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APPENDICES

Appendix - 1

Study of migration as one form of adaptation strategy

for natural hazards

Questionnaire

Sheet No.

1. Age Group

18-25 year		25-35 year		35-45year		45-55 year		55> year	
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2. Sex

Male		Female	
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3. Marital Status

single		Married	
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4. Educational Background

Graduate/Vocational Training		A/L		O/L		Grade 8 or less	
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5. Occupation.....

6. Income

0 - 10,000		10,000-25,000		25,000- 50,000		>50,000	
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7. How long do you stay in this place?

<10 Years		10-20 years		20-30 years		30-40		40>years	
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8. What types of natural hazard events have you or someone in your household experienced?

flood		Land slides		Drought	
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9. How many times flood has occurred per year

1		2	3	>4	
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10. What is the degree of severity of flood experienced by yourself or your household

Mild (1)		Somewhat heavy (2)		Heavy (3)		
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11. What hardship did your family face during this season

No.	Difficulties	1	2	3	4	5
1.	Food					
2.	Accommodation					
3.	Access to livelihood					
4.	Access to sanitary services					
5.	Drinking water					
6.	Children education					
7.	Security					
8.	Transport problem					
9.	Diseases					

1	Dissatisfied	3	Neither satisfied nor dissatisfied	5	satisfied
2	Somewhat dissatisfied	4	Somewhat satisfied		

12. What coping mechanisms (Adaptation strategies) did your family employ during this time?

1
2
3
4
5

6
7
8

13. Have you considered migrating due to flood seriously? 1 Yes 2 No

14. If yes What are factors affect for you to consider migration

Factor	1	2	3	4	5
Economic					
Access to Livelihood					
Cost of recovery					
Food scarcity					
Social factors					
Break down of Children education					
Security					
Spread of disease					

1	Not at all considered	3	somewhat concerned	5	Extremely concerned
2	Slightly concerned	4	Moderately concerned		

15. what are the factors affect to stay in risky area

Factor	1	2	3	4	5
Economical					
Livelihood linked with the place					
Migration cost					
Social					
Educational facilities					
Access to services					
Native place					
Social ties					
Political					
Incentives					
Security					

1	Not at all considered	3	somewhat affected	5	Extremely affected
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2	Slightly affected	4	Moderately affected		
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16. If the heavy flood is occurred for next five years

Statements	1	2	3	4	5
My household would have the ability to successfully adapt to the flood					
My household would be able to fully recover from the damage caused by the floods					
My household would have access to sufficient financial resources to ensure that we fully recover from the threats posed by the floods.					
My household would be able to draw on the support of family and friends to ensure that we fully recover from the threats posed by the floods					
My household would have access to early-warning information to ensure that we are fully prepared for the threats posed by the floods.					
Past knowledge is crucial in successfully dealing with future flood events.					
If the flooding is continuing in my area for next five years, I will decide to find an alternative location to settle.					

1	Strongly disagree	3	Neutral	5	Strongly agree
2	disagree	4	agree		

Appendix - 2

Table 3.1. Average monthly Rainfall of Rathnapura (January to December).

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (mm)	65	80	115	290	315	200	180	100	225	395	335	200

Source: Metrological Department office, Rathnapura District, 2010.

Table 3.2. Existing Land Use of Pattern of Rathnapura MC Area – 2004

Category	Extent (ha.)	%
Commercial	49.75	2.2
Residential	821.52	37.1
Government & Semi governments	81.74	3.7
Highways & Transport	116.95	5.3
Industries	10.91	0.5
Parks, Play Grounds & Open Areas	24.27	1.1
Urban Forests	237.55	10.7
Religious	12.14	0.6
Water Courses	95.55	4.5
Under developed lands		
Paddy fields	253.74	11.5
Plantations	244.84	11.0
Mixed Cultivation	114.51	5.1
Marshy	36.42	1.6
Cemeteries	2.83	0.1
Open Areas	111.28	5.0
Total:	2,218	100.0

Source: UDA, 2006

Table 3.3 Population Distribution and Density by Municipal Wards-2001

Ward no	Municipal Ward	Extent (Hectares)	Population - 2001	Gross Population Density per
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				Hectare- 2001
1.	Hidallana	280.5	5,900	21.0
2.	Kospelawinna	415.9	4,665	11.2
3.	Weralupe	190.9	4,585	24.0
4.	Pompakele	93.5	2,367	25.3
5.	Godigamuwa	136.2	4,885	35.0
6.	Angamma	296.6	2,364	8.0
7.	ThiriwanaKetiya	167.5	2,017	12.0
8.	Batugedera	153.1	2,497	16.3
9.	Warakathota	18.2	650	35.7
10.	Bazaar	23.3	997	42.7
11.	Fort	21.2	1,440	67.9
12.	Pulugupitiya	46.1	1,131	24.5
13.	Dewalegawa	102.3	3,561	34.8
14.	Muwagama	138.1	5,100	36.9
15.	Mudduwa	137.2	4,150	30.2
Total:		2218.0	46,309	20.9

Source: UDA, 2006

Table 3.4. Classification of Houses – 2004

Type of Houses	No of Houses	%
Permanente	7,743	78.35
Semi Permanent	1,696	17.17
Temporary	439	4.46
Total:	9,882	

Source: Reports from Ratnapura Divisional Secretariat, 2006

Table 3.6. Damage caused by the Floods – 2003

<i>Particulars</i>	<i>No in RMC area</i>	<i>No in District</i>	<i>% in RMC</i>
Loss of lives	03	122	2
House damages:			
Partially Damaged	2879	9291	31
Totally Damaged	618	3367	18
No of Displaced families	9400	34473	27
Damaged Paddy lands	176 ha.	1369 ha.	13

Source:Rathnapura Municipal Council, 2006

Appendix - 3

Table 4.1 Livelihood linked with the Place

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent
Yes	Valid	Not at all Considered	7	41.2	41.2	41.2
		Slightly Concerned	3	17.6	17.6	58.8
		Somewhat Concerned	6	35.3	35.3	94.1
		Moderately Concerned	1	5.9	5.9	100.0
		Total	17	100.0	100.0	
No	Valid	Not at all Considered	1	3.0	3.0	3.0
		Slightly Concerned	1	3.0	3.0	6.1
		Somewhat Concerned	2	6.1	6.1	12.1
		Extremely Concerned	29	87.9	87.9	100.0
		Total	33	100.0	100.0	

Table 4.2 Migration Cost

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent
Yes	Valid	Moderately Concerned	1	5.9	5.9	5.9
		Extremely Concerned	16	94.1	94.1	100.0
		Total	17	100.0	100.0	
No	Valid	Not at all Considered	1	3.0	3.0	3.0
		Slightly Concerned	1	3.0	3.0	6.1
		Somewhat Concerned	2	6.1	6.1	12.1
		Moderately Concerned	3	9.1	9.1	21.2
		Extremely Concerned	26	78.8	78.8	100.0
		Total	33	100.0	100.0	

Table 4.3 Educational Facilities

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent
Yes	Valid	Slightly Concerned	1	5.9	5.9	5.9
		Somewhat Concerned	5	29.4	29.4	35.3
		Moderately Concerned	11	64.7	64.7	100.0
		Total	17	100.0	100.0	
No	Valid	Not at all Considered	5	15.2	15.2	15.2
		Slightly Concerned	2	6.1	6.1	21.2
		Somewhat Concerned	12	36.4	36.4	57.6
		Moderately Concerned	11	33.3	33.3	90.9
		Extremely Concerned	3	9.1	9.1	100.0
		Total	33	100.0	100.0	

Table 4.4 Access to Service

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent
Yes	Valid	Slightly Concerned	1	5.9	5.9	5.9
		Somewhat Concerned	1	5.9	5.9	11.8
		Moderately Concerned	15	88.2	88.2	100.0
		Total	17	100.0	100.0	
No	Valid	Moderately Concerned	22	66.7	66.7	66.7
		Extremely Concerned	11	33.3	33.3	100.0
		Total	33	100.0	100.0	

Table 4.5 Native Place

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent

Yes	Valid	Not at all Considered	3	17.6	17.6	17.6
		Slightly Concerned	2	11.8	11.8	29.4
		Somewhat Concerned	2	11.8	11.8	41.2
		Moderately Concerned	5	29.4	29.4	70.6
		Extremely Concerned	5	29.4	29.4	100.0
		Total	17	100.0	100.0	
No	Valid	Not at all Considered	1	3.0	3.0	3.0
		Slightly Concerned	1	3.0	3.0	6.1
		Somewhat Concerned	5	15.2	15.2	21.2
		Moderately Concerned	6	18.2	18.2	39.4
		Extremely Concerned	20	60.6	60.6	100.0
		Total	33	100.0	100.0	

Table 4.6 Social Ties

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent
Yes	Valid	Somewhat Concerned	5	29.4	29.4	29.4
		Moderately Concerned	11	64.7	64.7	94.1
		Extremely Concerned	1	5.9	5.9	100.0
		Total	17	100.0	100.0	
No	Valid	Not at all Considered	1	3.0	3.0	3.0
		Somewhat Concerned	8	24.2	24.2	27.3
		Moderately Concerned	12	36.4	36.4	63.6
		Extremely Concerned	12	36.4	36.4	100.0
		Total	33	100.0	100.0	

Table 4.7 Incentives

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent
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Yes	Valid	Not at all Considered	17	100.0	100.0	100.0
No	Valid	Not at all Considered	31	93.9	93.9	93.9
		Slightly Concerned	1	3.0	3.0	97.0
		Somewhat Concerned	1	3.0	3.0	100.0
		Total	33	100.0	100.0	

Table 4.8 Security

Thought of migrate			Frequency	Percent	Valid Percent	Cumulative Percent
Yes	Valid	Not at all Considered	17	100.0	100.0	100.0
No	Valid	Not at all Considered	31	93.9	93.9	93.9
		Slightly Concerned	2	6.1	6.1	100.0
		Total	33	100.0	100.0	