

TABLES
FOR
APPENDIX XIII

Table XIII.3-1 Results of Survey on Undang and Openg Floods (1)

No. of Survey Points	Undang Flood					Openg Flood					Remarks	
	Inundation Water Depth (m)			FWL (m)		Inundation Water Depth (m)			FWL (m)			
	House	Road	Paddy	Others	Duration of Inundation	House	Road	Paddy	Others	Duration of Inundation		
1	0.6				1 day							
2		0.4										
3		-0.8							0.2	23.6		
4		±0							0.4	23.3		
5	2.2											
6		-0.9										
7	0.65				2 days			1 week	1.7	22.8	3 days	
8		-0.5										
9		1.0							2.5	27.7		
10	2.4				2 days				4.4	29.2		
11		2.2										
12	0.65								0.65	24.2		
13												
14												
15		-1.0 R.B							±0 R.B	24.0		by MPWH by MPWH R.B=River bank by MPWH
16		-0.15										
17	0.5				2 days			2 days	1.4	20.0	1.5 days	
18	0.8				1 day			3 days	1.3	19.9		
19	2.5				2 days			3 days				
20												
21	0.5				0.5 days			1 week	1.6	21.0		
22		±0						2 days	-0.4	19.6		
23	1.3				2 days				1.5	19.5	3 days	
24		0.8						1 day	0.8	27.2		
25		-0.1										
26		-1.5										
27	0.3				7 hours							3 days
28		-0.4						1 day				
29		0.3						1 day				

(Continue)

Table XIII.3-1 Results of Survey on Undang and Openp Floods (2)

No. of Survey Points	Undang Flood					Openp Flood					Remarks						
	Inundation Water Depth (m)			FWL (m)	Duration of Inundation			Inundation Water Depth (m)				FWL (m)	Duration of Inundation				
	House	Road	Paddy		Others	House	Road	Paddy	House	Road			Paddy	House	Road	Paddy	
30	1.5				25.1	1.5	1.5 days				1.5	0.15		25.1	1.5 days		
31		-0.55			24.25			1 day						24.95			
32		-0.8	1.5		23.5			1 week									
33					23.4												
34		0.2			21.7			1 week									by MPWH
35				-0.3 R.W	23.5			1 day						-0.8 R.W	23.0		R.W=Railway
36				-0.5 R.W	21.2			1 day						-1.0 R.W	20.7		R.W=Railway
37	2.0				20.3						1.9			20.2			
38	3.2	0.9			20.05		2 days				3.2			20.05	2 days		
39		1.5			20.0			1 day	2 days								by MPWH
40					19.03												
41		1.9			18.9												
42		0.8			17.9			2 days	1 week								
43		0.4			17.9			2 days	1 week			1.9		19.4	1 week		
44	3.3				18.7		4 days				4.0			19.4			
45	2.5				18.0												
46	2.6				19.0		2 days				3.3			19.7	3 days		
47	2.7				19.1		2 days										
48	2.6				17.7		1.5 days				3.3			18.4			
49					16.95												by MPWH
50					15.68												by MPWH
51					37.5			2 days						40.0	1 week		
52			1.0		35.0			2 days									
53		-0.5			31.0												
54																	
55												1.0		33.0	6 hours		
56												1.0		32.0	8 hours		
57					31.8			3 days				0.9		32.9			
58												0.5		32.4			
59												2.5		32.7	4 hours		

(Continue)

(Continue)

Table XIII. 3-1 Results of Survey on Undang and Openg Floods (3)

No. of Survey Points	Undang Flood					Openg Flood					Remarks
	Inundation Water Depth (m)			FWL (m)		Inundation Water Depth (m)			FWL (m)		
	House	Road	Paddy	Others	Duration of Inundation	House	Road	Paddy	Others	Duration of Inundation	
59											
60	1.0				4 hours		1.5			32.8 5 hours	
61										26.8 1 day	by MPWH
62	0.6				12 hours		1.0			26.5 1 week	
63	+0				1 day		0.4			25.15	
64		1.8			1 day						by MPWH
65		0.4			1 day						
66	1.6				1 day						
67	0.9				1 day						
68		0.3					1.9			21.3 1 day	by MPWH
69	1.5				3 days		1.5			18.5	by MPWH
70		0.3									
71	0.8				2 days						
72		0.4			1 day						
73		+0									
74	0.4				1 day						
75	0.85				1 day		0.85			17.25	
76	+0						0.9			17.8 1 week	
77		1.2			12 hours				1.5	18.3	
78	0.5				1 day		0.5			18.5	
79		0.3			3 days						
80											
81											
82	0.1				2 days						
83		-0.2			1 day				0.15	17.25	
84	0.3				1 day						
85		0.3									by MPWH
86		0.1			2 days				+0	15.2	
87		+0							0.35	15.95	

(Continue)

(Continue)

Table XIII.3-1 Results of Survey on Undang and Openg Floods (4)

No. of Survey Points	Undang Flood					Openg Flood					Remarks				
	Inundation Water Depth (m)		FVL (m)	Duration of Inundation		Inundation Water Depth (m)		FVL (m)	Duration of Inundation						
	House	Road		Paddy	Others	House	Road		Paddy	Others		House	Road	Paddy	
88	-0.2					14.5				+0	14.7				
89	+0					13.1				0.2	13.3				
90	1.15				1 day	13.15				1.6	13.6	4 days			
91				0.6 bridge		13.0									
92	+0					12.8				0.9	13.7				
93										0.1	13.6				
94	1.3				3 days	13.6									
95															
96		2.2				13.8		2 weeks		0.4	13.8	1 day			
97	1.5				3 days	13.5		2 weeks		2.2	14.2				
98	+0				2 days	13.5									
99	+0				2 days	12.8		5 days		0.6	14.1	1 week			
100	Not inundated														
101						13.01									by MPWH
102	0.85					12.95		1 week		1.9	14.0			2 weeks	
103	1.1				3 days	13.2		5 days							
104	0.9					12.6				2.1	13.8				
105	0.6					12.8				1.6	13.8				
106	+0					13.15									
107	0.7				2 days	13.15				1.9	14.35	1 week			
108						13.3		1 day			14.5				
109	1.8					13.9				3.0	15.1				by MPWH
110		0.45				13.05									
111	1.8					13.2				3.6	15.0				
112	0.4					12.9									
113	1.1				1 week	12.75				1.8	13.45	1 week			
114		1.67				15.6									by MPWH
115		1.2				15.2									by MPWH
116	2.1				1.5 days	13.8		3 days		2.3	14.0				

Continue

(Continue)

Table XIII.3-1 Results of Survey on Undang and Openg Floods (5)

No. of Survey Points	Undang Flood					Openg Flood					Remarks		
	Inundation Water Depth (m)			FWL (m)	Duration of Inundation		Inundation Water Depth (m)			FWL (m)		Duration of Inundation	
	House	Road	Paddy		Others	House	Road	Paddy	House			Road	Paddy
117	0.6				13.6	2 days				1.5	14.5	4 days	by MPWH
118					13.6								
119	1.8				13.5	3 days		1 week		2.8	14.5		
120	1.2				13.5	2 days				1.95	14.25	4 days	by MPWH
121		1.8			13.5								
122	2.2				12.9	5 days		1 week		3.2	13.9		
123					13.53								by MPWH
124					13.06								
125					12.67								
126			1.3		11.8			4 days		2.1	12.6	1 week	by MPWH
127					12.18								
128	0.15				10.45	12 hours		1 week		1.65	11.95	2 days	
129		0.2			19.4		1 day						by MPWH
130	0.4				19.4	1 day			0.4		19.4		
131	0.5				18.8			1 day	0.5		18.8		
132		0.1			16.2			1 day					by MPWH
133		±0			13.6			1 week					
134		1.5			13.4		3 days	1 week					
135	0.3				13.1			1 week					by MPWH
136	0.7				13.2	12 hours		1 day	0.5		13.0		
137	0.7				11.4	3 days		1 week	1.6		12.3		
138		±0			13.0								by MPWH
139			2.5		10.5			1 week					
140	1.0				11.0	3 days		1 week	1.3		11.3		
141					11.0			2 days					by MPWH
142		1.0			12.0								
143	1.0				11.5	1 day		3 days					
144	-0.3				12.0			4 days					by MPWH
145	1.3				12.3	1 day			1.0		12.0		

(Continue)

(Continue)

Table XIII. 3-1 Results of Survey on Undang and Openg Floods (6)

No. of Survey Points	Undang Flood					Openg Flood					Remarks		
	Inundation Water Depth (m)			Duration of Inundation		Inundation Water Depth (m)			Duration of Inundation				
	House	Road	Paddy	Others	FWL (m)	House	Road	Paddy	Others	FWL (m)		House	Road
146	0.4				18.4	1 day		3 days					
147		1.05			11.55		1 day		1.25	11.75			
148	0.85				15.5	1 day		1.5 days	0.85	15.5			
149		0.2			15.7			1 day	0.2	15.7			
150	1.6				11.6								
151	1.2				11.6	2 days			1.9	12.4			
152	0.3				11.3	12 hours							
153	0.2				10.6		1 week	10 days	0.2	10.6			
154					11.0								
155			3.7		10.8			1 week	4.2	11.3			10 days
156	0.7				10.3			3 days	2.3	11.7			1 week
157	1.6				10.8			3 days					
158		-1.0			10.0			5 days					
159		3.3			10.5			5 days	4.5	11.7			8 days
160	2.2				9.8	5 days		1 week	1.8	9.4			
161		2.4			9.0		1 week						by MPME
162		2.1			8.7		5 days	1 week					
163			2.3		8.8			1 week	3.1	9.6			2 weeks
164	1.0				9.4	4 days	5 days						
165	0.6				9.8	1.5 days		1 week	1.5	10.7			
166			1.2		7.6			4 days	2.4	8.8			1 week
167			1.3		7.7				2.15	8.55			
168	Not inundated							Not inundated					
169	1.5				8.0	5 days			2.7	9.2			2 weeks
170	Not inundated												
171	1.2				7.8	3 days		1 week					
172	Not inundated												
173	2.0				7.1			10 days	2.8	7.9			1 week
174	1.2				7.1	1 week			2.3	8.2			1 week

(Continue)

(Continue)

Table XIII.3-1 Results of Survey on Undang and Openg Floods (7)

No. of Survey Point	Undang Flood					Openg Flood					Remarks						
	Inundation Water Depth (m)			FWL (m)	Duration of Inundation			Inundation Water Depth (m)				FWL (m)	Duration of Inundation				
	House	Road	Paddy		Others	House	Road	Paddy	House	Road			Paddy	House	Road	Paddy	
175	1.1				7.3	3 days		1 week									
176		0.7			7.3	5 days							0.9	7.5	1 week		
177					6.91												by MPWH
178	0.7				6.2	2 days											
179	0.7				7.0	1 week		1 week									
180		0.3			6.7		2 days										
181	0.8				4.4			2 weeks									
182	0.8				4.7		1 week										by MPWH
183					4.4												
184		0.3			4.3	1 week	3 days	4 days					1.1	5.1	1 week	3 days	5 days
185	±0				3.05			1 week						5.1	1 week	3 weeks	
186		0.3			2.8		2 days										
187		±0			2.6												by MPWH
188	1.3				3.1		3 days	1 week						4.2	3 days	2 weeks	
189	0.5				2.4	4 days		12 days						3.4	12 days	16 days	
190	0.9				2.3	12 days		16 days						2.3	7 days	10 days	
191		1.0			3.0		3 days	1 week					2.0	4.0	1 week		
192		0.6			2.3		2 days										by MPWH
193	0.8				2.5	10 days								2.3			
194	1.75				2.95	1 week								2.55	5 days		
195		0.4			3.1												
196					3.03												by MPWH
197	1.4				3.4	1 week								3.7	2 weeks		
198		1.35			3.55												by MPWH
199	Not inundated																
200	0.6				2.4												
201		1.2			3.1		4 days										by MPWH
202	0.4				3.4	1 day								3.6	4 days		
203		0.2			2.9		3 days										by MPWH

(Continue)

(Continued)

Table XIII.3-1 Results of Survey on Undang and Openg Floods (8)

No. of Survey Points	Undang Flood					Openg Flood					Remarks					
	Inundation Water Depth (m)			FWL (m)	Duration of Inundation			Inundation Water Depth (m)				FWL (m)	Duration of Inundation			
	House	Road	Paddy		House	Road	Paddy	House	Road	Paddy			House	Road	Paddy	
204				3.4												by MPWH
205	1.1			4.0						0.7				3.6		by MPWH
206		0.35		3.15		1 day										
207		0.4		3.3		4 days	5 days					0.8		3.7		
208	0.4			4.1		3 days	1 week			0.6				4.3		
209		0.4		3.5		3 days										by MPWH
210		0.5		2.8		4 days										by MPWH
211		0.45		2.65		2 days										by MPWH
212	0.7			2.5		3 days				1.1				2.9	1 week	
213	0.5			1.9		2 weeks				0.3				1.7		
214					0.1 Dike	2.4	10 days									
215					0.4* Dike	2.1*										
216	0.6*				2.3*	30 min.*										
217					2.0											
					1.4* Dike	3.4*										
218	1.1				2.6		1 week									
219	1.0				3.0			1 week		0.8				2.8		
220	1.0				2.6		1 week			1.3				2.9		
	0.3*				1.9*											
221	0.8				2.6		2 days									
222	0.9				2.3		3 days			0.5				1.9	3 days	
223	0.65				1.95		3 days									
224	0.5				2.6		1 week									
225					1.0* Dike	2.7*	1 hour*									
226					1.9* Dike	3.9*	1 hour*									
227	0.9				2.6		1 day									
228	1.85				3.45		4 days									
229	0.7				2.4		3 days									
230	0.4				2.4			2 days		1.3				3.3	6 days	
231	0.4				2.1		3 days			1.4				3.1		

(Continue)

Note: * indicates tidal wave

(Continue)

Table XIII.3-1 Results of Survey on Undang and Openg Floods (9)

No. of Survey Points	Undang Flood						Openg Flood						Remarks			
	Inundation Water Depth (m)			FWL (m)	Duration of Inundation		Inundation Water Depth (m)			FWL (m)	Duration of Inundation					
	House	Road	Paddy		Others	House	Road	Paddy	Others		House	Road		Paddy		
232	1.0				2.5	3 days				1.0				2.5	3 days	
	0.3*				1.8*	10 min.*										
233		0.75			2.75	3 days								1.5	5 days	
234		0.4*			1.6*		4 hours*							0.8		2 days 3 days
235	0.3				2.2	5 hours		3 days		1.3				3.2	1 week	
236		1.0*			2.1*		4 hours*							0.8		2 days
237		0.4*			1.6*		3 hours*									
238	Not inundated															
239		-0.1			1.6									0.7		4 days 1 week
240	Not inundated									0.3				2.3	4 hours	
241	0.5				1.3	1 day		3 days		1.3				2.1	3 days	1 week
242		0.3*			1.8*		1 hour*			Not inundated						
243	Not inundated									0.6				1.9	3 days	
244	Not inundated									0.6				2.0	16 hours	
245	0.1*				1.5*					Not inundated						
246		0.1*			1.3*					0.1				1.3		
247					1.6*	1.5 hours*				Not inundated						
248		2.3*			3.6*	30 min.*				Not inundated						
249	0				0.9			2 hours		0.8				1.7	12 hours	1 day
250	0.4				1.7	4 hours		8 hours								
251	0.2				1.3											
252	Not inundated									Not inundated						
253		0.3			2.2			2 days								
254	Not inundated															
255	Not inundated									1.15				3.0	4 days	
256	0.6				1.7	12 hours										

Note: * indicates tidal wave

TABLE XIII. 4-1 PROGRESS OF THE FIELD RESEARCH

Date	Agricultural Damage	Building and Other Damage
June 3-6	Data Collection of comprehensive damages affected by the Typhoon in head offices of the government in Manila	
6-7	Data Collection of sectoral damage from Provincial Offices of MAF, BAECON, NIA, BFAR.	Data Collection of damages in the Capiz Governor's Office and MPWH District Engineer's Office.
9-11	Data Collection of sectoral damage from regional branch of the national government as like BAECON, MAF, NIA and etc.	Data Collection of sectoral damage from each regional branch of the national government such as NEDA, OOCOD, and MSSD in Iloilo City.
9-17/20	Data Collection of agricultural damages by Village by Municipalities.	Data Collection of sectoral damage through city or municipal mayor's offices.

TABLE XIII. 4-2 CONSOLIDATED TOTAL DAMAGES BY TYPHOON "UNDANG"

	Human Damage			Houses Damaged		Damages in Monetary Terms (P1000)			
	Dead	Injured	Missing	Total	Totally Damaged	Partially Damaged	Total	Agriculture	Others
Region IV	-	-	-	-	50 (0)	616 (1)	666 (0)	19 (0)	4,000 (0)
Region VI ¹	629 (87)	2,077 (97)	461 (88)	3,168 (93)	96,814 (69)	66,889 (84)	163,723 (74)	321,308 (28)	564,336 (75)
Aklan	27 (4)	89 (4)	3 (1)	119 (4)	24,926 (17)	18,587 (23)	43,513 (20)	47,393 (4)	21,419 (3)
Antique	10 (1)	- (-)	4 (1)	14 (0)	5,494 (4)	4,882 (6)	10,376 (5)	9,685 (1)	11,500 (2)
Capiz	487 (67)	1,965 (92)	277 (53)	2,729 (80)	46,939 (34)	31,732 (40)	78,671 (35)	195,406 (17)	457,229 (61)
Iloilo	105 (15)	24 (1)	173 (33)	302 (9)	18,405 (14)	11,625 (15)	31,030 (14)	68,824 (6)	74,188 (10)
Negros Occidental	- (-)	- (-)	4 (1)	4 (0)	50 (0)	63 (0)	113 (0)	- (-)	- (-)
Region VII	11 (2)	1 (0)	40 (8)	52 (2)	8 (0)	8 (0)	16 (0)	34,578 (3)	10,045 (1)
Region VIII	81 (11)	66 (3)	23 (5)	170 (5)	44,464 (31)	12,227 (15)	56,691 (26)	802,937 (69)	178,060 (24)
Total	721 (100)	2,145 (100)	524 (100)	3,390 (100)	141,336 (100)	79,740 (100)	221,096 (100)	1,158,842 (100)	752,441 (100)
									1,911,264 (100)

Remarks : ¹ Figures come from NEDA except damages in monetary terms.

² Figures in parentheses are percentage distribution.

Sources : "Comprehensive Report of typhoon "Undang", November, 1984, OOOD

TABLE XIII.4-3 DAMAGES OF CROPS AND LIVESTOCKS CAUSED BY TYPHOON UNDAUNG IN REGION VI.

Province/Item	Aklan		Antique		Capiz		Cebu		Iloilo		Total
	Amount damaged	Damage value	Amount damaged	Damage value	Amount damaged	Damage value	Amount damaged	Damage value	Amount damaged	Damage value	
	(ha)/1	(P)	(ha)	(P)	(ha)	(P)	(ha)	(P)	(ha)	(P)	(P)
1. CROPS											
Rice	629	4,560,250	735	7,056,000	11,031	106,117,400	358	265,299	10,816	59,885,616	177,894,565
Corn	99	103,950	-	-	938	2,985,000	-	-	62	477,334	3,566,284
Fruit	25	797,650	7,404	314,500	3,612	15,820,560	-	-	41,496	888,980	17,821,690
Palana	6,249	28,216,400	29	309,760	3,426	16,446,000	4	9,025	366	1,832,585	46,813,770
Mango	241	220,220	-	-	-	-	600	765,000	1,076	1,650,500	2,635,720
Vegetable	720	12,291,720	298	1,442,750	868	6,944,000	-	-	500	1,822,781	22,501,251
Sub-total		46,190,190		9,121,010		148,312,960		1,039,324		66,557,796	271,223,280
(percentages)		(17.0%)		(3.4%)		(54.7%)		(0.4%)		(24.5%)	(100%)
2. LIVESTOCKS											
Buffaloe	14	42,000	44	116,500	167	668,000	7	2,000	156	420,500	1,249,000
Cattle	28	84,000	70	152,000	63	252,000	-	-	118	331,000	819,000
Swine	1,070	1,070,000	115	60,900	3,382	2,705,000	-	-	381	381,000	4,216,900
Goat	57	6,840	89	8,300	1,442	252,000	4	280	320	39,800	307,220
Poultry	-	-	1,093	20,610	104,352	3,027,000	-	-	4,085	51,700	3,099,310
Sub-total		1,202,840		28,110		6,904,000		2,280		1,224,010	9,691,430
(percentages)		(12.4%)		(3.7%)		(71.2%)		(-)		(12.6%)	(100%)
TOTAL (Crops + Livestocks)		47,393,030		9,481,320		155,216,960		1,041,604		67,781,806	280,914,710
(percentages)		(16.9%)		(3.4%)		(55.3%)		(0.3%)		(24.1%)	(100%)

Source: Summary Report of Damage Caused by Typhoon Undang, Ministry of Agriculture and Food, Region VI.

Remarks, 1: Area damaged.

2: Number of livestock damaged.

TABLE XIII.4-4(1) AREA AND VALUE DAMAGED BY TYPHOON UNDANG
IN THE PROVINCE OF CAPIZ (CROPS)

Municipality	Rice		Corn		Fruit Trees		Banana		Vegetables	
	Area	Value	Area	Value	Area	Value	Area	Value	Area	Value
	(ha)	(10 ³ P)	(ha)	(10 ³ P)	(ha)	(10 ³ P)	(ha)	(10 ³ P)	(ha)	(10 ³ P)
1. Cuartero	1,474	14,371	7	23	300	1,314	150	720	50	400
2. Dao	723	6,941	-	-	19	83	95	456	45	360
3. Dumalag	697	6,691	17	55	280	1,226	200	960	350	2,800
4. Dumarao	250	2,400	20	65	1,000	4,380	450	2,160	-	-
5. Ivisan /1	26	250	3	10	54	237	72	346	11	88
6. Jamindan	133	1,277	65	211	50	219	250	1,200	-	-
7. Maayon	577	5,539	112	364	350	1,533	500	2,400	62	496
8. Mambusao	516	4,954	17	55	50	219	238	1,142	3	24
9. Panay	1,175	11,280	-	-	3	13	30	144	-	-
10. Panitan	926	8,890	5	16	44	193	207	994	215	1,720
11. Pilar /1	253	2,428	130	423	100	438	75	360	-	-
12. Pontevedra	730	7,008	34	111	29	127	100	480	-	-
13. Pres. Roxas	28	269	267	868	176	771	50	240	-	-
14. Sapián /1	305	2,928	6	20	88	385	147	706	7	56
15. Sigma	1,484	14,246	26	85	230	1,007	392	1,882	26	208
16. Tapaz	250	2,400	209	679	800	3,504	320	1,536	18	144
17. Roxas City	1,484	14,246	-	-	39	171	150	720	81	648
Total	11,031	106,118	918	2,985	3,612	15,820	3,426	16,446	868	6,944

SOURCE: Typhoon Undang Final Damage Report, Ministry of Agriculture and Food, Province of Capiz.

NOTE, /1: These municipalities are not included in "Panay River Basin Area".

TABLE XIII.4-4(2) NUMBER OF HEADS AND VALUE DAMAGED BY TYPHOON UNDANG
IN THE PROVINCE OF CAPIZ (LIVESTOCKS)

Municipality	Buffaloe		Cattle		Swine		Goat		Poultry	
	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)
1. Cuartero	5	20	4	16	96	77	42	7	1,500	44
2. Dao	-	-	-	-	10	8	5	1	1,000	29
3. Dumalag	3	12	-	-	15	12	16	3	-	-
4. Dumarao	11	44	2	8	40	32	42	7	5,384	156
5. Ivisan /1	6	24	17	68	12	10	142	25	470	14
6. Jamindan	6	24	1	4	8	6	-	-	-	-
7. Maayon	16	64	5	20	71	57	43	8	7,949	231
8. Mambusao	4	16	5	20	38	30	40	7	4,379	127
9. Panay	20	80	2	8	124	99	282	49	677	20
10. Panitan	6	24	5	20	2,261	1,809	11	2	13,930	404
11. Pilar /1	9	36	4	16	72	58	124	22	3,125	91
12. Pontevedra	51	204	4	16	109	87	210	37	520	15
13. Pres. Roxas	14	56	2	8	258	206	109	19	11,780	342
14. Sapián /1	-	-	3	12	105	84	46	8	-	-
15. Sigma	2	8	7	28	33	26	-	-	488	14
16. Tapaz	1	4	2	8	12	10	42	7	2,350	67
17. Roxas City	13	52	-	-	118	94	287	50	50,800	1,473
Total	167	668	63	252	3,382	2,705	1,441	252	104,352	3,027

SOURCE: Typhoon Undang Final Damage Report, Ministry of Agriculture and Food, Province of Capiz.

NOTE, /1: These municipalities are not included in "Panay River Basin Area".

TABLE XIII.4-4(3) FISHERY DAMAGES CAUSED BY TYPHOON UNDANG
IN THE PROVINCE OF CAPIZ

Municipality	Fishpond			Fishing Boat		Repairing Cost	Total Damage
	Area	Milkfish	Prawn	Motorized	Non-Motorized		
	(ha)	(10 ³ P)	(10 ³ P)	(Piece)	(10 ³ P)	(10 ³ P)	(10 ³ P)
1. Cuartero	-	-	-	-	-	-	-
2. Dao	-	-	-	-	-	-	-
3. Dumalag	-	-	-	-	-	-	-
4. Dumarao	-	-	-	-	-	-	-
5. Ivisan <u>/1</u>	420	829	-	50	750	225	1,125
6. Jamindan	-	-	-	-	-	-	-
7. Maayon	-	-	-	-	-	-	-
8. Mambusao	-	-	-	-	-	-	-
9. Panay	834	416	2,102	495	4,125	135	375
10. Panitan	-	-	-	-	-	-	-
11. Pilar <u>/1</u>	417	415	160	95	1,425	135	685
12. Pontevedra	314	145	714	52	780	40	200
13. Pres. Roxas	-	507	2,051	170	2,550	60	300
14. Sapián <u>/1</u>	1,034	2,044	-	10	150	70	350
15. Sigma	-	-	-	-	-	-	-
16. Tapaz	-	-	-	-	-	-	-
17. Roxas City	217	387	-	135	2,025	15	75
Total	3,236	4,743	5,027	1,007	11,805	680	3,110
						322	25,007

SOURCE: from Ministry of Agriculture and Food, Bureau of Fisheries and Aquatic Resources, Province of Capiz.

NOTE, /1: These municipalities are not included in "Panay-River Basin Area".

TABLE XIII.4-5(1) AREA AND VALUE DAMAGED BY TYPHOON UNDANG
IN THE PANAY RIVER BASIN AREA (CROPS)

Municipality	Rice			Corn			Fruit Trees			Banana			Vegetables		
	Area (ha)	Value (10 ³ P)		Area (ha)	Value (10 ³ P)		Area (ha)	Value (10 ³ P)		Area (ha)	Value (10 ³ P)		Area (ha)	Value (10 ³ P)	
1. Cuartero	1,474	14,371		7	23		300	1,314		150	720		50	400	
2. Dao	723	6,941		-	-		19	83		95	456		45	360	
3. Dumalag	697	6,691		17	55		280	1,226		200	960		350	2,800	
4. Dumarao	250	2,400		20	65		1,000	4,380		450	2,160		-	-	
5. Jamindan	133	1,277		65	211		50	219		250	1,200		-	-	
6. Maayon	577	5,539		112	364		350	1,533		500	2,400		62	496	
7. Mambusao	516	4,954		17	55		50	219		238	1,142		3	24	
8. Panay	1,175	11,280		-	-		3	13		30	144		-	-	
9. Panitan	926	8,890		5	16		44	193		207	994		215	1,720	
10. Pontevedra	730	7,008		34	111		29	127		100	480		-	-	
11. Sigma	1,484	14,246		26	85		230	1,007		392	1,882		26	208	
12. Tapaz	250	2,400		209	679		800	3,504		320	1,536		18	144	
13. Roxas City	1,484	14,246		-	-		39	171		150	720		81	648	
Total	10,419	100,243		512	1,664		3,194	13,989		3,082	14,794		850	6,800	

SOURCE: Typhoon Undang Final Damage Report, Ministry of Agriculture and Food, Province of Capiz.

TABLE XIII.4-5(2) NUMBER OF HEADS AND VALUE DAMAGED BY TYPHOON UNDANG
IN THE PANAY RIVER BASIN AREA (LIVESTOCKS)

Municipality	Buffaloe		Cattle		Swine		Goat		Poultry	
	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)	Heads	Value (10 ³ P)
1. Cuartero	5	20	4	16	96	77	42	7	1,500	44
2. Dao	-	-	-	-	10	8	5	1	1,000	29
3. Dumalag	3	12	-	-	15	12	16	3	-	-
4. Dumarao	11	44	2	8	40	32	42	7	5,384	156
5. Jamindan	6	24	1	4	8	6	-	-	-	-
6. Maayon	16	64	5	20	71	57	43	8	7,949	231
7. Mambusao	4	16	5	20	38	30	40	7	4,379	127
8. Panay	20	80	2	8	124	99	282	49	677	20
9. Panitan	6	24	5	20	2,261	1,809	11	2	13,930	404
10. Pontevedra	51	204	4	16	109	87	210	37	520	15
11. Sigma	2	8	7	28	33	26	-	-	488	14
12. Tapaz	1	4	2	8	12	10	42	7	2,350	67
13. Roxas City	13	52	-	-	118	94	287	50	50,800	1,473
Total	138	552	37	148	2,935	2,347	1,020	178	88,977	2,580

SOURCE: Typhoon Undang Final Damage Report, Ministry of Agriculture and Food, Province of Capiz.

TABLE XIII.4-5(3) FISHERY DAMAGES CAUSED BY TYPHOON UNDANG
IN THE PANAY RIVER BASIN AREA

Municipality	Fishpond		Fishing Boat		Repairing Cost	Total Damage
	Area (ha)	Milkfish (10 ³ P)	Prawn (10 ³ P)	Motorized (Piece)	Non-Motorized (Piece)	
1. Cuartero	-	-	-	-	-	-
2. Dao	-	-	-	-	-	-
3. Dumalag	-	-	-	-	-	-
4. Dumarao	-	-	-	-	-	-
5. Jamindan	-	-	-	-	-	-
6. Maayon	-	-	-	-	-	-
7. Mambusao	-	-	-	-	-	-
8. Panay	834	416	2,102	495	135	7,076
9. Panitan	-	-	-	-	-	-
10. Pontevedra	314	145	714	52	40	1,866
11. Sigma	-	-	-	-	-	-
12. Tapaz	-	-	-	-	-	-
13. Roxas City	217	387	-	135	15	2,506
Total	1,365	948	2,816	682	190	11,448

SOURCE: from Ministry of Agriculture and Food, Bureau of Fisheries and Aquatic Resources, Province of Capiz.

TABLE XIII.4-6 FLOOD DAMAGES CAUSED BY TYPHOON UNDANG
IN THE PANAY RIVER BASIN AREA

Municipality	Crop Damages				Fishery Damages				Livestock/ Damages	Total Damages
	Rice		Corn		Fish Pond		Repairing Cost			
	Area (ha)	Value (10 ³ P)	Area (ha)	Value (10 ³ P)	Area (ha)	Milkfish (10 ³ P)		Prawn (10 ³ P)		
1. Cuartero	1,474	14,371	7	23	50	400	-	-	164	14,958
2. Dao	723	6,941	-	-	45	360	-	-	38	7,339
3. Dumalag	697	6,691	17	55	350	2,800	-	-	27	9,573
4. Dumarao	250	2,400	20	65	-	-	-	-	247	2,712
5. Jamindan	133	1,277	65	211	-	-	-	-	34	1,522
6. Maayon	577	5,539	112	364	62	496	-	-	380	6,779
7. Mambusao	516	4,954	17	55	3	24	-	-	200	5,233
8. Paday	1,175	11,280	-	-	-	-	834	416	2,102	14,112
9. Panitan	926	8,890	5	16	215	1,720	-	-	2,259	12,885
10. Pontevedra	730	7,008	34	111	-	-	314	145	714	8,364
11. Sigma	1,484	14,246	26	85	26	208	-	-	76	14,615
12. Tapaz	250	2,400	209	679	18	144	-	-	96	3,319
13. Roxas City	1,484	14,246	-	-	81	648	217	387	1,669	16,969
Total	10,419	100,243	512	1,664	850	6,800	1,365	948	2,816	118,380
								104	5,805	

SOURCE: Typhoon Undang Final Damage Report, Ministry of Agriculture and Food, Province of Capiz.

NOTE: 1. Breakdown of livestock damages is shown on Table "NUMBER OF HEADS AND VALUE DAMAGED BY TYPHOON UNDANG IN THE PANAY RIVER BASIN AREA (LIVESTOCKS)".

TABLE XIII. 4-7 (1) RESIDENTIAL BUILDING DAMAGE IN CAPIZ PROVINCE

Municipality	Number of Damaged Unit			Amount (P1000)
	Totally	Partially	Total	
Cuartero	2,341	1,434	3,775	20,012
Dao	2,717	1,646	4,363	18,495
Dumalag	1,679	1,969	3,648	12,793
Dumarao	2,531	1,751	4,282	15,400
Ivisan	1,990	1,186	3,176	15,771
Jamindan	789	3,588	4,377	15,213
Maayon	3,064	1,209	4,273	9,916
Mambusao	3,939	1,324	5,263	18,198
Panay	3,654	1,731	5,385	22,245
Panitan	2,333	1,650	3,983	16,996
Pilar	3,773	1,669	5,442	23,102
Pontevedra	3,390	1,868	5,258	12,714
Pres. Roxas	1,328	2,094	3,422	9,189
Sapian	2,598	657	3,255	21,686
Sigma	2,335	1,632	3,967	14,938
Tapaz	2,530	1,822	4,352	13,660
Roxas City	5,948	4,502	10,450	24,034
Total	46,939	31,732	78,671	284,362

Sources : Capiz Governor's Office, Roxas City Mayor's Office

TABLE XIII. 4-7(2) RESIDENTIAL BUILDING DAMAGE IN THE PANAY RIVER BASIN

Municipality	Statistical Data /1		Damage by the Typhoon		
	Population	Number of Residence	Number of Damaged Unit		Amount (P1000)
			Totally	Partially	Total
Cuartero	18,512	3,344	2,341	1,434	3,775
Dao	23,904	4,325	2,717	1,646	4,363
Dumalag	22,188	4,070	1,679	1,969	3,648
Dumarao	29,931	5,381	2,531	1,751	4,282
Jamindan	25,652	4,299	789	3,588	4,377
Maayon	25,711	4,490	3,064	1,209	4,273
Mambusao	32,066	5,639	3,939	1,324	5,263
Panay	31,649	5,502	3,654	1,731	5,385
Panitan	24,431	4,874	2,333	1,650	3,983
Pontevedra	30,482	5,120	3,390	1,868	5,258
Sigma	20,038	3,807	2,335	1,632	3,967
Tagaz	35,129	6,377	2,530	1,822	4,352
Roxas City	80,953	13,943	5,948	4,502	10,450
Total	403,645	71,171	37,250	26,126	63,376
					214,614

Remark : /1 1980 Population and Housing ; NCSO

Sources : Capiz, Governor's Office ; City Mayor's Office; Municipal Mayor's Offices; MSSD

TABLE XIII: 4-7 (3) NON-RESIDENTIAL BUILDING DAMAGE IN CAPIZ PROVINCE

(Unit : ₱1000)

Municipality	Educational ^{/1}		Medical ^{/2}		Industrial ^{/3}		Commercial ^{/4}		Religious ^{/5}		Others ^{/6}		Total
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Cuartero	41	1,675	1	45	424		240	486		823			3,683
Dao	24	2,414	4	1,933	2,068		210	913		1,032			8,570
Dumalag	17	2,686	5	98	628		46	649		6,768			10,875
Dumarao	35	2,440	3	30	296		277	1,389		1,170			5,601
Ivisan	27	2,287	1	35	171		170	568		911			4,142
Janindan	55	3,482	2	60	395		410	1,982		1,991			8,320
Maayon	47	1,423			92		79	335		183			2,111
Mambusao	51	2,103	8	850	446		55	2,719		135			6,308
Panay	38	2,844	2	100	1,300		20	1,277		712			7,253
Panitan	54	2,442	6	50	691		160	733		1,273			5,449
Pilar		2,985	8	60	175		305	506		1,131			5,162
Pontevedra	37	2,614	6	540	11,150		0	459		7,900			22,663
Pres. Roxas	36	1,077			271		275	395		15,870			17,888
Sapian	38	11,547	7	675	310		150	620		1,385			14,687
Sigma	39	2,718	4	50	777		80	855		1,005			5,285
Tapaz	54	1,774			109		35	527		1,180			3,625
Roxas City	32	3,954	1	150	-		77	-		2,300			6,481
Capiz Total		50,264	58	4,676	19,291		2,589	14,414		15,870			137,104

Notes : /1 School

/2 Hospital and Health Center

/3 Rice mill and Warehouse

/4 Market

/5 Church and Chapel

/6 Municipal and Barangay halls and others

Sources : Capiz, Governor's Office; MPWH, District Engineer's Office & City Engineer's Office

TABLE XIII.4-7(4) NON-RESIDENTIAL BUILDING DAMAGE IN THE PANAY RIVER BASIN

Municipality	Educational/1		Medical/2		Industrial/3		Commercial/4		Religious/5		Others/6		Total
	No	Amount	No	Amount	No	Amount	No	Amount	No	Amount	No	Amount	
Quartero	41	1,675	1	45	414	240	486	823	3,683				
Dao	24	2,414	4	1,933	2,068	210	913	1,032	8,570				
Dumalag	17	2,686	5	98	628	46	649	6,768	10,875				
Dumarao	35	2,440	3	30	296	277	1,389	1,170	5,601				
Jamindan	55	3,482	2	60	395	410	1,982	1,991	8,320				
Maayon	47	1,423			92	79	335	183	2,111				
Mambusao	51	2,103	8	850	446	55	2,719	135	6,308				
Panay	38	2,844	2	100	1,300	20	1,277	712	6,253				
Panitan	54	2,442	6	50	691	160	732	1,373	5,449				
Pontevedra	37	2,614	6	540	11,150	0	459	7,900	22,663				
Sigma	39	2,518	4	50	777	80	855	1,005	5,285				
Tapaz	54	1,774			109	35	527	1,180	3,625				
Roxas City	32	3,954	1	150	0	77	0	2,300	6,481				
Total	524	32,369	42	3,906	18,366	1,689	12,324	26,572	95,224				

Notes : /1 School
/4 Market

/2 Hospital and Health Center
/5 Church and Chapel

/3 Rice Mill and Warehouse
/6 Municipal and Barangay Halls
and Others

Sources : Capiz, Governor's Office; MPWH, District Engineer's Office & City Engineer's Office

TABLE XIII.4-8(1) INFRASTRUCTURE DAMAGE

Item	Amount of Damage (P1000)	Remark
1. Roads and Bridges	17,224	Table XIII.2-7(2)
2. River Structure	8,840	Table XIII.2-7(3)
3. Water Supply	83	Table XIII.2-7(4)
4. Electricity	1,818	Table XIII.2-7(5)
5. Telephone	73	Table XIII.2-7(6)
6. Railway	249	Table XIII.2-7(7)
7. Irrigation Facilities	3,581	
Total	31,869	

TABLE XIII.4-8(2) DAMAGE OF ROADS AND BRIDGES

Municipality	National		Provincial		Municipal		Barangay		Total	
	Length (km)	Amount (P1000)	Length (km)	Amount (P1000)	Length (km)	Amount (P1000)	Length (km)	Amount (P1000)	Length (km)	Amount (P1000)
Cuartero	58.3	6,875		220		0		507	16,364	
Dao				350		0		246		
Dumalag				160		0		425		
Dumarao				440		0		398		
Maayon				765		14		288		
Mambusao				380		100		451		
Panay				680		16		449		
Panitan				770		28		545		
Pontevedra	14.6	200		170		0		1,354	860	
Sigma				240		8		485		
Roxas City				250		0		410		
Total	72.9	7,075		4,425		166		5,558		17,224

Sources :MPWH, District Engineer's Office & City Engineer's Office; Capiz, Governor's Office; NEDA, Region VI

TABLE XIII.4-8(3) DAMAGE OF FLOOD CONTROL FACILITIES

Municipality	Location	Length (m)	Amount (P1000)
Cuartero	Panay River	220	2,900
Mambusao	Mambusao River	80	1,000
Panay	Panay River	80	2,000
Panitan	Banga-an River	30	360
Pontevedra	Agbalo River	200	2,000
Sigma	Mambusas River	15	180
Roxas City	Panay River	-	400
Total			8,840

Sources : MPWH, District Engineer's Office and City
Engineer's Office

TABLE XIII.4-8(4) DAMAGE OF WATER SUPPLY FACILITIES (LEVEL I)

Municipality	No. of Unit	Amount (Pesos)
Cuartero	2	10,632
Dao	1	4,000
Dumalag	2	7,868
Dumarao	3	10,967
Maayon	1	8,500
Mambusao	1	4,000
Panay	2	6,967
Panitan	1	3,934
Pontevedra	3	14,566
Roxas City	3	11,934
Total		83,368

Sources : MPWH, District Engineer's Office and City Engineers's
Office

TABLE XIII.4-8(5) DAMAGE OF ELECTRICITY NETWORK SYSTEM

Item	Whole Service Area (Capiz)		Basin	Owner
	Number	Amount (P1000)	Amount (P1000)	
1. Supply Cable	553 km	5,300	1,357	CAPELCO
2. Pole	2,206	1,800	461	CAPELCO
3. Transmission		1,750	-	CAPELCO
4. -do-		144	-	NPC
Total		8,994	1,818	

Note : Most of above facilities might be destroyed by gales of wind. A part of cable and pole damages might be caused by flood, the amount of which would be in proportion to the ratio (0.256) of affected road length (72.9km) to total road length (285.1km).

Sources : NPC; CAPELCO

TABLE XIII.4-8(6) DAMAGE OF TELEPHONE NETWORK SYSTEM

Item	Amount (P1000)	Remark
Service Cable	73	$P1,818,000 \times \frac{1}{2} \times 20\% \times \frac{1}{3} \times (14.6\text{km} \times \frac{1}{4} / 72.9\text{km} \times \frac{1}{5})$
Total	73	

Notes : /1 According to a manager of Public Affairs Division of PLDT, the amount of telephone cable damage would be estimated less than 20% of the damage of electricity network, because the telephone cable is set up on the poles established by CAPELCO. Furthermore, they are serving only within Roxas City.

/2 Damage of the electricity network

/3 Damage ratio of telephone network to the electricity network

/4 Length of affected national road in Roxas City

/5 Length of affected national road in Capiz

TABLE XIII.4-8(7) DAMAGE OF RAILWAY

Item	Number	Amount (P1000)	Remark
1. Embankment	19km	60.0	Washed out at the 77km point from Iloilo
2. Bridge	2	159.4	
Total		249.4	

Source : Panay Railway, Inc.

TABLE XIII. 4-9 RELIEF OPERATIONS

Item	Amount (P1000)
1. Commodity assistance program (For 12,513 families)	3,504 ¹
2. Distribution of various types of medicines	489
3. Chlorination of water sources (9315 water sources chlorinated)	28
4. Tetanus toxoid immunization (100 vials)	6
Total	4,027

Note : ¹ Calculated on the fact that P34,776,000 is spent for 124,201 families as a commodity assistance program.

Source : NEDA, Region VI

TABLE XIII.4-10 HUMAN DAMAGE IN CAPIZ PROVINCE

Municipality	Dead	Injured	missing	Total
Cuartero*	3	82	0	85
Dao*	5	27	0	32
Dumalag*	5	168	0	173
Dumarao*	2	84	0	86
Ivisan	2	211	0	213
Jamindan*	11	319	0	330
Maayon*	0	7	0	7
Mambusao*	13	256	0	269
Panay*	225	331	18	574
Panitan*	12	108	0	120
Pilar	119	73	250	442
Pontevedra*	28	73	1	102
Pres. Roxas	19	34	4	57
Sapian	7	22	0	29
Sigma*	13	80	2	95
Tapaz*	2	24	0	26
Roxas City*	21	66	2	89
Total (in Capiz)	487	1,965	277	2,729
Total (in the Basin)	340	1,625	23	1,988

Remark : * means municipalities related to the basin.

Sources : Capiz, Governor's Office and City Mayor's Office

TABLE XIII.4-11 DIRECT DAMAGE BY THE FLOOD IN THE BASIN

Item	Amount (P1000)	Percentage
1. Crop Damage	115,938	47
Paddy	100,243	40
Corn	1,664	1
Sugar Cane	7,231	3
Others	6,800	3
2. Livestock Damage	5,805	2
3. Fishpond Damage	3,868	2
4. Building Damage	90,149	36
Residential Building	42,373	17
Non-residential Building	47,776	19
5. Infrastructure Damage	31,868	13
Total	247,628	100

TABLE XIII. 4-12 DAMAGE RATIO OF INFRASTRUCTURE

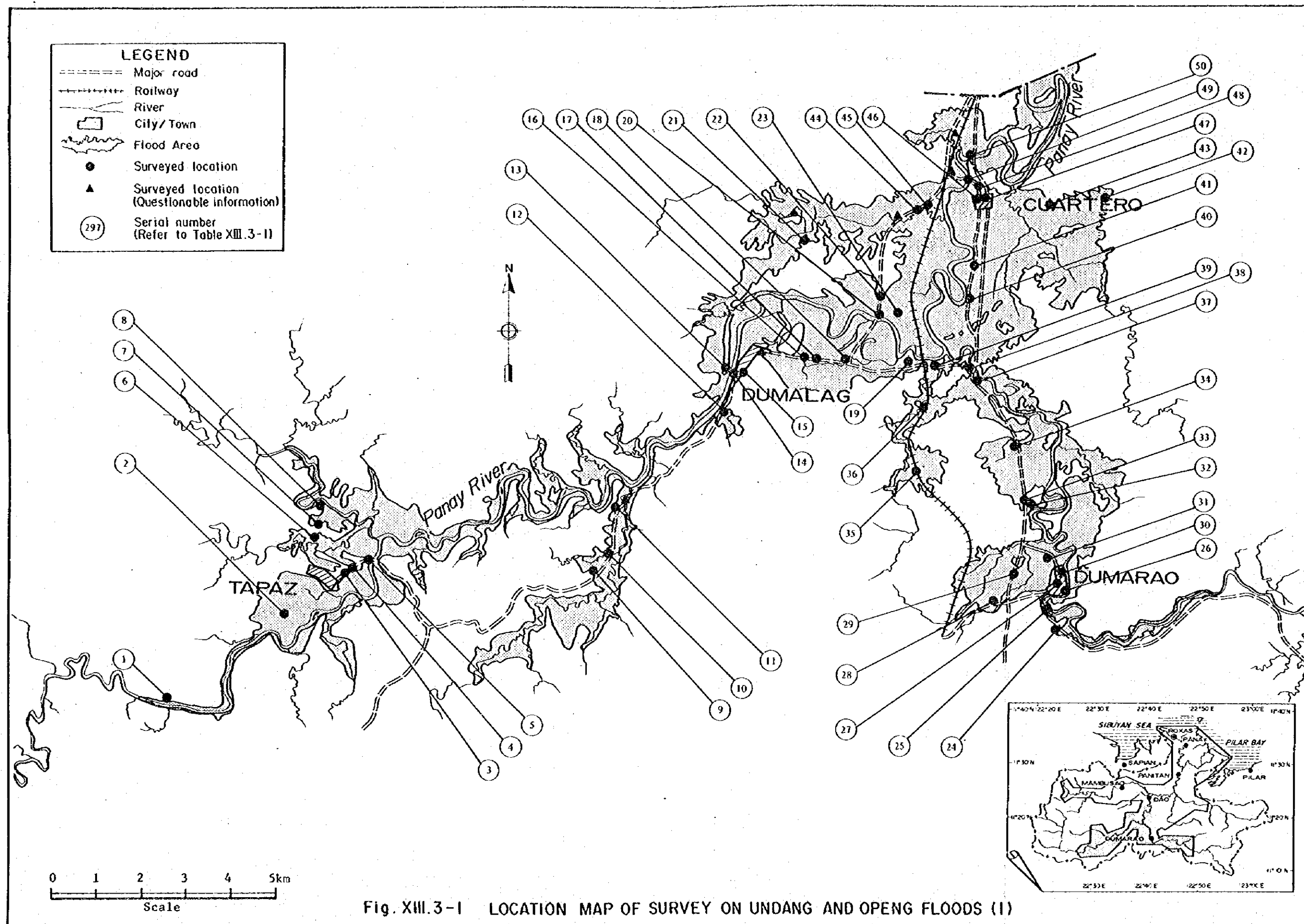
Item	Figure
1. Total Number of Damaged Residential Building within the Flood Prone Area (Table XIII. 2-6(1))	63,376
2. Total Amount of Damaged Residential Building within the Area (Table XIII. 2-6 (1))	#214,614x10 ³
3. Average Damage Amount Per Unit	#3,400
4. Total Number of Damaged Non-residential Building within the Area ^{/1}	2,300
5. Total Amount of Damaged Non-residential Building within the Area (Table XIII. 2-6(2))	#95,224x10 ³
6. Average Damage Amount Per Unit	#41,400
7. Number of Inundated Building ^{/2} A. Residential	12,513
B. Non-residential	1,154
9. Estimated Damage Amount of Inundated Building [(3)x(7)+(6)x(8)]	#90,149x10 ³
10. Damage Amount of Infrastructure Affected by the Flood (Table XIII. 2-7)	#31,868x10 ³
11. Damage Ratio of Infrastructure to Buildings [(10)/(9)]	35%

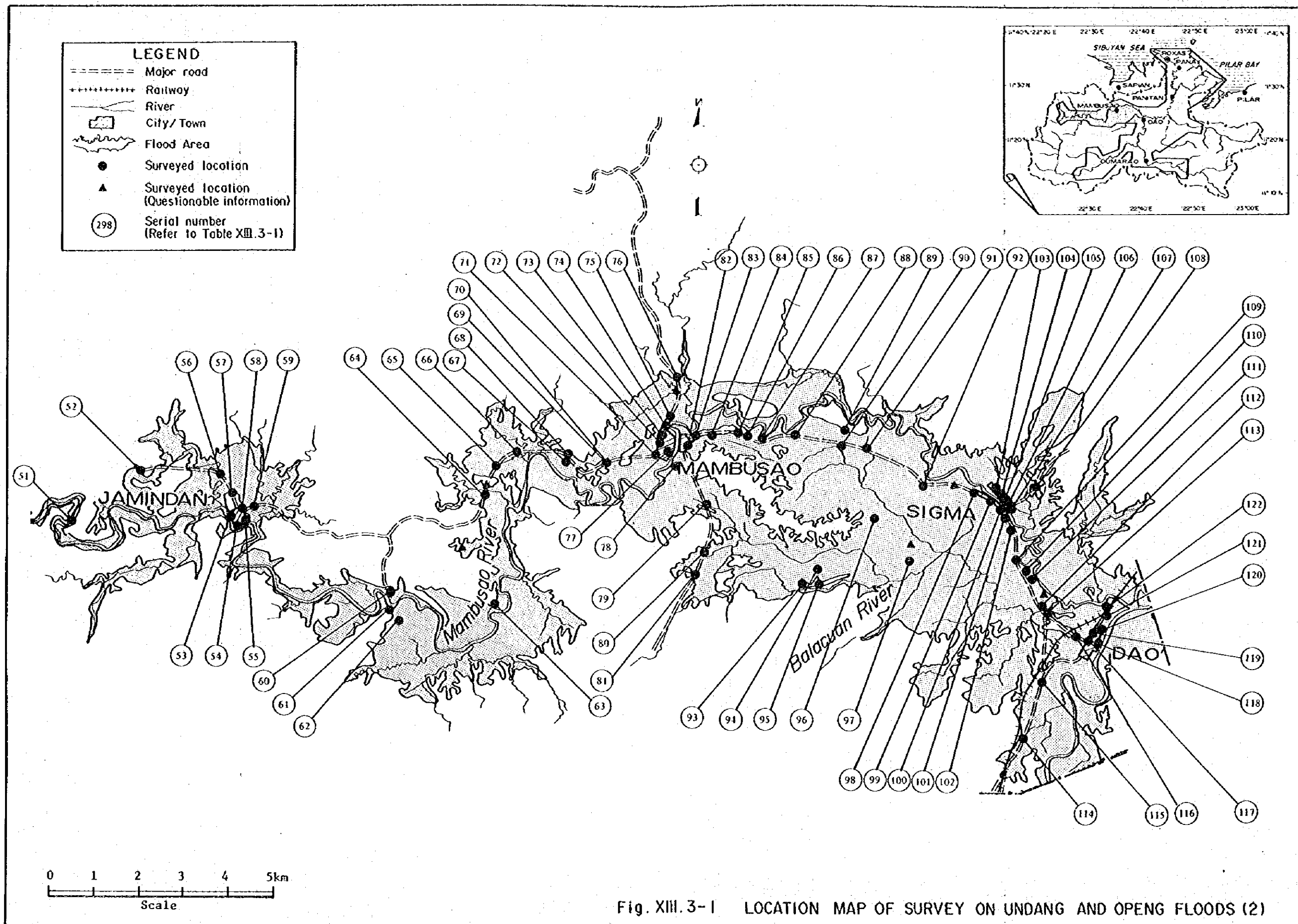
Remarks : ^{/1} Refer to section 2-6.

^{/2} The number is calculated by the river system model.



FIGURES
FOR
APPENDIX XIII





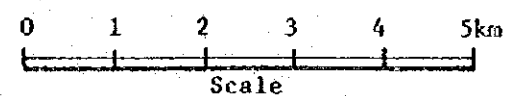
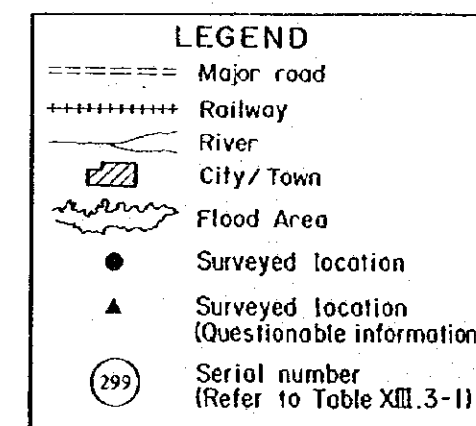
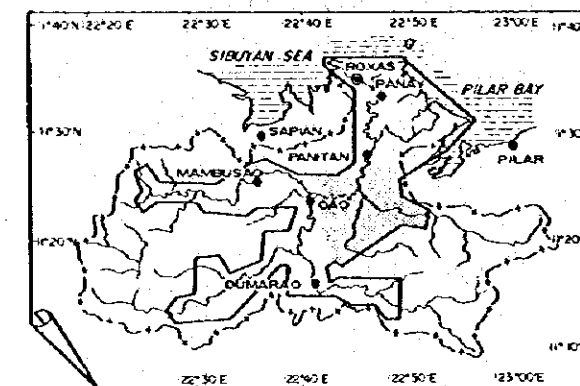
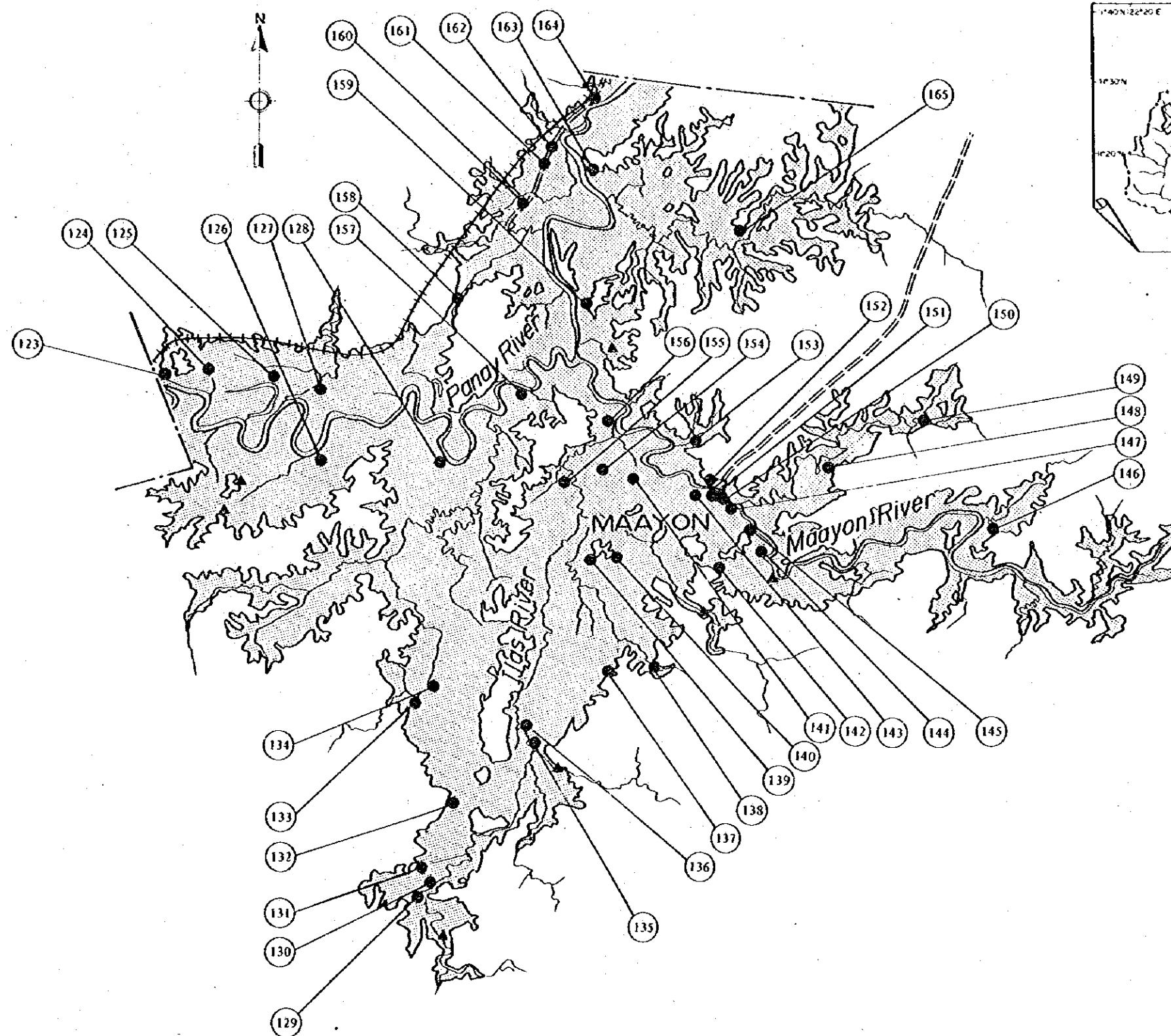
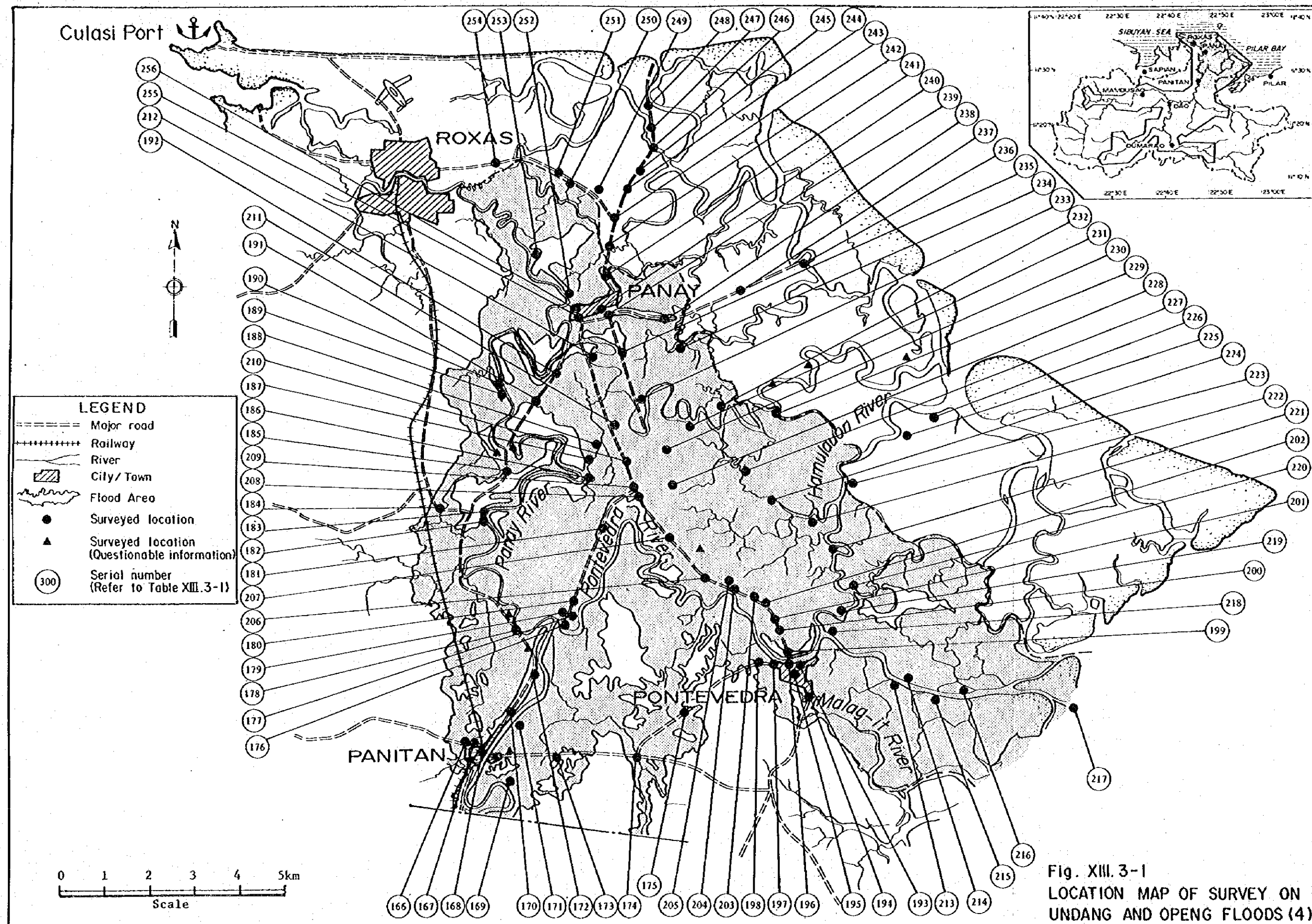
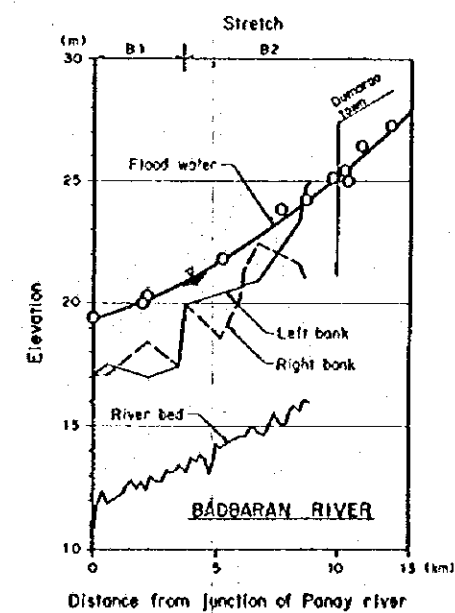
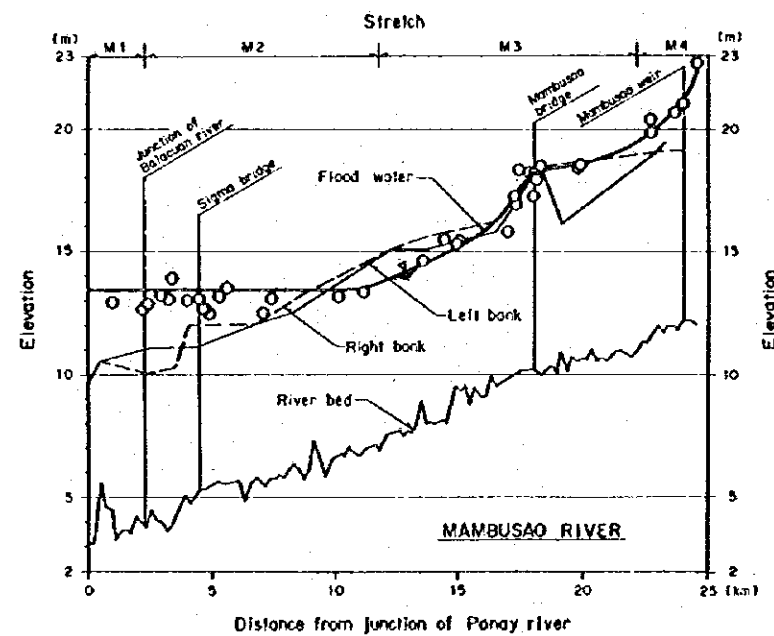
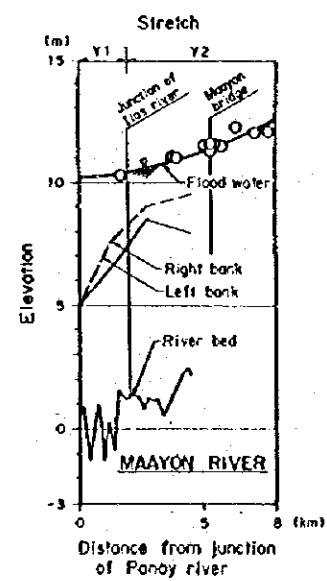
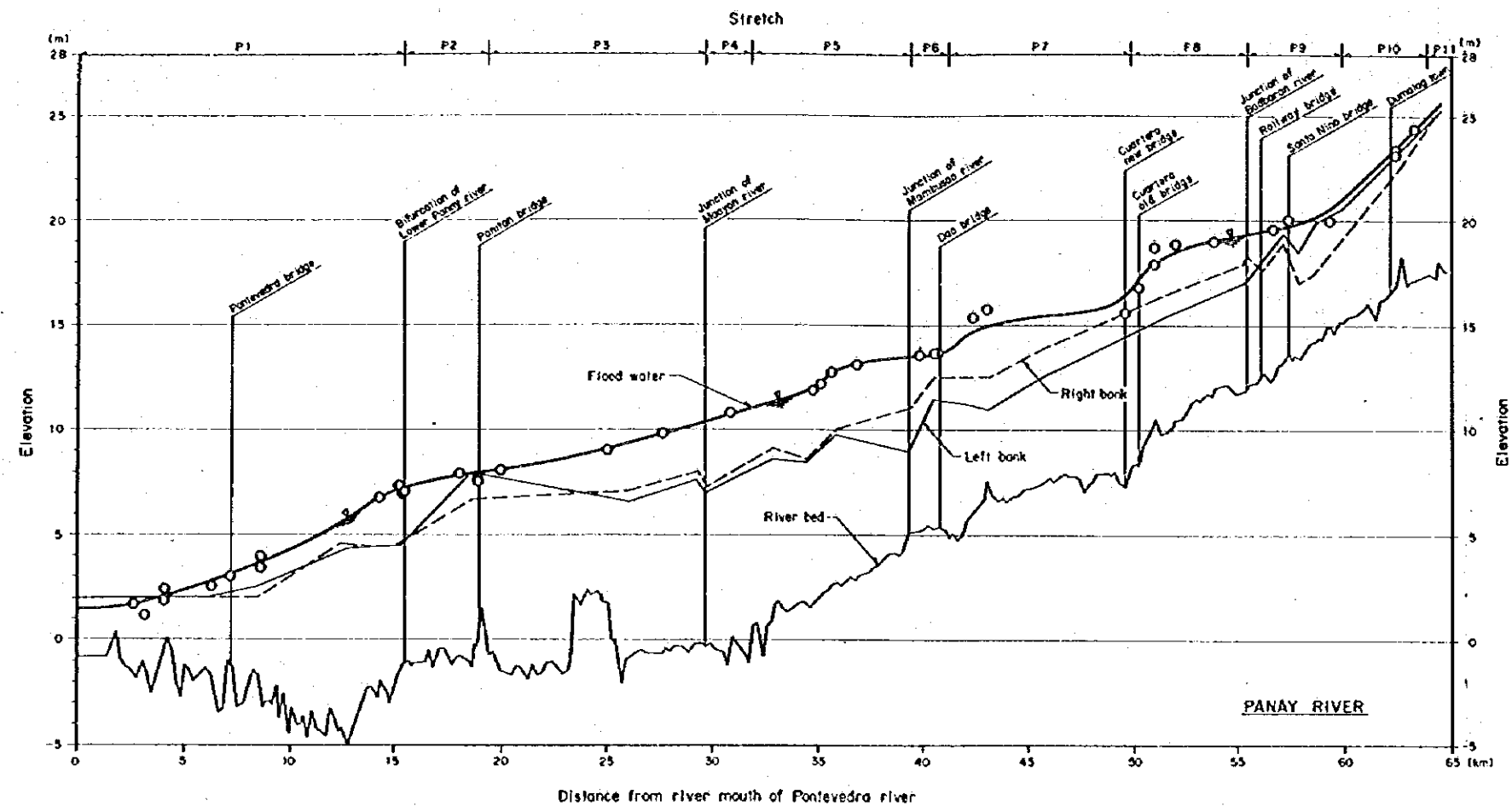


Fig. XIII. 3-1 LOCATION MAP OF SURVEY ON UNDANG AND OPENG FLOODS (3)





Remarks: O shows surveyed water level

Fig.XIII.3-2 LONGITUDINAL WATER PROFILE BY UNDANG FLOOD

