Golden Fish: Evaluating and optimising the biological, social and economic returns of small-scale fisheries: Supplementary material

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2023

FRDC Project No **2016/034**

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2016/034

2023

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1.2. Heterogeneity among recreational fishers' motivations for utilising two estuarine fisheries

Table S1.2.1. Number of responses (n) and the frequency of occurrence (%) of responses about the demographics of Blue Swimmer Crabs and Black Bream fishers. Data obtained from respondents that answered all questions in the closed question online survey.

	Blue Swimmer Crab		Black Bream	
Gender	**n**	**%**	**n**	**%**
Male	298	83.94	99	93.40
Female	55	15.49	7	6.60
Other	2	0.56	0	0.00
Age	**n**	**%**	**n**	**%**
18 - 24	30	8.47	18	16.98
25 - 34	66	18.64	26	24.53
35 - 44	96	27.12	29	27.36
45 - 54	70	19.77	15	14.15
55 - 64	53	14.97	16	15.09
65 or more	39	11.02	2	1.89
Education	**n**	**%**	**n**	**%**
Primary School	3	0.88	1	0.94
Secondary School	108	31.67	41	38.68
Technical or Further educational institution	119	34.90	31	29.25
University or other Tertiary institution	111	32.55	32	30.19
Other	0	0.00	1	0.94
Household annual income	**n**	**%**	**n**	**%**
<$0	5	1.61	3	3.06
$0	14	4.50	6	6.12
$1 - $20,799	20	6.43	9	9.18
$20,800 - $41,599	28	9.00	10	10.20
$41,600 - $62,399	48	15.43	10	10.20
$62,400 - $83,199	50	16.08	18	18.37
$84,000 - $103,999	32	10.29	16	16.33
$104,000 - $142,999	41	13.18	7	7.14
$143,000 - $181,999	32	10.29	6	6.12
$182,000 - $233,999	21	6.75	7	7.14
$234,000 - $285,999	5	1.61	1	1.02
$286,000 - $337,999	6	1.93	2	2.04
> $338,000	9	2.89	3	3.06

Table S1.2.2. Number of responses (n) and the frequency of occurrence (%) of responses about the characteristics of Blue Swimmer Crabs and Black Bream fishers. Data obtained from respondents that answered all questions in the closed question online survey.

	Blue Swimmer Crab		Black Bream	
Fishing frequency	**n**	**%**	**n**	**%**
I have never been fishing for crabs*	10	1.92	2	1.40
I have not fished for crabs in the past 12 months*	33	6.32	7	4.90
Once	46	8.81	4	2.80
Once a month	92	17.62	27	18.88
Once every 2 - 3 months	87	16.67	16	11.19
Once every 4 - 6 months	97	18.58	7	4.90
1 - 2 days a fortnight	107	20.50	41	28.67
1 - 2 days a week	35	6.70	33	23.08
3 - 4 days a week	12	2.30	6	4.20
5 days or more a week	3	0.57	0	0.00
Fishing experience	**n**	**%**	**n**	**%**
1 year or less	24	5.16	5	3.91
2 - 3 years	34	7.31	13	10.16
4 - 5 years	40	8.60	22	17.19
6 - 10 years	63	13.55	18	14.06
11 - 20 years	93	20.00	36	28.13
21 - 39 years	119	25.59	24	18.75
40 years or more	92	19.78	10	7.81
Fishing location	**n**	**%**	**n**	**%**
Shore	124	26.67	51	40.16
Both but usually shore	53	11.40		
Both equally	34	7.31		
Both but usually boat	83	17.85		
Kayak			31	24.41
Boat	171	36.77	38	29.92
Other			7	5.51
Fishing method	**n**	**%^**	**n**	**%**
Drop/crab nets	372	79.49		
Scoop nets	276	58.97		
Catch by hand by diving/snorkelling/wading	93	19.87		
Crab traps	3	0.64		
Wire hook	5	1.07		
Bait			30	23.08
Lures (including soft plastics)			80	61.54
Bait and lures			18	13.85
Other			2	1.54
Skill level	**n**	**%**	**n**	**%**
Beginner (novice)	57	12.28	13	10.16
Intermediate	235	50.65	74	57.81
Expert	172	37.07	41	32.03

* After selecting this response these respondents were automatically transferred to the final page of the questionnaire to complete some basic demographic questions and received a thank you message.

^ Respondents were able to select multiple options and so value do not sum to 100.

Table S1.2.3. Percentage number of times a salient motivation for (a) Blue Swimmer Crab and (b) Black Bream fishing was selected from the closed-question online survey. Percentages given for all fishers targeting the species (overall), for those fishers utilising a particular fishery and allocated to a fisher group. Values in both (a) and (b) shaded separately, with values in dark red being the lowest and those in dark green the highest. Note respondents were able to select as many motivations as they deemed appropriate. The CLUSTER-SIMPROF groups assigned are given below. Fisheries or fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different. In this and other tables, average responses from Black Bream fishers utilising Wilson Inlet and those in fisher group *a* were not subjected to CLUSTER-SIMPROF analysis due to them having very small numbers of respondents. Peel = Peel-Harvey Estuary; Swan = Swan-Canning Estuary; Lesch = Leschenault Estuary; Shark = Shark Bay; Black. = Blackwood River Estuary; Wilson = Wilson Inlet.

(a) Blue Swimmer Crabs	Overall		Fishery					Fisher group						
			Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
Food	92		93	94	91	86		100	95	96	92	100	90	60
Enjoyment of catch	67		71	69	67	71		30	75	70	71	50	64	60
Enjoyment of outdoors	65		72	67	58	57		50	68	71	71	70	70	20
Pleasure	65		69	70	61	57		50	84	72	65	50	59	40
Time with family	51		57	47	52	57		30	67	56	41	20	51	60
Time with friends	48		51	56	36	43		20	54	58	45	30	45	0
CLUSTER-SIMPROF group			*a*	*a*	*a*	*a*		*a*	*b*	*b*	*b*	*a*	*b*	*c*

(b) Black Bream	Overall		Fishery						Fisher group				
			Black.	Peel	Swan	Wilson	Other		a	b	c	d	e
Sport / Challenge	81		83	88	83	100	77		100	67	83	69	100
Enjoyment of outdoors	67		72	50	65	100	80		100	67	67	73	66
Pleasure	64		56	56	60	100	83		100	67	67	73	54
Relaxation	63		56	63	62	100	70		0	67	50	71	51
Enjoyment of catching a big fish	58		56	50	57	100	67		100	100	67	59	54
Time with friends/family	39		33	44	40	100	37		0	0	33	47	26
Food	15		6	19	14	0	17		0	0	50	19	6
Easy access to boat ramp and fishing sites	12		17	6	8	0	20		0	0	17	14	9
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*			*a*	*a*	*a*	*a*

Table S1.2.4. Average rating (X) and standard error (SE) from -3 to +3 for each salient motivation for (a) Blue Swimmer Crab and (b) Black Bream fishing provided in the closed-question online survey. Average rating values in both (a) and (b) shaded separately, with values in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries or fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

(a) Blue Swimmer Crabs

	Fishery										Fisher group													
	Overall			Peel		Swan		Lesch.		Shark			a		b		c		d		e		f		g	
	X	SE		X	SE	X	SE	X	SE	X	SE		X	SE	X	SE	X	SE	X	SE	X	SE	X	SE	X	SE
Catching enough crabs to eat	1.89	0.06		1.98	0.08	1.89	0.10	1.90	0.26	2.50	0.30		2.20	0.47	2.04	0.12	1.87	0.11	2.00	0.18	2.11	0.29	1.83	0.19	1.00	1.11
Catching big crabs	1.89	0.05		1.86	0.07	1.96	0.09	2.11	0.18	2.40	0.32		2.00	0.63	2.12	0.14	1.86	0.11	1.98	0.19	2.38	0.24	1.77	0.17	1.00	0.96
Being with friends/family is enough	1.52	0.06		1.59	0.08	1.46	0.10	0.78	0.33	1.33	0.20		2.00	0.49	1.46	0.16	1.50	0.11	1.08	0.24	1.57	0.40	1.64	0.15	1.75	0.39
Being outdoors is enough	1.44	0.06		1.46	0.09	1.31	0.10	0.96	0.32	0.40	0.54		2.14	0.50	1.32	0.14	1.35	0.12	1.36	0.24	1.11	0.40	1.64	0.13	2.00	0.58
Catching as many crabs as I am legally allowed to	0.43	0.09		0.64	0.12	0.37	0.14	0.19	0.34	-0.17	0.76		1.25	0.77	0.52	0.25	0.35	0.16	0.62	0.29	0.60	0.76	0.13	0.24	-1.67	0.62
Catching some crabs	-0.57	0.09		-0.52	0.13	-0.32	0.15	-0.77	0.35	-0.83	0.85		-1.25	0.86	-0.64	0.28	-0.41	0.17	-0.62	0.32	-1.22	0.74	-0.39	0.26	-2.20	0.73
CLUSTER-SIMPROF group				a		a		a		a			a		b		b		b		b		b		c	

(b) Black Bream

	Fishery												Fisher group									
	Overall			Black.		Peel		Swan		Wilson		Other			a		b		c		d		e	
	X	SE		X	SE	X	SE	X	SE	X	SE	X	SE		X	SE	X	SE	X	SE	X	SE	X	SE
Catching a big bream (over 30cm)	2.33	0.13		2.53	0.36	2.92	0.08	2.40	0.15	-2.00		2.08	0.29		3.00		3.00	0.00	2.60	0.24	2.37	0.16	2.24	0.28
Having a relaxing day	1.70	0.15		1.15	0.80	2.07	0.29	1.78	0.15	2.00		1.80	0.31				0.33	1.76	1.20	0.49	2.09	0.14	1.39	0.34
Catching a legal sized bream (25cm)	1.64	0.15		2.06	0.30	2.00	0.27	1.67	0.22	1.00		1.33	0.36		-2.00		1.67	0.88	1.00	1.00	1.59	0.20	1.88	0.34
Being outdoors is enough	1.44	0.16		0.44	0.69	2.36	0.28	1.57	0.15	3.00		1.57	0.29		2.00		-0.33	1.33	1.80	0.37	1.94	0.14	1.08	0.37
Catching a bream no matter the size	1.08	0.19		-0.38	0.74	2.07	0.28	1.31	0.24	3.00		0.88	0.32		-3.00		1.33	0.88	0.33	0.56	1.17	0.25	1.74	0.32
Being with friends/family is enough	1.07	0.21		0.58	0.79	1.44	0.73	1.18	0.22	2.00		1.15	0.42				-3.00		2.25	0.48	1.27	0.24	1.17	0.49
Good weather conditions	0.63	0.19		0.58	0.72	1.57	0.65	0.55	0.25	-1.00		0.73	0.34		-2.00		0.67	1.20	-0.25	0.75	0.96	0.24	0.38	0.41
Catching as many bream as I am legally allowed to	-0.94	0.23		0.57	0.69	-0.30	0.70	-1.50	0.29	-3.00		-0.83	0.42		-3.00		0.00	1.73	-1.25	0.25	-1.30	0.31	-0.42	0.49
CLUSTER-SIMPROF group				a		b		c				c			a		a		a		a		a	

Table S1.2.5. Percentage number of times (a) Blue Swimmer Crab and (b) Black Bream fishers eat, release and give away legal-sized individuals that they catch. Percentages given for all fishers targeting the species (overall), for those fishers utilising a particular fishery and allocated to a fisher group. Values in both (a) and (b) shaded separately, with values in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries or fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

(a) Blue Swimmer Crabs	Overall		Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
Eat them														
Always	91		93	92	90	100		80	95	96	90	90	84	83
Sometimes	8		7	7	10	0		20	4	4	10	10	14	0
Never	1		1	1	0	0		0	2	0	0	0	3	17
CLUSTER-SIMPROF group			*a*	*a*	*a*			*a*	*b*	*b*	*b*	*b*	*b*	*c*
Release after capture														
Always	2		2	0	0	0		0	5	0	0	11	3	20
Sometimes	68		69	67	55	67		60	54	68	69	78	78	80
Never	31		29	33	45	33		40	40	32	31	11	19	0
CLUSTER-SIMPROF group			*a*	*a*	*b*			*a*	*a*	*a*	*a*	*b*	*b*	*b*
Give away														
Always	8		7	9	15	0		20	7	7	6	0	7	0
Sometimes	75		73	76	55	100		60	79	76	78	60	70	83
Never	18		20	16	30	0		20	16	17	16	40	22	17
CLUSTER-SIMPROF group			*a*	*a*	*b*			*a*	*b*	*b*	*b*	*c*	*b*	*b*

(b) Black Bream	Overall		Black.	Peel	Swan	Wilson	Other		a	b	c	d	e
Eat them													
Always	9		9	8	2	0	23		0	0	33	12	0
Sometimes	27		45	8	30	0	23		0	0	33	40	9
Never	64		45	83	69	100	54		100	100	33	48	91
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*		*a*	*b*	*b*	*a*	
Release after capture													
Always	76		83	83	76	100	67		100	100	33	66	94
Sometimes	23		17	17	22	0	33		0	0	67	32	6
Never	1		0	0	2	0	0		0	0	0	2	0
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*		*a*	*c*	*b*	*a*	
Give away													
Always	2		0	8	2	0	0		0	0	17	0	3
Sometimes	13		18	0	7	0	31		0	0	0	21	6
Never	85		82	92	91	100	69		100	100	83	79	91
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*		*a*	*a*	*a*	*a*	

Table S1.2.6. Percentage number of times (a) Blue Swimmer Crab and (b) Black Bream fishers catch, fewer target individuals than allowed (i.e. the bag limit), the number allows, more than allowed and multiple options. Percentages given for all fishers targeting the species (overall), for those fishers utilising a particular fishery and allocated to a fisher group. Values in both (a) and (b) shaded separately, with values in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries or fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

(a) Blue Swimmer Crabs	Overall		Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
			Fishery					Fisher group						
Catch fewer crabs than allowed														
Always	31		28	33	55	0		50	14	33	22	40	41	50
Sometimes	67		70	65	40	100		50	86	65	67	60	59	50
Never	1		1	1	0	0		0	0	1	6	0	0	0
Don't know	1		0	1	5	0		0	0	1	4	0	0	0
CLUSTER-SIMPROF group			a	a	b			a	d	b	d	c	c	a
As many crabs as the limit allows														
Always	12		9	14	10	17		40	12	10	14	10	9	17
Sometimes	72		79	72	50	83		40	77	74	76	70	69	50
Never	16		12	15	40	0		20	11	16	10	20	20	33
Don't know	0		0	0	0	0		0	0	0	0	0	1	0
CLUSTER-SIMPROF group			a	a	a			a	b	c	b	c	c	d
More crabs than allowed														
Always	0		0	1	0	0		0	0	0	0	0	0	0
Sometimes	37		26	23	47	25		0	0	1	0	0	3	0
Never	1		1	2	0	0		0	2	3	2	0	0	0
Don't know	61		72	75	53	75		100	98	96	98	100	97	100
CLUSTER-SIMPROF group			a	a	b			a	a	a	a	a	a	a
All of the above depending on the day														
Always	5		5	6	0	0		0	8	3	11	10	3	0
Sometimes	23		24	25	20	67		40	29	25	17	20	18	20
Never	42		44	42	50	33		30	53	39	46	40	45	20
Don't know	30		27	28	30	0		30	10	33	26	30	34	60
CLUSTER-SIMPROF group			a	a	b			a	a	a	a	a	a	a

(b) Black Bream	Overall		Black.	Peel	Swan	Wilson	Other		a	b	c	d	e
			Fishery						Fisher group				
Catch fewer fish than allowed													
Always	73		58	55	80	100	70		100	33	83	73	74
Sometimes	4		0	9	5	0	0		0	0	0	2	6
Never	16		25	36	11	0	15		0	67	0	14	20
Don't know	8		17	0	4	0	15		0	0	17	12	0
CLUSTER-SIMPROF group			a	a	a		a			a	a	a	a
As many fish as the limit allows													
Always	4		8	0	5	0	0		0	0	0	5	3
Sometimes	1		0	0	2	0	0		0	0	0	0	0
Never	85		83	100	82	100	85		100	67	83	81	94
Don't know	10		8	0	11	0	15		0	33	17	14	3
CLUSTER-SIMPROF group			a	a	a		a			a	a	a	a
More fish than allowed													
Always	0		0	0	0	0	0		0	0	0	0	0
Sometimes	1		0	0	2	0	0		0	0	0	0	0
Never	99		100	100	98	100	100		100	100	100	100	100
Don't know	0		0	0	0	0	0		0	0	0	0	0
CLUSTER-SIMPROF group			a	a	a		a			a	a	a	a
All of the above depending on the day													
Always	1		0	9	0	0	0		0	0	17	0	0
Sometimes	14		18	0	20	0	8		0	33	0	16	9
Never	74		73	82	67	100	85		100	67	50	70	89
Don't know	11		9	9	13	0	8		0	0	33	14	3
CLUSTER-SIMPROF group			a	a	a		a			a	b	a	a

Table S1.2.7. Perceived importance of (a) Blue Swimmer Crab and (b) Black Bream fishing to fishers that target those species and the percentage of fishers that would undertake different substitute activities if their target species could no longer be fished in the estuary they fish most regularly in. Percentages given for all fishers targeting the species (overall), for those fishers utilising a particular fishery and allocated to a fisher group. Values in both (a) and (b) shaded separately, with values in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries or fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

(a) Blue Swimmer Crabs	Overall		Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
			Fishery					Fisher group						
Compared to other types of fishing, how important is crabbing to you?														
Much more important	19		19	22	47	17		56	28	19	11	11	17	17
More important	27		27	31	5	50		11	28	28	32	22	24	17
The same importance	50		50	45	37	33		22	44	51	51	56	53	67
Less important	3		2	2	5	0		11	0	1	6	0	4	0
Much less important	1		1	0	5	0		0	0	1	0	11	3	0
CLUSTER-SIMPROF group			*a*	*a*	*b*			*a*	*b*	*b*	*b*	*b*	*b*	*b*
Compared to other types of outdoor recreation, how important is crabbing to you?														
Much more important	17		16	20	30	17		50	20	18	15	0	14	0
More important	30		32	37	35	67		10	32	35	31	40	20	33
The same importance	44		43	36	25	17		40	46	40	46	40	47	33
Less important	9		8	7	10	0		0	2	7	8	20	18	0
Much less important	1		0	1	0	0		0	0	0	0	0	1	33
CLUSTER-SIMPROF group			*a*	*a*	*a*			*a*	*b*	*b*	*b*	*b*	*b*	*c*
If crabbing was not available in the estuary where you fish most often, what would you most likely do instead?														
Fish for Blue Swimmer Crabs elsewhere	58		60	62	42	67		67	65	54	59	70	53	50
Fish a different species in the same estuary	19		20	17	32	17		11	15	20	17	20	25	0
Do a different water-based outdoor activity	15		14	14	16	17		22	15	22	9	0	10	33
Take on a different land-based outdoor activity	4		3	3	0	0		0	4	2	9	10	4	17
Loss of the fishery will not affect me	4		2	3	11	0		0	2	2	7	0	8	0
CLUSTER-SIMPROF group			*a*	*a*	*b*			*a*	*a*	*a*	*a*	*a*	*a*	*b*

| (b) Black Bream	Overall		Black.	Peel	Swan	Wilson	Other		a	b	c	d	e
			Fishery						Fisher group				
Compared to other types of fishing, how important is bream fishing to you?													
Much more important	23		8	27	22	100	26		100	100	33	22	74
More important	30		17	27	35	0	30		0	0	33	29	14
The same importance	43		58	45	42	0	41		0	0	33	42	11
Less important	3		17	0	0	0	4		0	0	0	5	0
Much less important	1		0	0	2	0	0		0	0	0	2	0
CLUSTER-SIMPROF group			*a*	*b*	*b*		*b*			*b*	*a*	*a*	*b*
Compared to other types of outdoor recreation, how important is bream fishing to you?													
Much more important	44		58	55	38	100	44		100	67	33	24	77
More important	37		17	18	42	0	44		0	33	33	49	20
The same importance	12		0	18	16	0	7		0	0	33	15	3
Less important	4		17	9	0	0	4		0	0	0	7	0
Much less important	3		8	0	4	0	0		0	0	0	5	0
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*			*a*	*a*	*a*	*a*
If bream fishing was not available in the estuary where you fish most often, what would you most likely do instead?													
Fish for Black Bream elsewhere	63		58	82	67	0	50		100	100	50	48	86
Fish a different species in the same estuary	30		33	9	27	100	38		0	0	17	43	11
Take on a different land-based outdoor activity	4		8	0	4	0	4		0	0	0	5	3
Do a different water-based outdoor activity	3		0	9	2	0	4		0	0	33	2	0
Loss of the fishery will not affect me	1		0	0	0	0	4		0	0	0	2	0
CLUSTER-SIMPROF group			*a*	*b*	*a*		*a*			*a*	*b*	*b*	*a*
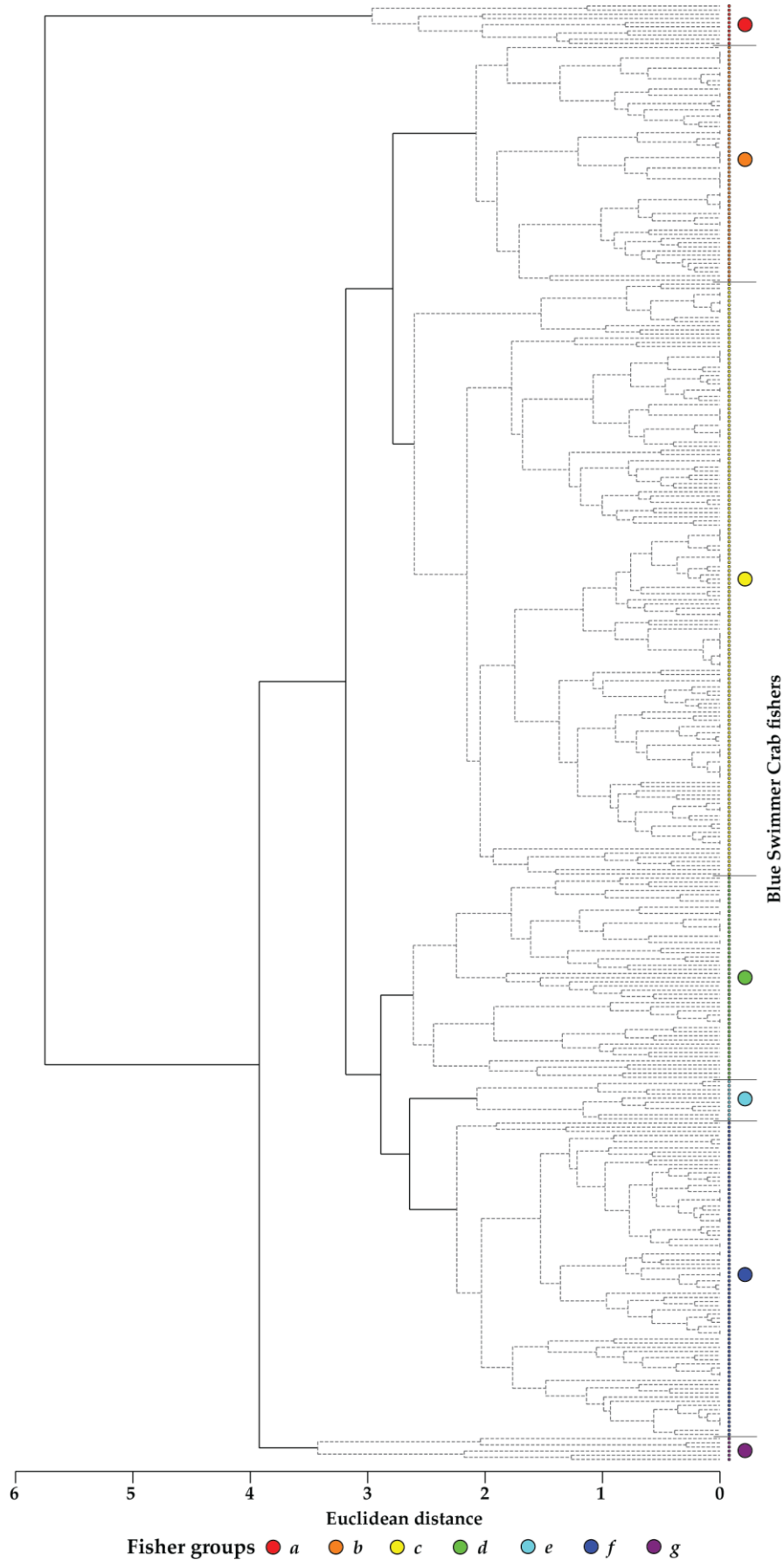
Figure S1.2.1. Dendrogram derived from CLUSTER-SIMPROF analysis of the five fisher characteristics of Blue Swimmer Crab fishers. Samples joined horizontal red line represent fishers that were shown by SIMPROF to have statistically similar fisher characteristics ($P > 0.01$), but to be significantly different from all those fishers in other fisher groups ($P < 0.01$).
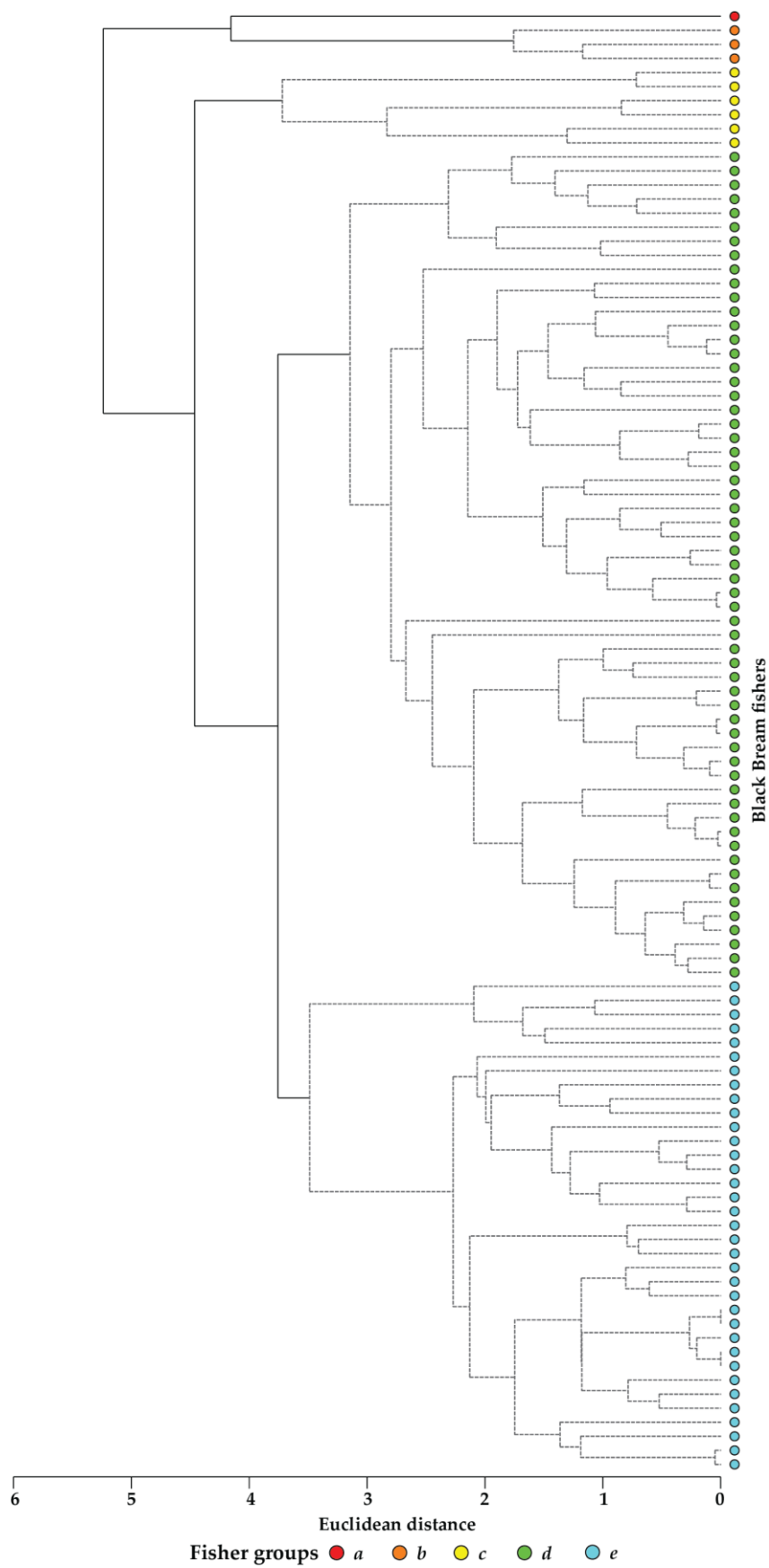
Fisher groups ● a ● b ● c ● d ● e ● f ● g

Figure S1.2.2. Dendrogram derived from CLUSTER-SIMPROF analysis of the seven fisher characteristics of Black Bream fishers. Samples joined by dashed horizontal red line represent fishers that were shown by SIMPROF to have statistically similar fisher characteristics ($P > 0.01$), but to be significantly different from all those fishers in other fisher groups ($P < 0.01$).
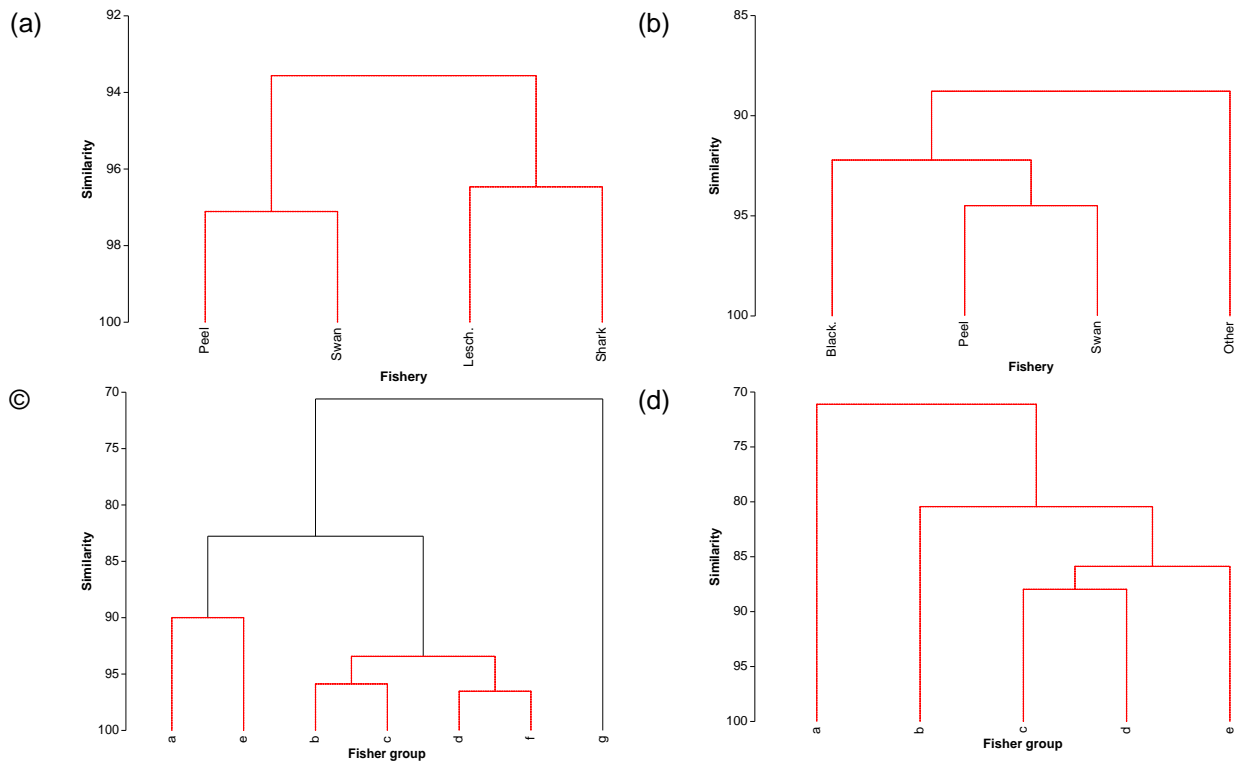
Figure S1.2.3. Dendrograms derived from CLUSTER-SIMPROF analysis of the motivations for fishing for (a, c) Blue Swimmer Crabs and (b,d) Black Bream by fisher operating in a particular (a,b) fishery and (c,d) belonging to a different fisher group (see Figures 1.2.2-1.2.5; Table 1.2.1). The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

Figure S1.2.4. Dendrograms derived from CLUSTER-SIMPROF analysis of the motivation ratings for fishing for (a,c) Blue Swimmer Crabs and (b,d) Black Bream by fisher operating in a particular (a,b) fishery and (c,d) belonging to a different fisher group (see Figures 1.2.2-1.2.5; Table 1.2.1). The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
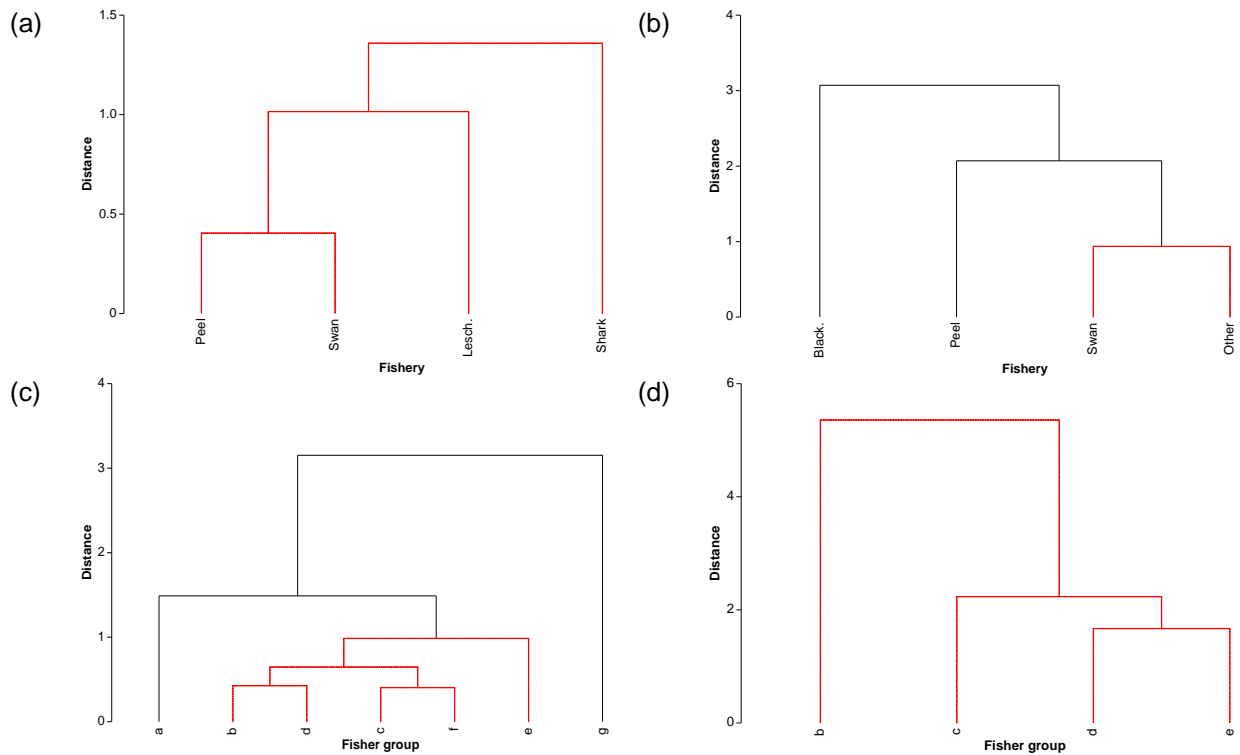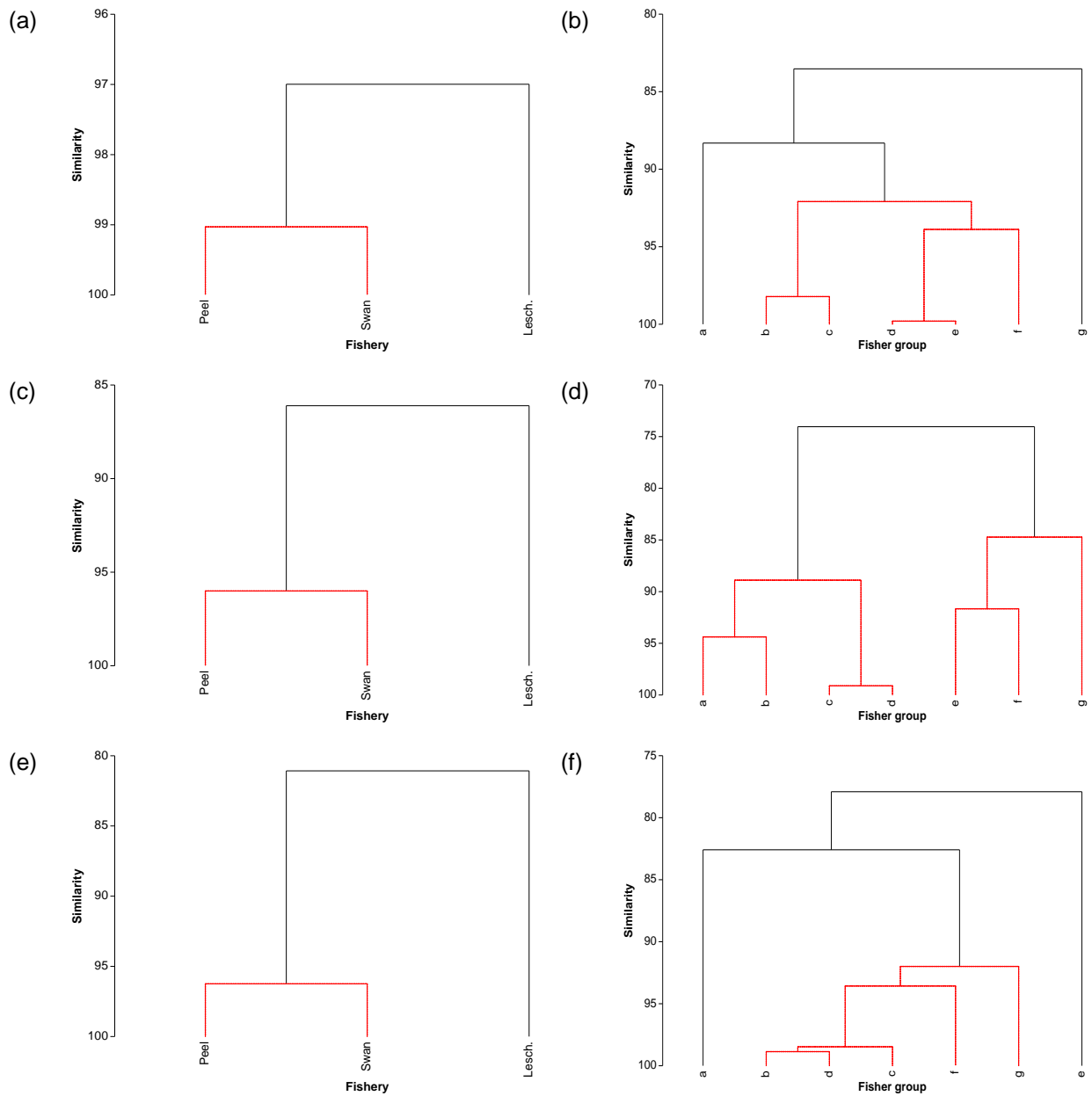
Figure S1.2.5. Dendrograms derived from CLUSTER-SIMPROF analysis of the fate of legal-sized Blue Swimmer Crabs (i.e. a,b = *eaten*; c,d = *released after capture* and e,f = *given away*) after capture by fishers operating in a particular (a,c,e) fishery and (b,d,f) belonging to a different fisher groups. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

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Figure S1.2.6. Dendrograms derived from CLUSTER-SIMPROF analysis of the fate of legal-sized Blue Swimmer Crabs (i.e. a,b = *eaten*; c,d = *released after capture* and e,f = *given away*) after capture by fishers operating in a particular (a,c,e) fishery and (b,d,f) belonging to a different fisher groups. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
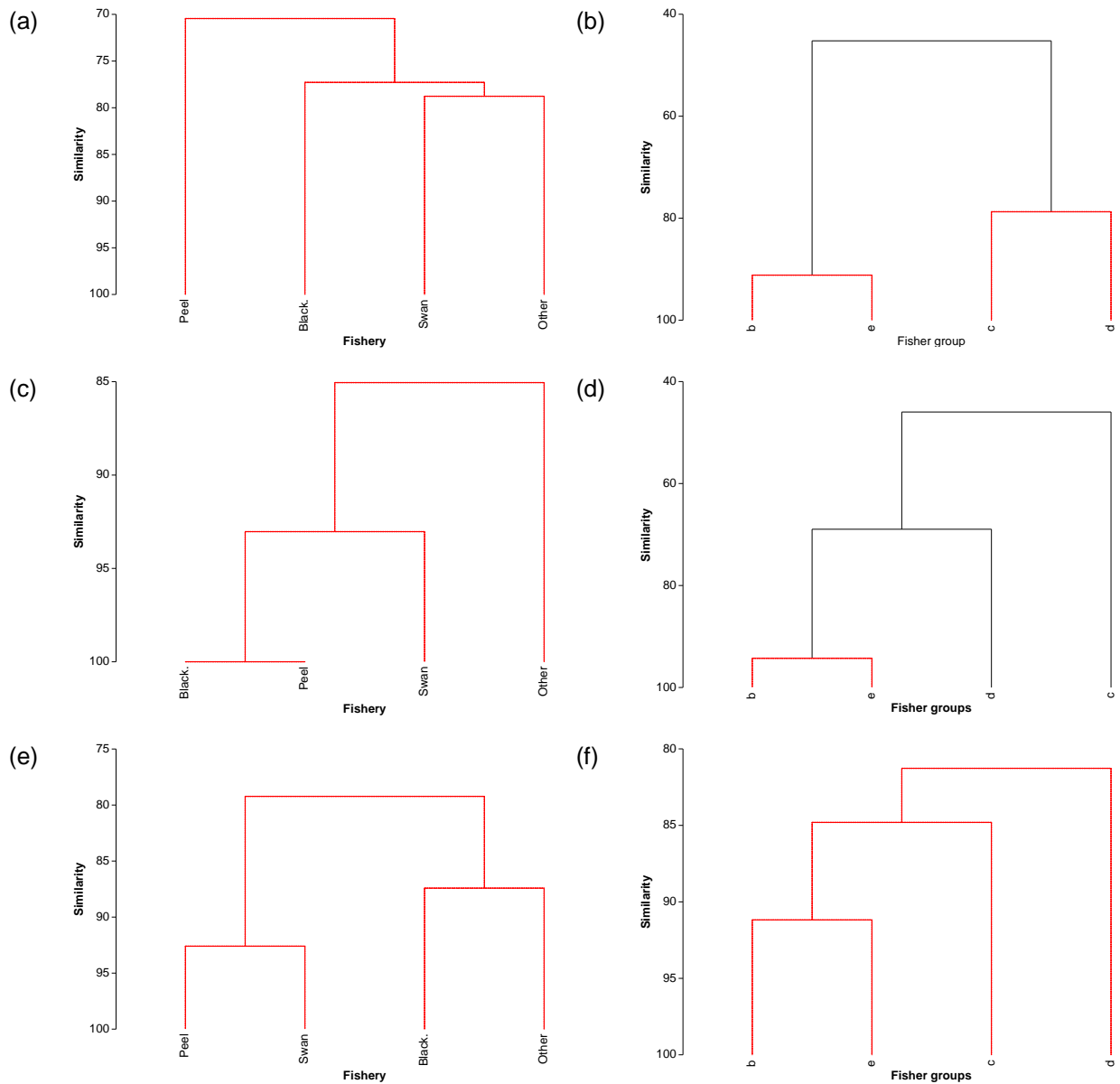
Figure S1.2.7. Dendrograms derived from CLUSTER-SIMPROF analysis on how often Blue Swimmer Crab fishers in a particular (a,c,e) fishery and (b,d,f) belonging to a different fisher groups obtain different sized catches. (a,b) *Catch fewer crabs than allowed*; (c,d) *As many crabs as the limit allows*; (e,f) *More crabs than allowed*; (e,f) *All of the above depending on the day*. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
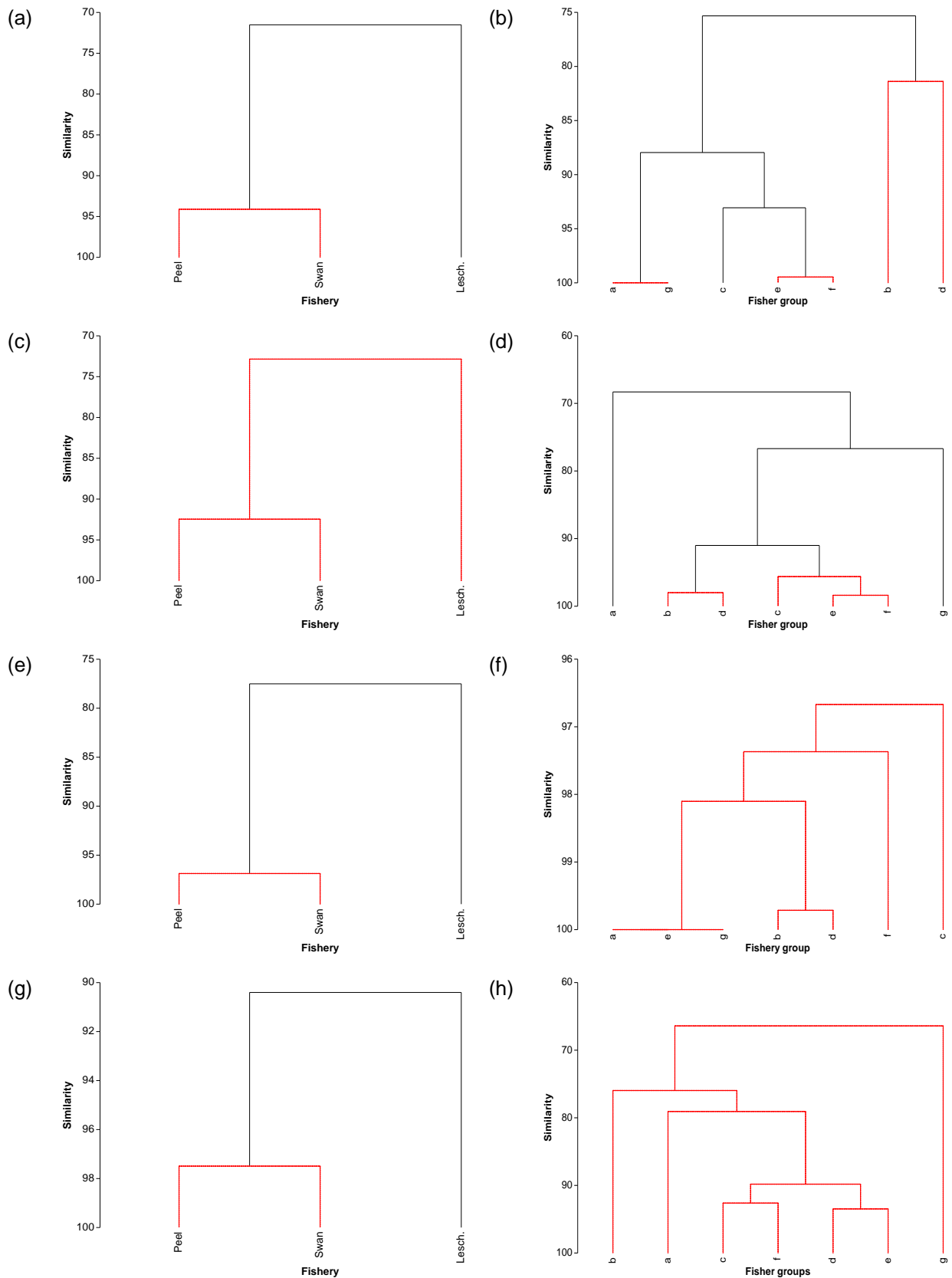
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Figure S1.2.8. Dendrograms derived from CLUSTER-SIMPROF analysis on how often Black Bream fishers in a particular (a,c,e) fishery and (b,d,f) belonging to a different fisher groups obtain different sized catches. (a,b) *Catch fewer fish than allowed*; (c,d) *As many fish as the limit allows*; (e,f) *More fish than allowed*; (e,f) *All of the above depending on the day*. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
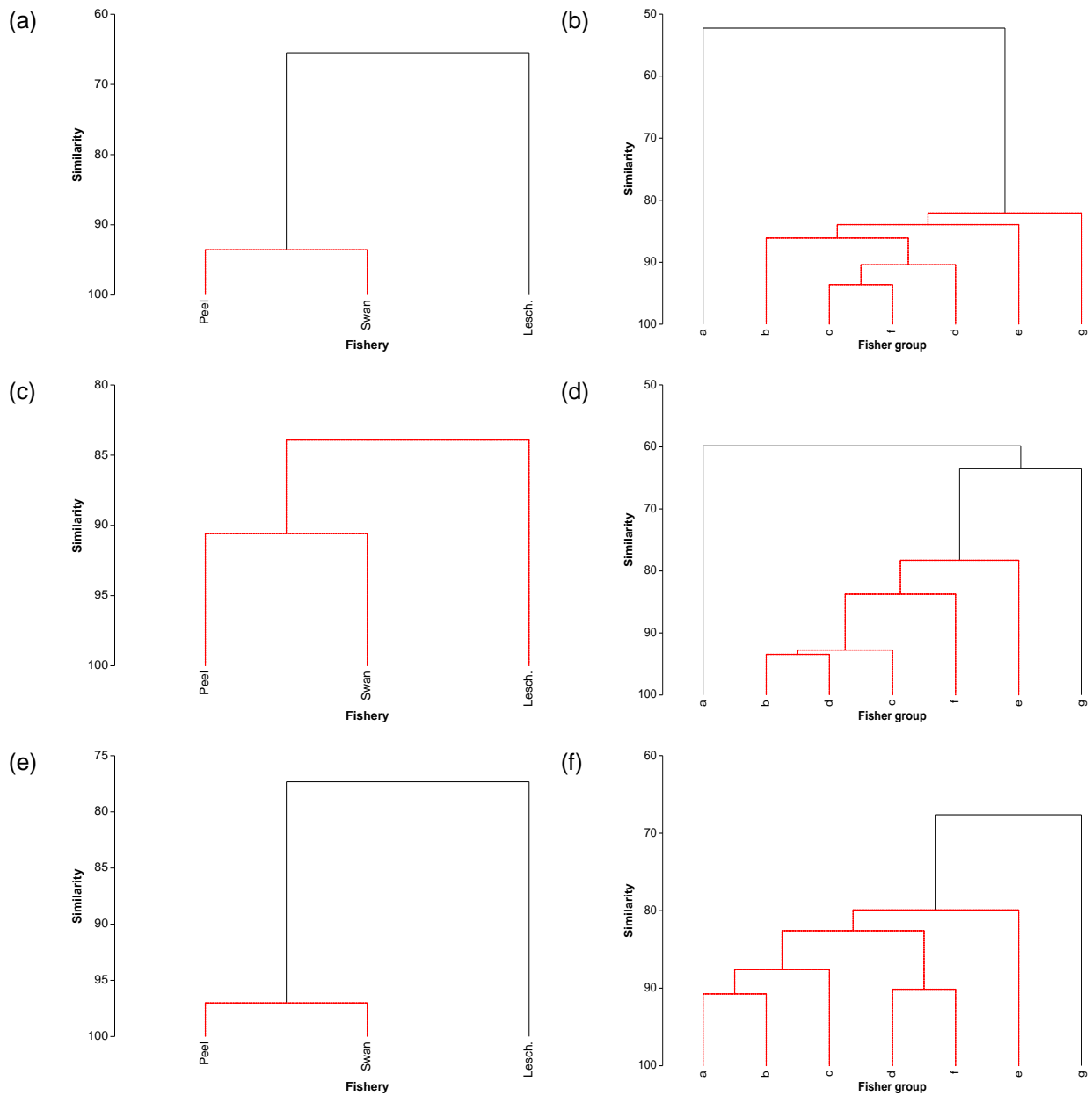
Figure S1.2.9. Dendrograms derived from CLUSTER-SIMPROF analysis on the importance of Blue Swimmer Crab fishing for fishers operating in a particular (a,c,e) fishery and (b,d,f) belonging to a different fisher group. (a,b) *compared to other types of fishing, how important is crabbing to you*; (c,d) *compared to other types of outdoor recreation, how important is crabbing to you*; (e,f) *if crabbing was not available in the estuary where you fish most often, what would you most likely do instead*. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
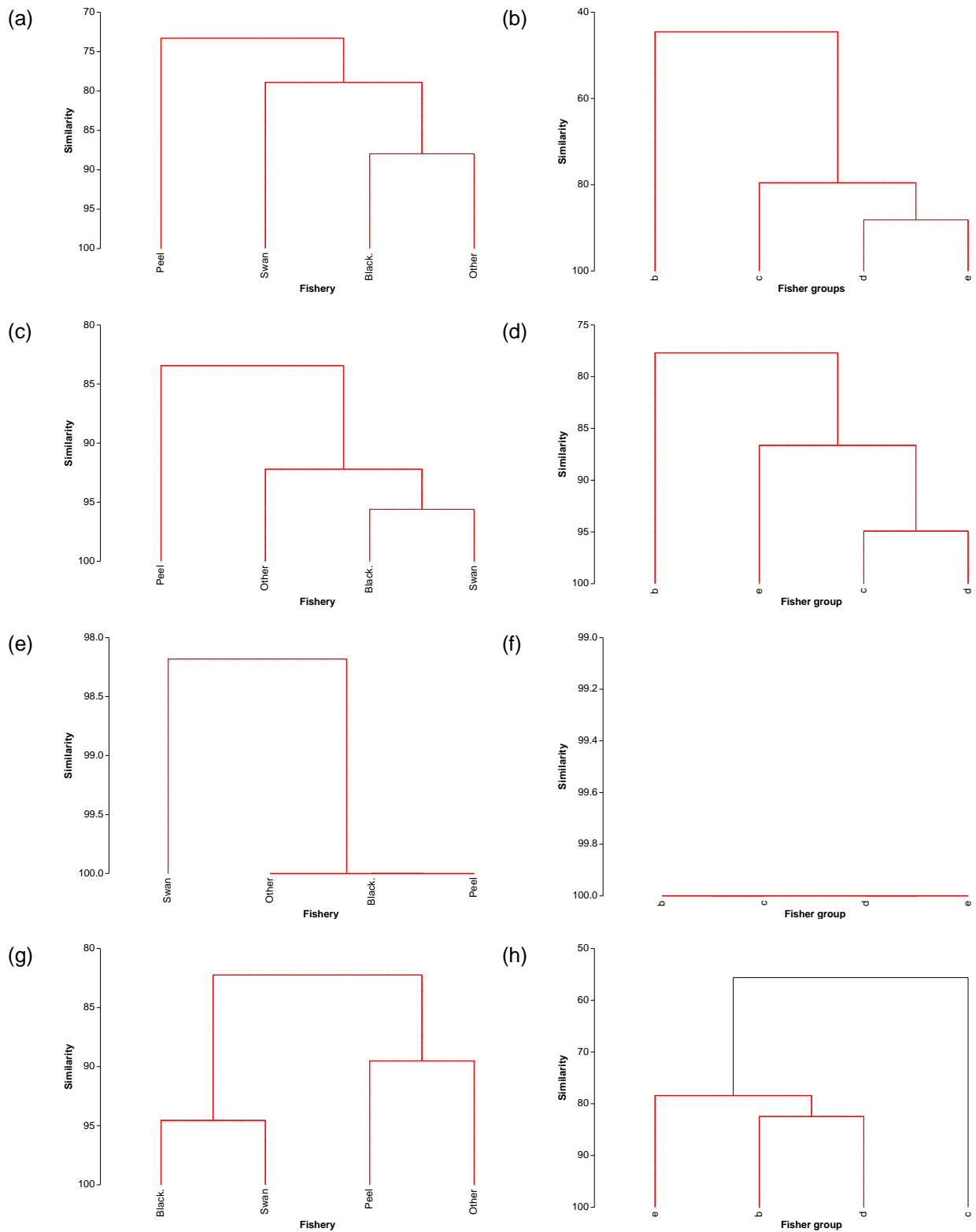
17
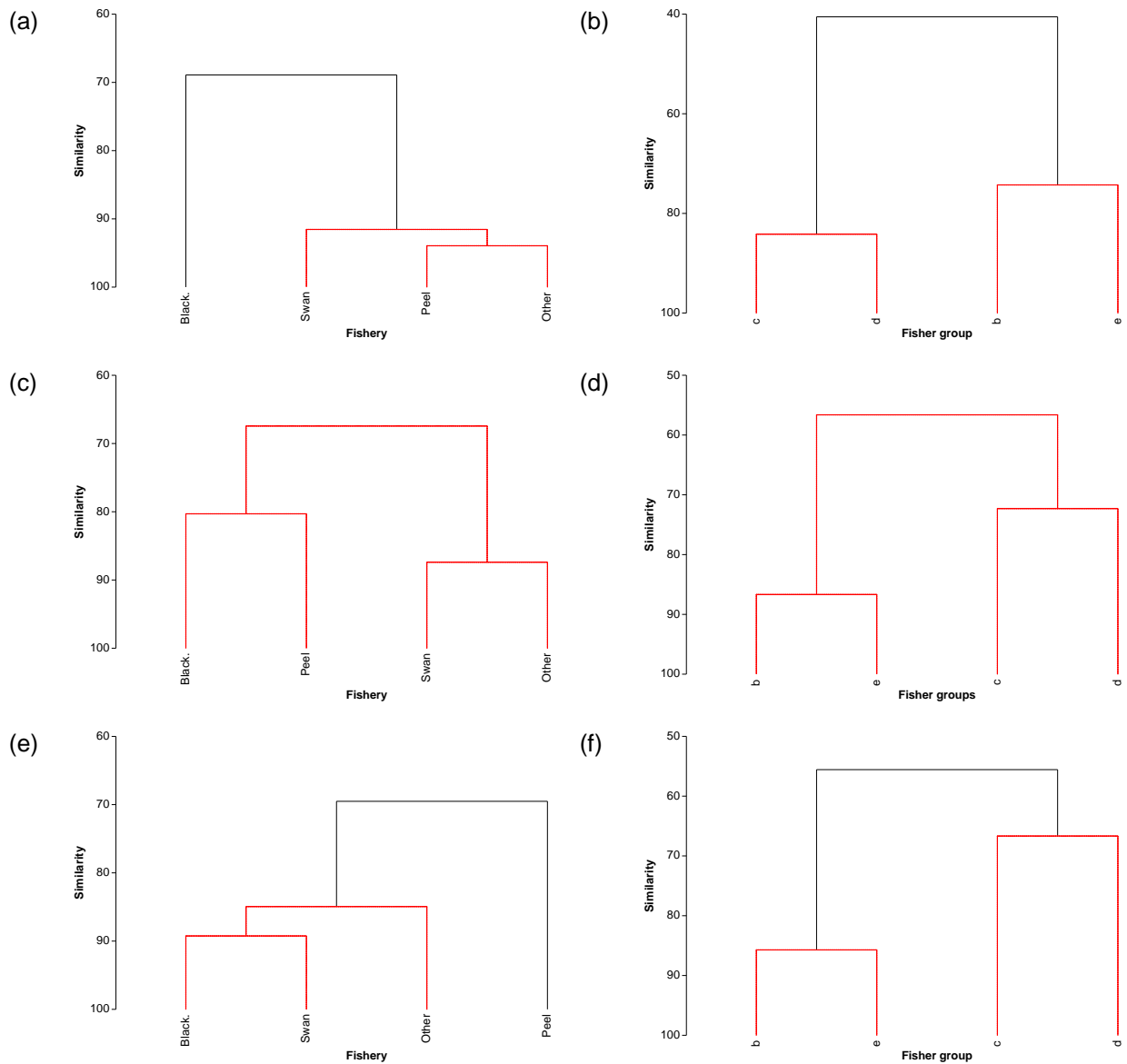
Figure S1.2.10. Dendrograms derived from CLUSTER-SIMPROF analysis on the importance of Black Bream fishing for fishers operating in a particular (a,c,e) fishery and (b,d,f) belonging to a different fisher group. (a,b) *compared to other types of fishing, how important is bream fishing to you*; (c,d) *compared to other types of outdoor recreation, how important is bream fishing to you*; (e,f) *if bream fishing was not available in the estuary where you fish most often, what would you most likely do instead*. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

# 1.4. Selecting from the fisheries managers tool-box: recreational and commercial fishers' views of stock enhancement and other management options

Table S1.4.1. Percentage of recreational Blue Swimmer Crab fishers that agreed, disagreed or were unsure about the effects of potential issues on their chosen fishery. Percentages given for all fishers (overall; see also Figure 1.4.1a) and for those fishers utilising a particular fishery. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different. Issues ranked by the percentage of respondents who agreed. Peel = Peel-Harvey Estuary; Swan = Swan-Canning Estuary; Lesch. = Leschenault Estuary; Shark = Shark Bay.

Blue Swimmer Crabs			Fishery			
	Overall		Peel	Swan	Lesch.	Shark
Taking of undersized crabs						
Agree	75		80	67	83	83
Unsure	16		12	19	14	17
Disagree	9		7	14	3	0
CLUSTER-SIMPROF group			b	a	c	c
Overfishing of stocks						
Agree	68		72	69	62	100
Unsure	20		17	19	34	0
Disagree	12		11	12	3	0
CLUSTER-SIMPROF group			a	a	b	c
Exceeding the bag limit						
Agree	68		71	65	72	33
Unsure	22		19	21	24	67
Disagree	10		9	15	3	0
CLUSTER-SIMPROF group			a	a	a	b
Recreational fishing						
Agree	62		64	62	55	67
Unsure	27		25	25	34	33
Disagree	11		11	13	10	0
CLUSTER-SIMPROF group			a	a	a	b
Commercial fishing						
Agree	59		62	59	55	67
Unsure	32		30	30	41	17
Disagree	9		8	11	3	17
CLUSTER-SIMPROF group			a	a	b	c
Lack of education						
Agree	47		49	52	38	67
Unsure	18		15	15	31	17
Disagree	35		36	33	31	17
CLUSTER-SIMPROF group			a	a	b	c
The closed season is too short						
Agree	42		47	36	38	67
Unsure	25		24	27	34	17
Disagree	33		30	38	28	17
CLUSTER-SIMPROF group			a	a	a	b
Recreational fishing pressure is irrelevant compared to commercial pressure						
Agree	25		24	27	21	33
Unsure	38		39	32	48	33
Disagree	37		37	41	31	33
CLUSTER-SIMPROF group			a	a	a	a
Pollution						
Agree	23		20	27	36	0
Unsure	44		41	42	43	50
Disagree	33		38	31	21	50
CLUSTER-SIMPROF group			a	a	b	c
Climate change						
Agree	23		21	26	24	67
Unsure	53		55	49	52	0
Disagree	24		24	25	24	33
CLUSTER-SIMPROF group			a	a	a	b
There are no issues affecting the fishery						
Agree	2		2	2	3	0
Unsure	10		9	10	17	0
Disagree	88		89	88	79	100
CLUSTER-SIMPROF group			a	a	a	a

Table S1.4.2. Percentage of recreational Black Bream fishers that agreed, disagreed or were unsure about the effects of potential issues on their chosen fishery. Percentages given for all fishers (overall; see also Figure 1.4.1b) and for those fishers utilising a particular fishery. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different. Issues ranked by the percentage of respondents who agreed. Black = Blackwood River Estuary; Peel = Peel-Harvey Estuary; Swan = Swan-Canning Estuary; Wilson = Wilson Inlet. Other = other estuaries, i.e. not one of the system named, e.g. Beaufort Inlet or Stokes Inlet.

Black Bream	Overall		Black.	Peel	Swan	Wilson	Other
Taking of undersized fish							
Agree	70		31	79	86	100	46
Unsure	23		46	14	12	0	43
Disagree	7		23	7	2	0	11
CLUSTER-SIMPROF group			*b*	*a*	*a*		*b*
Lack of education							
Agree	67		54	79	71	0	61
Unsure	20		31	21	15	100	21
Disagree	13		15	0	14	0	18
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*
Fishing pressure and overfishing							
Agree	66		69	77	73	0	46
Unsure	19		23	15	17	100	21
Disagree	15		8	8	10	0	32
CLUSTER-SIMPROF group			*a*	*a*	*a*		*b*
Exceeding the bag limit							
Agree	57		46	64	66	100	39
Unsure	33		38	36	29	0	39
Disagree	10		15	0	5	0	21
CLUSTER-SIMPROF group			*a*	*a*	*b*		*c*
Pollution							
Agree	49		31	71	51	0	43
Unsure	29		31	14	36	100	18
Disagree	23		38	14	14	0	39
CLUSTER-SIMPROF group			*b*	*a*	*a*		*b*
Commercial fishing							
Agree	46		69	71	44	0	29
Unsure	39		23	14	46	0	46
Disagree	15		8	14	10	100	25
CLUSTER-SIMPROF group			*a*	*a*	*b*		*b*
Poor management							
Agree	43		62	64	44	0	25
Unsure	13		8	7	15	0	14
Disagree	43		31	29	41	100	61
CLUSTER-SIMPROF group			*a*	*a*	*a*		
Recreational fishing							
Agree	43		23	43	47	0	43
Unsure	28		23	50	25	0	25
Disagree	30		54	7	27	100	32
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*
Climate change							
Agree	19		31	14	19	0	18
Unsure	56		46	57	58	100	54
Disagree	25		23	29	24	0	29
CLUSTER-SIMPROF group			*a*	*b*	*b*		*b*
There are no issues affecting the fishery							
Agree	3		0	0	0	0	11
Unsure	12		23	7	10	0	14
Disagree	85		77	93	90	100	75
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*

Table S1.4.3. Percentage of recreational Blue Swimmer Crab fishers that considered that measures of their catches and fishing trips had changed. Percentages given for all fishers (overall) and for those fishers utilising a particular fishery. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

Blue Swimmer Crabs			Fishery			
	Overall		Peel	Swan	Lesch.	Shark
Crab size						
Increased	5		5	5	10	0
Not changed	39		38	42	20	0
Decreased	56		57	53	70	100
CLUSTER-SIMPROF group			*a*	*a*	*b*	*c*
Crab abundance						
Increased	6		7	4	10	0
Not changed	25		23	27	10	17
Decreased	69		70	69	80	83
CLUSTER-SIMPROF group			*a*	*a*	*a*	*a*
Abundance of other species caught						
Increased	10		7	11	10	0
Not changed	56		60	52	50	67
Decreased	34		34	37	40	33
CLUSTER-SIMPROF group			*a*	*b*	*b*	*a*
Number of people fishing						
Increased	81		84	82	90	83
Not changed	17		15	16	5	17
Decreased	2		1	2	5	0
CLUSTER-SIMPROF group			*a*	*a*	*b*	*a*
Number of sites I fish regularly						
Increased	18		19	23	15	0
Not changed	56		54	51	60	67
Decreased	26		27	25	25	33
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*
Fishing depth						
Increased	23		22	26	15	33
Not changed	75		75	72	80	67
Decreased	3		3	2	5	0
CLUSTER-SIMPROF group			*a*	*a*	*b*	*c*
Time spent fishing						
Increased	59		62	60	75	100
Not changed	30		28	27	25	0
Decreased	11		10	13	0	0
CLUSTER-SIMPROF group			*a*	*a*	*b*	*c*
Distance travelled						
Increased	40		44	38	50	33
Not changed	58		56	59	50	67
Decreased	2		0	3	0	0
CLUSTER-SIMPROF group			*a*	*a*	*a*	*a*

Table S1.4.4. Percentage of recreational Black Bream fishers that considered that measures of their catches and fishing trips had changed. Percentages given for all fishers (overall) and for those fishers utilising a particular fishery. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

Black Bream			Fishery				
	Overall		Black.	Peel	Swan	Wilson	Other
Black Bream size							
Increased	5		13	3	0	0	5
Not changed	35		6	60	14	100	33
Decreased	60		81	37	86	0	61
CLUSTER-SIMPROF group			*a*	*b*	*a*		*b*
Black Bream abundance							
Increased	13		6	14	16	100	7
Not changed	31		13	7	30	0	53
Decreased	56		81	79	56	0	37
CLUSTER-SIMPROF group			*a*	*a*	*a*		*B*
Abundance of other species caught							
Increased	21		25	21	14	100	21
Not changed	52		69	52	43	0	50
Decreased	27		6	28	43	0	29
CLUSTER-SIMPROF group			*a*	*b*	*b*		*C*
Number of people fishing							
Increased	63		25	55	64	100	78
Not changed	32		56	41	36	0	19
Decreased	5		19	3	0	0	3
CLUSTER-SIMPROF group			*a*	*b*	*b*		*c*
Number of sites I fish regularly							
Increased	38		31	34	29	0	45
Not changed	48		38	55	64	100	41
Decreased	14		31	10	7	0	14
CLUSTER-SIMPROF group			*a*	*a*	*a*		*b*
Distance travelled							
Increased	46		60	21	50	0	55
Not changed	53		40	75	50	100	45
Decreased	1		0	4	0	0	0
CLUSTER-SIMPROF group			*a*	*b*	*a*		*b*

Table S1.4.5. Percentage of recreational Blue Swimmer Crab fishers that agreed, disagreed or were unsure about aspects of crab fishery management. Percentages given for all fishers (overall) and for those fishers utilising a particular fishery. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

Blue Swimmer Crabs			Fishery			
	Overall		Peel	Swan	Lesch.	Shark
The fishery is well managed						
Agree	27		25	36	0	17
Unsure	34		30	30	50	33
Disagree	39		45	34	50	50
CLUSTER-SIMPROF group			*a*	*b*	*c*	*a*
Stocks need to be better managed						
Agree	69		70	66	85	83
Unsure	22		21	24	15	17
Disagree	9		8	10	0	0
CLUSTER-SIMPROF group			*a*	*a*	*b*	*b*
I am happy with the number of crabs						
Agree	34		33	38	33	33
Unsure	19		19	18	11	0
Disagree	47		49	44	56	67
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*
I am happy with the size of crabs						
Agree	39		33	47	48	0
Unsure	14		12	11	4	17
Disagree	48		56	41	48	83
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*

Table S1.4.6. Percentage of recreational Black Bream that fishers agreed, disagreed or were unsure about aspects of crab fishery management. Percentages given for all fishers (overall) and for those fishers utilising a particular fishery. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

Black Bream			Fishery				
	Overall		Black.	Peel	Swan	Wilson	Other
The fishery is well managed							
Agree	14		8	7	16	100	14
Unsure	40		31	14	47	0	39
Disagree	46		62	79	38	0	46
CLUSTER-SIMPROF group			*a*	*a*	*b*		*b*
Stocks need to be better managed							
Agree	74		85	86	74	0	64
Unsure	24		15	14	24	100	7
Disagree	3		0	0	2	0	29
CLUSTER-SIMPROF group			*a*	*a*	*a*		*b*
I am happy with the number of Black Bream							
Agree	26		15	14	19	100	50
Unsure	12		23	0	16	0	43
Disagree	61		62	86	66	0	7
CLUSTER-SIMPROF group			*a*	*a*	*a*		*b*
I am happy with the size of Black Bream							
Agree	22		8	14	12	100	48
Unsure	15		23	21	16	0	45
Disagree	63		69	64	72	0	7
CLUSTER-SIMPROF group			*a*	*a*	*a*		*b*

Table S1.4.7. Percentage of recreational Blue Swimmer Crab fishers that chose a management acceptability rating for each of the nine options that currently are or could potentially be used to manage Blue Swimmer Crab fisheries in south-western Australia. Mean rating values (very unacceptable = 1 to very acceptable = 5) are also provided. Percentages and means are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries and fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different. Management options ordered by mean rating (i.e. acceptability).

Blue Swimmer Crabs	Overall		Fishery					Fisher group						
			Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
Minimum size limit														
Very acceptable	84		84	84	81	50		100	84	82	84	80	88	100
Acceptable	10		9	8	19	33		0	4	11	14	20	11	0
Neutral	3		3	5	0	0		0	4	3	2	0	1	0
Unacceptable	1		1	1	0	0		0	2	1	0	0	0	0
Very unacceptable	2		3	2	0	17		0	7	4	0	0	0	0
Average	**4.72**		**4.71**	**4.72**	**4.81**	**4.00**		**5.00**	**4.55**	**4.65**	**4.82**	**4.80**	**4.87**	**5.00**
CLUSTER-SIMPROF group			*a*	*a*	*b*	*c*		*a*	*b*	*b*	*b*	*b*	*b*	*a*
Temporal closure														
Very acceptable	63		69	60	48	33		90	67	57	61	60	80	50
Acceptable	28		23	29	48	33		10	25	33	24	30	15	33
Neutral	5		3	5	0	0		0	4	5	6	10	3	17
Unacceptable	2		2	2	4	17		0	0	2	6	0	0	0
Very unacceptable	3		3	3	0	17		0	5	3	2	0	3	0
Average	**4.46**		**4.52**	**4.41**	**4.41**	**3.50**		**4.90**	**4.47**	**4.39**	**4.37**	**4.50**	**4.69**	**4.33**
CLUSTER-SIMPROF group			*a*	*a*	*b*	*c*		*a*	*b*	*b*	*b*	*b*	*a*	*c*
Fisher surveillance														
Very acceptable	66		71	66	48	33		80	67	65	79	30	69	67
Acceptable	21		19	19	26	33		0	26	19	13	70	20	17
Neutral	7		3	9	15	17		10	2	8	6	0	7	17
Unacceptable	3		3	4	4	0		10	4	3	2	0	1	0
Very unacceptable	3		4	3	7	17		0	2	5	0	0	3	0
Average	**4.44**		**4.50**	**4.41**	**4.04**	**3.67**		**4.50**	**4.53**	**4.37**	**4.69**	**4.30**	**4.52**	**4.50**
CLUSTER-SIMPROF group			*a*	*a*	*b*	*b*		*a*	*a*	*a*	*a*	*a*	*a*	*a*
Fisher education														
Very acceptable	58		58	58	48	17		70	63	49	67	60	63	83
Acceptable	28		29	29	33	50		10	23	36	18	30	24	0
Neutral	10		7	8	19	17		20	9	10	10	10	12	17
Unacceptable	2		3	2	0	17		0	4	2	2	0	1	0
Very unacceptable	2		2	2	0	0		0	2	3	2	0	0	0
Average	**4.38**		**4.39**	**4.39**	**4.30**	**3.67**		**4.50**	**4.42**	**4.26**	**4.47**	**4.50**	**4.48**	**4.67**
CLUSTER-SIMPROF group			*a*	*a*	*b*	*c*		*a*	*b*	*b*	*b*	*b*	*b*	*a*
Stock enhancement														
Very acceptable	60		59	64	59	50		60	58	64	57	50	56	67
Acceptable	21		22	21	11	17		10	26	21	12	20	28	0
Neutral	14		13	10	22	17		20	12	10	18	30	11	33
Unacceptable	3		2	2	0	17		10	2	4	2	0	3	0
Very unacceptable	3		3	2	7	0		0	2	2	10	0	3	0
Average	**4.33**		**4.32**	**4.42**	**4.15**	**4.00**		**4.20**	**4.37**	**4.40**	**4.04**	**4.20**	**4.32**	**4.33**
CLUSTER-SIMPROF group			*a*	*a*	*a*	*a*		*a*	*a*	*a*	*a*	*a*	*a*	*a*
Bag limit														
Very acceptable	59		61	61	56	33		90	54	60	53	40	68	67
Acceptable	26		22	25	37	33		10	28	23	20	30	25	33
Neutral	8		8	7	0	0		0	7	7	16	10	3	0
Unacceptable	5		5	5	0	33		0	9	5	2	20	3	0
Very unacceptable	3		4	2	7	0		0	2	4	8	0	1	0
Average	**4.32**		**4.32**	**4.39**	**4.33**	**3.67**		**4.90**	**4.25**	**4.30**	**4.08**	**3.90**	**4.56**	**4.67**
CLUSTER-SIMPROF group			*a*	*a*	*b*	*c*		*a*	*b*	*b*	*c*	*d*	*b*	*b*
Gear restriction														
Very acceptable	38		38	43	33	17		60	33	31	29	30	44	67
Acceptable	28		27	27	33	67		10	30	35	29	30	28	17
Neutral	17		19	12	11	0		0	12	18	22	10	17	17
Unacceptable	11		12	10	15	17		10	16	10	12	30	8	0
Very unacceptable	6		5	7	7	0		20	9	6	8	0	3	0
Average	**3.81**		**3.80**	**3.88**	**3.70**	**3.83**		**3.80**	**3.63**	**3.77**	**3.57**	**3.60**	**4.03**	**4.50**
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*		*a*	*b*	*b*	*b*	*b*	*b*	*a*

Table S1.4.7 continued. Percentage of recreational Blue Swimmer Crab fishers that chose a management acceptability rating for each of the nine options that currently are or could potentially be used to manage Blue Swimmer Crab fisheries in south-western Australia. Mean rating values (very unacceptable = 1 to very acceptable = 5) are also provided. Percentages and means are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries and fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different. Management options ordered by mean rating (i.e. acceptability).

Blue Swimmer Crabs	Overall		Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
Spatial closure														
Very acceptable	33		30	35	33	33		30	32	28	29	30	51	33
Acceptable	27		26	29	22	17		20	21	33	24	50	24	50
Neutral	19		20	18	15	17		20	20	17	24	20	16	17
Unacceptable	12		14	10	19	33		20	14	13	6	0	9	0
Very unacceptable	8		11	8	11	0		10	13	10	16	0	0	0
Average	**3.66**		**3.51**	**3.72**	**3.48**	**3.50**		**3.40**	**3.46**	**3.55**	**3.43**	**4.10**	**4.16**	**4.17**
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*		*b*	*b*	*b*	*b*	*b*	*b*	*a*
Maximum size limit														
Very acceptable	15		13	19	19	0		10	18	16	10	20	17	17
Acceptable	9		7	10	4	0		10	5	5	10	30	16	0
Neutral	32		32	27	33	67		20	27	30	35	20	36	67
Unacceptable	25		27	23	19	33		30	25	28	18	20	25	0
Very unacceptable	20		22	21	26	0		30	24	21	27	10	5	17
Average	**2.75**		**2.63**	**2.84**	**2.70**	**2.67**		**2.40**	**2.69**	**2.66**	**2.59**	**3.30**	**3.15**	**3.00**
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*		*a*	*a*	*a*	*a*	*a*	*a*	*b*

Table S1.4.8. Percentage of recreational Black Bream fishers that chose a management acceptability rating for each of the ten options that currently are or could potentially be used to manage Black Bream fisheries in south-western Australia. Mean rating values (very unacceptable = 1 to very acceptable = 5) are also provided. Percentages and means are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below for fisheries only. Those with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different. No tested was done on fishery groups due to the low number of responses from fishers in some groups. Management options ordered by mean rating (i.e. acceptability).

Black Bream	Overall		Black	Peel	Swan	Wilson	Other		a	b	c	d	e
Minimum size limit													
Very acceptable	78		92	71	79	100	72		0	100	67	81	77
Acceptable	13		8	14	12	0	17		100	0	33	10	11
Neutral	2		0	0	4	0	0		0	0	0	0	6
Unacceptable	3		0	7	2	0	3		0	0	0	5	0
Very unacceptable	4		0	7	4	0	7		0	0	0	3	6
Average	**4.58**		**4.92**	**4.36**	**4.61**	**5.00**	**4.45**		**4.00**	**5.00**	**4.67**	**4.61**	**4.54**
CLUSTER-SIMPROF group			*a*	*c*	*b*		*c*						
Stock enhancement													
Very acceptable	73		75	86	70	0	72		100	100	50	66	86
Acceptable	18		8	7	23	100	14		0	0	0	22	11
Neutral	7		17	7	4	0	10		0	0	50	8	0
Unacceptable	0		0	0	0	0	0		0	0	0	0	0
Very unacceptable	3		0	0	4	0	3		0	0	0	3	3
Average	**4.58**		**4.58**	**4.79**	**4.56**	**4.00**	**4.52**		**5.00**	**5.00**	**4.00**	**4.47**	**4.77**
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*						
Fisher education													
Very acceptable	63		67	79	52	100	72		0	100	50	58	68
Acceptable	27		8	21	36	0	21		100	0	50	29	21
Neutral	8		25	0	9	0	3		0	0	0	10	9
Unacceptable	0		0	0	0	0	0		0	0	0	0	0
Very unacceptable	3		0	0	4	0	3		0	0	0	3	3
Average	**4.46**		**4.42**	**4.79**	**4.32**	**5.00**	**4.59**		**4.00**	**5.00**	**4.50**	**4.37**	**4.50**
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*						
Maximum size limit													
Very acceptable	67		67	79	67	100	62		0	100	50	63	77
Acceptable	17		8	7	18	0	24		100	0	17	20	11
Neutral	9		25	7	11	0	0		0	0	17	8	9
Unacceptable	3		0	7	0	0	7		0	0	17	3	0
Very unacceptable	4		0	0	5	0	7		0	0	0	5	3
Average	**4.40**		**4.42**	**4.57**	**4.40**	**5.00**	**4.28**		**4.00**	**5.00**	**4.00**	**4.32**	**4.60**
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*						
Restricting commercial fishing													
Very acceptable	56		67	86	49	0	52		0	100	33	49	69
Acceptable	26		25	7	28	100	28		100	0	17	27	20
Neutral	16		8	7	19	0	17		0	0	50	20	9
Unacceptable	1		0	0	0	0	3		0	0	0	0	3
Very unacceptable	2		0	0	4	0	0		0	0	0	3	0
Average	**4.33**		**4.58**	**4.79**	**4.19**	**4.00**	**4.28**		**4.00**	**5.00**	**3.83**	**4.19**	**4.54**
CLUSTER-SIMPROF group			*a*	*b*	*a*		*a*						
Fisher surveillance													
Very acceptable	58		58	93	54	100	45		0	100	67	47	71
Acceptable	27		17	7	32	0	34		0	0	17	32	20
Neutral	7		17	0	9	0	3		0	0	0	10	6
Unacceptable	3		0	0	0	0	10		100	0	17	2	0
Very unacceptable	5		8	0	5	0	7		0	0	0	8	3
Average	**4.29**		**4.17**	**4.93**	**4.30**	**5.00**	**4.00**		**2.00**	**5.00**	**4.33**	**4.08**	**4.57**
CLUSTER-SIMPROF group			*a*	*b*	*a*		*a*						
Bag limit													
Very acceptable	58		50	36	65	0	59		0	100	50	61	60
Acceptable	17		17	21	14	0	21		100	0	50	17	9
Neutral	11		33	0	9	100	7		0	0	0	8	11
Unacceptable	6		0	0	9	0	7		0	0	0	5	11
Very unacceptable	9		0	43	4	0	7		0	0	0	8	9
Average	**4.08**		**4.17**	**3.07**	**4.28**	**3.00**	**4.17**		**4.00**	**5.00**	**4.50**	**4.17**	**4.00**
CLUSTER-SIMPROF group			*b*	*a*	*c*		*c*						

Table S1.4.8 continued. Percentage of recreational Black Bream fishers that chose a management acceptability rating for each of the ten options that currently are or could potentially be used to manage Black Bream fisheries in south-western Australia. Mean rating values (very unacceptable = 1 to very acceptable = 5) are also provided. Percentages and means are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below for fisheries only. Those with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different. No tested was done on fishery groups due to the low number of responses from fishers in some groups. Management options ordered by mean rating (i.e. acceptability).

Black Bream	Overall		Fishery						Fisher group				
			Black	Peel	Swan	Wilson	Other		a	b	c	d	e
Spatial closure													
Very acceptable	8		17	21	7	0	0		0	0	0	8	11
Acceptable	28		17	36	26	0	34		0	0	33	31	26
Neutral	27		25	14	33	100	17		100	33	0	25	29
Unacceptable	16		25	7	16	0	17		0	33	17	20	9
Very unacceptable	21		17	21	18	0	31		0	33	50	15	26
Average	2.86		2.92	3.29	2.89	3.00	2.55		3.00	2.00	2.17	2.97	2.89
CLUSTER-SIMPROF group			a	a	a		a						
Temporal closure													
Very acceptable	13		42	36	7	0	3		0	0	17	15	14
Acceptable	17		0	0	21	0	24		100	0	0	19	14
Neutral	21		25	21	18	0	28		0	67	50	19	23
Unacceptable	24		17	29	28	0	17		0	0	33	22	20
Very unacceptable	25		17	14	26	100	28		0	33	0	25	29
Average	2.70		3.33	3.14	2.54	1.00	2.59		4.00	2.33	3.00	2.76	2.66
CLUSTER-SIMPROF group			a	a	b		b						
Restricting recreational fishing													
Very acceptable	4		17	0	4	0	3		0	0	17	5	3
Acceptable	16		17	14	16	100	14		100	0	0	17	20
Neutral	12		8	21	14	0	7		0	0	0	19	3
Unacceptable	27		17	21	33	0	21		0	67	33	24	29
Very unacceptable	41		42	43	33	0	55		0	33	50	36	46
Average	2.17		2.50	2.07	2.23	4.00	1.90		4.00	1.67	2.00	2.32	2.06
CLUSTER-SIMPROF group			a	a	a		a						

Table S1.4.9. Percentage of recreational Blue Swimmer Crab fishers that chose an option about whether management option should change or remain the same. Percentages are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries and fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

Blue Swimmer Crabs	Overall		Fishery					Fisher group						
			Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
Minimum size limit														
Increase	34		33	37	30	17		11	38	32	23	50	39	67
Remain the same	65		65	61	65	83		67	63	67	77	50	60	33
Decrease	1		1	1	4	0		11	0	1	0	0	0	0
Unsure	1		1	1	0	0		11	0	0	0	0	1	0
CLUSTER-SIMPROF group			a	a	a	b		a	b	b	c	d	b	d
Temporal closure														
Increase	52		60	47	46	67		0	4	9	6	40	3	17
Remain the same	40		35	45	42	33		80	81	67	82	40	67	67
Decrease	3		2	3	0	0		20	14	24	12	20	28	17
Unsure	5		3	5	13	0		0	2	1	0	0	3	0
CLUSTER-SIMPROF group			a	b	b	a		a	a	b	a	c	b	d
Fisher surveillance														
Increase	83		87	82	75	100		70	86	87	80	70	87	67
Remain the same	13		9	14	21	0		20	13	10	18	30	8	33
Decrease	1		1	1	0	0		0	0	1	2	0	0	0
Unsure	3		3	2	4	0		10	2	2	0	0	5	0
CLUSTER-SIMPROF group			a	a	a	b		a	b	b	b	a	b	a
Fisher education														
Increase	82		82	85	75	83		100	88	79	79	70	81	100
Remain the same	14		14	13	21	0		0	11	17	15	30	15	0
Decrease	1		1	2	4	17		0	0	2	0	0	0	0
Unsure	3		3	1	0	0		0	2	1	6	0	4	0
CLUSTER-SIMPROF group			a	a	a	a		a	b	b	b	b	b	a
Bag limit														
Increase	7		9	3	0	0		0	4	9	6	40	3	17
Remain the same	71		72	73	67	67		80	81	67	82	40	67	67
Decrease	21		18	24	33	33		20	14	24	12	20	28	17
Unsure	1		1	1	0	0		0	2	1	0	0	3	0
CLUSTER-SIMPROF group			a	a	b	b		a	a	c	a	d	c	b
Boat limit														
Increase	12		13	10	4	0		20	12	13	10	40	5	33
Remain the same	67		68	70	67	83		60	77	69	73	50	55	50
Decrease	19		18	20	29	17		20	11	18	15	10	31	17
Unsure	2		2	0	0	0		0	0	0	2	0	9	0
CLUSTER-SIMPROF group			a	a	a	a		a	a	a	a	c	b	c

Table S1.4.10. Percentage of recreational Black Bream fishers that chose an option about whether management option should change or remain the same. Percentages are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries and fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

Black Bream	Overall		Fishery						Fisher group				
			Black	Peel	Swan	Wilson	Other		a	b	c	d	e
Minimum size limit													
Increase	45		33	31	47	0	55		0	67	33	43	49
Remain the same	54		67	69	51	100	45		100	33	67	55	51
Decrease	1		0	0	2	0	0		0	0	0	2	0
Unsure	0		0	0	0	0	0		0	0	0	0	0
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*						
Fisher education													
Increase	88		75	92	91	100	86		100	100	50	92	89
Remain the same	9		17	8	7	0	10		0	0	50	5	9
Decrease	0		0	0	0	0	0		0	0	0	0	0
Unsure	3		8	0	2	0	3		0	0	0	7	3
CLUSTER-SIMPROF group			*a*	*b*	*b*		*b*						
Fisher surveillance													
Increase	83		75	85	86	100	79		100	100	67	78	97
Remain the same	11		17	15	7	0	14		0	0	33	14	0
Decrease	1		8	0	0	0	0		0	0	0	2	0
Unsure	5		0	0	7	0	7		0	0	0	7	3
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*						
Bag limit													
Increase	5		0	0	7	0	7		0	0	0	8	3
Remain the same	36		50	23	34	0	41		100	0	50	39	29
Decrease	58		50	77	57	100	52		0	100	50	51	69
Unsure	1		0	0	2	0	0		0	0	0	2	0
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*						
Boat limit													
Increase	5		0	8	5	0	7		0	0	0	8	3
Remain the same	40		58	38	36	0	41		100	0	83	39	37
Decrease	49		42	54	48	100	48		0	67	17	44	60
Unsure	6		0	0	11	0	3		0	33	0	8	0
CLUSTER-SIMPROF group			*a*	*a*	*a*		*a*						

Table S1.4.11. Mean ratings for each stock enhancement belief across (a) belief strength (0; very unlikely to 6; very likely), (b) belief evaluation (-3; very bad to +3; very good) and (c) cross-products (belief-based attitude: -18; very likely and very bad to +18; very likely and very good) for Blue Swimmer Crab stock enhancement overall and for each fishery and fisher group. Cells shaded according to the magnitude of their values with for belief strength and belief evaluation those in dark red being the lowest and those in dark green the highest and for the belief-based attitude from dark red to dark blue.

Blue Swimmer Crabs			Fishery					Fisher groups						
Belief strength (0 to 6)	Overall		Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
Increasing crab numbers	4.78		4.73	4.88	5.15	5.40		5.20	4.75	4.79	4.29	4.63	4.96	5.00
More crabs to catch	4.82		4.78	4.85	5.19	5.00		5.25	4.67	4.87	4.38	4.78	4.86	4.67
More fishers fishing	4.54		4.59	4.38	4.81	4.67		5.14	4.42	4.43	4.69	3.90	4.77	5.40
No change in crab abundance	2.20		2.27	2.01	1.61	1.20		1.86	2.57	2.08	2.85	3.50	1.81	2.25
Increasing fishing pressure	3.05		3.09	2.83	3.17	1.50		2.38	2.87	3.14	3.34	1.88	3.18	5.00
Environment impact	2.87		2.62	2.94	2.57	1.00		2.60	2.14	3.02	2.98	3.22	3.26	3.00
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*		*a*	*a*	*a*	*a*	*a*	*a*	*a*
Belief evaluation (-3 to +3)														
Increasing crab numbers	2.14		2.14	2.12	2.20	2.67		2.33	2.12	2.26	1.87	1.90	2.13	3.00
More crabs to catch	2.17		2.17	2.17	2.55	2.50		2.80	2.04	2.25	2.07	2.10	2.09	1.20
More fishers fishing	-0.55		-0.77	-0.35	0.60	0.50		1.14	-0.44	-0.55	-0.86	0.29	-0.69	-1.20
No change in crab abundance	-1.31		-1.32	-1.45	-1.35	-2.33		-2.00	-1.22	-1.36	-0.95	0.80	-1.64	-2.00
Increasing fishing pressure	-1.50		-1.46	-1.70	-1.26	-2.33		-1.67	-1.44	-1.47	-1.49	-1.11	-1.67	-1.60
Environment impact	-1.30		-1.38	-1.34	-0.31	-2.20		-0.88	-1.43	-1.19	-1.46	0.13	-1.39	-1.50
CLUSTER-SIMPROF group			*a*	*a*	*a*	*a*		*a*	*b*	*b*	*b*	*c*	*b*	*d*
Belief-based attitude (-18 to +18)														
Increasing crab numbers	10.45		10.25	11.01	11.25	12.17		13.11	9.76	10.74	9.96	8.00	10.83	11.25
More crabs to catch	10.39		10.11	10.66	13.75	13.33		11.80	9.06	10.85	10.57	10.30	9.56	4.40
More fishers fishing	-1.18		-1.85	-0.30	3.60	4.17		2.86	0.44	-0.76	-2.81	3.00	-2.86	-6.40
No change in crab abundance	-1.28		-1.15	-1.68	-1.00	-1.83		-0.50	-1.73	-1.57	-1.43	4.80	-1.23	-4.25
Increasing fishing pressure	-3.41		-3.46	-3.52	-3.63	-2.83		-5.83	-3.12	-3.40	-2.82	1.67	-4.31	-7.00
Environment impact	-2.10		-2.45	-2.55	1.50	-1.20		-2.50	-1.65	-2.30	-2.54	2.75	-2.25	-3.00
CLUSTER-SIMPROF group			*a*	*a*	*b*	*b*		*a*	*b*	*b*	*b*	*c*	*b*	*d*

Table S1.4.12. Mean ratings for each stock enhancement of belief across (a) belief strength (0; very unlikely to 6; very likely), (b) belief evaluation (-3; very bad to +3; very good) and (c) cross-products (belief-based attitude: -18; very likely and very bad to +18; very likely and very good) for Black Bream stock enhancement overall and for each fishery and fisher group. Cells shaded according to the magnitude of their values with for belief strength and belief evaluation those in dark red being the lowest and those in dark green the highest and for the belief-based attitude from dark red to dark blue.

Black Bream			Fishery						Fisher groups				
Belief strength (0 to 6)	Overall		Black.	Peel	Swan	Wilson	Other		a	b	c	d	e
Increasing the number of bream	5.34		5.45	5.08	5.35	5.00	5.38		4.00	6.00	5.00	5.26	5.47
More bream to catch	5.31		5.55	5.09	5.40	4.00	5.19			5.50	4.83	5.15	5.72
Too many Black Bream	1.08		1.20	0.67	1.11	4.00	1.04			0.00	0.83	0.98	1.10
Less bream surviving	1.17		1.71	0.82	1.05	3.00	1.29			0.00	1.00	1.57	0.60
Increasing fishing pressure	2.02		1.22	1.91	2.27	5.00	1.78		1.00	1.67	1.00	2.37	1.63
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*	*a*			*a*	*a*	*a*	*a*
Belief evaluation (-3 to +3)													
Increasing the number of bream	2.57		2.64	2.67	2.63	2.00	2.42			2.33	2.00	2.58	2.82
More bream to catch	2.58		2.45	2.58	2.67	3.00	2.44		2.00	2.33	2.00	2.52	2.80
Too many Black Bream	1.44		2.56	2.27	1.46	0.00	0.59		-2.00	1.67	2.00	1.07	2.19
Less bream surviving	-2.41		-2.78	-2.64	-2.49	-3.00	-2.00		-1.00	-2.33	-1.80	-2.31	-2.71
Increasing fishing pressure	-1.98		-2.11	-2.27	-2.08	-1.00	-1.64		-2.00	-2.67	-1.67	-1.92	-2.20
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*	*b*			*a*	*a*	*a*	*a*
Belief-based attitude (-18 to +18)													
Increasing the number of bream	13.54		14.82	13.58	13.84	10.00	12.54			14.00	8.60	13.44	15.15
More bream to catch	13.28		14.00	12.42	13.94	12.00	12.04		0.00	11.00	10.40	12.72	15.40
Too many Black Bream	0.54		2.44	1.64	0.24	0.00	-0.14		0.00	0.00	1.75	-0.09	1.81
Less bream surviving	-1.77		-4.00	-2.00	-1.42	-9.00	-1.35		0.00	0.00	-1.80	-2.22	-1.12
Increasing fishing pressure	-2.84		-1.11	-4.91	-2.94	-5.00	-2.28		-2.00	-3.67	-2.33	-3.38	-2.13
CLUSTER-SIMPROF group			*a*	*a*	*a*	*b*	*a*			*a*	*a*	*a*	*a*

Table S1.4.13. Percentage of recreational (a) Blue Swimmer Crab and (b) Black Bream fishers that agreed, disagreed or were unsure whether they would continue to fish if the population is restocked. Percentages are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries and fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

(a) Blue Swimmer Crabs	Overall		Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
				Fishery						**Fisher group**				
Agree	88		88	87	89	83		100	86	89	82	80	92	50
Unsure	10		9	9	4	17		0	11	9	12	0	1	33
Disagree	3		3	4	7	0		0	4	2	6	20	7	17
CLUSTER-SIMPROF group			a	a	a	b		a	a	a	a	a	a	b

(b) Black Bream	Overall		Black.	Peel	Swan	Wilson	Other		a	b	c	d	e
					Fishery						**Fisher group**		
Agree	96		92	93	97	100	97		100	100	83	95	100
Unsure	3		8	7	2	0	3		0	0	0	3	0
Disagree	2		0	0	2	0	0		0	0	17	2	0
CLUSTER-SIMPROF group			a	a	a		a			a	a	a	

Table S1.4.14. Percentage of recreational Blue Swimmer Crab fishers that chose options related to what they would do if they caught a hatchery-reared crab. Percentages are given for all fishers (overall) and for those fishers utilising a particular fishery and those belonging to a fisher group. Cells shaded according to the magnitude of their values with those in dark red being the lowest and those in dark green the highest. The CLUSTER-SIMPROF groups assigned are given below. Fisheries and fisher groups with the same letter indicate no significant difference in the percentage contribution across the possible answers, whereas those with different letters are deemed to be different.

| Blue Swimmer Crabs	Overall		Peel	Swan	Lesch.	Shark		a	b	c	d	e	f	g
				Fishery							**Fisher group**			
I would eat it as if it was wild crab														
Agree	84		81	89	95	83		80	88	87	78	70	81	83
Don't know	13		15	9	5	0		0	11	12	16	30	16	0
Disagree	3		3	2	0	17		20	2	1	6	0	3	17
CLUSTER-SIMPROF group			a	a	a	a		a	b	b	b	b	b	a
I would eat it but would prefer wild crab														
Agree	28		28	27	29	0		60	26	25	27	60	29	17
Don't know	41		43	41	43	50		30	28	46	41	10	40	33
Disagree	32		29	32	29	50		10	46	29	33	30	31	50
CLUSTER-SIMPROF group			a	a	a	b		a	c	b	b	a	b	c
I would not eat it myself but would keep it for family/friends														
Agree	4		4	5	5	0		0	0	3	4	10	9	0
Don't know	20		22	19	14	0		0	14	16	22	30	33	20
Disagree	75		74	77	81	100		100	86	81	73	60	57	80
CLUSTER-SIMPROF group			a	a	b	b		a	b	b	b	c	c	b
I would release after capture, I don't like aquacultured crabs														
Agree	3		4	2	0	0		20	4	1	2	0	5	0
Don't know	33		35	25	29	0		20	21	29	45	60	44	20
Disagree	64		61	73	71	100		60	75	70	53	40	51	80
CLUSTER-SIMPROF group			a	a	a	b		a	a	a	b	b	b	a
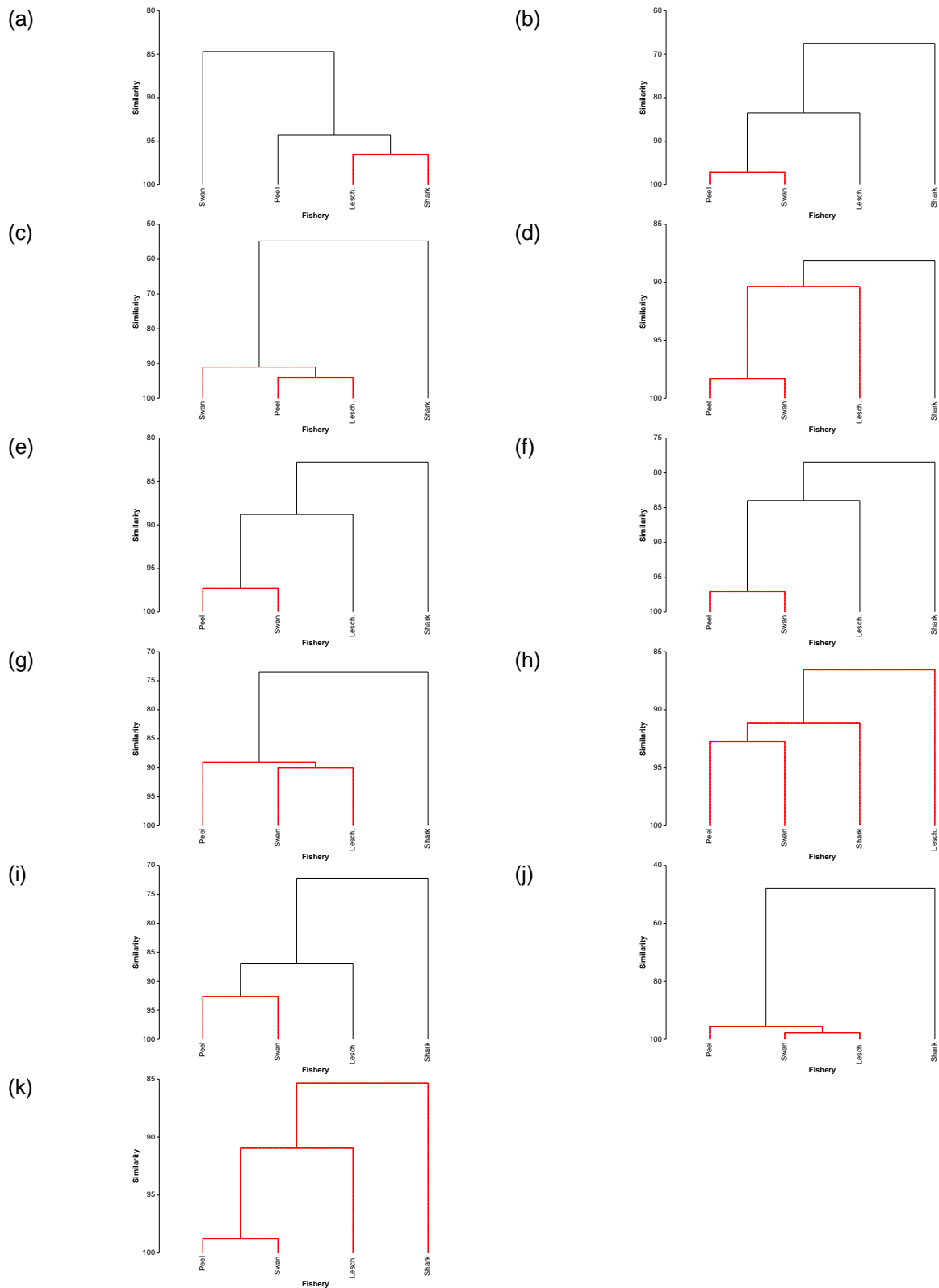
Figure S1.4.1. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Blue Swimmer Crab fishers who agree, disagree or were unsure about the effects of potential issues on each fishery (see Table 1.4.1). Potential issues; (a) taking of undersized crabs; (b) overfishing of stocks; (c) exceeding the bag limit; (d) recreational fishing; (e) commercial fishing; (f) lack of education; (g) the closed season is too short; (h) recreational fishing pressure is irrelevant to commercial pressure; (i) pollution; (j) climate change; (k) there are no issues affecting the fishery. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
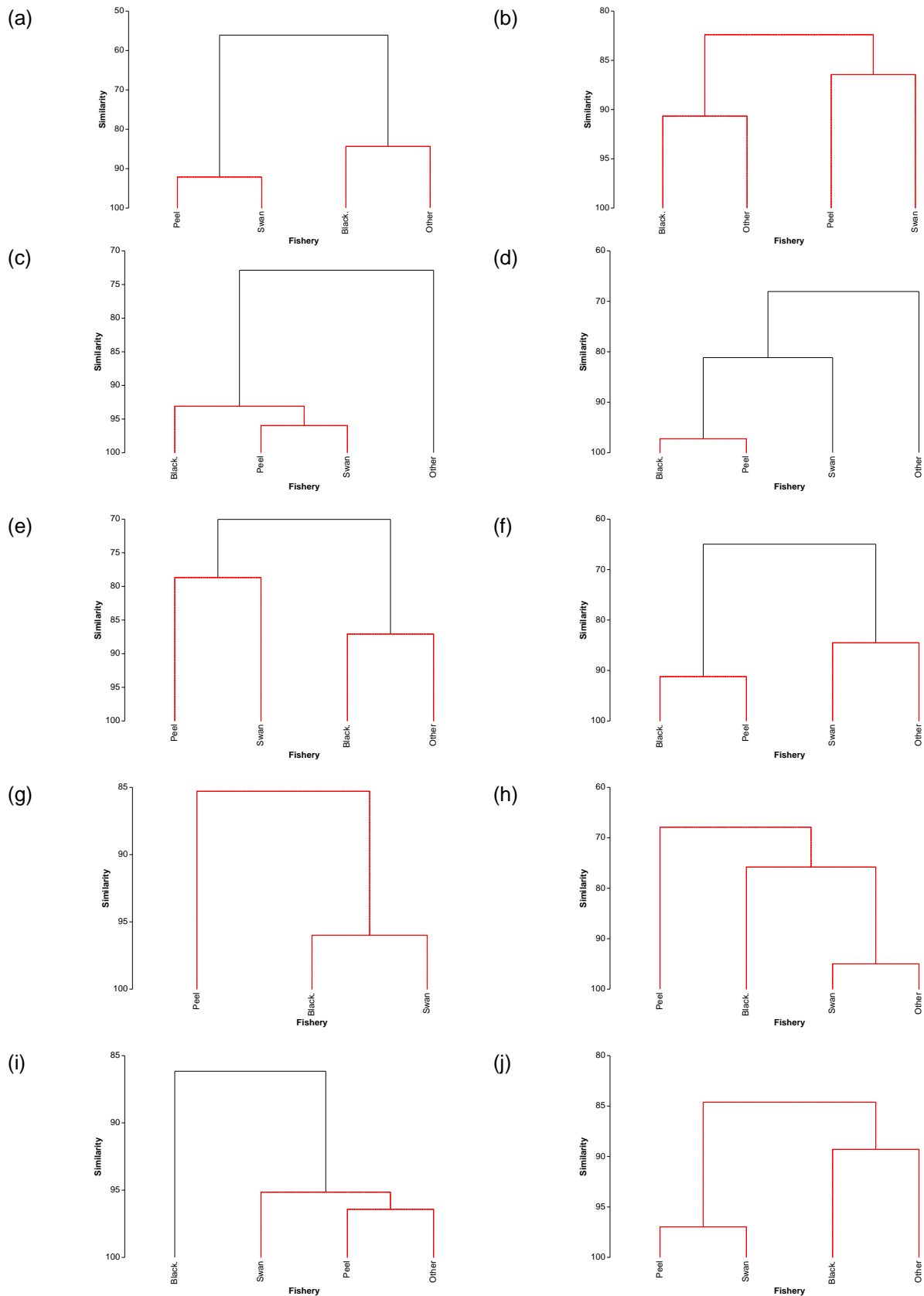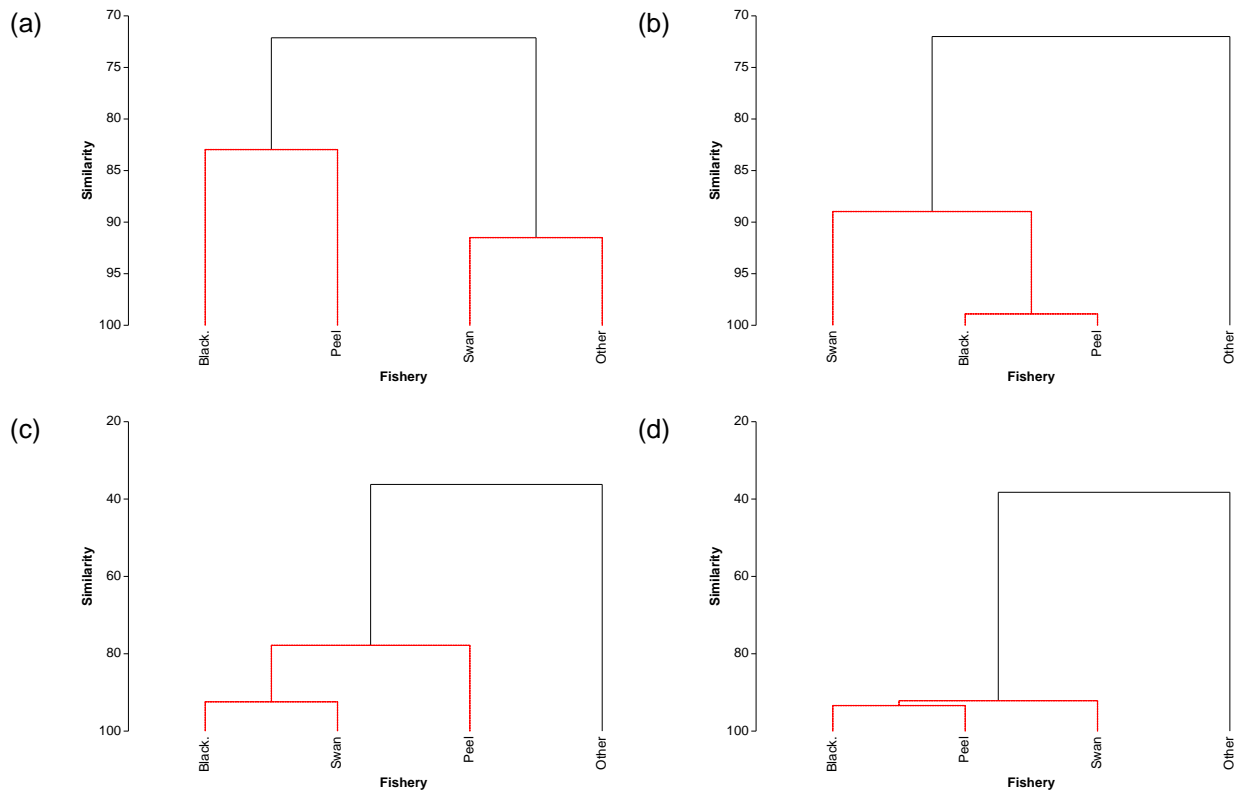
Figure S1.4.2. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Black Bream fishers who agree, disagree or were unsure about the effects of potential issues on each fishery (see Table 1.4.2). Potential issues; (a) taking of undersized fish; (b) lack of education; (c) fishing pressure and overfishing; (d) exceeding the bag limit; (e) pollution; (f) commercial fishing; (g) poor management; (h) recreational fishing; (i) climate change; (j) there are no issues affecting the fishery. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

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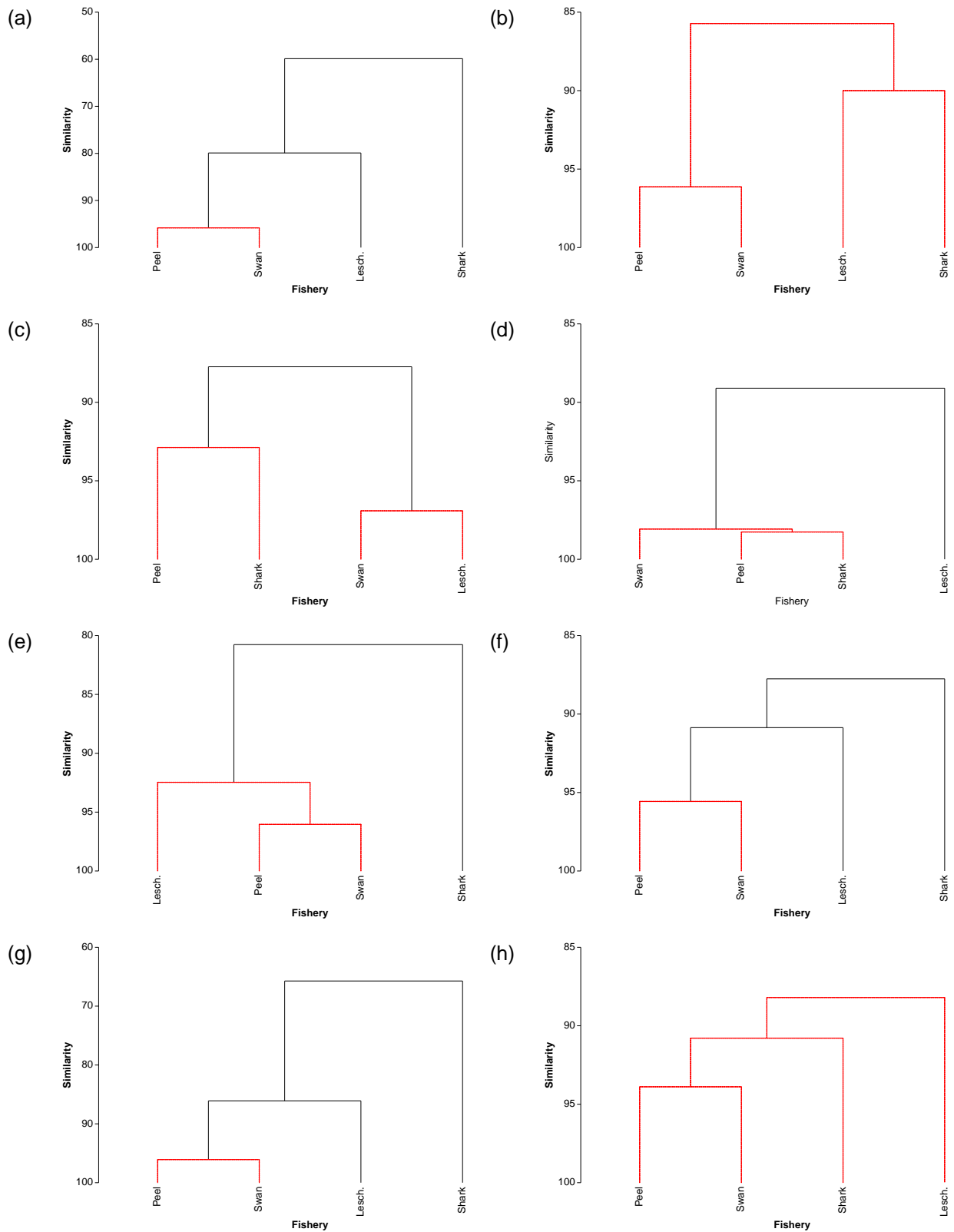
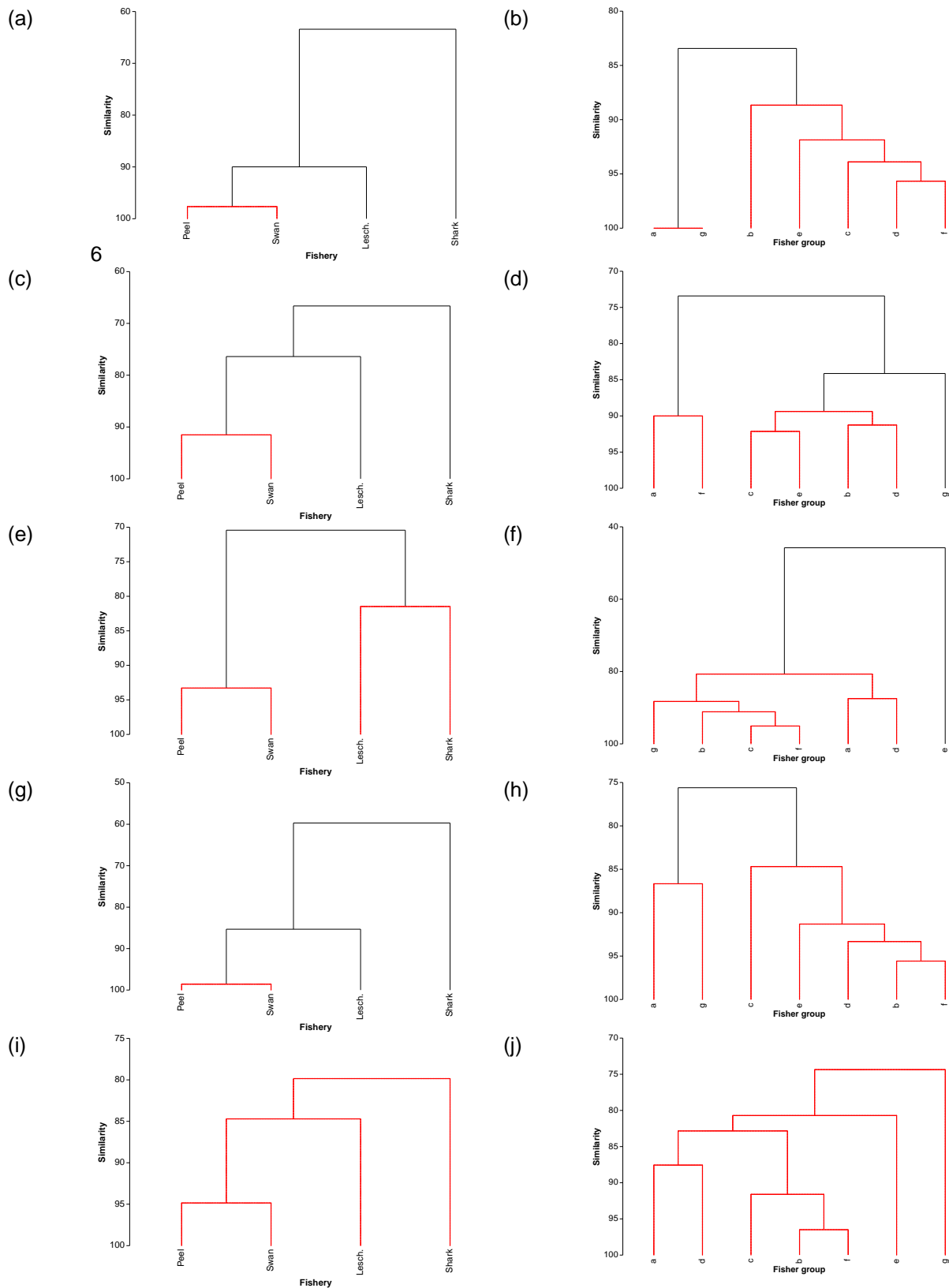**Figure S1.4.3.** Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Blue Swimmer Crab fishers considered that parameters around their catches and fishing trips had changed (see Table 1.4.3). Parameters; (a) crab size; (b) crab abundance; (c) abundance of other species caught; (d) number of people fishing; (e) number of sites I fish regularly; (f) fishing depth; (g) time spent fishing; (h) distance travelled. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
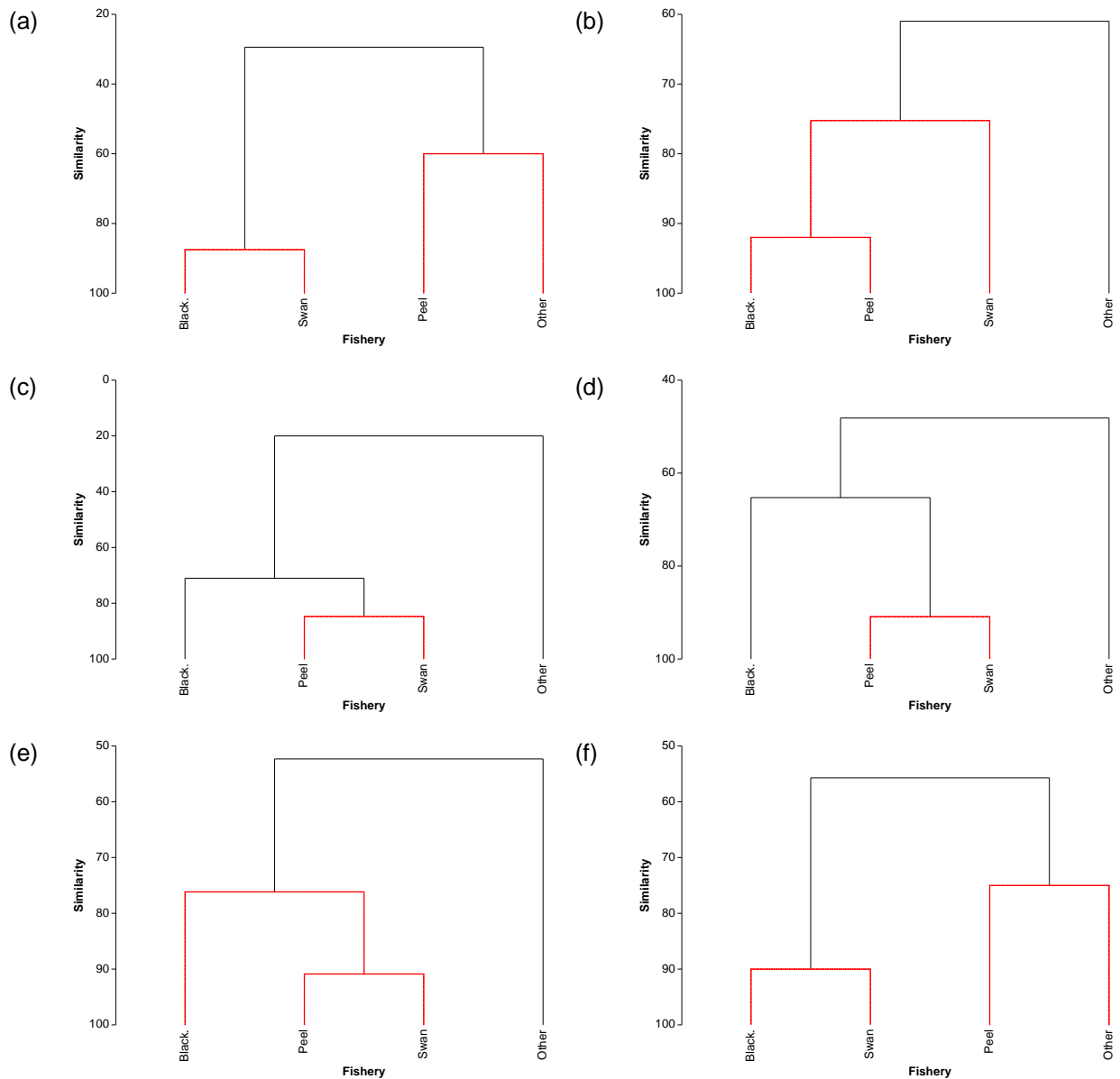
Figure S1.4.4. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Black Bream fishers considered that parameters around their catches and fishing trips had changed (see Table 1.4.4). Parameters; (a) Black Bream size; (b) Black Bream abundance; (c) abundance of other species caught; (d) number of people fishing; (e) number of sites I fish regularly; (f) distance travelled. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
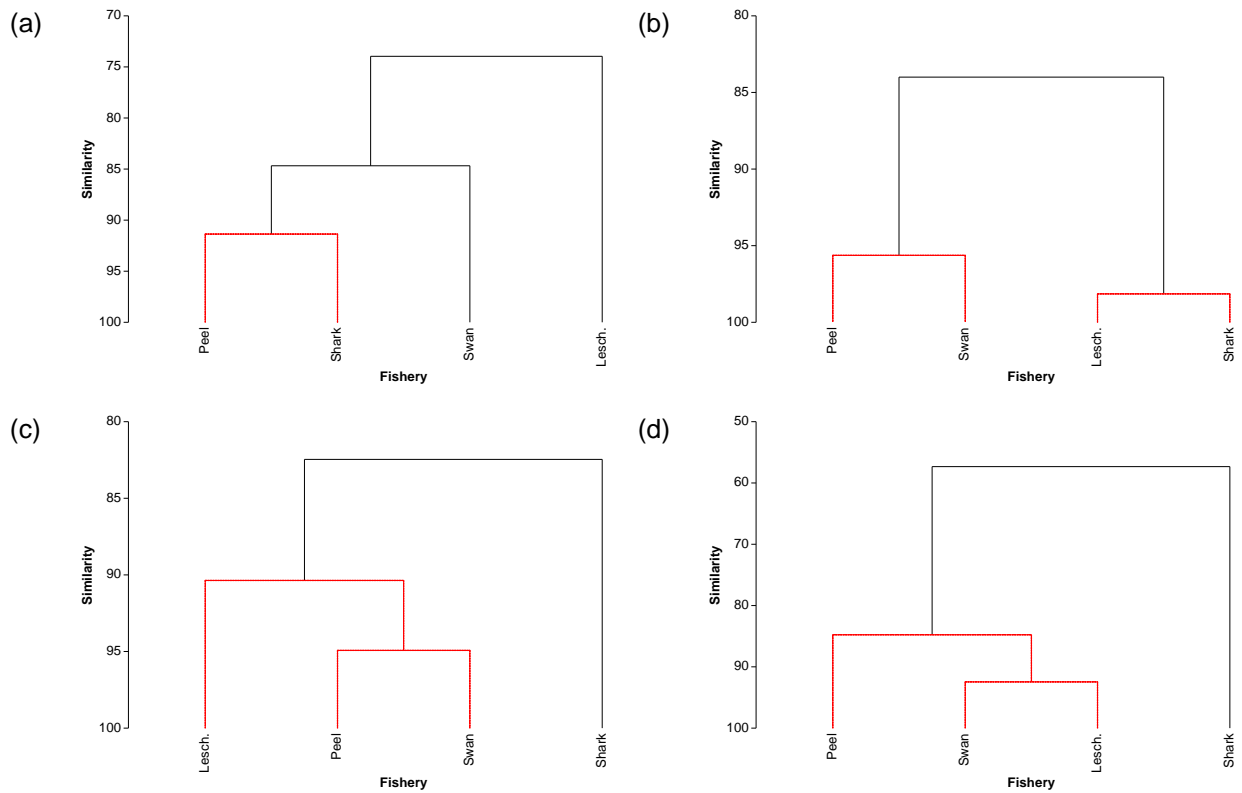
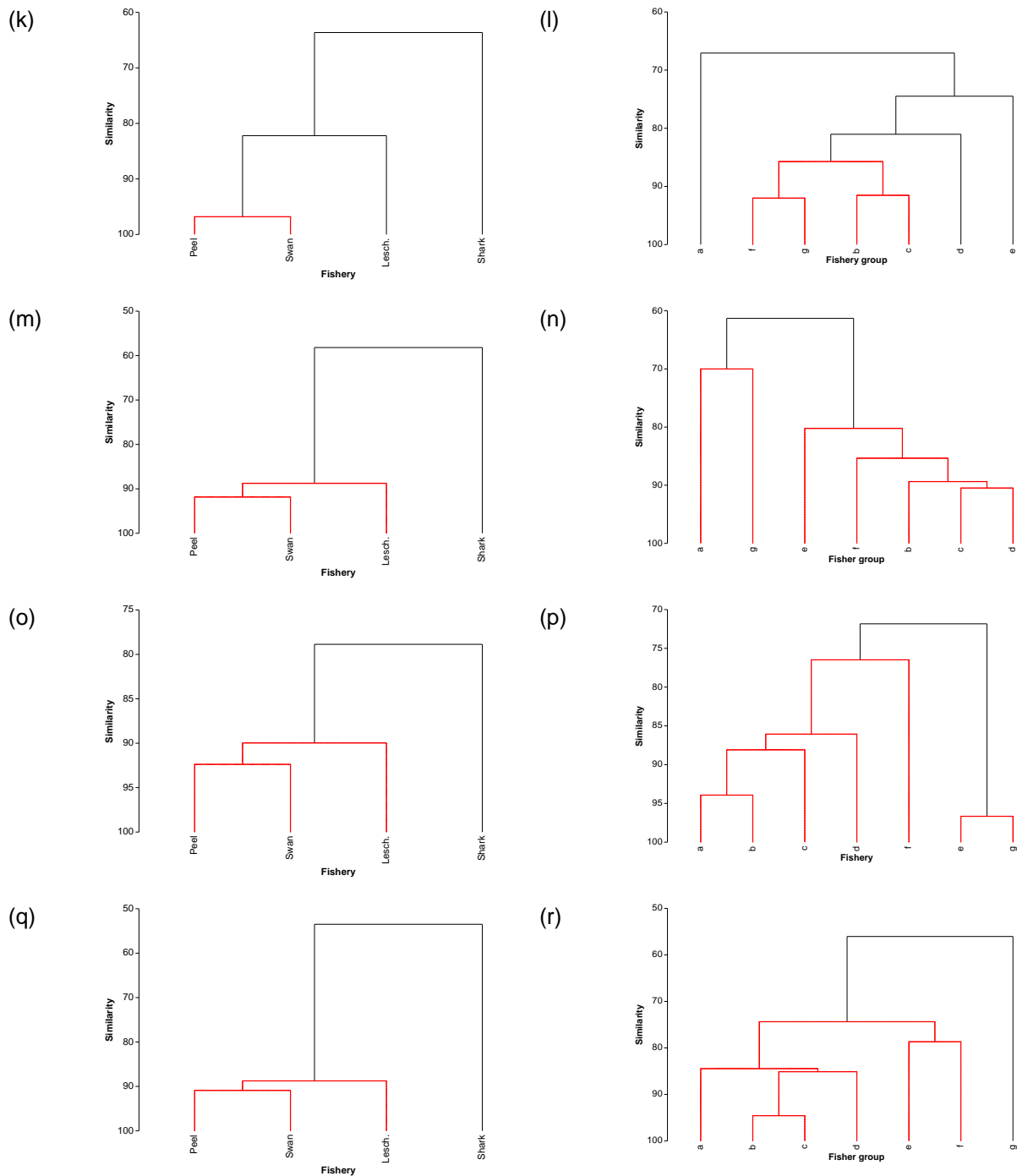**Figure S1.4.5.** Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Blue Swimmer Crab fishers that agreed, disagreed or were unsure about aspects of crab fishery management (see Table 1.4.5). Aspects: (a) *the fishery is well managed*; (b) *stocks need to be better managed*; (c) *I am happy with the number of crabs*; (d) *I am happy with the size of crabs*. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

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Figure S1.4.6. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Black Bream fishers that agreed, disagreed or were unsure about aspects of crab fishery management (see Table 1.4.5). Aspects: (a) *the fishery is well managed*; (b) *stocks need to be better managed*; (c) *I am happy with the number of Black Bream*; (d) *I am happy with the size of Black Bream*. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

Figure S1.4.7. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Blue Swimmer Crab fishers that utilise each fishery (a,c,e,g,i,k,m,o,q) and belong to each fisher group (b,d,f,h,j,l,n,p,r) that chose a management acceptability rating for each of the nine options that currently are or could potentially be used to manage Blue Swimmer Crab fisheries in south-western Australia. Management options: (a,b) minimum size limit; (c,d) temporal closure; (e,f) fisher surveillance; (g,h) fisher education; (i,j) stock enhancement; (k,l) bag limit; (m,n) gear restriction; (o,p) spatial closure; (q,r) maximum size limit. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
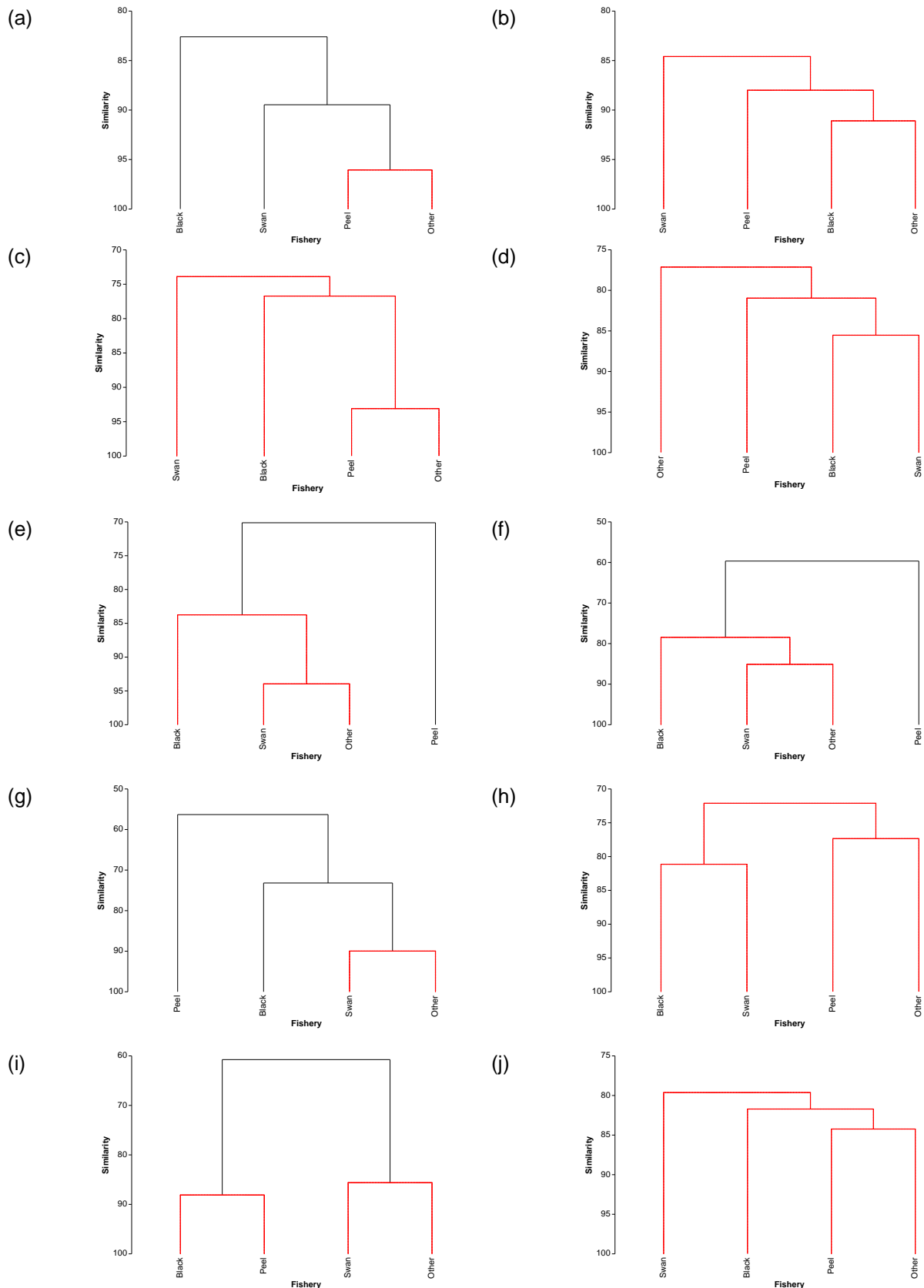
40

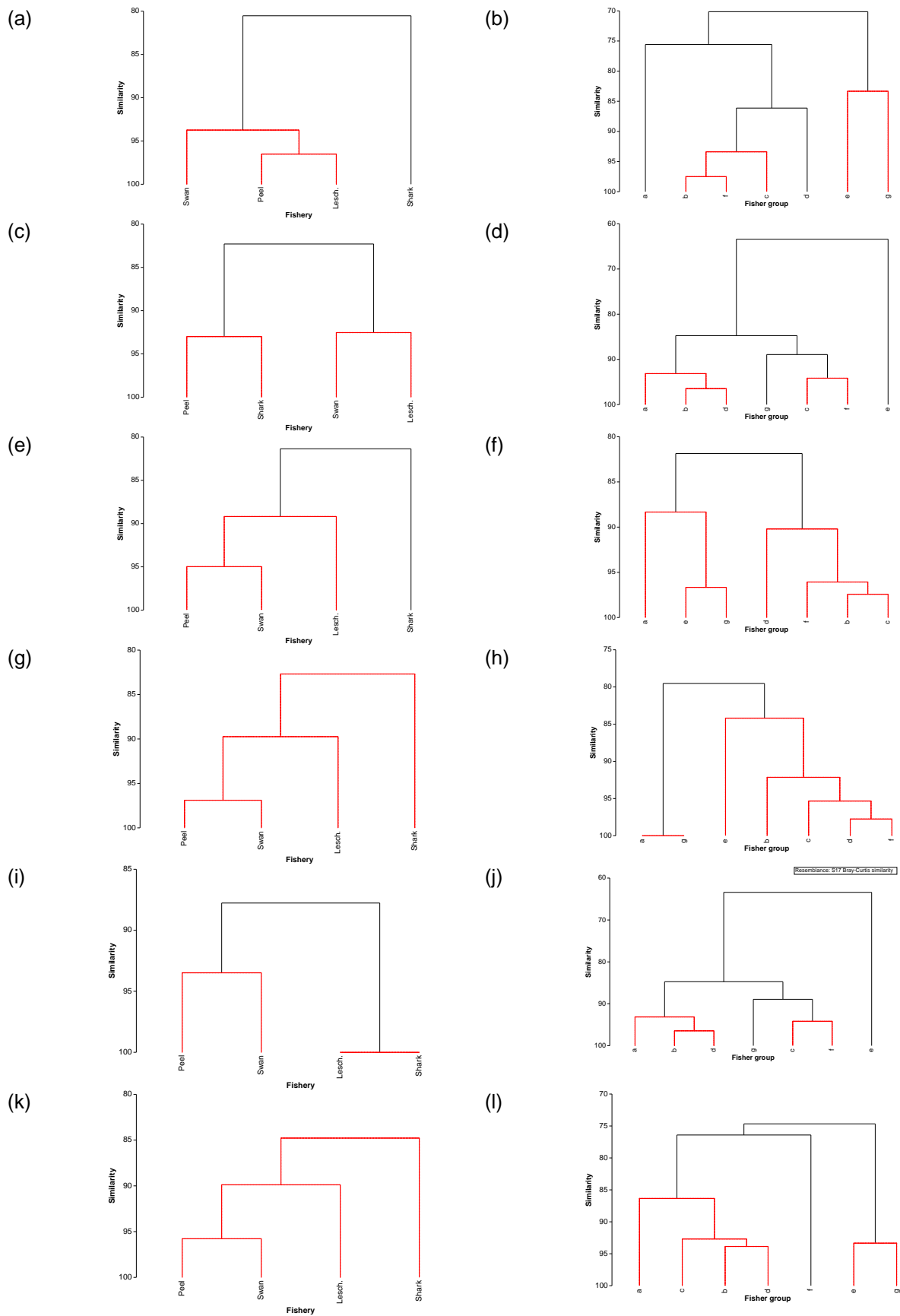**Figure S1.4.7 continued.** Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Blue Swimmer Crab fishers that utilise each fishery (a,c,e,g,i,k,m,o,q) and belong to each fisher group (b,d,f,h,j,l,n,p,r) that chose a management acceptability rating for each of the nine options that currently are or could potentially be used to manage Blue Swimmer Crab fisheries in south-western Australia. Management options: (a,b) minimum size limit; (c,d) temporal closure; (e,f) fisher surveillance; (g,h) fisher education; (i,j) stock enhancement; (k,l) bag limit; (m,n) gear restriction; (o,p) spatial closure; (q,r) maximum size limit. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
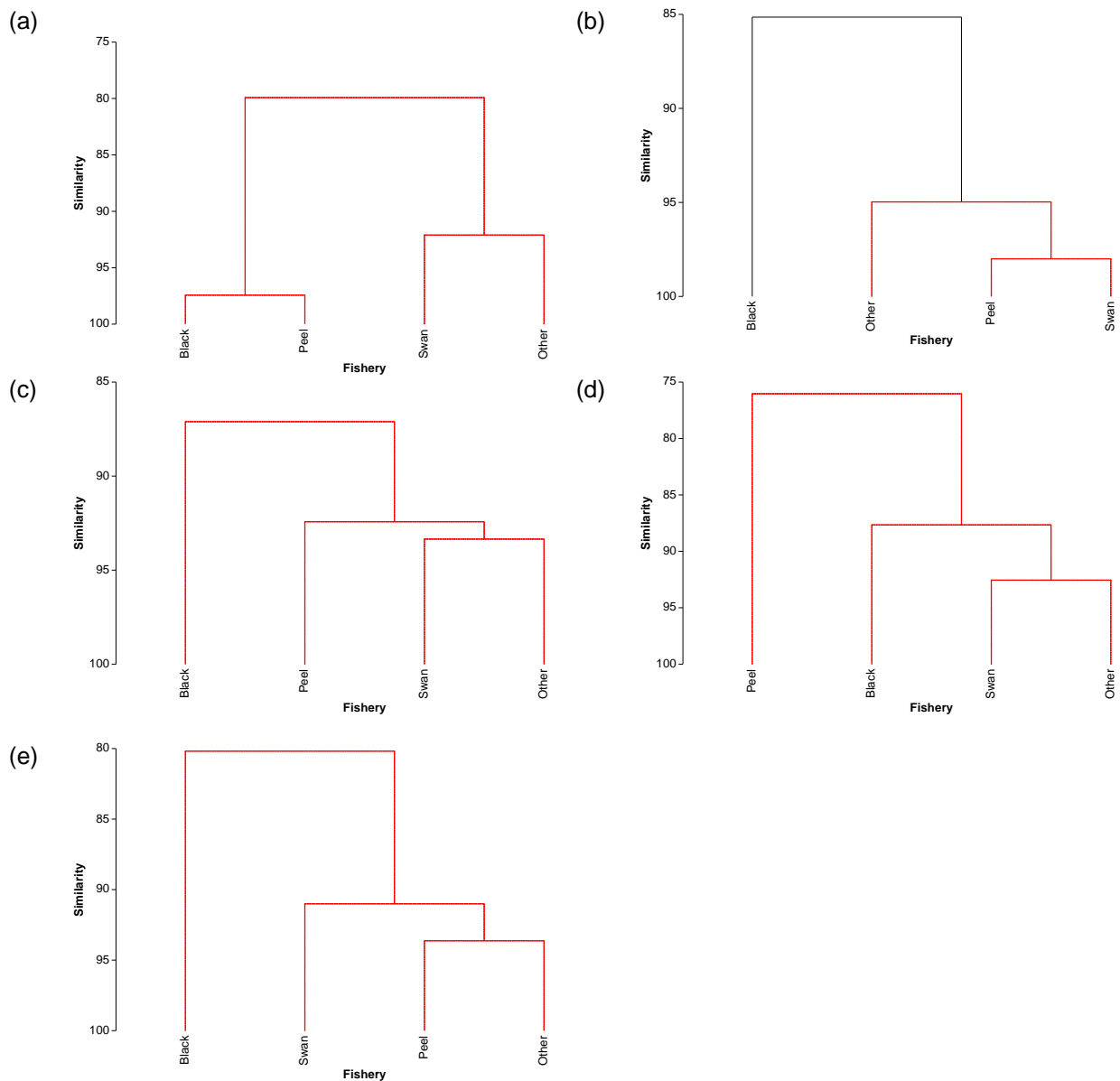
41

Figure S1.4.8. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Black Bream fishers that utilise each fishery that chose a management acceptability rating for each of the nine options that currently are or could potentially be used to manage Black Bream fisheries in south-western Australia. Management options: (a) minimum size limit; (b) stock enhancement; (c) fisher education; (d) maximum size limit; (e) restricting commercial fishing; (f) fisher surveillance; (g) bag limit; (h) spatial closure; (i) temporal closure; (j) restricting recreational fishing. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

Figure S1.4.9. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Blue Swimmer Crab fishers that utilise each fishery (a,c,e,g,i,k) and belong to each fisher group (b,d,f,h,j,l) that chose an option about whether management option should change of remain the same. Management options: (a,b) minimum size limit; (c,d) temporal closure; (e,f) fisher surveillance; (g,h) fisher education; (i,j) bag limit; (k,l) boat limit. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
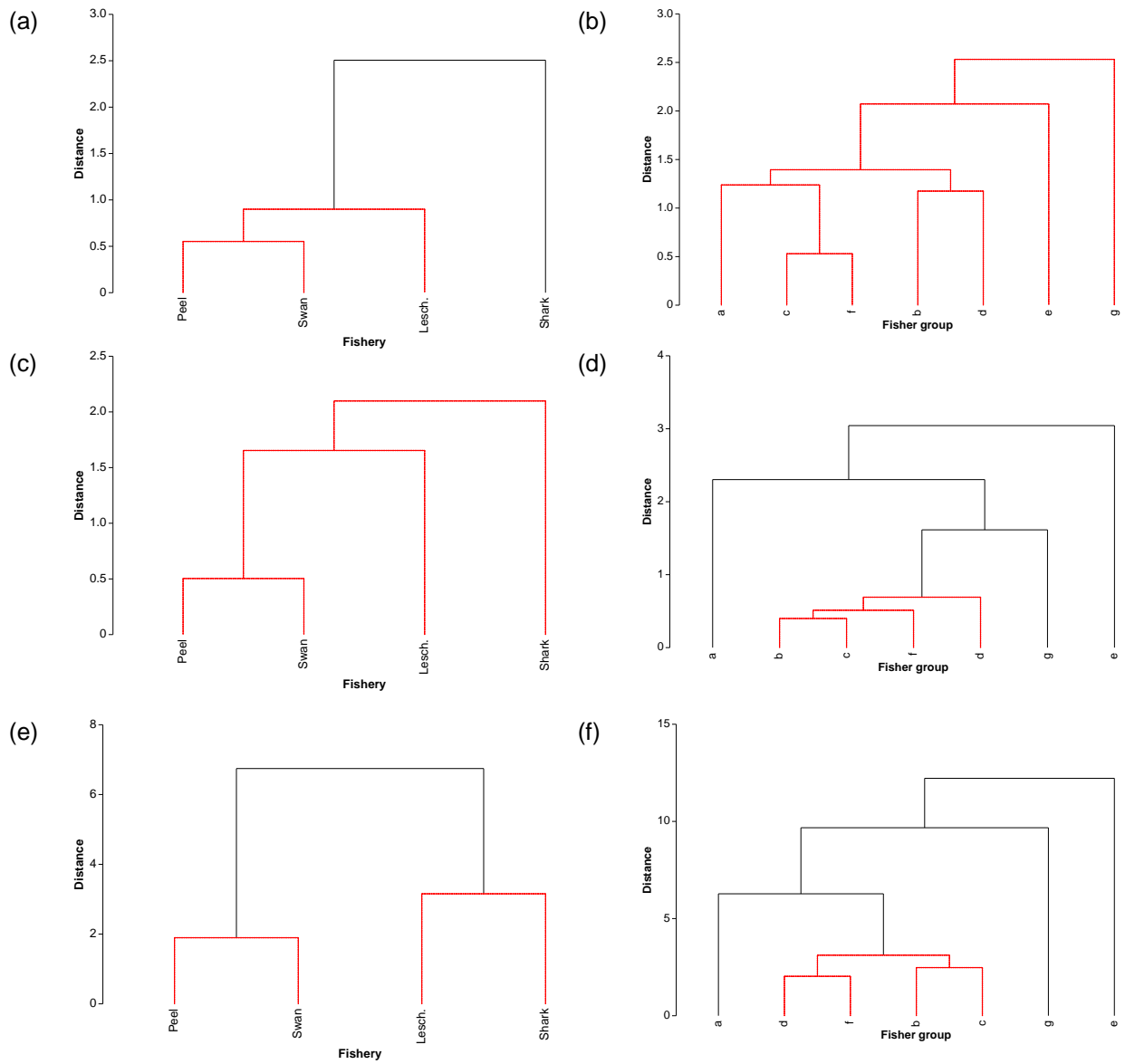
Figure S1.4.10. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Black Bream fishers that utilise each fishery that chose an option about whether management option should change of remain the same. Management options: (a) minimum size limit; (b) fisher education, (c) fisher surveillance; (d) bag limit; (e) boat limit. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

Figure S1.4.11. Dendrograms derived from CLUSTER-SIMPROF analysis of the ratings for each stock enhancement belief across (a,b) belief strength, (c,d) belief evaluation and (e,f) belief-based attitude for Blue Swimmer Crab stock enhancement. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
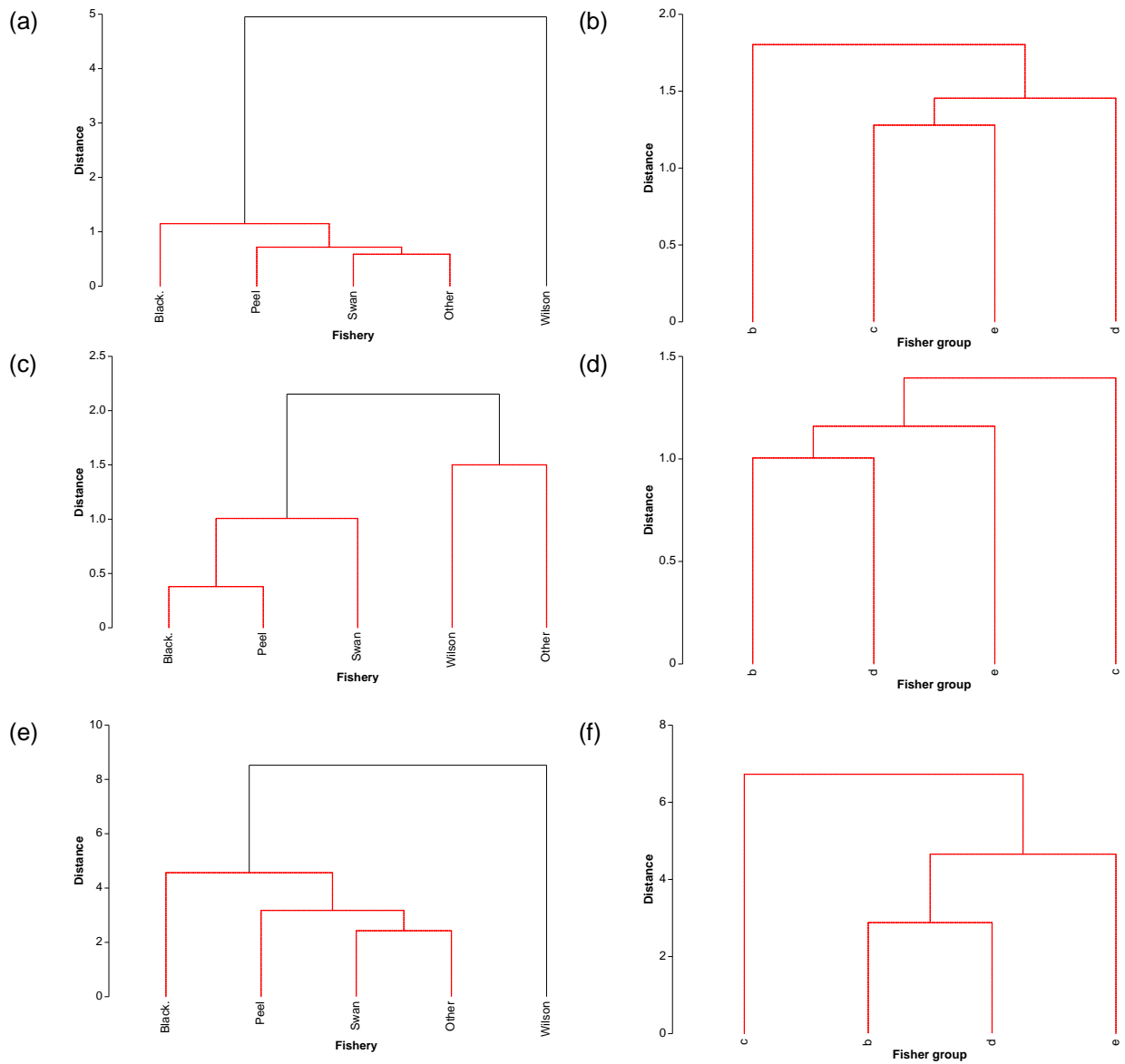
45

Figure S1.4.12. Dendrograms derived from CLUSTER-SIMPROF analysis of the ratings for each stock enhancement belief across (a) belief strength, (b) belief evaluation and (c) belief-based attitude for Black Bream stock enhancement. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
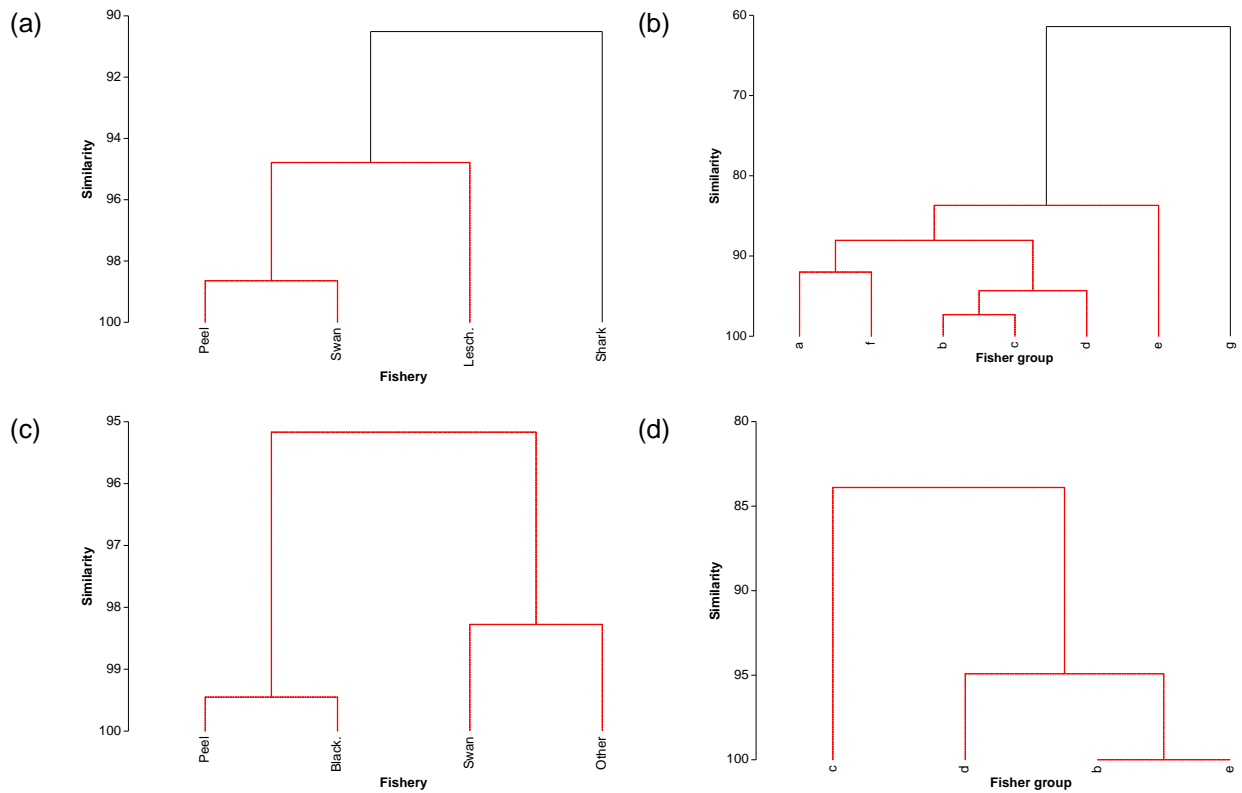
Figure S1.4.13. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of (a,b) Blue Swimmer Crab and (c,d) Black Bream fishers that utilise each fishery (a,c) and belong to each fisher group (b,d) that agreed, disagreed or were unsure whether they would continue to fish if the population is restocked. The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.
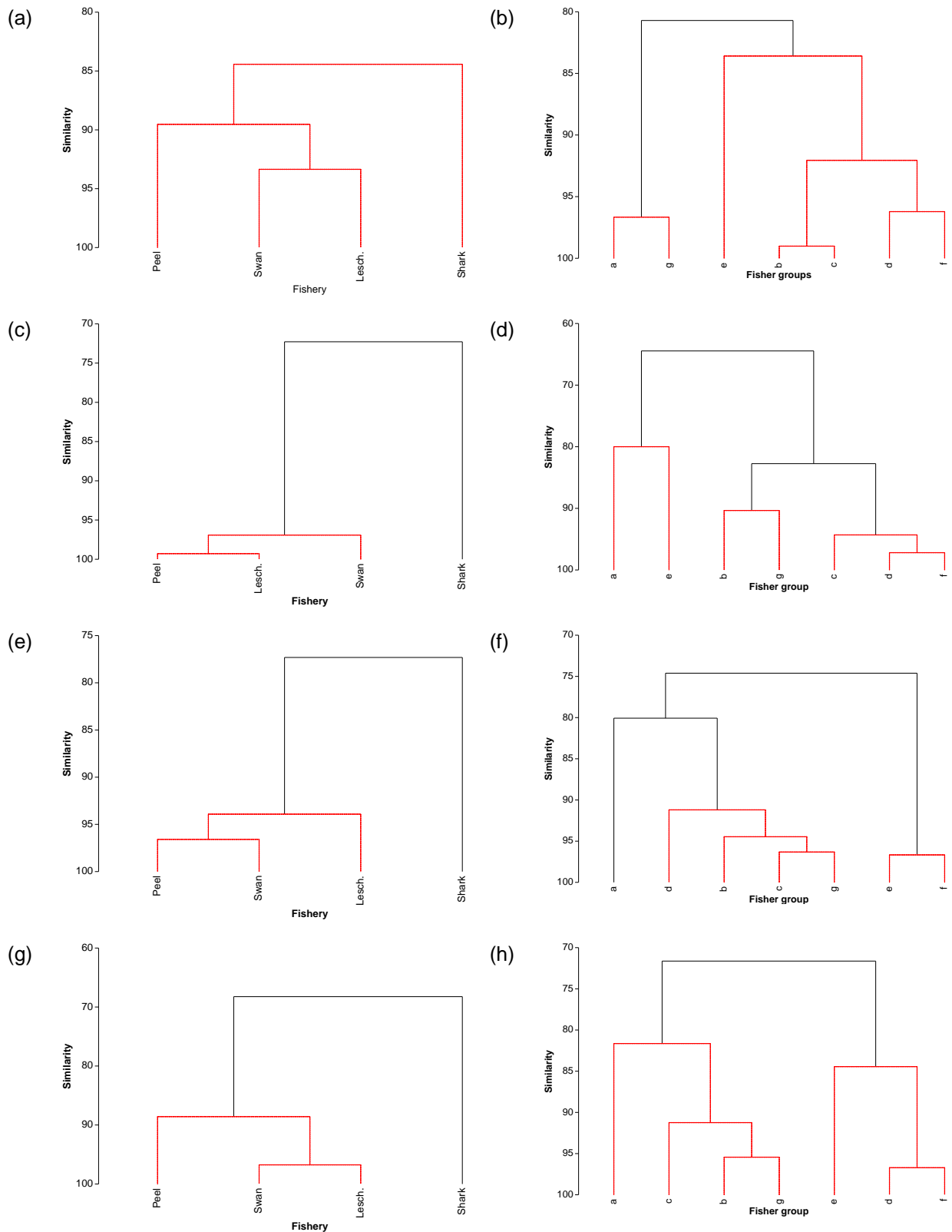
Figure S1.4.14. Dendrograms derived from CLUSTER-SIMPROF analysis of the percentage number of Blue Swimmer Crab fishers that utilise each fishery (a,c,e,g) and belong to each fisher group (b,d,f,h) Crab chose options related to what they would do if they caught a restocked crab. (a) *I would eat as if it was wild crab*; (b) *I would eat it but would prefer wild crab*; (c) *I would not eat it myself but would keep it for family/friends;* (d) *I would release after capture, I don't like restocked crabs.* The clusters under each dashed vertical red line represent 'samples' that were shown by SIMPROF to be statistically similar.

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1.5. Information sharing and the management of the Peel-Harvey Estuary

Table S1.5.1. Exponential random graph model results for attribute-based mixing for the attribute 'Seniority' of individual stakeholders forming the extended PHBSC fishery network.

Attribute	*P* value
mix.seniority.1.1	0.544
mix.seniority.2.1	0.492
mix.seniority.3.1	0.943
mix.seniority.1.2	0.535
mix.seniority.2.2	0.903
mix.seniority.3.2	0.687
mix.seniority.1.3	0.914
mix.seniority.2.3	0.367
mix.seniority.3.3	0.042
mix.seniority.NA.3	0.336

Table S1.5.2. Exponential random graph model results for attribute-based mixing for the attribute 'Organisation' of individual stakeholders forming the extended PHBSC fishery network.

Attribute	*P* value
mix.organisation.DPIRD.Birdlife Australia	0.029
mix.organisation.City of Mandurah.City of Mandurah	0.508
mix.organisation.DBCA.City of Mandurah	0.512
mix.organisation.DPIRD.City of Mandurah	0.001
mix.organisation.MSC.City of Mandurah	0.941
mix.organisation.PHCC.City of Mandurah	0.079
mix.organisation.City of Mandurah.DBCA	0.512
mix.organisation.DPIRD.DBCA	0.004
mix.organisation.DPIRD.Dolphin Watch	0.028
mix.organisation.Birdlife Australia.DPIRD	0.028
mix.organisation.DPIRD.DPIRD	0.004
mix.organisation.DWER.DPIRD	0.001
mix.organisation.General public.DPIRD	0.004
mix.organisation.MLFA.DPIRD	0.002
mix.organisation.MSC.DPIRD	0.087
mix.organisation.Murdoch.DPIRD	<0.001
mix.organisation.PDC.DPIRD	0.004
mix.organisation.PHCC.DPIRD	<0.001
mix.organisation.Rec. fishers.DPIRD	<0.001
mix.organisation.RFW.DPIRD	<0.001
mix.organisation.SCS.DPIRD	0.044
mix.organisation.SSPWA.DPIRD	0.028
mix.organisation.WAFIC.DPIRD	<0.001
mix.organisation.DPIRD.DWER	<0.001
mix.organisation.MLFA.DWER	0.014
mix.organisation.Murdoch.DWER	0.017
mix.organisation.PHCC.DWER	0.049
mix.organisation.Murdoch.FRDC	0.285
mix.organisation.City of Mandurah.General public	0.512
mix.organisation.DPIRD.General public	0.004
mix.organisation.MLFA.Mandurah cruises	0.376
mix.organisation.RFW.Mandurah times	0.870
mix.organisation.DPIRD.MLFA	<0.001
mix.organisation.MLFA.MLFA	0.002
mix.organisation.MSC.MLFA	0.376
mix.organisation.Murdoch.MLFA	<0.001
mix.organisation.PHCC.MLFA	0.009
mix.organisation.RFW.MLFA	0.034
mix.organisation.SCS.MLFA	0.827

mix.organisation.SSPWA.MLFA	0.040
mix.organisation.WAFIC.MLFA	0.031

Attribute	*P* value
mix.organisation.RFW.MOFSC	0.870
mix.organisation.DPIRD.MSC	0.087
mix.organisation.MLFA.MSC	0.827
mix.organisation.PHCC.MSC	0.721
mix.organisation.Rec. fishers.MSC	0.721
mix.organisation.WAFIC.MSC	0.721
mix.organisation.DPIRD.Murdoch	<0.001
mix.organisation.DWER.Murdoch	0.009
mix.organisation.MLFA.Murdoch	<0.001
mix.organisation.Murdoch.Murdoch	<0.001
mix.organisation.PDC.Murdoch	0.079
mix.organisation.PHCC.Murdoch	0.005
mix.organisation.WAFIC.Murdoch	0.005
mix.organisation.DPIRD.PDC	0.006
mix.organisation.DWER.PDC	0.313
mix.organisation.Murdoch.PDC	0.158
mix.organisation.PHCC.PDC	0.241
mix.organisation.RFW.PDC	0.827
mix.organisation.DPIRD.Peel Bright Minds	0.028
mix.organisation.DPIRD.PHCC	<0.001
mix.organisation.DWER.PHCC	0.049
mix.organisation.MLFA.PHCC	0.008
mix.organisation.Murdoch.PHCC	0.005
mix.organisation.RFW.PHCC	0.177
mix.organisation.SCS.PHCC	0.721
mix.organisation.MLFA.Politician	0.242
mix.organisation.RFW.Rec. fishers	0.754
mix.organisation.SCS.Rec. fishers	0.721
mix.organisation.DPIRD.RFW	0.067
mix.organisation.MLFA.RFW	0.034
mix.organisation.MOFSC.RFW	0.870
mix.organisation.MSC.RFW	0.870
mix.organisation.Murdoch.RFW	0.008
mix.organisation.PDC.RFW	0.376
mix.organisation.PHCC.RFW	0.177
mix.organisation.Rec. fishers.RFW	0.754
mix.organisation.RFW.RFW	0.599
mix.organisation.SSPWA.RFW	0.870
mix.organisation.WAFIC.RFW	0.322
mix.organisation.DPIRD.SCS	0.087
mix.organisation.MLFA.SCS	0.376
mix.organisation.MSC.SCS	0.966
mix.organisation.RFW.SCS	0.870
mix.organisation.WAFIC.SCS	0.721
mix.organisation.MLFA.Seafood producer	0.242
mix.organisation.DPIRD.SSPWA	0.028
mix.organisation.MLFA.SSPWA	0.674
mix.organisation.RFW.SSPWA	0.870
mix.organisation.WAFIC.SSPWA	0.198
mix.organisation.Murdoch.UWA	0.285
mix.organisation.DPIRD.WAFIC	<0.001
mix.organisation.MLFA.WAFIC	0.031
mix.organisation.MSC.WAFIC	0.721
mix.organisation.Murdoch.WAFIC	0.005
mix.organisation.PHCC.WAFIC	0.031
mix.organisation.RFW.WAFIC	0.322
mix.organisation.SCS.WAFIC	0.721
mix.organisation.SSPWA.WAFIC	0.608

Table S1.5.3. Exponential random graph model results for attribute-based mixing for the attribute 'Age' of individual stakeholders forming the extended PHBSC fishery network.

Attribute	*P* value
mix.age.25-34.25-34	0.226
mix.age.35-44.25-34	0.432
mix.age.45-54.25-34	0.001
mix.age.55-64.25-34	0.132
mix.age.NA.25-34	0.031
mix.age.25-34.35-44	0.226
mix.age.35-44.35-44	0.037
mix.age.45-54.35-44	0.011
mix.age.55-64.35-44	0.192
mix.age.NA.35-44	0.251
mix.age.25-34.45-54	0.010
mix.age.35-44.45-54	0.039
mix.age.45-54.45-54	< 0.001
mix.age.55-64.45-54	0.041
mix.age.NA.45-54	0.040
mix.age.25-34.55-64	0.132
mix.age.35-44.55-64	0.070
mix.age.45-54.55-64	0.005
mix.age.55-64.55-64	0.987
mix.age.65+.55-64	0.380
mix.age.NA.55-64	0.012
mix.age.NA.65+	0.262
mix.age.25-34.NA	0.031
mix.age.35-44.NA	0.197
mix.age.45-54.NA	0.050
mix.age.55-64.NA	0.080

Table S1.5.4. Exponential random graph model results for attribute-based mixing for the attribute 'Group of individual stakeholders forming the extended PHBSC fishery network.

Attribute	*P* value
mix.group.Academics.Academics	0.004
mix.group.Commercial sector.Academics	< 0.001
mix.group.Government body.Academics	< 0.001
mix.group.NGO, Conservation groups.Academics	0.001
mix.group.Academics.Commercial sector	< 0.001
mix.group.Commercial sector.Commercial sector	0.191
mix.group.Government body.Commercial sector	< 0.001
mix.group.NGO, Conservation groups.Commercial sector	0.004
mix.group.Recreational sector.Commercial sector	< 0.001
mix.group.Academics.Government body	< 0.001
mix.group.Commercial sector.Government body	< 0.001
mix.group.Government body.Government body	< 0.001
mix.group.NGO, Conservation groups.Government body	< 0.001
mix.group.Public awareness & Tourism.Government body	< 0.001
mix.group.Recreational sector.Government body	< 0.001
mix.group.Academics.NGO, Conservation groups	0.001
mix.group.Commercial sector.NGO, Conservation groups	0.001
mix.group.Government body.NGO, Conservation groups	< 0.001
mix.group.NGO, Conservation groups.NGO, Conservation groups	0.019
mix.group.Recreational sector.NGO, Conservation groups	0.013
mix.group.Commercial sector.Public awareness & Tourism	< 0.001
mix.group.Government body.Public awareness & Tourism	< 0.001
mix.group.Recreational sector.Public awareness & Tourism	0.003
mix.group.Academics.Recreational sector	0.001
mix.group.Commercial sector.Recreational sector	< 0.001
mix.group.Government body.Recreational sector	< 0.001
mix.group.NGO, Conservation groups.Recreational sector	0.013
mix.group.Public awareness & Tourism.Recreational sector	0.004

Table S1.5.5. Exponential random graph model results for attribute-based mixing for the attribute 'Organisation' of individual stakeholders forming the extended PHBSC fishery network.

Attribute	*P* value
mix.gender.Female.Female	0.040
mix.gender.Male.Female	0.104
mix.gender.Female.Male	0.125
mix.gender.Male.Male	NA

2.1. Economic value of recreational Blue Swimmer Crab fishing in south-western Australian estuaries

Table S2.2.1. Number of responses (n) and the frequency of occurrence (%) of responses about the demographics of Blue Swimmer Crabs fishers. Data obtained from respondents that answered all questions in the closed question online survey.

Demographic Information	n	%
Gender		
Female	18	15.4
Male	98	83.8
Other	1	0.9
Age group		
18 to 24 years	14	12.2
25 to 34 years	29	25.2
35 to 44 years	27	23.5
45 to 54 years	29	25.2
55 to 64 years	11	9.6
65+ years	5	4.4
Education of respondents		
Primary school	2	1.7
Secondary school	27	23.3
Technical or further education	44	37.9
University education	37	31.9
Other	1	0.9
Not stated	5	4.3
Employment category		
Unemployed	3	2.6
Home duties	5	4.3
Full-time student	4	3.5
Part time or casual paid employment	12	10.4
Full time paid employment	78	67.8
Pensioner (disability, illness, age, etc)	3	2.6
Retired	4	3.5
Other	6	5.2
Annual income group		
Negative income (less than $0)	2	1.6
No income ($0)	9	7.4
$1-$20,799	13	10.7
$20,800-$41,599	16	13.1
$41,600-$62,399	17	13.9
$62,400-$83,199	16	13.1
$84,000-$103,999	15	12.3
$104,000-$142,999	11	9.0
$143,000-181,999	10	8.2
$182,000-$233,999	1	0.8
$234,000-$285,999	1	0.8
$286,000-$337,999	1	0.8
Prefer not to say	10	8.2

2.2. Estimation of the economic value of recreational Black Bream fishing

Table S2.2.1. Number of responses (n) and the frequency of occurrence (%) of responses about the demographics of Black Bream fishers. Data obtained from respondents that answered all questions in the closed question online survey.

Demographic Information	n	%
Gender		
Female	7	5.7
Male	113	92.6
Other	2	1.6
Age group		
18 to 24 years	24	19.5
25 to 34 years	26	21.1
35 to 44 years	33	26.8
45 to 54 years	19	15.4
55 to 64 years	14	11.4
65+ years	7	5.7
Education of respondents		
Primary school	2	1.6
Secondary school	37	30.1
Technical or further education	42	34.1
University education	39	31.7
Other	2	1.6
Not stated	1	0.8
Employment category		
Unemployed	8	6.6
Home duties	6	4.9
Full-time student	8	6.6
Part time or casual paid employment	12	9.8
Full time paid employment	75	61.5
Pensioner (disability, illness, age, etc)	2	1.6
Retired	5	4.1
Other	6	4.9
Annual income group		
Negative income (less than $0)	1	0.9
No income ($0)	8	7.1
$1-$20,799	9	8.0
$20,800-$41,599	13	11.5
$41,600-$62,399	11	9.7
$62,400-$83,199	17	15.0
$84,000-$103,999	15	13.3
$104,000-$142,999	12	10.6
$143,000-181,999	5	4.4
$182,000-$233,999	6	5.3
$234,000-$285,999	1	0.9
$286,000-$337,999	1	0.9
Prefer not to say	14	12.4

Appendix 3. Social dimensions of Blue Swimmer Crab recreational fishing in the Peel-Harvey Estuary

Table A3S1. Number of responses (n) and the frequency of occurrence (%) of responses for questions about fisher demographics and fisher characteristics obtained from 41 face-to-face interviews with Blue Swimmer Crabs fishers on the Peel-Harvey Estuary.

Respondent characteristics	n	%
Gender		
Male	31	75.6
Female	10	24.4
Age group		
18 – 24	1	2.4
25 – 34	8	19.5
35 – 44	5	12.2
45 – 54	6	14.6
55 – 64	9	22.0
65+	12	29.3
Residency		
Mandurah resident (live within 20 km of estuary)	29	70.7
Non-Mandurah resident	12	29.3
Length of time fishing for Blue Swimmer Crabs		
1 year or less	5	14.3
2 – 3 years	4	11.4
4 – 10 years	2	5.7
11 – 20 years	7	20.0
21 – 39 years	5	14.3
40 or more years	12	34.3
Highest level of education		
Secondary	22	53.7
Tertiary or further educational institution	11	26.8
University	8	19.5
Primary	0	0
Fishing method		
Both boat and shore, but mainly boat	11	26.8
Shore only	9	22.0
Both boat and shore, but mainly shore	8	19.5
Both equally	7	17.1
Boat only	6	14.6
Are Blue Swimmer Crabs key to fisher identity?		
No	27	65.9
Yes	14	34.1
Fisher awareness of restocking		
Yes	34	82.9
No	7	17.1

Table A3S2. Number of responses (n) and the frequency of occurrence (%) of responses for questions about fisher demographics and fisher characteristics obtained from the closed question online survey with Blue Swimmer Crabs fishers using the Peel-Harvey Estuary.

Fisher characteristics	n	%
Gender		
Male	129	79.6
Female	32	19.8
Other	1	0.6
Age		
18 – 24	10	6.2
25 – 34	30	18.6
35 – 44	37	23.0
45 – 54	39	24.2
55 – 64	28	17.3
65+	17	10.6
Residency		
Non-Mandurah resident	81	50.9
Mandurah resident	78	49.1
Length of time fishing for Blue Swimmer Crabs		
1 year or less	8	3.8
2 – 3 years	12	5.7
4 – 5 years	20	9.5
6 – 10 years	26	12.3
11 – 20 years	43	20.4
21 – 39 years	54	25.6
40 or more years	48	22.7
Frequency of fishing over the last 12 months		
I have not fished for the crabs in the past 12 months	6	2.6
Once	27	11.6
Once every 4 – 6 months	43	18.5
Once every 2 – 3 months	42	18.1
Once a month	47	20.3
1 – 2 days a fortnight	39	16.8
1 – 2 days a week	22	9.5
3 – 4 days a week	4	1.7
5 days or more a week	2	0.9
Education		
Secondary	53	34.2
Tertiary or further educational institution	51	32.9
University	48	31.0
Primary	3	1.9
Fishing method		
Boat only	71	33.3
Shore only	50	23.5
Both boat and shore, but mainly boat	41	19.2
Both boat and shore, but mainly shore	30	14.1
Both equally	21	9.9
Self-assessed fishing level		
Intermediate	109	51.7
Expert	82	38.8
Beginner (novice)	20	9.5

Table A3S3. H-values from Kruskal-Wallis tests between the basic fisher demographics, fisher characteristics and CLUSTER-SIMPROF fisher groups and the motivational factors. Dark and light shading indicate significant results ($p < 0.050$) and those with a p-value between 0.051-0.100, respectively.

	What makes a fishing trip successful?					
	Catching enough crabs to eat	Catching big crabs	Being with friends/family is enough	Being outdoors is enough	Catching as many crabs as legally allowed	Catching some crabs, despite number or size
Demographics						
Age	1.19	4.41	1.76	2.68	5.00	11.99
Gender	3.36	3.11	4.39	1.91	3.76	4.14
Residency	5.08	0.13	3.40	4.14	1.82	0.69
Fisher charact.						
Fishing frequency	17.08	6.22	14.89	15.32	8.65	8.95
Length of practice	6.66	1.60	4.56	11.81	3.82	5.50
Fishing method	5.19	1.44	1.31	4.26	11.08	3.63
Expertise	3.38	3.66	2.60	3.48	2.02	0.46
Fisher groups	4.78	2.15	3.30	4.37	3.40	0.70

Table A3S4. H-values from Kruskal-Wallis tests between the basic fisher demographics, fisher characteristics and CLUSTER-SIMPROF fisher groups and the restocking belief strength. Dark and light shading indicate significant results (p < 0.050) and those with a p-value between 0.051-0.100, respectively.

	Belief Strength					
	Increase crab number	More crabs to catch	More fishers fishing	No change in crab abundance	Increase fishing pressure	Impact on the environment and species
Demographics						
Age	6.93	7.89	3.69	6.13	8.83	9.44
Gender	1.81	3.39	1.81	1.09	4.41	2.97
Residency	1.25	2.78	0.01	2.74	1.43	0.06
Fisher charact.						
Fishing frequency	6.99	7.72	10.48	4.69	5.96	8.05
Length of practice	6.98	6.24	5.50	5.01	7.27	6.89
Fishing method	3.06	2.06	2.41	0.75	1.70	8.16
Expertise	1.36	0.05	1.61	1.01	0.21	5.24
Fisher groups	2.03	2.58	4.32	4.72	3.28	10.67

Table A3S5. H-values from Kruskal-Wallis tests between the basic fisher demographics, fisher characteristics and CLUSTER-SIMPROF fisher groups and the restocking belief evaluation. Dark and light shading indicate significant results ($p < 0.050$) and those with a p-value between 0.051-0.100, respectively.

	Belief evaluation					
	Increase crab number is	More crabs to catch is	More fishers fishing is	No change in crab abundance is	Increase fishing pressure is	Impact on the environment and species is
Demographics						
Age	3.73	5.11	2.80	4.67	2.49	4.53
Gender	5.42	5.47	0.45	0.38	2.26	0.01
Residency	0.32	1.88	2.32	2.93	0.39	1.53
Fisher charact.						
Fishing frequency	8.68	10.13	8.88	12.14	3.38	3.95
Length of practice	4.12	3.83	12.06	8.88	4.15	10.38
Fishing method	4.01	2.33	4.13	4.76	2.15	6.42
Expertise	1.39	0.30	0.66	4.12	4.16	0.34
Fisher group	2.02	4.58	4.16	6.75	1.32	4.39

Table A3S6. H-values from the Kruskal-Wallis test between the basic fisher demographics, fisher characteristics and CLUSTER-SIMPROF fisher groups and the restocking cross-product data. Dark and light shading indicate significant results ($p < 0.050$) and those with a p-value between 0.051-0.100, respectively.

	Cross-product (belief strength x belief evaluation)					
	Increase crab number	More crabs to catch	More fishers fishing	No change in crab abundance	Increase fishing pressure	Impact on the environment and species
Demographics						
Age	6.20	4.69	1.66	3.63	3.92	3.31
Gender	3.77	4.61	0.32	0.16	0.02	3.77
Residency	0.59	2.59	1.75	0.38	1.04	1.23
Fisher charact.						
Fishing frequency	11.49	10.40	11.24	12.50	3.18	9.14
Length of practice	6.12	3.89	13.34	4.30	9.28	5.55
Fishing method	2.77	2.07	1.85	2.47	4.37	4.51
Expertise	0.61	0.13	0.17	2.43	4.54	7.63
Fisher groups	2.36	5.33	2.98	1.93	2.49	3.70

Table A3S6. H-values from Kruskal-Wallis tests between the basic fisher demographics, fisher characteristics and CLUSTER-SIMPROF groups and the various management interventions. Dark and light shading indicate significant results ($p < 0.050$) and those with a p-value between 0.051-0.100, respectively.

	Management								
	Min size limits	Max size limits	Bag limits	Season closure	Closed fishing zones	Restrict fishing gear	Monitor fishers	Educate fishers	Restock crabs
Demographics									
Age	0.92	6.40	0.32	3.89	4.07	3.44	7.99	5.88	5.05
Gender	0.38	7.51	1.82	1.57	5.79	2.21	0.37	1.17	0.64
Residency	0.07	1.31	0.90	0.20	0.07	0.07	0.09	0.01	1.40
Fisher charact.									
Fishing freq.	2.64	14.37	5.91	6.84	17.51	5.65	6.71	2.94	2.05
Len. of practice	5.60	7.11	3.83	3.04	9.25	6.56	4.06	6.19	5.28
Fishing method	2.76	14.84	3.88	3.41	8.64	4.33	1.06	3.40	3.80
Expertise	3.43	4.79	2.88	0.07	13.77	6.17	2.07	1.56	1.47
Fisher group	1.99	8.28	5.71	3.38	9.93	3.29	3.09	3.57	0.54