	12	36	22

Bermuda
Government
June 10, 2015

Q sort record sheet

Country	No.
B	2

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					47					
				16	26	10				
		15	8	2	45	11				
	40	35	33	3	36	18	32			
	13	42	37	43	31	21	6	29	30	
5	39	27	9	14	19	46	34	25	12	28
44	38	23	1	7	21	24	4	41	22	17

Bermuda
Government
June 12, 2015

Q sort record sheet

Country	No.
B	3

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					30					
				39	22	18				
			26	20	47	36	35			
		16	5	4	1	32	10	6		
	44	7	19	8	34	11	23	9	2	
42	37	45	13	24	3	31	41	29	25	17
21	14	27	40	38	12	43	46	15	33	28

Bermuda
Government
June 16, 2015

Q sort record sheet

Country	No.
B	4

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					12					
				5	21	4				
			42	39	31	16	22			
		26	33	19	11	20	29	6		
	9	44	43	2	32	13	47	40	36	
35	45	38	23	25	37	41	18	1	46	30
3	27	7	15	28	24	14	34	10	17	8

Bermuda
Industry
June 16, 2015

Q sort record sheet

Country	No.
B	5

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					43					
				16	37	2				
			23	27	13	47	25			
		1	19	40	22	36	41	15		
	38	5	8	21	11	24	18	9	30	
3	44	26	39	31	42	28	10	35	20	17
45	34	32	4	33	7	14	12	6	29	46

Bermuda
NGO
July 9, 2015

Q sort record sheet

Country	No.
B	6

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					31					
				46	27	9				
			8	40	14	3	47			
		5	12	1	45	42	6	29		
	19	43	36	16	21	15	22	7	32	
44	26	34	10	11	28	41	17	24	35	18
38	23	13	39	4	37	33	20	30	2	25

Bermuda
NGO
July 19, 2015

Q sort record sheet

Country	No.
B	7

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					5					
				19	13	10				
			43	2	16	42	29			
		20	45	7	4	46	28	9		
	37	3	35	27	32	31	21	33	12	
8	23	26	34	44	41	15	30	6	24	18
11	1	39	14	38	36	40	47	22	25	17

Bermuda
NGO
July 29, 2015

Q sort record sheet

Country	No.
B	8

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					45					
				5	32	30				
			37	16	40	2	1			
		31	8	33	26	19	6	36		
	23	27	25	39	15	7	28	11	4	
13	35	43	44	12	14	47	22	18	46	21
24	41	20	3	9	42	29	38	34	10	17

Bermuda

Industry

August 18, 2015

Q sort record sheet

Country	No.
B	9

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					4					
				37	45	16				
			13	9	19	7	46			
		26	28	11	31	47	33	32		
	5	27	39	35	30	22	3	41	2	
38	23	12	43	14	8	17	34	6	42	20
44	1	24	25	40	29	18	36	21	10	15

Bermuda
Government
August 17, 2015

Q sort record sheet

Country Palau	No. P 1
-------------------------	-------------------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					43					
				26	35	24				
			19	16	39	41	14			
		37	45	15	3	34	8	6		
	27	46	7	32	9	42	2	33	22	
13	5	31	23	12	36	21	11	28	29	18
38	44	25	1	40	30	10	20	4	47	17

Palau
 Researchers / contractors
 July 7, 2016

Q sort record sheet

Country Palau	No. P 2
-------------------------	-------------------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					11					
				12	28	43				
			19	31	4	5	35			
		45	27	16	41	17	20	22		
	39	38	14	9	2	44	29	47	34	
30	37	26	36	1	42	46	21	25	40	33
15	3	23	24	32	18	6	7	8	13	10

Palau
 Researcher / contractor
 June12, 2016

Q sort record sheet

Country Palau	No P 3.
------------------	------------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					18					
				31	22	32				
		27	4	29	43	45				
	26	3	39	1	35	11	6			
8	38	34	42	33	41	15	37	21		
5	13	44	16	7	10	9	36	46	20	24
19	23	47	40	12	2	30	28	17	25	14

Palau
Industry
July 25, 2016

Q sort record sheet

Country Palau	No. P 4
------------------	------------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					45					
				32	18	22				
		4	35	10	6	24				
	19	23	40	42	33	41	30			
	13	16	12	36	7	15	3	25	2	
39	34	5	11	44	1	9	43	37	29	26
38	21	26	31	17	8	47	46	14	20	17

Palau
Government
July 22, 2016

Q sort record sheet

Country	No.
Palau	P 5

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					3					
				13	18	24				
		27		17	30	7	45			
		38	34	8	15	10	41	4		
	11	1	31	12	19	35	46	28	25	
26	44	39	5	16	43	42	20	29	9	33
40	36	23	21	32	14	47	37	2	6	22

Palau
NGO
July 20, 2016

Q sort record sheet

Country Palau	No. P 6
------------------	------------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					1					
			39		13	18				
		41	37		2	31	47			
	44	23	35		21	3	5	22		
7	9	32	6		16	43	42	40	34	
20	14	4	38	46	28	17	29	11	33	10
25	45	24	36	19	30	27	15	8	12	26

Palau
Government
July 23, 2016

Q sort record sheet

Country Palau	No. P 7
------------------	------------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					39					
				2	42	17				
			43	15	30	31	18			
		38	46	26	4	23	27	32		
	19	33	44	9	28	16	29	40	41	
8	3	5	34	11	12	20	35	10	45	37
47	1	7	13	21	14	25	36	22	24	6

Palau
Industry
July 27, 2016

Q sort record sheet

Country Palau	No. P 8
------------------	------------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					25					
				19	7	29				
			14	12	22	10	20			
		13	23	8	42	43	9	11		
	16	36	44	18	31	30	41	46	21	
34	45	27	26	40	35	24	4	28	32	17
47	1	39	5	38	2	3	33	6	37	15

Palau
Government
July 6, 2016

Q sort record sheet

Country Easter Island, Chile	No.1
---------------------------------------	------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					47					
			23	35	31					
		45	16	8	30	29				
		19	33	15	26	22	36	24		
	37	10	34	7	39	1	28	21	46	
44	13	38	27	5	25	41	18	12	17	2
43	32	4	20	40	11	9	42	6	14	3

Rapa Nui (Easter Island), Chile
NGO
Feb. 19, 2016

Q sort record sheet

Country Easter Island, Chile	No. 2
---------------------------------------	-------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					23					
				26	41	19				
			25	7	4	40	39			
		5	21	27	42	38	8	47		
	43	46	1	18	11	30	36	2	3	
35	37	6	33	16	26	15	10	24	17	12
9	29	11	31	14	44	22	34	45	13	28

Rapa Nui (Easter Island), Chile
Government
June 21, 2016

Q sort record sheet

Country Easter Island, Chile	No. 3
---------------------------------------	-------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					32					
				46	45	42				
			14	22	43	10	38			
		16	39	30	5	28	31	44		
	4	6	27	25	41	19	13	40	8	
7	11	9	18	3	26	36	17	47	2	1
35	15	29	24	37	21	23	20	12	34	33

Rapa Nui (Easter Island), Chile
Government
June 23, 2016

Q sort record sheet

Easter Island, Chile	No. 4
----------------------------	-------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					46					
				4	44	47				
			11	1	38	18	34			
		42	21	32	33	26	23	28		
	31	29	6	41	40	43	19	15	39	
45	24	7	35	16	13	8	3	12	22	17
37	20	25	9	27	5	30	10	14	2	36

Rapa Nui (Easter Island), Chile
 Researcher / consultant
 June 24, 2016

Q sort record sheet

Country Easter Island, Chile	No. 5
---------------------------------------	-------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					42					
				27	7	15				
		5	34	3	17	19				
		40	28	36	11	46	22	41		
	16	30	26	29	44	25	24	10	37	
38	12	9	39	23	18	21	31	32	33	2
4	35	8	43	13	1	47	45	6	14	20

Rapa Nui, Easter Island, Chile
Government
July 4, 2016

Q sort record sheet

Country	No.
El, Chile	6

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					18					
				32	19	15				
			1	34	26	42	25			
		13	9	8	40	11	46	33		
	24	7	4	35	30	3	45	6	2	
5	44	27	38	16	10	28	22	21	43	41
23	39	36	31	47	12	29	17	20	37	14

Rapa Nui (Easter Island), Chile
 NGO
 July 9, 2016

Q sort record sheet

Country Easter Island, Chile	No. 7
---------------------------------------	-------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					22					
				4	3	20				
			43	19	24	26	29			
		33	5	40	21	14	47	30		
	41	13	18	39	16	18	34	46	28	
44	1	31	35	23	27	32	8	25	36	17
42	45	9	15	12	7	37	10	11	2	6

Rapa Nui (Easter Island), Chile
Government
July 13, 2016

Q sort record sheet

Country Easter Island, Chile	No. 8
---------------------------------------	-------

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					39					
				47	26	33				
			44	25	21	16	35			
		38	34	11	15	19	28	20		
	13	8	4	10	9	22	18	6	46	
5	1	23	12	27	3	30	17	29	43	24
31	36	2	7	32	40	41	14	37	42	45

Rapa Nui (Easter Island), Chile
 NGO
 Aug. 2, 2016

Q sort record sheet

Country	No.
K	1

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					41					
				43	20	2				
		28	11	9	1	15				
	14	35	13	34	30	24	29			
	36	27	5	37	40	19	45	8	46	
23	42	26	3	31	21	12	18	33	10	4
38	39	16	44	32	7	6	22	47	17	25

Kiribati
 Researcher / contractor
 May 11, 2016

Q sort record sheet

Country	No.
K	2

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					37					
				16	26	20				
		45	47	32	41	43				
	14	19	27	29	7	18	10			
	38	3	36	12	25	46	6	22	2	
44	23	24	31	33	34	8	35	28	11	17
13	1	39	5	42	21	30	9	40	4	15

Kiribati
NGO
May 11, 2016

Q sort record sheet

Country	No.
K	3

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					36					
				43	25	32				
			47	13	11	9	33			
		39	3	21	4	37	41	45		
	31	16	42	24	35	26	6	17	22	
38	5	7	40	14	2	15	10	30	46	19
34	23	8	44	1	12	29	27	20	18	28

Kiribati
Government
June 6, 2016

Q sort record sheet

Country	No.
K	4

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					39					
				4	25	15				
			36	19	31	41	28			
		38	14	2	3	21	43	45		
	13	8	5	34	12	29	33	17	20	
1	23	44	16	42	18	11	30	10	24	35
27	7	9	40	26	37	47	46	22	6	32

Kiribati
Government
June 22, 2016

Q sort record sheet

Country K	No. 5
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-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					45					
				32	2	8				
			1	27	5	42	46			
		13	26	19	21	37	10	39		
	40	31	47	33	11	41	9	15	18	
23	7	20	25	36	12	24	16	43	3	4
44	38	28	30	14	35	34	22	6	17	29

Kiribati
 Researcher or contractor
 June 28, 2016

Q sort record sheet

Country	No.
K	6

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					30					
				8	28	15				
			45	2	25	32	41			
		42	36	11	26	27	6	20		
	47	7	16	33	34	37	17	29	43	
13	31	1	12	21	14	35	22	40	9	3
38	23	44	5	39	19	18	4	46	10	24

Kiribati
Government
June 30, 2016

Q sort record sheet

Country	No.
K	7

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					1					
				33	4	18				
			43	8	28	3	6			
		39	9	42	7	32	10	31		
	38	23	16	36	12	11	24	37	20	
13	44	47	21	19	40	25	2	35	30	46
5	27	34	26	15	29	41	22	14	45	17

Kiribati
NGO
July 4, 2016

Q sort record sheet

Country K	No. 8
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-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
					28					
				18	13	25				
			44	47	10	9	38			
		42	35	27	34	39	36	45		
	37	24	20	32	43	19	33	5	31	
7	12	1	30	41	21	11	23	16	3	4
14	6	2	46	22	15	29	40	26	8	17

Kiribati
 Researcher / contractor
 July 20, 2016

End of data