

**Project Title:**

**Climate change and impacts on rice production in Vietnam:  
Pilot testing of potential adaptation and mitigation measures**

**CLIMAVIET**

**Deliverable 2.1**

**Analysis of gender-differentiated climate change impacts, vulnerability  
and adaptation of smallholders in Soc Trang and Tra Vinh provinces in  
the Mekong River Delta (MRD)**

**APPENDICES**

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*Annex 1 Basic information about Soc Trang Province and study sites*

Name	Total area (ha)	Total agricultural area (ha)	Rice area (ha)	Population			Total households	Agricultural households	Rice farming households	Poverty	
				Total	Male	Female				Poor household	Poverty rate %
Soc Trang province	331,176	276,958	146,970	1,304,965	648,547	656,418	313,648	200,169	167,792	53,295	16.99
Long Phu district	26,382	21,341	15,530	113,090	56,145	56,945	27,918	17,288		4,284	15.34
Tran De district	37,786	32,389	23,158	133,637	66,564	67,073	31,478			6,435	20.44
Tan Hung Commune (Long Phu district)	3,227.43	2,905.87	2,400	12,042	5,990	6,052	3,061	1,575	1,575	618	20.19
5 villages:											
Tan Qui A	664.31	598.12	494	3,179	1,625	1,554	714	279	279	127	17.79
Tan Qui B	509.66	458.86	379	1,842	950	892	477	322	322	168	35.22
Soc Dong	840.48	756.74	625	2,978	1,397	1,581	799	384	384	63	7.88
Tan Lich	641.45	577.54	477	1,965	934	1,031	565	287	287	127	22.48
Ko Ko	571.52	514.58	425	2,078	1,080	998	506	303	303	133	26.28
Lieu Tu commune (Tran De district)	5,056	2,850	2,850	14,720	7,375	7,345	3,305	1,580	1,580	774	23.42
5 villages:											
Bung Bui	801	659	659	2,552	1,279	1,273	576	353	353	162	28.13
Bung Triet	613	486	486	2,067	1,036	1,031	474	258	258	110	23.21
Dai Non	1,172	849	849	4,465	2,237	2,228	1,002	515	515	237	23.65
Giong Chat	1,562	619	619	3,710	1,859	1,851	867	327	327	173	19.95
Total	909	237	237	1,926	965	961	420	127	127	92	21.90

*Annex 2 Basic information of Tra Vinh province and the study sites*

Name	Total area (ha)	Total agricultural area (ha)	Rice area (ha)	Population			Total households	Agricultural households	Ric farming households	Poverty	
				Total	Male	Female				Poor household	Poverty rate %
Tra Vinh province	234,116	184,956	97,422	1,015,300	500,200	515,100	260,589	144,128	124,899	43,362	16.64
Tra Cu district	36,992	28,347	18,069	178,708	87,655	91,053	46,133	22,952	21,460	9,757	21.15
Don Chau commune	3,129	1,649	1,413	13,785	6,695	7,090	3,294	1,503	1,503	1,226	37.22
11 villages											
Ta Rom A	227.8	176.8	124	1,163	547	616	272	167	167	94	34.56
Ta Rom B	246.6	179.34	152	1,289	637	652	309	207	207	127	41.10
Mo Coi	195.8	159.24	121	860	400	460	190	123	123	77	40.53
Bao Mon	471	416.07	368	1,933	935	998	470	340	340	151	32.13
Ba Sat	350	308.7	254	1,481	744	737	384	289	289	133	34.64
Coc Lach	102	45.77	59	651	319	332	159	70	70	68	42.77
Sa Vang	106	77.56	71	627	300	327	153	113	113	63	41.18
La Bang Chua	468.4	128.22	57	1,693	827	866	390	89	89	218	55.90
La Bang Kinh	705.4	91.83	25	828	402	426	180	53	53	52	28.89
La Bang Cho				2,282	1,097	1,185	551			176	31.94
Ba Nhi	253.6	92.47	22	978	487	491	236	52	52	67	28.39

(Continued)

Name	Total area (ha)	Total agricultural area (ha)	Rice area (ha)	Population			Total households	Agricultural households	Rice farming households	Poverty	
				Total	Male	Female				Poor household	Poverty rate %
Don Xuan commune	2,621	2,230	1,519	14,048	6,474	7,574	3,421	1,607	1,607	979	28.62
11 villages											
Ba Giam A	287	269.7	233.8	1,381	585	796	346	163	163	108	31.21
Ba Giam B	269.4	247.6	201	1,434	631	803	332	156	156	116	34.94
Xom To	265.3	264.5	212	1,298	549	749	312	146	146	117	37.50
Quan Am	144.3	125.1	99.4	795	336	459	211	99	99	72	34.12
Lo Soi B	136.8	126.3	87.3	1,444	611	833	344	162	162	115	33.43
Bao Sau	143.1	107.8	72.6	596	252	344	145	68	68	29	20.00
Cay Cong	215.9	144.7	76.1	1,064	450	614	290	136	136	58	20.00
Lo Soi A	434	370.8	228.3	1,107	468	639	264	124	124	70	26.52
Cho	78.9	34.8	11.9	1,058	448	610	255	120	120	27	10.59
Cay Da	320.5	234.7	150.8	2,339	990	1,349	526	247	247	168	31.94
Ba Nhi	342.5	304	145.8	1,532	648	884	396	186	186	99	25.00

*Annex 3 Household head of the household*

Item	Soc Trang (n=80)	Tra Vinh (n=80)	All (N=160)
	%	%	%
Husband	88	80	84
Wife	6	4	5
Parents	6	16	11

*Annex 4 Household characteristics*

Item	Soc Trang (n=80)	Tra Vinh (n=80)	All (N=160)
Ethnic (%)			
Kinh	33	14	23
Hoa	13	-	6
Khmer	55	86	71
Household size (%)			
≤ 3	16	24	20
4 - 6	65	65	65
> 6	19	11	15
Average of household size	5.0	4.4	4.7
Average of male member	2.5	2.3	2.4
Average of dependents	2.1	1.6	1.9
Average of number of earners	2.5	2.7	2.6

*Annex 5 Socio-economic characteristics of principal male and female of farming households*

Item	Soc Trang (n=80)	Tra Vinh (n=80)	All (N=160)
<i>Average age (years)</i>			
Principal male	49	47	48
Principal female	47	44	46
<i>Average years in school</i>			
Principal male	6	5	6
Principal female	5	3	4
<i>Average years in farming</i>			
Principal male	27	24	25
Principal female	16	18	17

*Annex 6 House type and location*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b><i>Type of house</i></b>						
Permanent	22	28	10	13	32	20
Semi permanent	46	58	40	50	86	54
Temporary	12	15	30	38	42	26
Total	80	100	80	100	160	100
<b><i>Location of the house</i></b>						
Close to the river/canal/sea	31	39	19	24	51	32
Flood prone	1	1	2	3	3	2
Saline and drought prone	15	19	16	20	31	19
Near rural transportation road	-	-	5	6	5	3
Close to the river/canal/sea and flood prone	2	3	1	1	3	2
Close to the river/canal/sea and saline and drought prone	28	35	35	44	62	39
Flood, saline and drought prone	1	1	-	-	1	1
Saline and drought prone and near rural transportation road	1	1	2	3	3	2
Close to the river/canal/sea and flood, saline and drought prone	1	1	-	-	1	1
Total	80	100	80	100	160	100

*Annex 7 How land has been obtained*

How to have the land	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
Inherited	47	59	52	65	99	62
Bought	12	15	6	8	18	11
Provided by government	-	-	4	5	4	3
Inherited and bought	21	26	18	23	39	24
Total	80	100	80	100	160	100

*Annex 8 Female members own other assets rather than land*

Wife/other female members own other assets (%)	Soc Trang (n=80)	Tra Vinh (n=80)	All (N=160)
Yes	29	33	31
No	71	68	69
Total	100	100	100

Annex 9 Type of asset owned by wife or other female member

Soc Trang	Tra Vinh
- Small animal (pig, chicken)	- Cow and pig
- Cell phone	- Cell phone
- Cart to sell vegetable, meat, fish	- Motorbike
- House right certificate	- Small store/food shop
- Motorbike	- House
- Cash	- Cash

Annex 10 Land characteristics

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b><i>Parcel Number/household</i></b>						
1	33	41	32	40	65	41
2	17	21	29	36	46	29
3	18	23	16	20	34	21
>3	12	15	3	4	15	9
Total	80	100	80	100	160	100
Total land area (ha/household)	2.34		1.04		1.69	
Total rice land (ha/household)	2.30		1.04		1.67	
<b><i>Location</i></b>						
Close to the river/canal/sea	108	62	75	50	183	56
Flood prone	-	-	1	1	1	a
Saline and drought prone	4	2	16	11	20	6
Close to the river/canal/sea, saline and drought prone area	61	35	59	39	120	37
Close to the river/canal/sea, flood prone, saline & drought prone	2	1	-	-	2	1
Total	175	100	151	100	326	100
<b><i>Soil type</i></b>						
Silt loam	138	79	46	30	184	56
Sandy	3	2	28	19	31	10
Clayey	27	15	26	17	53	16
Salinity	2	1	1	1	3	1
Acid sulphate soil	1	1	21	14	22	7
Silt loam, Sandy	-	-	5	3	5	2
Silt loam, Clayey	-	-	2	1	2	1
Sandy, Clayey	4	2	19	13	23	7
Silt loam, Sandy, Acid soil	-	-	3	2	3	1
Total	175	100	151	100	326	100
<b><i>Land tenure</i></b>						
Owner-cultivator	162	93	141	93	303	93
Rented-In	9	5	8	5	17	5
Rented-Out	1	1	2	1	3	1
Amortizing in	3	2	-	-	3	1



Total	175	100	151	100	326	100
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*Annex 11 Source of water and cropping system*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b>Sources of water by land parcel</b>						
River	106	61	73	48	179	55
Canal	65	37	54	36	119	37
Rains	-	-	1	1	1	a
River, canal	3	2	10	7	13	4
River, rains	-	-	7	5	7	2
Canal, rains	1	1	3	2	4	1
River, canal, rains	-	-	3	2	3	1
Total	175	100	151	100	326	100
<b>Type of cropping systems</b>						
Rice-rice-rice	73	88	53	58	126	72
Rice-rice	10	12	35	38	45	26
Rice-rice-corn	-	-	1	1	1	1
Rice	-	-	2	2	2	1
Total	83	100	91	100	174	100

Note: a= less than 1%

*Annex 12 Seed use and rice yield in the different crop seasons*

*(a) Seed use and rice yield in crop season 1 (Winter-Spring)*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b>Seed type</b>						
Certified	66	45	29	33	95	41
Non-certified	81	55	58	67	139	59
Total	147	100	87	100	234	100
<b>Seed source</b>						
Seed producer	64	44	22	25	86	37
Farmer exchange	35	24	36	41	71	30
Own seeds (from previous season)	48	33	29	33	77	33
Total	147	100	87	100	234	100
<b>Method of crop establishment</b>						
Direct seeding by Drum seeder	1	1	-	-	1	a
Direct seeding by manually broadcasting	146	99	87	100	233	100
Total	147	100	87	100	234	100
Seed rate (kg/ha)			206.2		190.0	200.2
Yield (t/ha)			4.05		5.26	4.50

Note: a= less than 1%

(b) Seed use and rice yield in crop season 2 (Summer-Autumn)

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b>Seed type</b>						
Certified	80	49	58	40	138	45
Non-certified	84	51	86	59	170	55
Other (foundation seed)	-	-	2	1	2	1
Total	164	100	146	100	310	100
<b>Seed source</b>						
Seed producer	70	43	43	29	113	36
Farmer exchange	46	28	69	47	115	37
Own seeds (from previous season)	48	29	34	23	82	26
Total	164	100	146	100	310	100
<b>Method of crop establishment</b>						
Direct seeding by Drum seeder	1	1	-	-	1	a
Direct seeding by manually broadcasting	160	98	146	100	306	99
Transplanting	3	2	-	-	3	1
Total	164	100	146	100	310	100
Seed rate (kg/ha)		197.3		191.9		194.7
Yield (t/ha)		5.44		5.15		5.30

Note: a= less than 1%

(c) Seed use and rice yield in crop season 3 (Autumn-Winter)

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b>Seed type</b>						
Certified	86	53	54	38	140	46
Non-certified	74	45	86	61	160	52
Other (foundation seed)	3	2	2	1	5	2
Total	163	100	142	100	305	100
<b>Seed source</b>						
Seed producer	87	53	41	29	128	42
Farmer exchange	40	25	55	39	95	31
Owned (from previous crop season)	36	22	46	32	82	27
Total	163	100	142	100	305	100
<b>Method of crop establishment</b>						
Direct seeding by Drum seeder	1	1			1	a
Direct seeding by manually broadcasting	162	99	142	100	304	100
Total	163	100	142	100	305	100
Seed rate (kg/ha)		198		195		197
Yield (t/ha)		5.71		5.23		5.49

Note: a= less than 1%

*Annex 13 Rice marketing*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b>Who to sell rice:</b>						
Middlemen	76	95	77	100	153	97
Miller	3	4	-	-	3	2
Both	1	1	-	-	1	1
Total	80	100	77	100	157	100
<b>Major means of transporting the rice sold</b>						
Boat	78	98	68	88	146	93
Truck	1	1	7	9	8	5
Both	1	1	2	3	3	2
Total	80	100	77	100	157	100
<b>Type of transportation road to sell rice:</b>						
Road	1	1	9	12	10	6
River	51	64	58	75	109	69
Canal	27	34	5	6	32	20
Both road and river	1	1	2	3	3	2
Both road and canal			3	4	3	2
Total	80	100	77	100	157	100
<b>Farmer deliver the rice or rice was picked up</b>						
Deliver	7	9	2	3	9	6
Pick-up	72	90	75	97	147	94
Both	1	1			1	1
Total	80	100	77	100	157	100
<b>Farmer canvass for the rice prices in selling</b>						
Yes	15	19	26	34	41	26
No	65	81	51	66	116	74
Total	80	100	77	100	157	100

*Annex 14 Rice disposal*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
Farmer sold rice						
Yes	80	100	77	96	157	98
No	-	-	3	4	3	2
Total	80	100	80	100	160	100
Farmer keep rice for home consumption						
Yes	30	38	43	54	73	46
No	50	63	37	46	87	54
Total	80	100	80	100	160	100
Farmer keep rice for seeds						
Yes	17	21	22	28	39	24
No	63	79	58	73	121	76
Total	80	100	80	100	160	100
Rice disposal						
Percentage of rice sold		95		92		94
Percentage of rice kept for home consumption		3		7		4
Percentage of rice kept for seeds		2		1		2
Total		100		100		100

*Annex 15 Fertilizer use*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (n=160)	
	Count	%	Count	%	Count	%
Number of granular fertilizer application per crop season						
3	25	31	57	71	82	51
4	50	63	19	24	69	43
5	5	6	4	5	9	6
Total	80	100	80	100	160	100
Average number granular fertilizer application		4		3		4
Number of foliar fertilizer application per crop season						
1	14	18	10	13	24	15
2	12	15	5	6	17	11
3	8	10	5	6	13	8
4	2	3	-	-	2	1
Total	36	45	20	25	56	35
Average number foliar fertilizer application		2		2		2

*Annex 16 Pesticide use*

Number of applications per crop season	Soc Trang (n=80)	Tra Vinh (n=80)	All (n=160)
1. Herbicide	2	2	2
2. Insecticide	3	2	2
3. Fungicide	3	3	3
4. Rodenticide	1	2	2
5. Molluscicide	1	1	1
Total	10	10	10

*Annex 17 Number of irrigation applications and water depth*

Item	Soc Trang (n=80)	Tra Vinh (n=80)	All (N=160)
Number of irrigation before sowing/transplanting	1	1	1
Number irrigation from sowing/transplanting to flowering	3	3	3
Number irrigation from flowering to harvesting	1	1	1
Total number irrigation per crop season	4	5	5
Average number of day interval between 2 irrigations	11	12	12
Average depth of water from soil surface for each irrigation (cm)	8	9	9

*Annex 18 Power use*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
<b><i>For land preparation:</i></b>						
Rotovator/ Tractor	79	99	80	100	159	99
No land preparation, only drag surface by banana trunk manually	1	1	-	-	1	1
Total	80	100	80	100	160	100
<b><i>For harvesting:</i></b>						
Combine harvester	78	98	80	100	158	99
Manual	2	3	-	-	2	1
Total	80	100	80	100	160	100
<b><i>Pumping water into field</i></b>						
Mechanical	47	82	63	90	110	87
Manual	10	18	7	10	17	13
Total	57	100	70	100	127	100
<b><i>Drainage water</i></b>						
Mechanical	2	5	5	15	7	9
Manual	39	95	28	85	67	91
Total	41	100	33	100	74	100

*Annex 19 Health status in years with severe climate variation*

Item	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Male (n=80)	Female (n=80)	Male (n=80)	Female (n=80)	Male (N=160)	Female (N=160)
	%	%	%	%	%	%
No change	16	10	4	6	10	8
Improved	1	1	1	-	1	1
Worsen	83	89	95	94	89	91
Total	100	100	100	100	100	100

*Annex 20 Common health problems in the family during period of severe climate change (\*)*

Item	Soc Trang (n=80)				Tra Vinh (n=80)				All (n=160)			
	Male (n=77)		Female (n=79)		Male (n=79)		Female (n=78)		Male (n=156)		Female (n=157)	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Flu	35	45	38	48	42	53	41	53	77	49	79	50
Colds	69	90	77	97	75	95	73	94	144	92	150	96
Cough	67	87	67	85	73	92	69	88	140	90	136	87
Hyperacidity	14	18	12	15	13	16	8	10	27	17	20	13
High blood pressure	25	32	28	35	20	25	14	18	45	29	42	27
Heart attack	10	13	6	8	13	16	8	10	23	15	14	9
Dehydration	17	22	17	22	30	38	28	36	47	30	45	29
Diarrhea	17	22	12	15	7	9	7	9	24	15	19	12
Malaria	10	13	4	5	4	5	6	8	14	9	10	6
Arthritis	16	21	18	23	33	42	26	33	49	31	44	28
Skin problems (pimples on skin, red skin, itchy)	18	23	13	16	6	8	7	9	24	15	20	13
Others (a)	21	27	19	24	12	15	10	13	33	21	29	18

(\*) Multiple response

(a) Others: Inflammation of nasal cavity, eye sore, running nose, sore throat, low blood pressure, vomit, backache, headache, body pain, blood bleeding at nose, difficulty in breathing, petechial fever, swollen hands and feet when it is cold

Annex 21 The most important health problem

Item	Soc Trang (n=80)				Tra Vinh (n=80)				All (n=160)			
	Male (n=80)		Female (n=80)		Male (n=80)		Female (n=80)		Male (N=160)		Female (N=160)	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Flu	1	1	1	1	2	3	1	1	3	2	2	1
Colds	32	40	36	45	40	50	39	49	72	45	75	47
Cough	18	23	20	25	16	20	17	21	34	21	37	23
Hyperacidity	1	1	-	-	-	-	-	-	1	1	-	-
High blood pressure	8	10	4	5	2	3	3	4	10	6	7	4
Heart attack	-	-	-	-	1	1	-	-	1	1	-	-
Dehydration	1	1	4	5	6	8	3	4	7	4	7	4
Diarrhea	3	4	2	3	2	3	3	4	5	3	5	3
Arthritis	4	5	4	5	6	8	8	10	10	6	12	8
Skin problems (pimples on skin, red skin, itchy)	1	1	3	4	2	3	1	1	3	2	4	3
Others (a)	8	10	5	6	2	3	3	4	10	6	8	5
None	3	4	1	1	1	1	2	3	4	3	3	2
Total	80	100	80	100	80	100	80	100	160	100	160	100

(a) Others (Inflammation of nasal cavity, eye sore, running nose, sore throat, low blood pressure, vomit, backache, flu, headache, body pain, blood bleeding at nose, difficulty in breathing, petechial fever, swollen hands and feet when it is cold ).

Annex 22 Members among the family that are most affected by health problems (\*)

Item	Soc Trang (n=80)				Tra Vinh (n=80)				All (N=160)			
	Male (n=77)		Female (n=79)		Male (n=79)		Female (n=78)		Male (N=156)		Female (N=157)	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Husband	11	14	8	10	10	13	5	6	21	13	13	8
Wife	15	19	24	30	9	11	13	17	24	15	37	24
Both H&W	8	10	9	11	12	15	13	17	20	13	22	14
Grown children	-	-	1	1	-	-	1	1	-	-	2	1
Small children	41	53	40	51	31	39	27	35	72	46	67	43
Elders	15	19	14	18	12	15	12	15	27	17	26	17
All members	13	17	16	20	16	20	19	24	29	19	35	22

(\*) Multiple responses.

Annex 23 Change in men and women's agricultural and non-agricultural activities in Soc Trang (% of farmers)

Activities	Male (n=80)				Female (n=80)			
	Increase	Decrease	No change	n/a	Increase	Decrease	No change	n/a
<b>Rice production</b>								
Land preparation	55	23	5	18	11	4	5	80
Pulling of seedlings	-	-	-	100	-	-	-	100
Transplanting/ Gap filling	56	20	8	16	29	14	5	53
Broadcasting	48	13	16	24	14	8	5	74
Irrigating	61	18	8	14	13	3	4	81
Weeding	29	19	8	45	19	8	3	71
Application of fertilizer	75	10	9	6	24	3	1	73
Application of chemicals	65	10	10	15	20	1	1	78
Harvesting	40	40	10	10	15	13	3	70
Threshing	11	9	3	78	11	1	4	84
Drying	14	9	1	76	18	5	1	76
Removing off-types	16	3	3	79	11	-	3	86
Seed selection for next crop season	19	13	16	53	6	-	13	81
Storing seeds	15	6	16	63	13	-	9	79
Purchase of inputs	38	33	11	19	11	3	8	79
Selling of produce	33	28	10	30	25	5	8	63
Supervision of hired labor	68	9	10	14	36	1	8	55
Bringing food to the farm	6	1	6	86	3	-	9	89
<b>Non rice production</b>								
Land preparation	-	-	-	100	-	-	-	100
Sowing/ Planting	-	-	-	100	-	-	-	100
Irrigating	-	-	-	100	-	-	-	100
Weeding	-	-	-	100	-	-	-	100
Application of fertilizer	-	-	-	100	-	-	-	100
Application of chemicals	-	-	-	100	-	-	-	100
Harvesting	1	-	-	99	-	-	-	100
Threshing	-	-	-	100	-	-	-	100
Purchase of inputs	-	1	-	99	-	-	-	100
Selling of produce	-	-	1	99	-	-	-	100
Supervision of hired labor	-	-	-	100	-	-	-	100
Bringing food to the farm	-	-	-	100	-	-	-	100
<b>Other household activities</b>								
Animal care (Pig, chicken)	43	1	9	48	45	3	5	48
Child care	50	9	15	26	60	9	16	15
House care (cleaning, washing, drying clothes)	46	6	21	26	66	8	20	6
Getting food and Cooking	28	21	29	23	44	14	30	13



Annex 24 Change in men and women's agricultural and non-agricultural activities in Tra Vinh (% of farmers)

Activities	Male (n=80)				Female (n=80)			
	Increase	Decrease	No change	Not applicable	Increase	Decrease	No change	Not applicable
<b>Rice production</b>								
Land preparation	49	18	13	21	5	6	3	86
Pulling of seedlings	-	-	-	100	-	-	-	100
Transplanting/ Gap filling	61	15	15	9	34	14	8	45
Broadcasting	43	18	25	15	3	9	5	84
Irrigating	59	18	4	20	4	3	3	91
Weeding	35	15	5	45	16	5	9	70
Application of fertilizer	70	9	6	15	10	1	1	88
Application of chemicals	71	11	8	10	4	1	1	94
Harvesting	51	33	6	10	11	9	4	76
Threshing	15	3	1	81	3	1	1	95
Drying	50	10	1	39	33	1	5	61
Removing off-types	18	3	3	78	9	3	3	86
Seed selection for next crop season	18	16	18	49	6	1	4	89
Storing seeds	13	4	16	68	5	-	9	86
Purchase of inputs	46	24	19	11	14	6	8	73
Selling of produce	38	24	19	20	24	5	14	58
Supervision of hired labor	61	9	20	10	29	5	8	59
Bringing food to the farm	13	4	6	78	8	1	5	86
<b>Non rice production</b>								
Land preparation	5	1	1	93	4	-	1	95
Sowing/ Planting	6	1	1	91	5	-	1	94
Irrigating	8	1	-	91	5	-	-	95
Weeding	3	1	1	95	3	-	1	96
Application of fertilizer	3	1	5	91	5	-	-	95
Application of chemicals	-	1	3	96	3	-	-	98
Harvesting	8	1	-	91	5	-	-	95
Threshing	-	1	-	99	-	-	-	100
Purchase of inputs	3	1	4	93	3	-	1	96
Selling of produce	4	1	1	94	3	-	1	96
Supervision of hired labor	1	-	1	98	1	-	1	98
Bringing food to the farm	1	-	1	98	1	-	1	98
<b>Other household activities</b>								
Animal care (Pig, chicken)	43	9	15	34	51	4	8	38
Child care	45	16	23	16	63	10	11	16
House care (cleaning, washing, drying clothes,...)	45	14	28	14	61	8	15	16
Getting food and Cooking	36	16	25	23	44	16	20	20

*Annex 25 Family members left behind because of migration*

Item	Soc Trang (n=80)				Tra Vinh (n=80)				All (n=160)			
	Male (n=9)		Female (n=7)		Male (n=21)		Female (n=19)		Male (n=30)		Female (n=26)	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Husband	-	-	-	-	5	24	4	21	5	17	4	15
Wife	3	33	2	29	7	33	5	26	10	33	7	27
Both H&W	5	56	5	71	5	24	5	26	10	33	10	38
Male grown children	1	11	-	-	2	10	2	11	3	10	2	8
Female grown children	-	-	-	-	-	-	1	5	-	-	1	4
Elders	-	-	-	-	2	10	1	5	2	7	1	4
Other (husband's sibling)	-	-	-	-	-	-	1	5	-	-	1	4
Total	9	100	7	100	21	100	19	100	30	100	26	100

*Annex 26 Type of training attended by farmers*

Name of training	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160)	
	Count	%	Count	%	Count	%
1. Crop cultivation technologies (as rice, corn, peanut)	-	-	7	35	7	25.0
2. Rice pest control as IPM	6	75	4	20	10	35.7
3. Technology on reduction of fertilizer and pesticide	1	12.5	2	10	3	10.7
4. Technology of rearing cow	-	-	4	20	4	14.3
5. Producing seed	-	-	1	5	1	3.6
6. Method of pesticide spray	-	-	1	5	1	3.6
7. Method of land preparation, seed establishment, pesticide spray and water management	-	-	1	5	1	3.6
8. Method of protection from strong winds and typhoon	1	12.5	-	-	1	3.6
Total	8	100	20	100	28	100

*Annex 27 Attend workshop of pesticide and fertilizer advertisement by company*

Attend	Soc Trang (n=80)		Tra Vinh (n=80)		All (N=160s)	
	Count	%	Count	%	Count	%
Yes	40	50	21	26	61	38