Table C.5.10(1) Inventory of Major Damageable Assets in Potential Flood Area of 2 Year Return Period: 1996

	Tobable	Langid	Suyo	Poblacion	Camangagn	Poblacion	San	Cess	Ç.	San
Item	Flood Area	Scor	Laoag	જ	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Target Area (Am²) "1	128.0	1,3	0.3	6.3	1.8	1.0	1.0	0.0	1.0	0.0
2. Living Quarters										
- Population	35,476	824	0	2,283	796	1,295	425	٥	o	c
<ul> <li>Dwelling Units</li> </ul>	6,916	165	0	459	66	266	8	<b>o</b>	0	0
3. Agricultural Lands (ha)	7.745	138	0	17	122	\$ \$ 2	, FA	, 2,	ŗ	c
- Irrigated Field	7.598	138	0	17	122		<b>2</b>	3 8	4 C	> <
- Rainfed Field	147	0	0	0	0	0	25	) o	> 14	0
4. Industrial Establishment	165	9	0	33		∞	۲	Ċ	c	c
- Manufacturing Industry	21	0	0	4		, <b>p</b>	· c	, c	• •	> <
Trading Industry	144	<b>v</b> o	0	28	4		7	0	0	> 0
5. Infrastructure										
- Educational Facility	43		0	á	<b>F4</b>	0	0	c	c	c
Pre-school	7		0	7	0	0	0	· c	o C	<b>&gt;</b> C
Elementary.	29	0	0	<b>4</b>	<u>-</u>	0	0	0	· c	· c
Secondary	<b>5</b>	0	0	<b>-</b> 4	0	0		0	0 0	• 0
Tertiary	ત	0	0	2		0	0	0	0	òc
- Health Facility	6	0	0	0	•	0	0	0	C	· c
Hospital	0	0	0	0	0	0	0	0	) C	· c
Rural Health Unit		0	0	0	0	0	0	· c	· c	> <
Barangay Health Station	Ø	0	0	0	0	٥	0	0	o 0	•
- Road (km)	403.7	9.9	80	0.8	4.2	4.7	5,4	0.0	2.5	¢
Concrete	23.7	9.0	0.1	0.1	0.4	0.5	0.4	0.0	03	9 0
Asphalt	10.9	0.2	0.0	0.0	0.1	0.2	0.2	0.0	0.1	200
Gravel	58.2	6.0	0.1	0.1	9.0	0.7	6.0	0.0	9.0	C
Earth	310.9	4.9	90	.90		2.4	6	C		

Source: Socio-Economic Profile, Ilocos Norte, Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices Note: \*1 Excluding river area of 35 km² in total.

Table C.5.10(2) Inventory of Major Damageable Assets in Potential Flood Area of 2 Year Return Period: 1996

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	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Item	Cristobal	River/	Dingras	jo	River	River	River	River	Bongo	Bongo
	Sarra	Iviziroziociue		Unigras	Dasin	Dasin	Dasin	Dasiii		
1. Target Area (ha)	0.3	5.1	1.5	0.8	33.5	19.0	37.0	17.3	3.3	3,5
2. Living Ouarters										
	91	434	1,356	1,176	8,994	4,721	8,131	3,495	199	1,160
- Dwelling Units	m	68	275	231	1,803	916	1,583	682	38	214
3. Agricultural Lands (ha)	\$	176	100	32	2,229	1,333	2,014	1,218	Z	191
- Imigated Field		175	83	32	2,201	1.297	2,009	1,190	A	191
- Rainfed Field	<b>~</b>	<b>~</b>	17	0	28	36	v	83	0	0
4. Industrial Establishment		p-4	4	H	33	23	27	53	0	9
- Manufacturing Industry			0	0	8	7		ч	0	0
- Trading Industry	•	<del></del>	4		27	16	26	#	0	ø
SInfrastructure										
- Educational Facility			0	0	7	6	<b>8</b>	به	0	0
Pre-school	0	0	0	0	0	7	7	0	0	0
Elementary			0	0	7	S	S	<b>S</b>	0	0
Secondary	0	0		0	0	2			0	0
Tertiary	0	0	0	0	0 :	0	0	0	0	0
- Health Facility	0	0	0	0	m	2	4	0	<b>-</b> ⊶	F-4
Hospital	0	0	0	o o	0	0	0	0	0	0
Rural Health Unit	; ;	0	0	0	0	<b>.</b> -	0	0	0	0
Barangay Health Station	0	0	0	0	٣		7	0	<b>,</b>	~-4
- Road (km)	6.0	16.9	6.3	3.0	60.1	35.2	157.6	2.4	19.7	15.5
Concrete		0.7	4.0	0.2	4.1	2.4	6.7	4.3	6.0	5.1
Asplalt	0.0	0.4	0.2	0.1	1.8	1.1	3.7	1.7	0.5	9.0
Gravel	0.2	2.3	1.1	0.5	10.0	0.9	22.1	7.5	2.7	1.9
Earth	9.0	13.5	4.6	2.3	4	25.7	125.1	50.9	15.6	11.6
					-					

Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

Table C.5.11(1) Inventory of Major Damageable Assets in Potential Flood Area of 5 Year Return Period: 1996

						٠				
	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	San
Item	Flood Area	Lacig	Laoag	jo	Lacag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoag		Nicolas	Sarrat	Sarret	Sarrat	Sarrat
1. Target Area (km²) *1	148.0	4.0	1.3	0.5	2.5	1.5	1.5	0.5	1.0	0.3
2. Living Quarters										
- Population	45,404	2,190	1,026	3,376	1,020	1,851	425	55	25	102
- Dwelling Units	8,967	433	185	684	203	374	8	==	'n	20
3. Agricultural Lands (ha)	9,371	344	59	1.1	130	69	43	\$\$	. 41	n
- Impated Field	9.209	344	65	17	190	69	18	55	0	17
- Rainfed Field	162	Ö	0	0	0	0	25	0	7	<b>∞</b>
4. Industrial Establishment	228	15	7	4	∞	01	1	4		w
- Manufacturing Industry	58	0	0	<b>'</b>	<b>1</b>	<b>≠</b> +1	٥	٥	0	0
- Trading Industry	200	15	4	36	7	6	7	4		æ
5. Infrastructure		1-								
- Educational Facility	8	ന	-	20	Ä	0	٥	0	0	٥
Pre-school	15	7	0	'n	0	0	0	0	0	0
Elementary	40	pr4	#4	6	-	Ó	0	0	0	0
Secondary	<b>60</b>	o	0	6	0	0	0	0	0	0
Tertiary	m	0	0	m	0	٥	0	0	٥	0
- Health Facility	71		p⊣	7	<b></b>	0	0	0	0	0
Hospital	m	Ö	0	-	<b>F</b> -4	0	0	0	0	0
Rural Health Unit	7	0	0	0	0	0	0	0	0	0
Barangay Health Station	12	0	-		0	0	0	0	0	0
- Road (Kun)	472.4	20.4	3.3	1.4	5.9	7.1	6.7	1,4	2.5	0.8
Concrete	28.8	1.9	0.3	0.1	9.0	0.7	9.0	0.2	0.3	0.1
Asphalt	13.0	9.0	0.1	0.1	0.2	0.2	0.4	0.1	0.1	0.0
Gravel	68.2	2.7	0.4	0.2	8.0	1.1	1.3	0.3	9.0	0.1
Earth	362.5	1.5.1	2.5	1.0	4.3	5.1	4.4	8.0	1.5	9.0

Source: Socio-Economic Profile, Ilocos Norte; Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

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Note: \*1 Excluding river area of 35 km² in total.

Table C.5.11(2) Inventory of Major Damageable Assets in Potential Flood Area of 5 Year Return Period: 1996

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	San	Cuisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Item	Cristobal Sarrat	River/ Mandaloque	Dingras	of Dingras	River Basin	River Basin	Krver Basin	Kıv <b>er</b> Basin	Congo	Congo
l. Target Area (ha)	0.5	5.6	1.5	2.8	36.3	21.5	39.3	18.8	89. 87.	4.8
<ul><li>2. Living Quarters</li><li>Population</li><li>Dwelling Units</li></ul>	0 <del>,</del> ∞	1691	1,438	3,267 642	10,231	5,358	8,605 1,678	3,926	% X	1,498
<ul><li>3. Agricultural Lands (ha)</li><li>Irrigated Field</li><li>Rainfed Field</li></ul>	25 18 7	238 237 1	122 105 17	256 256 0	2,550 2,521 29	1,484	2,194 2,189 5	1,302 1,270 32	8,880	301
Industrial Establishment     Manufacturing Industry     Trading Industry	440	707	S H 4	6 W 4	3 8	24	30	4 4 4	<b>.</b> 0 ₽	101
5. Infrastructure - Educational Facility - Pre-school	<b>~</b> ~	10	и н	4 74	<b>&amp;</b> O	Ø 13	જત	90	00	00
Elementary Secondary	·∺ o	0	<b>○</b>	0 0	<b>∞</b>	W 61	ν	<b>%</b> ⊷	00	00
Tertiary - Health Facility	0 - 0	000	000	0 11 -	040	0 11 0	0 11 0	000	o c	0 - 0
Rural Health Unit Barmery Health Station	> O	<b>,</b> 0 0	00	0	,04	<b>,</b>	) O (4	000	) O e4	0
- Road (km) Concrete	1.5	18.5	6.3	10.5	65.1	39.8 2.8	167.4	7.0.0	22.6	21.2
Asphalt Gravel	0.1	2.5	0.2	0.3	2.0	1.2	3.9	1.8 8.2	3.1	0.8 5.6
Earth	0.0	14.8	4.6	7.9	47.8	29.1	132.8	55.3	17.9	15.9

Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOII, BAS, DTI, Assessors in Provincial and Municipal Offices

Table C.S.12(1) Inventory of Major Damageable Assets in Potential Flood Area of 10 Year Return Period: 1996

Item	Probable Flood Area Total	Tangid Laoag	Suyo Laoag	Poblacion of Laoag	Camangaan Laoag	Poblacton of San Nicolas	San Manuel Sarrat	San Felipe Sarrat	Sto. Tomas Sarrat	San Marcos Sarrat
1. Target Area (km²) *1	159.5	5.5	1.5	1.0	2.5	90 F	8	8.0	1.3	0.3
<ul><li>2. Living Quarters</li><li>Population</li><li>Dwelling Units</li></ul>	\$0,826 10,050	3,338	1,054	3,376	1,020	2,596	573 119	130	85 81	102
Agricultural Lands (ha)     Irrigated Field     Rainfed Field	9,982 9,796 186	382 382 0	tt.	40 00 00	207 207 0	440	55 24 31	44°	35 2	22 14 8 8
Industrial Establishment     Manufacturing Industry     Trading Industry	265 33 232	4°°°	707	41 5 36	o. ⊷ ⊗	12 3 15	<b>&amp;</b> O &	21 0 21	404	m O m
<ol> <li>Infrastructure</li> <li>Educational Facility</li> <li>Pre-school</li> </ol>	76 81	m 74		22	-0	8 -	00	00	00	00
Elementary Secondary Tertiary	<b>4</b> ≃ w	00	-00	O 4 W	~ 0 0	0 0	000	000	000	000
- Health Facility Hospital Rural Health Unit	. <u> </u>	000	○ ○	8-1-	0	000	000	000	000	000
Barangay Health Station - Road (km) Conerete	12 514.1 31.7	28.1	3.8	2.8	0 8 9 0	0.8.0 8.5	8.1	0 H 6	9.3 0.4 0.4	0.00 8.00 1.0
Asphalt Gravel Earth	14.2 74.7 393.6	0.9 3.7 20.8	0.1 0.5 2.9	0.1	0.2 0.8 4.3	0.3	0.4 1.6 5.3	0.1	0.1	0.0 0.1 0.6

Source: Socio-Economic Profile, Ilocos Norte, Data presented by DECS, DOH, BAS, DII, Assessors in Provincial and Municipal Offices

Note: "1 Excluding river area of 35 km² in total.

Table C.5.12(2) Inventory of Major Damageable Assets in Potential Flood Area of 10 Year Return Period: 1996

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The State College Coll	1			* * * *						
	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Item	Cristobal	River/	Dingras	Jo	River	River	River	River	Bongo	Bongo
	Sarrat	Sarrat Mandalogue		Dingras	Basin	Basin	Basin	Basin		
1. Torget Area (ha)	0.8	6.3	2.0	4.8	37.5	22.3	41.3	19.0	4.0	5.0
2 Living Quarters										
- Population	23	917	2,317	4,228	10,552	5,358	8,745	4,494	379	1,498
Dwelling Units	15	182	465	832	2,130	1,045	1,707	088	ħ	275
3. Agricultural Lands (ha)	43	311	139	319	2,634	1,501	2,296	1,336	111	326
- Imigated Field	18	310	122	319	2,605	1,465	2,291	1,304	111	326
- Rainfed Field	25	-	17	0	29	36	٧	33	0	0
4. Industrial Establishment	m	Ξ	9		36	24	30	16	2	7
- Manufacturing Industry	6	-	7	ന	۷,	7	p-4	2	0	0
- Trading Industry	0	10	4	4	31	17	29	14	73	7
المراوية والمراوية والمراوية										
Facility Facility	e	m	8	<b>v</b> n	œ	6	01	9	0	prod
Pre-school			: ****** :	Ä	0	7	<b>.</b>	0	0	0
Elementary	2	<b>**</b>	0	<b>ю</b> 	<b>*</b>	S	7	\$	0	
Secondary	0	<b>≓</b>	• <b>-</b>	0	0	7	, pref	<b>-</b> 4	0	0
Tertiary	•	0	<b>O</b> -	0	0	0	0	0	0	0
- Month Facility		•	0	<b>R</b>	4		7	0		~
Fiospital	0	Ö	0 %	·	0 .	0	0	0	0	0
Rural Health Unit	0	0	0	-	0	-		0	0	0
Barangay Health Station			0	9	4	,	7	0	I	<b>p-4</b>
- Road (km)	2.5	20.9	8.4	18.0	67.2	41.3	175.9	70.7	23.8	22.1
Concrete	0.3	0.0	0.5	6.0	4,6	2.9	7.5	4.7	1.1	2.1
Asphalt	0.1	0.5	0.3	0.5	2.0	1.2	4.1		9.0	8.0
Gravel	0.5	2.8	3.5	3.1	11.2	7.0	7.4.7	8.3	3.3	2.7
Earth	1.5	16.6	6.1	13.5	49.4	30.1	139.6	55.9	18.9	16.5
							:			

Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOH, BAS, DII, Assessors in Provincial and Municipal Offices

Table C.5.13(1) Inventory of Major Damageable Assets in Potential Flood Area of 25 Year Return Period: 1996

Flood Area   Lacag   Lacag   of Lacag   of San Mi		Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	San
Total   Lanoag   Niveolas   Sarrat	Item	Flood Area	Laoag	Lang	ò	Laoag	of San	Manuel	Felipe	Tomas	Marcos
Int) **1   172.9   6.0   2.0   1.3   4.8   2.3   5.5   1.0   1.5    Interpolation   10.588   4.32   1.054   5.149   2.039   5.835   1.339   182   107    Interpolation   10.588   4.32   1.20   4.5   379   96   395   1111   4.2    Interpolation   10.589   4.32   1.20   4.5   379   96   356   1111   35    Interpolation   365   2.8   7   5.5   2.2   4.7   2.3   1.8   5    Interpolation   2.3   7   5.0   2.0   2.0   0    Interpolation   2.3   7   5.0   2.0   2.0    Interpolation   2.3   7   5.0   2.0   0    Interpolation   2.3   7   5.0   2.0   0    Interpolation   3   3   3   4   3    Interpolation   4.4   1   1   0   0    Interpolation   4.4   1   1   1   0   0    Interpolation   4.4   4   1   1   1   0    Interpolation   4.4   4   1   1   1   1    Interpolation   4.4   4   1   1   1    Interpolation   4.4   4   1   1   1    Interpolation   4.4   4   4   4   4    Interpolation   4.4   4   4   4    Interpolation   4.4   4   4   4    Interpolation   4.4   4   4    Interpolation   4.4   4    Interpolation   4.4		Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
Fig. 10,118	1. Target Area (km²) *1	172.9	6.0	2.0	1.3	4.8	2.3	5.5	1.0	1.5	0.3
Column	2. Living Quarters										
Intise 12,113 750 191 1,043 406 1,189 274 36 21 and 6 (a) 10,988 432 120 45 379 96 395 1111 42 and 6 (a) 199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Population	61,118	3,945	1,054	5,149	2,039	5,835	1,339	182	107	102
icid (na) 10,988 432 120 45 379 96 395 1111 42 5 6 4 5 10 4 5 10 4 5 10 4 5 10 4 5 10 4 5 10 4 5 10 4 5 10 4 5 10 4 5 10 4 5 10 4 6 199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Dwelling Units	12,113	780	191	1,943	406	1,189	274	36	71	20
icld         10,789         432         120         45         379         96         356         111         35           cld         199         0         0         0         0         39         0         7           Abisiment         365         28         7         55         22         47         23         18         5           Abisiment         36         28         7         50         20         21         2         0         7           Amistry         311         28         3         1         25         2         21         2         0	3. Agricultural Lands (ha)	10,988	432	120	45	379	96	395	111	5	22
eld 199 0 0 0 0 0 39 0 7  blishment 365 28 7 55 22 47 23 18 5  trig Industry 54 0 0 5 2 21 2 0 0  dustry 311 28 7 50 20 26 21 18 5  life and 21 2 0 7 60 2 0 0 0  life and 21 2 0 7 0 0 0 0  life and 21 2 0 7 0 0 0 0  lift 4 0 0 5 0 0 0 0  lifty 21 1 1 0 0 0 0  lifty 21 1 1 0 0 0 0  lifty 21 1 1 0 0 0 0  lifty 4 0 0 0 0 0 0  lifty 4 1 1 1 0 0 0 0  lifty 51 1 1 0 0 0 0  lifty 6 1 1 1 1 0 0 0 0  lifty 7 1 1 1 0 0 0 0  lifty 8 24 2.7 3.8 0.3 1.1 1.0 2.2 0.3 0.4  lift 6 0.5 1.5 1.6 1.5 1.6 4.8 0.6 0.9  426.4 22.7 3.8 2.6 8.3 7.8 16.3 1.7 2.3	<ul> <li>Irrigated Field</li> </ul>	10,789	432	120	45	379	96	356	IIE	35	7
Austry 365 28 7 55 22 47 23 18 5  Justry 311 28 7 50 20 26 21 18 5  Justry 311 28 7 50 20 20 0  Justry 311 28 7 50 0 0 0  Justry 311 28 7 50 0 0 0  Justry 85 3 1 25 2 2 1 0 0 0  Justry 48 1 1 10 2 1 0 0 0  Justry 48 1 1 10 2 0 0 0  Justry 48 1 1 10 0 0 0  Justry 53 0 0 0 0 0  Justry 60 0 0 0 0 0  Justry 7 13 0 0 0 0 0  Justry 7 13 0 0 0 0 0  Justry 60 0 0 0 0 0  Justry 60 0 0 0 0 0  Justry 60 0 0 0 0 0  Justry 7 13 10 0 0 0 0  Justry 7 13 10 0 0 0 0  Justry 7 13 10 0  Justry 7 1	- Rainfed Field	199	0	0	0	0	0	39	0	, ~	; ∞
tring Industry 54 0 0 5 2 21 2 0 0 0  dustry 311 28 7 50 20 26 21 18 5  difficulty 85 3 1 25 2 5 0 0 0 0  ool 21 2 0 7 0 2 0 0 0  ool 21 2 0 7 0 2 0 0 0  dustry 48 1 1 10 2 1 0 0 0  any 13 0 0 5 0 0 0 0 0  illy 21 1 1 4 1 1 0 0 0 0  lealth Unit 3 0 0 1 0 0 0 0  lealth Thit 3 10 3 24.6 2.7 3.8 0.4  lealth Station 5559.9 30.6 5.1 3.6 11.3 1.0 2.2 0.3 0.4  82.1 4.1 0.6 0.5 1.5 1.6 4.8 0.6 0.9  426.4 22.7 3.8 2.6 8.3 7.8 16.3 1.7 2.3		365	78	7	55	22	47	23	18	٠	er.
Austry 311 28 7 50 20 26 21 18 5  AlFacility 85 3 1 25 2 5 0 0 0 0  ool 21 2 0 7 0 2 0 0 0  tary 48 1 1 10 2 1 0 0 0 0  any 13 0 0 5 0 2 0 0 0 0  ility 21 1 1 4 1 1 0 0 0 0  ility 21 1 1 4 0 0 0 0 0 0  ility 4 0 0 0 0 0 0 0 0 0  icalth Unit 3 0 0 1 0 0 0 0 0 0  icalth Unit 3 0 0 1 0 0 0 0 0 0  icalth Unit 3 0 0 1 0 0 0 0 0 0  icalth Unit 4 1 1 1 0 0 0 0 0 0 0 0  icalth Unit 559.9 30.6 5.1 3.6 11.3 10.8 24.6 2.7 3.8 0.4 0.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1	- Manufacturing Industry	\$2	0	0	\$	7	21	7	0	0	
Facility   85   3   1   25   2   5   0   0   0   0	- Trading Industry	311	28	~	95	20	56	21	18	S	m
Pacility   85   3   1   25   2   5   0   0   0   0	S Infrastructure								٠		
col 21 2 0 7 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Educational Eachlity	. 8			36	·	v	ć	<b>&lt;</b>	,	•
tury  tury  48  1 1 10 2 1 0 0 0  2 0 0 0 0  3 0 0 0 0 0 0  6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Des colons	3 2		• ‹	<b>)</b> (	41 (	n (	<b>&gt;</b>	Э	5	0
Mary 48 1 1 10 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	rae-school	17	7	<b>ɔ</b> ]	4	0	71	0	0	0	0
LLY 13 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Elementary	48	-	1	10	7	<b></b> 4	0	٥	0	٥
lity 21 1 1 4 1 1 0 0 0 0 4 0 0 0 0 0 0 0 2 1 0 0 0 0 0 1 0 0 0 0 0 2 1 0 0 0 0 0 2 1 0 0 0 0 0 3 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Secondary	2	0	0	<b>ب</b>	0	4	0	0	0	0
lifty 21 1 1 4 1 1 0 0 0 0 0 0 1 1 1 4 1 1 1 0 0 0 0	Tertiary	m	0	0	<b>ю</b>	0	0	0	0	0	o
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Health Facility	21		,,	4	<b>~</b>		0	0	0	0
cealth Unit 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hospital	4	0	0	71	<b>⊷</b>	0	0	0	0	C
sylfealth Station 14 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Rural Health Unit	٣	0	0	-	0	0	0	· C	· c	· c
\$59.9     30.6     5.1     3.6     11.3     10.8     24.6     2.7     3.8       35.4     2.9     0.5     0.3     1.1     1.0     2.2     0.3     0.4       16.0     1.0     0.2     0.2     0.3     1.3     0.2     0.2       82.1     4.1     0.6     0.5     1.5     1.6     4.8     0.6     0.9       426.4     22.7     3.8     2.6     8.3     7.8     16.3     1.7     2.3	Barangay Health Station	14			-	0	ent	0	, c	, c	> c
c 35.4 2.9 0.5 0.3 1.1 1.0 2.2 0.3 0.4 16.0 1.0 0.2 0.2 0.3 0.3 1.3 0.2 0.2 0.3 1.3 0.2 0.2 0.2 0.3 1.3 0.2 0.2 0.2 0.2 0.2 0.2 0.5 1.5 1.6 4.8 0.6 0.9 0.5 1.5 1.6 4.8 0.6 0.9 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	- Road (km)	559.9	30,6	5.1	3.6	11.3	10.8	24.6	2.7	: 00 :*1	0
16.0 1.0 0.2 0.3 0.3 1.3 0.2 0.2 0.2 82.1 4.1 0.6 0.5 1.5 1.6 4.8 0.6 0.9 426.4 22.7 3.8 2.6 8.3 7.8 16.3 1.7 2.3	Concrete	35.4	2.9	0.5	0.3	1.1	1.0	2.2	0.3	9	0
82.1 4.1 0.6 0.5 1.5 1.6 4.8 0.6 0.9 4.5 4.5 4.5 2.7 3.8 2.6 8.3 7.8 16.3 1.7 2.3	Asphalt	16.0	1.0	0.2	0.2	0.3	0.3	1.3	0.2	0.2	00
426.4 22.7 3.8 2.6 8.3 7.8 16.3 1.7 2.3	Gravel	82.1	4.1	9.0	0.5	5.1	9.1	4.8	9,0	60	) C
	Earth	456.4	7.77	3.8	2.6	8,3	7.8	16.3	7	. "	

Source: Socio-Economic Profile, Ilocos Norte, Data presented by DECS, DOH, BAS, DIT, Assessors in Provincial and Municipal Offices Note: \*1 Excluding river area of 35 km² in total. ()

Table C.5.13(2) Inventory of Major Damageable Assets in Potential Flood Area of 25 Year Return Period: 1996

	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Item	Cristobal Sarrat	River/ Mandaloque	Dingras	of Dingras	River	River Basin	River Basin	River Basin	Bongo	Bongo
1. Target Area (ha)	0.8	7.3	2.0	5.5	39.0	22.8	41.8	19.5	4.0	5.5
<ul><li>2. Living Quarters</li><li>Population</li><li>Divelling Units</li></ul>	73 15	1,058	2,317 465	4,228 832	11,115 2,243	7,152	8,764	4,651	480 92	1,528
<ul><li>3. Agricultural Lands (ha)</li><li>- Imigated Field</li><li>- Rainfed Field</li></ul>	43 18 25	333 332 1	85 22 71	4 4 0 4 4 0	2,748 2,719 29	1,551 1,515 36	2,312 2,307 5	1,383 1,351 32	145 145 0	348 348 0
Industrial Establishment     Manufacturing Industry     Trading Industry	m m 0	16 1 15	<b>0</b> 44	r w 4	35 × 55	31	30	5 2 4	мом	101
<ul><li>5. Infrastructure</li><li>- Educational Facility</li><li>Pre-school</li></ul>	<b>6</b>	m m	a H	9 19	٥.	\$ 14	0 7	<b>v</b> 0	00	- 0
Elementary Secondary	0 0		<b>○</b>	4 0	<b>%</b> 0	2 6	<b>~</b> ==	NΗ	00	O
Tertiary - Health Facility Hoemital	<b>Ф</b> н С	000	000	0 11 -	040	0 11 0	0 11 0	000	0 0	<b>о</b> н (
Rural Health Unit Barangay Health Station	000	000	000	→ <b>-</b> 0	0 4	>		o	o -	0 -
- Road (km) Concrete	2.5	24.2	8.4 0.5	20.6	69.9	42.2	178.0	, 27. 8.4.8	23.8	24.3
Asphalt Gravel	0.1	9.0	0.3	3.6	2.17	1.3	4.1	9.1 8.5	3.3	9.0
ਪ੍ਰਮਾਤ	1.5	19.3	6.1	15.5	51.4	30.8	141.3	57.4	18.9	18.2
Courses Come Bearens Describe Hoc	or More									

Source: Socio-Economic Profile, Ilocos Norte

Data presented by DECS, DOH, BAS, DTT, Assessors in Provincial and Municipal Offices

Table C.S.14(1) Inventory of Major Damageable Assets in Potential Flood Area of 50 Year Return Period: 1996

Lacoag         of San         Manuel         Felipe         T           2.3         1.5         6.3         5.8         5.5         1.3           1,528         5,149         2,404         10,499         1,339         182           271         1,043         2,404         10,499         1,339         182           271         1,043         2,404         10,499         1,339         182           125         50         515         448         395         1111           125         50         503         413         356         111           0         0         12         35         39         0           13         55         27         88         23         118           0         5         2         37         2         0           1         11         2         37         2         0           0         2         37         2         0         0           1         4         1         2         0         0           0         4         0         0         0         0           0         0         1			Probable	Tangid	Suyo	Poblacion	Comangaan	Poblacion	San	San	Sto	San
Total   Laborg   Nicolas   Surrat   S	Item		Flood Area	Laoag	Laoag	of	Laoag	of San	Manuel	Felipe	Tomas	Marcos
189.9   10.5   2.3   1.5   6.3   5.8   5.5   1.3   1.5     12.768   8.428   1.528   5,149   2,404   10,499   1,339   182   107     12.340   803   125   50   515   448   395   111   42     12.340   803   125   50   503   413   356   111   42     12.084   803   125   50   503   413   356   111   35     12.084   803   125   50   50   12   35   39   0   7     2.56   0			Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
72,768         8,428         1,528         5,149         2,404         10,499         1,339         182         107           14,432         1,680         271         1,043         477         2,144         274         36         21           12,340         803         125         50         515         448         395         111         42           12,054         803         125         50         503         413         356         111         42           12,054         803         125         50         50         11         35         11         42         11         35         11         42         11         43         44         11         2         4	l. Target Area (km²) *1		6.681	10.5	2.3	1.5	6.3	5.8	\$,8	1.3	1.5	0.3
72,768         8,428         1,528         5,149         2,404         10,499         1,339         182         107           14,422         1,680         271         1,043         477         2,144         274         36         21           12,340         803         125         50         515         448         395         111         42           256         0         0         0         12         35         39         111         35           256         61         13         55         27         88         23         18         5           27         6         1         3         5         2         37         2         0         0           380         61         13         50         25         51         21         18         5           24         3         0         2         51         21         18         5           24         3         1         11         2         3         0         0         0           4         0         0         1         4         0         0         0         0         0	2. Living Quarters											
14,432   1,680   271   1,043   477   2,144   274   36   21     12,340   803   125   50   515   448   395   111   42     256   0   0   12   35   39   0   7     256   0   0   12   35   39   0   7     452   61   13   55   27   88   23   18   5     72   0   0   5   2   37   2   0   0     73   380   61   13   50   25   51   21   18   5     84   3   1   11   2   3   0   0   0     98   6   2   29   3   7   0   0   0     98   6   2   29   3   7   0   0   0     16   0   1   0   2   0   0   0     16   0   1   0   0   0   0   0     17   0   0   1   0   0   0   0     18   0   0   1   0   0   0   0     19   0   0   0   0   0   0     10   0   0   0   0   0   0     11   0   0   0   0   0     12   0   0   0   0   0     13   0   0   0   0   0   0     14   50   0.5   0.4   0.4     15   17   0.2   0.2   0.2     478.8   39.7   4.4   3.0   10.9   19.7   16.3   2.2     51   11   12   2.2   2.3     51   12   12   2.2   2.3     52   2.3   2.5   2.3     52   2.3   2.5   2.5     53   2.5   2.5     54   27   2.5     55   27   2.5     57   2.5   2.5     58   27   2.5     58   27   2.5     59   27   2.5     50   27     50   50     50   50     50   50     50   50	- Population		72,768	8,428	1,528	5,149	2,404	10,499	1,339	182	107	102
12,340 803 125 50 515 448 395 111 42 256 0 0 12 35 39 111 42 256 0 0 0 12 35 39 111 35  452 61 13 55 27 88 23 18 5  72 0 0 5 2 37 2 0 0 0  73 0 0 12 3 0 0 0  8 0 2 5 11 13 5 5  54 3 1 1 11 2 3 0 0 0  74 0 0 0 0 0 0  75 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- Dwelling Units		14,432	1,680	271	1,043	477	2,144	274	38	21	20
12,084   803   125   50   503   413   356   111   35   35   35   35   35   35   3	3. Agricultural Lands (ha		12,340	803	125	50	\$15	448	395	111	42	ដ
256         0         0         12         35         39         0         7           472         61         13         55         27         88         23         18         5           472         0         0         5         2         37         2         0         0           380         61         13         55         2         37         2         0         0           24         3         6         2         29         3         7         0         0         0           24         3         1         11         2         3         0	<ul> <li>Irrigated Field</li> </ul>		12,084	803	125	20	503	413	356	133	35	4
452         61         13         55         27         88         23         18         5           380         61         13         50         25         37         2         0         0           98         6         2         29         3         7         0         0         0           24         3         0         8         0         2         0         0         0           16         0         1         1         11         2         3         0         0         0           24         3         1         11         2         0 <td>- Rainfed Field</td> <td></td> <td>256</td> <td>0</td> <td>0</td> <td>0</td> <td>13</td> <td>35</td> <td>39</td> <td>0</td> <td>7</td> <td>∞</td>	- Rainfed Field		256	0	0	0	13	35	39	0	7	∞
ring Industry 72 0 0 5 2 37 2 0 0 0  dustry 380 61 13 50 25 51 21 18 5  dustry 380 6 2 2 29 3 7 0 0 0  od 24 3 1 11 2 3 0 0 0  tary od 4 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0 0 0 0 0 0  illity 24 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4. Industrial Establishmer	뇀	452	<b>.</b> 5	13	55	27	88	23	18	٧.	eri
dustry  380 61 13 50 25 51 21 18 55 61 26 27 60 00 00 14 24 3 61 11 11 2 3 00 00 00 00 14 24 3 11 11 2 3 00 00 00 00 00 00 00 00 00 00 00 00 0	- Manufacturing Indu	stry	77	0	0	ķ	2	37	ผ	0	0	0
of Facility         98         6         2         29         3         7         0         <	- Trading Industry		380	. 61	13	.80	25	51	21	18	· vs	m
ellity 98 6 2 29 3 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5. Infrastructure	. •										
24 3 0 8 0 2 0 0 0 0 0 0 0 16 0 0 0 0 0 0 0 0 0 0 0	- Educational Facility	*	86	9	7	29	m	7	0	0	0	0
54 3 1 11 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Pre-school		24	æ	0	<b>∞</b>	0	7	0	0	0	0
16 0 1 6 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Elementary		3	60		1	71	en	0	0	0	0
24 2 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Secondary		16	0		9	<b>≓</b> 4	7	0	0	0	0
24     2     1     4     1     2     0     0     0       6     1     0     2     1     1     0     0     0       coll fill Station     15     1     1     0     0     0     0     0       coll fill Station     15     1     0     0     0     0     0     0       630.6     53.6     5.9     4.2     14.8     27.3     24.6     3.5     3.5     3.8       41.4     5.0     0.6     0.4     1.5     2.6     2.2     0.4     0.4       18.2     1.7     0.2     0.2     0.5     0.9     4.1     4.8     0.7     0.9       92.2     7.1     0.7     0.6     1.9     19.7     16.3     2.2     2.3	Tertiary		ব	0	0	4	0	0	0	0	0	0
te to 1 0 2 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>Ficalth Facility</li> </ul>		24	2	· 	4		7	0	0	0	0
realth Unit 3 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hospital		9	r=4	0	7	-	F-4	0	0	0	0
te 630.6 5.9 4.2 14.8 27.3 24.6 3.5 3.8 (6.0.4) 1.5 2.6 2.2 0.4 0.4 (7.8) 1.3 0.2 0.2 0.2 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Ruml Health Ur	nt	6	0	0		Ö	0	٥	٥	0	0
630.6 53.6 5.9 4.2 14.8 27.3 24.6 3.5 3.8 (c. 41.4 5.0 0.6 0.4 1.5 2.6 2.2 0.4 0.4 (c. 18.2 1.7 0.2 0.2 0.5 0.9 1.3 0.2 0.2 0.5 0.9 1.3 0.2 0.2 0.5 0.9 4.1 4.8 0.7 0.9 4.1 4.8 0.7 0.9 0.9 1.3 2.2 2.3	Barangay Health	h Station	15	-	<b>~</b>		O	pi-4		0	0	0
c 41.4 5.0 0.6 0.4 1.5 2.6 2.2 0.4 0.4 1.3 1.3 0.2 0.2 0.2 0.5 0.9 1.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	- Road (km)		9.059	53.6	5.9	4.2	14.8	27.3	24.6	3.5	3.8	0.8
18.2 1.7 0.2 0.2 0.9 1.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	Concrete		41.4	5.0	9.0	0.4	1.5	2.6	2.2	4.0	0.4	0.1
92.2 7.1 0.7 0.6 1.9 4.1 4.8 0.7 0.9 4.1 4.8 0.7 0.9 4.8 3.0 10.9 19.7 16.3 2.2 2.3	Asphalt		18.2	1.7	070	0.2	0.5	0.9	1.3	0.2	0.2	0.0
478.8 39.7 4.4 3.0 10.9 19.7 16.3 2.2 2.3	Gravel		92.2	7.1	0.7	9.0	1.9	4.1	4.8	0.7	6.0	0.1
	Earth	• •	478.8	39.7	4.4	3.0	10.9	19.7	16.3	2.2	2.3	9.0

Source: Socio-Economic Profile, Ilocos Norte; Data presented by DECS, DOH, BAS, DTL, Assessors in Provincial and Municipal Offices Note: \*1 Excluding river area of 35 km² in total. ()

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Table C.5.14(2) Inventory of Major Damageable Assets in Potential Flood Area of 50 Year Return Period: 1996

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Guisti         Suyo         Poblacion         Cura         Solicora         Adonorgan         Papa         Lower           Adandaloque         Dingras         0.78         39.8         23.0         42.8         19.8         4.3           7.3         2.0         7.8         39.8         23.0         42.8         19.8         4.3           1,058         2.517         5.283         11,115         7.152         8.918         4.769         480           208         465         1,031         2.243         1,396         1,741         924         92           208         465         1,031         2.243         1,396         1,741         924         92           332         122         \$61         2.765         1,551         2.377         1,423         170           1         0         0         29         38         31         30         16         32           1         0         0         29         38         31         30         16         3           1         0         0         3         4         4         33         24         29         14         3           1									6	,	
Target Area (ta) 0.8 7.3 2.0 7.8 59.8 23.0 42.8 19.8 4.3  Target Area (ta) 0.8 7.3 2.0 7.8 59.8 23.0 42.8 19.8 4.3  Population 15 208 465 1031 2.243 1.396 1.741 934 92  - Descripted Units  - Description 15 208 465 1.031 2.243 1.396 1.741 934 92  - Description 15 208 465 1.031 2.243 1.396 1.741 934 92  - Englated Field 25 1 17 0 2.9 36 1.551 2.377 1.423 1.70  - Englated Field 25 1 1 2 5 3 3 1 1 2 5 3 1 1 1 2 5 3 1 1 1 2 5 3 1 1 1 2 5 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Item	San Cristobal	Guisit River/	Suyo Dingras	Poblacion of	Cura River	Solsona River	Madongan River	Papa River	Lower	Upper Bongo
1,058	. Target Area (ha)	o.8	Mandaloque 7.3	2.0	Zingras 7.8	39.8	23.0	42.8	19.8	4.3	7.3
Properties					:						
- Divelling Units	. Living Quarters - Population	73	1,058	2,317	5,283	11,115	7,152	8,918	4,769	480	1,865
President	- Divelling Units	15	208	465	1,031	2,243	1,396	1,741	934	65	341
- Irrigated Field - Rainfed Field - Rainfed Field - Rainfed Field - Sainfed Fi	Agricultural Lands (ha)	43	333	139	561	2,765	1,551	2,377	1,423	170	467
- Rainford Field	- Irrigated Field	18	332	122	561	2,736	1,515	2,362	1,391	170	467
Industrial Establishment   3   16   6   9   38   31   30   16   3	- Rainfed Field	25	_	17	o o	29	38	15	32	0	0
- Manufacturing Industry 3 1 2 5 5 7 1 1 2 0 1 1 2 0 1 1 1 1 1 1 1 1 1 1 1 1	Industrial Establishment	w	16	9	6	38	31	30	91	m	7
dustry         0         15         4         4         33         24         29         14         3           develity         3         3         2         7         10         9         10         6         0           ool         1         1         1         2         2         2         2         0         0           attry         0         1         0         2         1         1         0         0           attry         0 <th< td=""><td></td><td>· kn</td><td>-</td><td>ผ</td><td>8</td><td><b>~</b></td><td>7</td><td>1</td><td>7</td><td>0</td><td>0</td></th<>		· kn	-	ผ	8	<b>~</b>	7	1	7	0	0
1 Facility     3     3     2     7     10     9     10     6     0       teary     1     1     1     2     2     2     0     0       teary     2     1     0     0     2     1     1     0       avy     0     0     0     0     0     0     0       aility     0     0     0     0     0     0       all     0     0     0     0	- Trading Industry	•	15	4	ঘ	33	22	53	14	m	7
1 Facility         3         3         2         7         10         9         10         6         0           tool         1         1         2         2         2         2         0         0           and         2         1         0         0         0         0         0         0           y         0         0         0         0         0         0         0         0           iii         0         0         3         4         2         2         0         0           iii         0         0         1         0         0         0         0         1           iii         0         1         0         1         0         0         0         0         0            is         0         0         1         0 <td>Infrastructure</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>	Infrastructure							•			
1 1 1 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0	- Educational Facility	<u>ب</u> ر	m	7	7	01	6	10	9	0	F-4
2 1 0 5 8 5 7 5 0 0 1 1 1 0 0 0 2 1 1 1 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0	Pre-school		<b>-</b>	-	7	7	73	7	0	0	0
Control Cont	Elementary	74	. <del></del>	0	\$	<b>∞</b>	5	7	<b>S</b>	0	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Secondary	0	-	·	0	0	7		g\$	0	0
h Unit 0 0 0 3 4 2 2 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	Tertiary	0	0	0	0	0	0	0	0	0	0
h Unit 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Health Facility	1	0	0 1	£,	4	7	7	0	<b>~</b>	•
calth Unit 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hospital	0	0	0		0	0	0	0	0	0
y Health Station 1 0 0 1 4 1 2 0 1 1 2 25.5 24.2 8.4 29.3 71.4 42.6 182.3 73.7 25.6 6.3 0.3 1.1 0.5 1.5 4.9 2.9 7.8 4.9 1.2 0.6 0.3 0.7 2.2 1.3 4.2 1.9 0.6 0.5 0.5 1.5 5.1 11.9 7.3 25.6 8.6 3.5 1.5 19.3 6.1 22.0 52.4 31.1 144.7 58.2 20.3	Rural Health Unit	0	0	0	<b>-</b>	0		0	0	0	0
c 0.3 1.1 0.5 1.5 4.9 2.9 7.8 4.9 1.2 0.5 0.1 0.5 0.3 0.7 2.2 1.3 4.2 1.9 0.6 0.5 0.3 0.7 2.2 1.3 4.2 1.9 0.6 0.5 3.3 1.5 5.1 11.9 7.3 25.6 8.6 3.5 1.5 19.3 6.1 22.0 52.4 31.1 144.7 58.2 20.3	Barangay Health Station		0	6	<b>-</b> -4	4	⊷	7	Ö ,		e4
c 0.3 1.1 0.5 1.5 4.9 2.9 7.8 4.9 1.2 0.1 0.6 0.3 0.7 2.2 1.3 4.2 1.9 0.6 0.5 3.3 1.5 5.1 11.9 7.3 25.6 8.6 3.5 1.5 19.3 6.1 22.0 52.4 31.1 144.7 58.2 20.3	- Road (km)	2.5	24.2	8.4	29.3	71.4	42.6	182.3	73.7	25.6	32.3
0.1 0.6 0.3 0.7 2.2 1.3 4.2 1.9 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Concrete	0.3	11	0.5	2.1	4.9	2.9	7.8	4.9	1.2	3.1
0.5 3.3 1.5 5.1 11.9 7.3 25.6 8.6 3.5 1.5 19.3 6.1 22.0 52.4 31.1 144.7 58.2 20.3	Asphalt	0.1	9.0	0.3	0.7	2.2	1.3	4.2	1.9	9.0	1.2
1.5 19.3 6.1 22.0 52.4 31.1 144.7 58.2 20.3	Gravel	0.5	3.3	1.5	5.1	11.9	7.3	25.6	8.6	3.5	3.9
	Earth	1.5	19.3	6.1	22.0	52.4	31.1	144.7	58.2	20.3	24.1

Source: Socio-Economic Profile, llocos Norte

Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

Table C.S.15(1) Inventory of Major Damageable Assets in Potential Flood Area of 100 Year Return Period: 1996

					:					
	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	Xan ,	g S	, X	ਸ਼ੂ 2
Item	Flood Area Total	Laoag	Laoag	of Laoag	Lacag	or San Nicolas	Manuel Sarrat	гепре Sarrat	Sarrat	Sarrat
1. Target Area (km²) *1	202.2	13.0	2.3	1.8	7.8	8.3	6.5	1.3	1.8	0.3
2. Living Ouarters				\$ \$						
	78,858	9,758	1,528	5,149	2,404	12,730	2,416	258	156	102
- Dwelling Units	15,630	1,938	271	1,043	477	2,588	485	15	31	2
3. Agnoultural Lands (ha)	13,222	996	125	20	636	175	484	125	3	ដ
- Impated Field	12,934	996	125	20	619	531	445	125	35	4
- Rainfed Field	288	0	0	0	17	40	39	0	29	<b>∞</b>
4. Industrial Establishment	511	71	13	55	50	114	33	27	9	ĸ
- Manufacturing Industry	87	0	0	\$	61	51	т	o	0	0
- Trading Industry	424	r,	<b>£</b> 1	9	27	63	28	23	<b>9</b>	m
5. Infrastructure				٠.,				•		
- Educational Facility	107	7	73	29	4	11	-		0	0
Pre-school	56	<b>6</b>	0	∞	0	4	0	0	0	0
Elementary	ទ	4	_		٣	Ś	<b>j</b> k	-	0	0
Secondary	16	0	<b>-</b>	9	<b>p</b> -4	7	9	٥	0	0
Tertion	4	0	0	4	0	0	0	0	0	0
- Health Facility	29	m	<b>,</b>	4	-	4	0		0	0
Hospital	ý	•	0	2		<b>e-4</b>	0	ö	0	0
Rural Health Unit	4	0	0	<b>→</b>	0	pd	O <sup>°</sup>	0	0	0
Barangay Health Station	61	7	-	7	0	7	0	<b>~</b>	0	0
- Road (km)	9.529	66.3	5.9	5.0	18.3	39.0	29.1	3.5	4.5	0.8
Concrete	45.3	6.2	9.0	0.5	1.8	3.7	2.6	0.4	0.5	0.1
Asphalt	19.7	2.1	0.2	0.2	9.0	1.2	1.6	0.2	0.2	0.0
Gravel	98.9	8.8	0.7	0.7	2.4	8.8	5.7	0.7	1.0	0.1
Earth	511.8	49.1	4.4	3.6	13.5	28.2	19.2	2.2	2.8	9.0

Source: Socio-Economic Profile, Ilocos Norte, Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices Note: \*1 Excluding river area of 35 km² in total.

Table C.5.15(2) Inventory of Major Damageable Assets in Potential Flood Area of 100 Year Return Period: 1996

Ø

et Arca (ha)         Sarrat Mandeloque         Dingras         Basin         Basin         Basin         Earin           g Quarters         7.6         2.0         7.8         40.0         25.5         43.8           g Quarters         7.6         1.286         2,317         5,283         11,115         7,811         9,358         4           spolution         73         1,286         2,317         5,283         11,115         7,811         9,358         4           welling Units         15         2.56         1,031         2,243         1,829         4         1,829         4         4         4         1,829         4         4         1,829         4         4         1,829         4         1,829         4         4         1,829         4         1,829         4         1,829         4         1,829         4         1,829         4         1,829         4         1,829         4         1,829         1,829         1,829         1,829         1,829         1,829         1,931         1,829         1,931         2,491         1,1         1,829         1,931         1,932         1,911         1,938         2,491         1,1         1,1         1,1 </th <th>  Target Acca (ha)   0.8   7.6   2.0   7.8   40.0   25.5   43.8     Living Quarters   7.3   1.286   2.317   5.283   11,115   7,811   9,358     Population   15   2.56   465   1,031   2.243   1,520   1,829     Dwelling Units   18   348   122   561   2.745   1,712   2,476     Import   Import   Import   18   348   122   561   2.745   1,712   2,476     Import   Import   Import   19   17   0   2.9   38   33   30     Industrial Enablishment   3   17   6   9   38   33   30     Industrial Enablishment   3   17   6   9   38   33   30     Manufacturing Industry   16   17   0   2   2   2     Import   Import   Import   10   10   10   10     Import   Import   10   10   10   10     Import   10   10   10     Import   10   10   10     Import   10   10   10     Import  </th> <th>[tem</th> <th>San</th> <th>Guisit River/</th> <th>Suyo Dingras</th> <th>Poblacion of</th> <th>Cura River</th> <th>Solsona River</th> <th>Madongan River</th> <th>Papa River</th> <th>Lower</th> <th>Upper Bongo</th>	Target Acca (ha)   0.8   7.6   2.0   7.8   40.0   25.5   43.8     Living Quarters   7.3   1.286   2.317   5.283   11,115   7,811   9,358     Population   15   2.56   465   1,031   2.243   1,520   1,829     Dwelling Units   18   348   122   561   2.745   1,712   2,476     Import   Import   Import   18   348   122   561   2.745   1,712   2,476     Import   Import   Import   19   17   0   2.9   38   33   30     Industrial Enablishment   3   17   6   9   38   33   30     Industrial Enablishment   3   17   6   9   38   33   30     Manufacturing Industry   16   17   0   2   2   2     Import   Import   Import   10   10   10   10     Import   Import   10   10   10   10     Import   10   10   10     Import   10   10   10     Import   10   10   10     Import	[tem	San	Guisit River/	Suyo Dingras	Poblacion of	Cura River	Solsona River	Madongan River	Papa River	Lower	Upper Bongo
Target Acea (ha)	Target Acea (ha)		Sarrat	Mandaloque		Dingras	Basin	Basin	Basin	Basin		
Living Quarters - Population - Dwelling Units - Rainfod Field - Rainfod	Living Quarters - Population - Population - Dwelling Units - Dwelling Unit	i. Target Area (ha)	8.0	7.6	2.0	7.8	40.0	25.5	43.8	20.0	4.3	7.3
tr	73     1,286     2,317     5,283     11,115     7,811     9,358     4       43     349     139     561     2,765     1,748     2,491     1       18     348     122     561     2,765     1,712     2,476     1       25     1     17     6     9     38     33     30       3     17     6     9     38     33     30       3     1     2     5     5     7     1       3     1     2     5     7     1       3     1     4     4     33     26     29       3     3     2     7     10     9     11       4     4     33     26     29       5     8     5     8     8       6     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     0     0       2     2     2     2     2       8     4 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>,</td><td></td><td>- (</td><td>•</td><td></td></t<>							,		- (	•	
th 349 139 561 2,743 1,524 1,829 1,829 1,829 1,829 1,829 1,93 561 2,745 1,748 2,491 1,1	15 256 465 1,031 2,243 1,520 1,829  43 349 139 561 2,765 1,748 2,491 1,1  25 1 17 0 29 38 33 30  17 6 9 38 33 30  18 3 17 6 9 38 33 30  10 16 4 4 33 26 29  11 1 2 5 5 7 10  11 1 1 2 2 2  12 1 0 0 0 0 0  11 0 0 0 0 0 0  11 0 0 0 0	- Population	E	1,286	2,317	5,283	11,115	7,811	9,358	4,769	28. 28. 29.	508,1
43     349     139     561     2,765     1,748     2,491     1,1       25     1     17     0     29     36     1,712     2,476     1,1       25     1     17     0     29     38     33     30       3     17     6     9     38     33     30       5     5     5     7     1       1     2     5     5     7       1     1     2     5     29       1     1     0     0     1       0     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     1     0       1     0     0     1     0     1       1     0     0     0     1     0       1     0     0     0     1     0       1     0     0     0     0     0       0     0     0     0     0     0       0     0     0 </td <td>18 349 139 561 2,765 1,748 2,491 1,1 2 5 1 172 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2</td> <td>- Dwelling Units</td> <td>15</td> <td>256</td> <td>465</td> <td>1,031</td> <td>2,243</td> <td>1,520</td> <td>1,829</td> <td>\$</td> <td>76</td> <td>ž.</td>	18 349 139 561 2,765 1,748 2,491 1,1 2 5 1 172 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2,476 1,512 2	- Dwelling Units	15	256	465	1,031	2,243	1,520	1,829	\$	76	ž.
18 348 122 561 2,736 1,712 2,476 1  25 1 17 0 29 38 33 30  sury 3 17 6 9 38 33 30  10 16 4 4 33 26 29  11 1 2 5 7 1  12 2 2 2  2 1 1 0 0 0 0 0  10 0 0 0 0 0  11 0 0 0 0	18     348     122     561     2736     1,712     2,476     1       25     1     17     0     29     36     15     15       sury     3     17     6     9     38     33     30       sury     0     16     4     4     4     33     26     29       sury     0     16     4     4     33     26     29       1     1     2     5     5     7     11       1     1     1     0     9     11       1     1     1     0     0     0       1     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     0     0       1     0     0     0     1     0       1     0     0     1     4     1     2       1     0     0     0     0     0     0       1     0     0     0     0     0       0     0     0     0     0     0       0     0     0     0     0     0	3. Agricultural Lands (ha)	43	349	139	195	2,765	1,748	2,491	1,446	170	467
- Rainfod Field 25 1 17 0 29 36 15  Industrial Establishment 3 17 6 9 38 33 30  - Manufacturing Industry 3 1 2 5 7 1 1 2 5 7 1 1 1 2 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- Rainfed Field	- Irrigated Field	18	348	122	561	2,736	1,712	2,476	1,414	170	467
Industrial Establishment   3   17   6   9   38   33   30	Industrial Establishment   3	- Rainfed Field	25		17	°	29	98	15	32	0	0
- Manufacturing Industry 3 1 2 5 5 7 1 1 1 2 5 5 29 - Trading Industry 0 16 4 4 33 26 29 - Trading Industry 0 16 4 4 33 26 29 - Infrastructure - Educational Facility 3 3 2 7 10 9 11	- Manufacturing Industry - Trading Industry - Industructure - Educational Facility - Educational Facility - Educational Facility - Educational Facility - Hospital - Rospital - Road (km) - Road (km) - Rospital - Road (km) - Rospital - Road (km) - Road (km		m	17	9	6	38	. 33	်တ္တ -	91	ლ	7
1 Facility         3         2         7         10         9         11           1 Facility         3         3         2         7         10         9         11           ool         1         1         1         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         3         8         9         9         1         0 <td>Inverty         0         16         4         4         33         26         29           I Facility         3         3         2         7         10         9         11           ool         1         1         0         5         8         5         8         9         9         1         9         9         9         1         9         9         1         9         9         1         9         9         9         1         9         9         1         9         9         9         1         9         9<td>1</td><td>m</td><td>F-4</td><td>7</td><td>S</td><td><b>\$</b></td><td>7</td><td>H</td><td>73</td><td>0</td><td>0</td></td>	Inverty         0         16         4         4         33         26         29           I Facility         3         3         2         7         10         9         11           ool         1         1         0         5         8         5         8         9         9         1         9         9         9         1         9         9         1         9         9         1         9         9         9         1         9         9         1         9         9         9         1         9         9 <td>1</td> <td>m</td> <td>F-4</td> <td>7</td> <td>S</td> <td><b>\$</b></td> <td>7</td> <td>H</td> <td>73</td> <td>0</td> <td>0</td>	1	m	F-4	7	S	<b>\$</b>	7	H	73	0	0
Facility   3   3   2   7   10   9   11	Facility   3   3   2   7   10   9   11	- Trading Industry	0	91	4	4	33	56	29	14	ო	7
Facility   3   3   2   7   10   9   11	Facility	5. Infrastructure							:			
1 1 1 2 2 2 2 2 2 2 2 2 3 8 8 8 8 8 8 8 8 8 8	1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 8 8 8 8 8 8 8	- Educational Facility		m	74	7	10	6	11	9	0	
2 1 0 5 8 5 8 5 8 0 0 0 0 0 0 2 1 1 0 0 0 0 0 0 0 0 0 0 0	2 1 0 5 8 5 8 1	Pre-school	H	-	<b>.</b>	74	7	. 7	7	0	0	0
the Unit control of the Control of t	h Unit call State    1	Elementary	7	H	0	<b>S</b>	∞	ς.	<b>«</b>	<b>5</b>	0	~4
br Unit 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Company   Comp	Secondary		, <del></del>	-	0	0	7	<b></b> '	F	0	0
h Unit 0 0 3 4 2 2 2 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 3 4 2 2 2 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0	Tertiary	0	0	0	0	0	0	0	0	0	0
calth Unit 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	calth Unit	- Health Facility	-	• •	0	m	4	7	. 5	<b>≠</b> -4		
calth Unit 0 0 0 1 0 1 0 1 0 0 0 1 0 0 1 0 0 0 1 0 0 0 0 1 0 0 0 1 0	calth Unit 0 0 0 1 0 1 0 1 2 2 2 2 2 2.5.2 8.4 29.3 71.7 47.2 186.5 c 0.3 1.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 0.5 3.4 1.5 5.1 12.0 8.1 26.2 1.5 5.1 12.0 8.1 26.2 1.5 5.1 12.0 8.1 26.2 1.5 5.1 12.0 8.1 26.2 1.5 5.1 12.0 8.1 26.2 1.5 5.1 12.0 8.1 26.2 1.5 5.1 2.0 52.7 34.5 148.0	Hospital	0	0	0	-	0	0	0	0	0	0
c 0 1 4 1 2 2.5 25.2 8.4 29.3 71.7 47.2 186.5 0.3 1.1 0.5 1.5 4.9 3.3 8.0 0.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 3.4 1.5 5.1 12.0 8.1 26.2	c 2.5 25.2 8.4 29.3 71.7 47.2 186.5 c 0.3 1.1 0.6 0.3 1.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 0.5 1.5 5.1 12.0 8.1 26.2 1.4 4.3 1.5 20.1 6.1 22.0 52.7 34.5 148.0	Rural Health Unit		0	0	-	o		0	0	0	0
c 0.3 1.1 0.5 1.5 4.9 3.3 8.0 0.7 2.2 1.4 4.3 0.5 1.5 5.1 12.0 8.1 26.2	c 2.5 25.2 8.4 29.3 71.7 47.2 186.5 0.3 0.5 1.5 4.9 3.3 8.0 0.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 3.4 1.5 5.1 12.0 8.1 26.2 1.5 20.1 6.1 22.0 52.7 34.5 148.0	Barangay Health Station		0	0	7	4	<b>p-4</b>	7	-	<b>,-4</b>	
c 0.3 1.1 0.5 1.5 4.9 3.3 8.0 0.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 0.5 3.4 1.5 5.1 12.0 8.1 26.2	c 0.3 1.1 0.5 1.5 4.9 3.3 8.0 0.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 3.4 1.5 5.1 12.0 8.1 26.2 1.5 1.5 5.1 12.0 8.1 26.2 1.5 5.1 12.0 8.1 26.2	- Road (km)	2.5	25.2	8.4	29.3	7.1.7	47.2	186.5	74.4	25.6	32.3
0.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 0.5 3.4 1.5 5.1 12.0 8.1 26.2	0.1 0.6 0.3 0.7 2.2 1.4 4.3 0.5 3.4 1.5 5.1 12.0 8.1 26.2 1.5 5.1 12.0 8.1 26.2 1.5 5.1 1.5 52.7 34.5 148.0	Concrete	0.3	1.1	0.5	1.5	6.4	3.3	8.0	2.0	1.2	3.1
0.5 3.4 1.5 5.1 12.0 8.1 26.2	0.5 3.4 1.5 5.1 12.0 8.1 26.2 1.5 20.1 6.1 22.0 52.7 34.5 148.0	Asphalt	0.1	9:0	0.3	0,7	2.2	4	4.3	1.9	9.0	1.2
4071 JFC 4769 C. 4	52.7 34.5 148.0	Gravel	0.5	3.4	1.5	5.1	12.0	8.1	26.2	8.7	3.5	3,9
1.5 20.1 6.1 22.0 52.7 34.5 148.0		Earth	1.5	20.1	6.1	22.0	52.7	34.5	148.0	58.8	20.3	24.1

Source: Socio-Economic Profile, Ilocos Norte

Data presented by DECS, DOH, BAS, DII, Assessors in Provincial and Municipal Offices

Table C.5.16(1) Present Value of Major Damageable Assets in Potential Flood Area of 2 Year Return Period

							(Un	it: Million Pes	(Unit: Million Pesos at 1996 Market Prices)	ket Prices)
	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	San
Item	Flood Area	Laoag	Laoag	ð	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Total Value	1,340.0	28.9	0.2	\$4.3	21.0	29.1	12.6	1.6	0.1	
2. Living Quarters	9.809	14.5	•	40.4	8.7	23.4	7.9	:.		•
- Housing Units	345.8	8.3	•	23.0	5.0	13.3	4.5	•	•	,
- Houhold Effects	262.8	6.3	•	17.4	3.8	10.1	3,4	1		•
3. Crop Production	160.7	2.9	•	0.4	2.5	8.0	0.7	0.5	0.0	1
- Imgated Fields	158.6	2.9	•	0.4	2.5	8.0	4,0	0.5	•	•
- Reinfed Fields	2.0			•		•	0.3	1.	0.0	1
4. Industrial Establishment	34.9	1.4	•	8.9	1.0	1.7	1.6		•	•
- Manufacturing Industry	2.5	. •	•	0.5	0.1	0.1	• 1	,	•	,
- Trading Industry	32.4	1.4	•	6.3	6.0	1.6	1.6	•	•	•
5. Infrastructure	535.8	10.2	0.2	16.8	8.7	3.2	2.4	1.1	0.9	1
- Social Infrastructure	79.2	1.8		15.8	1.8	i	•			i
a Educational Facility	75.3	1.8	•	15.8	1.8	•	•	•	1	•
Pre-school	12.3	8.	1.	3.5			1	1		•
Elementary	50.8		•	7.0	8.1	t	•	•	•	1
Secondary	8.8	•	,	1.8	•	ı	•	2	1	ı
Tertiary	3.5	•	•	3.5	•	ı		,	ı	•
b Health Facility	3.9	•	2 · · · · · · · · · · · · · · · · · · ·	•	. •	ı		,	•	•
Hospital			•	•		•	•	•	•	4
Rural Health Unit	1.0	•	•		·	ì	•		1	ť
Barangay Health Station	2.9	•	•	•	•	•	•	•	ı	1
- Physical Infrastructure	456.7	<b>₩</b>	0.2	.1.1.	7.0	3.2	2,4	1.1	0.9	•
a Road	101.1	2.0	0.2	0.3	1.3	1.4	1.5	,	6.0	•
Concrete	31.8	0.8	0.1	0.1	9.0	9.0	0.5		0,4	,
Asphalt	13.6	0.3	0.0	0.0	0.2	0.2	0.3	•	0.1	•
Gravel	28.1	0.4	0.0	0.1	0.3	0.3	4.0	. 1	0.3	•
Earth	27.6	0.4	0.1	0.1	0.3	0.3	0.3		0.1	•
b Irrigation Facility	355.6	6.5	•	0.8	5.7	1.8	8.0	1.1	ı	•
Source: Socio-Economic Profile Hoos Norte	Jorde									

Source: Socio-Economic Profile, Ilocos Norte

Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

Table C.5.16(2) Present Value of Major Damageable Assets in Potential Flood Area of 2 Year Return Period

8

								(Un	Unit: Million Pesos at 1996 Market Prices)	s at 1996 Mars	cet Prices)
item		San Cristobal	Guisit River/	Suyo Dingras	Poblacion of	Cura	Solsona River	Madongan River	Papa River	Lower Bongo	Upper Bongo
		Sarrat	Mandalogue	į	Dingras	Basin	Basin	Basin	Basin	ā	
1. Total Value		2.4	25.5	32.7	23.5	344.5	200.5	331.4	170.1	12.5	38.1
2. Living Quarters		0.3	7.8	24.2	20.3	158.7	80.9	139.3	0.09	3.3	18.8
- Housing Units		0.2	4.5	13.8	11.6	90.2	46.0	79.2	34.1	1.9	10.7
- Houhold Effects		0.1	3.4	10.5	8.8	68.5	34.9	60.2	25.9	1.4	8.1
3. Crop Production		0.1	3.7	2.0	0.7	46.3	27.6	42.0	25.2	1.3	0.4
- Imigated Fields			3.7	1.7	0.7	46.0	27.1	41.9	24.8	1.3	4.0
- Reinfed Fields	:	0.1	0.0	0.2	•	0.4	0.5	0.1	0.4	•	•
4. Industrial Establishment		i	6.2	0.9	0.2	6.7	4.4	0.9	2.7	•	1.4
- Manufacturing Industry	:	•	1	•		9.0	0.8	0.1	0.2	ı	1
- Trading Industry	:	i	0.2	6.0	0.2	6.1	3.6	5.9	2.5	•	1.4
5. Infrastructure		2.1	13.7	5.6	2.2	132.9	87.6	144.1	82.2	7.9	13.9
- Social Infrastructure	1	1.8	8.1	•		13.3	17.2	14.7	10.5	0.4	0.4
a Educational Facility		1.8	1.8	i i	•	12.3	15.8	14.0	10.5	•	•
Pre-school		•			•		3.5	3.5	•	,	•
Elementary		 	1.8		•	12.3	8.8	89	8°8	1	•
Secondary			•	•	i	•	3.5	1.8	1,8	•	
Tertiary		•	•	. •	•	•	•	1	1	•	
b Health Facility		•	•	•	1	1.1	7.1	0.7	i	0.4	0.4
Hospital		•	•	•	•	ì	•		•	•	•
Rural Health Unit					•	ì	1.0	•	•	4	•
Barangay Ilculth Station	tion	•	•	•		1.1	0.4	0.7	•	0.4	0.4
- Physical Infrastructure		0.4	12.0	5.6	2.2	119.5	70.5	129.4	71.7	7.5	13.6
a Road		0.4	3.8	1.7	0.7	16.5	8.6	35.4	16.0	4.5	4.6
Concrete		0.2	1.0	0.5	0.2	5.5	3.3	9.1	5.8	1.2	2.0
Asphalt		0.0	0.5	0.2	0.1	2.3	1.3	4.6	2.1	9.0	0.7
Gravel		0.1	1.7	0.5	0.2	8.4	2.9	10.7	3.6	1.3	0.9
Earth		0.0	1.2	0.4	0.2	3.9	2.3	11.1	4.5	1.4	1.0
b Irrigation Facility		•	8.2	3.9	1.5	103.0	60.7	94.0	55.7	3.0	8.9
Canana Come Bearing Deafile Ho	None										

Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOIJ, BAS, DTL, Assessors in Provincial and Municipal Offices

Table C.S.17(1) Present Value of Major Damageable Assets in Potential Flood Area of 5 Year Return Period

				The second section of the second			යි)	(Unit: Million Pesos at 1996 Market Prices)	s at 1996 Mar	ket Prices)
	Probabic	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	Sen	Sto.	San
Item	Flood Arca	Laoag	1,3038	of	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Total Value	6.127,1	76.0	24.9	121.5	51.6	41.9	13.3	6.1	1.6	3,7
2. Living Quarters	789.1	38.1	16.3	60.2	17.9	32.9	7.9	1.0	0.4	. 8
- Housing Units	448.4	21.7	9.3	34.2	10.2	18.7	4.5	9.0	0.3	1.0
- Houhold Effects	340.7	16.5	7.0	26.0	7.7	14.2	3.4	0.4	0.2	8.0
3. Crop Production	194.5	7.2	1.2	0,4	4.0	4	0.7	<u></u>	0.0	0.4
- Irrigated Fields	192.3	7.2	1.2	0.4	0.4	1.4	0.4	17	ļ	0.3
- Reinfed Fields	2.2	•	•	•	1	•	0.3	1	0.0	0.1
4. Industrial Establishment	48.3	3,4	1.6	8.7	1.7	2.1	1.6	0.0	0.2	0.7
<ul> <li>Manufacturing Industry</li> </ul>	3.3	•	. •	9.0	0.1	0.1	•		•	•
- Trading Industry	45.0	3.4	1.6	8.1	1.6	2.0	1.6	6.0	0.2	0.7
5. Infrastructure	719.9	27.4	5.8	52.3	28.1	5.4	3.1	3.1	0.9	6.0
- Social Infrastructure	169.0	5.3	74	51.1	17.5	1	•	•	ı	,
a Educational Facility	115.5	5.3	1.8	35.0	1.8	,	1	•	,	
Pre-school	26.3	3.5	•	85. 85.	•	•	•	ì	•	•
Elementary	70.0	1.8	1.8	15.8	1.8	•	•	,	•	,
Secondary	14.0	•	•	5.3	•	•	•	ı	ı	ı
Tertiary	5.3	•	•.	5.3	•	•	ı	ı	,	•
5 Health Facility	53.5	•	0.4	16.1	15.7	•	•	•	•	•
Hospital	47.1	•	•	15.7	15.7	,	•	•	•	•
Rural Health Unit	2.1	•	: : •	•	•	ı	•	•	,	•
Barangay Health Station	4.4	•	0.4	0.4	•	•	•	,	•	•
<ul> <li>Physical Infrastructure</li> </ul>	550.9	22.1	3.7	1.2	10.7	5.4	3.1	3.1	6.0	6.0
a Road	119.9	6.0	1.0	0.4	1.8	2.1	2.3	0.5	6.0	0.2
Concrete	38.7	2.6	0,4	0.2	0.8	6.0	8.0	0.2	0.4	0.1
Asphalt	16.2	0.8	0.1	0.1	0.2	0.3	0.4	0.1	0.1	0.0
Gravel	32.9	1.3	0.2	1:0	0.4	0.5	9.0	0.1	0.3	0.0
Earth	32.2	1.3	0.2	0.1	0.4	0.5	9,0	0.1	0.1	0
b Irrigation Facility	431.0	16.1	2.8	8.0	8.9	3.2	8.0	2.6	٠	0.7

Source: Socio-Economic Profile, Ilocos Norte

Data presented by DECS, DOH, BAS, DT, Assessors in Provincial and Municipal Offices

Table C.5.17(2) Present Value of Major Damageable Assets in Potential Flood Area of 5 Year Return Period

(1)

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								-	it: Million Pes	(Unit: Million Pesos at 1996 Market Prices)	ict Prices)
i i i		San Cristobal	Guisit River/	Suyo Dingras	Poblacion of	Cura River	Solsona River	Madongan River	Papa River	Bongo	Upper Bongo
			Mandaloque	,	Dingras	Basin	Basin	Basin	Basin		
1. Total Value		6.7	35.6	39.2	101.4	393.4	223.3	356.6	184.7	17.2	52.9
2. Living Ouariers		0.7	12.1	25.6	\$6.5	181.7	92.0	147.7	67.5	4.8	24.2
	٠.	0.4	6.9	14.6	32.1	103.3	52.3	83.9	38.4	2.7	13.8
- Houhold Effects		0.3	5.2	11.1	24.4	78.5	39.7	63.8	29.1	2.1	10.5
3. Crop Production	:	0.5	5.0	2.4	5.3	53.0	30.7	45.8	27.0	2.0	6.3
		9.0	4.9	2.2	5.3	52.6	30.2	45.7	26.5	2.0	6.3
- Reinfed Fields		0.1	0.0	0.2	•	0.4	0.5	0.1	6.0	•	ı
4. Industrial Establishment		0.2	1.6	1.0	1.3	7.3	4.7	9.9	2.9	0.2	1.6
		0.2	•	0.1	0.4	9.0	0.8	0.1	0.2	1	•
- Trading Industry		•	1.6	6.0	0.9	8.8	3.8	6.5	2.7	0.2	9.1
5 Infrastructure		5.3	17.0	10.2	38.3	151.3	0.96	156.5	87.3	10.1	20.8
		3.9	8:	3.5	23.7	15.5	17.2	16.5	10.5	0.4	0.4
a Educational Facility		3.5	1.8	3.5	7.0	14.0	15.8	15.8	10.5	•	•
Pre-school		1.8	. •	1.8	3.5	•	3.5	3.5	•	•	٠
Elementary		8.1	1.8	<b>F</b>	3.5	14.0	89. 89.	10.5	8.8 8.8	•	•
Secondary		•	ř	1.8		,	3.5	1.8	1.8	•	•
Tertiary		•		· •	1	•	•	•	•	•	•
b Health Facility		0.4	•	•	16.7	1.5	1.4	0.7	•	4.0	0.4
Hospital		•	k.	•	15.7	•	•	•	•		•
Rural Health Unit		ŕ	•	•	1.0	,	1.0	•	•	•	•
Barangay Health Station	tation	0.4	•	ı	•	1.5	0.4	0.7	1	4.0	0.4
- Physical Infrastructure	è	1.4	15.3	6.7	14.6	135.9	78.8	140.0	76.8	8.6	20.4
a Road		9.0	4.2	1.7	2.6	17.9	11.1	37.6	17.4	5.2	6.4
Concrete		0.3	Π	0.5	0.7	0.9	3.7	9.6	6.3	1.4	2.8
Asphalt		0	9.0	0.2	0.3	2.5	1,5	4.8	2.3	0.7	1.0
Gravel		0.2	1.2	0.5	6.0	5.2	3.3	11.3	3.9	1.5	1.
Earth		0.1	1.3	0.4	0.7	4.2	2.6	11.8	4.9	1,6	4.
b Irrigation Facility		8.0	11.1	4.9	12.0	118.0	67.8	102.4	59.4	4.6	14.1

Source: Socio-Economic Profile, Ilocos Norte.

Data presented by DECS, DOH, BAS, DH, Assessors in Provincial and Municipal Offices

Table C.S.18(1) Present Value of Major Damageable Assets in Potential Flood Area of 10 Year Return Period

							(Cn	(Unit: Million Pesos at 1996 Market Prices)	os at 1996 Mar	ket Prices)
	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	San
Item	Flood Area	Lacag	Lacag	Jo	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total	:		Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Total Value	1,924.9	103.1	26.8	128.1	53.0	60.4	17.1	10.7	8'\$	3.7
2. Living Quarters	884.4	58.3	16.8	60.2	17.9	46.3	10.5	2.3	1.3	8:1
- Housing Units	502.5	33.2	9.6	32.2	10.2	26.3	0.0	1.3	0.8	1.0
- Houhold Effects	381.9	25.2	7.3	26.0	7.7	20.0	4.5	1.0	9:0	0.8
3. Crop Production	207.1	8.0	9.1	0.8	4.3	1.5	6.0	1.5	8:0	0.4
- Irrigated Fields	204.5	8.0	1.6	8.0	4.3	1.5	0.5	1.5	0.7	0.3
- Reinfed Fields	2.5		•	•	. •	•	0.4	•	0.0	0.1
4. Industrial Establishment	56.1	5.4	9.1	8.7	1.9	3.1	1.8	2.7	6.0	0.7
<ul> <li>Manufacturing Industry</li> </ul>	3.9	r	1	9.0	0.1	0.4	•	į	•	i i
- Trading Industry	52.2	5.4	9.	8.1	1.8	2.7	8:1	2.7	6.0	0.7
5. Infrastructure	777.3	31.4	8.9	58.4	28.9	9.5	3.9	4.2	2.9	6.0
- Social Infrastructure	187.6	5.3	2.1	55.6	17.5	3.5	•	•	•	ı
a Educational Facility	133.0	5.3	8.1	38.5	1.8	3.5	•	•	•	•
Pre-school	31.5	3.5	•	10.5		1.8	•		•	t
Elementary	77.0	1.8	1.8	15.8	1.8		1	,	•	•
Secondary	19.3	•	•	7.0	.1	1.8	•		•	•
Tertiary	5.3	•	•	5.3	•		1	•	•	•
b Health Facility	2.0	. •	4.0	17.1	15.7	•	1	•	4	•
Hospital	47.1	\$ •	•	15.7	15.7	Þ	•	•	•	
Rural Health Unit	3.1	•	•	1.0	•	•	•	ı		1
Barangay Health Station	4.4	•	0.4	0.4	,	•		•	•	i
<ul> <li>Physical Infrastructure</li> </ul>	589.7	26.2	4.7	2.8	11.5	0.9	3.9	4.2	2.9	6.0
a Road	131.3	8.3	<b>:</b> :	6.0	1.8	2.6	2.7	0.8	1.2	0.2
Concrete	42.6	3.5	0.5	0.4	0.8	1.1	1.0	0.3	0.5	0.1
Asphalt	17.8	1.1	0.1	0.2	0.2	0.3	0.5	0.2	0.2	0.0
Gravel	36.0	3.7	0.2	0.2	0.4	9.0	8.0	0.2	0.4	0.0
Earth	34.9	1.8	0.3	0.2	0.4	0.5	0.5	0.1	0.2	0.1
b Irrigation Facility	458.5	17.9	3.6	1.9	9.7	3.5	1.1	3.4	1.6	0.7
O (3 13 13 13 13										

Source: Socio-Economic Profile, llocos Norte
Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

Table C.S.18(2) Present Value of Major Damageable Assets in Potential Flood Area of 10 Year Return Period

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San Item Cristobal Sarrat  1. Total Value 2. Living Quarters - Housing Units - Houhold Effects 3. Crop Production - Irrigated Fields - Reinfed Fields - Reinfed Fields - Reinfed Fields - Reinfed Fields - Amulfacturing Industry - Trading Industry - Trading Industry - Trading Industry	Guisit River/ Mandaloque 49.3 16.0 9.1 6.9 6.5 6.5	Suyo Dingras	Poblacion of Dingras	Cura River	Solsona River	ł	Papa Lower Upper River Bongo Bonge	Lower	Upper
Total Value Living Quarters - Housing Units - Houhold Effects Crop Production - Irrigated Fields - Reinfed Fields - Ranfed Fields - Manufacturing Industry - Trading Industry	6.9 6.9 6.9 8.9 8.9 8.9			Kasın	Basin	Basin	Rasin	١.	91127
Living Quarters - Housing Units - Houhold Effects Crop Production - Irrigated Fields - Reinfed Fields - Ranfed Fields - Manufacturing Industry - Trading Industry	16.0 9.1 6.9 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	56.4	126.0	405.6	224.9	369.7	197.6	20.1	\$6.6
- Housing Units - Houhold Effects Crop Production - Irrigated Fields - Reinfed Fields - Reinfed Fields - Manufacturing Industry - Trading Industry	9.1 6.9 6.5 6.5 7.7 7.7	40.9	73.2	187,4	92.0	150.2	77.4	63	747
- Houhold Effects Crop Production - Irrigated Fields - Reinfed Fields Industrial Establishment - Manufacturing Industry - Trading Industry	6.9 6.5 6.5 6.5 6.5	23.3	41.6	106.5	52.3	85.4	44.0	3.6	13.8
Crop Production - Irrigated Fields - Reinfed Fields Industrial Establishment - Manufacturing Industry - Trading Industry	8.8 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	17.7	31.6	80.9	39.7	6.5	33.4	2.7	10.5
<ul> <li>Irrigated Fields</li> <li>Reinfed Fields</li> <li>Industrial Establishment</li> <li>Manufacturing Industry</li> <li>Trading Industry</li> </ul>	0.0	2.8	6.7	848	31.1	47.9	27.7	2.3	89
<ul> <li>Reinfed Fields</li> <li>Industrial Establishment</li> <li>Manufacturing Industry</li> <li>Trading Industry</li> </ul>	0.0	2.5	6.7	4 4	30.6	47.8	27.2	2.3	89
Industrial Establishment - Manufacturing Industry - Trading Industry	,	0.2	• 3	0,4	0.5	0.1	0.4	•	
	r. 4	1.1	1.3	7.6	4.7	99	3,4	0.5	1.6
- Trading Industry	0.1	0.2	0.4	9.0	0.8	0.1	0.2		•
	2.3	6.0	0.0	2.0	3.8	6.5	3.2	0.5	1.6
5. Infrastructure 7.4	24.4	11.5	44.9	155.9	97.2	18.9	89.1	11.0	24.0
- Social Infrastructure 5.6	5.3	3.5	25.5	15.5	17.2	18.2	10.5	0,4	2.1
a Educational Facility 5.3	5.3	3.5	80. 80.	14.0	15.8	17.5	10.5	1	80
Pre-school 1.8	1:8	1.8	3.5	•	3.5	3,5	•		•
Elementary 3.5	80		5.3	14.0	8.8	12.3	8.8	•	1.8
Secondary	1.8	8.1	•	•	3.5	1.8	1.8	ı	•
	•	•	•	1		•		•	ι
b Mealth Facility 0.4	•	•	16.7	2.1	1.4	0.7	ı	9.0	0.4
Flospital	•	10.3	15.7	•	•			•	•
Rural Health Unit	•	•	1.0		1.0		•		•
Barangay Health Station 0.4	•	•	•	1.5	0.4	0.7	.•	0.4	0.4
- Physical Infrastructure 1.8	19.2	8.0	19.4	140.4	80.0	146.7	78.6	10.7	21.9
a Road	4.7	2.3	4.5	18.5	11.5	39.5	17.6	5.5	9.9
Concrete 0.4	1.2	0.7	1.2	6.2	3.8	10.1	6.3	1.5	2.9
Asphalt 0.1	9.0	0.3	9.0	2.5	1.6	5.1	2.3	0.7	1.0
	4.1	0.7	1.5	5.4	3.4	11.9	0.4	1.6	5.7
	1.5	0.5	1.2	4.4	2.7	12.4	5.0	1.7	1.5
b Irrigation Facility 0.8	14.5	5.7	14.9	121.9	68.6	107.2	61.0	5.2	15.3

Source: Secio-liconomic Profile, Ilocos Norte
Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

Table C.S.19(1) Present Value of Major Damageable Assets in Potential Flood Area of 25 Year Return Period

Lange Lange Foundation cannagarin Toolase Surrat Su									(Unit: Million Pesos at 1996 Market Prices)	os at 1996 Ma	ket Prices)
Hearth   Ford Area   Lacog   Class   Sam Mannel   Forg   Forg   Forg   Lacog   Class   Mannel   Forg   Forg   Forg   Lacog   Class   Mannel   Forg   Forg   Forg   Forg   Lacog   Class   Cl		Probable	Langid	ońy.	Poblacion	Camangaan	Poblacion	SE :	ues :	Sto.	eg Y
Total Value	Item	Flood Area Total	Laoag	Laoag	lo Lacar	Laoag	of San Nicolas	Manuel	Felipe Sarrat	Tomas	Marcos
1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000   1,000,000   1,000,000   1,000,000,000   1,000,000   1,000,000,000   1,000,000,000   1,000,000,000,000   1,000,000,000,000   1,000,000,000   1,000,000,000   1,000,000,000   1,000,000,000   1,000,000,000   1,00	1. Total Value	2,240.0	118.8	30.1	184.4	88.7	131.9	62.1	15.8	6.8	3.7
Discissing Units		1,065.9	9.89	16.8	91.8	35.7	104.6	24.1	3.2	1.8	1.8
Hoshold Efficers	- Housing Units	605.7	39.0	9.6	52.2	20.3	59.5	13.7	1.8	1.1	0.1
Copy Production         228.0         9.0         2.3         0.9         7.9         2.0         8.0         2.3         0.8           - Infigured Ficides         25.3         9.0         2.5         0.9         7.9         2.0         7.4         2.3         0.7           - Reinfed Ficides         2.7         6.3         1.6         11.8         4.7         8.3         5.0         4.1         1.1           - Manufacturing Industry         6.4         -         -         0.6         2.5         2.5         2.5         2.5         0.7         4.1         1.1         1.1         1.2         3.5         2.5         2.5         2.5         2.5         4.7         4.1         1.1         1.1         1.1         4.5         5.9         4.7         4.1         1.1         1.1         1.1         4.5         5.9         4.7         4.1         1.1	- Houhold Effects	460.3	29.6	7.3	39.6	15.4	45.2	10.4	1,4	8.0	0.8
- imparted Fields         225.3         9.0         2.5         0.9         7.9         2.0         7.4         2.3         0.7           - Reinfold Fields         2.7         -         -         -         -         -         0.5         -         -         0.1           - Reinfold Fields         2.7         -         -         -         -         -         0.5         -         -         0.1         -         0.1         -         0.1         -         0.1         -         0.1         -         0.1         -         0.1         -         0.1         -         0.1         -         0.1         -         0.1         0.2         -         0.1		228.0	9.0	2.5	6.0	7.9	2.0	8.0	2.3	0.8	0.4
Reinfold Fields	- Imigated Fields	225.3	9.0	2.5	6.0	7.9	2.0	7.4	2.3	0.7	0.3
Industrial Establishment   76,3   6,3   1,6   11,8   4,7   8,3   5,0   4,1   1,1	- Reinfed Fields	2.7	•	•	•	•	•	0.5	•	0.1	0.1
- Manufacturing Industry 64 66 0.2 2.5 0.2	1. Industrial Establishment	76.3	6.3	9.1	11.8	4.7	8.3	5.0	4.1	1.1	0.7
- Trading Industry 70,0 6,3 1,6 11,3 4,5 5,9 4,7 4,1 1,1 1,1 1,1 1,1 1,1 1,1 1,1 1,1 1,1	<ul> <li>Manufacturing Industry</li> </ul>	6.4	•	•	9.0	0.2	2.5	0.2	1	•	,
Infrastructure   869.7   34.9   9.2   79.8   40.3   16.9   25.0   6.2   3.0     Social Infrastructure   219.7   5.6   2.1   76.6   19.2   9.1	- Trading Industry	70.0	6.3	1.6	11.3	4.5	5.9	4.7	4.1	177	0.7
sixtucture         219.7         5.6         2.1         76.6         19.2         9.1         . </td <td>5. Infrastructure</td> <td>2.698</td> <td>34.9</td> <td>9.2</td> <td>79.8</td> <td>40.3</td> <td>16.9</td> <td>25.0</td> <td>6.2</td> <td>3.0</td> <td>0.9</td>	5. Infrastructure	2.698	34.9	9.2	79.8	40.3	16.9	25.0	6.2	3.0	0.9
Educational Facility         148.8         5.3         1.8         43.8         3.5         8.8         -	- Social Infrastructure	219.7	5.6	2.1	9.92	19.2	9.1		•	,	•
36.8       3.5       12.3       3.5       1.8       1.9       1.4       1.4       1.0       1.4 <td< td=""><td></td><td>148.8</td><td>5.3</td><td>8:</td><td>43.8</td><td>3.5</td><td>8.8</td><td></td><td></td><td>•</td><td>1</td></td<>		148.8	5.3	8:	43.8	3.5	8.8			•	1
84.0 1.8 1.75 3.5 1.8	Pre-school	36.8	3.5	•	12.3	•	3.5	1		•	•
22.8	Elementary	84.0	1.8	1.8	17.5	3.5	1.8	•	ŧ	•	•
5.3 5.3 6.4   52.8   15.7   0.4 6.2   15.7   0.4	Secondary	22.8	• .	ı.	87. 87.	t	3.5	•	ì	•	•
71.0 0.4 0.4 32.8 15.7 0.4	Tertiary	5.3	•	•	5.3	•	•		•	•	•
h Station 5.1		71.0	0.4	0.4	32.8	15.7	0.4	•	,	•	•
h Station 5.1 0.4 0.4 0.4 0.4	Hospital	62.8	•	٠.	31.4	15.7	•	•	i	٠,	٠
h Station 5.1 0.4 0.4 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 - 0.4 0.2 0.2 0.2 0.2 0.4 0.4 0.6 0.5 0.2 0.4 0.6 0.2 0.2 0.4 0.4 0.6 0.2 0.2 0.4 0.4 0.6 0.2 0.2 0.4 0.4 0.6 0.2 0.2 0.4 0.4 0.6 0.2 0.2 0.2 0.4 0.4 0.4 0.1 0.2 0.2 0.3 0.4 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7	Rural Health Unit	3.1	4	•	1.0	1	4	ı	•	•	•
650.0         29.3         7.1         3.3         21.1         7.8         25.0         6.2         3.0           145.0         9.0         1.5         1.2         3.4         3.3         8.4         1.0         1.4           47.6         3.9         0.6         0.5         1.5         1.4         3.0         0.4         0.6           20.0         1.2         0.2         0.4         0.4         1.6         0.2         0.2           39.6         2.0         0.3         0.3         0.7         0.7         1.4         0.1         0.2           37.8         2.0         0.3         0.2         0.7         1.4         0.1         0.2           504.9         20.2         5.6         2.1         17.7         4.5         16.7         5.2         1.6	Barangay Health Station	5.1	0.4	0.4	0.4	•	0.4	•	,	•	1
145.0     9.0     1.5     1.2     3.4     3.3     8.4     1.0     1.4       47.6     3.9     0.6     0.5     1.5     1.4     3.0     0.4     0.6       20.0     1.2     0.2     0.2     0.4     1.6     0.2     0.2       39.6     2.0     0.3     0.3     0.7     0.8     2.3     0.3     0.4       37.8     2.0     0.3     0.2     0.7     0.7     1.4     0.1     0.2       504.9     20.2     5.6     2.1     17.7     4.5     16.7     5.2     1.6	- Physical Infrastructure	0.059	29.3	7.1	3.3	21.1	7.8	25.0	6.2	3.0	6.0
47.6     3.9     0.6     0.5     1.5     1.4     3.0     0.4     0.6       20.0     1.2     0.2     0.2     0.4     0.4     1.6     0.2     0.2       39.6     2.0     0.3     0.3     0.7     0.8     2.3     0.3     0.4       37.8     2.0     0.3     0.2     0.7     0.7     1.4     0.1     0.2       504.9     20.2     5.6     2.1     17.7     4.5     16.7     5.2     1.6	a Road	1450	0.6	1.5	1.2	3.4	3.3	8.4	1.0	1.4	0.2
20.0     1.2     0.2     0.4     0.4     1.6     0.2     0.2       39.6     2.0     0.3     0.3     0.7     0.8     2.3     0.3     0.4       37.8     2.0     0.3     0.2     0.7     0.7     1.4     0.1     0.2       504.9     20.2     5.6     2.1     17.7     4.5     16.7     5.2     1.6	Concrete	47.6	3.9	9.0	0.5	1.5	1.4	3.0	0.4	9.0	0.1
39.6     2.0     0.3     0.3     0.7     0.8     2.3     0.3     0.4       37.8     2.0     0.3     0.2     0.7     0.7     1.4     0.1     0.2       504.9     20.2     5.6     2.1     17.7     4.5     16.7     5.2     1.6	Asphalt	20.0	1.2	0.2	0.2	0.4	0.4	1.6	0.2	0.2	0.0
37.8     2.0     0.3     0.2     0.7     0.7     1.4     0.1     0.2       \$04.9     20.2     \$.6     2.1     17.7     4.5     16.7     \$.2     1.6	Gravel	39.6	2.0	0.3	0.3	0.7	8.0	2.3	0.3	0.4	0.0
504.9 20.2 5.6 2.1 17.7 4.5 16.7 5.2 1.6	Earth	37.8	2.0	0.3	0.2	0.7	0.7	1.4	0.1	0.2	0.1
	b Irrigation Facility	504.9	20.2	5.6	2.1	17.7	4.5	16.7	5.2	1.6	0.7

Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOH, BAS, DTL, Assessors in Provincial and Municipal Offices

Table C.5.19(2) Present Value of Major Damageable Assets in Potential Flood Area of 25 Year Return Period

							ສ	nit: Million Pes	os at 1996 Mar	ket Prices)
	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Item	Cristobal	River/	Dingras	Jo S	River	River	River	River	Bongo	Bongo
	Sarrat Manc			Dingras	Basin	Basin	Basin	Basin		
1. Total Value	9.8	55.0	56.4	130.1	426.2	261.0	371.6	203.9	24.4	59.2
2 Living Quarters	.3	18.3	40.9	73.2	197.4	122.8	150.6	80.1	8.1	24.7
	80	10.4	23.3	41.6	112.2	8.69	85.6	45.5	4.6	14.1
- Hounold Effects	9.0	7.9	17.7	31.6	85.2	53.0	0.59	34.6	3,5	10.7
3. Crop Production	0.7	6.9	2.8	7.2	57.2	32.1	48.2	28.6	3.0	7.3
	0,4	6.9	2.3	7.2	56.8	31.6	48.2	28.2	3.0	7.3
- Reinfed Fields	0.3	0.0	0.2	•	0.4	0.5	0.1	0.4	•	•
4. Industrial Establishment	0.4	3.5	1	ឮ	8.0	6.2	9:9	3.4	0.7	1.6
	0.4	0.1	0.2	0.4	9.0	8.0	0.1	0.2		•
- Trading Industry	•	3.4	0.9	6.0	7.4	5.4	6.5	3.2	0.7	1.6
\$ Infrastructure	7.4	26.2	11.5	48.5	163.7	8.66	166.2	91.8	12.6	25.7
- Social Infrastructure	5,6	5.3	3.5	27.2	17.2	17.2	18.2	10.5	0.4	2.1
a Educational Facility	5.3	5.3	3.5	10.5	15.8	15.8	17.5	10.5	ı	1.8
Pre-school	1.8	1.8	8:1	3.5	80.	3.5	3.5	4	•	•
Elementary	3.5	1.8	•	7.0	14.0	8.8	12.3	8.8	•	1.8
Secondary	•	1.8	8.1			3.5	1.8	8:1	•	•
Tertiary	1		•	•		•	•	•	1	1
b Health Facility	0.4		•	16.7	1.5	1.4	0.7	•	0.4	0.4
Hospital	•	. 4	•	15.7	i	•	•	•	•	•
Rural Health Unit	•		• 1	1.0	•	0.1	•	r	•	
Barangay Health Station	0.4	· •	•		1.5	4.0	0.7	•	0.4	0,4
<ul> <li>Physical Infrastructure</li> </ul>	87.7	21.0	8.0	21.3	146.5	9.78	147.9	81.3	12.3	23.6
a Road	0.1	5.4	2.3	5.2	19.2	11.7	40.0	18.0	5.5	7.3
Concrete	0.4	14	0.7	1.4	6.4	3.9	10.2	6.5	1.5	3.2
Asphalt	0.1	0.7	0.3	0.7	2.6	1.6	5.2	2.3	0.7	1.1
Gravel	0.3	1.6	0.7	1.7	5.6	3,5	12.1	4.1	1.6	4,1
Earth	0.1	1.7	0.5	1.4	4.6	2.7	12.5	5.1	1.7	1.6
b Lrigation Facility	0.8	15.5	5.7	16.1	127.2	70.9	108.0	63.2	6.8	16.3
Course Canal Bonesia Describe Manne										

Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOM, BAS, DT, Assessors in Provincial and Municipal Offices

Table C.5.20(1) Present Value of Major Damageable Assets in Potential Flood Area of 50 Year Return Period

							(G	(Unit: Million Pesos at 1996 Market Prices)	os at 1996 Mar	ket Prices)
	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	San
Item	Flood Area	Laoag	Laoag	jo	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Total Value	2,624.9	258.3	40.8	191.9	107.5	269.6	62.1	16.1	6.8	3.7
2. Living Quarters	1,270.0	147.8	23.8	91.8	42.0	188.7	24.1	3.2	8.	8
- Housing Units	721.6	0 %	13.6	52.2	23.9	107.2	13.7	8.1	1.1	1.0
- Houhold Effects	548.4	63.8	10.3	39.6	18.1	81.5	10.4	4.1	8.0	0.8
3. Crop Production	255.8	16.8	2.6	1.0	10.7	9.1	08	. 6	o C	70
- Irrigated Fields	252.3	16.8	2.6	1.0	10.5	8,0	4,7	2.3	0.7	, m
- Reinfed Fields	3.5	i	•	•	0.2	0.5	0.5	•	0.1	0.1
4. Industrial Establishment	94.0	13.7	2.9	11.8	5.9	15.8	8.0	4	p	60
- Manufacturing Industry	8.5	•		9.0	0.2	4	0,2	ı		<u>;</u> 1
- Trading Industry	85.5	13.7	2.9	11.3	5.6	11.5	4.7	4.1	:	0.7
5. Infrastructure	1,005.1	80.0	11.4	87.2	49.0	55.9	25.0	99	0	00
- Social Infrastructure	274.3	26.6	3.9	83.6	21.0	28.3	; ;		ì	; ;
a Educational Facility	171.5	10.5	3.5	50.8	5.3	12.3	•		•	i 4
Pre-school	42.0	5.3	: : •	14.0	•	3.5			•	1
Elementary	94.5	5.3	1.8	19.3	3.5	5.3	•	•	•	•
Secondary	28.0		1.8	10.5	1.8	3.5	•	•	•	•
Tertiary	7.0		. ,•	7.0	.•	•	•			•
b Health Facility	102.8	16.1	0.4	32.8	15.7	16.1	١	,	•	
Hospital	94.2	15.7	•	31.4	15.7	15.7	•	ï	•	•
Rural Health Unit	3.1	•	•	1.0	<b>.</b>	•	•	•	•	• •
Barangay Health Station	5,4	0.4	0.4	0.4	•	0.4	•	•	,	•
<ul> <li>Physical Infrastructure</li> </ul>	730.8	53.4	7.6	3.7	28.0	27.6	25.0	6.6	3.0	6.0
a Road	165.3	15.8	1.7	1.3	4.5	8.3	8,4	1.4	1,4	0.2
Concrete	55.7	8.9	0.7	0.5	2.0	3.5	3.0	0.6	90	0 1
Asphalt	7.22	2.1	0.2	0.2	9.0	1.1	1.6	0.3	0.2	0.0
Gravel	44.5	3.4	0.4	0.3	6.0	2:0	2.3	4,0	0.4	00
Earth	42.5	3.5	0.4	0.3	1.0	1.7	1.4	0.2	0.2	0.1
b Irrigation Facility	565.5	37.6	5.9	2.3	23.5	19.3	16.7	5.2	1.6	0.7
Course Conis Bessemin Destita Beach Man							,,,,,			

Source: Socio-Economic Profile, llocos Norte

Data presented by DECS, DOH, BAS, DT, Assessors in Provincial and Municipal Offices

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Table C.5.20(2) Present Value of Major Damageable Assets in Potential Flood Area of 50 Year Return Period

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Heath   Sing								<u>:</u>	Unit: Million Pesos at 1996 Market	os at 1996 Mar	ket Prices)
tem         Cristobal         Effect         Dingrate         River         River         River         River         River         River         River         Dingrate         River         River         River         River         Dingrate         River		San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Second National Processes	Item	Cristobal	River!	Dingras	Jo	River	River	River	River	Bongo	Bongo
Total Value         9.8         \$5.0         \$6.4         166.9         429.5         26.11         379.1         200.0         26.5           Living Quarters         1.3         18.3         40.9         90.7         197.4         122.8         153.2         82.2         8.1           - Flowing Quarters         0.6         7.9         17.7         39.2         18.2         6.8         87.1         46.7         46.7           Cop Production         0.7         6.9         2.3         11.7         57.1         31.6         49.3         29.5         3.5           Cop Production         0.7         6.9         2.5         11.7         57.1         31.6         49.3         29.5         3.5           - Impact of Fields         0.4         0.2         -         0.4         0.5         0.2         -         0.4         0.5         0.2         0.4         0.5         0.2         0.6         0.2         0.6         0.2         0.6         0.2         0.6         0.2         0.6         0.2         0.7         0.7         0.7         0.7         0.7         0.7         0.7         0.7         0.7         0.7         0.7         0.7         0.7		Sarrat	Man		Dingras	Basin	Basin	Basin	Basin		
Living Quarters  1.3 18.3 40.9 90.7 1974 122.8 153.2 82.2 8.1  1.4 Cooperate	1. Total Value	8.6	55.0	56.4	6.991	429.5	261.1	379.1	209.0	26.5	75.0
Cooptroling Units   Coop		F1	60 60 1	40.9	90.7	197.4	122.8	153,2	82.2	8.1	30.0
Crop Production		8,0	10.4	23.3	51.6	112.2	8.69	87.1	46.7	4.6	17.1
Crop Production         0.7         6.9         2.8         11.7         57.5         32.1         49.5         29.5         3.5           - Imgated Fields         0.4         6.9         2.5         11.7         57.1         31.6         49.3         20.0         3.5           - Reinfool Fields         0.3         0.0         0.2         -         0.4         0.5         0.0         0.5         0.4         -           - Manufacturing Industry         0.4         0.1         0.2         0.6         0.8         0.1         0.2         0.7           - Trading Industry         0.4         0.1         0.2         0.6         0.8         0.1         0.2         0.7           - Trading Industry         0.4         0.1         0.2         0.9         0.9         0.6         0.8         0.1         0.7           - Trading Industry         0.4         0.1         0.2         0.9	- Houhold Effects	9.0	7.9	17.7	39.2	85.2	53.0	66.2	35.5	3.5	13.0
Franciscot Fields		0.7	6.9	2.8	11.7	57.5	32.1	49.5	29.5	3.5	9.8
Reinford Fields   0.3   0.0   0.2   0.4   0.5   0.2   0.4   0.5     Inducerial Earbhishment   0.4   3.5   1.1   1.5   8.0   6.2   6.6   3.4   0.7     Indicatron Polatery   0.4   0.1   0.2   0.6   0.6   0.8   0.1   0.2     Indicatron Polatery   0.4   0.1   0.2   0.6   0.6   0.8   0.1   0.2     Indicatron Polatery   0.4   0.1   0.2   0.6   0.6   0.8   0.1   0.2     Indicatron Polatery   0.4   0.1   0.2   0.6   0.6   0.8   0.1   0.2     Indicatron Facility   0.4   0.1   0.2   0.4   0.7   0.4     Indicatron Facility   0.4   0.7   0.3   0.4   0.7   0.4     Indicatron Pacility   0.4   0.7   0.7   0.7   0.7     Indicatron Pacility   0.7	•	0.4	6.9	2.5	11.7	57.1	31.6	49.3	29.0	3.5	9.8
Industrial Extoblishment   0.4   3.5   1.1   1.5   8.0   6.2   6.6   3.4   0.7     Nanufacturing Industry   0.4   0.1   0.2   0.6   0.6   0.8   0.1   0.2   0.7     Trading Industry   0.4   0.1   0.2   0.6   0.6   0.8   0.1   0.2   0.7     Trading Industry   0.4   0.1   0.2   0.6   0.6   0.8   0.1   0.2   0.7     Infrastructure   2.6   5.3   3.5   3.5   1.75   18.2   10.5   0.4     Social Infrastructure   3.5   3.3   3.5   3.5   1.75   10.5   0.4     Elementary   3.5   1.8   1.8   1.8   1.4   1.5   10.5   1.5     Elementary   3.5   1.8   1.8   1.8   1.4   1.5   1.5   1.5   1.5     Elementary   3.5   1.8   1.8   1.8   1.4   0.7   1.0     Elementary   1.8   1.8   1.8   1.4   0.7   1.0     Hospital   1.8   1.8   1.5   1.4   0.7   1.0     Rural Health Unit   1.5   1.4   0.7   1.0   1.5     Barangy Health Station   0.4   1.4   0.7   0.4   1.5   0.5   1.8   1.8   1.8     And   Concrete   0.4   1.4   0.7   0.5   0.5   4.0   0.5   0.5     Arabhalt   0.1   0.7   0.3   0.5   2.7   1.5   3.5   1.8   1.5     Earth   0.1   0.7   0.5   2.0   2.7   2.8   1.2   3.5   1.5     Earth   0.1   0.7   0.5   2.0   2.7   2.8   2.8   2.8   2.8   2.8     Earth   0.1   0.7   0.5   2.0   2.7   2.8   2.8   2.8   2.8   2.8   2.8     Earth   0.1   0.7   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5     Earth   0.1   0.7   0.5   0	- Reinfed Fields	0.3	0.0	0.2	•	0.4	0.5	0.2	9.4	•	٠
ring Industry 0.4 0.1 0.2 0.6 0.6 0.8 0.1 0.2		0.4	3.5	1.1	1.5	8.0	6.2	9.9	3.4	0.7	1.6
totastry - 3.4 0.9 0.9 74 5.4 6.5 3.2 0.7  Attactive 5.6 5.3 3.5 29.4 19.0 17.2 18.2 10.5 0.4  school lis 1.8 1.8 3.5 3.5 3.5 3.5 3.5 3.5 3.5  condary - 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8  Facility 0.4 - 1.7 1.7 1.5 1.5 1.5 1.5 1.8  Facility 0.4 - 1.7 1.7 1.5 1.5 1.5 1.8  Facility 0.4 - 1.7 1.7 1.5 1.5 1.5 1.8  Facility 0.4 - 1.7 1.7 1.5 1.5 1.5 1.8  Facility 0.4 - 2.3 7.3 19.6 11.8 40.9 18.3 5.9  Facility 0.1 0.7 0.3 0.9 2.7 15.1 5.3 2.4 0.8  Facility 0.1 0.7 0.5 2.0 4.7 2.8 12.8  Facility 0.1 0.7 0.5 2.0 4.7 2.8 12.8  Facility 0.1 0.7 0.5 2.0 12.8 1.8  Facility 0.1 0.7 0.5 2.0 12.8  Facility 0.1 0.7 0.7 0.7  Facility 0.1 0.7 0.7 0.7  Facility 0.1 0.7 0.7  Facility 0.7  Facility 0.7 0.7  Facility	- Manufacturing Industry	0.4	0.1	0.2	9.0	9.0	0.8	0.1	0.2	•	1
74         26.2         11.5         62.9         166.6         99.9         169.7         93.9         14.2           scenal Facility         5.3         3.5         29.4         19.0         17.2         18.2         10.5	- Trading Industry	•	3.4	6.0	6.0	4	5.4	6.5	3.2	0.7	1.6
ity 5.6 5.3 3.5 29.4 19.0 17.2 18.2 10.5 0.4 1.2 18.2 17.5 10.5 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8	5. Infrastructure	7.4	26.2	11.5	62.9	166.6	6.66	169.7	93.9	14.2	33.6
Educational Facility         5.3         5.3         12.3         17.5         15.8         17.5         10.5           Pre-school         1.8         1.8         3.5         3	- Social Infrastructure	5.6	5.3	3.5	29.4	19.0	17.2	18.2	10.5	9,0	2.1
Pre-school         1.8         1.8         3.5         3.8         3.5         3.8         3.8         3.5         3.8         3.8         3.5         3.8	a Educational Facility	5.3	5.3	3.5	12.3	17.5	15.8	17.5	10.5	•	30.
Elementary         3.5         1.8         8.8         14.0         8.8         12.3         8.8         .         .         8.8         .         .         8.8         .         .         8.8         .         <	Pre-school	8.1	1.8	1.8	3.5	3.5	3.5	3.5	1	i	•
Secondary         1.8         1.8         3.5         1.8         1.9         1.0         1	Elementary	3.5	1.8	•	80 80	14.0	8.8	12.3	8.8	•	8.
Tertiary         17-tian         1.5         1.4         0.7         0.4           Hospital         1.5         1.4         0.7         0.4           Hospital         1.0         1.0         1.0         1.0           Rural Health Unit         1.0         1.0         1.0         1.0           Barangay Health Unit         0.4         1.5         0.4         0.7         0.4           Hysical Infrastructure         1.8         21.0         8.0         33.6         147.7         82.7         151.5         83.4         13.8           Road         1.0         5.4         2.3         7.3         19.6         11.8         40.9         18.3         5.9           Concrete         0.4         1.4         0.7         2.0         6.5         4.0         18.3         5.9           Concrete         0.4         1.4         0.7         2.0         6.5         4.0         18.3         5.9           Asphalt         0.1         0.7         0.3         0.9         2.7         1.6         6.5         1.7         2.4         0.8           Earth         0.1         0.7         2.0         2.0         2.7         1.5	Secondary	•	1.8	1.8	•	•	3.5	1.8	1.8		•
Health Facility  Hospital  Fospital  Rural Health Unit  Barangay Health Station  O.4  1.0  1.0  1.0  1.0  1.0  1.0  1.0  1	Tertiary		•		<b>.</b>	1,	ł	4	1	•	4
int - 1.0 - 1.0 - 0.4   1.5   0.4   0.7 - 0.4   1.5   0.4   0.7 - 0.4   1.5   0.4   0.7 - 0.4   1.5   0.4   0.7 - 0.4   1.3   0.4   1.5   0.4   0.7   0.4   1.8   0.7   0.5   0.9   0.7   0.5		0.4	•	•	17.1	1.5	1.4	0.7	ı	0,4	0.4
h Station 0.4 1.0 - 1.0 - 0.4 0.7 - 0.4 0.7 - 0.4 1.8 0.4 0.7 - 0.4 1.8 0.4 0.7 - 0.4 1.8 0.4 0.7 - 0.4 1.8 0.9 18.3 5.9 0.4 1.4 0.7 2.0 6.5 4.0 10.5 6.6 1.6 0.1 0.7 0.3 0.9 2.7 1.6 5.3 2.4 0.8 0.3 1.5 0.7 2.0 4.7 2.8 12.3 4.2 1.7 0.8 0.1 1.7 0.5 2.0 4.7 2.8 12.8 5.2 1.8 0.8 0.8 15.5 5.7 2.6.3 12.8 0.7 10.5 65.1 8.0	Hospital		•		15.7	•			ı		•
h Station 0.4 0.4 1.5 0.4 0.7 - 0.4 1.8 13.8 13.8 11.8 21.0 8.0 33.6 147.7 82.7 151.5 83.4 13.8 1.0 5.4 2.3 7.3 19.6 11.8 40.9 18.3 5.9 5.9 0.4 1.4 0.7 2.0 6.5 4.0 10.5 6.6 1.6 1.6 0.1 0.7 0.9 2.7 1.6 5.3 2.4 0.8 0.9 0.1 1.7 0.5 2.4 5.7 3.5 12.3 4.2 1.7 0.5 0.0 1.5 5.7 2.8 12.8 5.2 1.8 0.8 0.8 15.5 5.7 2.6.3 128.0 70.9 110.5 65.1 8.0	Rural Health Unit	•	t	. 1	1.0		1.0	,	•	•	1
1.8     21.0     8.0     33.6     147.7     82.7     151.5     83.4     13.8       1.0     5.4     2.3     7.3     19.6     11.8     40.9     18.3     5.9       0.4     1.4     0.7     2.0     6.5     4.0     10.5     6.6     1.6       0.1     0.7     2.0     2.7     1.6     5.3     2.4     0.8       0.3     1.6     0.7     2.4     5.7     3.5     12.3     4.2     1.7       0.1     1.7     0.5     2.0     4.7     2.8     12.8     5.2     1.8       0.3     1.5.5     5.7     26.3     128.0     70.9     110.5     65.1     8.0	Barangay Health S		•	1	0.4	1.5	0.4	0.7	ŀ	5.0	0.4
1.0     5.4     2.3     7.3     19.6     11.8     40.9     18.3     5.9       0.4     1.4     0.7     2.0     6.5     4.0     10.5     6.6     1.6       0.1     0.7     2.0     2.7     1.6     5.3     2.4     0.8       0.3     1.6     0.7     2.4     5.7     3.5     12.3     4.2     1.7       0.1     1.7     0.5     2.0     4.7     2.8     12.8     5.2     1.8       0.3     15.5     5.7     26.3     128.0     70.9     110.5     65.1     8.0	- Physical Infrastructure	, ,	21.0	8.0	33.6	147.7	82.7	151.5	83.4	13.8	31.5
0.4     1.4     0.7     2.0     6.5     4.0     10.5     6.6     1.6       0.1     0.7     0.9     2.7     1.6     5.3     2.4     0.8       0.3     1.6     0.7     2.4     5.7     3.5     12.3     4.2     1.7       0.1     1.7     0.5     2.0     4.7     2.8     12.8     5.2     1.8       0.3     15.5     5.7     26.3     128.0     70.9     110.5     65.1     8.0		1.0	5.4	2.3	7.3	9.61	11.8	40.9	18.3	5.9	6.7
0.1     0.7     0.3     0.9     2.7     1.6     5.3     2.4     0.8       0.3     1.6     0.7     2.4     5.7     3.5     12.3     4.2     1.7       0.1     1.7     0.5     2.0     4.7     2.8     12.8     5.2     1.8       0.3     15.5     5.7     26.3     128.0     70.9     110.5     65.1     8.0	Concrete	0.4	1.4	0.7	2.0	6.5	4 0	10.5	9.9	1.6	4.2
0.3 1.6 0.7 2.4 5.7 3.5 12.3 4.2 1.7 0.1 1.7 0.5 2.0 4.7 2.8 12.8 5.2 1.8 0.3 15.5 5.7 26.3 128.0 70.9 110.5 65.1 8.0	Asphalt	0.1	0.7	0.3	6.0	2.7	1.6	5.3	2.4	0.8	1.5
0.1 1.7 0.5 2.0 4.7 2.8 12.8 5.2 1.8 0.8 15.5 5.7 26.3 128.0 70.9 110.5 65.1 8.0	Gravel	0.3	1.6	0.7	2.4	5.7	3.5	12.3	4.2	1.7	1.9
0.8 15.5 5.7 26.3 128.0 70.9 110.5 65.1 8.0	Earth	0.1	1.7	0.5	2.0	4.7	2.8	12,8	5.2	1.8	2.1
	b Irrigation Facility	0.8	15.5	5.7	26.3	128.0	70.9	110.5	65.1	8.0	21.9

Source: Socio-Economic Profile, Ilocos Norte

Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

Table C.5.21(1) Present Value of Major Damageable Assets in Potential Flood Area of 100 Year Return Period

								(Unit: Million Pesos at 1996 Market Prices)	s at 1996 Mar	ect Prices)
	Probable	Iangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto	San
Item	Flood Area	Laoag	Laoag	of.	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoug		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Total Value	2,831.5	300.2	46.8	192.2	118.7	333.0	91.6	22.5	8.5	3.7
2. Living Quarters	1,375.4	170.5	23.8	8.16	42.0	7.722	42.7	2,4	2.7	00
- Housing Units	781.5	6.96	13.6	52.2	23.9	129.4	24.3	2.6	9:	1.0
- Houhold Effects	593.9	73.6	10.3	39.6	18.1	98.3	18.4	6:1	1.2	0.8
3. Crop Production	274.0	20.2	2.6	1.0	13.2	11.6	8.6	2.6	Ξ	0.4
<ul> <li>Irrigated Fields</li> </ul>	270.1	20.2	2.6	0.1	12.9	11.1	9.3	2.6	0.7	0.3
- Reinfed Fields	3.9	•	•	<b>t</b> .	0.2	0.5	0.5	•	0,4	0.1
4. Industrial Establishment	105.7	16.0	2.9	11.8	6.3	20.2	6.7	6.1	1.4	0.7
- Manufacturing Industry	10.3	) •		9.0	0.2	0.9	0.4	•		•
- Trading Industry	95.4	16.0	2.9	111.3	6.1	14.2	6.3	6.1	1,4	0.7
5. Infrastructure	1,076.3	93.5	11.4	87.5	57.2	73,4	32.5	9.3	e. e.i	6.0
- Social Infrastructure	292.5	28.7	3.9	83.6	22.7	36.7	1.8	2.1	1	•
a Educational Facility	187.3	12.3	3.5	50.8	7.0	19.3	1.8	1.8	•	•
Pre-school	45.5	5.3	:	14.0	•	7.0	•	•	•	•
Elementary	106.8	7.0	1.8	19.3	5.3	8.8	90	1.8	•	•
Secondary	28.0	. 1	1.8	10.5	1.8	3.5		•	i	•
Tertiary	7.0	•	•j	2.0	•	,	,	•	•	•
b Health Facility	105.2	16.4	0.4	32.8	15.7	17.5		0.4	•	
Hospital	94.2	15.7	i	31.4	15.7	15.7	•	i	ı	1
Rural Health Unit	4.2	1		1.0	•	1.0	•	•	1	
Barangay Health Station	6.9	0.7	<b>0.</b> 4	9.4	. 1	0.7		0.4	•	•
- Physical Infrastructure	783.8	, ,	7.6	4.0	34.5	36.7	30.7	7.2	3.3	0.0
a Road	178.5	19.6	1.7	9.1	5.5	11.9	6.6	1.4	1.7	0.2
Concrete	8709	8.4	0.7	9.0	2.5	5.0	3.5	9.0	0.7	0.1
Asphalt	24.6	2.6	0.2	0.3	0.7	1.6	1.9	0.3	0.3	0.0
Gravel	47.7	4.3	<b>0</b> ,4	0.3	1.2	2.8	2.8	0,4	0.5	0.0
Earth	45.4	4.4	0.4	0.3	1.2	2.5	1.7	0.2	0.2	0.1
b Irrigation Facility	605.3	45.2	5.9	2.3	29.0	24.9	20.8	5.9	1.6	0.7

Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOH, BAS, DTI, Assessors in Provincial and Municipal Offices

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Table C.5.21(2) Present Value of Major Damageable Assets in Potential Flood Area of 100 Year Return Period

				:			į	(Unit: Million Pesos at 1996 Market Prices)	s at 1996 Mar	cet Prices)
Item	San Cristobal	Guisit River/	Suyo Dingras	Poblacion of	Cura River	Solsona River	Madongan River	Papa River	Lower	Upper Bongo
	Sarrat	Sarrat Mandaloque		Dingras	Basin	Basin	Basin	Basin		
1. Total Value	8.6	60.7	56.4	166.9	429.6	287.1	397.2	211.1	26.5	75.0
2 Thing Original	<u> </u>	22.5	40.9	200.7	197.4	133.8	161.0	82.2	8.1	30.0
	8.0	12.8	23.3	51.6	112.2	76.0	\$1.5	46.7	4.6	17.1
. Houhold Effects	0.0	7.6	17.71	39.2	85,2	87.8	.69.5	35.5	3.5	13.0
3 Cross Production	0.7	7.3	2.8	11.7	57.5	36.2	\$1.9	30.0	3,5	8.6
	0.4		2.5	11.7	57.1	35.7	51.7	29.5	3.5	8.6
Reinfed Fields	0.3	0.0	0.2	1	0.4	0.5	0.2	0.4	•	•
4 Industrial Establishment	0.4	3.7		1.5	8.0	6.7	9.9	3.4	0.7	9.1
	0.4	0.1	0.2	9.0	9.0	8.0	0.1	0.2	•	•
- Trading Industry		3.6	0.9	6.0	7.4	5.9	6.5	3.2	0.7	1.6
S Infractnicture	7.4	27.2	11.5	62.9	166.7	110.4	177.7	95.5	14.2	33.6
Social Infrastructure	5.6	5.3	3.5	29.4	19.0	17.2	20.0	10.9	9.0	2.1
a Educational Facility	5.3	53	3.5	12.3	17.5	15.8	19.3	10.5	,	1.8
Pre-school	1.8	8:1	8.1	3.5	3.5	3.5	3.5		•	•
Elementary	3.5	1.8	1	8.8	14.0	8.8	14.0	8.8	٠	8.1
Secondary	•	1.8	1.8	•	•	3.5	1.8	1.8	•	
Tertiary		•	•	•	•	•	•	•	•	•
b Health Facility	0.4	•	•	17.1	1.5	4.	0.7	0,4	0.4	0.4
Hospital		•	•	15.7	•	•		•		,
Rural Health Unit	•	•	•	01	•	0.1	•	•	•	•
Burangay Health Station	ation 0.4	•	•	0.4	1.5	0.4	0.7	0.4	0.4	0.4
- Physical Infrastructure	00:	21.9	8.0	33.6	147.8	93.2	157.8	84.7	13.8	31.5
a Road	1.0	5.7	2.3	7.3	19.7	13.1	41.9	18.5	6.2	9.7
	0.4	1.5	0.7	2.0	9.9	4.4	10.7	6.7	1.6	4.2
Asphait	0.1	0.8	0.3	0.0	2.7	8:	5,4	2.4	8.0	1.5
Gravel	0.3	1.6	0.7	2.4	5.8	3.9	12.6	4.2	1.7	1.9
Earth	0.1	1.8	0.5	2.0	4.7	3.1	13.1	5.2	1.8	23
b Imgation Facility	8.0	16.3	5.7	26.3	128.0	80.1	115.9	66.2	8.0	21.9
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Source: Socio-Economic Profile, Ilocos Norte
Data presented by DECS, DOH, BAS, DH, Assessors in Provincial and Municipal Offices

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Table C.5.22 Probable Damage by Flood Inundation of 2 Year Return Period

	:						ט	Unit: Million Pesos at 1996 Market Prices	ios at 1996 Mai	ket Prices)
	Probable	Tangid	oánS	Poblacion	Camangaan	Poblacien	San	San	Sto.	San
Item	Flood Area	Laoag	Laoag	Jo	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Direct Damage Total	274.1	4.6	0.0	4.8	3.0	8.0	2.4	0.5	0.0	0.0
a. Agricultural Production	68.3	1.1	0.0	0.0	1.8	0.3	0.4	0.4	0.0	0.0
- Imgated Field	67.2	1.1	0.0	0.0	1.8	0.3	0.2	0.4	0.0	0.0
- Rainfed Field	1.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
b. Housing Units	106.7	1.7	0.0	0.3	0.2	0.2	1.1	0.0	0.0	0.0
c. Industry	13.4	03	0.0	60	0.2	0.2	0.5	0.0	0.0	0.0
- Shoping Stores	12.6	0.3	0.0	8.0	0.2	0.2	0.5	0.0	0.0	0.0
- Factories	8.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
d. Infrastructure	85.7	1.5	0.0	3.5	8.0	0.1	0.4	0.1	0.0	0.0
- Social Infrastructure	40.0	0.7	0.0	2.7	0.3	0.0	0.0	0.0	0.0	0.0
Educational Facilities	32.9	0.7	0.0	2.7	0.3	0.0	0.0	0.0	0.0	0.0
Medical Facilites	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Infrastructure Damage	45.7	8.0	0.0	8.0	0.5	0.1	0.4	0.1	0.0	0.0
2. Indirect Damage	27.4	0.5	0.0	0.5	0.3	0.1	0.2	0.0	0.0	0.0
3. Total	301.5	5.0	0.0	5.3	3.3	6.0	2.7	0.5	0.0	0.0
		# . · ·								
	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Item	Cristobal	River/	Dingras	8	River	River	River	River	Bongo	Bongo
	Sarrat	Mandaloque		Dingras	Basin	Basin	Basin	Basin	)	•
1. Direct Damage Total	0.4	6.7	4.7	2.6	82.4	58.5	58.6	27.8	5.8	9.2
a. Agricultural Production	0.0	2.7	1.1	0.3	21.9	13.0	15.8	6.9	1.0	1.7
- Irrigated Field	0.0	2.7	1.0	0.3	21.7	12.7	15.8	9.9	1.0	1.7
- Rainfed Field	0.0	0.0	0.1	0.0	0.2	0.3	0.0	0.2	0.0	0.0
b. Housing Units	0.0	2.9	2.4	1.8	34.1	23.3	22.3	9.4	2.1	4.7
c. Industry	0.0	0.1	0.5	0.1	3.4	2.4	2.6	1.4	0,0	0.7
- Shoping Stores	0.0	0.1	0.5	0.1	3.2	2.1	2.5	1.4	0.0	0.7
- Factories	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.1	0.0	0.0
d. Infrastructure	4.0	2.2	0.8	0.4	23.0	8'61	18.0	10.1	2.6	2. i
- Social Infrastructure	0.3	6.0	0.0	0.0	9.2	10.0	8.2	5.5	1.6	0.5
Educational Facilities	0.3	6.0	0.0	0.0	6.7	9.1	6.7	5.5	0.0	0.0
Medical Facilites	0.0	0.0	0.0	0.0	2.5	0.9	1.5	0.0	1.6	0.5
- Infrastructure Damage	0.1	1.3	0.3	0.4	13.7	9.7	8.6	4.6	1.0	1.5
	0.0	0.8	0.5	0.3	8.2	5.8	5.9	2.8	9.0	6.0
3. Total	0.4	8.7	5.2	2.9	9.06	64.3	64.5	30.6	6.4	10.1

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Table C.5.23 Probable Damage by Flood Inundation of 5 Year Return Period

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							Ð	Unit: Million Pesos at 1996 Market Prices	os at 1996 Mar	ket Prices)
	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	San
Item	Flood Area	Laoag	Laoag	ঠ	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total	· •		Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1 Direct Damage Total	417.0	11.1	2.3	28.0	7.0	6'9	3.7	1.1	0.2	0.2
n Aericultural Production	91.1	3.0	0.3	0.2	2.6	8.0	0.5	9.0	0.0	0.0
	89.68	3.0	0.3	0.2	2.6	8.0	0.3	9.0	0.0	0.0
Rainfod Biold	5.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
h Housing Imits	167.7	3.6	0.4	8.9	1.7	4.1	1.8	0.0	0.1	0.0
	21.5	0.0	0.4	2.8	9.0	0.8	0.7	0.3	0.1	0.1
	20.2	6.0	4,0	2.6	6.0	0.7	0.7	0.3	0.1	0.1
Factories	5.	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
d Infrastructure	136.7	3.6	1.2	18.1	2.1	1.1	9.0	0.2	0:0	0.0
	67.2	8.1	0.8	13.4	1.0	0.0	0.0	0.0	0.0	0.0
Educational Facilities	50.2	1.8	0.5	8.6	0.4	0.0	0.0	0.0	0.0	0.0
Medical Facilities	17.0	0.0	0.3	3.6	9.0	0.0	0.0	0.0	0.0	0.0
Infrastructure Damage	69.5	3.5	0.4	4.7	1.2	I.I	9.0	0.2	0.0	0.0
2 Indirect Damage	41.7		0.2	2.8	0.7	0.7	0.4	0.1	0.0	0.0
3 Total	458.8	12.2	2.5	30.8	7.7	7.5	4.1	1.2	0.2	0.2
					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		٠			
	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Trem.	Cristobai	River/	Dingras	Jo	River	River	River	River	Bongo	Bongo
	Sarrat	Mandaloque	· )	Dingras	Basın	Basin	Basin	Basin		
1 Direct Damage Total	3.2	9.3	6.9	12.3	119.4	72.5	81.5	30.6	7.5	13.4
2 Acrientitural Production	0.3	M	7.7	1.3	29.4	16.5	19.7	7.5	1.3	2.5
	0.3	3.	T.T	1.3	29.1	16.1	19.7	7.2	1.3	2.5
- Rainfed Field	0.1	0.0	0.1	0.0	0.3	0.4	0.0	0.3	0.0	0.0
b. Housing Units	0.1	3.3	3.4	3.8	52.8	29.8	34.8	10.9	3.1	7.2
	0.1	0.5	5.0	0.3	4.6	2.8	3.3	1.6	0.2	0.1
	0.0	0.5	0.5	0.2	4.3	2.5	3.3	1.5	0.2	1.0
Factories	0.1	0.0	0:0	0.1	0.3	0.4	0.0	0.1	0.0	0.0
d Infrastructure	2.6	2.5	1.8	6.9	32.6	23.4	23.7	10.6	2.9	2.8
	2.1	6.0	9.0	4.9	12.7	11.3	10.2	5.5	1.6	0.5
Educational Facilities	1.4	6.0	9.0	1.4	8.8	10.4	8.6	5.5	0.0	0.0
Medical Facilities	0.7	0.0	0.0	3.4	3.9	0.0	1.5	0.0	1.6	0.5
- Infrastructure Damage	0.5	1.6	::	2.0	19.9	12.1	13.6	5.1	1.3	2.2
2. Indirect Damage	0.3	0.0	0.7	1.2	6.11.9	7.2	8.7	3.15 6.	အ လ	1.3
	3.5	10.2	7.6	13.5	131.4	7.67	89.7	33.7	8.3	14.8

Table C.5.24 Probable Damage by Flood Inundation of 10 Year Return Period

							D)	nit Million Per	sos at 1996 Market	ket Prices)
•	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	Sen
Item	Flood Area	Laoag	Lacag	of	Lacag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Laoag		Nicolas	Sarrat	Sarrat	Sarrat	Sampt
1. Direct Damage Total	508.4	16.7	5.7	47.5	12,0	17.4	4.2	2.0	0.7	0.2
a. Agricultural Production	102.1	4.3	0.7	4,0	3.2	1.1	9.0	6.0	0	0
- Irrigated Field	100.3	4.3	0.7	0.4	3.2	1.1	0.3	6.0	0.1	0.0
- Rainfed Field	8.1	0.0	0.0	0.0	0.0	0.0	0,3	0.0	0.0	0.0
b. Housing Units	208.1	8.8	2.3	15.2	4.7	11.7	2.1	0.2	0.3	0.0
c. Industry	25.9	1.5	9.0	3.6	0.7	1.1	0.8	9.0	0.2	0.1
<ul> <li>Shoping Stores</li> </ul>	24.2	1.5	9.0	3.4	0.7	1.0	0.8	9.0	0.2	0.1
	1.7	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0
d. Infrastructure	172.3	5.1	2.2	28.4	3.3	3.5	0.7	0.3	0.1	0.0
- Social Infrastructure	87.5	2.4	1.2	20.4	1,3	9.0	0.0	0.0	0.0	00
Educational Facilites	63.0	2.4	0.7	13.9	0.5	9.0	0.0	0.0	0.0	0.0
Medical Facilites	24.5	0.0	0.5	9.9	8.0	0.0	0.0	0.0	0.0	0.0
	2.3	2.8	1.0	7.9	2.0	2:9	0.7	0.3	0.1	0.0
	50.8	1.7	9.0	4.8	1.2	1.7	0.4	0.2	0.1	0.0
3. Total	559.2	18.4	6.3	52.3	13.1	19.2	4.6	2.2	8'0	0
	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Caper
Item	Cristobal	River/	Dingras	, S	River	River	River	River	Bongo	Волдо
	Sarrat	Mandaloque		Dingras	Basin	Basin	Basin	Basin	<b>}</b>	•
<ol> <li>Direct Dumage Total</li> </ol>	5.1	12.8	5.6	19.4	130.8	77.6	90.2	31.6	10.1	14.9
a. Agricultural Production	0.5	3.5	7	2.1	31.6	17.9	21.4	7.9	1.5	2.8
- Irrigated Field	0.3	3.5	1.2	2.1	31.3	17.5	21.3	7.5	1.5	8:
	0.2	0.0	0.2	0.0	0.3	0.4	0.0	0.3	0.0	0.0
	0.3	4.1	5.4	4.8	58.9	30.9	38.2	11.3	4.8	7.4
c. Industry	0.2	1.0	0.5	0.4	4.9	3.1	3.6	1.7	0.4	1.0
- Shoping Stores	0.0	0.1	0.5	0.3	4.5	2.6	3.5	1.6	0.4	1.0
	0.2	0.0	00	0.1	0.4	0.5	0.0	0.1	0.0	0.0
d. Infrastructure	4.1	4.3	2.2	12.1	35.4	25.8	27.1	10.7	3.3	3.6
- Social Infrastructure	3.2	2.1	9.0	8.9	13.6	12.8	12.1	5.5	1.6	1.1
Educational Facilities	2.4	2.1	9.0	2.7	9.7	11.3	10.1	5.5	0.0	9.0
Medical Facilites	0.8	0.0	0.0	6.2	3.9	1.6	2.0	0.0	1.6	0.5
- Infrastructure Damage	0.8	2.1	1.6	3.2	21.8	12.9	15.0	5.3	1.7	2.5
	0.5	1.3	6.0	1.9	13.1	7.8	0.6	3.2	1.0	1.5
3. Total	5.6	14.1	10.4	21.3	143.9	85.4	99.2	34.8	11.2	16.4

Table C.5.25 Probable Damage by Flood Inundation of 25 Year Return Period

				• • • • • • • • • • • • • • • • • • • •			)	Unit: Million Per	sos at 1990 Ma	rice Prices)
	Probable	Tangid	Suvo	Poblacion	Camangaan	Poblacion		Sam	Sto.	San
, ton	Flood Area	Laoac	Laoag	jo	Laoag	of San	7-1	Felipe	Tomas	Marcos
***************************************	Total	•	3	Laoag	) .	Nicolas		Sarrat	Sarrat	Sarrat
1 Direct Damage Total	632.8	26,8	7.1	72.5	19.1	24.6		3.1	6.0	0.5
a Aericultural Production	117.3	5.5	7	0.7	4.7	1.3		1.2	0.2	0.1
Trioated Field	115.1	5,5	7	0.7	4.7	1.3		1.2	0.2	0.1
Boing Field	22	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Therefore I have	4 Lyc	11.6	2.7	21.0	8.5	14.9		0.3	0.3	0.0
o Industry	33.1	2.2	9.0	4.7	0.1	2.0		1.1	0.3	0.2
	308	2.2	9.0	4	1.0	1.6		1.1	0.3	0.2
Entopies	2.3	0.0	0.0	0.3	0.1	0.4		0.0	0.0	0.0
Carry	2151	7.5	2.6	46.1	4.9	6.3		0.5	0.1	0.1
Social Infrastructure	9 601	3.0	4	34.1	1.7	2.2		0.0	0.0	0.0
Educational Facilities	74.2	2.5	0.7	19.1	0.7	2.0		0.0	0.0	0.0
Medical Facilities	35.4	0.5	0.7	14.9	1.0	0.3		0.0	0.0	0.0
- Infrastructure Damace	105.5	4.5	1.2	12.1	3.2	4.1	1.5	0.5	0.1	0.1
2 Indirect Damage	63.3	2.7	0.7	7.3	6.1	2.5		0.3	0.1	0.0
3 Total	696.1	29.5	7.8	79.8	21.0	27.0		3.4	1.0	0.5

	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
item	Cristobal	River/	Dingras	o	River	River	River	River	Bongo	Bongo
	Sarrat	Mandalogue	,	Dingras	Basin	Basin	Basın	Basin		
Direct Damage Total	6.0	18.7	12.8	25.5	142.9	90.3	102.7	40.2	12.3	18.3
a Agricultural Production	7.0	4.5	1:7	3.0	33.9	19.3	23.2	9.1	2.1	3.0
- Imposted Field	60	4	1.5	3.0	33.5	18.9	23.2	8.7	2.1	3.0
Rainfed Field	03	0.0	0.2	0.0	0.4	9.0	0.0	0.3	0.0	0.0
h Housing Units	90	0.9	7.8	8.2	4.1	39.3	45.8	16.9	5.9	9.4
c Inclusive	0.5	2.0	0.5	4.0	5.2	3.8	3.7	2.0	9.0	1.2
Shoring Stores	00	2.0	0.5	0.3	4 8	3.4	3.6	2.0	9.0	1.2
Factories -	0.2	10	0.1	0.1	4.0	0.5	0.0	0.1	0.0	0.0
/ Infrastmenture	4.6	62	2.7	13.8	39.6	27.9	30.1	12.2	3.7	4.6
- Social Infrastructure	3.6	<del>[</del>	9.0	5.6	15.8	12.8	12.9	5.5	1.6	1.6
Educational Facilities	000	8	9.0	ST M	10.9	11.3	11.0	5.5	0.0	9.0
Medical Facilities	8 C	0.0	0.0	6.2	4.9	9.1	2.0	0.0	1.6	1.0
- Infrastructure Damage	0	1.6	2.1.2	4.2	23.8	15.0	17.1	6.7	2.0	3.0
7 Indirect Dannage	90	6.1	13	2.5	14.3	0.6	10.3	4.0	1,2	1.8
7,747	7	20.5	14.0	28.0	157.2	99.3	113.0	44.2	13.5	20.1

Table C.S.26 Probable Damage by Flood Inundation of 50 Year Return Period

Item	Probable	Tanoid	Cimb	Doblacion		Poblocion		٤		
		1111111	orno	10010000	Camangaan	1001001	E S	EZ.		F.
	Flood Area	Laoag	Laoag	ું જ	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total			Lacag		Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
. Direct Damage Total	755.8	43.0	12.8	94.6	21.4	39.9	10.0	3.8	1.3	1.0
a. Agricultural Production	132.3	7.5	16	0.7	6.2	2.3	2.0	1.4	0.4	0.3
- Imigated Field	129.9	7.5	1.6	0.7	6,2	2.2	1.6	1.4	0.4	0.2
- Rainfed Field	2.4	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.1
b. Housing Units	322.8	17.2	6.3	31.3	8.5	20.9	8.4	0.5	0.3	0.3
c. Industry	39.0	3.5	6.0	5.4	1.2	3.5	1.5	1.3	0.4	0.3
- Shoping Stores	36.0	3.5	60	5.1	1.1	2.7	4.1	1.3	0.4	0.3
- Factories	3.0	0.0	0.0	0.3	0.1	0.8	0.0	0.0	0.0	0.0
d. Infrastructure	261.8	14.8	4.0	57.2	5.6	13.2	1.7	9.0	0.2	0.2
- Social Infrastructure	135.8	7.6	1.9	414	2.0	6.5	0.0	0.0	0.0	0.0
Educational Facilities	87.0	3.6	1.2	24.0	1.0	3.0	0.0	0.0	0.0	0.0
Medical Facilites	48.8	4.0	0.7	17.4	1.0	3.6	0.0	0.0	0.0	0.0
- Infrastructure Damage	126.0	7.2	2.1	15.8	3.6	9.9	1.7	9.0	0.2	0.2
	75.6	4.3	1.3	5.6	2.1	4.0	1.0	0.4	0.1	0.1
3. Total	831.3	47.3	14.0	104.1	23.6	43.9	11.0	4.2	1.4	1.1
	San	Guisit	Suvo	Poblacion	Cum	Solsona	Madonean	Papa	Lower	I Someting
, m	, adopted	Distant/	Dinorne	,	Diving	Direct	2.0	politica C	2000	2
ııçııı		Mandalogue	Sangara.	Dingras	Basin	Basin	Basin	Parsin	congo	Dongo
Direct Damage Total	ı	20.6	18.8	36.6	153.8	98.5	112.4	44.2	13.5	22.5
a. Agricultural Production	0.7	8.4	1.9	4.5	35.1	20.7	25.2	10.01	2.5	4
- Irrigated Field	0.3	4.8	1.7	4.5	34.7	20.3	25.1	9.6	2.5	4.6
- Rainfed Field	0.3	0.0	0.2	0.0	4,0	0.4	0.0	0.3	0.0	0.0
b. Housing Units	0.7	9.9	12.1	11.8	70.9	43.3	50.9	18.5	6.4	11.3
c. Industry	0.2	2.4	9.0	0.5	5.3	4.2	3.8	2.2	0.7	
- Shoping Stores	00	2.4	0.5	0.3	4.0	3.5	3.8	2.1	0.7	1.3
- Factories	0.2	0.1	0.3	0.2	0.4	9.0	0.0	0.1	0.0	0.0
d. Infrastructure	5.4	6.7	4.2	19.8	42.5	30.4	32.6	13.6	3.9	5.3
- Social Infrastructure	4.3	3.2	1.1	13.7	16.9	14.0	13,8	6.2	1.6	97
Educational Facilities	3.3	3.2	1.1	4.9	11.5	11.9	11.4	6.2	0.0	9.0
Medical Facilites	1.0	0.0	0.0	8.8	5.3	2.0	2.4	0.0	1.6	1.0
<ul> <li>Infrastructure Damage</li> </ul>	12	3.4	3.1	6.1	25.6	16.4	18.7	7.4	2.2	3.8
2. Indirect Damage	0.7	2.1	1.9	3.7	15,4	6.6	11.2	4.4	1.3	2.3
3. Total	7.7	22.6	20.7	40.2	169.2	108.4	123.7	48.7	14.8	24.8

B

Table C.5.27 Probable Damage by Flood Inundation of 100 Year Return Period

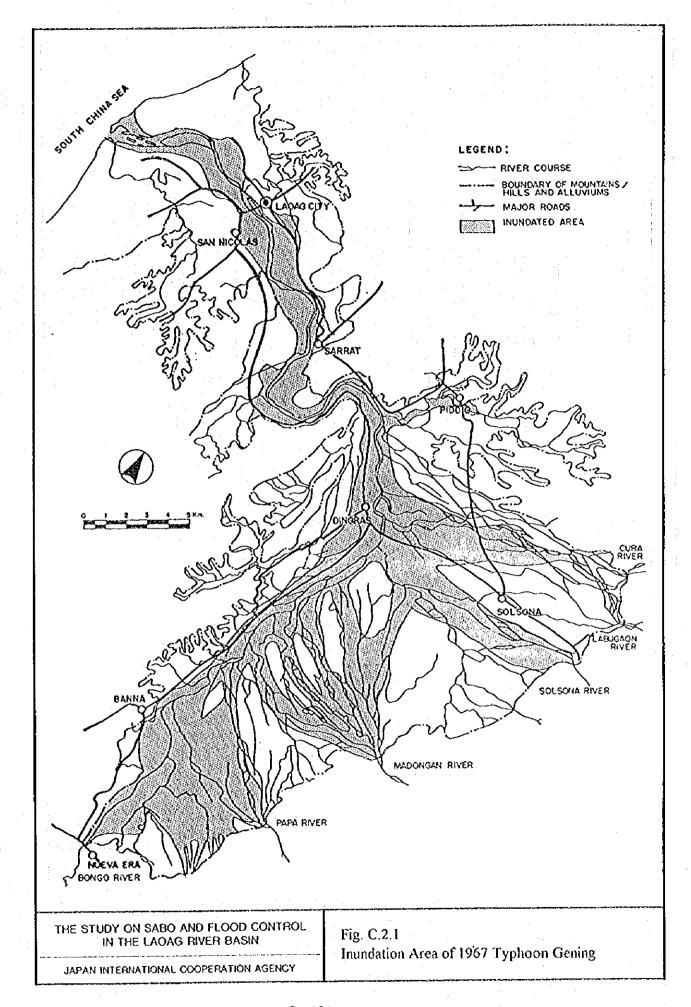
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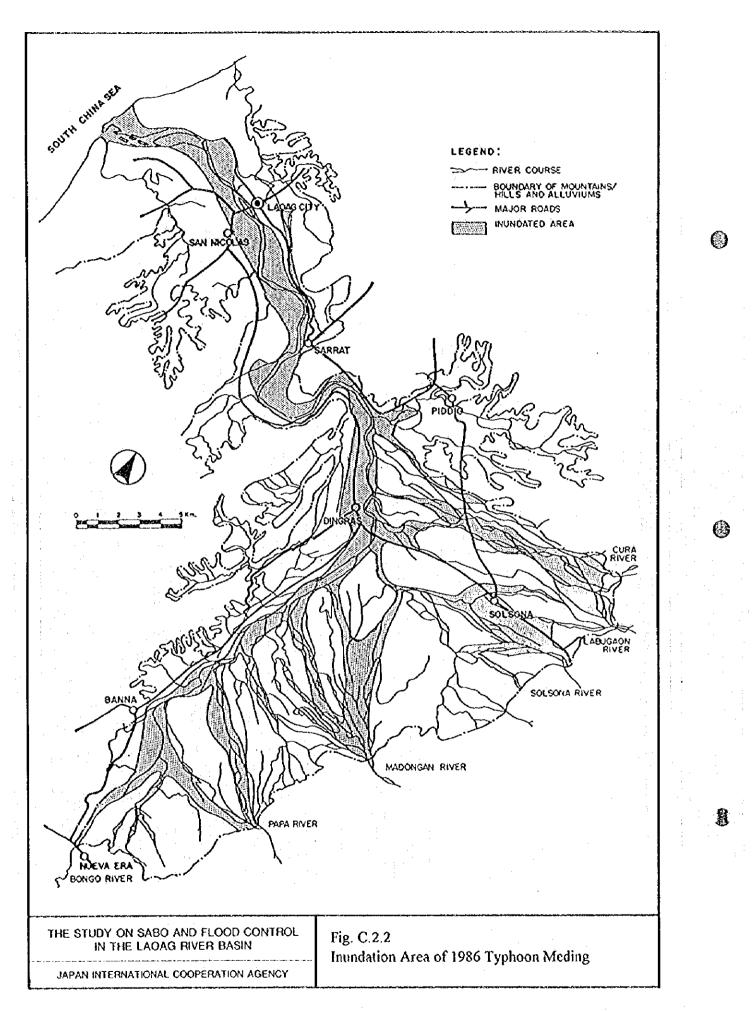
							ດ)	nit: Million Pes	os at 1996 Mar	ket Prices)
	Probable	Tangid	Suyo	Poblacion	Camangaan	Poblacion	San	San	Sto.	San
Item	Flood Area	Laoag	Laoag	of of	Laoag	of San	Manuel	Felipe	Tomas	Marcos
	Total	•		Laoag	١,	Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
1. Direct Damage Total	830.7	51.3	14.5	100.3	23.2	49.1	14.4	5.5	1.7	1.0
a. Agricultural Production	146.6	9.8	2.0	0.7	7.1	3.0	4.1	1.6	9.0	0.3
- Irrigated Field	144.0	9.8	2.0	0.7	7.0	2.9	3.6	1.6	0.5	070
- Rainfed Field	2.6	0.0	0.0	0.0	0.1	0.1	0.5	0.0	0,1	0.1
b. Housing Units	357.2	19.9	7.1	33.4	8.7	25.3	5.5	0.7	4.0	0.3
	43.7	4.6	6.0	5.6	1.3	4.5	2.1	1.8	4,0	0.3
	40.2	4,6	6.0	5.2	1.2	3.4	2.0	1.8	4,0	0.3
- Factorics	3.4	0.0	0.0	0.3	0.1	1.2	0.1	0.0	0.0	0.0
d. Infrastructure	283.2	17.0	4.5	60.5	6.1	16.3	2.7	1.5	0.3	0.2
	14.7	8.4	2.1	43.8	2.2	8.1	0.3	9.0	0:0	0.0
Educational Facilites	92.3	4.2	1.2	24.4	1.2	4.2	0.3	0.3	0.0	0.0
Medical Facilites	52.4	4.2	0.8	19.4	0.1	3.9	0.0	0.3	0.0	0.0
- Infrastructure Dannage	138.5	8.5	2.4	16.7	3.9	8.2	2.4	6.0	0.3	0.2
2. Indirect Damage	83.1	5.1	1.4	10.0	2.3	4.9	7.	0.5	0.2	0.1
	913.8	56.4	15.9	110.3	25.5	54.0	15:8	0.9	1.9	1.1
			:							
	San	Grier	Suvo	Poblacion	Cura	Solsona	Madonean		Lower	Upper
,	Cristobal	River/	Dingras	0	River	River	River		Bongo	Bongo
	Sarrat	Mandalogue	•	Dingras	Basin	Basin	Basin		•	,
1 Direct Damage Total	7.0	20.9	18.8	40.9	162.4	111.6	125.3		13.9	23,4
a. Agricultural Production	0.7	6.4	1.9	6.5	37.4	22.5	26.3		2.7	4. 8.
- Irrigated Field	0.3	4.9	1.7	5.9	37.0	22.0	26.3		2.7	4.8
- Rainfed Field	0.3	0.0	0.2	0.0	0.4	0.5	0.0	0,3	0.0	0.0
b. Housing Units	0.7	8.9	12.1	13.7	74.8	51.3	59.5		9:9	11.7
c. Industry	0.2	2.5	9.0	9.0	5.4	4.8	3.9		0.7	1.3
- Shoping Stores	0.0	2.4	0.5	0,4	5.0	4.2	3.8		0.7	1.3
- Factories	0.2	0.1	0.1	0.2	0.4	9.0	0.0		0.0	0:0
d. Infrastructure	5.4	6.7	4.2	20.7	44.8	33.1	35.6		4.0	5.5
- Social Infrastructure	4.3	3.2	1.1	13.9	17.7	14.4	14.7		1.6	1.6
Educational Facilities	3.3	3.2	1:1	5.1	12.4	12.4	12.3		0.0	9.0
Medical Facilites	1,0	0.0	0.0	8.8	5.3	2.0	2.4		1.6	1.0
- Infrastructure Damage	1.2	3.5	3.1	6.8	27.1	18.6	20.9		2.3	3.9
2. Indirect Damage	0.7	2.1	1.9	4.1	16.2	11.2	12.5		1.4	2.3
3. Total	7.7	23.0	20.7	44.9	178.6	122.8	137.8	-	15.3	25.7

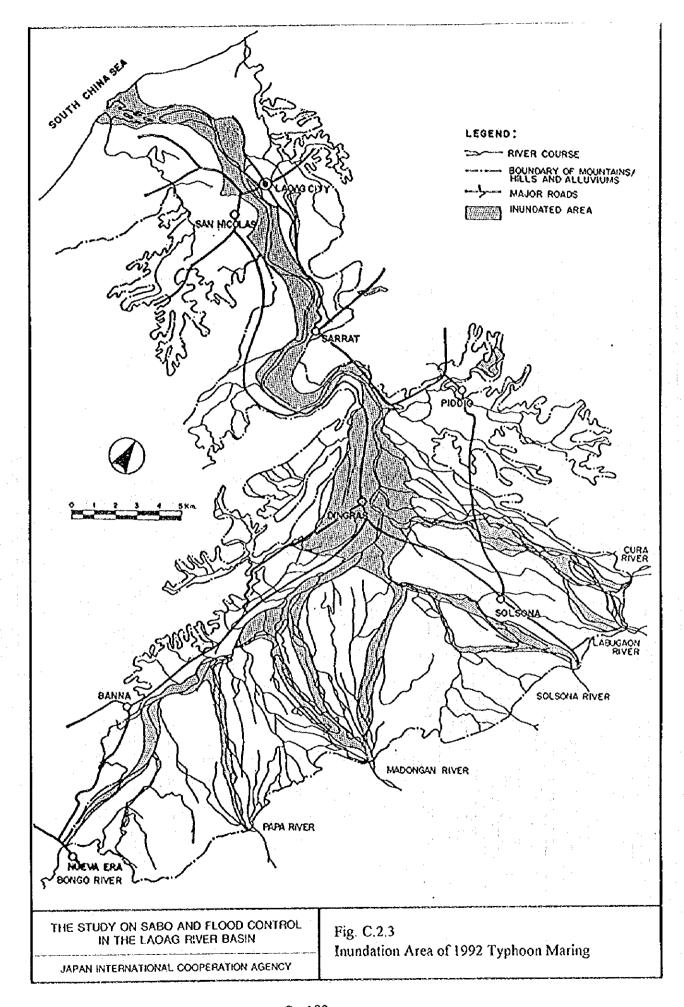
Table C.5.28 Annual Benefit under Present Condition in Financial Terms

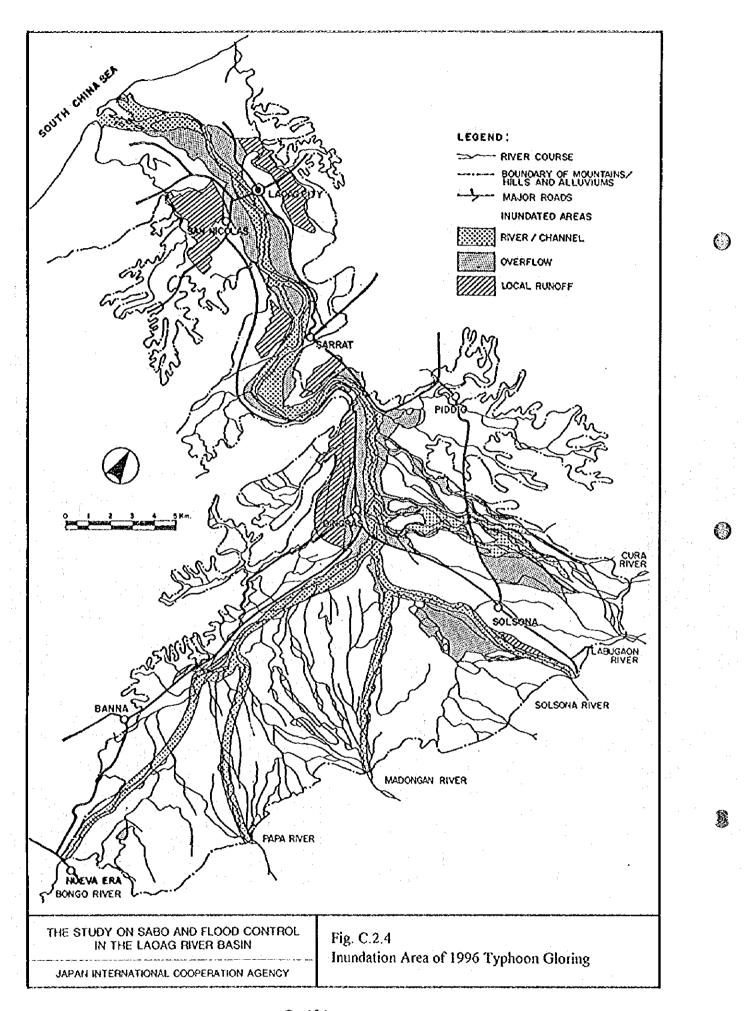
									(Unit: Mil	(Unit: Million Pesos)
Return Period	Probable Flood Area	Tangid	Suyo	Poblacion of	Camangaan Laoag	Poblacion of San	San Manuel	San Felipe	Sto. Tomas	San Marcos
	Total	•		Laoag	) :	Nicolas	Sarrat	Sarrat	Sarrat	Sarrat
						:				
2 - year	75.4	1.3	0.0	1.3	8.0	0.2	0.7	0.1	0.0	0.0
5 - year	189.4	3.8	0.4	6.7	2.5	1.5	1.7	0.4	0.0	0.0
10 - year	240.3	5.4	8.0	10.9	3.5	2.8	2.1	9.0	0.1	0.1
25 - year	278.0	8.9	1.2	14.8	4.5	4.2	2.5	0.7	0.1	0.1
50 - year	293.2	7.6	1,4	16.7	5.0	4.9	2.7	8.0	0.2	0.1
100 - year	302.0	8.1	1.6	17.7	5.2	5.4	2.9	6.0	0.2	0.1
	San	Guisit	Suyo	Poblacion	Cura	Solsona	Madongan	Papa	Lower	Upper
Retum Period	Cristobal Sarrat	River/ Mandaloque	Dingras	of Dingras	Kuver Basın	Kiver Basin	Kaver Basin	Kiver Basin	Longo	oguog
2 - year	0.1	2.2	1.3	0.7	22.7	16.1	16.1	7.7	1.6	2.5
5 - year	0.7	5.0	3.2	3.2	56.0	37.7	39.3	17.3	3.8	6.2
10 - year	1.1	6.2	4.1	4.9	69.7	45.9	48.7	20.7	4.8	7.8
25 - year	1.5	7.3	4.9	6.4	78.8	51.5	55.1	23.1	5.5	8.9
50 - year	1.7	7.7	5.2	7.1	82.0	53.6	57.4	24.0	5.8	9.3
100 - year	1.7	7.9	5,4	7.5	83.8	7.42	58.7	24.5	5.9	9.6
						;				

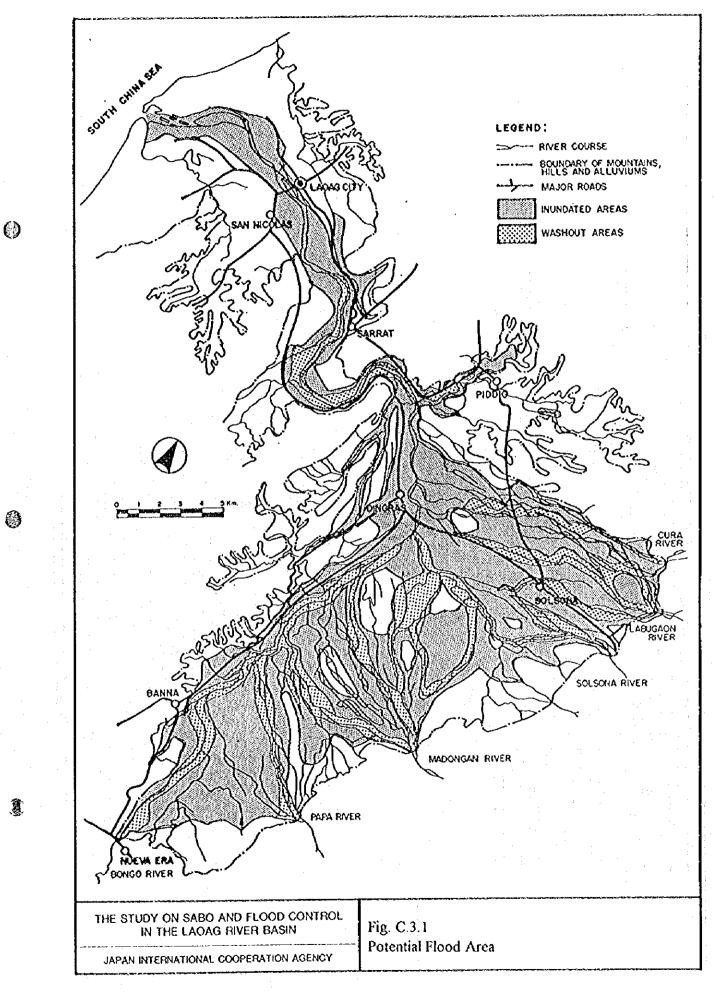
## **FIGURES**

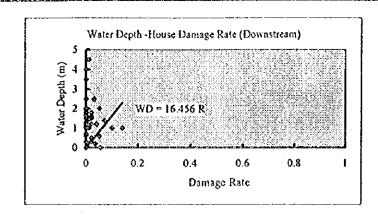


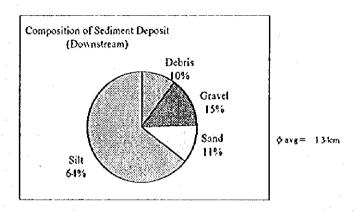


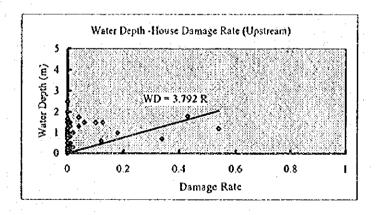


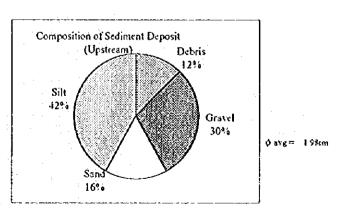






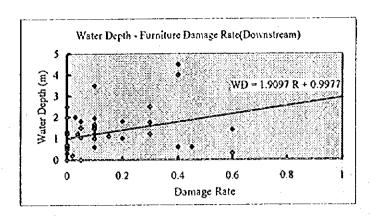


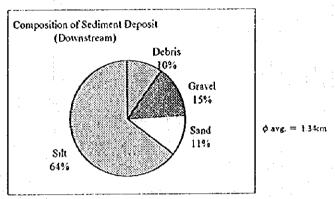


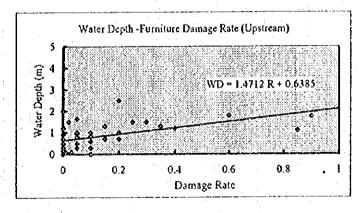


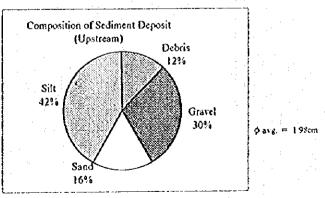
THE STUDY ON SABO AND FLOOD CONTROL IN THE LAOAG RIVER BASIN

Fig. C.3.2 Relation between House Damage Rate and Water Depth





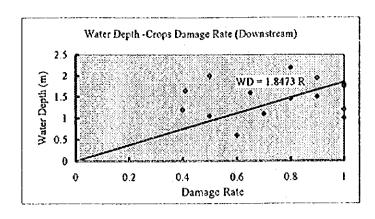


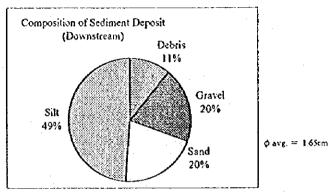


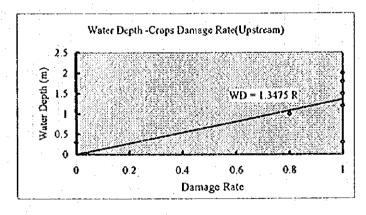
THE STUDY ON SABO AND FLOOD CONTROL IN THE LAOAG RIVER BASIN

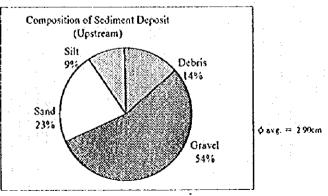
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Fig. C.3.3 Relation between Furniture Damage Rate and Water Depth



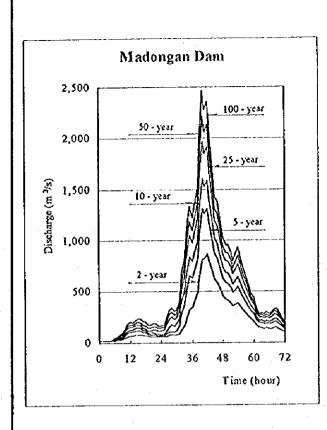






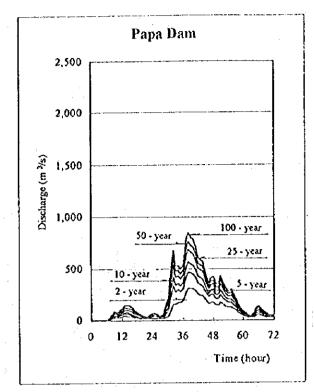
THE STUDY ON SABO AND FLOOD CONTROL IN THE LAOAG RIVER BASIN

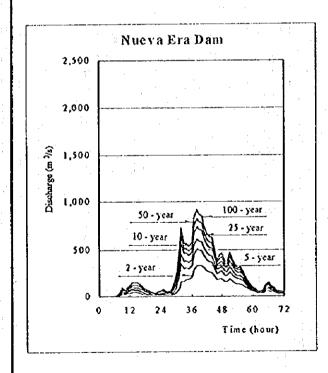
Fig. C.3.4 Relation between Crop Damage Rate and Water Depth

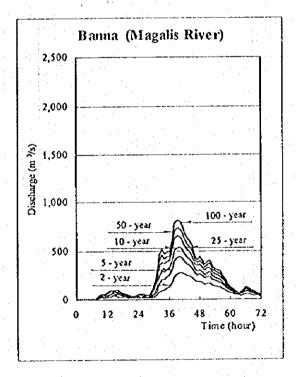


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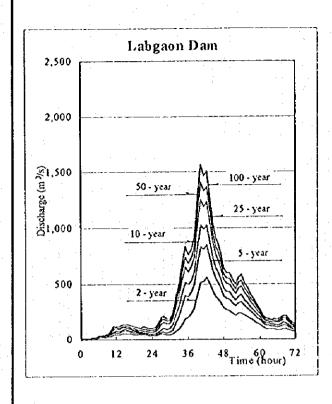


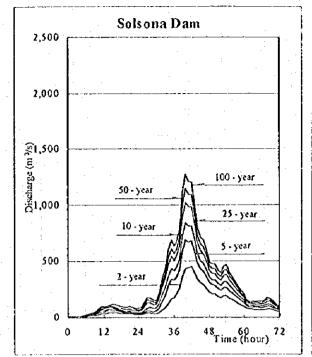


THE STUDY ON SABO AND FLOOD CONTROL IN THE LAOAG RIVER BASIN

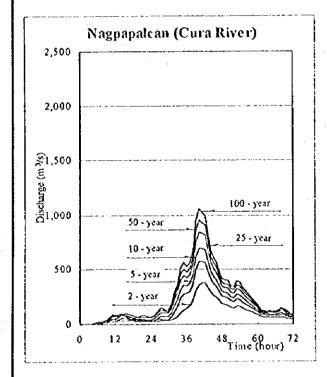
JAPAN INTERNATIONAL COOPERATION AGENCY

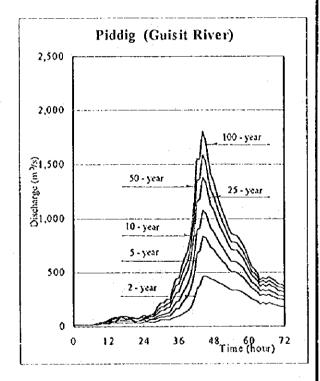
Fig. C.4.1 (1) Probable Flood Hydrograph





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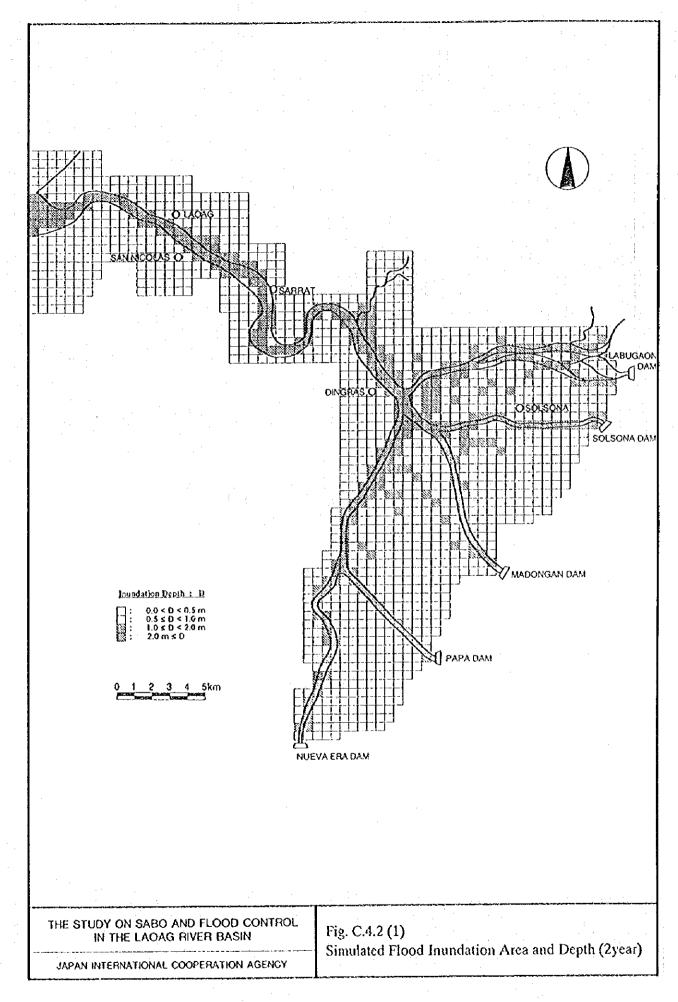


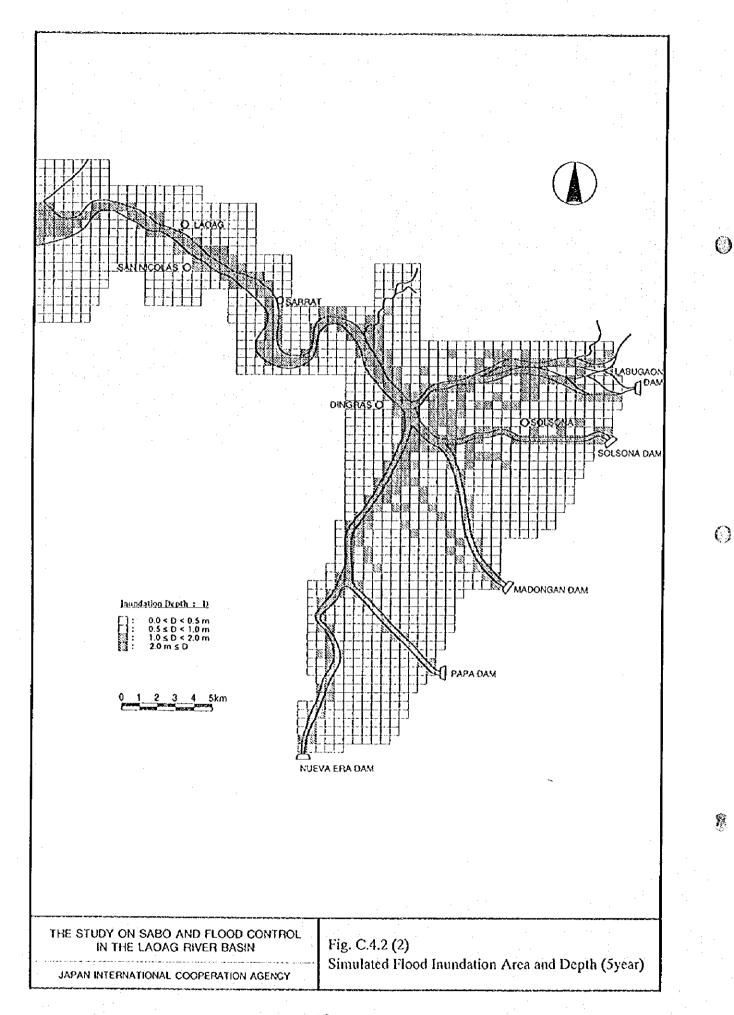


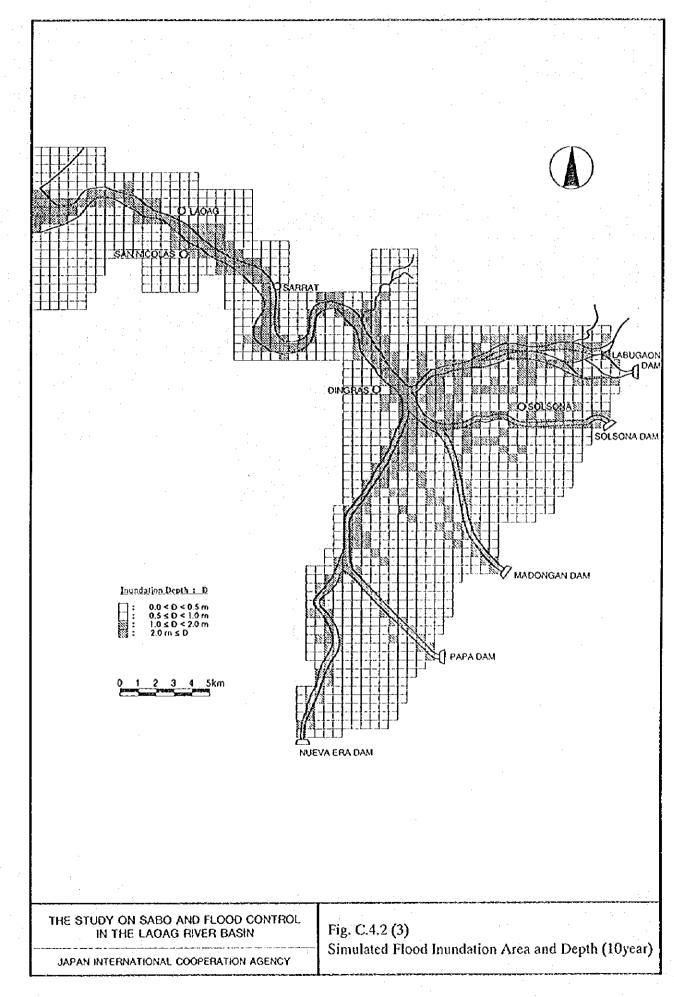
THE STUDY ON SABO AND FLOOD CONTROL IN THE LAOAG RIVER BASIN

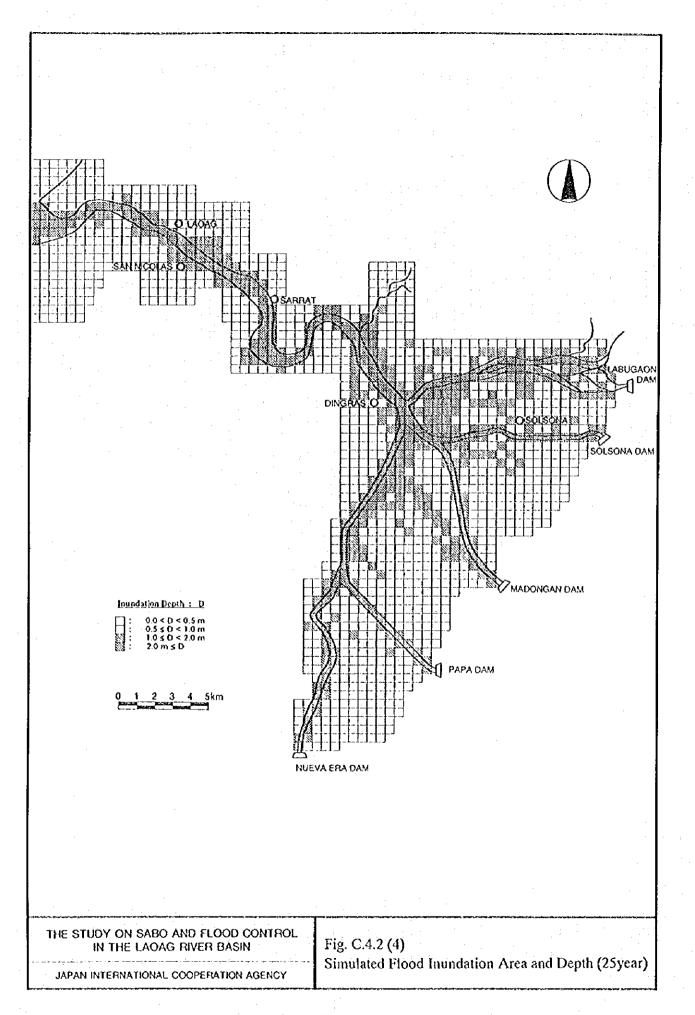
JAPAN INTERNATIONAL COOPERATION AGENCY

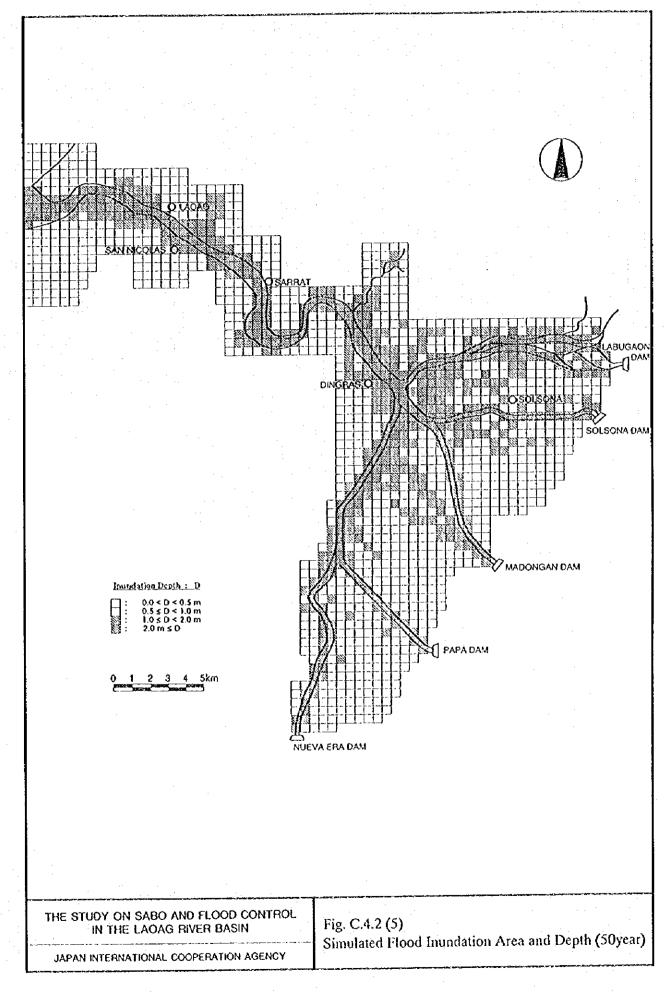
Fig. C.4.1 (2) Probable Flood Hydrograph

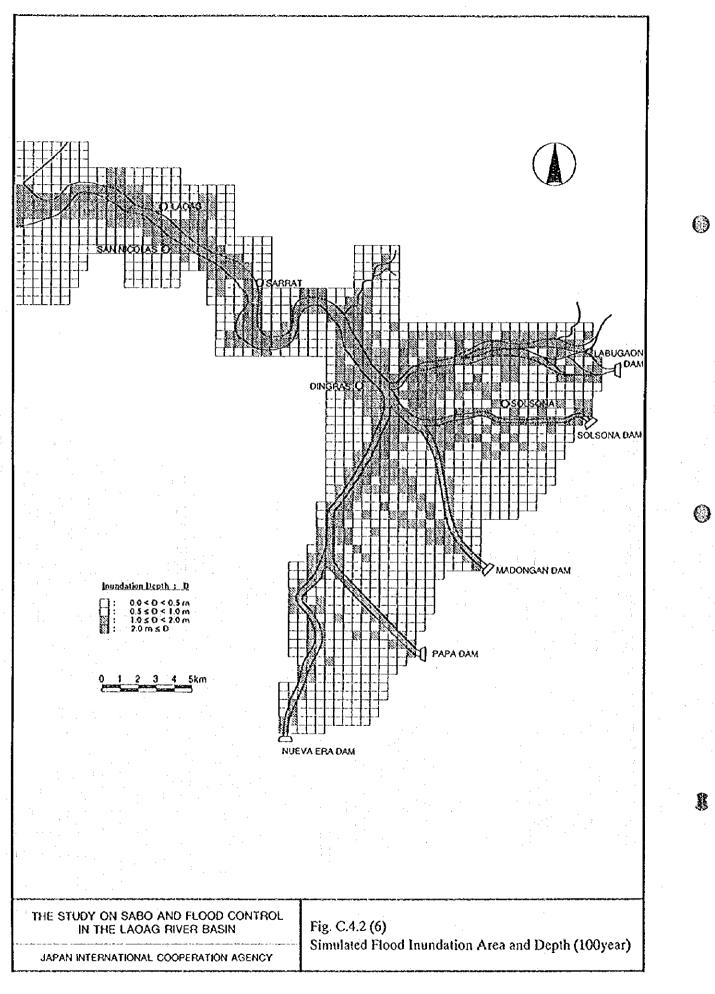


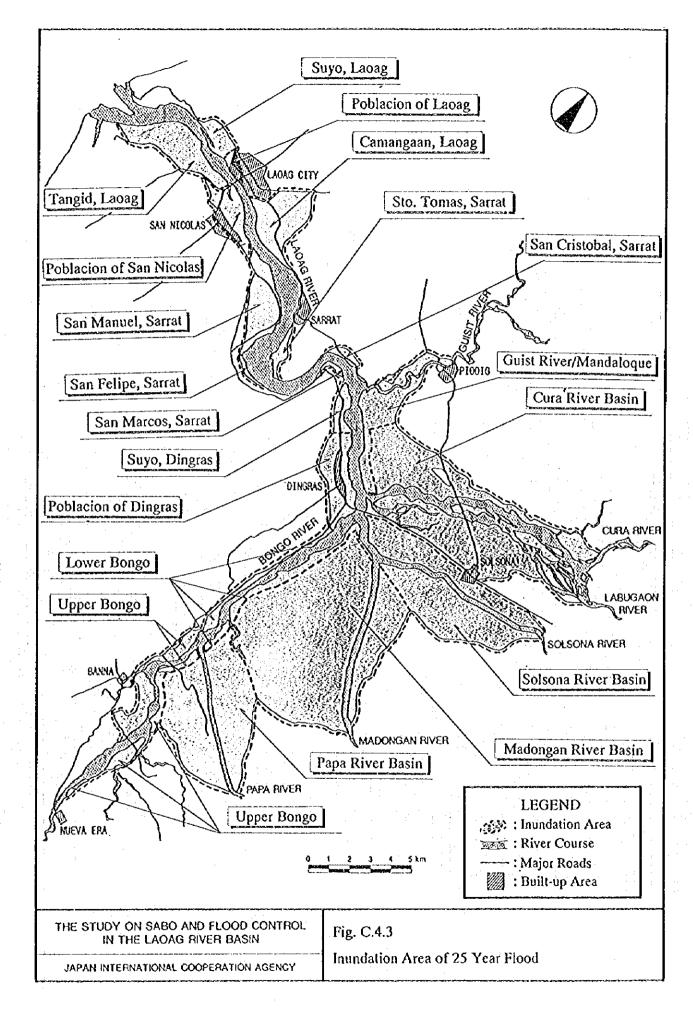




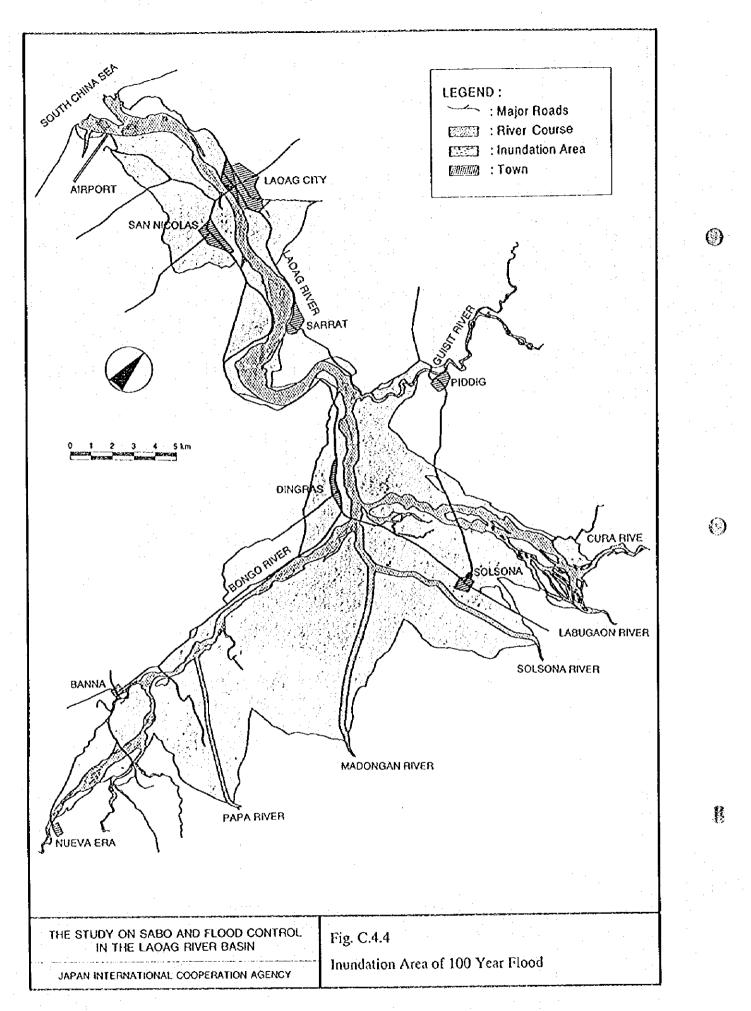


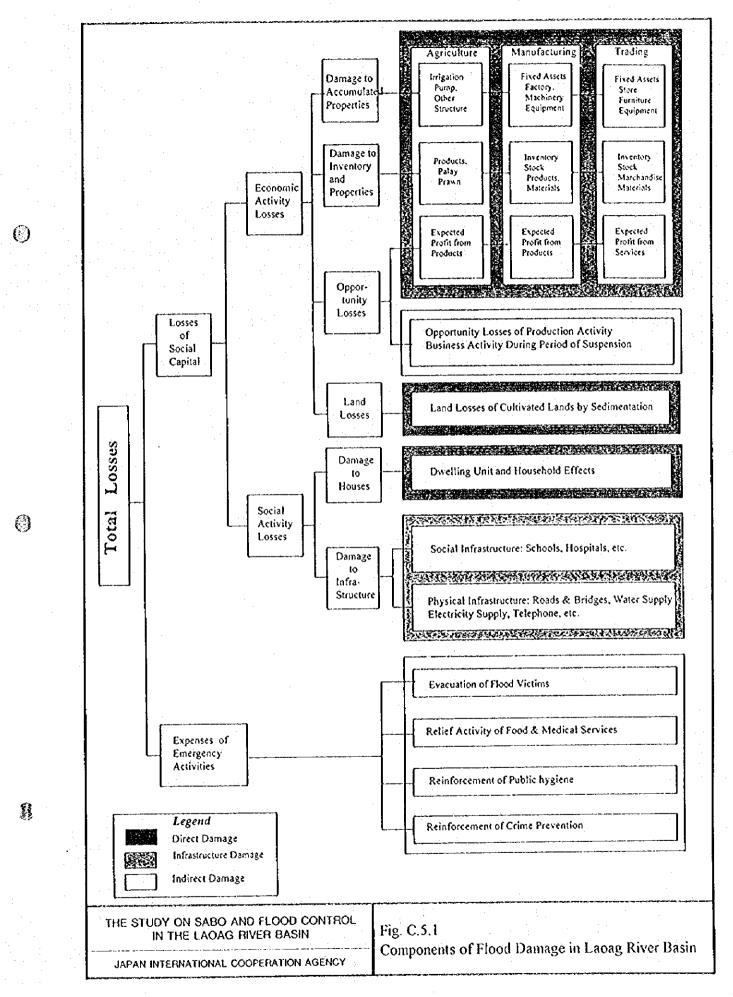


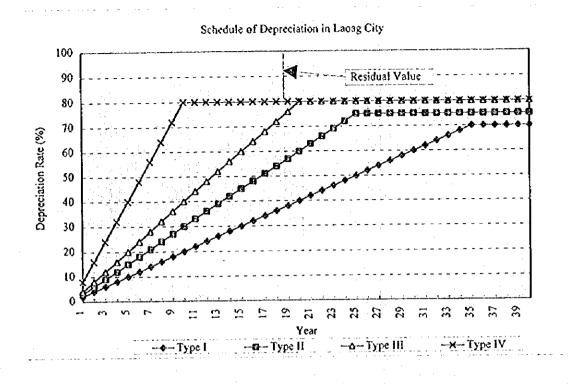


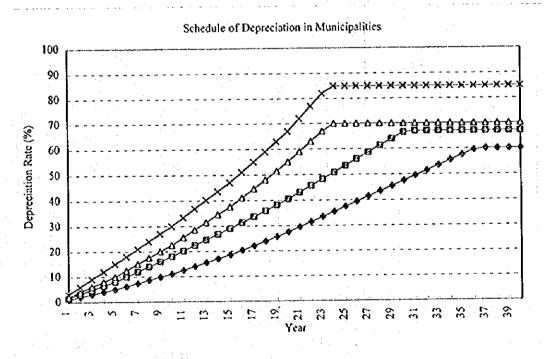


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THE STUDY ON SABO AND FLOOD CONTROL IN THE LAOAG RIVER BASIN

Fig. C.5.2 Depreciation by Type of Building and by Local Government Unit

# ATTACHMENT - A

QUESTIONNAIRE FOR INTERVIEW SURVEY

# SABO AND FLOOD CONTROL IN THE LAOAG RIVER BASIN (1996) QUESTIONNAIRE TO CLARIFY THE FLOODING CONDITIONS AND FLOOD PREPAREDNESS

#### for barangay captain

	Interviewer	<u></u>
0	Date of Interview	<u>,1996</u>
	Time started: AM/PM	
	A. <u>IDENTIFICATION</u> 1. Location Latitude(X) Longitude	ıde(Y) <u>X:</u> Y:
	2. City/Municipality (Check appr	
	2.1 Bacarra	2.8 Batac
	2.2 Vintar	2.9 Pinili
	2.3 Laoag City	2.10 Nueva Era
0	2.4 San Nicolas	2.11 Espiritu
	2.5 Sarrat	2.12 Marcos
	2.6 Piddig	2.13 Dingras
	2.7 Carasi	2.14 Solsona
	4. Barangay	Barangay Number
	5. Address (no. and name of stre	eet)
•	6. Name of Respondent	

B. CHARACTERRISTICS OF THE HOUSEHOL	D		
1. Number of occupants and household in the bar	rangay		
2.1 Occupantspersons			
2.2 Households			
3. Type of dwelling unit (fill out on the line)			
number or %	(or predominan	t type of house)	
3.1 Single-detached			0
3.1.1 Makeshift			
3.1.2 Concrete			
3.1.3 Wood			
3.1.4 Concrete and wood	<u> </u>		
3.1.5 Barong-barong			
3.1.6 Others, specify	(	)	
3.2 Duplex			
3.2.1 Makeshift		4 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	
3.2.2 Concrete	· · · · · · · · · · · · · · · · · · ·		
3.2.3 Wood	<u> </u>		
3.2.4 Concrete and wood	_ <del>`</del> _		
3.2.5 Barong-barong	<del></del>		
3.2.6 Others, specify	(	<b>)</b>	()
3.3 Apartment			
3.3.1 Concrete	<del> </del>		
3.3.2 Wood			
3.3.3 Concrete and wood			
3.3.4 Others, specify	(	) · · · · · · · · · · · · · · · · · · ·	
3.4 Mansion			
3.4.1 Concrete	<u> </u>		
3.4.2 Wood			
3.4.3 Concrete and wood			
3.4.4 Others, specify	(	,··· )	
4. Height of ground floor from street level in me	ters (fill out on t	he following line)	
Number o	or %(or predom	nant type of height)	8
4.1 Less than 1.0 meter (Elev. < -1.0 m)		<del></del>	•
4.2 Below the street level (-1.0 m $\leq$ Elev. $\leq$ 0 m	1)	· · · · · · · · · · · · · · · · · · ·	
4.3 At the street level (same elevation)		<del></del>	
4.4 Above the street level (0 m < Elev. < 1.0 m	)		
45 I meter or more (10 m < Fley)			

	5. Ownership of dwelling unit (fill out Ni	; on the following line umber or %	?)
	5.1 Owned		
	5.2 Rented		
	5.3 Others, specify	(	)
	6. Occupation of the people who live	in the barangay	
		Number or %	<b>6</b>
	6.1 Farmer	·	<b></b>
	6.1.1 With livestock	<u> </u>	· · · · · · · · · · · · · · · · · · ·
	6.1.2 Without livestock	<u> </u>	
	6.2 Public official		<del></del>
	6.3 Dressmaking and weaving	<u> </u>	
	6.4 Restaurant, pub and bar		
	6.5 Sari-sari store and canteen		<del></del> ;
	6.6 Worker of factory		
	6.7 Doctor		
4 - 4	6.8 Nurse		<del></del>
	6.9 Others, specify	<u> </u>	<u>_</u> (
13			
	7. Assessment values of lot (land) and	i house	
	(If he knows, you fill out the follow	ving lines)	
	7.1 Lot (1.0 square meter)	P	<del>_</del>
	7.2 House (per common house)		
	7.2.1 made of concrete	Р	· .
	7.2.2 made of wood	P	
	7.2.3 made of wood and concrete	Р	
	7.2.4 Barong-barong	P	
	7.2.5 Others, specify ( )	P	·
	7.2.6 Extent of 1 household (average)	age)	
		<u></u>	ha / m2

.s ruini	due (Check of Im our	Number	,	
		(e.g. 1, 2, or 1 to 2)	Price(per 1)	
7.3.1	Chest of drawers			
7.3.2	Television			
7.3.3	Carpets			
7.3.4	Dresser			
7.3.5	Living set			
7.3.6	Stereo			
7.3.7	Cabinet			
7.3.8	Table and chair			
7,3,9	Refrigerator			
7310	Others, specify(	)[		

C. ORGANIZATION OF AGR (If no one is farmer/fishern agriculture", go to "D. Organi 1. Area of farm lands 2. Area of farm lands per one 3. Kinds of crops	nan in the tization of soc	parangay, terminate	e "C. Organization (ha or m2) (ha or m2)	of
	Kinds	Month(season) of sowing	Month(season) of harvest	Area
3.1 Irrigated paddy field				
3.2 Rainfed paddy field				
3,3 Sugarcane				
3.4 Corn				
3.5 Rootcrops				
3.6 Legume				
3.7 Others				

## Attachment - A

4.	Price	of crops and I Kinds	ivestocks Unit	Unit price	Yield per ha	
	4.1	Rice				
	4.2	Sugarcane				
	4.3	Corn				
	4.4	Rootcrop				
	4,5	Legume		<u> </u>		lar.
	4.6	Chicken				
	4.7	Cow				
:	4.8	Others				

## 5. Fishery/Aqua-culture

5.1 Kinds of fish and catches/cultivation in ponds/fishpen (fill out box)

Kinds	Season of catch/cultivation (whole or dry season)	Unit	Unit price	Yield
1 · ·				
			·	

	D.	OR	GANIZATION OF SOCIA	AL CONDITIO	ON AND FACTORY
	1.	Pt	ablic offices (fill out the m	imber or words	on the following line)
				Number	Price of construction
		3.1	Elementary school		P
		1.2	High school		P
		1.3	College/University		P
		1.4	Post office		P
		1.5	Park		P
		1.6	Public hall		P
e		1.7	Hospital		P
	:	1.8	Others/specify		P (
			•		P (
* .				· .	P(
•					
	2	. In	frastructure (fill out the m	umber or word	· · · · · · · · · · · · · · · · · · ·
•			1 1	Number	Price of construction
100		2.1	National road	· · · · · · · · · · · · · · · · · · ·	P
	•	2.2	Provincial road		P
	4.1	2.3	Municipality road		P
•		2.4	Barangay road		P
		2.5	Intake/Weir		P
		2.6	Sluice		<b>P</b>
		2.7	Drainage length	m	P
		2.8	Bridge name:	<u> </u>	P
			name:	<u> </u>	P
			name:		P
		•	name:		P
			name:	<u> </u>	P
	3		actory		
			Name of a factory		<del></del>
			Capital of the factory		
• .			Kind of the production _		
			Annual yield		
		3.5	Name of president		
					•

E.

					<b>-</b>
	1.1 Due to local runoff				
	1.2 Due to overbank flow	from a nearby	river or creek		
	1.2.1 Location of overb	- •	year	:	place:
	Longitude:	Latitude:		<del></del>	
	1.3 Due to both				]
	1.4 No flooding		·		1
•	Name of the nearest river	r or creek whic	h caused flood	ing	
	Number of times of flood	ing that were e		_	nbers, you wr
		ing that were e		_	nbers, you wr
	Number of times of flood	ing that were e		_	nbers, you wr
•	Number of times of flood	ing that were e		_	nbers, you wr
•	Number of times of flood name of month and typho	ling that were e	xperienced. (If	he remer	nbers, you wr
•	Number of times of flood name of month and typho  Year of the large flood  (1)year	ling that were e	xperienced. (If	he remer	mbers, you wr
	Number of times of flood name of month and typho  Year of the large flood  (1)year	ling that were e	xperienced. (If typhoon typhoon	he remer	nbers, you w
	Number of times of flood name of month and typho  Year of the large flood  (1)year	ling that were e	xperienced. (If typhoon typhoon	he remer	nbers, you w
•	Number of times of flood name of month and typho  Year of the large flood  (1)year	ing that were e	xperienced. (If typhoon _ typhoon _ typhoon	he remer	
	Number of times of flood name of month and typho  Year of the large flood  (1)year	ing that were e	typhoon typhoon typhoon typhoon	he remer	red from stre

6.	(Check appropriate box)	or response of 5 from the ground hoor of houses
	6.1 1-50 cms	(1) (2) (3)
	6.2 51-100 cms	
	6.3 No flooding over your	r property
7.	Duration of flooding in the b	parangay (Check appropriate box)
·	7.1 Less than 1 hr.	
	7.2 1 hr 5 hrs.	
	7.3 5 hrs 24 hrs.	
	7.4 1 day - 3 days	
	7.5 3days - 7 days	
	7.6 More than 7 days	
8.	Predominant type of flooding	ng (Check appropriate box)
	Flowing Velocity of flood stream	Ponding
9	Extent of flooding during e	ach large flood events (sketch on the topo-map)

10.	Condition of	flood	lwaters (Check ap	propriate b	oox)			
1	0.1 Rocks/deb	ris de	posit					
1	0.2 Sediments	(grave	el) deposit					
1	0.3 Sediments	(sand:	s) deposit					
1	0.4 Sediments	(silts)	deposit		:			
10	0.5 Reasonabl	y clea	r					
1	0.6 Others, sp	ecify	: · · · · · · · · · · · · · · · · · · ·		<del></del>			:
11.	Direct flood d	-	e during the larges	st flood				
	11.1.1 Ye		•		•			
	11.1.2 M		:				•	
	11.1.3 Ty	_		<del></del> -			٠	
	11.2 Agricult	ure/Fi	shery/Livestock		* .			
٢	Kinds		Extent of damage	Damage a	mount or i	ate of d	lamage	e(%)
		1 .					142	<del>``</del>
· [_		·			· · · · · · · · · · · · · · · · · · ·	<del></del>		:
	·	• • •				<u> </u>	•	193
-	<u> </u>	<del></del>			: <u> </u>			<u> </u>
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-		•						
.	- <del></del>			<del> </del>	<del></del>			
-	· · · · · · · · · · · · · · · · · · ·			<b> </b>	:		<del></del>	 :,
L			L					

#### 11.3 Household/Furniture

Kinds	Number of damage			<b>j</b>		
	Totally destroyed	Partially destroyed	Inundated	Damage amount		
Made of concrete						
Made of wood		•				
Made of conc./wood						
Barong-barong						
Makeshift						
Others				anganga mana amana mana kana karratar ya inginina da akan dikanasika araliki ak indasa amani		

Name of furniture

Damage amount or rate of damage(%)

## 11.4 Social/Public structure and factory

Name of structure

Damage amount or rate of damage(%).

12.1 Suspended period of transportation due to flooding  12.1.1 National roaddays  12.1.2 Provincial roaddays  12.1.3 Municipality roaddays  12.1.4 Barangay roaddays  12.2 Suspended period of farming due to flooding  12.2.1 Irrigated fieldsdays  12.2 Non-irrigated fieldsdays  12.3 Suspended period of productive activities due to flooding  Name of factory	
12.1.1 National roaddays 12.1.2 Provincial roaddays 12.1.3 Municipality roaddays 12.1.4 Barangay roaddays 12.2 Suspended period of farming due to flooding 12.2.1 Irrigated fieldsdays 12.2 Non-irrigated fieldsdays 12.3 Suspended period of productive activities due to flooding Name of factorydays  12.4 Suspended period of selling commodities at the store/shop due to flooding Name	
12.1.3 Municipality roaddays 12.1.4 Barangay roaddays  12.2 Suspended period of farming due to flooding 12.2.1 Irrigated fieldsdays 12.2 2 Non-irrigated fieldsdays  12.3 Suspended period of productive activities due to flooding  Name of factorydaysdays  12.4 Suspended period of selling commodities at the store/shop due to flooding  Namedaysdaysdaysdaysdaysdaysdaysdays 12.5 Suspended period of electric supply due to floodingdays 12.6 Affected families and persons due to flooding Number	
12.1.4 Barangay roaddays  12.2 Suspended period of farming due to flooding  12.2.1 Irrigated fieldsdays  12.2 Non-irrigated fieldsdays  12.3 Suspended period of productive activities due to flooding  Name of factorydays days  12.4 Suspended period of selling commodities at the store/shop due to flooding  Namedays daysdaysdaysdaysdays  12.5 Suspended period of electric supply due to floodingdays  12.6 Affected families and persons due to flooding Number	
12.2 Suspended period of farming due to flooding  12.2.1 Irrigated fields	
12.2.1 Irrigated fieldsdays  12.2.2 Non-irrigated fieldsdays  12.3 Suspended period of productive activities due to flooding Name of factorydaysdays  12.4 Suspended period of selling commodities at the store/shop due to flooding Namedaysdaysdaysdays  12.5 Suspended period of electric supply due to floodingdays  12.6 Affected families and persons due to flooding Number	
12.2 Non-irrigated fieldsdays  12.3 Suspended period of productive activities due to flooding Name of factorydaysdays  12.4 Suspended period of selling commodities at the store/shop due to flooding Namedaysdaysdaysdaysdaysdays  12.5 Suspended period of electric supply due to flooding	6
12.3 Suspended period of productive activities due to flooding  Name of factory  days  days  12.4 Suspended period of selling commodities at the store/shop due to flooding  Name  days  days  days  days  days  days  days  days  12.5 Suspended period of electric supply due to flooding  Mane  Number	
Name of factory	
days  12.4 Suspended period of selling commodities at the store/shop due to flooding  Namedaysdaysdaysdays  12.5 Suspended period of electric supply due to floodingdays  12.6 Affected families and persons due to flooding Number	
12.4 Suspended period of selling commodities at the store/shop due to flooding  Name	
Name	
days days  12.5 Suspended period of electric supply due to flooding days  12.6 Affected families and persons due to flooding Number	€
days  12.5 Suspended period of electric supply due to flooding days  12.6 Affected families and persons due to flooding  Number	
days  12.5 Suspended period of electric supply due to flooding days  12.6 Affected families and persons due to flooding  Number	
12.5 Suspended period of electric supply due to floodingdays  12.6 Affected families and persons due to flooding Number	
days  12.6 Affected families and persons due to flooding  Number	
days  12.6 Affected families and persons due to flooding  Number	
12.6 Affected families and persons due to flooding  Number	_ :
Number	
Number	*
12.6.1 Affected families	
12.0.1 Itticolog laminos	
12.6.2 Affected persons	
12.6.3 Casualty	
12.6.4 Injured	
12.7 Other nuisances during flooding and after flooding	

### F. FLOOD FIGHTING/PREPAREDNES

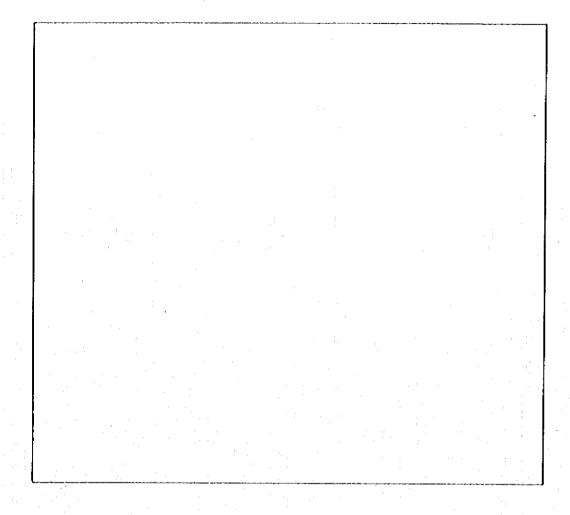
1. Flood preparedness

G.

- -Action taken by residents and related organizations in past flood events.
- -Equipment and materials used for flood prevention measures by residents.
- (e.g. construction dike and spur dike, transfer of furniture to higher place, flood proofing works for the residential houses)

	proofing works for the residential houses)  Year:
	Action taken
	Flooding fighting during floods
٠.	g. emergency work to prevent dike breach, evacuation) Year:
	Action taken
<u>o</u>	THERS
	Experience of having the land washed out by flood water in the barangay.
٠.	(Check appropriate box)
	1.1 Yes No
	1.2 Year:, Month:, Typhoon:
	1.3 Area: ha
*1	1.4 Land Use before the flood:
•	1.5 Present land use:
	1.6 Period to be needed for restoration:

2. Request of the Project for Sediment and Flood control



## ATTACHMENT - B

REQUEST FOR A FLOOD MITIGATION PROJECT

MUNICIPALITY	t for construction of embankment.  BARANGAY	REQUEST
Marcos	Escoda	Construction of embankment
Sarrat	San Francisco (Pob.)	Construction of embankment
Dingras	Lanas	Construction of embankment
Dingras Dingras	.Barong ;	Construction of embankment
Solsona	Maananteng .	Construction of embankment
Solsona	Barcelona	Construction of embankment
San Nicolas	1 San Francisco (Pob.)	Construction of embankment
San Nicolas	San Baltazar (Bo.2) (Pob.)	Construction of embankmen
San Nicolas	San Bartolome (Bo.4) (Pob.)	Construction of embankmen

MUNICIPALITY	BARANGAY	REQUEST
Marcos	Daquioag	Construction of spur dike
Piddig	Bimmanga	Construction of spur dike
Piddia	Mangitayag	Construction of spur dike
Piddig	Libnaoan :	Construction of spur dike
Piddig	Estancia	Construction of spur dike
Laoag City	30-a Suyo	Construction of spur dike
Lacag City	1 San Lorenzo (Pob.)	Construction of spur dike
Dingras	Sagpalan	Construction of spur dike
Dingras Dingras	Lanas	Construction of spur dike
Dingras Dingras	Foz	Construction of spur dike
Dingras	Elizabeth	Construction of spur dike
Dingras	Francisco	Construction of spur dike
	Parado(Bangay)	Construction of spur dike
Dingras	Bubuos	Construction of spur dike
Solsona Marcos	Elizabeth (Culao)	Construction of spur dike

Table	M-3	Req	uest	for t	dredg	ing	of	the	river.

	it for dreaging of the river.		
MUNICIPALITY	BARANGAY	REQUEST	·
Marcos	Elizabeth (Culao)	Dredging of the river	
Marcos	Escoda	Dredging of the river	
Marcos	Pacifico (Agunit)	Dredging of the river	
Marcos	Fortuna	Dredging of the river	
Marcos	Valdez	Dredging of the river	
Marcos	Daquioag	Dredging of the river	
Espiritu	Масауеруер	Dredging of the river	
Espiritu	Caribquib	Dredging of the river	
Espiritu	Cataglaguen	Dredging of the river	
Espiritu	Sinamar	Dredging of the river	
Espiritu	Hilario (Pob.)	Dredging of the river	
Espiritu	Caestebanan	Dredging of the river	
Piddig	Gayamat	Dredging of the river	
Piddig	Bimmanga	Dredging of the river	
Piddig	Mangitayag	Dredging of the river	
Piddig	Libnaoan	Dredging of the river	
Laoag City	53 Rioeng	Dredging of the river	
Laoag City	30-b Santa Maria	Dredging of the river	. :
Lacag City	51-a Nangalisan East	Dredging of the river	
Laoag City	34-b Gabu Norte East	Dredging of the river	
Lacag City	1 San Lorenzo (Pob.)	Dredging of the river	
Nueva Era	Santo Nino	Dredging of the river	
Nueva Era	Cabittauran	Dredging of the river	
Nueva Era	Cabittauran	Dredging of the river	
Nueva Era	Caray	Dredging of the river	
Nueva Era	Poblacion	Dredging of the river	
Solsona	Laurela (Pob.)	Dredging of the river	
Dingras	Mandaloque	Dredging of the river	
Sanat	San Andres	Dredging of the river	
Sarrat	San Francisco (Pob.)	Dredging of the river	
Sanat	San Joaquin (Pob.)	Dredging of the river	
Sanat	San Manuel	Dredging of the river	
Sanat	San Antonio	Dredging of the river	
Sanat	San Isidro	Dreaging of the river	
	San Felipe	Dredging of the river	
Sanat Sanat	San Cristobal	Dredging of the river	
The state of the s	San Jose	Dredging of the river	
Sarrat		Dreaging of the river	
Sarrat	Santo Tomas	Dredging of the river	
Sarrat	San Marcos	Dredging of the river	
Sarrat	San Leandro (Pob.)		
Sarrat	San Vicente (Pob.)	Dredging of the river	
Dingras	Sagpatan	Dredging of the river	
Dingras	Lanas	Dredging of the river	
Dingras	San Marcos	Dredging of the river	
Dingras	Medina	Dredging of the river	
Dingras	Foz	Oredging of the river	
Dingras	Ver	Dredging of the river	
Dingras	Elizabeth	Dredging of the river	
Oingras	Barong	Dredging of the river	
Dingras	Baresbes	Oredging of the river	
Dingras	San Marcelino (Padong)	Oredging of the river	
Solsona	Maananleng	Dredging of the river	
Solsona	Darasda <b>s</b>	Oredging of the river	

MUNICIPALITY	st for dredging of the river.  BARANGAY	REQUEST
Solsona	Aguitap	Dredging of the river
Dingras	Sulguiano	Dredging of the river
Dingras	Lumbad	Dredging of the river
Dingras	Bagut	Dredging of the river
Dingras	Guerrero (Pob.)	Dredging of the river
Dingras	Dancel	Dredging of the river
Dingras	Albano (Pob.)	Dredging of the river
Dingras	Madamba (Pob.)	Dredging of the river
Dingras	Suyo (3)	Dredging of the river
Dingras	Root (Baldias)	Oredging of the river
Dingras	Puruganan (Pob.)	Dredging of the river
Dingras	Bungcag	Dredging of the river
Dingras	Peralta (Pob.)	Dredging of the river
Solsona	Lipay	Dredging of the river
Solsona	San Juan	Dredging of the river
Solsona	Barcelona	Dredging of the river
Soisona	Taluglog	Dredging of the river
Solsona	Nalasin	Dredging of the river
Solsona	Mariguet	Dredging of the river
	Santa Ana	Dredging of the river
Soisona	Puttao	Dredging of the river
Solsona	Manalpac	Dredging of the river
Solsona	Catangraran	Dredging of the river
Solsona	Nagpatpatan	Oredging of the river
Solsona	Bagbag	Oredging of the river
Solsona	Capunctan	Dredging of the river
Soisona	Bubuos	Dredging of the river
Solsona	Santiago	Dredging of the river
Solsona	Juan (Pob.) (1)	Dredging of the river
Solsona		Dredging of the river
Solsona	Bagbago Bugasi	Dredging of the river
Espiritu		Dredging of the river
Espiritu	Tablabagan Volda	Dredging of the river
Espiritu	Valdez	Dredging of the river
Marcos	Tabucbuc (Ragas)	Dredging of the river
Marcos	Santiago	Dredging of the river
Marcos	Cacafean	Dredging of the river
San Nicolas	1 San Francisco (Pob.)	Oredging of the river
San Nicolas	San Baltazar (Bo.2) (Pob.)	Dredging of the river
San Nicolas	San Bartolome (Bo.4) (Pob.)	Dredging of the river
San Nicolas	San Ildefonso (Bo.3) (Pob.)	Dredging of the river
San Nicolas	San Juan Bautista	Distind of the HAS

MUNICIPALITY	for forestation of mountain area BARANGAY	REQUES!
Lacag City	1 San Lorenzo (Pob.)	Forestation of mountain area
• •		Forestation of mountain area
Solsona	Lipay	Forestation of mountain area
Solsona	San Julian	Forestation of mountain area
Solsona	Taluglog '	
Solsona	Nalasin	Forestation of mountain area

Table M-5 Reques	st for bank protection.	REQUEST	<del></del>
MUNICIPALITY	BARANGAY	Bank protection	
Marcos	Ferdinand	Bank protection	
Marcos	Fortuna	Bank protection	
Espiritu	Catagtaguen	Bank protection	
Espiritu	Sinamar	Bank protection	
Espiritu	Hilario (Pob.)	Bank protection	
Espiritu	Caestebanan	Bank protection	
Piddig	Dupitac		
Piddig	Callusa	Bank protection	
Piddig	Gayamat	Bank protection	•
Nueva Era	Santo Nino	Bank protection	
Nueva Era	Cabittauran	Bank protection	
Nueva Era	Poblacion	Bank protection	
Solsona	Laurela (Pob.)	Bank protection	
Dingras	Mandaloque	Bank protection	
Sarrat	San Roque	Bank protection	
Sanal	San Joaquin (Pob.)	Bank protection	
Sarrat	San Manuel	Bank protection	
Sarrat	San Antonio	Bank protection	
Sanat	San Nicolas	Bank protection	
Sarrat	San Isidro	Bank protection	
Sarrat	San Cristobal	Bank protection	
Sarrat	Santo Tomas	Bank protection	
Sarrat	San Marcos	Bank protection	
Sarrat	San Leandro (Pob.)	Bank protection	
Dingras	Medina	Bank protection	
Dingras	Ver	Bank protection	
Dingras	Elizabeth	Bank protection	
Solsona	Aguitap	Bank protection	1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +
Dingras	Parado(Bangay)	Bank protection	
Dingras	Sulquiano	Bank protection	
	Guerrero (Pob.)	Bank protection	
Dingras Diagras	Dancel	Bank protection	
Dingras	Albano (Pob.)	Bank protection	*
Dingras	Madamba (Pob.)	Bank protection	
Dingras	Suyo (3)	Bank protection	
Dingras	Root (Baldias)	Bank protection	
Dingras	Puruganan (Pob.)	Bank protection	
Dingras	Bungcag	Bank protection	
Dingras	Peralta (Pob.)	Bank protection	-
Dingras	Mariquet	Bank protection	
Solsona	Santa Ana	Bank protection	
Solsona		Bank protection	
Solsona	Puttao	Bank protection	
Solsona	Manalpac	Bank protection	1
Solsona	Catangraran	Bank protection	•
Solsona	Nagpalpalan	Bank protection	
Solsona	Bagbag	Bank protection	
Solsona	Capurician	Bank protection	
Solsona	Bubuos	Bank protection	
Solsona	Santiago	Bank protection	
Solsona	Juan (Pob.) (1)	Bank protection	
Suisona	Bagbago	Bank protection	
Espiritu	Bugasi	pally blotscriots	
Espiritu	Tablabagan	Bank protection	

MUNICIPALITY	l for bank protection.  BARANGAY	REQUEST
Espiritu	Valdez	Bank protection
Marcos	Tabucbuc (Ragas)	Bank protection  Bank protection
Marcos	Santiago	Bank protection
Marcos	Cacafean 24 Santa Monicá (Nagrebcan)	Bank protection
San Nicolas San Nicolas	San Juan Bautista	Bank protection

MUNICIPALITY	st for cut-off channel or re-channel BARANGAY	REQUEST
Marcos	Pacifico (Agunit)	Cut-off channel or re-channelling of river
Marcos	Fortuna	Cut-off channel or re-channelling of river
Marcos	Valdez	Cut-off channel or re-channelling of river
Solsona	Laureta (Pob.)	Cut-off channel or re-channelling of river
Sarrat	San Joaquin (Pob.)	Cut-off channel or re-channelling of river
Sarrat	San Nicolas	Cut-off channel or re-channelling of river
Sarrat	San Lorenzo	Cut-off channel or re-channelling of river
Sarrat	San Isidro	Cut-off channel or re-channelling of river
Sarrat	San Felipe	Cut-off channel or re-channelling of river
Sanat	San Agustin (Pob.)	Cut-off channel or re-channelling of river
Dingras	Foz	Cut-off channel or re-channelling of river
Solsona	Aguitap	Cut-off channel or re-channelling of river
Dingras	Madamba (Pob.)	Cut-off channel or re-channelling of river
Dingras	Peralla (Pob.)	Cut-off channel or re-channelling of river
Solsona	Talugtog	Cut-off channel or re-channelling of river
Solsona	Santiago	Cut-off channel or re-channelling of river
Solsona	Bagbago	Cut-off channel or re-channelling of river
Espiritu	Bugasi	Cut-off channel or re-channelling of river
Sarrat	San Vicente (Pob.)	Cut-off channel or re-channelling of river
San Nicolas	1 San Francisco (Pob.)	Cut-off channel or re-channelling of river
San Nicotas	24 Santa Monica (Nagrebcan)	Cut-off channel or re-channelling of river
San Nicolas	San Baltazar (Bo.2) (Pob.)	Cut-off channel or re-channelling of river
San Nicolas	San Bartolome (Bo.4) (Pob.)	Cut-off channel or re-channelling of river

Table M-7 Request for general river control.  MUNICIPALITY BARANGAY REQUEST  Marcos Pacifico (Agunit) General river control  Marcos Valdez General river control  Espiritu Macayepyep General river control  Espiritu Lorenzo (Pob.) General river control  Espiritu Caribquib General river control  Espiritu Catagtaguen General river control  Espiritu Sinamar General river control  Espiritu Hilario (Pob.) General river control  Espiritu Hilario (Pob.) General river control  Espiritu Caestebanan General river control  Espiritu Bimmanga General river control  Espiritu General river control  Espiritu Gastebanan General river control  Espiritu Sanda General river control  Laoag City 30-b Santa Maria General river control  Laoag City 45 Tangid General river control  Laoag City 51-a Nangalisan East General river control  Laoag City 51-b Nangalisan West General river control  Laoag City 54-b Camangaan General river control  Nueva Era Cabittauran General river control	
Marcos Valdez General river control Marcos Valdez General river control Espíritu Lorenzo (Pob.) General river control Espiritu Caribquib General river control Espiritu Catagtaguen General river control Espiritu Sinamar General river control Espiritu Hilario (Pob.) General river control Espiritu Caestebanan General river control Espiritu Caestebanan General river control Espiritu Caestebanan General river control Piddig Bimmanga General river control Piddig Estancia General river control Laoag City 53 Rioeng General river control Laoag City 30-a Suyo General river control Laoag City 45 Tangid General river control Laoag City 43 Cavit (4) General river control Laoag City 51-a Nangalisan East General river control Laoag City 51-b Nangalisan West General river control Caeray General river control	
Marcos Valdez General river control Espiritu Lorenzo (Pob.) ' General river control Espiritu Caribquib General river control Espiritu Catagtaguen General river control Espiritu Sinamar General river control Espiritu Hilario (Pob.) General river control Espiritu Caestebanan General river control Espiritu Caestebanan General river control Espiritu Caestebanan General river control Piddig Bimmanga General river control Piddig Estancia General river control Laoag City 53 Rioeng General river control Laoag City 30-b Santa Maria General river control Laoag City 45 Tangid General river control Laoag City 43 Cavit (4) General river control Laoag City 51-a Nangalisan East General river control Laoag City 54-b Camangaan General river control Seneral river control General river control	
Espiritu Lorenzo (Pob.) ' General river control Espiritu Caribquib General river control Espiritu Catagtaguen General river control Espiritu Sinamar General river control Espiritu Hilario (Pob.) General river control Espiritu Caestebanan General river control Espiritu Sinamar General river control Espiritu Catagtaguen General river control Espiritu Espiritu Sinamar General river control Espiritu Sinamar General river control Espiritu	
Espiritu Caribquib General river control Espiritu Catagtaguen General river control Espiritu Sinamar General river control Espiritu Hilario (Pob.) General river control Espiritu Caestebanan General river control Espiritu Caestebanan General river control Espiritu Caestebanan General river control Piddig Birmanga General river control Piddig Estancia General river control Laoag City 53 Rioeng General river control Laoag City 30-b Santa Maria General river control Laoag City 30-a Suyo General river control Laoag City 45 Tangid General river control Laoag City 43 Cavit (4) General river control Laoag City 51-a Nangalisan East General river control Laoag City 51-b Nangalisan West General river control Caestebanan General river control	
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Espiritu Sinamar General river control Espiritu Hilario (Pob.) General river control Espiritu Hilario (Pob.) General river control Espiritu Caestebanan General river control Piddig Bimmanga General river control Piddig Estancia General river control Laoag City 53 Rioeng General river control Laoag City 30-b Santa Maria General river control Laoag City 30-a Suyo General river control Laoag City 45 Tangid General river control Laoag City 43 Cavit (4) General river control Laoag City 51-a Nangalisan East General river control Laoag City 51-b Nangalisan West General river control Laoag City 54-b Camangaan General river control Nueva Era Capittauran General river control General river control	
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Espiritu Caestebanan General river control  Piddig Bimmanga General river control  Piddig Estancia General river control  Laoag City 53 Rioeng General river control  Laoag City 30-b Santa Maria General river control  Laoag City 30-a Suyo General river control  Laoag City 45 Tangid General river control  Laoag City 43 Cavit (4) General river control  Laoag City 51-a Nangalisan East General river control  Laoag City 51-b Nangalisan West General river control  Laoag City 54-b Camangaan General river control  Nueva Era Capittauran General river control	€.
Espiritu Caestebanan Piddig Bimmanga General river control Piddig Estancia General river control Laoag City 53 Rioeng General river control Laoag City 30-b Santa Maria General river control Laoag City 30-a Suyo General river control Laoag City 45 Tangid General river control Laoag City 43 Cavit (4) General river control Laoag City 51-a Nangalisan East General river control Laoag City 51-b Nangalisan West General river control Laoag City 54-b Camangaan General river control Nueva Era Cabittauran General river control General river control General river control	
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Piddig Estancia General river control Laoag City 53 Rioeng General river control Laoag City 30-b Santa Maria General river control Laoag City 30-a Suyo General river control Laoag City 45 Tangid General river control Laoag City 43 Cavit (4) General river control Laoag City 51-a Nangalisan East General river control Laoag City 51-b Nangalisan West General river control Laoag City 54-b Camangaan General river control Nueva Era Cabittauran General river control General river control General river control	
Laoag City Camangaan Capittauran Capittauran General river control	
Laoag City Camangaan Cabittauran Capittauran Caray General river control General river control General river control General river control	
Laoag City Camangaan Cabittauran Capittauran Caray General river control	
Laoag City Camangaan Cabittauran Caray  General river control	
Laoag City Camangaan Cabittauran Caray  General river control	
Laoag City Laoag City Laoag City Laoag City Laoag City St-b Nangalisan West General river control	
Laoag City  Laoag City  Laoag City  S4-b Camangaan  Nueva Era  Capitlauran  Caray  General river control  General river control  General river control	
Laoag City  S4-b Camangaan  General river control  General river control  General river control  General river control	
Nueva Era Cabittauran General river control	
General nyer control	
San Roote General Tivel Control	
Santa Barbara (Pob.) General river Control	
San Nicolas General river control	
San Lorenzo General river collitor	í,
San Feline General river control	
Sarrat San Cristobal General river control	
Sarrat Santo Tomas General nver control	
Sarral San Marcos General river control	
Sarrat San Leandro (Pob.) General river control	
Dingras San Esteban General river control	
Dingras Ver General fiver Control	
Dingras Guerrero (Pob.) General nver control	
Dindlas Wingle (1.00%)	
Dingras Puruganan (Pob.) General liver control	
Solsona Sali ocidii	
Solsona Sali dell'	
Solsona	
Solsona Malasiii	
Soisona Bubbos	
Espiritu Tabiabagan Congrel river control	
Espiritu Valuez	,
San Nicolas 24 Santa Montes (Deb ) General river control	į
San Nicolas San indefinite (2007) ( Coneral river control	
San Nicolas San Juan Bautista General river control	

Table M-8 Request for maintenance of present bank and river coarse.

Table M-o Kedne	DADALICAY	REQUEST
MUNICIPALITY Laoag City Dingras Dingras Dingras Solsona Solsona	BARANGAY  34-b Gabu Norte East  Foz  Ver  San Marcelino (Pagong)  Maananteng  Nalasin	Maintenance of present bank and river

Table M-9 Request for construction of sabo dam.

MUNICIPALITY	BARANGAY	REQUEST
Solsona	Darasdas	Construction of sabo dam
Solsona	Lipay	Construction of sabo dam
Solsona	San Julian	Construction of sabo dam
Marcos	Cacafean	Construction of sabo dam

Table M-10 Request for repair of irrigation channel.

MUNICIPALITY	BARANGAY	REQUEST
Espiritu	Sinamar	Repair of imigation channel
Espiritu	Hilario (Pob.)	Repair of imigation channel
Espiritu	Tabtabagan .	Repair of imigation channel

Table M-11 Request for other measures of flood mitigation.

MUNICIPALITY	BARANGAY	REQUEST
Espiritu	Sinamar	Others
Piddig	Callusa	Others
Laoag City	30-a Suyo	Others
Laoag City	51-b Nangalisan West	Others
Sanal	San Andres	Others
Sanat	San Joaquin (Pob.)	Others
Sarrat	San Lorenzo	Others
Sarrat	San Agustin (Pob.)	Others