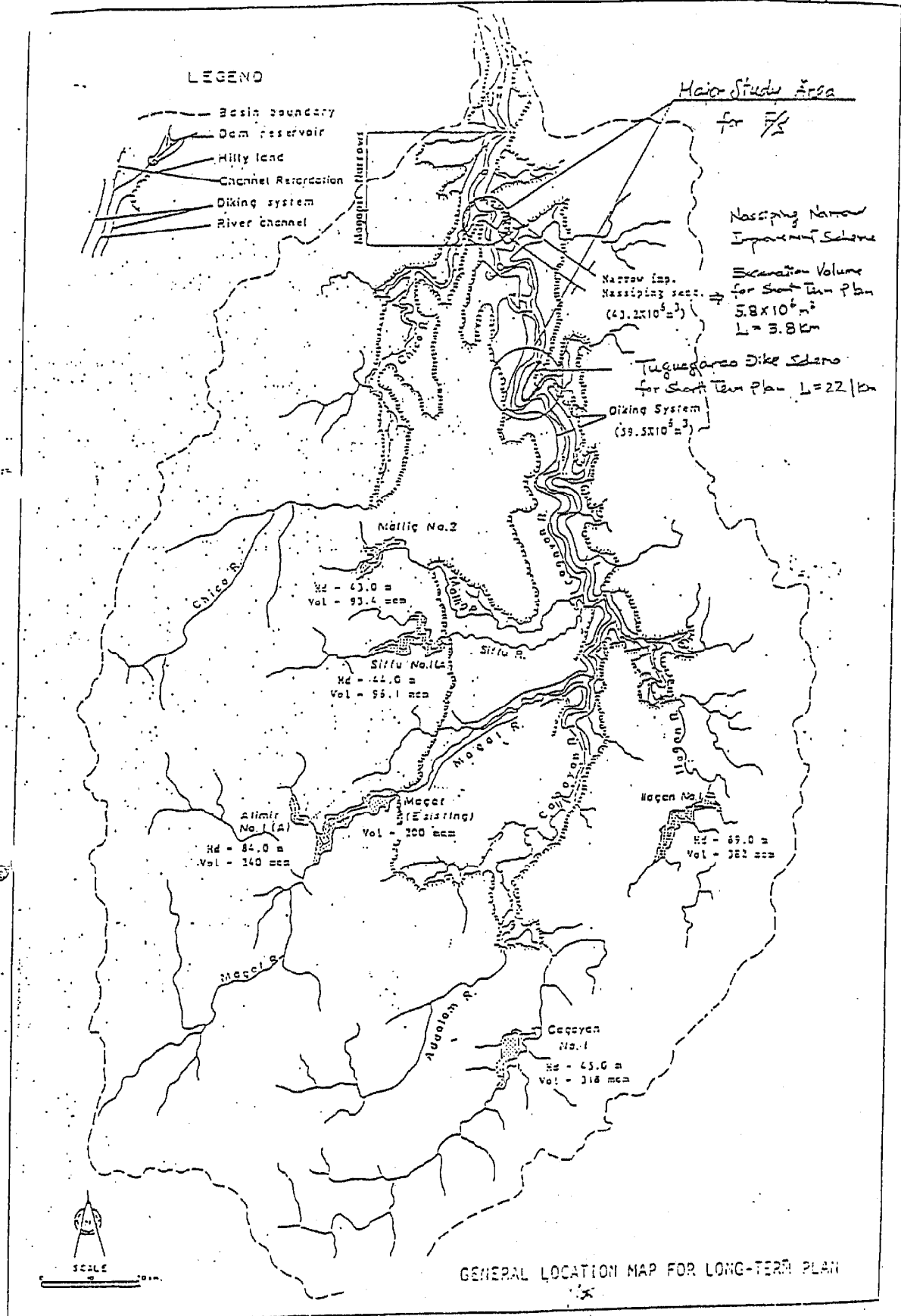
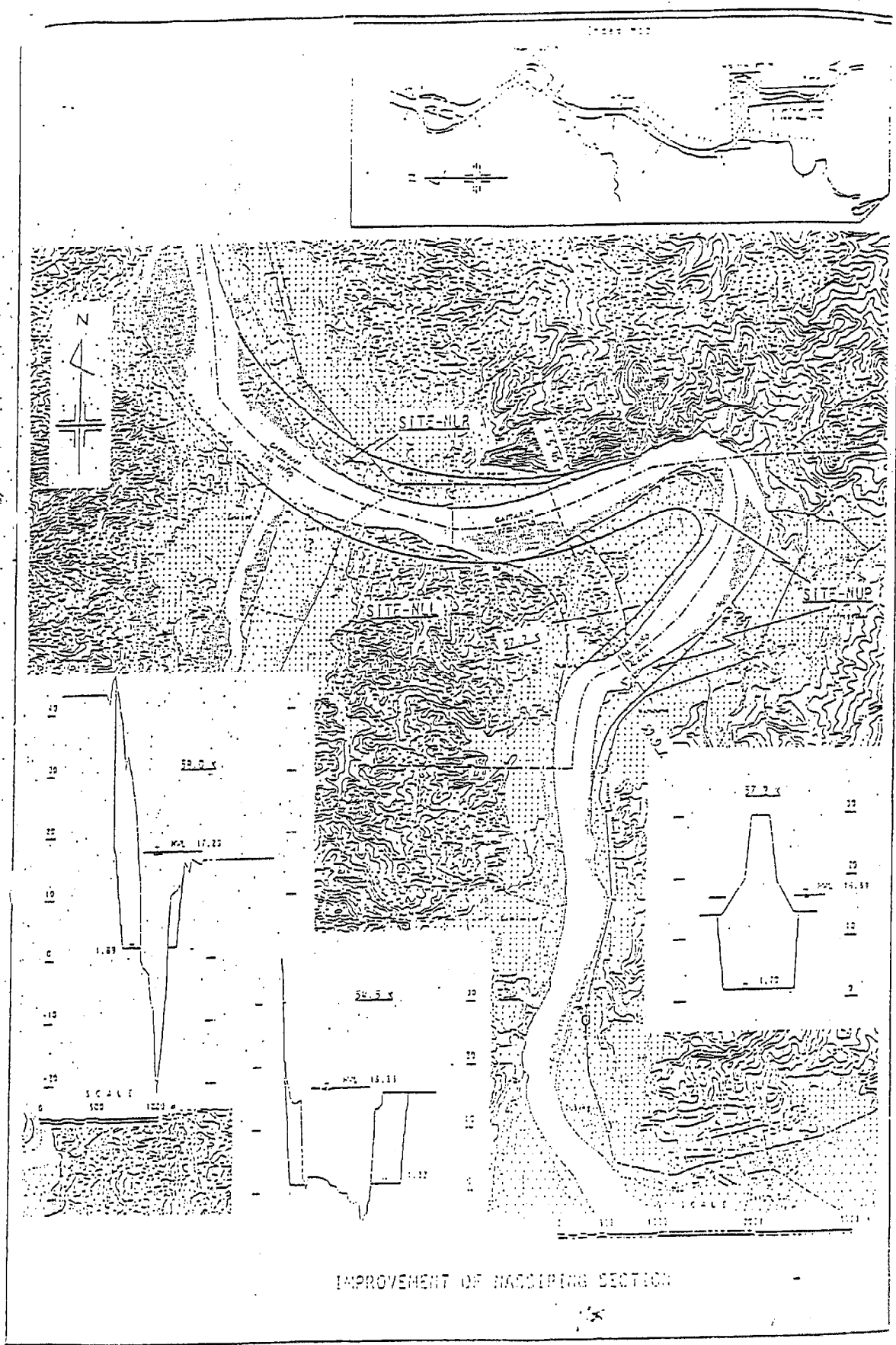
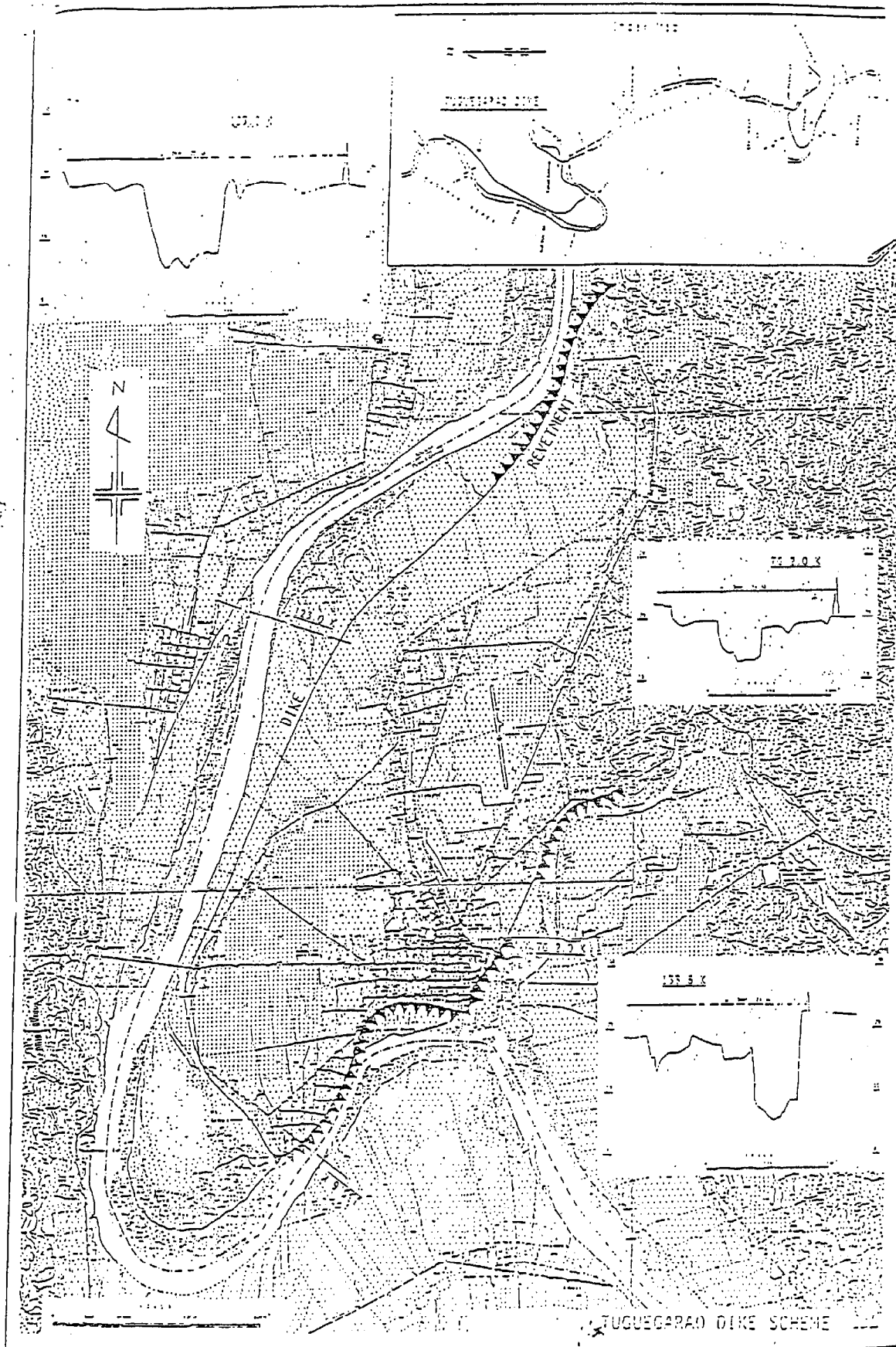


ANNEXES

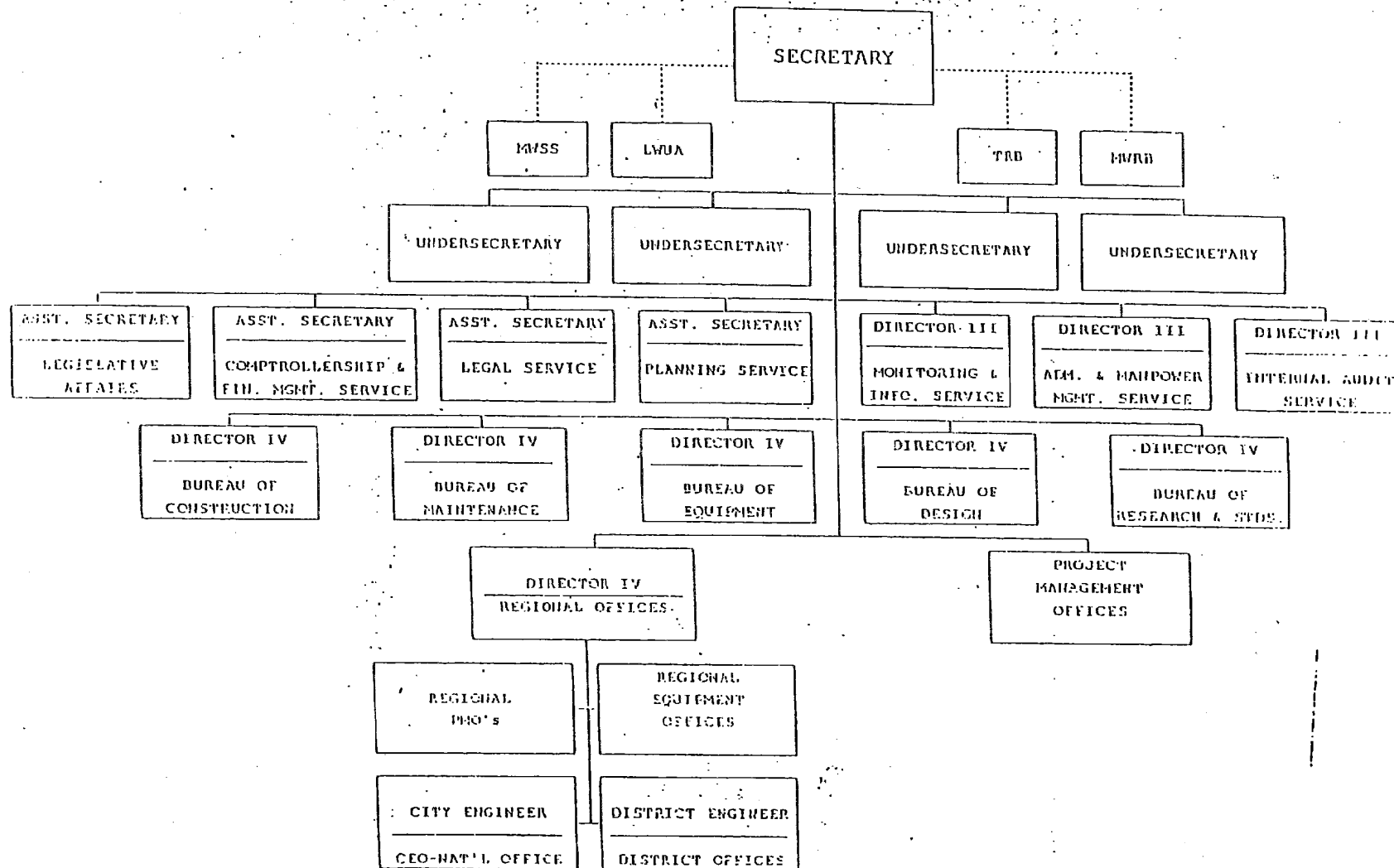




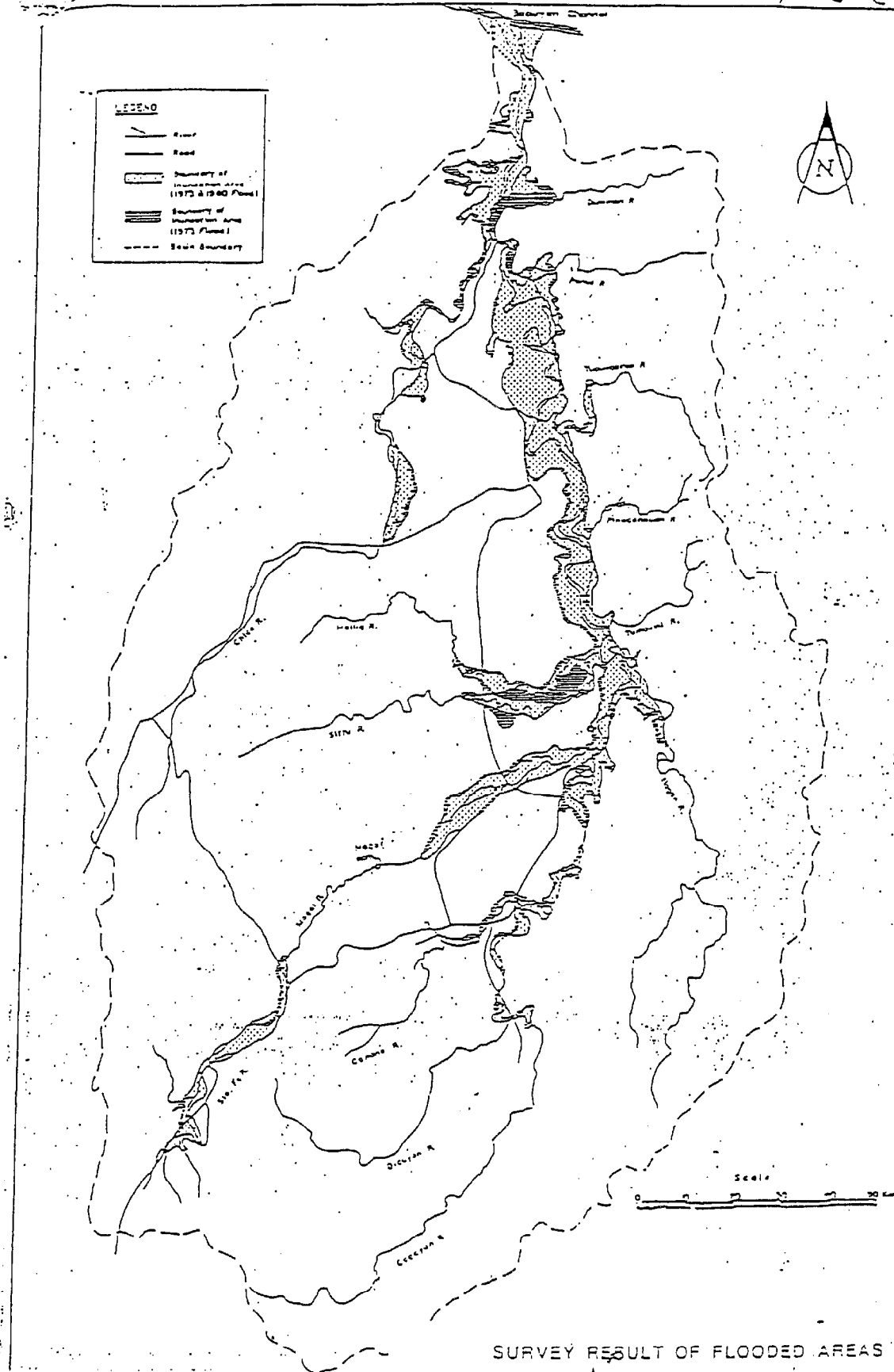
IMPROVEMENT OF NACIPING SECTION



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS ORGANIZATION CHART (1-A)



ANNEX I



A N N E X - D

PREPARATORY WORKS FOR THE
FEASIBILITY STUDY OF
LOWER CAGAYAN FLOOD CONTROL

Mr. Jose G. Gunnzon
Chief of Project Planning &
Evaluation Service DFWH
Donisaclo Drive, Manila

Telex: J24557 KOEICO
7377655 KOEICO J
Cable Address: NIIPPON KAI DEN I TOKYO
Telephone: 03 (238) 8215

October 13, 1987

Your ref.

Our ref.

Date

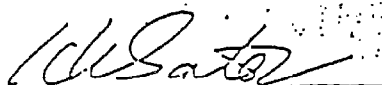
Dear Sir,

Subject: Recommendations on Preparatory Works for
Lower Cagayan Flood Control Project

In Reply to your verbal request, I prepared and submit you a Note which recommend you to carry out hydrographic surveys and core drilling surveys as the most important preparatory works for the implementation of the Feasibility Study on the Lower Cagayan Flood Control Project.

As the then team leader of the JICA Master Plan Study on the Cagayan River Basin Water Resources Development, I believe that your understanding and prompt actions along this recommendations will contribute much to the project realization, which is the urgent and fundamental requirement for the socio-economic development of the Cagayan Valley. I remain,

Truly yours,



Hideki Sato
Director
Nippon Koei Co., Ltd.
Tokyo 2678

RECOMMENDATION NOTES
ON
THE HYDROGRAPHIC AND CORE DRILLING SURVEYS
FOR
THE LOWER CAGAYAN RIVER FLOOD CONTROL PROJECT

1. The Recommendations

This note aims to recommend The Government of the Philippines to carry out the survey works as a part of the requisit preparatory works for the smooth and effective implementation of the Feasibility Study on the Lower Cagayan River Flood Control Project which is proposed in the Master Plan Study on the Cagayan River Basin Water Resources Development carried out by the JICA.

The works recommended herein are identified on the basis of the proposals in the Short Term Plan in the Master Plan Study and with due regard to the site conditions. They are supposed to be the inevitable and fundamental input for the Feasibility Study.

The recommended survey works comprise hydrographic surveys and core drilling surveys. The hydrographic surveys recommend have two folds, namely river cross sectional surveys along the Cagayan river and the Tuguegarao river and river profile surveys along the Cagayan river using echo sounder. The details are described in the following paragraphs by works recommended.

2. River Cross-Sectional Surveys

2.1 Objective and Target Area

The objectives of the cross-sectional surveys are listed as follows;

- 1) To provide the data for the flood discharge routing analysis to examine the effect of the proposed flood control works in the up- and downstream reaches from Magapit Narrows.

- 2) To provide the data for the analysis of the design high water levels in the Cagayan river and the Tuguegarao river.
- 3) To provide the data for the excavation volumes of the Magapit Narrows improvement.
- 4) To provide the data for the embankment volumes of the proposed levees along the Cagayan river in Tuguegarao area and along the Tuguegarao river.

The target area of the Cagayan river is the areas along the river channel of about 40 km from Lallo to Alcala and 30 km from 12 km downstream of the Buntun bridge towards upstream. Meanwhile the target area of the Tuguegarao river is the areas along the river channel of 10 km from the junction with the Cagayan river towards upstream.

2.2 Matters To Be Noted

The interval of the cross section is set at approximately 200 m however the channel section shall be surveyed at the site where the section shows an immediate change in order to secure the appropriate accuracy of analysis. The outcrops of rocks in the river banks and dune evolved in the channel are to be due attentioned.

The attached figures (Fig. 1, 2 & 3) show the approximate areas to be surveyed. The red coloured line in the figures show the left and right ends of the sections to be surveyed. There may be the case a building or other permanent structures disturb the survey along a straight line. It is recommendable to take a round about route in such occasions. In any case the surveyed line should be enunciated in the drawings.

Permanent stakes made of reinforced concrete with foundation shall be installed on the both banks along the surveyed sections at about 1.0 km intervals. Elevation thereof shall be surveyed on the basis of the BCGS datum.

A wooden stake shall be installed on each bank to show every site of the surveyed section. The stakes shall be maintained in good condition during the study period.

3. River Profile Survey by Echo Sounder

3.1 Objective and Target Area

At the Magapit Narrows, the topography and geology is intricate to some extent. During the Master Plan Study, the conditions of the river channel was studied through the cross-sectional surveys, water surface slopes, flood marks and the appearances of the river water surface. The site to be improved was determined on the basis of the data obtained as mentioned above. The river profile surveys by echo sounder will furnish more detailed information for the data which identify the bottle neck of the river channel.

Thereby, the most effective improvement site will be confirmed in terms of the flood water level reduction in the upstream reaches.

The target area of the survey is the Cagayan river channel of about 40 km from Lallo to Alcala.

3.2 Matters To Be Noted

Three (3) profiles are to be surveyed as follows:

- Profile No. 1 : 50 m apart from the left bank
- No. 2 : 50 m apart from the right bank
- No. 3 : center of the channel

A plan and three profiles are to be depicted on a drawing to show the locations, the water levels, the riverbed levels and the accumulated distances from the rivermouth for each profile. Remarkable structures, dunes and outcrops of rocks shall be appeared on the plan.

In addition to the above, a drawing should be prepared to show three riverbed profiles in a graph to show the differences of the riverbed elevations by the distances from riverbanks. It is advisable to show the locations of

permanent concrete stakes to be established by the River Cross-sectional Surveys proposed in the paragraph 2.2.

4. Core Drilling Surveys

4.1 Objective and Target Area

A considerable amount of excavation is proposed in the Master Plan Study at Magapit Narrows in order to improve the Cagayan river channel. The cost for the excavation is deemed to dominate the project cost. In this connection, the excavation cost may largely vary in accordance with the proportions of rock and common.

In view of this, the geologic conditions at Magapit Narrows shall be surveyed through core drilling to furnish data to quantify the volumes of rock excavation and common excavation. The target area of the survey is the vicinity of Nassiping.

4.2 Matters To Be Noted

The location of drilling holes are shown in Fig. 4. The number of drilling holes proposed is 12 in total. The lengths of drilling are assumed to be 20 meters for Hole No. 1, 4, 6 and 8. The lengths of 30 meters are assumed for No. 2, 3, 5 and 7. The under water drillings are contemplated for No. 9, 10, 11 and 12 with a length of 10 meters. The Standard penetration test shall be carried out at each bore hole in an interval of 1 meter in depth. However if N-value exceed 50, the test may be terminated for the hole.

The recovered core shall be kept and stored in core boxes. The locations and elevations shall be specified for each core recovered.

The surveyed results shall be geologically interpreted and the geological profiles shall be estimated and presented in drawings. The profiles shall enunciate the depths of common, weathered rock and fresh rock together with N-values.

5. Estimates of Work Volume

5.1 River Cross-Sectional Surveys

Cagayan River (Lallo - Alcala)

Average length/section : 1.9 km
Maximum length : 3.5 km
Minimum length : 1.3 km
Total section numbers : 230

- Cagayan River (Tuguegarao)

Average length/section : 2.1 km
Maximum length : 4.0 km
Minimum length : 1.5 km
Total section number : 155

- Tuguegarao River

Average length/section : 1.5 km
Maximum length : 2.0 km
Minimum length : 0.7 km
Total section number : 55

5.2 River Profile Surveys

- Cagayan River

Length : 40 km
Number of profiles : 3

5.3 Core Drilling Surveys

<u>No. of Hole</u>	<u>Depth (m)</u>	<u>Remarks</u>
1	20	
2	30	
3	30	
4	20	
5	30	
6	20	
7	30	
8	20	
9	10	under water
10	10	under water
11	10	under water
12	10	under water
<hr/>		
Total 12	240	(Including Underwater 40 m)

ANNEX E

RDC II Resolution No. 225-93

(Project Indorsement)



REGIONAL DEVELOPMENT COUNCIL
Region 02, Tuguegarao, Cagayan

RDC II RESOLUTION NO. 225-93

INDORSING THE REQUEST OF DPWH-PMO FOR FLOOD CONTI
FOR ADDITIONAL-FUND OF P1 MILLION TO COMPLETE TH
ENGINEERING SURVEYS NECESSARY FOR THE CONDUCT C
THE F.S. FOR THE FLOOD CONTROL COMPONENT OF THE
CREWRDP, AND P5 MILLION AS GOP COUNTERPART FOR
THE CONDUCT OF THE F.S. FOR THE IDENTIFIED
STRATEGIC FLOOD CONTROL PROJECTS

WHEREAS, the Cagayan River Basin Water Resource Development Study which is a major component of the "AQUA-D. development strategy of the Regional Development (RDP) of Region 02 for 1993-1998, is a master study to harness the potentials of the said basin manage its water resource;

WHEREAS, one of the identified significant-problems atte to the resource is perennial flooding and conti erosion of rich agricultural areas and urban se ments, and destruction of infrastructure utilities facilities, notwithstanding loss of lives;

WHEREAS, it is deemed that annually millions of pesos of agri tural products, agricultural lands, and infrastruc facilities and utilities are destroyed/damaged du these natural hazards;

WHEREAS, in order to address these concerns, the Master I Study identified strategic flood control projects al the Cagayan River and other tributaries and recommen their implementation within 20 years for a total c of P5.765B (1987 prices);

WHEREAS, the feasibility studies should have started in 1987 t was deferred by the Japanese government due to pee and order problem but which is being pursued;

WHEREAS, however, as necessary preparatory works for the feasib. lity study which the DPWH is resolved to pursue with th assistance of the RDC 02, the DPWH-PMO for Flood Contrc pursued the following activities which is approximatel 80% completed;

- a) Core drilling at Magapit-Nassiping Narrows;
- b) River Profile Survey (Echo Sound);
- c) River Cross Sectional Survey;
- d) Flood Damage Survey; and
- e) Site Investigation/Inspection for River Training.

WHEREAS, in order to complete these surveys, P1 Million is still necessary;

WHEREAS, relatedly, the feasibility study which was deferred by the Japanese Government as cited above should be implemented within the short term in view of the urgent necessity of the identified projects to the regional economy and the relatively improved peace and order situation in the identified project areas;

WHEREAS, it is necessary that the national government should accord priority to the conduct of these feasibility studies for flood control in the Region 02 thru allocation of P5 Million in 1994 as GOP counterpart.

NOW THEREFORE, the RDC 02 thru the Executive Committee RESOLVES, as it is hereby RESOLVED to indorse the request of DPWH-PMO for Flood Control for P1 Million to complete the required engineering surveys and P5 Million as GOP counterpart for the RP-JICA conduct of the F.S. for the identified strategic flood control projects.

RESOLVED FURTHER that copies of the Resolution be furnished to Honorable Gregorio Vigilar, Secretary of DPWH for his information and favorable action and to His Excellency, President Fidel V. Ramos for his recommendation.

Done in the Municipality of Santiago, Isabela this 18th day of August 1993.

CERTIFIED CORRECT:

ORIGINAL SIGNED:

SINFOROSO M. BIRUNG
RDC II Secretary

ATTESTED:

ORIGINAL SIGNED:

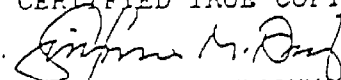
CATALINO S. BOQUIREN, JR., CESO III
RDC II Vice-Chairman

APPROVED:

ORIGINAL SIGNED:

GUMERSINDO D. LASAM, CESO II
RDC II Chairman

CERTIFIED TRUE COPY OF THE ORIGINAL:

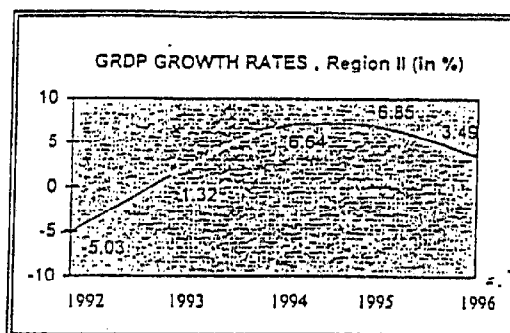

SINFOROSO M. BIRUNG
RDC II Secretary

A. HIGHLIGHTS OF ECONOMIC PERFORMANCE: 1992-1997

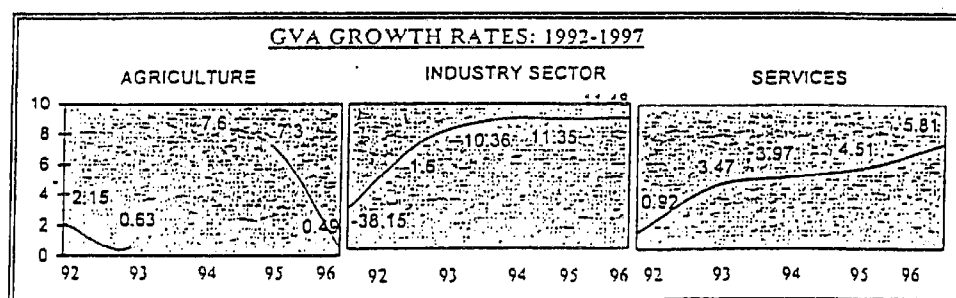
Overall, the regional economy performed remarkably well during the period 1992-1997. Among the region's significant accomplishments are the following:

a.1 GRDP recovered and consistently posted positive growth rates

Domestic production recovered in 1993 with a 1.32 % growth owing to the resolution of the power crisis. Thereafter, it posted a 6.64% and 6.35% growth in 1994 and 1995 respectively.



This is attributed to the continued generation of investments in the industry and services sectors alongside the upward performance of the agriculture sector. In 1996, destructive typhoons pulled down agriculture's performance but this was offset by strong performance of the industry sector resulting in 3.9% GRDP growth.

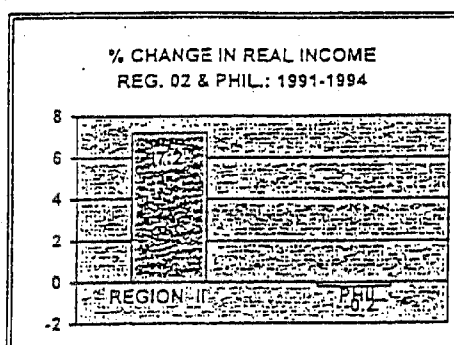


Among sectors, the Industry Sector reflected a dramatic and consistent expansion in Gross Value Added as the region was able to attract substantial investments particularly in construction and manufacturing activities. Thus, the

sector's GVA posted the 2nd and 3rd highest growth rates among regions in 1993 and 1995 respectively. Likewise, the Services Sector posted a sustained growth during the period 1993-1997 with trading, financial and other personal services leading the sector's growth. On the other hand, the Agriculture Sector's performance experienced a fluctuating growth owing to the occurrences of weather disturbances.

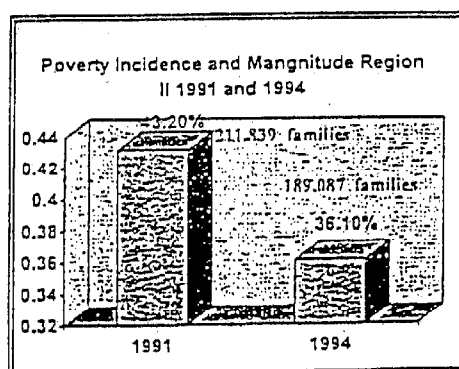
a.2 Family income was higher and more equitably distributed

Total family income (at constant prices) in 1994 was P 36.24 B, up by 14.0% from its level of P 31.79 B in 1991. This translates to a 7.2% increase in average real family income, from P34,177 in 1991 to P36,637 in 1994. A trend analysis of the region's Gini Coefficient Ratio, a measure of income distribution, reveals that a more equitable income distribution was attained in 1994 with a Gini Ratio of 0.4097 compared to 0.4172 in 1991.

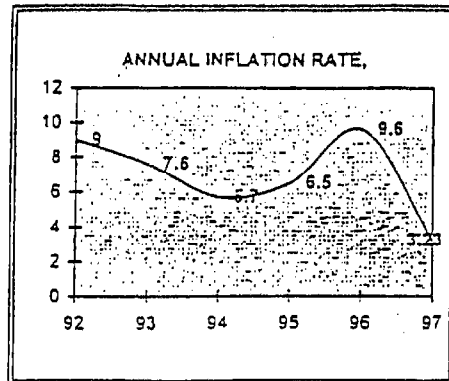


a.3 Lesser incidence and magnitude of poverty

With the increase in real average family income, significant gains in poverty reduction were attained from 1991 to 1994. In actual levels, about 22,572 families were lifted from poverty, bringing down the region's poverty incidence to 36.1% in 1994 from 43.2% in 1991.

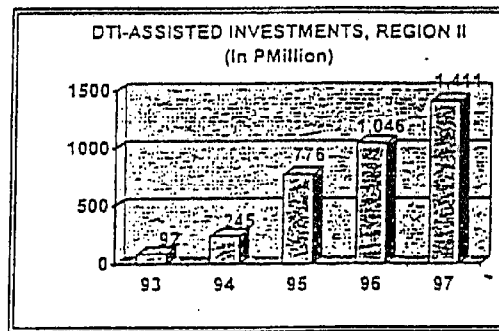


a.3 Increase in prices was generally manageable



From double-digit inflation rates previous years, Region II posted digit inflation rate of 9.0%. Inflation further decelerated to 3.3% in October 1997 as the stable supply of agricultural products have minimized the inflationary effect of the implementation, the successive rise in oil price increases and the weakening of the Peso against the US dollar during the later part of the year.

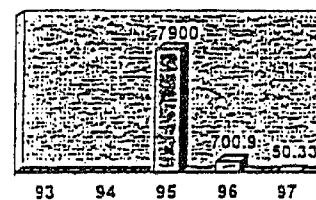
a.4 Investments and exports are on the uptrend



In 1992, total investment in DTI-assisted firms was P1.046 billion. This significantly increased in the succeeding years to reach P1.04 Billion and P1.444 Billion in 1996 and 1997 respectively.

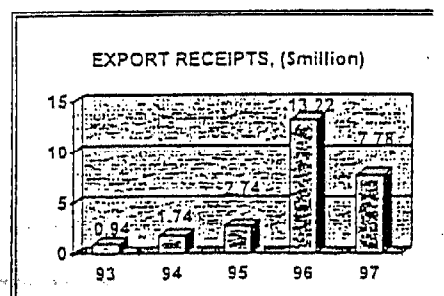
Increased investor confidence in the region likewise resulted in the entry of BOI-registered investments with total project costs of P7.9 Billion, P700.9 Million and P50.83 Million in 1995, 1996 and 1997 respectively. Most of these BOI investments are into food

BOI-Listed Investments
Region II, (In Pmillion)



processing and were reported to be due for commercial operation during the semester of 1997.

On the other hand, regional export products have become competitive in the international market with total receipts of \$7.78 Million in 1997 (as of September) from \$1.9 Million in 1992. The revival of the tobacco industry and the entry of mangoes in the region's export products contributed to the positive performance of this sector.



a.5 Employment trends improved

In terms of employment generation, a total of 165,000 jobs were created from 1992 to 1997, thereby increasing the region's employment rate from 94.2% in 1992 to 96.52% in 1997 (based on the July Round Survey). Correspondingly, the number of unemployed persons decreased from 65,000 in 1992 to 44,000 as of July 1997.

However, underemployment rate remained high at 18.72% or about 228,000 persons were underemployed as most of the jobs generated are in the agriculture sector where part-time or seasonal job status is prevalent.

Fig. 00 EMPLOYMENT SITUATION
Region II, 1992 and 1997 (Jul. Rd. Surv.)

Indicator	1992	1997
Total Population	1,119,000	1,263,000
Employed	1,054,000	1,219,000
Unemployed	65,000	44,000
Underemployed	210,000	228,000
Employment Rate	94.20%	96.52%
Underemployment Rate	5.80%	3.48%
Unemployment Rate	16.60%	18.72%

Source: National Statistics Office

TENTATIVE SCHEDULE OF THE STUDY

WORK ITEMS	M O N T H																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FEASIBILITY STUDY																								
1. Review on existing studies/plans																								
2. Collection of Data and Information																								
3. Execution of Necessary Survey and Investigation																								
• Hydrographic/Hydraulic Engineer																								
• Topographic Survey																								
• Flood Damage Survey																								
• Soil Sampling/Material Testing																								
• Aerialphoto Mapping																								
• Geotechnical Investigation																								
4. Study and Analysis																								
• Socio-Economy																								
• Environmental Study																								
• Hydrologic/Hydraulic Analysis																								
• Flood Damage Assessment																								
5. Project Formulation																								
• Preliminary Engineering Design																								
• Construction Planning																								
• Cost Estimation																								
6. Project Evaluation																								
• Economic Evaluation																								
• Sensitivity Analysis																								
• Ranking and Prioritization																								
7. Environmental Impact Assessment																								
8. Transfer of Knowledge																								
9. Reporting																								

#1 Inception Report

#2 Progress Report

#3 Interim Report

#4 Draft Final Report

#5 Final Report

PROPOSED MANNING SCHEDULE
FEASIBILITY STUDY OF LOWER CAGAYAN RIVER FLOOD CONTROL PROJECT

Engineers/Expert to be assigned	Months after Commencement																								Total Estimated M/M		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Field	Home	Total
(1) Team Leader																									6.0	4.0	10.0
(2) Assistant Team Leader/ River Engineer																									17.0	6.0	23.0
(3) Hydrologist/Hydraulic Engineer																									7.0	6.0	13.0
(4) Drainage Engineer																									6.0	1.0	7.0
(5) Structural Engineer																									7.0	1.0	8.0
(6) Cost Estimator/Const. Planner																									6.0	0.0	6.0
(7) Survey Expert																									7.0	0.0	7.0
(8) Geologist																									4.0	2.0	6.0
(9) Soil Mechanical Engineer																									3.0	1.0	4.0
(10) Resettlement Planner																									5.0	1.0	6.0
(11) Environmental Expert																									6.0	1.0	7.0
(12) Economist																									5.0	1.0	6.0
Reporting Requirements																									79.0	24.0	103.0

LEGEND:

- Assignment in Japan
 Assignment in R.P.

ANNEX H

Certification of Peace and Order
by PNP Regional Command 2

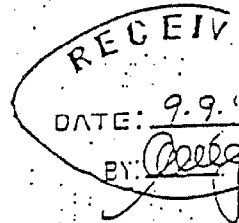


Republic of the Philippines
Department of the Interior and Local Government
HEADQUARTERS PHILIPPINE NATIONAL POLICE
OFFICE OF THE ASSISTANT REGIONAL DIRECTORATE FOR INTELLIGENCE
REGIONAL COMMAND 2
Camp Adduna, Tuguegarao, Cagayan

OARDI

25 August 1993

CERTIFICATION



TO WHOM IT MAY CONCERN:

THIS IS TO CERTIFY that based on our assessment and analysis reports and the direct observation of our men in the field, the substantial improvement in the security and peace and order situation Region 2. On insurgency, our statistics and information gained recovered subversive documents and revelation of captured/surrendered terrorists dissidents indicate a steady downtrend in TD strength armaments.

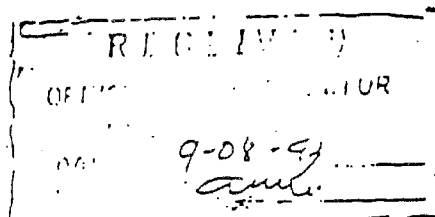
On peace and order, our data reveals a steady improvement in peace and order situation in the Region 2. In fact, the crime sol efficiency (CSE) of the Command for the first semester of this year pegged at 83.45% which registered an increase of 0.06% compared to year's CSE for the same period.

In view of the foregoing, this Command has no reservation in attesting to the improved and propitiousness of the peace and order situation in region which makes it safe and favorable for business and economic ventures.

This certification is issued upon the request of the NEDA Regional Director for whatever legal purpose it may serve.

FOR THE REGIONAL DIRECTOR:

JEFFERSON P SORIANO
Police Superintendent
ARD for Intelligence



DAILY INQUIRER

JUNE 8, 1998

Cagayan Valley farms tagged as flood-prone

TUGUEGARAO, Cagayan—At least 43,964 hectares of irrigated ricefields in Cagayan Valley were identified to be at great risk to flooding once the La Niña phenomenon occurs, regional agriculture officials said.

The regional Department of Agriculture has allotted P557 million for measures to prevent, or lessen the impact of the floods, expected to come between August and October.

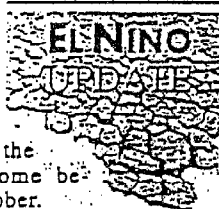
Domingo Manaligod, regional DA assistant director, said their office has started its campaign to preempt the destruction of basic agricultural irrigation structures in the region.

Manaligod said part of the fund will be used to install more irrigation pumps in areas not vulnerable to flooding.

Identified to be at low risk to

flooding were 19,145 hectares of farmlands in the region.

He said the DA will also provide seeds and fertilizers for immediate rehabilitation of areas where the crops may be destroyed by flooding.



"Unlike the El Niño, the negative weather factor of La Niña will require quick action within short notices," Manaligod said.

He also advised farmers in flood prone areas to prepare contingency plans for moving their farm animals to higher areas.

Manaligod said they would tap private and government-owned mechanical dryers and warehouses so that the farmers could use these to dry and store their produce when the La Niña comes. *Imelda Visaya, PDI Northern Luzon Bureau*

TABLES

GROSS REGIONAL DOMESTIC PRODUCT
1985 TO 1997

(In Million Pesos at current prices)

Region	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
1. NCR Metro Manila	164,246	180,117	208,661	251,164	298,589	347,609	409,778	437,730	475,312	548,782	620,110	720,058
2. CAR Cordillera Administrative			13,691	15,562	17,928	20,267	23,659	23,974	27,597	33,497	38,733	43,892
3. 1 Ilocos Region	25,033	29,290	20,385	23,041	26,931	32,501	36,336	37,102	41,961	49,731	58,155	66,898
4. 2 Cagayan Valley	15,309	15,574	14,280	16,709	19,674	23,724	25,262	26,671	29,847	35,002	41,102	47,633
5. 3 Central Luzon	53,774	55,256	59,992	68,010	75,253	91,922	106,726	118,202	129,870	143,552	159,290	184,874
6. 4 Southern Tagalog	82,615	86,983	95,946	114,401	130,349	155,817	188,502	205,172	218,201	250,808	274,079	314,305
7. 5 Bicol Region	19,366	19,876	20,607	23,849	27,549	31,927	36,201	39,618	44,296	50,575	55,785	63,767
8. 6 Western Visayas	42,418	44,338	48,890	57,265	66,455	75,649	85,407	95,299	105,867	118,577	133,965	154,690
9. 7 Central Visayas	35,754	38,381	43,326	51,872	61,737	70,766	82,821	88,831	94,892	108,493	122,058	141,384
10. 8 Eastern Visayas	16,210	16,309	18,139	21,586	24,640	28,269	32,057	34,681	38,354	43,644	49,817	57,700
11. 9 Western Mindanao	18,561	19,542	20,900	23,607	26,469	31,182	35,157	39,012	41,496	47,816	52,896	59,522
12. 10 Northern Mindanao	32,412	34,173	37,920	42,282	49,146	55,120	62,726	68,855	74,686	87,479	97,902	111,218
13. 11 Southern Mindanao	43,727	45,502	54,132	59,889	66,287	74,670	82,459	90,297	98,322	113,563	129,370	140,597
14. 12 Central Mindanao	22,452	23,549	25,897	29,948	34,436	37,813	40,919	46,118	40,909	45,559	54,337	63,517
15. ARMM									12,848	15,856.00	18,730	20,880.00
PHILIPPINES	571,884	608,888	682,765	799,183	925,444	1,077,237	1,248,011	1,351,550	1,474,457	1,692,932	1,906,328	2,196,595

Notes: 1. The GRDP estimates for the CAR and the ARMM started only in 1987 and 1993 respectively.
Prior to these, the contributions to the economy of the provinces comprising the CAR is accounted for the Regions 1 and 2 while those of the ARMM provinces accrued to Regions 9 and 12.
2. Data for the years 1994 to 1996 are updates as of July, 1997.
3. Details may not add up to totals due to rounding.
Source: Philippine Statistical Yearbook, 1997

RECENT TYPHOON / FLOOD DAMAGES
CAGAYAN PROVINCE - REGION 2

DATE OF OCCURENCE	TYPHOON CODE	DAMAGES									
		CAGAYAN PROVINCE					REGION 2				
		HUMAN DAMAGES			AGRICULTURE (P1.0 M)	INFRASTRUCTUR E (P1.0 M)	HUMAN DAMAGES			AGRICULTUR E (P1.0 M)	INFRASTRUCTUR E (P1.0 M)
		DEAD / MISSING	INJURED	HOUSES			DEAD / MISSING	INJURED	HOUSES		
Oct. 1991	Trining						18	28	14,661	509.7	17.575
Sept. 1992	Maring	2		507	437.60	56.57	7	1	4,644	741.26	57.7
June 1993	Kadiang	3	-	6	166.79	7.2	55	25	1,984	1103.75	84.77
Oct. 1993	Goring	-	-	1,452	20.50	20.3	52	89	102,773	674.2	169.39
Nov. 1993	Husing	3	-	-	57.55	106.5	17	-	4,948	137.92	145.24
Sept. 1994	Weling	8	-	78	88.63	35.61	8	-	78	88.63	35.61
Aug. 1995	Gening						-	-	-	167.63	21.28
Oct. 1995	Mameng						-	-	-	299.96	17.96
Nov. 1995	Rosing	1			27.68	15.22	2		44	69.49	58.53
Dec. 1995	Flash floods	1	-	-	236.13	54.63	1			572.93	78.1
July 1996	Gloring	3	4	1,422	118.17	64.04	5	4	1,422	142.65	64.04
Aug. 1996	Lucing	1	1	1,090	4.49	3.85	1	1	1,090	4.49	3.85
Sept. 1996	Maring	7	22	727	14.13	25.07	7	22	727	14.13	25.07
Oct. 1996	Seniang	4	-	7,251	108.38	34.06	7	-	7,388	153.38	39.16
Oct. 1997	Narsing	15	7	11,989	169.09	105.97	14	8	14,824	225.02	151.38

Source of data: Office of Civil Defense, Region 2

Table 2