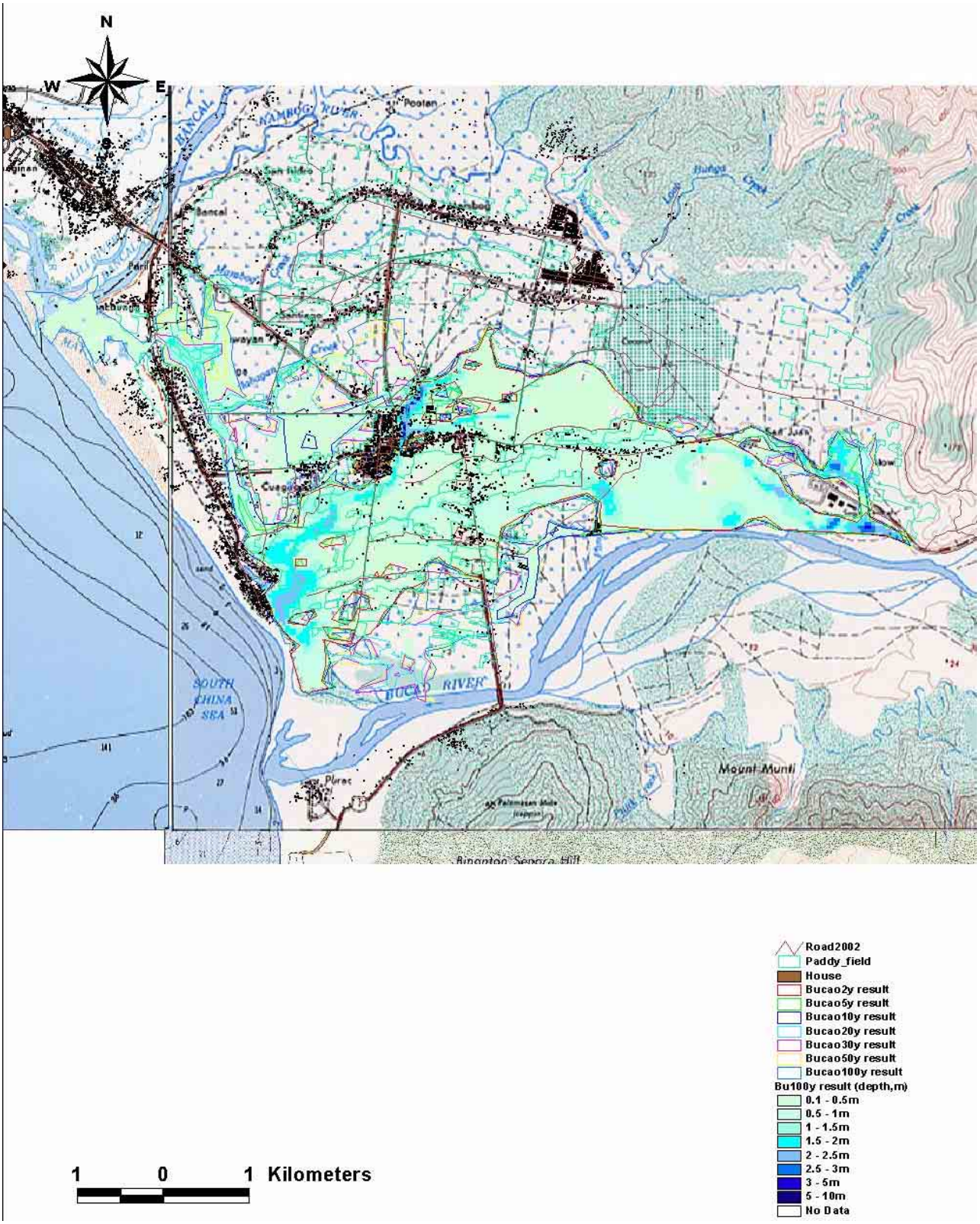

THE GOVERNMENT OF THE PHILIPPINES THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **The Study on Sabo and Flood Control for Western River Basins of Mount Pinatubo in the Republic of the Philippines** *JAPAN INTERNATIONAL COOPERATION AGENCY*	**Figure 1.4.1** **Mudflow Hazard Area in the Bucao River Basin under 100-year Probable Flood**

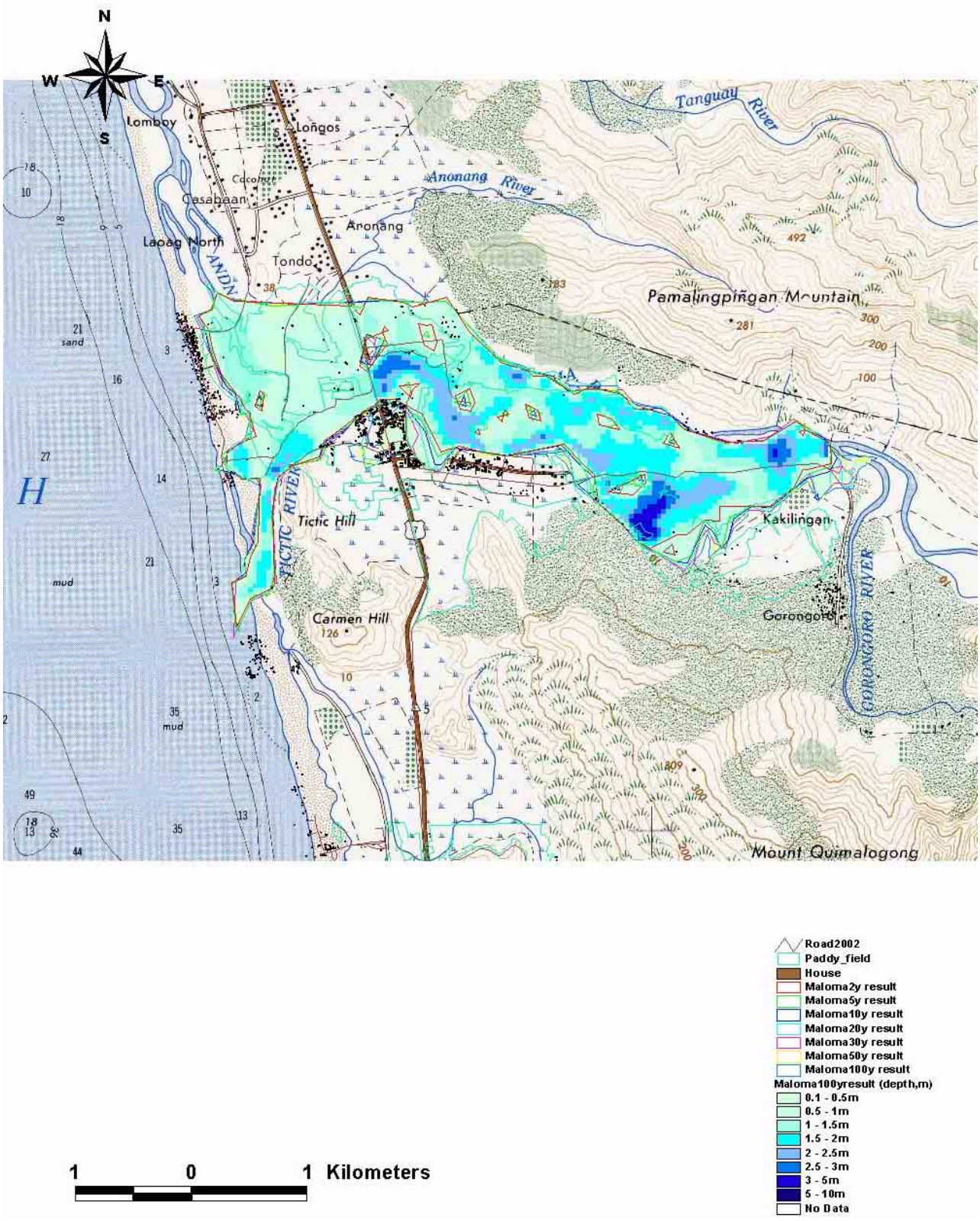

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Figure 1.4.2

Mudflow Hazard Area in the Maloma River Basin under 100-year Probable Flood

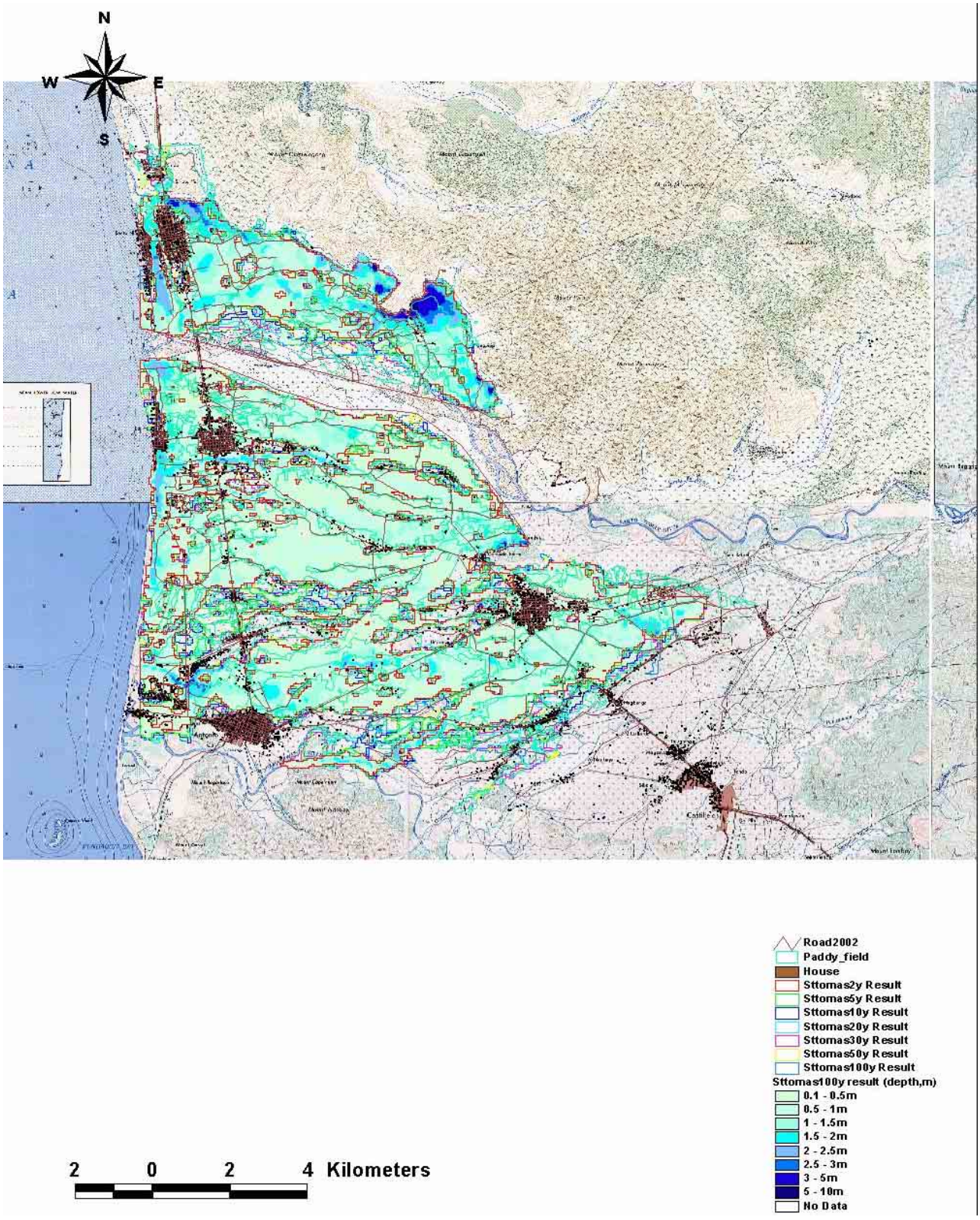

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Figure 1.4.3

Mudflow Hazard Area in the Sto. Tomas River Basin under 100-year Probable Flood

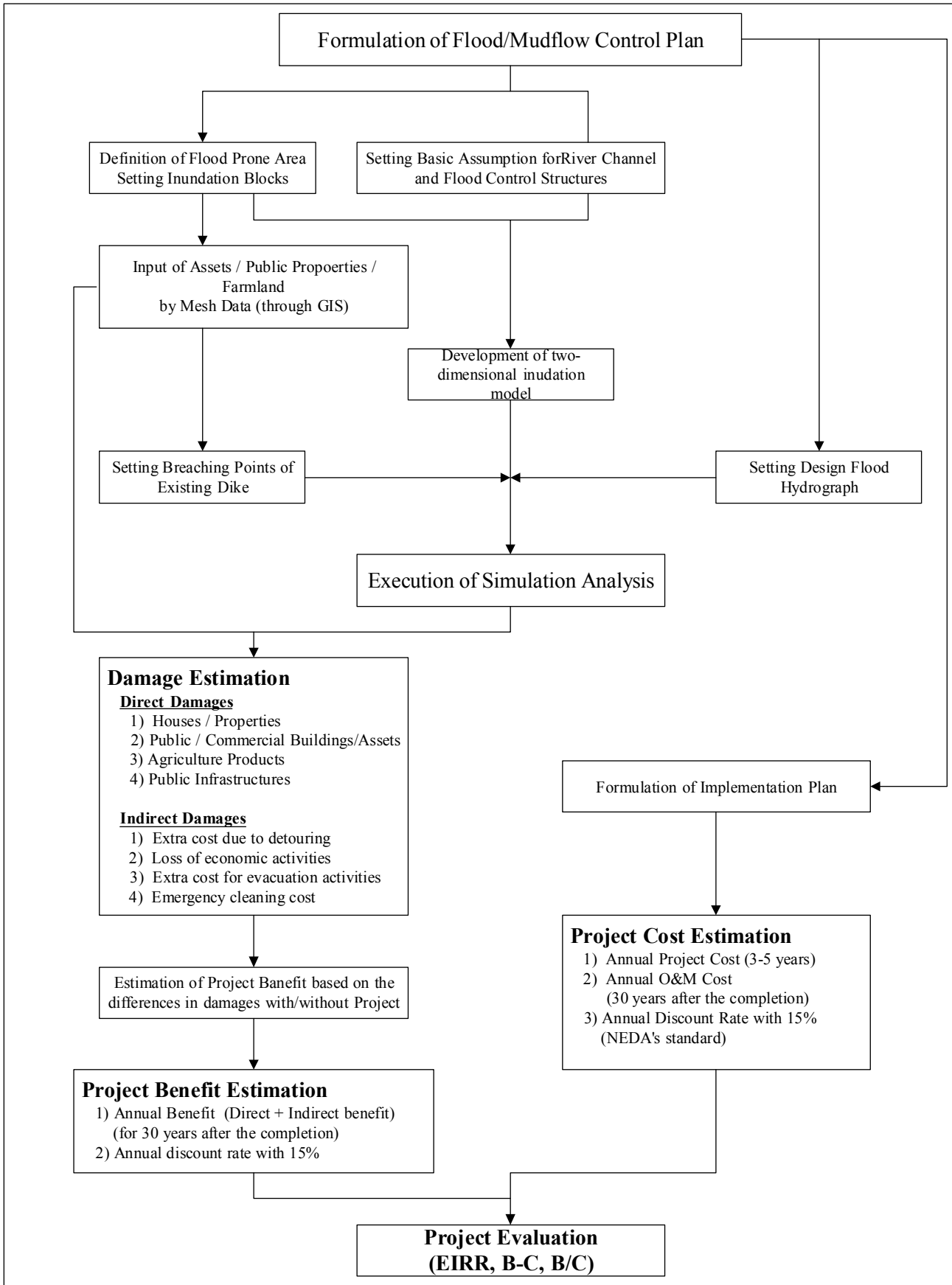

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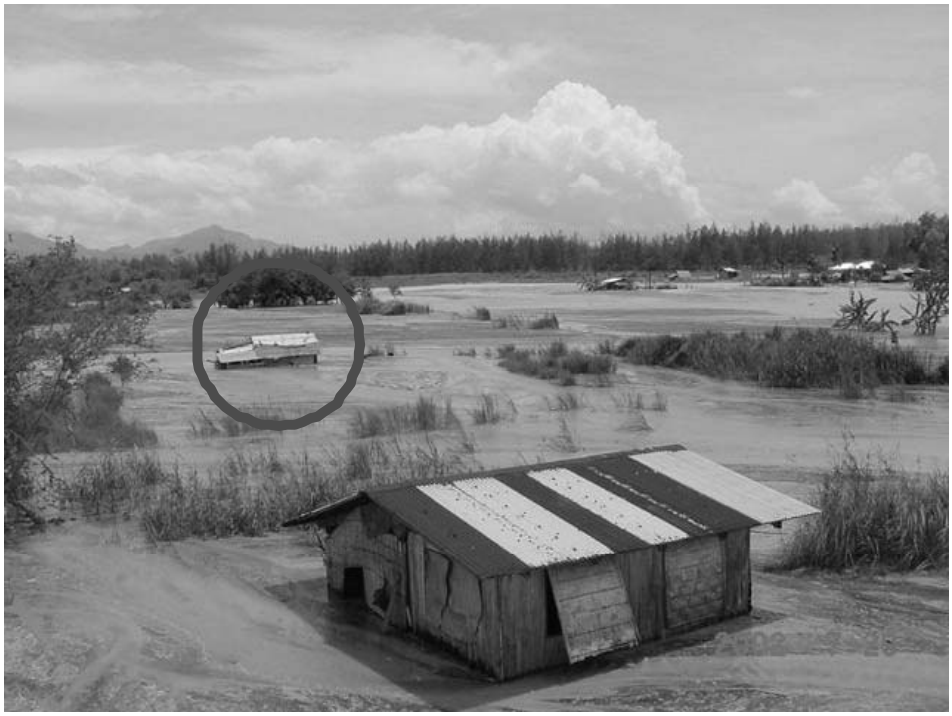
Figure 2.2.1

Flow Chart on Flood Damage Estimation and Economic Evaluation

A. During Flood

B. After Flood



Inundated area / building were fully buried by sediment more than 1 m depth.
House and farm land are no longer available after flood

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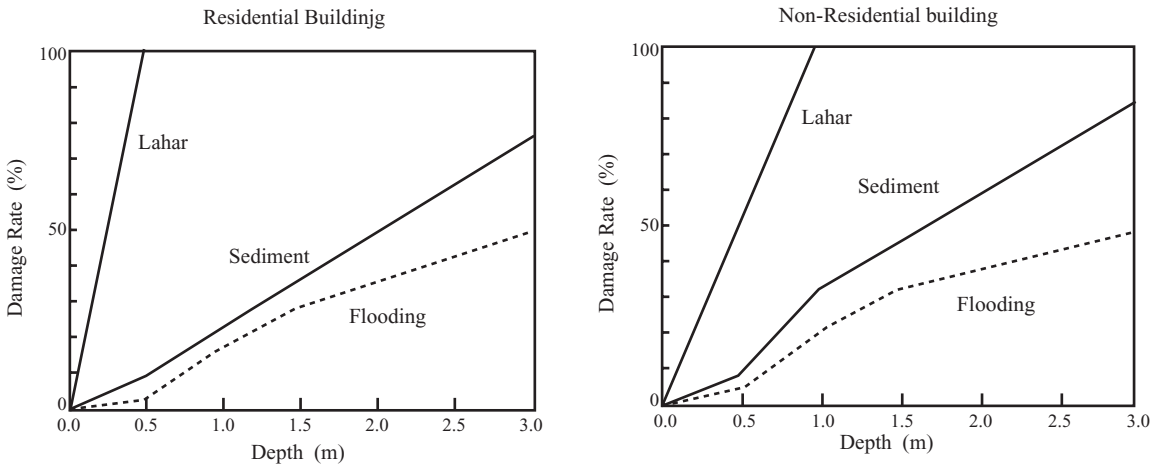
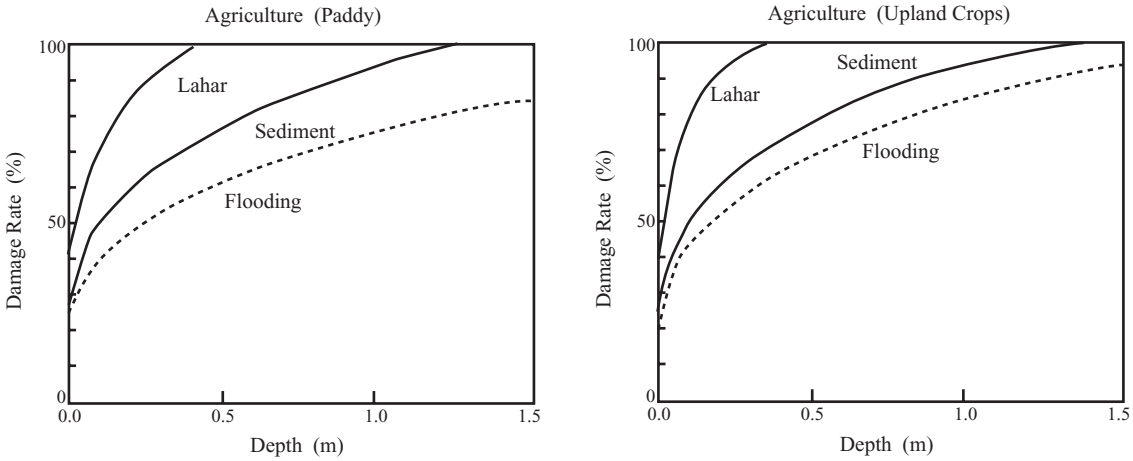
Figure 2.2.2

Actual Flood Damage Condition due to Dike Breach in July 2002

Building



Agriculture



Infrastructure

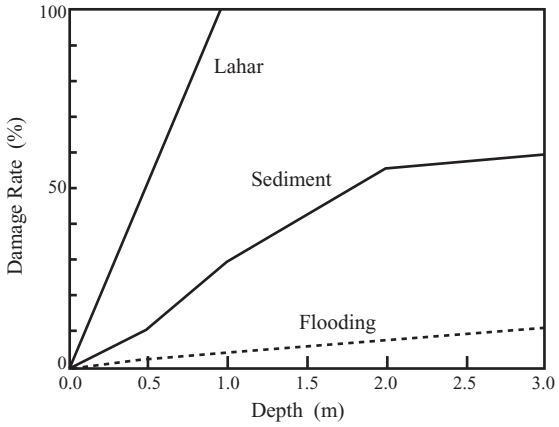


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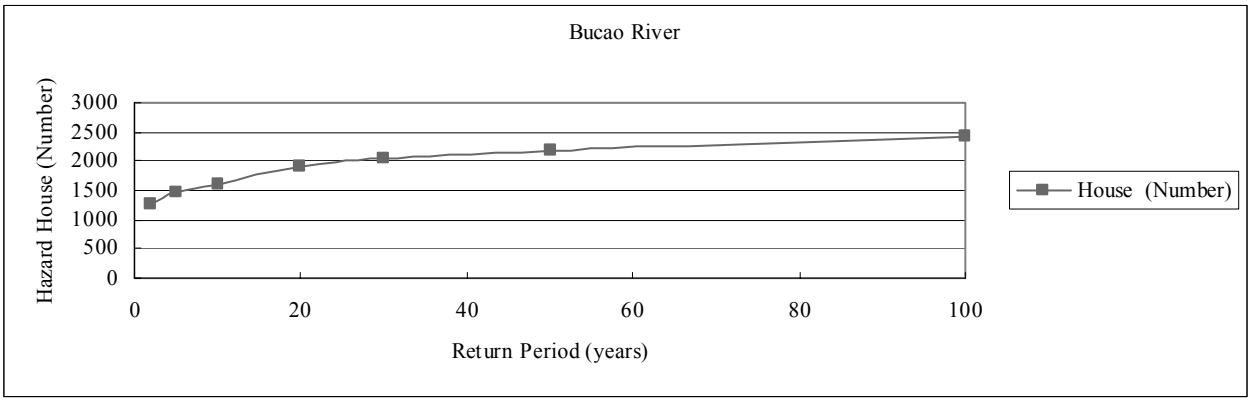
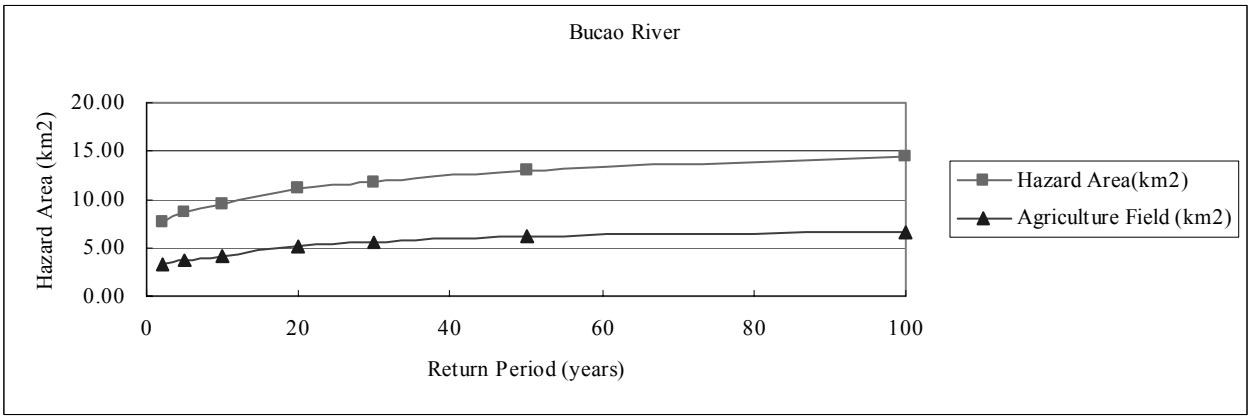
Figure 2.2.3

Damage Curves for Properties

Bucao River

Return Period(years)	Hazard Area(km2)	Probable Damage				
		House (Number)	Road(km)			Agriculture Field (km2)
			National	Others	Total	
2	7.67	1276	1.37	16.33	17.70	3.30
5	8.69	1460	1.73	20.78	22.50	3.78
10	9.56	1591	1.80	24.19	26.00	4.17
20	11.12	1908	2.23	29.11	31.34	5.08
30	11.85	2040	2.51	31.51	34.02	5.47
50	12.92	2191	2.78	34.11	36.89	6.09
100	14.43	2406	3.17	36.79	39.96	6.70





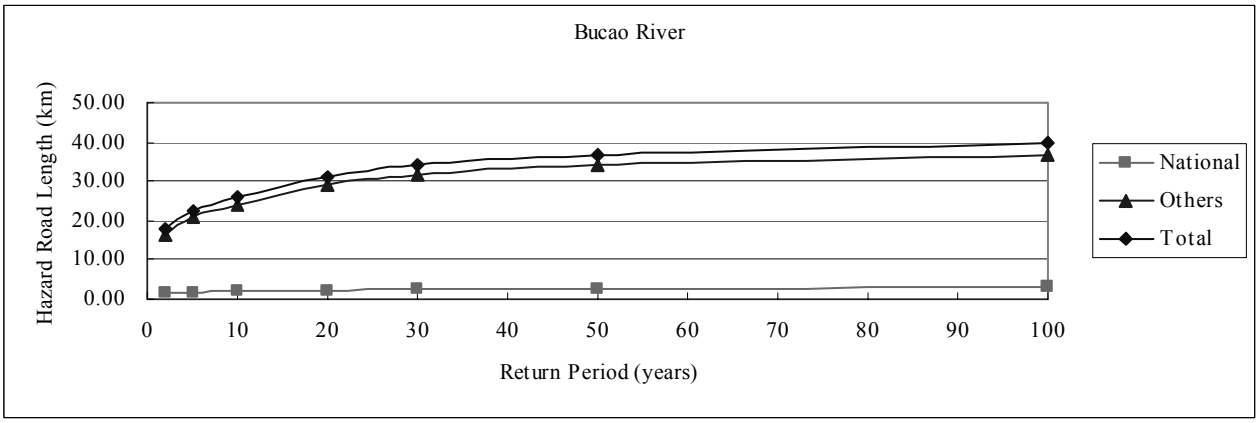


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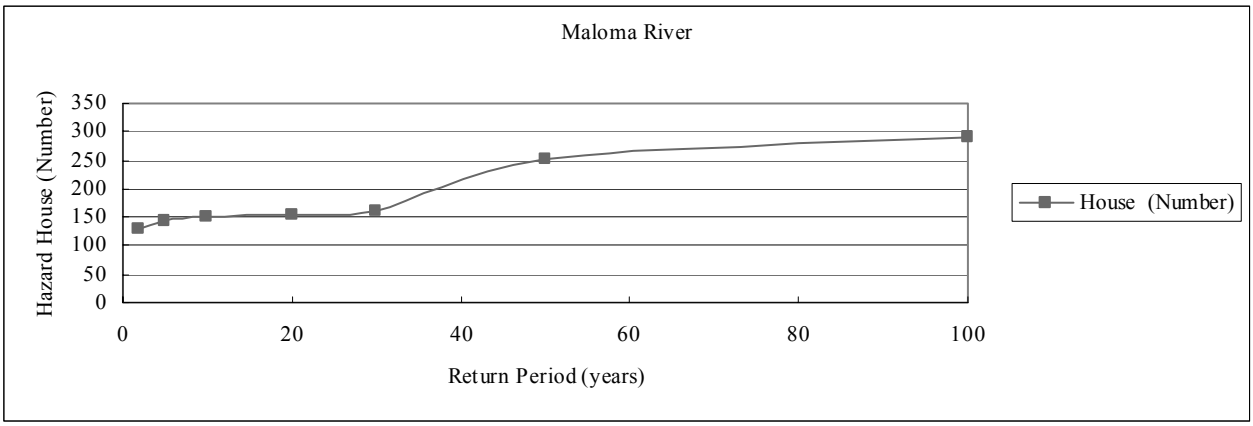
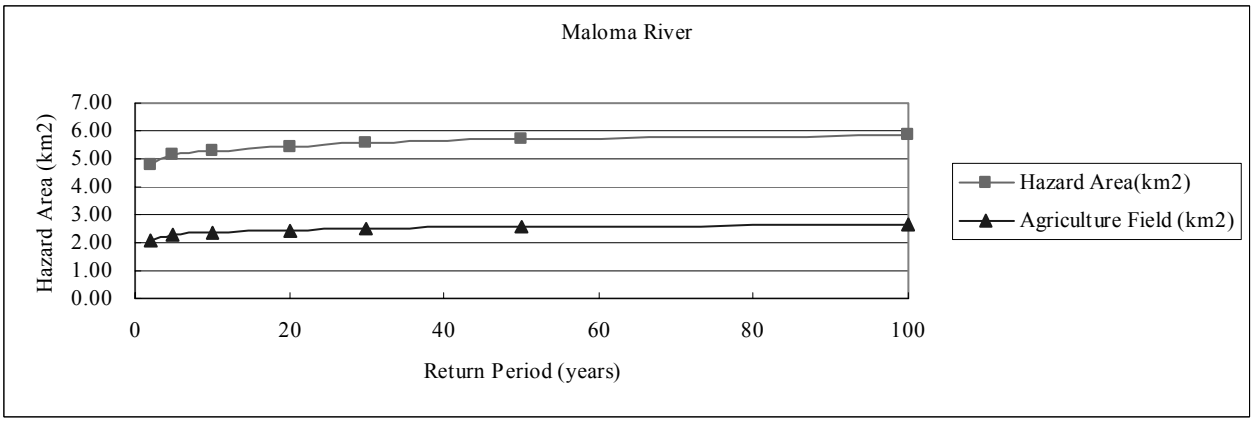
Figure 2.3.1

Probable Damage of the Bucao River Basin

Maloma River

Return Period(years)	Hazard Area(km2)	Probable Damage				
		House (Number)	Road(km)			Agriculture Field (km2)
			National	Others	Total	
2	4.80	128	0.74	19.42	20.16	2.07
5	5.14	144	0.74	20.93	21.67	2.26
10	5.29	150	0.78	21.70	22.47	2.34
20	5.45	154	0.80	22.88	23.68	2.42
30	5.55	161	0.80	23.42	24.21	2.48
50	5.71	253	1.00	24.53	25.53	2.55
100	5.86	292	1.11	25.93	27.04	2.61





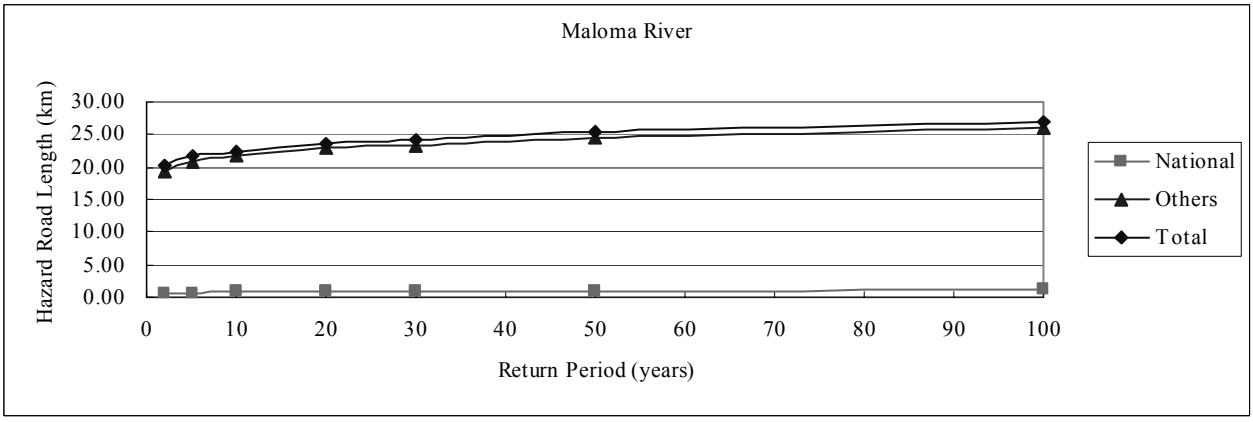


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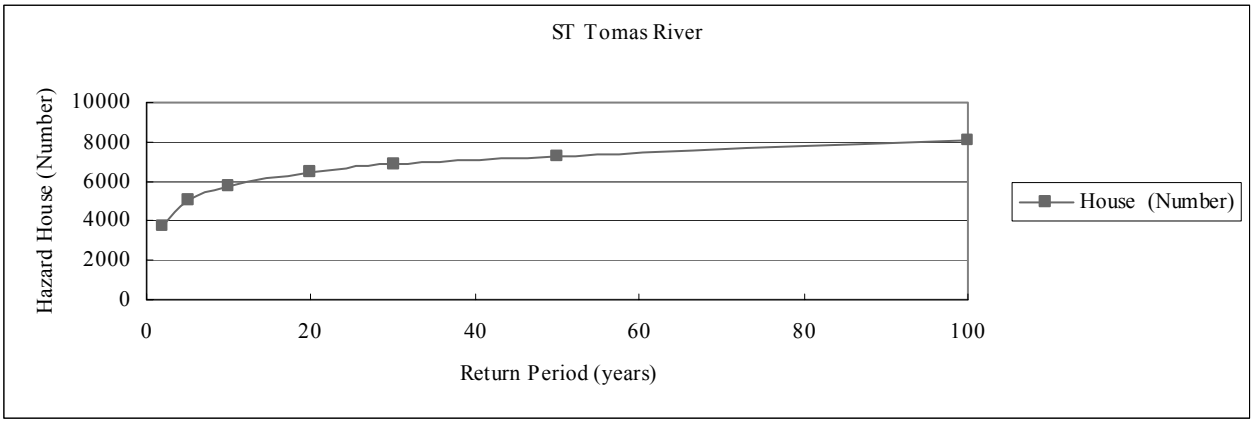
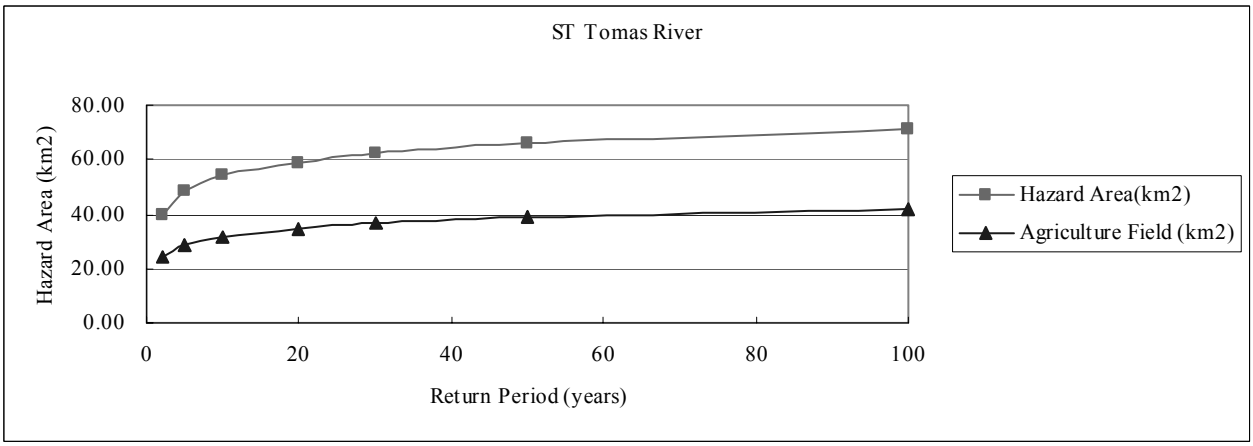
Figure 2.3.2

Probable Damage of the Maloma River Basin

ST Tomas River

Return Period(years)	Hazard Area(km2)	Probable Damage				
		House (Number)	Road(km)			Agriculture Field (km2)
			National	Others	Total	
2	39.85	3782	4.13	166.19	170.32	23.87
5	48.49	5045	4.91	218.63	223.55	28.62
10	53.95	5762	5.54	247.89	253.43	31.75
20	58.94	6444	6.02	273.75	279.77	34.65
30	62.20	6832	6.26	289.54	295.79	36.56
50	65.89	7296	6.91	307.53	314.44	38.68
100	71.04	8079	7.62	333.84	341.46	41.68





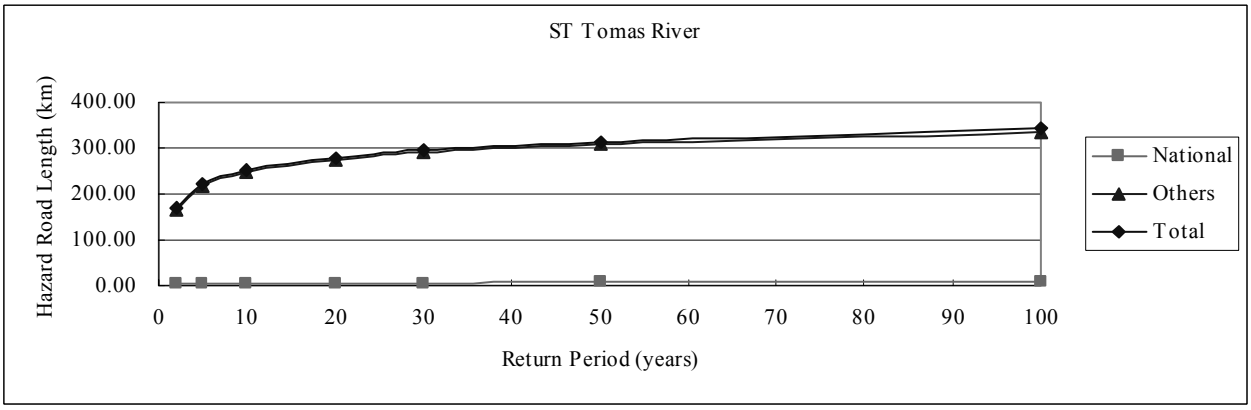


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Figure 2.3.3

Probable Damage of the Sto.Tomas River Basin

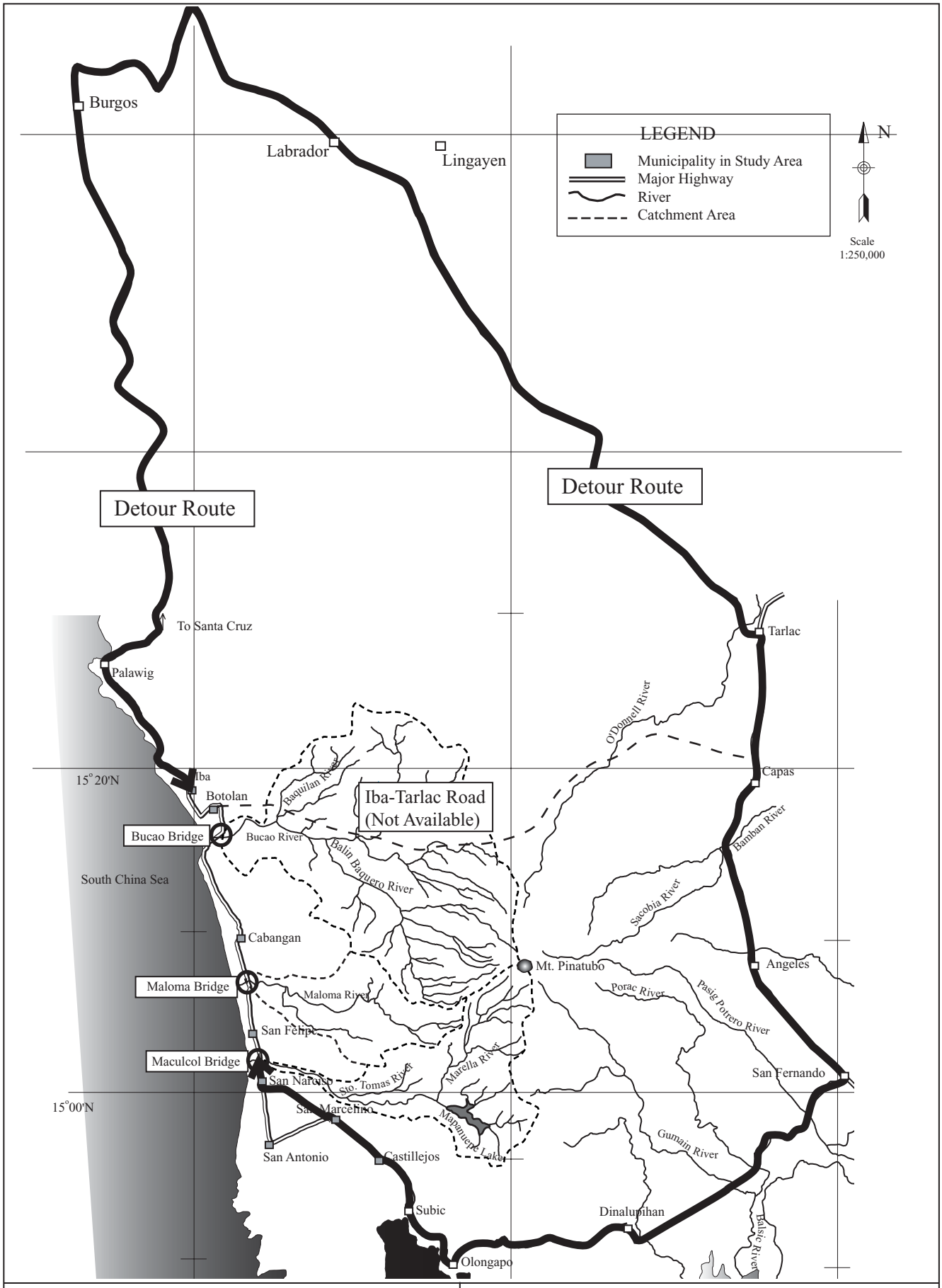

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Figure 2.4.1

Detouring Route for the Bridges along the National Highway No.7