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Small-scale fisher migration, conflict and wellbeing

A case study from Sri Lanka

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Appendices

Appendix I - Questionnaire for the Socioeconomic Survey

Wellbeing of migrant fishers in conflicting areas

Statement of confidentiality / informed consent: Reflecting on our wellbeing can sometimes be quite difficult.

We will ask you a series of questions on the general lifestyle, health and livelihood, and also how satisfied you are regarding certain aspects of life. All information gathered is confidential and will only be used for research. The identity of respondents or households will not be revealed to anyone. You are not obliged to participate, and if you feel you do not want to answer a particular question, please let us know and we can stop the interview, or leave out the question.

The above statement of confidentiality was read to the respondent and the respondent has agreed to participate in the interview.

Please tick the box

Name:

Age:

Address:

Education:

Gender:

Total years in fishing:

1. Your Role: Boat owner () Crew member () Involvement: Full time / Part time
2. Number of family members: - Male Female.....
3. Children: i. Below 5 years ii Schooling iii.After A/L
4. Job holders: - Permanent Temporary Fishery : Male Female.....
5. Why do you do fishing?
 - i Decent from family ii. Due to friends iii. Profitability iv. Interest v. No alternatives
 - vi Other (Explain)
6. What age did you start fishing (as a job)?
7. Have there been periods of your life when you have not fished?
 - i. Duration (ages) when not fishing ?
 - ii. Reason why (not fishing, what was done instead) ?
 - iii. What made you enter / or return to fishing?

8. Occupational activities

Activity (season/offseason)	Income/day	Adequacy of infrastructure	Preference	Satisfaction	Remarks

9. What are the places you do fishing in the year (except Negombo)?

How do you go there?

- I. Alone ii. With family iii. Friends iv. With crew v. Other

.....

10. Do you like to migrate to Mannar than other regions in Sri Lanka? Why?

Favourable factors	Unfavourable factors
Profitable fishery	
Contacts/relations (explain)	
Facilities	
Easy to survive	
Job opportunities	

12. Who are the important people you find in the area?

People/ institute	Relationship	Assistance	Difficulties	Satisfaction	Perception

13. How do the conflicts in Mannar affect your life?

Type of conflict	Impact on fishery	Impact on life (WB)	Impact on community	Weight (%)

15. What is your satisfaction level over the following attributes?

Description	In Negombo	In Mannar	Perception	Impact (%)
Income				
Resource availability				
Family Relationships				
Social relationships				
Job security				
Physical security				
Personal health				

Others Support				
Standard of living				
Clean water				
Savings				
Food consumption				
Housing				
Mental health				
Ethnic relations				
Future aspirations				
Achievement in life				
Overall satisfaction				

16. In which ways does migration help you to achieve a good life (give percentages)?

Criteria	Impact	Criteria	Impact
Income increase		Relationships in the family	
Job security		Relationships in the community	
Happiness in the family		Children education	
Satisfaction on life		Mental fitness	
Savings			

17. How do you measure self – worth? What activities do you undertake to feel good about yourself?

Way / activity	Satisfaction	Expected level	Enabling/constraining	What would help you feel better about yourself

18. Give your satisfaction level

Criteria	Satisfaction	Religious/ activities	Satisfaction	What would enable to enjoy greater religious/spiritual wellbeing
Economic situation				
National security				
Social condition				
Government				
Business/fishery				

19. Compared to other households in the community, would you describe your household as:

- Amongst the richest in the community
- Richer than most households in the community
- About average in the community
- A little poorer than most households in the community
- Amongst the poorest in the community

20. Comparing your family’s situation now with five years ago, which of the following is true?
 Much worse now A little worse now Same A little better now Much better now
 Explain why?

21. Would you desire to continue fishing in the future? Why?

22. Would you desire your children and grand children to engage in fishing / migration? Why?

23. What are the strategies you adopt to ensure a good life and harmony?

In the family	In the community	In Mannar

24. Taking all aspects of your fishing livelihood into account, how would you say your wellbeing these days?
 Would you say you are:

Very Happy Fairly happy Not too happy

Why do you describe yourself as such?



Part 3 Quality of life

1. Can you share with us some of the most important moments in your life?

Happiest time	Difficult time

2. What are your hopes/ aspirations for the future?

3. Do you think you will be able to realize these hopes – What hinders your goals, what will help you?

4. How have you personally been affected due to the conflict (Give descriptions)?

5. Position yourself in the wellbeing ladder (Before 5 years ‘1’; now ‘2’ ; after 5 years ‘3’; without migration ‘4’; without Mannar conflicts ‘5’)



Questionnaire for the survey on Wellbeing Indicators – Phase II

Wellbeing factor	Necessity	Satisfaction
No debts		
Ability to save		
nets/gear/fuel at a low price		
House		
Food consumption/Drink		
Good price for the fish harvest		
Acquire assests (jewelry, three wheelers)		
Alternative job opportunities (dry fish processing, go abroad, hiring vehicle, self employment)		
Buy new fishing equipment		
Build a good future for children		
Engage in religious activities		
Well mannered obedient children		
Patience		
Dedication and commitment to the fishing job		
Good relationship in the family		
Stop Indian trawling		
Stop illegal fishing techniques		
Good education for children		
Peace and unity among the migratory fishers' community		
Peace and unity among the villagers (Tamil and Muslims)		
Ability to do the fishing without any conflicts		
Good physical health		
Easy access to sea		
Love and caring (spouse and children)		
Highly necessary/highly satisfied		2
Necessary/just satisfied		1
Not necessary/not satisfied		0

Name:

Age:

Male/female

Home town:

Migration site:

Source: Author- modified based on Coulthard et al. 2015.

Appendix II – GPGI questionnaire

Quality of life score		
Step 1: Identifying aspects of life that are important for living well	Step 2: Scoring Satisfaction in Each Area	Step 3: Spending Points – what needs to be changed?
<p>We would like you to think of the areas of your life that are most important for you to be able to live well in this community.</p> <p>These can be things that you:</p> <ul style="list-style-type: none"> • need to have • need to be able to do • the sort of person you need to be <p>Please tell us up to five areas in order of IMPORTANCE</p>	<p>In this part we would like you to score your level of satisfaction in the areas that you mentioned.</p> <p>This score should show how you felt about this area of your life over the past MONTH. Please score each area using this scale:</p> <p>5 = Excellent - Exactly as you would like to be 4 = Good - Close to how you would like to be 3 = OK, but not how you would like 2 = Poor but not the worst you could imagine 1 = Bad - The worst you could imagine</p>	<p>If you were able to change these areas of life what would you seek to change (and WHY)?</p> <p>We want you to ‘spend’ 10 points to show which areas of your life you feel are most important to change in order to improve your overall quality of life.</p> <p>Spend more points on areas you feel are most important for you to change and less on areas that you feel are not so important.</p> <p>You can choose to spend no points on one or more areas, but you can’t spend more than 10 points in total.</p>
<input type="text"/>	→ <input type="text"/>	→ <input type="text"/>
<input type="text"/>	→ <input type="text"/>	→ <input type="text"/>
<input type="text"/>	→ <input type="text"/>	→ <input type="text"/>
<input type="text"/>	→ <input type="text"/>	→ <input type="text"/>
<input type="text"/>	→ <input type="text"/>	→ <input type="text"/>

Source: WeD research group, URL: <http://www.bath.ac.uk/soc-pol/welldev/research/methods-toobox/ranq-toolbox.htm>

Appendix III - List of interviews

Interview No	Age	Gender	Home region	Migratory site
1	25	Male	Negombo	SouthBar
3	35	Male	Negombo	SouthBar
4	44	Male	Negombo	Silavathurei
5	37	Female	Negombo	Silavathurei
6	23	Male	Negombo	Silavathurei
7	51	Male	Negombo	SouthBar
8	30	Female	Negombo	Silavathurei
10	23	Female	Chilaw	SouthBar
11	35	Female	Negombo	Silavathurei
12	48	Male	Negombo	Silavathurei
13	37	Male	Negombo	Silavathurei
14	44	Male	Negombo	Silavathurei
15	47	Male	Chilaw	Silavathurei
16	43	Female	Negombo	Silavathurei
17	38	Male	Negombo	Silavathurei
18	48	Female	Negombo	Silavathurei
21	38	Male	Negombo	Silavathurei
22	40	Female	Chilaw	Silavathurei
23	41	Male	Chilaw	Silavathurei
24	53	Male	Negombo	SouthBar
26	38	Female	Negombo	Silavathurei
28	46	Male	Chilaw	Silavathurei
31	47	Male	Chilaw	Silavathurei
38	43	Male	Chilaw	SouthBar
41	51	Male	Chilaw	SouthBar
42	41	Female	Chilaw	Silavathurei
44	58	Male	Chilaw	SouthBar
46	39	Male	Negombo	SouthBar
48	45	Female	Chilaw	SouthBar
50	46	Female	Negombo	Silavathurei

KI No	Age	Gender	Place	Designaiton
KI - 1	72	Male	Negombo	School master
KI - 2	54	Male	Mannar	Former president of PFCS
KI - 3	55	Male	Negombo	NFF president
KI - 4	46	Male	Chilaw	RCS president

KI - 5	78	Male	Chilaw	An elderly fisherman-SouthBar
KI - 6	42	Male	Mannar	FI
KI - 7	55	Female	Negombo	Women leader
KI - 8	48	Male	Negombo	AD/Fisheries
KI - 9	37	Female	Negombo	Secretary - SVFO
KI -10	42	Male	Negombo	The Priest
KI -11	52	Female	Chilaw	Principal
KI- 12	65	Male	Colombo	Academic
KI - 13	75	Male	Negombo	Community leader
KI - 14	45	Male	Silavathurai	Police Officer
KI - 15	38	Male	Silavathurai	Navy Officer

Appendix IV - Laws and Regulations against IUU Fishing

4.1.1 Definition of IUU Fish

In accordance with the international plan of action to prevent, deter and eliminate illegal, un reported fishing (FAO 2001), the following fishing activities fall into the category of IUU fishing.

Illegal fishing

- a) Activities conducted by national or foreign vessels in waters under the jurisdiction of a state, without the permission of the state, or in contravention of its laws and regulations
- b) Activities conducted by vessels flying the flag of states that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the state are bound, or relevant provisions of the applicable international law;
- c) Activities conducted in violation of national laws or international obligations including those undertaken by co-operating states to a relevant regional fisheries management organization

Unreported fishing

- d) Fishing activities that have not been reported or have been misreported, to the relevant national authority, in contravention of the national law and regulations
- e) Fishing activities conducted in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention to the reporting procedures of that organization.

Unregulated fishing

- f) Fishing activities in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a state that is not a party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization;
- g) Fishing activities in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with state responsibilities for the conservation of living marine resources under the international law.

4.1.2. IOTC Definition

According to the Indian Ocean Tuna Commission (IOTC) resolution 11/03 on establishing a list of vessels presumed to have carried out IUU fishing in the IOTC area of competence, fishing vessels are presumed to have carried out IUU fishing in the IOTC area of competence that when a contracting party or co- operation non – contracting party presents evidence that such vessels:

- a) Harvest tuna or tuna- like species without registering in the IOTC record of vessels authorized to harvest tuna or tuna- like fish in the IOTC area of competence
- b) Harvest tuna or tuna-like species when their flag state is without sufficient quotas, catch limit or effort allocation under IOTC conservation and management measures where applicable;
- c) Do not record or report their catches made in the IOTC area of competence in accordance with IOTC reporting requirement, or make false reports;
- d) Take or land undersized fish in contravention of IOTC conservation measures;
- e) Fish during closed fishing periods or in closed areas in contravention of IOTC conservation measures;
- f) Use prohibited fishing gear in contravention of IOTC conservation measures;
- g) Trans-ship with , or participate in joint operations such as re-supplying or re-fuelling vessels included in the IUU vessels list;
- h) Harvest tuna or tuna-like species in the waters under the national jurisdiction of a coastal state in the IOTC area of competence without authorization and/or infringe the coastal state's law and regulations (this is without prejudice to the sovereign rights of coastal states to take measures against such vessels)
- i) Are without nationality and harvest tuna or tuna –like species in the IOTC area of competence;
- j) Engage in fishing, including transshipping, re-supply or re-fuelling contrary to any other IOTC conservation and management measures.

The IOTC definition of IUU fishing falls within the framework of the FAO definition. The definition is confined to in the high seas in the IOTC area of competence and areas of national jurisdiction of coastal states in the IOTC area of competence. Fishing or related activities in contravention with IOTC management and conservation measures, such as catching undersized fish, fishing during closed seasons and in closed areas, joint operations with vessels in the IUU list, unauthorized fishing in areas under national jurisdiction of coastal states are treated as IUU fishing to IOTC definition.

4.2. IUU fishing activities in Sri Lanka

Following are the fishing activities that come under the category of IUU fishing in accordance with the laws and regulations that govern fisheries in Sri Lanka, i.e. FARA and its regulations, and FFBA.

4.2.1. Illegal fishing

- i. Engaging in any prescribed fishing activity in Sri Lanka waters without a license obtained from director general (section 6 of FARA and its regulations of 1996 published in Gezette, No. 948/25 of 07-11-1996) .
 - Fishing operations carried out by seine nets, beach seines, model, or Danish seines nets
 - Fishing operations carried out by trawl nets
 - Fishing operations carried out by surrounding nets
 - Fishing operation carried out by trammel nets

- Fishing operation carried out by gillnets
- Fishing operation carried out by long lines
- Fishing operation carried out by cast nets
- Fishing operation carried out by fish traps
- Fishing operation carried out by stake nets (katt del)
- Beche-de-mer fishing operations
- Chank fishing operations
- Fishing operation carried out using bundles of *pila atu* (*Tephrosia* plants)
- Fishing operation carried out using fish aggregation devices
- Fishing operation carried out by lift net (Atoli)
- Fishing operations carried out by diving including free diving SCUBA diving and HOOKAH diving

Penalty: imprisonment of either description for a term not exceeding six months or to a fine not less than Rs. 3000 or to both such imprisonment and fine (section 49 (2) FARA)

- ii. Use of a fishing boat that has not been registered as a fishing boat by DG for fishing in Sri Lanka waters (section 15 of FARA and the registration of fishing boat regulations 1980); Penalty: fine no less than Rs. 2000
- iii. Use of poisonous, explosive or stupefying substances(including dynamite) or other noxious or harmful material for fishing (section 27 of FARA as amended by act, no. 4 of 2004); Penalty: imprisonment of either description for a term not less than three years and not exceeding five years and to a fine not less than Rs. 100,000 or no a second or subsequent conviction to imprisonment of either description for term not less than five years and not exceeding seven years and to a fine not less than Rs. 500, 000 (section 49(3) FARA as amended by Act, No. 4 of 2004)
- iv. Engaging in fishing operations, which have been prohibited (section 28 of FARA)
The following fishing operations have been prohibited (fishing operations regulations of 1996 published in Gazette, No =. 948/25 of 07 November 1996)
 - Push net fishing operations
 - Harpooning for marine mammals
 - Moxi net fishing operations
 - Gillnet or trammel net fishing operations on coral reefs or rocksPenalty : imprisonment of either description for a team not exceeding six months or to a fine not less than RS. 3000 or to both such imprisonment and fine section 49(2) FARA)
- v. Engaging in fishing operation in an area specified by minister during a closed season(section 34 of FARA) Months of February, September and October have been declared as closed seasons for fishing of lobster (notification published in gazette, No 1601/36 of 15 may 2009); Penalty : imprisonment of either description for a team not exceeding six months or to a fine not less than RS. 3000 or to both such imprisonment and fine (section 49(2) FARA)
- vi. Engaging in a fishing operation without a permit from DG in an area declared by minister as a fisheries reserve section 36 and 37 of FARA); Penalty: violation of the section 36 and 37 of FARA has not been listed as offences under the part ix offences and penalties in FARA perhaps due to an oversight.

- vii.** Engaging in spiny fishing operation in the sea area belonging to the southern coastal belt between the estuaries of Bentota River And Kumbukkan River(lobster fisheries management Regulations of 2000 published gazette, No. 1123/2 of 13 march 2000). Penalty : imprisonment of either description for a term not exceeding six months or to a fine not less than RS. 2000 or to both such imprisonment and fine(section 49(5) FARA)
- viii.** Engaging in a dredging operation or a trawling operation for the purpose of taking chank (chank fisheries management regulations, 2003 published in gazette,No. 1298/ 1 of 21 july 2003)
Penalty: imprisonment of either description for a term not exceeding six months or to both such imprisonment and fine (section 49(5) FARA)
- ix.** Landing of fins ok shark or skate which are not exceeding six months or to a fine not less than RS. 2000 Or to both such find (landing of fish (species of shark and skate) Regulation, 2001 published in gazette 1206/20 17 October 2001); Penalty: imprisonment of either description for a term not exceeding six months or to a fine not less than Rs. 2000 or to both such imprisonment and fine (section 49(5) FARA)
- x.** Using a foreign boat fishing or related activities in Sri Lanka waters except under the authority of a permit issued by DG with the approval of the minister (section 4 of FFBA Penalty: fine not exceeding Rs. 1.5 million (section 15(a) of FFBA)
- xi.** Landing of fish taken outside Sri Lanka water at any port in Sri Lanka by a boat not registered under FARA without a landing permit obtained from direct general (landing of fish regulations, 1997 published in gazette 972/4 of 21 April 1997); Penalty: imprisonment of either description for a term not exceeding six months or to a fine not less than Rs. 2000 or to both such imprisonment and fine (section 49(5) FARA)

4.2.2. Unreported fishing

- I.** Not reporting data relating to the catch to director general after landing of fish at a port in srilanka by a boat not registered under FARA and to which director general has issued a landing permit to land fish taken outside srilanka waters at a port in Sri Lanka (landing of fish regulations 1997 published in gazette 972/4 of 21 April 1997)
Penalty: imprisonment of the either description for a term not exceeding or to a fine not less than Rs. 2000 or to both such imprisonment and fine (section 49(5) FARA)

4.2.3. Unregulated fishing

There are no provisions in the laws of Sri Lanka that governing fisheries, i.e. FARA and FFBA, concerning unregulated fishing activities as defined under IUU fishing.

Source: Hettiarachchi 2011- based on Fisheries Act of 1996

Appendix V - Fish varieties

COMMON NAME	LOCAL NAME	SCIENTIFIC NAME
Sardines	Salaya	<i>Sardinella spp</i>
Gold striped sardinella	Matta salaya	<i>Sardinella gibosa</i>
Ribbon fish	Savalaya	<i>Lepturacanthus savala</i>
White sardinella	Sudaya	<i>Sardinella albella</i>
Sword tail fish	Thalapatha	<i>Istiophorus platypterus</i>
Barracuda	Theliya	<i>Sphyræna jello</i>
Indian pellona	Udassa	<i>Pellona ditchela</i>
Black spot snapper	Ranna	<i>Lutjanus fulviflamma</i>
Frigate tuna	Alagoduwa	<i>Anxis Thazard</i>
Seer fish	Thora	<i>Scomberomorus spp</i>
Flying fish	Piyamasso	
Kawakawa	Atawalla	<i>Enthynnus affinis</i>
Skipjack tuna	Balaya	<i>Katswonus pelamis</i>
Big eyed scad	Bolla	<i>Selar crumenophthalmus</i>
Squid , Cuttle fish	Della	<i>Loligo spp., Sepia spp</i>
Rock fish	Galmalu	<i>Lutjanus rivulatus</i>
Blubberlip Snapper	Badawa	<i>Epinephelus malabaricus</i>
Malabar grouper	Galbola	<i>Lutjanus argentimaculatus</i>
Yellow tail scad	Ginneti parawa	<i>Atule mate</i>
Streaked spine foot	Girawa	<i>Siganus javus</i>
Short- headed anchovy	Halmassa	<i>Encrasicholina heteroloba</i>
Spotted sardinella	Hurulla	<i>Amblygaster sirm</i>
Talang queen - fish	Kattawa	<i>Scombroides Commersonians</i>
Wolf herrings	Katuwalla	<i>Chirocentrus nudus</i>
Yellow fin tuna	Kellawalla	<i>Thunnus albacores</i>
Black marlin	Koppara	<i>Makaria indica</i>
Anchovy	Lagga	<i>Ophisthopterus tardoore</i>
Indian scad	Linna	<i>Decapterus ruselli</i>
Skate , Ray fish	Maduwa	
Halfbeak	Maranda	<i>Hyporhamphus limbatus</i>
Trevally	Parava	<i>Caranx ignobilis/Carangoides sp.</i>
Splendid pony fish	Penna (Karalla)	<i>Gazza minuta / Leognathus splendens</i>
Spiny lobster	Pokirissa	<i>Panulirus spp.</i>
White fish	Pulunna	<i>Lactarius lactarius</i>

Appendix VI – Wellbeing calculations**Mean values of dimension basis wellbeing indicators of migrant fishing communities in Negombo and Chilaw (n=164)**

Material WB Item	Whole	Male	Female	Silavathurei	SouthBar	Male Sila	Male SB	Female Sila	Female SB
No debts	1.95	1.92	1.99	1.96	1.94	1.93	1.90	1.98	2.00
Ability to save	1.78	1.79	1.77	1.86	1.67	1.85	1.73	1.87	1.58
nets/gear/fuel at a low price	1.98	1.98	1.97	1.99	1.95	2.00	1.95	1.98	1.96
Home	1.83	1.83	1.83	1.93	1.68	1.96	1.68	1.90	1.69
Food consumption/drink/ entertainment	1.70	1.71	1.68	1.68	1.71	1.67	1.75	1.69	1.65
Good price for the fish harvest	1.95	1.91	1.99	1.97	1.91	1.96	1.85	1.98	2.00
Acquire assests (jewelry, three wheelers)	.97	1.00	.94	.97	.97	1.02	.98	.92	.96
Alternative job opportunities (dry fish processing, go abroad, hiring vehicle, self employment)	1.08	1.06	1.10	1.18	.92	1.13	.98	1.23	.85
Good physical health	1.96	1.98	1.95	1.96	1.97	1.96	2.00	1.96	1.92
Accessibility to sea	1.88	1.90	1.87	1.88	1.89	1.87	1.93	1.88	1.85
Valid N	164	86	78	98	66	46	40	52	26

Relational WB Item	Whole	Male	Female	Silavathurei	SouthBar	Male Sila	Male SB	Female Sila	Female SB
Good relationship within the house	1.96	1.97	1.96	1.98	1.94	1.96	1.98	2.00	1.88
Stop Indian trawling	1.98	1.97	2.00	1.98	1.98	1.96	1.98	2.00	2.00
Stop illegal fishing techniques	1.92	1.94	1.90	1.91	1.94	1.96	1.93	1.87	1.96
Peace and unity among the migratory fishers' community	1.98	2.00	1.96	2.00	1.95	2.00	2.00	2.00	1.88
Peace and unity among the villagers (Tamil and Muslims)	1.74	1.72	1.77	1.86	1.58	1.83	1.60	1.88	1.54
Ability to do the fishing without any conflicts	1.97	1.99	1.95	1.99	1.94	2.00	1.98	1.98	1.88
Valid N	164	86	78	98	66	46	40	52	26

Subjective WB Item	Whole	Male	Female	Silavathurei	SouthBar	Male Sila	Male SB	Female Sila	Female SB
Improve fishing and buy new fishing equipment	1.85	1.83	1.88	1.91	1.77	1.89	1.75	1.92	1.81
Build a good future for children	1.87	1.81	1.92	1.95	1.74	1.91	1.70	1.98	1.81
Engage in religious activities	1.95	1.93	1.97	1.98	1.91	1.96	1.90	2.00	1.92
Well mannered obedient children	1.93	1.88	1.97	1.98	1.85	1.96	1.80	2.00	1.92
Patient	1.99	2.00	1.97	1.99	1.98	2.00	2.00	1.98	1.96
Dedication and commitment to the fishing job	1.98	2.00	1.96	2.00	1.95	2.00	2.00	2.00	1.88
Give a good education for children	1.89	1.86	1.92	1.96	1.79	1.91	1.80	2.00	1.77
Valid N	164	86	78	98	66	46	40	52	26

Computed wellbeing indices – dimension basis**Whole sample – factor analysis**

MWB	Mean	RWB	Mean	SWB	Mean
No debts	1,95	Stop Indian trawling	1,98	Give a good education for children	1,89
nets/gear/fuel at a low price	1,98	Good relationship within the house	1,96	Well mannered obedient children	1,93
Home	1,83	Ability to do the fishing without any conflicts	1,97	Patient	1,99
MWBI (whole)	1,92	RWBI (whole)	1,97	SWBI (whole)	1,94

WBI (WHOLE SAMPLE) = 1.94 (factor analysis)**Whole sample – Descriptive analysis**

MWB	Mean	RWB	Mean	SWB	Mean
nets/gear/fuel at a low price	1,98	Peace and unity among the migratory fishers' community	1,98	Patient	1,99
Good physical health	1,96	Stop Indian trawling	1,98	Dedication and commitment to the fishing job	1,98
No debts	1,95	Ability to do the fishing without any conflicts	1,97	Engage in religious activities	1,95
Good price for the fish harvest	1,95	Good relationship within the house	1,96	Well mannered obedient children	1,93
Accessibility to sea	1,88	Love and Caring (spouse and children)	1,96	Give a good education for children	1,89
MWBI	1,94	RWBI	1,97	SWBI	1,95

WBI (WHOLE SAMPLE) = 1.95 (Descriptive analysis)**Male in the whole sample – Descriptive analysis**

MWB	Mean	RWB	Mean	SWB	Mean
Good physical health	1,98	Peace and unity among the migratory fishers' community	2,00	Dedication and commitment to the fishing job	2,00
nets/gear/fuel at a low price	1,98	Ability to do the fishing without any conflicts	1,99	Patient	2,00
No debts	1,92	Stop Indian trawling	1,97	Engage in religious activities	1,93
Good price for the fish harvest	1,91	Good relationship within the house	1,97	Well mannered obedient children	1,88
MWBI	1,94	RWBI	1,98	SWBI	1,95

WBI (MALE) = 1.96 (Descriptive analysis)

Female in the whole sample – Descriptive analysis

MWB	Mean	RWB	Mean	SWB	Mean
Good price for the fish harvest	1,99	Stop Indian trawling	2,00	Well mannered obedient children	1,97
No debts	1,99	Love and Caring (spouse and children)	1,97	Patient	1,97
nets/gear/fuel at a low price	1,97	Peace and unity among the migratory fishers' community	1,96	Engage in religious activities	1,97
Good physical health	1,95	Good relationship within the house	1,96	Dedication and commitment to the fishing job	1,96
MWBI	1,97	RWBI	1,97	SWBI	1,97

WBI (FEMALE) = 1.97 (Descriptive analysis)

Silavathurei fishers- Descriptive analysis

MWB	Mean	RWB	Mean	SWB	Mean
nets/gear/fuel at a low price	1,99	Love and Caring (spouse and children)	2,00	Dedication and commitment to the fishing job	2,00
Good price for the fish harvest	1,97	Peace and unity among the migratory fishers' community	2,00	Patient	1,99
Good physical health	1,96	Ability to do the fishing without any conflicts	1,99	Well mannered obedient children	1,98
No debts	1,96	Stop Indian trawling	1,98	Engage in religious activities	1,98
Home	1,93	Good relationship within the house	1,98	Give a good education for children	1,96
MWBI	1,96	RWBI	1,99	SWBI	1,98

WBI (Silav) = 1.98 (Descriptive analysis)

SouthBar fishers - Factor analysis

MWB	Mean	RWB	Mean	SWB	Mean
No debts	1,94	Ability to do the fishing without any conflicts	1,94	Engage in religious activities	1,91
Good physical health	1,97	Stop Indian trawling	1,98	Give a good education for children	1,79
Accessibility to sea	1,89	Good relationship within the house	1,94	Well mannered obedient children	1,85
MWBI	1,93	RWBI	1,95	SWBI	1,85

WBI (SB) = 1.91 (Factor analysis)

SouthBar fishers - Descriptive analysis

MWB	Mean	RWB	Mean	SWB	Mean
Good physical health	1,97	Stop Indian trawling	1,98	Patient	1,98
nets/gear/fuel at a low price	1,95	Peace and unity among the migratory fishers' community	1,95	Dedication and commitment to the fishing job	1,95
No debts	1,94	Stop illegal fishing techniques	1,94	Engage in religious activities	1,91
Good price for the fish harvest	1,91	Good relationship within the house	1,94	Well mannered obedient children	1,85
Accessibility to sea	1,89	Ability to do the fishing without any conflicts	1,94	Give a good education for children	1,79
MWBI	1,93	RWBI	1,95	SWBI	1,90

WBI (SB) = 1.93 (Descriptive analysis)**Silavathurei FEMALE – Descriptive analysis**

MWB	Mean	RWB	Mean	SWB	Mean
Good price for the fish harvest	1,98	Love and Caring (spouse and children)	2	Give a good education for children	2,00
nets/gear/fuel at a low price	1,98	Peace and unity among the migratory fishers' community	2	Dedication and commitment to the fishing job	2,00
No debts	1,98	Stop Indian trawling	2	Well mannered obedient children	2,00
Good physical health	1,96	Good relationship within the house	2	Engage in religious activities	2,00
MWBI	1,98	RWBI	2	SWBI	2,00

WBI (Sila, F) = 1.99 (Descriptive analysis)**SouthBar FEMALE – Descriptive analysis**

MWB	Mean	RWB	Mean	SWB	Mean
Good price for the fish harvest	2,00	Stop Indian trawling	2,00	Patient	1,96
No debts	2,00	Stop illegal fishing techniques	1,96	Engage in religious activities	1,92
nets/gear/fuel at a low price	1,96	Love and Caring (spouse and children)	1,92	Well mannered obedient children	1,92
MWBI	1,99	RWBI	1,96	SWBI	1,94

WBI (SB, F) = 1.96 (Descriptive analysis)

Silavathurei MALE – Descriptive analysis

MWB	Mean	RWB	Mean	SWB	Mean
nets/gear/fuel at a low price	2,00	Love and Caring (spouse and children)	2,00	Dedication and commitment to the fishing job	2,00
Good physical health	1,96	Ability to do the fishing without any conflicts	2,00	Patient	2,00
Good price for the fish harvest	1,96	Peace and unity among the migratory fishers' community	2,00	Well mannered obedient children	1,96
Home	1,96	Stop Indian trawling	1,96	Engage in religious activities	1,96
No debts	1,93	Good relationship within the house	1,96	Give a good education for children	1,91
Accessibility to sea	1,87	Stop illegal fishing techniques	1,96	Build a good future for children	1,91
MWBI	1,95	RWBI	1,98	SWBI	1,96

WBI (Sila, M) = 1.96 (Descriptive analysis)

SouthBar MALE – Descriptive analysis

MWB	Mean	RWB	Mean	SWB	Mean
Good physical health	2,00	Peace and unity among the migratory fishers' community	2,00	Dedication and commitment to the fishing job	2,00
nets/gear/fuel at a low price	1,95	Ability to do the fishing without any conflicts	1,97	Patient	2,00
Accessibility to sea	1,93	Stop Indian trawling	1,97	Engage in religious activities	1,90
No debts	1,90	Good relationship within the house	1,97	Give a good education for children	1,80
Good price for the fish harvest	1,85	Stop illegal fishing techniques	1,93	Well mannered obedient children	1,80
MWBI	1,93	RWBI	1,97	SWBI	1,90

WBI (SB, M) = 1.93 (Descriptive analysis)

Composite wellbeing index for fisheries

MWB	Mean	RWB	Mean	SWB	Mean
Good price for the fish harvest	1,98	Stop Indian trawling	1,98	Patient	1,99
No debts	1,95	Peace and unity among migratory fishers	1,98	Engage in religious activities	1,95
nets/gear/fuel at a low price	1,95	Good relationship within the house	1,96	Well mannered obedient children	1,93
MWBI	1,96	RWBI	1,97	SWBI	1,96

CWI (FISH NESS) = 1.96 (Descriptive analysis)