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BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR CONSTRUCTING
PRIMARY AND SECONDARY SCHOOLBUILDINGS (PHASE III)
IN
THE REPUBLIC OF THE PHILIPPINES

JUNE 1991

JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団

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PREFACE

In response to a request from the Government of the Republic of the Philippines, the Government of Japan decided to conduct a basic design study on the Project for Constructing Primary and Secondary Schoolbuildings (Phase III) and entrusted the study to the Japan International Cooperation Agency (JICA).

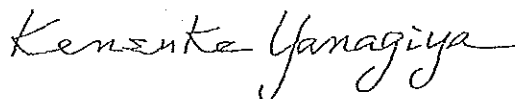
JICA sent to the Philippines a study team headed by Mr. Yutaka Yokoi, Deputy Director of Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs, from February 20 to March 14 1991.

The team held discussions with the officials concerned of the Government of the Philippines, and conducted a field study at the study area. After the team returned to Japan, further studies were made and the present report was prepared.

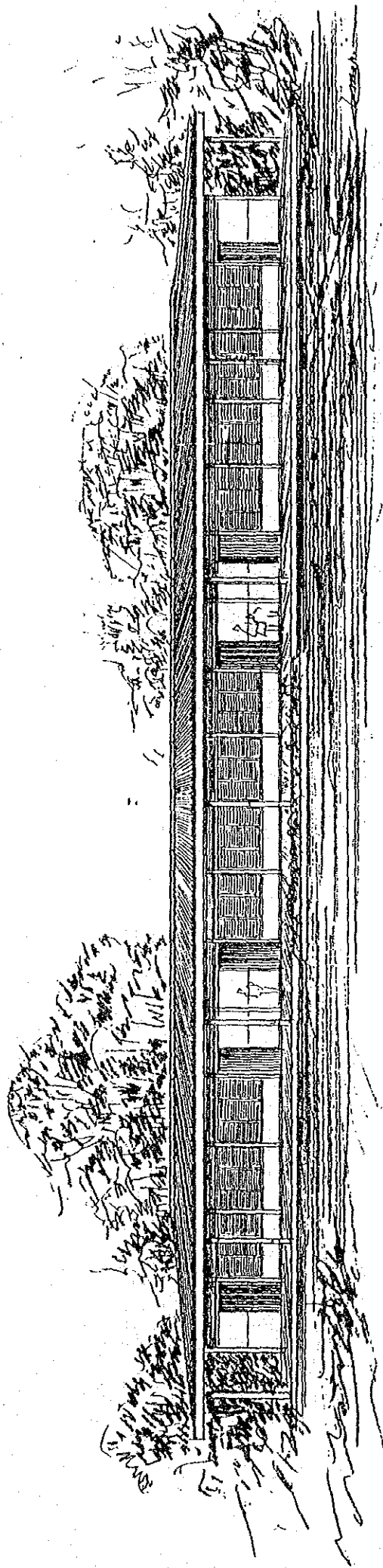
I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of the Philippines for their close cooperation extended to the team.

June 1991.

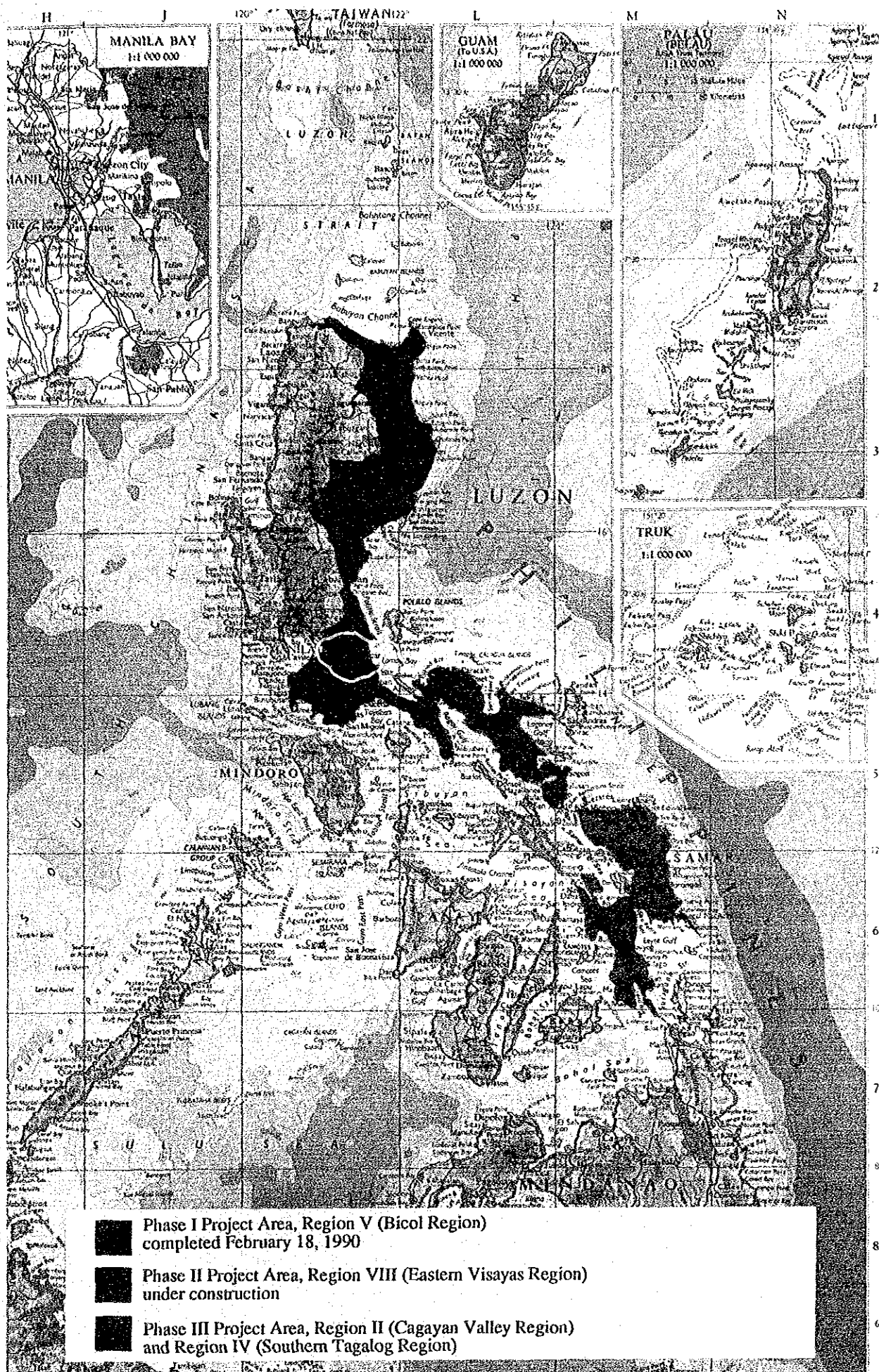


Kensuke Yanagiya
President
Japan International Cooperation Agency

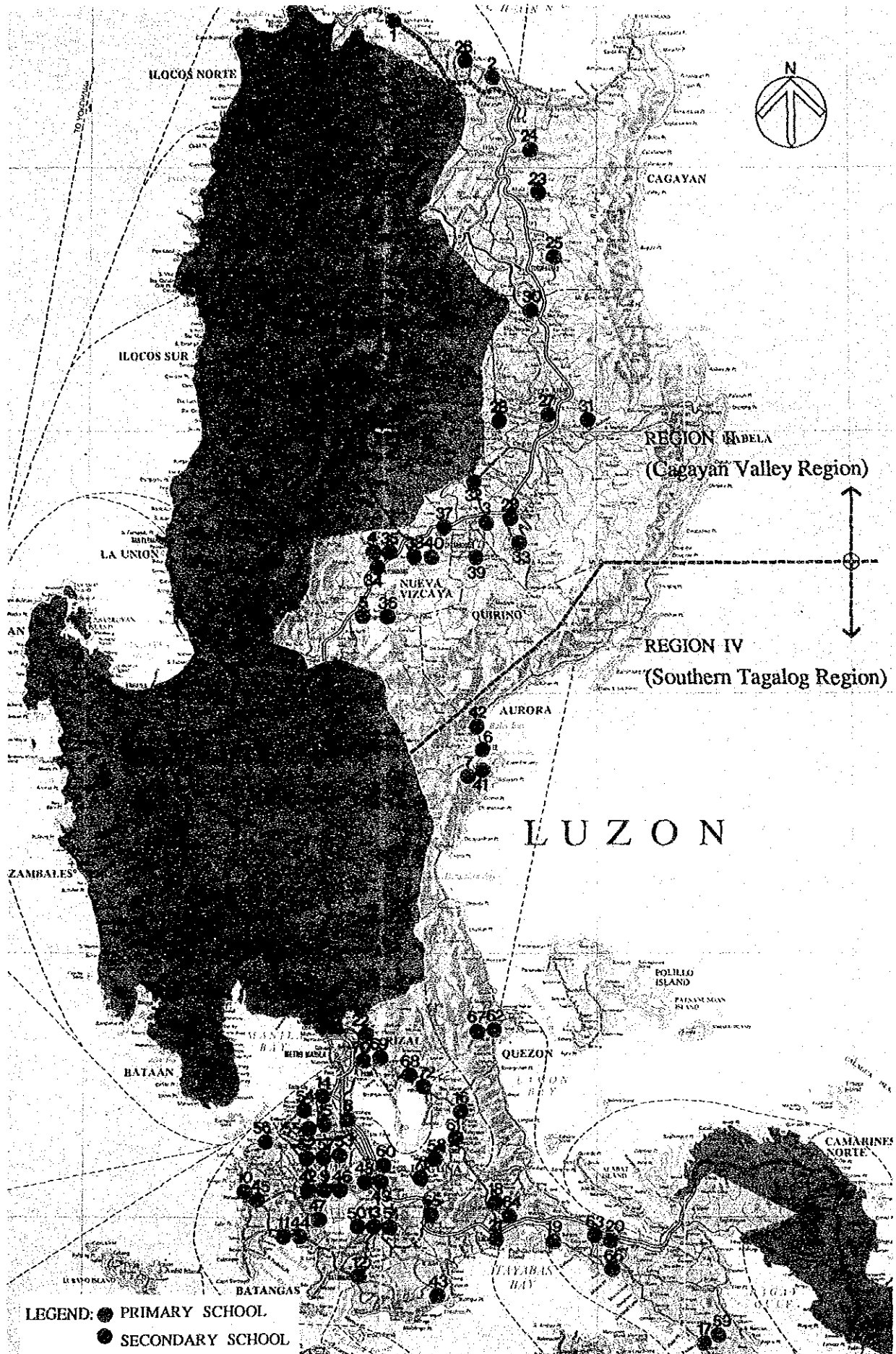


Perspective Drawing Type C

MAP OF THE PHILIPPINES



PROJECT LOCATION MAP



SUMMARY

SUMMARY

The Government of the Republic of the Philippines (hereinafter referred to as "Philippines") made every effort to provide equal educational opportunities to more children by increasing school facilities, granting scholarships, etc. under the Five-year Education Development Plan (1983-1987). As a result, the number of primary and secondary school children increased from 10.07 million in 1983 to 12.12 million in 1989. However, due to the indigence of individual households and the lack of the Government's educational budget, the total school enrolment rate is still low. The money spent for each of the primary and secondary school students decreased due to the increase of the number of students. In 1989, some 2.56 million school age children could not attend school.

By seriously taking the above situation into account, the Government of the Philippines established the Medium-term Philippine Development Plan (1987-1992) and Updates of the Philippine Development Plan (1990-1992) emphasizing the education and manpower development, and has been making efforts to improve the educational situation by upgrading the qualities of education and training, and strengthening the management structure of the education development plan.

During the same period of time, the Government established the Six-year School Construction Plan and is aiming to construct 40,252 primary and secondary school classrooms, 3,598 multipurpose facilities, 1,608 workshops, and 804 science laboratories by 1992. The serious damage inflicted on many houses and public facilities throughout the country by several typhoons, including two big ones in 1987. Damage to school facilities was great and the country's school facility shortage became increasingly worse, thereby hindering daily educational activities.

For the above reasons, the Government of the Philippines, in the midst of financial difficulties, has been driven by necessity to restore or repair many schoolbuildings in a short period of time. Thus, the Government selected 360 schools throughout the country and launched the Five-year Schoolbuilding Construction Plan to rebuild the schoolbuildings as typhoon-resistant prefabricated structures, and requested grant aid cooperation from the Government of Japan.

In response to the request made by the Government of the Philippines, the Government of Japan decided to conduct a basic design study for the project.

The Japan International Cooperation Agency (hereinafter referred to as "JICA") conducted a basic design study during June 1988 for 72 schools in Region V (Bicol Region) as the Phase I project. Construction of the Phase I project was decided upon and the Exchange of Notes was signed by both governments. The construction of the schoolbuildings for 72 schools was completed in February 1990.

Following the Phase I project, JICA conducted a basic design study in January 1990 for 69 schools in Region VIII (Eastern Visayas Region) and the Exchange of Notes was signed by both governments. The project is now under construction and will be completed by September 1991.

Following the Phase I and II projects, the Government of the Philippines selected 72 schools in Region II (Cagayan Valley Region) and Region IV (Southern Tagalog Region) for the Phase III Project, and requested grant aid cooperation for the construction of the schoolbuildings from the Government of Japan.

In response to the Government of the Philippines' request, JICA sent a Basic Design Study Team to the Philippines from February 20 to March 14, 1991. The Study Team held a series of discussions on the Project with the officials concerned of the Department of Education, Culture and Sports (hereinafter referred to as "DECS"), the Project implementation agency and the Department of Public Works and Highways (hereinafter referred to as "DPWH"), that is the responsible agency for the maintenance and management of the country's public facilities. The Team also held a series of discussions on the Project with officials concerned of the DECS's Cagayan Valley and Southern Tagalog Regional Offices, and conducted the field surveys at the Project school sites.

The Project is a part of the Philippine Government's Six-year School Construction Program. Besides the Government of Japan, the Asian Development Bank and the United States Agency for International Development are also expected to assist in the program.

The purpose of the Project is to construct the buildings for 72 primary and secondary schools in Region II and Region IV with typhoon-resistant prefabricated type structures. The Basic Design was made to construct the schoolbuildings by selecting a proper type from four proposed building types according to the size and needs of each school.

The primary and secondary schools selected for the Project are those that were seriously damaged by typhoons. Most of these schools are located in populated areas. Schools having high social needs, such as usage as places of refuge for area residents during natural calamities, were selected for the Project. Schools which may receive financial assistance from other countries or international organizations are not included in the Project.

The Project facilities and equipment are summarized as follows:

1. Summary of Schoolbuildings

- "A" Type: 108 m², 2 Classrooms
- "B" Type: 162 m², 3 Classrooms
- "C" Type: 216 m², 4 Classrooms
- "D" type: 270 m², 5 Classrooms
- Science Laboratory: 90 m², 1 science laboratory for
each secondary school
- Toilet: 25.5 m², 1 toilet building for each school

- Notes:
1. Two doors will be installed in each classroom for easy access.
 2. Each primary school classroom will accommodate 40 students. Each secondary school classroom and science laboratory will accommodate 42 students.
 3. Toilets are to be designed based on DPWH's design standards. They are not typhoon-resistant prefabricated structures. One toilet house will be built for each Project school.

2. Summary of Equipment

(1) Primary Schools

Classrooms:

. Teachers' desks, chairs, and filing cabinets

- . Students' desk-chairs (large, medium, and small types), and closets
- . Blackboards and bulletin boards

(2) Secondary Schools

Classrooms:

- . Teachers' desks, chairs, and filing cabinets
- . Students' desk-chairs and closets
- . Blackboards and bulletin boards

(3) Science Laboratories:

- . Experiment tables, stools and demonstration workbenches
- . Student Closets
- . Blackboards, bulletin boards, storage shelves, and steel shelves

A characteristic of the Project is to construct the facilities of 72 schools that are scattered widely throughout Region II and Region IV in a short period of time. Thus, it will be necessary to establish a construction schedule and management plan accordingly.

Since the prefabricated materials that are essential for attaining typhoon-resistant capabilities are not available in the Philippines, it was planned to procure them in Japan. However, it was decided upon to procure other construction materials and education equipment in the Philippines to allow for easy maintenance and management of the completed Project facilities. It was planned to select whole construction materials and education equipment by giving the first priority to the easy maintenance and after-service considerations, i.e., maintenance-free facilities.

The budget necessary for the maintenance and management of primary and secondary schools in the Philippines is distributed to DPWH by DECS according to the requests from each school's principal. With this budget, DPWH will repair, maintain, and manage the school facilities.

Since the Project's schoolbuildings will not require a large sum of money to cover maintenance and management costs and that the prime objective of the Project is to rebuild school facilities that were damaged by typhoons, it is felt that the present budgetary funds and the present

staff will be sufficient for maintaining and managing Project facilities.

The Government of the Philippines has been making every effort to improve the education situation. However, there is a shortage of primary and secondary school facilities and a great number of children cannot receive an education due to the damages caused by typhoons. Therefore, it can be evaluated that the construction of the school facilities under the Project will greatly contribute to improve the present classroom shortage problem.

The implementation of the Project will have the following effects:

(1) Increase Opportunities for Children to Attend School

516 classrooms have either been or are being built under the Phase I and II projects. 158 classrooms are for primary schools; 358 are for secondary schools. Assuming that one classroom can accommodate 40 students, these classrooms can accommodate 20,640 students.

274 classrooms are to be built under the Phase III Project. 75 of the classrooms are for primary schools; 199 are for secondary schools. These classrooms will accommodate 11,358 students.

As a result, 31,998 students will be able to use the classrooms built under the Phase I, II and III projects. Thus, this Project will represent a meaningful contribution towards increasing the opportunities for children to attend school.

(2) Contribution to Area Residents

The Project's school facilities will not only be used for classroom purposes (including classes that will be conducted in two or three shifts) but also as places of refuge for area residents during periods of natural calamities and as meeting places. This additional use of the Project's school facilities will be a beneficial contribution to the area residents.

(3) Activation of Rural Economies

The construction of numerous schoolbuildings in the rural areas of

the Philippines will provide employment opportunities for area residents. The local procurement of construction materials and equipment other than prefabricated building frames will make a significant contribution towards stimulating the rural economies of the Philippines.

In view of the above, it is deemed to be appropriate and extremely worthwhile to undertake the Project with grant aid cooperation.

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PERSPECTIVE DRAWING

MAP OF THE PHILIPPINES

PROJECT LOCATION MAP

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CHAPTER 1. INTRODUCTION

CHAPTER 1 INTRODUCTION

As a result of the typhoons since 1984, especially the two big ones in 1987, many schools in the Philippines were completely or partially destroyed. Thus, in the middle of financial difficulties, the Philippine Government had to repair or rebuild numerous schoolbuildings in a short period of time. The Philippine Government selected 360 schools throughout the country and established its five-year plan to rebuild these schools with prefabricated typhoon-resistant structures.

Following the Phase I project covering the Bicol Region (Construction completed in March 1990) and the Phase II project covering the Eastern Visayas Region (still undergoing construction and scheduled to be completed around September 1991), the Philippine Government has requested the Japanese Government for grant aid cooperation to construct schoolbuildings in the Cagayan Valley and the Southern Tagalog regions as their Phase III Project.

Based on the request, JICA dispatched the Basic Design Study Team headed by Mr. Yutaka Yokoi, Deputy director, Grant Aid Division, Economic Cooperation bureau, Ministry of Foreign Affairs of the Government of Japan from February 20 to March 14, 1991 (refer to Annexes 2, 3, 4 and 5 concerning the members of the Study Team, the Study schedule, the members of the concerned personnel of the Philippine Government, and the Minutes of Discussions).

The Basic Study Team and members of the Philippine side held a series of meetings. The Study Team conducted a site study of the Phase III Project schools and their related facilities and engaged in the collection of data. The team also confirmed such matters as the range of cooperation by the Japanese Government and the undertakings to be borne by the Philippine side.

Upon returning to Japan, and after reviewing the results of the study, the Study Team determined each schoolbuilding's size, prepared a list of appropriate and essential classroom equipment and materials, made a rough estimate of the Project cost and established Project plans.

Based on the above, this report compiles information pertaining to schoolbuilding sizes, the basic design, and the Project plan. This report also provides an evaluation of the Project and puts forth certain recommendations.

CHAPTER 2. BACKGROUND OF THE PROJECT

CHAPTER 2 BACKGROUND OF THE PROJECT

2-1 Education Situations in the Philippines

2-1-1 Present Education Situations in the Philippines

The educational system in the Philippines has been greatly influenced by the Spanish and American systems. The American influence is shown in the centralized 7-4-4 system (7 years of primary education, 4 years of secondary education, and 4 years of higher education), free primary education, the establishment of pilot schools, and cocducation. The decentralization of the education system has been tried recently.

Primary school education is now 6 years except for some private schools. The present system is 6 years of primary school education, 4 years of secondary school education and then on to a university. Since 1988, secondary education has been free, and all local public primary and secondary schools have been placed under the administration of the central government and nationalized.

The Philippine educational system is shown in Table 2-1. The education performance indicators of the Public Primary Education Activities are shown in Table 2-2. and those for the Public Secondary Education Activities are shown in Table 2-3.

Table 2-1. The Philippine Educational System

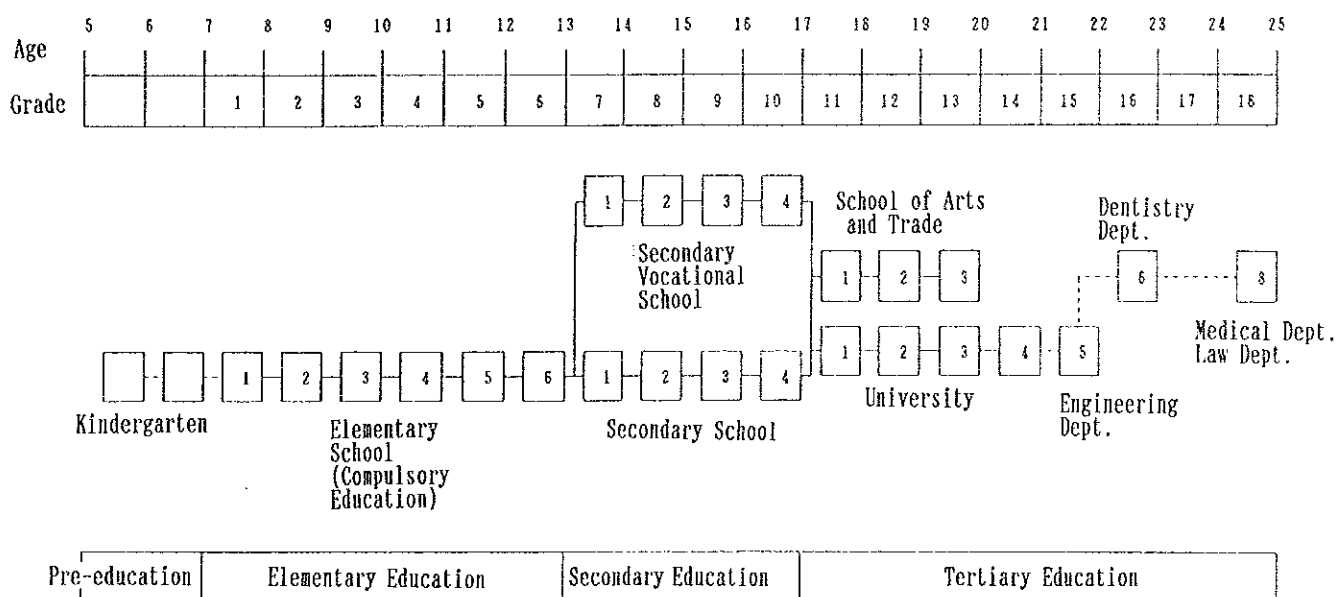


Table 2-2 The Education Performance Indicators of the Public Primary Educational Activities (1989-1990)

Region	Gross Enrolment Ratio	Retention Rate	Participation Rate	Graduation Rate	Transition Rate	Cohort Survival Rate	Completion Rate	Gross Teacher-Pupil Ratio	Dropout Rate
NCR	82.83 %	97.75%	80.17%	98.17%	101.13%	89.58%	87.94%	1:33	0.66 %
CAR	108.34 %	91.27%	97.62%	98.01%	95.44%	65.40%	64.10%	1:29	0.71 %
Region I	109.55 %	95.63%	99.53%	98.14%	97.84%	79.92%	78.43%	1:27	1.43 %
Region II	101.60 %	92.15%	89.99%	95.71%	94.08%	68.33%	65.39%	1:32	1.05 %
Region III	104.82 %	94.89%	97.30%	91.69%	96.13%	79.94%	73.29%	1:34	0.90 %
Region IV	108.25 %	93.96%	99.77%	97.48%	96.24%	78.39%	76.41%	1:34	1.17 %
Region V	103.52 %	92.58%	97.31%	96.90%	94.92%	65.70%	63.66%	1:31	1.28 %
Region VI	104.53 %	90.10%	94.08%	96.20%	93.46%	64.02%	61.59%	1:30	2.40 %
Region VII	100.37 %	88.69%	92.34%	96.52%	91.01%	61.30%	59.17%	1:32	3.41 %
Region VIII	103.04 %	89.01%	97.88%	95.84%	89.48%	55.07%	52.78%	1:27	2.98 %
Region IX	113.35 %	85.71%	99.36%	94.56%	86.75%	52.23%	49.39%	1:34	1.96 %
Region X	114.20 %	92.68%	98.65%	95.58%	94.97%	62.16%	59.41%	1:35	2.16 %
Region XI	115.05 %	91.13%	98.40%	97.80%	94.24%	62.48%	61.10%	1:36	1.80 %
Region XII	128.59 %	86.87%	99.57%	95.32%	87.32%	47.59%	45.36%	1:36	2.73 %
Total	105.35 %	92.06%	95.25%	96.25%	94.52%	67.50%	64.97%	1:32	1.74 %

Source: DECS-Office of Planning Service

Table 2-3 The Education Performance Indicators of the Public Secondary Educational Activities (1989-1990)

Region	Gross Enrolment Ratio	Retention Rate	Participation Rate	Graduation Rate	Transition Rate	Cohort Survival Rate	Completion Rate	Gross Teacher-Pupil Ratio	Dropout Rate
NCR	58.82 %	92.15 %	44.00 %	93.80 %	83.56 %	84.62 %	79.37 %	1:25	8.89 %
CAR	44.02 %	86.24 %	29.23 %	93.13 %	71.04 %	71.62 %	66.70 %	1:23	6.93 %
Region I	59.17 %	93.43 %	46.34 %	96.53 %	76.01 %	83.58 %	80.68 %	1:30	4.60 %
Region II	39.83 %	89.63 %	33.41 %	97.27 %	62.44 %	73.84 %	71.83 %	1:26	6.13 %
Region III	40.68 %	93.44 %	33.33 %	95.34 %	58.64 %	78.98 %	75.30 %	1:34	6.39 %
Region IV	46.53 %	91.08 %	32.75 %	94.14 %	61.14 %	79.29 %	74.65 %	1:30	6.83 %
Region V	44.73 %	94.59 %	32.96 %	94.01 %	65.53 %	68.95 %	64.82 %	1:33	6.98 %
Region VI	62.43 %	94.93 %	51.96 %	94.13 %	86.88 %	89.02 %	83.84 %	1:32	6.97 %
Region VII	31.03 %	79.75 %	20.57 %	94.53 %	63.27 %	60.98 %	57.64 %	1:36	6.88 %
Region VIII	41.47 %	81.84 %	28.64 %	96.71 %	80.33 %	61.44 %	59.42 %	1:29	11.51 %
Region IX	38.40 %	86.03 %	26.92 %	92.39 %	71.75 %	73.39 %	67.81 %	1:33	7.29 %
Region X	42.25 %	84.00 %	32.01 %	91.45 %	68.64 %	71.33 %	65.24 %	1:32	8.12 %
Region XI	44.85 %	86.19 %	31.57 %	94.12 %	71.67 %	72.60 %	68.33 %	1:32	7.35 %
Region XII	45.42 %	92.74 %	33.68 %	95.51 %	78.08 %	74.84 %	71.48 %	1:32	6.80 %
Total	46.21 %	90.12 %	34.98 %	94.49 %	70.94 %	76.65 %	72.42 %	1:30	7.27 %

Source: DECS-Office of Planning Service (OPS)

1) Number of Schools

There were 34,382 public and private primary schools in the Philippines in 1989. 32,811 were public and 1,571 were private. There were 5,523 public and private secondary schools, of which 3,369 were public and 2,154 were private.

The number of preschools, primary and secondary schools in 1989 is shown in Table 2-4. The number of primary and secondary schools for each year since 1954 is shown in Table 2-5.

Table 2-4 Number of Pre-schools, Primary and Secondary Schools in 1989

	Pre-Schools			Primary Schools			Secondary Schools		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
NCR	628	293	335	801	462	339	355	105	250
CAR	40	12	28	1,190	1,143	47	176	97	79
Region I	369	324	45	2,277	2,196	79	523	360	163
Region II	106	73	33	1,324	1,267	57	220	127	93
Region III	446	258	188	2,618	2,448	170	462	266	196
Region IV	814	532	282	4,158	3,897	261	801	467	334
Region V	225	222	3	2,879	2,806	73	458	312	146
Region VI	506	431	75	3,153	3,027	126	526	377	149
Region VII	151	87	64	2,666	2,591	75	375	206	169
Region VIII	87	69	18	3,168	3,145	23	356	283	73
Region IX	40	17	23	2,486	2,444	42	246	175	71
Region X	82	37	45	2,533	2,443	90	393	232	161
Region XI	151	110	41	2,389	2,246	143	358	194	164
Region XII	192	181	11	2,240	2,194	46	274	168	106
Total	3,837	2,646	1,191	34,382	32,811	1,571	5,523	3,369	2,154

Source: DECS-Office of Planning Service (OPS)

Table 2-5 Number of Primary and Secondary Schools for Each Year

School Year	Primary Schools			Secondary Schools		
	Total	Public	Private	Total	Public	Private
1954-55	24,962	24,962	-	356	356	-
1955-56	25,893	25,893	-	358	358	-
1956-57	26,980	26,980	-	365	365	-
1957-58	28,043	28,043	-	366	366	-
1958-59	28,635	28,635	-	376	376	-
1959-60	30,300	29,049	1,251	1,704	376	1,328
1960-61	30,830	29,590	1,240	1,642	402	1,240
1961-62	31,806	30,492	1,314	1,811	417	1,394
1962-63	33,018	31,676	1,342	1,662	265	1,397
1963-64	35,605	34,159	1,446	1,721	257	1,464
1964-65	24,150	22,659	1,491	2,062	521	1,541
1965-66	25,033	23,550	1,483	2,096	483	1,613
1966-67	36,679	36,070	609	2,679	1,045	1,634
1967-68	36,650	36,078	572	2,911	1,136	1,775
1968-69	38,076	37,020	1,056	3,478	1,562	1,916
1969-70	39,174	37,421	1,753	3,696	1,780	1,916
1970-71	23,804	22,838	966	4,139	2,125	2,014
1971-72	24,483	23,525	958	4,590	2,594	1,996
1972-73	27,612	26,635	977	4,716	2,709	2,007
1973-74	29,192	28,196	996	4,778	2,755	2,013
1974-75	30,761	29,745	1,016	4,844	2,825	2,019
1975-76	30,962	29,854	1,108	4,944	2,883	2,061
1976-77	31,372	30,306	1,066	4,942	2,865	2,077
1977-78	31,257	30,099	1,158	4,923	2,891	2,032
1978-79	31,519	30,221	1,298	5,129	3,134	1,995
1979-80	31,494	30,311	1,183	5,143	3,112	2,031
1980-81	31,455	30,287	1,168	5,156	3,161	1,995
1981-82	31,729	30,561	1,168	5,354	3,298	2,056
1982-83	32,114	30,946	1,168	5,327	3,342	1,985
1983-84	32,809	31,440	1,369	5,430	3,354	2,076
1984-85	33,104	31,768	1,336	5,475	3,399	2,076
1985-86	33,156	31,817	1,339	5,375	3,357	2,018
1986-87	33,485	32,037	1,448	5,394	3,327	2,067
1987-88	33,544	32,000	1,544	5,410	3,307	2,103
1988-89	34,526	32,875	1,651	5,496	3,347	2,149
1989-90	34,382	32,811	1,571	5,523	3,369	2,154

Source: DECS-OPS

2) Number of Students

In 1989, the number of students attending primary schools in the Philippines was 10.28 million, of which 9.6 million attended public schools and 0.68 million attended private schools. In 1995, the total number of students attending public primary schools is estimated to be 11 million. The number of students attending secondary schools in 1989 was 3.96 million, of which 2.51 million attended public schools and 1.44 million attended private schools. The number of students attending public secondary schools in 1994 is estimated to be 3.61 million.

The number of primary and secondary school students in each region during the 1989-1990 school year is shown in Table 2-6. The number of primary and secondary school students for each year since 1954 is shown in Table 2-7. The number of public primary school students in each region during the 1989-1990 school year is shown in Table 2-8. The forecasted number of public primary school students in each region for each school year from 1990-1991 to 1995-1996 is shown in Table 2-9. The forecasted number of public secondary school students in each region for each school year from 1990-1991 to 1994-1995 is shown in Table 2-10.

Table 2-6 Number of Primary and Secondary School Students
(1989-1990 school year)

Region	Primary School			Secondary Schools		
	Public	Private	Total	Public	Private	Total
NCR	855,180	273,240	1,128,420	323,251	243,936	567,187
CAR	181,211	15,826	197,037	43,624	33,396	77,020
Region I	559,374	23,726	583,100	191,286	82,676	273,962
Region II	380,673	11,870	392,543	90,404	57,030	147,434
Region III	942,440	80,703	1,023,143	224,671	191,990	416,661
Region IV	1,313,786	90,054	1,403,840	315,860	243,635	559,495
Region V	734,599	18,087	752,686	189,239	79,505	268,744
Region VI	906,063	33,209	939,272	323,267	85,956	409,223
Region VII	692,067	32,966	725,033	128,968	124,375	253,343
Region VIII	534,622	7,721	542,343	137,464	39,314	176,778
Region IX	559,470	12,493	571,963	113,705	40,044	153,749
Region X	614,227	22,442	636,669	136,754	78,998	215,752
Region XI	740,532	44,395	784,927	173,321	89,177	262,498
Region XII	590,178	13,707	603,885	124,915	54,878	179,793
Total	9,604,422	680,439	10,284,861	2,516,729	1,444,910	3,961,639

Source: DECS-OPS

Table 2-7 Number of Primary and Secondary School Students of Each Year

School Year	Primary School			Secondary Schools		
	Total	Public	Private	Total	Public	Private
1954-55	3,444,417	3,305,103	139,314	559,868	187,373	372,495
1959-60	4,150,743	3,970,750	179,993	611,544	200,164	411,380
1964-65	5,577,901	5,330,334	247,567	961,559	318,498	643,061
1969-70	6,855,501	6,521,143	334,358	1,591,356	675,840	915,516
1970-71	6,968,978	6,627,734	341,244	1,719,386	762,984	956,402
1971-72	7,001,970	6,659,544	342,426	1,800,684	812,260	988,424
1972-73	7,022,709	6,667,644	355,065	1,875,012	863,326	1,011,686
1973-74	7,209,039	6,845,138	363,901	1,958,048	913,342	1,044,706
1974-75	7,429,249	7,043,522	385,727	2,112,176	975,356	1,136,820
1975-76	7,597,279	7,197,878	399,401	2,291,707	1,061,731	1,229,976
1976-77	7,808,158	7,387,178	420,980	2,508,519	1,205,434	1,303,085
1977-78	7,861,641	7,424,254	437,387	2,696,460	1,319,898	1,376,562
1978-79	8,178,609	7,723,587	455,022	2,820,469	1,380,600	1,439,869
1979-80	8,227,355	7,817,450	409,905	2,766,874	1,489,959	1,276,915
1980-81	8,290,444	7,931,164	359,280	3,018,568	1,614,554	1,404,014
1981-82	8,518,283	8,073,290	444,993	2,935,732	1,591,510	1,344,222
1982-83	8,591,267	8,164,061	427,206	3,074,219	1,721,159	1,353,060
1983-84	8,717,469	8,228,554	488,915	3,204,551	1,844,174	1,360,377
1984-85	8,793,773	8,269,825	523,948	3,323,063	1,957,444	1,365,619
1985-86	8,896,920	8,392,103	504,817	3,269,434	1,949,542	1,319,892
1986-87	9,229,595	8,639,399	590,196	3,357,014	1,996,377	1,360,637
1987-88	9,601,322	8,964,804	636,518	3,494,460	2,090,073	1,404,387
1988-89	9,972,571	9,323,637	648,934	3,737,104	2,354,620	1,382,484
1989-90	10,284,861	9,604,422	680,439	3,961,639	2,516,729	1,444,910

Source: DECS-OPS

Table 2-8 Number of Public Primary School Student in Each Region (1989-1990)

REGION	Grade						Grade I-VI Total
	I	II	III	IV	V	VI	
NCR	165,316	149,605	145,718	139,460	132,023	123,058	855,180
CAR	44,001	33,738	30,087	27,372	24,351	21,662	181,211
Region I	109,474	98,900	95,598	91,982	84,815	78,605	559,374
Region II	80,709	69,225	65,282	60,288	55,624	49,545	380,673
Region III	185,973	167,992	162,589	152,953	142,766	130,167	942,440
Region IV	268,919	237,169	225,120	210,347	194,845	177,386	1,313,786
Region V	155,386	137,679	125,974	116,651	104,880	94,029	734,599
Region VI	203,906	163,574	151,518	139,799	128,717	118,549	906,063
Region VII	152,049	130,653	120,029	108,548	96,252	84,536	692,067
Region VIII	119,405	102,660	94,698	82,223	71,914	63,722	534,622
Region IX	141,838	113,810	95,329	81,964	67,218	59,311	559,470
Region X	138,299	116,805	106,069	95,435	84,152	73,527	614,227
Region XI	168,845	141,099	128,183	111,988	101,929	88,488	740,532
Region XII	165,254	121,115	95,435	81,983	67,467	58,924	590,178
Total	2,099,374	1,784,024	1,641,569	1,500,993	1,356,953	1,221,509	9,604,422

Includes State Colleges and Universities

Source: DECS-OPS

Table 2-9 Forecasted Number of Public Primary School Students in Each Region (1991-1996)

REGION	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996
NCR	903,160	925,937	943,694	958,464	970,362
CAR	188,297	192,831	196,389	199,319	201,708
Region I	601,955	617,095	628,903	638,719	646,632
Region II	411,806	421,927	423,847	436,400	441,714
Region III	1,015,764	1,041,106	1,060,893	1,077,314	1,098,580
Region IV	1,410,105	1,445,036	1,472,339	1,494,962	1,513,276
Region V	790,128	809,629	824,879	837,507	847,737
Region VI	986,838	1,011,162	1,030,188	1,045,939	1,050,782
Region VII	751,457	769,542	783,738	795,431	804,966
Region VIII	582,141	596,099	607,061	616,083	623,448
Region IX	596,198	609,852	620,652	629,451	636,723
Region X	639,307	654,560	666,548	676,403	604,450
Region XI	782,111	800,815	815,511	827,598	837,471
Region XII	598,722	612,394	623,212	632,020	639,306
Total	10,257,989	10,507,985	10,703,854	10,865,610	10,997,083

Source: DECS-OPS

2-10 Forecasted Number of Public Secondary School Students in Each Region (1991-1995)

REGION	1991-1992	1992-1993	1993-1994	1994-1995
NCR	390,282	417,977	451,349	486,532
CAR	52,683	56,569	61,087	85,850
Region I	226,344	243,034	262,439	782,896
Region II	102,652	110,221	119,022	823,300
Region III	247,770	266,014	287,282	309,576
Region IV	359,142	385,626	416,415	448,875
Region V	204,805	219,586	237,118	255,801
Region VI	357,853	383,861	414,578	448,818
Region VII	154,081	165,443	178,652	192,578
Region VIII	167,923	180,305	194,701	205,877
Region IX	131,726	141,439	152,731	164,636
Region X	163,579	175,071	190,129	204,545
Region XI	200,340	215,113	232,288	258,395
Region XII	133,676	143,533	154,993	167,675
Total	2,891,592	3,104,819	3,352,714	3,614,058

Source: DECS-OPS

3) Number of Teachers

There were approximately 316,000 primary school teachers in 1989. 297,000 taught in public schools and approximately 19,000 taught in private schools. There were 119,000 secondary school teachers, of which about 79,000 taught at public schools and about 40,000 taught at private schools.

The ratio of teachers to students in public primary schools in 1989 was 1:32. For private schools it was 1:21.

Table 2-11 gives the number of public and private primary and secondary school teachers. Table 2-12 gives the number of public and private primary and secondary school teachers for each year in each region. The ratio of teachers to students in public primary schools is shown in Table 2-13.

Table 2-11 Number of Public and Private Primary and Secondary School Teachers
(1989)

School Year	Primary Schools		Secondary Schools	
	Public	Private	Public	Private
1974-75	248,435	N/A	27,246	N/A
1975-76	246,569	N/A	33,083	N/A
1976-77	234,946	N/A	38,196	N/A
1977-78	258,947	N/A	44,613	N/A
1978-79	254,690	N/A	50,946	N/A
1979-80	253,911	N/A	48,223	28,150
1980-81	255,343	N/A	52,435	33,683
1981-82	261,131	N/A	54,555	30,910
1982-83	261,860	12,383	56,257	32,762
1983-84	270,493	10,963	69,563	34,614
1984-85	270,693	12,765	59,263	33,962
1985-86	277,076	N/A	53,255	N/A
1986-87	281,659	N/A	62,955	N/A
1987-88	284,796	N/A	69,226	N/A
1988-89	289,719	17,422	79,514	29,624
1989-90	297,043	18,542	79,083	39,722

* N/A: Data not available.

Source: DECS-CPS

Table 2-i2 Number of Public Primary and Secondary School Teachers in Each Region and for Each Year

School Year	TOTAL	NCR	CAR	Region I	Region II	Region III	Region IV	Region V	Region VI	Region VII	Region VIII	Region IX	Region X	Region XI	Region XII
Primary															
1980-81	255,343	22,481	-	23,319	11,543	24,272	31,885	20,668	28,282	19,865	18,167	12,581	13,921	15,742	12,617
1981-82	261,131	23,413	-	23,026	11,821	24,399	32,462	20,902	28,025	20,547	18,496	13,913	14,384	15,851	13,902
1982-83	261,860	23,414	-	23,390	11,822	24,399	32,478	20,902	28,198	20,547	18,499	13,880	14,534	15,851	13,956
1983-84	270,493	24,665	-	23,115	12,280	25,028	33,642	21,506	28,864	21,920	18,710	13,863	14,947	17,129	14,824
1984-85	270,693	24,761	-	22,933	12,434	25,123	34,156	21,614	28,686	20,664	18,542	13,994	14,786	17,952	15,048
1985-86	277,076	25,241	-	23,417	12,873	25,480	35,344	21,874	29,084	20,876	18,867	15,143	15,387	18,221	15,269
1986-87	281,658	25,484	-	23,595	12,713	26,637	35,961	22,605	29,198	21,166	18,770	14,633	16,178	19,024	15,695
1987-88	284,796	25,764	5,886	19,491	11,323	26,799	36,728	22,724	29,258	21,168	18,817	15,566	16,327	19,153	15,792
1988-89	289,719	25,873	5,946	19,631	11,412	27,217	37,593	22,879	29,447	21,359	18,988	16,123	17,125	20,150	15,976
1989-90	297,043	25,911	6,128	20,335	11,905	27,653	38,442	23,525	30,470	21,830	19,606	16,592	17,660	20,560	16,426
Secondary															
1980-81	52,435	10,247	-	5,239	2,774	3,938	5,508	3,075	6,779	2,248	3,479	1,999	1,840	2,890	2,369
1981-82	54,555	10,769	-	5,655	2,707	4,311	5,792	3,241	7,123	2,299	3,500	1,985	2,399	3,146	1,628
1982-83	56,257	10,112	-	5,644	2,796	3,986	6,882	3,743	7,873	2,491	2,722	1,979	2,846	3,294	1,909
1983-84	69,563	9,499	-	7,317	2,832	5,658	8,534	5,479	9,046	3,288	4,097	2,946	3,672	4,297	2,798
1984-85	59,263	8,092	-	6,233	2,413	4,820	7,356	4,668	7,707	2,801	3,490	2,510	3,128	3,661	2,384
1985-86	53,255			NO DATA AVAILABLE											
1986-87	62,955	10,491	-	6,281	2,995	5,365	8,333	3,904	7,630	2,157	3,584	2,465	3,410	3,969	2,370
1987-88	69,226	10,924	-	6,647	3,069	5,528	8,951	4,038	9,917	2,538	4,175	2,838	3,379	4,113	3,054
1988-89	79,514	11,790	1,568	7,398	3,242	6,198	9,697	4,737	10,735	3,461	4,558	3,473	4,082	5,088	3,487
1989-90	79,083	12,547	1,744	6,237	3,042	6,452	9,921	5,155	9,824	3,537	4,528	3,201	4,234	5,381	3,280

Source: DECS-OPS

Table 2-13 Teacher-Student Ratio in Public Primary Schools

School Year	Number of Students	Number of Teachers	Teacher Student Ratio
1974-75	7,043,522	248,435	1:28
1975-76	7,197,878	246,569	1:29
1976-77	7,387,178	234,946	1:31
1977-78	7,424,254	258,947	1:29
1978-79	7,723,587	254,690	1:30
1979-80	7,817,450	253,911	1:31
1980-81	7,931,164	255,343	1:31
1981-82	8,073,290	261,131	1:31
1982-83	8,164,061	261,860	1:31
1983-84	8,228,554	270,493	1:30
1984-85	8,269,825	270,693	1:31
1985-86	8,392,103	277,076	1:30
1986-87	8,639,399	281,659	1:31
1987-88	8,964,804	284,796	1:31
1988-89	9,323,637	289,719	1:32
1989-90	9,604,422	297,043	1:32

Source: DECS-OPS

There were 1,675 public and private colleges and universities in the Philippines in 1989. 472 of them have teacher training courses. About 39,000 students graduated from these courses in 1989.

In order to obtain teaching credentials after graduating, a student must pass the Board Examination for teachers. In 1989, 13,292 students passed the examination.

The teacher position classification system in the Philippines is similar to that in Japan and have a principal, vice principal and teacher. However many secondary schools have Department Heads under the principals.

The required courses and credits needed to become a primary or secondary school teacher are shown in Table 2-14.

Table 2-14 Required Courses and Credits for Teacher Credentials

Required Courses	Primary School Teacher	Secondary School Teacher
General Education Courses	102 Units	93 Units
Major Courses	36 Units (Minimum)	30 Units (Minimum)
Optional Courses	0	0
Special Courses		
Major	18	24
Minor	0	0
Total	156 Units	156 Units

2-1-2 Contents of Education in the Philippines

The uniqueness of the education in the Philippines is the variety of languages. Presently, primary education is carried out using three languages: English and Tagalog as the official languages and each local language.

The languages used in primary schools are shown in Table 2-15.

Table 2-15 Languages Used in Class and Language Education for Each Grade of Primary School

<u>Languages Used in Classes</u>	<u>Language Education</u>
6th Grade: English and Tagalog (Supplement)	English and Tagalog
5th Grade: English and Tagalog (Supplement)	English and Tagalog
4th Grade: English and Local Language (Supplement)	English and Tagalog
3rd Grade: English and Local Language (Supplement)	English and Tagalog
2nd Grade: English and Local Language	English and Tagalog
1st Grade: English and Local Language	English and Tagalog

1) Primary Education Curriculum

The new primary education curriculum was introduced in 1985. Compared to the previous curriculum, the new one emphasized the development of basic reading, writing and calculation skills and the development of pride in being a Filipino. Table 2-16 shows the primary education curriculum.

The characteristics of the curriculum are as follows:

- a) To teach the importance of public health even outside the classes of Character Building Activities and Science and Health.
- b) Introduction of the subjects that will be helpful in social life
- c) Development of basic reading, writing, and calculating skills, pride as Filipinos, and the manpower that will be useful in the future development of the country.

Many primary schools have a double-shift class system of morning and afternoon classes. Some schools that were lacking classrooms have a three-shift class system.

Table 2-16 New Primary Education Curriculum (unit: minutes/day)

Subject \ Grade	1	2	3	4	5	6
Character Building	20-30	20-30	20	20	20	20
Tagalog Language	60	60	60	60	60	60
English Language	60	60	60	60	60	60
Math	40	40	40	40	40	40
Citizen and Culture	40	40				
History, Geography, Work Ethics			40			
History, Geography Civics				40	40	40
Science and Health			40	40	40	40
Art and Physical Education			40	40	40	40
H. E. and Livelihood Educ.				40	60	60
Total	220-230	220-230	300	340	360	360

2) Secondary Education Curriculum

Similar to primary education, secondary education is conducted on a bilingual basis, using both English and Tagalog. The term of secondary education is four years. This is two years shorter than the Japanese school term.

As six years of education are taught in four years in the Philippines, the content is rich and the level is high considering the age of the students. According to the Secondary Education Development Program (SEDP) which was established in 1989, new curriculum have been taught. The contents of the curriculum are shown in Table 2-17.

Table 2-17 Secondary School Curriculum

Subject Min/wk	Grade		1		2		3		4	
			Unit	Min/dy	Unit	Min/dy	Unit	Min/dy	Unit	Min/dy
Filipino			1	40	1	40	1	40	1	40
Araling Panlipunam			1	40	1	40	1	40	1	40
PEHM			1	40	1	40	1	40	1	40
Values Education			1	40	1	40	1	40	1	40
English			1	40	1	40	1	40	1	40
Mathematics			1	40	1	40	1	40	1	40
Science & Technology			1.5	60	1.5	60	1.5	60	1.5	60
Technology			1.5	60	1.5	60				
Home Economics							2	80	2	80
Total			9	360	9	360	9.5	380	9.5	380

3) Contents of Textbooks

The textbooks used in the Philippines were greatly influenced by those used in the United States and Europe; they are rich in content. Since the history of textbook development in the Philippines is short, some textbooks are no longer appropriate for the present Philippine situations. Since 1980, an emphasis was placed on providing education in the country's own language as well as on increasing hours of the country's history and social studies in order to develop the individual's identity as a Filipino. Since 1989, according to SEDP, more emphasis has been placed on value oriented education and manufacturing skill education.

Textbooks made by the Government are provided to the students free

of charge. On an average, one textbook is used by two public primary school students and by three and a half public secondary school students.

2-1-3 Education Budget and Expenditures in the Philippines

The 1990 educational budget was about 27 billion pesos. This was about 25% of the entire budget of the Government of the Philippines. From the figure it can be understood how strongly the Government has been endeavoring to promote the country's educational policies. The items and amounts of DECS's 1990 educational expenditures are shown in Table 2-18. The percentage of educational expenditures among the Government's total expenditures from 1956 through 1990 is shown in Table 2-19.

Table 2-18 Breakdown of DECS's Expenditures in 1990

(Unit: P1,000)

<u>Current Operating Expenditures</u>	
Office of the Secretary	P 23,237,302
Bureau of Elementary Education	9,326
Bureau of Secondary Education	16,003
Bureau of Higher Education	28,975
Bureau of Physical Education of School Sports Program	13,871
Bureau of Technical and Vocational Education	8,748
Bureau of Non-Formal Education	8,100
Institute of National Language	10,107
National Historical Institute	24,733
National Library	16,414
National Museum	27,730
Records Management and Archives Office	14,267
Subtotal	P 23,415,576
<u>Capital Outlays</u>	
Office of the Secretary	P 3,571,475
National Historical Institute	15,754
National Library	8,741
National Museum	4,953
Records Management and Archives Office	1,154
Institute of National Language	160
Subtotal	P 3,602,237
Total New Appropriations, Department of Education, Culture and Sports	P 27,017,813

SOURCE : DECS-OPS

Table 2-19 Percentage of the Educational Expenditures (DECS)
Among the Government's Total Expenditures (1956-1990)

Fiscal Year	Expenditures(in hundred million)		Percentage(%)
	Government	DECS	
1956	6.0	1.7	28.33
1957	6.3	1.9	30.15
1958	7.7	2.1	27.27
1959	8.9	2.2	24.71
1960	8.9	2.4	26.96
1961	10.9	3.0	27.52
1962	11.9	3.5	29.41
1963	13.8	4.0	28.98
1964	19.7	5.0	25.38
1965	21.0	5.5	26.19
1966	20.0	5.9	29.50
1967	20.7	6.4	30.91
1968	22.7	6.8	29.95
1969	29.09	7.8	26.81
1970	33.2	8.3	25.00
1971	37.1	10.0	26.95
1972	41.6	10.9	26.20
1973	79.4	12.9	16.24
1974	87.1	14.9	17.10
1975	145.0	16.4	11.31
1976	224.0	16.8	7.50
1977	273.9	20.4	7.44
1978	286.8	31.9	11.12
1979	322.2	24.4	7.57
1980	378.9	34.1	8.99
1981	503.2	38.2	7.59
1982	570.9	43.8	7.67
1983	618.3	54.7	8.84
1984	534.5	56.1	10.49
1985	583.3	61.4	10.52
1986	674.1	87.1	12.92
1987	793.2	123.2	15.53
1988	875.4	151.0	17.24
1989	1,170.1	235.7	20.14
1990	1,101.5	270.1	24.52
	(110,153,182,000)	(27,017,813,000)	

Source: DECS-OPS

2-1-4 Education Problems in the Philippines

Following are the educational problems in the Philippines:

1) Chronic Shortage of School Facilities

Presently, the construction of approximately 125,000 new classrooms and the repair of approximately 69,000 classrooms are urgently needed. In addition, to meet the needs of the increasing number of students caused by the annual population growth of 2.2%, 5,000 new classrooms must be built annually. Furthermore, natural calamities, such as typhoon inflict damages upon school facilities every year. The lack of school facilities is one of the major problems of the Government of the Philippines.

2) Shortage of Textbooks and Other Teaching Materials

One textbook is supposed to be provided to an average of two primary school students. In reality, however, due to the insufficient budget and the transportation system, textbooks are not being delivered at the above rate to remote areas of the Philippine archipelago that consists of some 7,000 islands. Most schools, except for some private ones, do not have the necessary education equipment for educational TV programs and audio-visual education systems.

3) High Dropout Rate

In the Philippines, of the total of 9.6 million public primary school students in 1989, 1.74% (about 160,000 students) stopped attending school. During that year, of the total of 2.51 million public secondary school students, 7.27% (about 180,000 students) stopped attending schools. The major reasons for the high dropout rate are the lack of parents' understanding of education, household poverty, and children being considered as a labor source.

4) Heavy Burden of Language Study

Education in the Philippines is conducted in three languages: the

two official languages (English and Tagalog) and one local language. Language studies are a heavy burden for students and it is one of the reasons why students drop out of school.

2-1-5 Damage to School Facilities by Typhoons

Tropical cyclones (generally known as typhoons in Japan) are classified in the Philippines according to their wind speeds as follows:

- a) Tropical depression: A cyclone with a maximum wind speed of 63 km/hr
- b) Tropical storm: A cyclone with a maximum wind speed of 64-118 km/hr
- c) Typhoon: A cyclone with a maximum wind speed of more than 118 km/hr.

Observation of these cyclones that occur every year in the Philippines is conducted by the Philippine Atmospheric, Geophysical and Astronomical Service Administration (PAGASA) and alarm signals ranging from No.1 to No.3 according to the strength of the cyclone are given to warn of the coming of a cyclone.

In 1990, the total damages caused by cyclones amounted to 12.1 billion Pesos (60.5 billion Yen). Among the project areas, Region IV was the country's second region most frequently hit by cyclones; Region II was the 3rd. The number of cyclones hitting each Region since 1948 are shown in Table 2-20, and the amount of damage brought about by them is shown in Table 2-21. Much of the damage inflicted by these cyclones was to school facilities. In 1990, a budget of about 590 millions Pesos (2.95 billion Yen) was allocated for the repair of damages. The estimated amount of damages inflicted on school facilities is shown in Table 2-22.

Total 2-20 Annual Frequency of Tropical Cyclone Passage Over Regions in the Philippines
(From 1948 to 1990 - 43 Year Period)

Region YEAR	1	2	3	4	4A	5	6	7	8	9	10	11	12
1948	5	4	3	9	1	1	2	2	3	0	8	0	
1949	4	1	0	2	4	0	5	5	2	0	4	0	0
1950	3	2	1	2	1	1	1	1	0	0	1	0	0
1951	5	4	1	2	1	2	1	1	3	0	0	0	0
1952	7	4	1	7	2	5	1	1	4	0	1	1	0
1953	6	3	1	2	0	4	0	0	1	0	0	0	0
1954	4	3	0	2	2	0	4	4	1	0	3	0	0
1955	2	1	0	0	0	1	0	0	1	1	1	1	1
1956	6	6	1	6	1	5	0	0	3	0	0	0	0
1957	6	4	2	3	0	2	0	0	1	0	0	0	0
1958	1	1	0	1	1	1	1	0	2	1	1	0	0
1959	3	3	0	4	2	3	0	0	1	0	0	0	0
1960	4	1	5	6	1	4	1	1	1	0	1	0	0
1961	5	3	2	2	0	2	0	0	1	0	0	0	0
1962	2	1	1	4	1	4	1	1	4	0	1	0	0
1963	5	3	1	2	1	1	1	1	0	0	1	0	0
1964	8	4	5	7	0	5	1	0	1	0	1	0	0
1965	5	2	0	0	0	0	0	2	1	0	1	0	0
1966	8	4	1	7	1	4	0	0	3	0	1	0	0
1967	6	6	1	2	2	1	2	2	2	0	1	0	0
1968	4	3	1	1	2	0	2	2	2	0	1	0	0
1969	4	0	0	0	1	0	0	0	0	0	0	0	0
1970	4	3	2	6	2	3	2	2	2	1	3	1	1
1971	6	4	1	8	2	7	0	2	9	0	2	0	0
1972	3	1	2	4	1	3	1	1	2	0	1	0	0
1973	7	5	1	1	0	0	1	1	1	0	0	0	0
1974	9	7	3	6	3	3	1	0	2	0	0	0	0
1975	3	2	1	3	1	2	1	1	2	0	1	0	0
1976	3	3	1	3	0	1	1	1	1	0	1	0	0
1977	7	4	2	3	0	2	1	0	3	0	0	0	0
1978	4	2	2	7	2	3	1	1	4	0	1	0	0
1979	6	3	2	5	2	3	1	1	2	0	1	0	0
1980	9	5	4	7	2	5	2	3	4	0	1	0	0
1981	3	1	2	6	1	5	1	1	3	0	0	0	0
1982	4	2	2	4	4	4	3	1	3	1	1	1	0
1983	5	2	2	5	2	4	1	0	1	0	0	0	0
1984	5	2	0	1	2	1	2	2	2	0	1	0	0
1985	6	3	2	4	1	2	0	0	1	0	0	0	0
1986	3	2	1	5	2	4	2	2	5	0	1	0	0
1987	2	0	1	5	1	4	0	0	3	0	0	0	0
1988	4	3	1	3	0	4	1	1	3	0	0	0	0
1989	5	4	4	5	0	4	0	0	2	0	0	0	0
1990	3	5	0	1	1	1	1	1	1	0	0	0	0
TOTAL	208	126	63	163	53	111	48	44	93	4	33	4	2
RANK	1	3	6	2	7	4	8	9	5	11	10	11	12

Total 2-21 Summary of Damages

YEAR	TD	TS	TY	TOTAL	I	D	M	ACTUAL	82 P VALUE
1948	4	0	11	15	0	4	0	P 18,482,876	P 143,930,375
1949	1	2	7	10	588	475	0	34,024,036	272,898,611
1950	2	1	5	8	0	27	0	19,244,303	159,780,408
1951	0	0	7	7	0	1272	0	97,562,090	851,912,075
1952	0	2	10	12	349	612	509	102,982,112	850,036,931
1953	0	1	10	11	17	22	0	11,282,371	95,502,695
1954	0	1	5	6	10	27	0	5,872,423	51,198,108
1955	0	1	1	2	8	26	66	731,036	8,138,427
1956	0	1	5	6	0	0	0	1,968,490	27,887,594
1957	0	1	4	5	0	65	0	900,000	7,431,875
1958	1	0	4	5	0	3	13	2,957,128	23,944,356
1959	0	0	3	3	46	38	NA	23,734,800	188,222,045
1960	0	1	4	5	----- 404 -----			10,961,626	82,542,369
1961	0	2	2	4	20	3	0	3,228,000	23,579,255
1962	0	0	5	5	20	10	1	3,412,000	23,321,941
1963	0	1	4	5	0	20	0	11,665,000	73,410,958
1964	0	1	6	7	14	70	8	22,753,680	136,905,416
1965	0	0	2	2	1	32	0	4,402,000	25,504,056
1966	0	1	2	3	2	66	53	53,007,223	290,769,188
1967	0	0	7	7	98	269	17	40,571,325	210,760,138
1968	0	1	5	6	337	66	361	98,342,475	487,083,066
1969	0	0	3	3	12	41	4	4,741,480	22,386,591
1970	1	4	5	10	3425	1579	938	921,000,000	3,783,894,824
1971	0	3	11	14	12315	169	163	41,438,500	151,371,873
1972	1	0	6	7	28	1303	10	756,624,000	2,570,485,304
1973	0	1	2	3	48	101	74	215,735,904	626,047,312
1974	1	3	7	11	150	233	97	421,203,240	927,073,780
1975	1	1	2	4	99	285	116	51,146,701	104,317,154
1976	1	2	3	6	40	373	2967	723,870,000	1,346,738,645
1977	0	3	4	7	118	100	13	496,562,346	850,277,996
1978	1	2	4	7	834	662	395	1,574,700,000	2,495,284,169
1979	1	1	7	9	79	69	78	414,817,069	568,009,131
1980	1	3	5	9	55	143	29	1,371,644,000	1,753,209,434
1981	0	1	5	6	2559	668	322	1,346,000,000	1,440,804,967
1982	0	3	5	8	387	337	183	1,759,970,042	1,759,970,042
1983	0	0	4	4	328	244	1544	999,330,171	897,951,471
1984	0	1	5	6	3102	2074	738	6,417,635,000	3,844,276,386
1985	0	1	3	4	100	151	76	1,703,240,000	870,777,096
1986	0	2	4	6	46	139	41	996,650,459	515,417,736
1987	0	0	5	5	1497	896	321	3,633,980,000	1,686,301,623
1988	0	1	4	5	468	429	195	8,675,573,000	3,676,090,200
1989	0	0	7	7	903	386	251	4,529,164,000	1,741,986,100
1990	0	0	8	8	1389	670	256	12,108,377,000	
TOTAL	16	49	213	283	29404 + 14159 + 9836			49,741,487,906	35,687,431,785+
MEAN	0.4	1.2	4.9	6.5	700	337	240	1,156,778,700	849,700,700

NOTES: + Does not include 1990
+ Does not include 1960
+ Does not include 1959 & 1960

Table 2-22 Estimated Damages to Schoolbuilding by Year, and by Region (unit:peso)

NAME OF TYPHOON	MARING	NITANG	SISANG	HEEMING	TRINING	MEMENG	PEPANG	1988	1989	1990	TOTAL
DATE	19 Aug. '84	1 Sept. '84	1987	13 Aug. '87	1987	Sept 1987	1987	1988	1989	1990	TOTAL
Region I	35,313,802						46,594,210	NDA	NDA	55,591,057.13	138,499,069.13
Region II	6,140,192		7,300,000			2,568,300	4,795,800	NDA	NDA	44,610,217.00	65,414,509.00
Region III	7,610,000							NDA	NDA	9,450,850.00	17,070,850.00
Region IV		1,775,000	28,235,874	83,110,955	1,759,417			NDA	NDA	31,543,605.00	145,424,851.00
Region V			160,333,593	25,057,522				NDA	NDA	32,409,667.99	218,800,732.99
Region VI		15,930,000						NDA	NDA		15,930,000.00
Region VII		88,610,358						NDA	NDA	4,909,667.00	93,519,728.00
Region VIII		21,060,000						NDA	NDA	12,494,099.90	33,554,099.90
Region IX								NDA	NDA		0.00
Region X	200,000	167,859,177						NDA	NDA		168,059,177.00
Region XI	250,000	4,526,000						NDA	NDA		1,776,000.00
Region XII								NDA	NDA	1,000,000.00	1,000,000.00
合計	50,513,994	299,760,535	195,869,467	109,168,477	1,759,417	2,568,300	51,390,010	NDA	NDA	192,018,867.02	900,049,067.02

* N/A: Data not available

2-2 Outline of the Primary and Secondary Education in the Project Area

Region II (Cagayan Valley) which is in the Project Area is made of 5 school districts. The 1990 population figure in the Region was 2.34 million. Region IV (Southern Tagalog) in the Project Area is composed of 16 school districts and the 1990 population was 8.26 million. In 1989, the number of public and private primary schools in the two regions was 5,982 (5,664 were public schools); there were 1,021 secondary schools (594 were public schools). As for public schools, there were about 1.7 million primary school students and about 400,000 secondary school students. There were about 50,000 public primary school teachers and about 13,000 public secondary school teachers.

The school construction plan includes the building of 587 new classrooms, the rebuilding of 327 classrooms, the repair of 2,769 classrooms, the building of 163 new multipurpose workshops, the repair of 222 multipurpose workshops, and the building of 102 new toilets.

Table 2-23 shows the number of primary and secondary schools in each school district. Table 2-24 shows the number of students at public primary and secondary schools. Table 2-25 shows the number of teachers at public primary and secondary schools. Table 2-26 shows the educational index. Tables 2-27 and 2-28 show the construction plans for primary and secondary schools.

Tabal 2-23 Number of Primary and Secondary Schools in Each School District in Regions II and IV

Division	Primary School		Secondary School		
	Public	Private	Public		Private
			Nationally Funded	Locally Funded	
Region II					
Batanes	20	0	2	0	0
Cagayan	581	18	20	29	38
Isabela	761	26	20	36	37
Nueva Vizcaya	278	11	11	0	14
Quirino	127	2	6	1	4
Subtotal	1,767	57	61	66	93
Region IV					
Ratargas	588	20	4	71	55
Cavite	308	41	14	29	35
Laguna	322	66	5	61	58
Marinduque	166	2	2	29	11
Occidental Mindoro	202	6	4	19	6
Oriental Mindoro	365	11	4	20	24
Palawan	485	11	8	40	15
Quezon	751	21	14	63	59
Rizal	174	41	2	12	30
Romblon	181	2	8	13	7
Aurora	97	6	2	12	8
Batangas City	78	4	2	11	4
Cavite City	11	8	1	-	5
Lipa City	65	5	-	14	7
Lucena City	39	9	-	-	5
San Pablo City	65	8	1	2	5
Subtotal	3,897	261	71	396	334
Total	5,664	318	132	462	427

Table 2-24 Number of Public Primary and Secondary School Students in Each School District in Regions II and IV

Division	1987-1988		1988-1989		1989-1990	
	Primary School	Secondary School	Primary School	Secondary School	Primary School	Secondary School
Region II						
Batanes	2,359	1,522	2,339	1,517	2,306	1,521
Cagayan	129,779	30,530	129,885	33,982	134,802	36,894
Isabela	173,186	29,622	175,654	33,274	177,195	36,879
Nueva Vizcaya	45,503	9,559	46,200	10,487	47,015	10,627
Quirino	18,786	4,156	20,085	4,329	19,355	4,483
Subtotal	369,613	75,389	374,163	83,589	380,673	90,404
Region IV						
Ratargas	161,843	26,994	176,806	35,249	181,716	38,114
Cavite	139,909	40,238	152,507	45,036	157,804	49,078
Laguna	154,320	33,422	161,840	38,532	167,738	42,641
Marinduque	34,704	9,568	34,234	10,259	34,506	11,093
Occidental Mindoro	48,178	11,412	51,113	13,123	53,376	13,975
Oriental Mindoro	96,672	14,410	96,720	16,648	100,376	19,637
Palawan	75,742	21,056	94,634	23,400	98,944	25,457
Quezon	181,191	42,403	219,772	45,942	211,691	49,446
Rizal	119,058	12,462	123,033	15,507	131,165	17,829
Romblon	41,610	13,323	41,887	17,918	43,139	15,397
Aurora	22,545	4,053	23,357	4,761	23,993	5,195
Batangas City	24,065	11,646	26,320	11,312	27,136	12,232
Cavite City	11,803	6,352	11,788	6,355	12,068	6,188
Lipa City	20,758	4,677	21,648	5,180	22,330	6,050
Lucena City	19,377	0	20,205	0	20,672	0
San Pablo City	22,655	3,012	24,911	3,250	27,132	3,528
Sub total	1,174,430	255,028	1,280,775	292,452	1,313,786	315,860
Total	1,544,043	330,417	1,654,938	376,041	1,694,459	406,264

Table 2-25 Number of Public Primary and Secondary School Teachers in Each School District in Regions II and IV

Division	Primary School			Secondary School		
	Public	Private	Total	Public	Private	Total
Region II						
Batanes	136	0	136	114	0	114
Cagayan	4,432	92	4,524	1,235	268	1,503
Isabela	5,208	175	5,383	1,242	430	1,672
Nueva Vizcaya	1,508	94	1,602	274	245	519
Quirino	621	14	635	177	49	226
Subtotal	11,905	375	12,280	3,042	992	4,034
Region IV						
Ratanges	5,772	138	5,910	1,103	1,025	2,128
Cavite	4,559	336	4,895	1,948	686	2,634
Laguna	4,606	693	5,299	1,166	1,162	2,328
Marinduque	1,302	16	1,318	363	129	492
Occidental Mindoro	1,575	32	1,607	376	99	475
Oriental Mindoro	2,879	62	2,941	692	402	1,094
Palawan	2,551	63	2,614	846	217	1,063
Quezon	5,930	150	6,080	1,504	898	2,402
Rizal	3,430	542	3,972	354	959	1,313
Romblon	1,474	5	1,479	333	54	387
Aurora	786	19	805	216	114	330
Batangas City	927	108	1,035	458	123	581
Cavite City	453	57	510	253	87	340
Lipa City	722	97	819	175	232	407
Lucena City	606	114	720	0	123	123
San Pablo City	870	92	962	134	212	346
Subtotal	38,442	2,524	40,966	9,921	6,522	16,443
Total	50,347	2,899	53,246	2,963	7,514	5,677

Table 2-26 Educational Index of Public Primary and Secondary Schools in Each School District in Regions II and IV

	Participa- tion Rate (%)	Cohort Survival Rate (%)	Retention Rate (%)	Dropout Rate (%)	Teacher- Pupil Ratio	Comple- tion Rate (%)
Region II						
Primary School 1988	91.62	65.83	90.57	1.15	1:33	63.58
1989	92.67	69.06	92.45	1.03	1:32	66.14
Rate of Increase	+ 1.14	+ 4.90	+ 2.07	-10.43	+3.13(%)	+ 4.02
Secondary School 1988	31.93	76.47	91.58	5.02	1:26	73.27
1989	33.41	73.84	89.63	6.13	1:26	71.63
Rate of Increase	+ 4.63	- 3.43	- 2.12	+22.11	±0	- 1.96
Region IV						
Primary School 1988	99.93	75.25	97.55	1.35	1:34	72.48
1989	99.99	77.60	94.08	1.14	1:34	75.71
Rate of Increase	+ 0.06	+ 2.10	- 3.55	-15.55	±0	+ 4.45
Secondary School 1988	31.29	73.91	96.08	6.32	1:30	69.60
1989	32.75	79.29	91.08	6.83	1:30	74.65
Rate of Increase	+ 4.66	+ 7.27	- 5.20	+ 0.06	±0	+ 7.25

Table 2-27 Public Primary School Construction Plan in Regions II and IV (1991)

Region	Additional	Replacement	Rehabili- tation	MPW(*) Additional	MPW Reha- bilitation	Toilets
Region II	66	31	113	11	25	6
Region IV	688	108	397	83	52	64
Total	754	139	510	94	77	70

Note: * MPW-Multi-Purpose Workshops

Table 2-28 Public Secondary School Construction Plan in Regions II and IV (1991)

Division	Class Room	Science Laboratory	Workshop
Region II			
Cagayan	29	14	12
Isabela	14	13	1
Quirino	0	0	0
Subtotal	43	27	13
Region IV			
Ratangas	12	4	3
Cavite	6	4	4
Laguna	4	13	10
Marinduque	9	6	3
Occidental Mindoro	4	2	0
Oriental Mindoro	0	13	11
Palawan	18	5	8
Quezon	4	6	4
Aurora	3	5	3
Rizal	2	0	0
Romblon	3	9	8
Batangas City	2	0	0
Lipa City	0	1	1
San Pablo City	0	1	1
Subtotal	67	69	56
Total	110	96	69

In 1989, DECS's regional office conducted the following educational activities in Regions II and IV:

1) Region II:

- a) Improvement of basic education including primary and secondary education and literacy training.
 - * The number of literacy classes were increased by 30%.
- b) Priority was given to technical and vocational education including practical science and technology education.
 - Emphasis was placed on the staff development and curriculum development.
- c) Encourage the revival of old traditions, values, and practices and promotion of nationalism and pride in being a Filipino.
 - Emphasis on values education in secondary school curriculum.
 - Conduct seminars and folk dances.
 - In order to encourage the slogan "Priority to country rather than to the individual", biblical verses in the Filipino were issued to the field and integrated in Filipino lessons.
 - Encourage the following new educational motto in all subjects "Philippine education is composed of Prudence, Thought and Action."
 - Value oriented education including the development of educational material will be brought into nonformal education.
 - Traditional dances and songs shall be included in the cultural activities.
- d) Attention will be given to the training of cultural minorities.
 - Teaching, reading and writing to ethnic groups.
- e) Development of study subjects

- Development, publishing and distribution of instructional materials.
- Conducting new secondary education curriculum and monitoring.
- Conducting clinical supervision to secondary school teachers.

2) Region IV

a) Primary School Education

- Plan and conduct "Project Teaching Beginning Reading"
- Conduct "Project BRIGHT" for the rearing of gifted students.
- Enrich the contents of the study courses and encourage the purchasing educational magazines for students and the publishing of school organ.
- Establishing of a learning resources center in each school in order to secure reserve teachers.
- Conduct sign language classes for parents with children having hearing disabilities.
- Improvement of science and mathematics teaching in primary schools.
- Work out a plan for decreasing the number of dropouts by offering, for example, free lunches.
- Adopt the native culture study and a way of teaching unique to the local area.

b) Secondary School Education

- Hold tournaments and meetings related to education, such as a mathematics olympics.
- Conduct training and seminars for teachers on new curriculum.
- Distribution of textbooks for the Secondary Education Development Program.
- Conduct tests for all subjects and analyze the results.
- Establishment of an educational management information system center.
- Encouragement of the publishing of school organs in each school.

2-3 Outline of the National Project

2-3-1 National Education and Manpower Development Project

The Government of the Philippines drew up the Medium-Term Philippine Development Plan 1987-1992 to improve the people's standard of living and to maintain the growing economy and society. This will be carried out by restoring the country's economy, stabilizing prices, increasing income, leveling out regional differences, increasing job opportunities, increasing competitiveness in the industrial field and improving the balance of international payments. The final objective of the Project is to decrease the low income group and improve the living standards of the Philippine people.

Due to the attempted coup d'etat in 1989, the great earthquake in Luzon Island in 1990, and the effects of the Middle East gulf war, the increase in the GNP dropped to 3.4% in 1990 (the rate was 5.7% in 1989), the employment rate dropped and the country is facing economic difficulties, such as high inflation. Thus, the Medium-Term Philippine Development Plan was reviewed and the Updates of the Philippine Development Plan 1990-1992 was drawn up. The most important policy of the Government of the Philippines is the stabilization of the economy; however, more importance should be placed on the development of manpower which would encourage the industries. Thus, the Government has established the following objectives:

- 1) Realignment of budgetary priority accorded to education as mandated by the Constitution, with basic learning needs and the most depressed and underserved areas receiving the highest allocation;
- 2) Greater focus on measures that help alleviate poverty and enhancement of the well-being, security and stability of economically and socially disadvantaged families and communities;
- 3) Full implementation and strengthening of the free secondary education program and increased financial assistance to needy students;
- 4) Development of the country's manpower resources by providing better access to training and employment opportunities;

- 5) Improved provision and utilization of basic health, nutrition and family planning services for target clientele;
- 6) A more vigorous implementation of the National Shelter Program, specifically the Unified Home Lending Program (UHLP) and the Community Mortgage Program to increase accessibility of homeownership to lower-income households;
- 7) Development of a comprehensive program for squatter settlements covering land tenure, slum upgrading, in-city resettlement sites, new town development and integrated urban planning;
- 8) Increased access to opportunities, e.g., training and livelihood programs, that promote the active participation of women, youth, rebel returnees, cultural minorities and the disabled, among others, in all development efforts.

Actual results up to 1989 concerning the educational and manpower development objectives (1987-92) stated in the Medium-Term Philippine Development Plan are shown below together with the educational improvement objectives for 1990-92 which were made after considering the results.

Table 2-29 (1) Education and Manpower Development Targets, 1990-1992

INDICATOR	ACTUAL			REVISED TARGETS			ANNUAL AVERAGE 1990-1992
	1987	1988	1989	1990	1991	1992	
I. FORMAL EDUCATION							
A. KEY INDICATORS							
Literacy Rate	88.00	88.40	88.70	89.00	89.30	89.60	89.30
Participation Rate							
a. Elementary	96.87	98.74	99.04	99.50	99.50	99.50	99.50
b. Secondary	51.24	53.92	56.25	59.16	62.08	65.00	62.08
Cohort Survival Rate							
a. Grade 1 to Grade VI	65.94	66.62	67.56	68.38	69.19	70.00	69.19
b. 1st Year HS to 4th Year HS	72.02	76.08	79.01	79.40	80.20	81.16	80.25
Transition Rate							
a. Grade VI to 1st Year HS	87.82	90.00	93.50	94.35	95.00	96.00	95.12
Achievement Level							
a. Elementary /1	53.52+	55.22	60.00	64.00	67.00	70.00	67.00
b. Secondary /2	53.14++	56.57	59.88	63.26	66.63	70.00	66.63
Percent of Successful Examinees in Licensure/Board Examination	38.54%	40.52%	44.17%	48.00%	49.00%	50.00%	49.00%
Tertiary Education School Enrolment							
a. Post Secondary (Growth Rate)	2.58	6.92	7.05	7.20	8.35	8.50	8.02
b. Higher Education (Ratio to 17-24 yrs. old Population)	13.22	14.06	14.96	15.91	16.92	18.00	16.94
Total School Enrolment Ratio	62.78	64.59	66.33	67.96	69.47	70.97	69.47
B. PROGRAM INDICATORS							
1. Enrolment by Level							
TOTAL	14,556,327	15,289,613	15,762,815	16,638,890	17,312,151	17,996,023	17,315,688
a. Elementary	9,601,322	9,972,571	10,284,861	10,638,083	10,973,605	11,241,837	10,951,175
b. Secondary	3,494,460	3,737,104	3,961,639	4,148,162	4,327,992	4,572,339	4,349,498
c. Tertiary	1,460,545	1,579,938	1,516,315	1,852,645	2,010,554	2,181,847	2,015,015
i. Post Secondary	256,545	271,938	291,000	311,370	336,280	363,182	336,944
ii. Higher Education	1,204,000	1,308,000	1,225,315	1,541,275	1,674,274	1,818,665	1,678,071
2. Teacher-Pupil/Student Ratio							
a. Elementary	1:33	1:34	1:35	1:36	1:37	1:38	
b. Secondary	1:33	1:40	1:50	1:55	1:45	1:40	
c. Post-Secondary	1:35	1:30	1:25	1:20	1:18	1:16	
3. Textbook-Pupil/Student Ratio							
a. Elementary	1:2	1:2	1:2	1:2	1:1/1	1:1/2	
b. Secondary	1:7.7	1:7.7	1:1/3	1:1/4	1:1/5	1:1/6	
c. Post-Secondary	1:7	1:6	1:6	1:5	1:4	1:2	
4. Classroom-Pupil/Student Ratio							
a. Elementary	1:38	1:38	1:38	1:39	1:39	1:40	
b. Secondary	1:39	1:50	1:50	1:50	1:50	1:50	
c. Post-Secondary							
i. Lecture	1:12	1:15	1:15	1:18	1:20	1:25	
ii. Laboratory	1:8	1:10	1:10	1:12	1:14	1:16	
1/ Gr. 1 and 5 only	4/ Yr. 1 and 11 only						
2/ Gr. 1, 2, 5 and 6 only	5/ Yrs. I-III						
3/ Yr. 1 only	6/ All years						

Table 2-29 (2) Education and Manpower Development Targets, 1990-1992

INDICATOR	ACTUAL			REVISED TARGETS			ANNUAL AVERAGE 1990-1992
	1987	1988	1989	1990	1991	1992	
5. Class-Classroom Ratio							
a. Elementary							
i. Academic	1:1	1:1	1:1	1:1	1:1	1:1	
ii. H.E./Multipurpose workshop	one unit per five sections in Grades V and VI						
b. Secondary							
i. Academic	2.1:1	2.3:1	2:1	2:1	2:1	2:1	
ii. Science	33.7:1	33.1:1	20:1	15:1	8:1	8:1	
iii. Home Economics	11.7:1	11.1:1	10:1	5:1	4:1	4:1	
iv. Workshop	11.7:1	11.7:1	10:1	8:1	4:1	4:1	
c. Post Secondary	3:1	3:1	3:1	2:1	2:1	2:1	
6. In-Service Teacher Training							
a. Elementary	51,111	43,721	50,000	----- Grades I-IV teachers -----			
i. Teachers				86,110	85,000	95,000	88,703
ii. Head Teachers/Principal				6,330	6,330	6,330	6,330
iii. District Supervisors				742	742	742	742
iv. Reg'l Div. Supervisors				649	649	649	649
b. Secondary							
i. Teachers		926	33,000	38,766	39,400	38,400	38,855
Yr. I				Yr. II	Yr. III	Yr. IV	
ii. Principals		3,087	700	500	500	500	500
iii. Supervisors		200	200	200	200	200	200
c. Post-Secondary	368	404	265	582	271	565	473
d. DOST-SEI Training Programs		1,805	1,679	2,335	2,435	2,435	2,435
7. Physical Facilities							
a. Elementary Schoolbuildings	4,732	5,890	4,479	5,490	10,200	10,609	8,766.3
i. New Construction of Classrooms							
ii. Replacement of Classrooms	2,754	3,167	1,518	1,707	2,229	5,000	2,978.7
iii. Repair/Rehabilitation of Classrooms	7,135	11,381	7,178	11,216	9,197	20,000	13,471.0
iv. Multi-Purpose Workshop Buildings (H.E./I.A.)							
- Construction	298	329	1,062	826	1,718	2,100	1,548.0
- Rehabilitation	322	392	846	1,143	1,011	2,463	1,599.0
v. Decentralized Learning Resource Centers	525	614	742	742	816	897	818.3
vi. Makeshift Classrooms				5,500	5,500		
b. Secondary Schoolbuildings							
i. Additional Rooms							
- To meet increase in enrolment	945	945	3,876	3,493	3,622	4,216	3,777.0
- Repair/Rehabilitation		300	405	1,033	1,408	1,570	1,337.3
ii. Science Laboratories							
- To meet increase in enrolment		236	1,768	1,179	1,466	1,646	1,430.3
- Repair/Rehabilitation		200	65	300	116	190	202.0
iii. Workshops							
- To meet increase in enrolment		339	1,511	1,031	1,594	1,805	1,476.7
- Repair/Rehabilitation		120	718	424	261	344	343.0

In order to adapt the Medium-Term Development Plan to present conditions and to attempt to reactivate the country, the Philippine Government has drawn up the following concrete enforcement plan:

- 1) Redirecting the contents, delivery systems and implementation of education and manpower development programs in support of the following policy developments: (a) Education For All (EFA); (b) Newly Industrialized Country (NIC) Objective and Scientific and Technological Manpower Policy; (c) Countryside Agro-Industrial Development Strategy (CALDS); (d) Livelihood Development Policy; (e) Development Plan for Women; (f) Technical-vocational Education and Training Policy; (g) Decentralization Policy; (h) Poverty Alleviation Program; (i) Sports Development Plan; (j) Development Plan for culture; and (k) National Plan for children
- 2) Intensification and speeding up of remedial and intervention services, reconstruction and development and giving emphasis on long-term disaster preparedness;
- 3) Comprehensive assessment of the educational system in place since 1970 to rationalize educational legislation and executive policy making;
- 4) Realization of a commitment to the national Moral Recovery Program through a new vision of "Bayan Muna Bago Sarili";
- 5) Realignment of budgetary priorities accorded to education as mandated by the Constitution with basic learning needs (formal and nonformal/informal education) and the most deprived and underserved areas receiving the highest allocation;
- 6) Setting of appropriate guidelines on tuition fee increases in both the public and private education sectors;
- 7) Commitment to excellence in all levels, forms and types of education;
- 8) Greater emphasis on productivity improvement testing, monitoring and evaluation, accreditation, occupational testing certification;

- 9) Greater participation of sectorial constituents, particularly labor, industry, business, teachers, students and parents, as well as emphasis on the manpower market in educational decision-making;
- 10) Institutionalization and systematization of manpower planning and development to rationalize tertiary education and enrolment and match supply and demand for certain critical middle-level skills and professional manpower;
- 11) Curriculum reorientation in education and training programs relevant to textbook and instructional materials development, classroom teaching-learning practices and intensification of values education geared towards the promotion of women's status/roles;
- 12) Gearing education and training towards the development of a proportionate number of skilled, middle-level, and high-level female workers required for economic recovery and growth; and
- 13) Integration of demographic concerns (population size, composition and distribution) in population-education, programs to help in moderating population growth and in the rational distribution of the population.

2-3-2 Primary and Secondary School Construction Program

In 1987, the Philippine Government drew up the 6-Year School Construction Plan (1987-1991) with the objective of building 40,252 primary and secondary school classrooms, 3,598 multipurpose facilities, 1,608 workshops and 804 science laboratories, rebuilding 28,553 classrooms, and repairing 58,876 classrooms by 1992. The schools to be included in the project are those primary schools having classroom rates exceeding 2:1, and those secondary schools that lack more than 12 classrooms.

There remains a shortage of 28,528 classrooms as a result of typhoon damage, the deterioration of schoolbuildings, and the increasing number of students brought about the increase in population. Public primary schools lack 19,056 classrooms. Public secondary schools lack 4,135 classrooms, 2,600 science laboratories, and 2,737 workshops. To cope with the situation, DECS took the following steps in 1989:

1. About 7,000 classrooms were repaired by DECS through a special arrangement with DPWH and with the cooperation of local Parent-Teachers and Community Associations (PTCAs).
2. Class size was increased up to a maximum of 55 students.
3. Classes in multiple shifts/sessions were held.
4. Gymnasium, offices and other school facilities utilized as classrooms.
5. Private facilities were rented, and idle available spaces in other public buildings were utilized.
6. Makeshift classrooms were constructed.

As a result of the Secondary Education Development Program, all barangai (community) schools that use the facilities of other schools were nationalized according to the Government's policy and are being urged to find their own facilities and land.

5,000 new classrooms need to be build every year due to the yearly population increase of 2.2%.

The construction of primary and secondary schools is an urgent problem that must be solved quickly by the Philippine Government.

The public primary school construction plan of the 1991 fiscal year is shown in Table 3-30. The public secondary school construction plans of the 1991 fiscal year, the construction objectives for public secondary schools during the 1989-1992 period and the necessary expenditures are shown in Tables 3-31, 3-32, and 3-33 respectively.

Table 2-30 1991 Primary Schoolbuilding Construction Program (Unit: in thousand)

PROVINCE/CITY	ACADEMIC BUILDINGS				MULTI-PURPOSE WORKSHOP				TOILETS		TOTAL			
	ADDITIONAL		REPLACEMENT		REHABILITATION		ADDITIONAL		REHABILITATION				CONSTRUCTION	
	PHYSICAL TARGET (ROOM)	AMOUNT	PHYSICAL TARGET (ROOM)	AMOUNT	PHYSICAL TARGET (ROOM)	AMOUNT	PHYSICAL TARGET (ROOM)	AMOUNT	PHYSICAL TARGET (ROOM)	AMOUNT	PHYSICAL TARGET (ROOM)	AMOUNT	PHYSICAL TARGET (ROOM)	AMOUNT
1 NCR	474 CL	142,200	0 CL	0	48 CL	720	19 B	4,750	0 B	0	1 T	150	522 CL 19 B	154,999
2 REGION I	66 CL	13,530	56 CL	8,960	206 CL	8,240	23 B	5,750	39 B	2,808	6 T	360	323 CL 62 B	39,648
3 REGION II	66 CL	13,530	31 CL	4,950	113 CL	4,520	11 B	2,750	25 B	1,800	6 T	360	210 CL 35 B	27,920
4 CAR	66 CL	13,530	23 CL	3,680	85 CL	3,400	14 B	3,500	7 B	504	6 T	360	174 CL 21 B	24,974
5 REGION III	132 CL	31,160	67 CL	10,720	245 CL	9,800	60 B	15,000	30 B	2,160	14 T	840	464 CL 90 B	69,580
6 REGION IV-A	540 CL	110,700	75 CL	12,000	275 CL	11,038	63 B	15,750	37 B	2,664	50 T	3,000	891 CL 100 B	155,152
7 REGION IV-B	148 CL	30,340	33 CL	5,280	121 CL	4,840	20 B	5,000	15 B	1,080	14 T	840	323 CL 35 B	47,380
8 REGION V	66 CL	13,530	78 CL	12,480	286 CL	11,440	62 B	15,500	21 B	1,512	6 T	360	430 CL 33 B	54,622
9 REGION VI	66 CL	13,530	90 CL	14,400	328 CL	13,120	48 B	12,000	35 B	2,520	6 T	360	494 CL 83 B	55,930
10 REGION VII	66 CL	13,530	58 CL	9,280	212 CL	8,480	37 B	9,250	27 B	1,944	6 T	360	335 CL 54 B	42,844
11 REGION VIII	66 CL	13,530	65 CL	10,400	238 CL	9,520	31 B	7,750	27 B	1,944	6 T	360	393 CL 54 B	43,504
12 REGION IX	521 CL	106,805	42 CL	6,720	153 CL	6,120	34 B	8,500	12 B	864	48 T	2,880	715 CL 46 B	131,889
13 REGION X	66 CL	13,530	51 CL	8,160	186 CL	7,440	21 B	5,250	25 B	1,800	6 T	360	303 CL 46 B	36,540
14 REGION XI	358 CL	73,390	49 CL	7,840	180 CL	7,200	42 B	10,500	21 B	1,512	33 T	1,980	587 CL 83 B	102,422
15 REGION XII	438 CL	89,730	39 CL	6,240	142 CL	5,680	29 B	7,250	13 B	936	40 T	2,400	619 CL 42 B	112,296
TOTAL	3,159 CL	692,625	757 CL	121,120	2,819 CL	111,558	514 B	128,500	334 B	24,048	248 T	14,970	6,735 CL 848 B 248 T	1,100,000

Source: DECS-OPS

Table 2-31 1991 Secondary Schoolbuilding Construction Program

REGION	NEW CONSTRUCTION						
	PHYSICAL TARGET			A M O U N T			
	CLSRMS.	SCI. LAB.	WORKSHOP	CLSRMS.	SCI. LAB.	WORKSHOP	TOTAL
1 N C R	140	0	2	42,000,000	0	660,000	55,516,000
2 C A R	2	13	3	440,000	4,290,000	990,000	6,127,000
3 I	102	4	9	22,400,000	1,320,000	2,970,000	27,084,000
4 II	43	27	13	9,460,000	8,910,000	4,290,000	23,349,000
5 III	21	40	6	4,620,000	13,200,000	1,980,000	20,174,000
6 IV	67	69	56	14,740,000	22,770,000	18,480,000	58,916,000
7 V	47	25	57	10,340,000	8,250,000	18,810,000	40,689,000
8 VI	104	33	44	22,880,000	10,890,000	14,520,000	65,780,000
9 VII	9	14	12	1,980,000	4,620,000	3,960,000	11,306,000
10 VIII	35	27	17	7,700,000	8,910,000	5,610,000	22,460,000
11 IX	16	23	34	3,520,000	7,590,000	11,220,000	23,731,000
12 X	4	25	27	880,000	8,250,000	8,910,000	19,140,000
13 X I	8	23	15	1,760,000	7,590,000	4,950,000	15,019,000
14 X II	15	15	3	4,300,000	4,950,000	990,000	10,711,000
TOTAL	613	338	298	147,060,000	111,540,000	98,340,000	400,002,000

Source: DECS-OPS

Table 2-32 Secondary Schoolbuilding Construction Program (1988-1992)

	1988	1989	1990	1991	1992	Total
CLASSROOMS						
For Backlog		990	990	990	990	3,960
For Enrolment Increase	954	1,702	2,490	2,674	2,737	10,548
Replacement of Dilapidated		695	722	757	793	2,967
Repair	300	2,052	2,132	2,237	2,347	9,068
SCIENCE LABORATORIES						
For Backlog		812	812	812	812	3,248
For Enrolment Increase	236	426	623	669	689	2,643
Replacement of Dilapidated		91	116	145	174	526
Repair	200	298	336	379	423	1,636
WORKSHOPS						
For Backlog		624	624	624	624	2,496
For Enrolment Increase	339	734	804	865	900	3,612
Replacement of Dilapidated		244	271	299	329	1,143
Repair	120	718	759	802	846	3,245

Table 2-33 Investment Requirements for Public Secondary Schoolbuilding, 1988 to 1992 (Amount in Pesos)

	1988	1989	1990	1991	1992	Total
CLASSROOMS						
For Backlog		143,550,000	143,550,000	143,550,000	143,550,000	574,200,000
For Enrolment Increase	137,025,000	246,790,000	361,050,000	387,730,000	395,865,000	1,529,460,000
Replacement of Dilapidated		100,775,000	104,690,000	109,765,000	114,985,000	430,215,000
Repair	9,000,000	61,560,000	63,960,000	67,110,000	70,410,000	272,040,000
SCIENCE LABORATORIES						
For Backlog		174,580,000	174,580,000	174,580,000	174,580,000	698,320,000
For Enrolment Increase	50,740,000	91,590,000	133,945,000	148,835,000	148,135,000	568,245,000
Replacement of Dilapidated		19,565,000	24,940,000	31,175,000	37,410,000	113,090,000
Repair	8,000,000	11,920,000	13,440,000	15,160,000	16,920,000	65,440,000
WORKSHOPS						
For Backlog		152,880,000	152,880,000	152,880,000	152,880,000	611,520,000
For Enrolment Increase	83,055,000	180,075,000	196,980,000	211,925,000	220,500,000	892,535,000
Replacement of Dilapidated		59,780,000	66,395,000	73,255,000	80,605,000	280,035,000
Repair	5,400,000	32,310,000	34,155,000	36,090,000	38,070,000	146,025,000
TOTAL	293,220,000	1,275,375,000	1,470,565,000	1,547,055,000	1,594,910,000	6,181,125,000

2-4 Background and Contents of the Request

1) Background of the Request

To provide educational opportunities to as many people as possible, the Philippine Government established the following targets for 1992 to provide a complete school facility: the construction of 40,252 new primary and secondary school classrooms, 3,598 multipurpose facilities, 1,608 workshops and 804 science laboratories, the rebuilding of 28,553 classrooms and the repair of 58,876 classrooms.

To cope with the increasing number of students brought about by the yearly 2.2% increase in population, 5,000 new classrooms have to be built every year. At the present time, there are 2.56 million children who are unable to receive an education. On top of this, the typhoons since 1984, especially the two big ones that occurred in 1987, fully or partially destroyed many schools centering around Bicol, Quezon, Tagalog, and Eastern Visayas regions.

As the Philippine Government had to repair or rebuild many schools in a short period of time under heavy financial difficulties, the Government established a 5-year plan to construct 360 schools with prefabricated typhoon-resistant buildings at these schools, and requested grant aid cooperation for the construction from the Government of Japan.

In response to the Philippine Government's request, JICA conducted a basic design study in June 1988 for 72 schools in Region V (Bicol Region) as the Phase I project. As a result, project construction was implemented under grant aid cooperation from the Government of Japan. The project was completed in March 1990.

Following the Phase I project, JICA conducted a basic design study in January 1990 for 69 schools in Region VIII (Eastern Visayas Region) as the Phase II project. And, in the same year, the Japanese Government provided the grant aid cooperation for the project construction. The Phase II project is to be completed in September 1991.

For the Phase III Project, the Government of the Philippines selected 72

schools in Region II (Cagayan Valley Region) and Region IV (Southern Tagalog Region) and requested grant aid cooperation from the Government of Japan for the construction of the schoolbuildings.

2) Project Implementation Agency

The organization responsible for implementing the Project will be the Educational Development Projects Implementing Task Force (EDPITAF) with the cooperation of the Planning Dept. of DECS. DECS will be responsible for the planning of the Project, such as the selection of the schools. EDPITAF will set up a project operation committee and JICA project management department, and will supervise the Project with the cooperation of the DECS regional offices in Regions II and IV.

3) Contents of the Request

The original request called for the construction of 360 primary and secondary schools using the typhoon-resistant prefabricated construction method that allows the construction of many schoolbuildings within a short period of time by adopting only one standard type of buildings. However, as a result of the field surveys, five types (A and B types for primary schools and A, B, and C types for secondary schools) for the Phase I project and combinations of A, B, C, or D types for the primary and secondary schools for the Phase II project were adopted. The facility plan for the Phase III Project is similar to the one set up for the Phase II project. However, in addition to the plan, some improvements, such as the installation of two doors for emergency evacuation to each schoolbuilding and the installation of electrical wiring and switches on classroom ceilings to accommodate the fans to be put in by the Philippine's side, were made as a result of discussions with officials concerned of DECS.

The shift in the contents of Phase I, II, and III projects are listed in Table 2-34.

Table 2-34 Shift in the Contents of Phase I, II and III Projects

DECS's Request and Projects No.	Building Facilities	Equipment	Difference from Previous Phase Project
DECS's Request Contents	1) Primary School <ul style="list-style-type: none"> • 4 Classrooms • 1 Office • Toilets for males and females 2) Secondary Schools <ul style="list-style-type: none"> A) Building 1 <ul style="list-style-type: none"> • 4 Classrooms • 1 Science Laboratory B) Building 2 <ul style="list-style-type: none"> • 4 Classrooms • 1 Science Laboratory • 1 Office • Toilets for males and females 	Basic equipment necessary for class activities	
Phase I Project Contents	1) Primary School <ul style="list-style-type: none"> • A Type: 3 Classrooms • B Type: 4 Classrooms • 1 Office with each type • Toilets for males and females 2) Secondary Schools <ul style="list-style-type: none"> • A Type: 3 Classrooms • B Type: 4 Classrooms • C Type: 5 Classrooms • Science Laboratory with each type • 1 Workstop with C Type • Toilets for males and females 	Same as above	
Phase II Project Contents	<ul style="list-style-type: none"> • A Type: 2 Classrooms • B Type: 3 Classrooms • C Type: 4 Classrooms • D Type: 5 Classrooms • S Type: 1 Science Laboratory for every secondary school • Toilets for males and females 	Same as above	<ul style="list-style-type: none"> • Increased building type number • Eliminated office and workshop • Built toilets using Philippine methods separating them from other buildings • Local materials were used for interior finishing • Eliminated ceiling insulation • Changed door height from 1.8 to 2.0m

The entire Project, a five-year plan started in 1989, is to construct 360 primary and secondary schools throughout the Philippines. The Project plan is shown in Table 2-35. Original plan has been revised substantially in particular after Phase II Project as the result of the discussions held with the Philippines side.

Table 2-35 Implementation Schedule of Originally Requested
Schoolbuilding Construction Project

Phase	Period	Region	No. of Units
Phase I	1989	V-Albay Sorsogon Camarines Sur Camarines Norte	22 Elementary Schools 50 Secondary Schools
Phase II	1990	VII-Northern Samar Eastern Samar Calbayog City Leyte IV-Marinduque Batangas Quezon Occ. Mindoro Or. Mindoro Romblon	72 Secondary Schools Based on the Philippines side's request and as a result of the field surveys, 22 Primary schools and 47 secondary school in Region VIII were selected.
Phase III	1991	III-Nueva Ecija Tarlac Pampanga X-Surigao del Sur Surigao del Norte	72 Secondary Schools Based on the Philippines side's request and as a result of the field survey, 22 primary schools and 50 secondary schools in Region II & IV were selected.
Phase IV	1992	VI-Iloilo Aklan Capiz Antique	72 Secondary Schools
Phase V	1993	I-Banquet Abra Mt. Province II-Isabela Cagayan	72 Secondary Schools

CHAPTER 3. OUTLINE OF THE PROJECT

CHAPTER 3 OUTLINE OF THE PROJECT

3-1 Objective of the Project

The Philippine Government has been continuing in its efforts to develop education, manpower, and to improve educational conditions. Due to damages inflicted by typhoons, the deterioration of schoolbuildings, and an increase in the number of students caused by an increasing population, there is a chronic lack of primary and secondary school facilities; many children are not able to receive an education.

The objective of the Project is to improve the situation by constructing 360 typhoon proof prefabricated primary and secondary schoolbuildings in 5 years through the Japanese grant aid program. Phase III of the project concerns the construction of 72 schools in Region II (Cagayan Valley Region) and Region IV (Southern Tagalog Region).

3-2 Study and Examination of the Request

3-2-1 Evaluation of the Appropriateness and Necessity of the Project

As previously described, the Philippines not only has a chronic lack of primary and secondary school facilities, but is facing an economic crisis as a result of natural calamities, such as frequent large typhoons and strong earthquakes, a number of coup d'etat attempts, and unstable social conditions brought on by the Middle East gulf war. Thus, the Philippine Government is finding it very difficult to fund the School Construction Project on its own, but realizes that the construction of schoolbuildings is imperative if the country's educational situation is to be improved.

If the implementation of the School Construction Project will provide an increased number of children the opportunity to enter school, and will be able to maintain stable education without being affected by natural calamities, it can be expected that the Project will make a great contribution to the

The construction of the new schoolbuilding will accommodate nearly 11,190 students and will increase the educational opportunities for many children. In this way, the Project is essential for improving the country's education situations and will greatly contribute to the country's development.

Therefore, the Project is deemed to fulfill the requirements of the Japanese Grant Aid Program and it is judged that it will be worthwhile.

3-2-2 Evaluation of Project Implementation and Management Plan

Regarding the personnel and educational staff necessary for the management of Project facilities after the 72 schools are completed in Regions II and IV, it is estimated that the present staff and budget will suffice.

As the main objective of the Project is to rebuild those schools that were damaged by typhoons, it is assumed that the management of Project facilities may be covered by the present staff and budget plan for both regions.

As for the teaching staff and budget necessary to cope with the increase in population and students, the 1989 and 1990 budgets were increased by 10.8% for Region II and 13.4% for Region IV as compared to the previous year. Thus, the management capabilities, once Project construction is completed, are thought to be adequate.

The shift in the budget allotments for the past 5 years for Regions II and IV are shown in Table 3-1.

Table 3-1 Annual Management and Maintenance Costs Actually Spent by DECS's Regional Offices in Regions II and IV (Unit: 1,000 Pesos)

Year	Region II	Increase Rate	Region IV	Increase Rate
1986	371,651	-	872,431	-
1987	579,777	56.0%	1,356,421	55.4%
1988	717,197	23.7%	1,751,190	29.1%
1989	783,587	9.2%	2,165,829	23.6%
1990	868,226	10.8%	2,456,324	13.4%

3-2-3 Examination of the Relationship Between the Project and Other Similar Projects and Foreign Grant Aid Programs

Although the Philippines has drawn up a 6-Year School Construction Plan (1987-1992) to solve the chronic lack of classrooms, it would be difficult for them to achieve the objectives of the plan with their budget alone. Thus, the country has requested foreign aid to cover part of the costs of implementing the plan -- 40% of the costs will be covered by Japan; the rest will be covered by the Asian Development Bank (ADB), the U.S. Agency for International Development (USAID) and the Philippines' own budget.

During the field survey period, Project schools were selected so that they would not be overlapped with other assisting organizations.

Table 3-2 shows the contents of aid given by ADB to the new national secondary schools. Table 3-3 lists the schools in Regions II and IV that will be aided by the Asian development Bank. Table 3-4 shows New National Secondary School Construction Plan with financial aid from USAID and 3-5 list the schools in the regions assisted by USAID.

Table 3-2 Foreign Financial Aid from ADB to be Provided for the
Secondary Schoolbuildings Project (1989-1992)

REGION		YEAR				TOTAL
		1989	1990	1991	1992	
NCR	Target	7	14	14	14	49
	Actual	7	13	0	0	20
CAR	Target	4	3	2	0	9
	Actual	4	4	0	0	8
I	Target	12	9	10	7	38
	Actual	12	8	0	0	20
II	Target	10	6	6	5	27
	Actual	10	5	0	0	15
III	Target	17	19	18	21	75
	Actual	17	16	0	0	33
IV	Target	19	22	22	22	85
	Actual	19	18	0	0	37
V	Target	7	19	16	17	59
	Actual	9	17	0	0	26
VI	Target	12	17	16	15	60
	Actual	12	15	0	0	27
VII	Target	12	19	18	17	66
	Actual	12	16	0	0	28
VIII	Target	13	14	12	13	52
	Actual	13	13	0	0	26
IX	Target	12	11	12	9	44
	Actual	12	10	0	0	22
X	Target	10	12	12	11	45
	Actual	10	11	8	8	37
XI	Target	12	15	14	14	55
	Actual	12	13	0	0	25
XII	Target	7	9	8	6	30
	Actual	7	8	0	0	12
GRAND TOTAL	Target	154	189	180	171	694
	Actual	156	167	8	8	339

Target: As of 15 September, 1989

Actual: As of 28 February, 1991

Source: EDPITAF-SEDP

Table 3-3 Schools in Regions II and IV that are Expecting to Receive Financial Aid from ADB

Year		
Region II	Name of School	Location
1989	1. MATUCAY BHS 2. SAN ANTONIO BHS 3. ROXAS MHS 4. CAGASAT BHS 5. STA. ANA BHS 6. BIDDUANG BHS 7. CABULAY BHS 8. NANNARIAN BHS	Allacapan, Cagayan Delfin-Albano, Isabela Roxas, Isabela Cordon, Isabela Sta. Ana, Cagayan Pamplona, Cagayan Santiago, Isabela Penablanca, Cagayan
1990	1. CABATACAN BHS 2. DIVISORIA BHS	Cagayan Isabela
1991	1. CORDOVA BHS 2. VILLA CONCEPCION BHS 3. MUNOZ BHS	Amulung, Cagayan Cauayan, Isabela Roxas, Isabela
1992	1. STA. TERESITA HS 2. BAWA BHS	Sta. Teresita, Cagayan Gonzaga, Cagayan
Region IV	Name of School	Location
1989	1. GULOD BHS 2. SAN PABLO CHS 3. LUSACAN BHS 4. LUDLUD BHS 5. DAGATAN BHS 6. MATUYA-TUYA BHS 7. MAKAPUYAT BHS 8. HUPI BHS 9. NABUSLOT BHS 10. AURORA BHS 11. MANAGPI BHS 12. BENDITA BHS	Cabuyao, Laguna Lakeside, San Pablo City Tiaong, Quezon Ludlud, Lipa City Taysan, Batangas Torrijos, Marinduque Sta. Cruz, Marinduque Sta. Cruz, Marinduque Pinamalayan, Oriental Mindoro Naujan, Oriental Mindoro Calapan, Oriental Mindoro Magallanes, Cavite
1990	1. GOV. F. LEVISTE MEM. HS 2. IALAIBON BHS 3. RIZAL BHS 4. RECTO MEM. PHS 5. ROMBLON PHS 6. LOS BANOS BHS 7. AGUSTIN ABADILLA BHS	Lemery, Batangas Ibaan, Batangas Rizal, Lipa City Tiaong, Quezon Odiongan, Romblon Los Banos, Laguna Rosario, Cavite
1991	1. BALETE COMM. HS 2. PANIKIHAN BHS 3. TAGAYTAY CITY SCIENCE HS 4. DACANLAO S. AGONCILLO BHS 5. BALIHAN BHS 6. PALAHANAN BHS 7. RIZAL COMM. HS 8. BUKANDALA BHS 9. STO. DOMINGO BHS	Balete, Batangas Gumaca, Quezon Tagaytay City Calaca, Batangas Pangil, Laguna San Juan, Batangas Rizal, Laguna Imus, Cavite Calauag, Quezon
1992	1. CALAMBA BHS 2. MAULAWIN BHS 3. CALABUANAN BHS 4. BERNARDO LIRIO MEM. EXPERIMENTAL SCIENC HS 5. EL NIDO BHS 6. PAHARANG BHS 7. PAYAPA BHS 8. CORAL NA MULTI BHS 9. CALUMPANG BHS	Calamba, Laguna Pagsanjan, Laguna Baler, Aurora Tanauan, Batangas El Nido, Palawan Batangas City Lemery, Batangas Agoncillo, Batangas Nagcarlan, Laguna

Table 3-4 New National Secondary School Construction Plan
with Financial Aid from USAID (1987)

REGION	NUMBER OF SCHOOL
NCR	8
CAR	1
Region I	7
Region II	8
Region III	-
Region IV	8
Region V	8
Region VI	9
Region VII	7
Region VIII	4
Region IX	8
Region X	8
Region XI	9
Region XII	8
Total	93

Table 3-5 Schools in Regions II and IV that are Receiving or Expect
Financial Aid from USAID (1990)

Name of School	Location	Progress
Region II		
Aglipay Municipal High School	Quirino	in the pipeline
Camalanjungan Provincial High School	Cagayan	"
Cuayan Rural High School	Isabela	"
Dna. Eufronia Puzon Mun. High School	Kalinga Apayao	"
Lallo High School	Cagayan	"
Klemu Barangay High School	Cagayan	"
Quirino Community High School	Isabela	"
San Mariano Municipal High School	Isabela	"
Tabuk National High School	Kalinga Apayao	"
Aparri School of Arts and Trades	Cagayan	ongoing
Cagayan National High School	Cagayan	"
Eurile Vocational High School	Cagayan	"
Iguig National High School	Cagayan	"
Isabela National High School	Isabela	"
Madella Agro-Industrial High School	Quirino	"
Nueva Viscaya Gen. Comp High School	Nueva Vizcaya	"
Quirino Gen. Comp. High School	Quirino	"
Region IV		
Angono Municipal High School	Rizal	in the pipeline
Araceli Barangay High School	Palawan	"
Atimonan High School	Quezon	"
Aurora Science High School	Aurora	"
Balibago Barangay High School	Laguna	"
Binan National High School	Laguna	"
Fernando Air Base Brgy. High School	Lipa City	"
Luis Palad High School	Quezon	"
Magsaysay Municipal High School	Mindoro Occ.	"
Palawan National High School	Palawan	"
Rodriguez Technical High School	Rizal	"
Romblon National High School	Romblon	"
Cavite City National High School	Cavite City	ongoing
Amadeo National High School	Cavite	Completed
Batangas City Nat. High School	Batangas City	"
J. Leido Nat. High School	Or. Mindoro	"
J.F. Laurel Nat. Sch. of Arts. & Trade	Batangas	"
Quezon Nat. High School	Lucena City	"
San Pedro Rural Nat. High School	Laguna	"

Grant aid cooperation has been provided by Japan many times in the past in the form of grant aid and cultural grant aid. The projects incorporated the following:

- 1) The Project for Constructing the National Learning Resource Centre for Teacher Training in Science and Mathematics Education

Grant aid cooperation was provided for the construction of a center for the reeducation and training of primary and secondary school science and mathematics teachers, and for installation of equipments to be used in conducting experiments and training. (The Exchange of Notes was signed by both governments in October 1988. 20.4 billion yen was granted by the Japanese Government. Project has been completed in March, 1990.

- 2) The Project for Assistance to Secondary Education Instructional Equipment Program

This grant aid project concerns the installation of equipment for science, engineering and home economics classes in 210 secondary schools in Region V and Region VIII. The secondary schools included in Phase I and Phase II of the Project for constructing primary and secondary schoolbuildings have also been included in this project. (The Exchange of Notes was signed by both governments in April 1991. 540 million yen was granted by the Japanese Government. This Project is to be completed in March 1992.)

3-3 Project Description

3-3-1 Executing Agency and Operational System

This Project will be implemented under the supervision of the Educational Development Projects Implementing Task Force (EDPITAF) of DECS, with the cooperation of the DECS regional offices at Regions II and IV, and under the guidance of DECS.

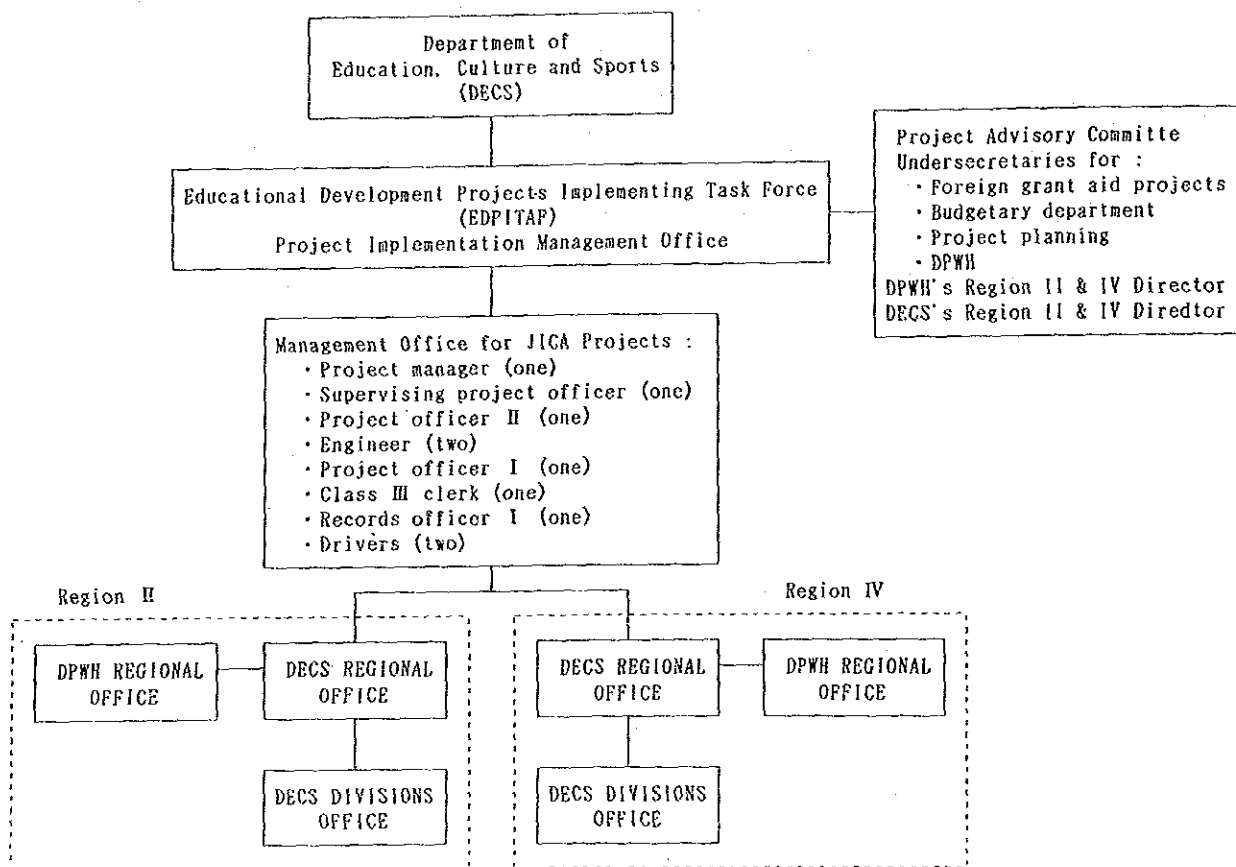
EDPITAF will establish a project advisory committee composed of an undersecretary in charge of foreign aided projects, an undersecretary in charge of financial affairs, a candidate secretary in charge of planning, and

a Director for each DECS regional office.

A JICA Project Management Department, consisting of a project manager, a project supervisor, a project official, a level I recorder, a level III clerk and two drivers, will also be established.

The above two groups will form an operating and management office and will take care of supervising the Project and running operations after the Project has been completed. Fig. 3-1 shows the organization Chart.

Figure 3-1 Project Implementation Organization



3-3-2 Standards for Selecting Project Schools

The standards for selecting the regions and the schools for the Project will take in those regions where the number of school children have greatly increased and these regions where schools were damaged by typhoons Sisang and

Herming in 1987. Other standards are as follows:

1. Schools having sufficient space to build on.
2. Schools that are surrounded by a vast population and may be used as a place of refuge.
3. Schools that do not expect to receive any financial aid, such as disaster funds.
4. Schools that do not expect to receive financial aid from the U.S. Agency for International Development or from the Asian Development Bank.
5. Schools that did not receive more than 300,000 Pesos in addition to their allotted 1986-1987 budget.

Upon applying these standards to primary and secondary schools in Regions II and IV requested by the Philippine Government, 72 schools were selected for the Phase III Project.

3-3-3 Selection of Building Size for Each Project School

In order to meet land conditions and the activities of each school, 4 types of school facility sizes were established. The number of classrooms each school lacked ranged from 3 to 88. To meet the requirements for classrooms and land conditions, a 2-classroom (A Type), a 3-classroom (B Type), a 4-classroom (C Type), and a 5-classroom (D Type) are to be assigned. Science labs in combination with classrooms is designed for all secondary schools.

Considering the school's hygiene and sanitary education to be given to the students, toilets that meet the improved specifications of DECS will be set up in a separate part of the school.

Table 3-6 shows the conditions of the Project schools. Table 3-7 shows the schoolbuilding type that corresponds to the classroom shortage of each Project school.

Table 3-6(1) Conditions of the Project Primary Schools

Recipient Schools	Enrolment 1990 -91	No of Teachers Adm. 1989 90-91	No of Class Rms Science(a) Work Shop	Road Condi- tion	W (m)	Aprox Site Dimension Length X Width(m)	Site Terrain	Soil Type	Leveling Required	Water Supply	Electricity Available	
E- 1. MASISIT ELEMENTARY SCHOOL	279	290	14	12	Fair	4	15 x 60	Slightly Sloping	Sandy	Slight	Public	Yes
E- 2. PUNTA ELEMENTARY SCHOOL	552	573	20	13	Good	8	30 x -	Flat	Sandy	None	Well	None
E- 3. GAYONG ELEMENTARY SCHOOL	299	400	8	8	Good	5	20 x 50	Rolling	Clayey	Slight	Well	Yes
E- 4. UDDIAWAN ELEMENTARY SCHOOL	377	400	15	13	Fair	5	Unlimited	Rolling	Clayey	Slight	Well	Yes
E- 5. GOV. ALFONSO CASTANEDA ELEMENTARY SCHOOL	302	345	9	8	Good	8	30 x 20	Rolling	Clayey	Much	Well	Yes
E- 6. AV MIJARES ELEMENTARY SCHOOL	395	400	15	13	Fair	6	Unlimited	Slightly Sloping	Clayey	Slight	Free Flowing	Yes
E- 7. SAN LUIS ELEMENTARY SCHOOL	673	700	25	29	Fair	3	Unlimited	Flat	Rocky	None	Public	Yes
E- 8. LANGGAM ELEMENTARY SCHOOL	1,304	1,500	30	16	Poor	4	35 x 15	Flat	Rocky	Slight	Public	Yes
E- 9. BALAKILONG ELEMENTARY SCHOOL	382	396	15	12	Fair	4	41 x 15	Rolling	Sandy Loam	Slight	Well	Yes
E-10. NASUGBU WEST CENTRAL ELEMENTARY SCHOOL	2,968	3,200	87	57	Good	8	29 x 14	Flat	Clayey	None	Public	Yes
E-11. CALACA ELEMENTARY SCHOOL	1,309	1,400	42	30	Good	6	50 x 15	Flat	Sandy Loam	Slight	Public	Yes
E-12. BATANGAS SOUTH CENTRAL ELEMENTARY SCHOOL	2,000	2,100	61	41	Good	-	70 x -	Flat	Clayey	None	Public	Yes
E-13. LIPA CITY SOUTH ELEMENTARY SCHOOL	1,389	1,550	50	38	Good	8	34 x 16	Flat	Sandy	None	Public	Yes
E-14. TALABA ELEMENTARY SCHOOL	1,400	1,480	41	23	Good	12	Unlimited	Swampy	Sandy	Extensive	Public	Yes
E-15. BULIHAN SITES SERVICES ELEMENTARY SCHOOL	2,317	2,440	84	50*	-	-	48 x 15	Flat	Clayey	None	Public	Yes
E-16. PAKIL ELEMENTARY SCHOOL	707	734	22	10	Good	4	12 x 36	Flat	Sandy Loam	Much	Public	Yes
E-17. MULANAY CENTRAL ELEMENTARY SCHOOL	1,751	-	65	45	Good	3	55 x 21	Flat	Clayey	Slight	Public	Yes
E-18. TAYABAS EAST ELEMENTARY SCHOOL	2,167	2,500	66	48	Good	8	56 x -	Rolling	Sandy Loam	Extensive	Public	Yes
E-19. YAVE ELEMENTARY SCHOOL	641	700	20	5	Fair	4	26 x 44	Flat	Sandy Loam	None	Public	Yes
E-20. GUMACA WEST CENTRAL ELEMENTARY SCHOOL	2,000	2,800	53	-	-	6	40 x -	Flat	Rocky	None	Well	Yes
E-21. DALAHICAN ELEMENTARY SCHOOL	1,777	2,000	46	47	Good	8	23 x 7	Flat	Rocky	None	Public	Yes
E-22. BAGONG NAYON II ELEMENTARY SCHOOL	2,531	2,900	46	24	Good	8	30 x 8	Flat	Clayey	None	Well	Yes

Table 3-8(2) Conditions of the Project Secondary Schools

Recipient Schools	Enrollment 1990-91 1991-92 -91 -92	No of Teachers & Adm. Staff 1989 90 91	No of Class Rms Science(a) Work Shop	Road Condi- tion	W (m)	Approx Site Dimension Length X Width(m)	Site Terrain	Soil Type	Leveling Required	Water Supply	Electricity Available
S-23. BAGGAO HIGH SCHOOL	725	17	9	Fair	6	50 x -	Flat	Clayey	None	Well	Yes
S-24. CALAAGAN DACKEL HIGH SCHOOL	524	21	9	Fair	5	Unlimited	Flat	Clayey	None	Well	Yes
S-25. CAMASI HIGH SCHOOL	888	28	17	Good	6	Unlimited	Rolling	Clayey	Slight	Well	Yes
S-26. BALLESTEROS HIGH SCHOOL	386	400	7	Fair	6	40 x 200	Flat	Sandy	None	None	Yes
S-27. MARINI HIGH SCHOOL	270	350	13	Fair	8	200 x -	Slightly Sloping	Clayey	Slight	Well	Yes
S-28. CALLANG HIGH SCHOOL	725	850	20	Fair	6	Unlimited	Flat	Clayey	None	Well	Yes
S-29. DON MARIANO MARCOS HIGH SCHOOL	849	1,042	40	Good	6	Unlimited	Flat	Clayey	None	Well	Yes
S-30. STA. MARIA HIGH SCHOOL	819	950	20	Fair	6	Unlimited	Slightly Sloping	Clayey	None	Well	Yes
S-31. BENITO SOLIVEN HIGH SCHOOL	625	800	25	Good	8	48 x -	Slightly Sloping	Rocky	Slight	Well	Yes
S-32. RAMON NATIONAL HIGH SCHOOL	864	950	36	Good	9	Unlimited	Slightly Sloping	Clayey	Slight	Public	Yes
S-33. HIGHWAY REGION HIGH SCHOOL	320	350	7	Good	6	Unlimited	Sloping	Clayey	Much	Well	Yes
S-34. BINTAWAN NATIONAL HIGH SCHOOL	691	730	39	Good	6	80 x -	Slightly Sloping	Clayey	None	Well	Yes
S-35. UDDIAWAN NATIONAL HIGH SCHOOL	370	400	15	Fair	6	40 x -	Flat	Clayey	Slight	Well	Yes
S-36. LAMO NATIONAL HIGH SCHOOL	515	700	37	Good	8	80 x -	Flat	Clayey	Slight	Well	Yes
S-37. DIADI NATIONAL HIGH SCHOOL	596	650	36	Good	15	Unlimited	Rolling	Clayey	Extensive	None	None
S-38. PANIKI HIGH SCHOOL	297	328	9	Fair	6	50 x -	Flat	Clayey	Slight	Well	Yes
S-39. SAGUDAY NATIONAL HIGH SCHOOL	739	800	40	Fair	6	Unlimited	Rolling	Clayey	Slight	Well	Yes
S-40. MURONG BARANGAY HIGH SCHOOL	258	307	7	Fair	4	Unlimited	Flat	Clayey	None	None	Yes
S-41. DITUMABO BARANGAY HIGH SCHOOL	427	470	18	Poor	8	Unlimited	Sloping	Sandy	Slight	Public	Yes
S-42. PALOPOC BARANGAY HIGH SCHOOL	115	150	6	Fair	-	52 x 13	Flat	Clayey	Slight	Public	Yes
S-43. LAIYA BARANGAY HIGH SCHOOL	900	1,000	18	Fair	6	Unlimited	Flat	Clayey	None	Well	None
S-44. P. PATERNO MEMORIAL HIGH SCHOOL	849	900	21	Good	6	52 x 35	Flat	Sandy Loam	-	Well	Yes
S-45. LUMBANGAN BARANGAY HIGH SCHOOL	416	600	10	Good	8	38 x -	Rolling	Clayey	Much	Public	Yes
S-46. WENCESLAO TRINIDAD MEMORIAL HIGH SCHOOL	1,685	1,800	56	Good	4	52 x 35	Hilly	Sandy	None	Public	Yes
S-47. MAABAD BARANGAY HIGH SCHOOL	774	820	27	-	4	35 x 26	Flat	Clayey	Slight	Public	Yes

Table 3-6(3) Conditions of the Project Secondary Schools

Recipient Schools	Enrolment 1990 -91	No of Teachers & Adm. Staff 1989	No of Class Rms Science(a) Work Shop	Road Condi- tion	W Dimension (m)	Approx Site Length X Width(m)	Site Terrain	Soil Type	Leveling Required	Water Supply	Electricity Available
S-48. SAN PEDRO BARANGAY HIGH SCHOOL	805	26	16(0)*	Good	4	Unlimited	Rolling	Sandy Loam	Slight	Public	Yes
S-49. STA. CLARA BARANGAY HIGH SCHOOL	654	18	7(0)*	Fair	4	Unlimited	Flat	Clayey	None	Well	None
S-50. ANILAO BARANGAY HIGH SCHOOL	240	7	5(0)*	-	-	Unlimited	Flat	Loam	None	Public	Yes
S-51. SAPAK BARANGAY HIGH SCHOOL	329	8	7(0)*	Poor	-	61 x 147	Rolling	Clayey	Slight	Public	Yes
S-52. CALUANGAN BARANGAY HIGH SCHOOL	327	11	5	Poor	8	72 x 28	Rolling	Clayey	Much	Public	Yes
S-53. KAONG BARANGAY HIGH SCHOOL	685	12	8	Poor	2.5	74 x -	Flat	Clayey	None	Well	Yes
S-54. LIGTONG BARANGAY HIGH SCHOOL	415	10	7(0)*	Good	4	Unlimited	Flat	Clayey	Extensive	Well	Yes
S-55. DASHARINAS RELOCATION SCHOOL-ANNEX	386	20	10	Fair	-	Unlimited	Flat	Clayey	Slight	Public	Yes
S-56. CAVITE PROVINCIAL SCIENCE HIGH SCHOOL	505	27	6	Fair	-	42 x -	Flat	Clayey	None	Well	Yes
S-57. LUMIL BARANGAY HIGH SCHOOL	563	16	7	Good	8	48 x 13	Rolling	Clayey	None	Public	Yes
S-58. MASAPANG BARANGAY HIGH SCHOOL	225	7	4(0)*	Good	8	38 x 11	Flat	Sandy Silt	None	Well	Yes
S-59. BAGOPAYE BARANGAY HIGH SCHOOL	350	7	4	-	-	Unlimited	Flat	Loam	None	Spring	Yes
S-60. LINGGA BARANGAY HIGH SCHOOL	787	22	11(8)*	Fair	4	35 x 35	Flat	Sandy Silt	Much	Public	Yes
S-61. MALAYA BARANGAY HIGH SCHOOL	632	17	8(0)*	Good	-	Unlimited	Flat	Clayey	None	None	Yes
S-62. INFANTA PROVINCIAL HIGH SCHOOL	1,900	2,500	29	Poor	8	50 x 20	Flat	Clayey	None	Public	Yes
S-63. CAMOHAGUIN BARANGAY HIGH SCHOOL	260	310	7	Fair	4	Unlimited	Flat	Clayey	Slight	None	Yes
S-64. TALIPAN BARANGAY HIGH SCHOOL	1,383	2,000	31	Good	-	45 x -	Flat	Loam	None	Public	Yes
S-65. PAIISA BARANGAY HIGH SCHOOL	350	370	7	Poor	8	Unlimited	Flat	Clayey	None	None	None
S-66. AMONTAY BARANGAY HIGH SCHOOL	322	450	10	Poor	8	Unlimited	Flat	Clayey	Slight	None	Yes
S-67. TONGOHIN BARANGAY HIGH SCHOOL	468	600	13	Poor	6	Unlimited	Flat	Clayey	None	Public	Yes
S-68. CONCEPCION BARANGAY HIGH SCHOOL	327	370	5	Good	-	65 x -	Flat	Clayey	Slight	Well	None
S-69. ANTIPOLLO MUNICIPAL HIGH SCHOOL	2,801	2,911	73	Good	8	42 x 8	Hilly	Clayey	Slight	Public	Yes
S-70. F.P. FELIX MUNICIPAL HIGH SCHOOL	4,217	5,000	116	Good	6	31 x 8	Flat	Sandy	None	Public	Yes
S-71. DAYAP BARANGAY HIGH SCHOOL	635	750	14	Good	-	Unlimited	Flat	Clayey	None	Public	Yes
S-72. QUISAO BARANGAY HIGH SCHOOL	635	770	17	Fair	8	Unlimited	Flat	Sandy	None	Public	Yes

3-3-4 Project Area Location and Conditions

The two regions to be covered by the Project are Region II (Cagayan Valley) which is the eastern half of Luzon -- the Philippine capital, Manila, is located here -- and Region IV (Southern Tagalog).

Region V (Bicol Region) which was included in the Phase I project is located south of Region IV. Project schools scatter throughout the entire area of Regions II and IV and stretches about 530 km from north to south. The schoolbuildings of 22 primary and 50 secondary schools (72 schools altogether) will be constructed under this Project.

The infrastructure for the Project will include electric and water supplies and drainage facilities. The electric power in both regions is 220 V. Presently, 6 project schools have no electricity. As for the water supply, 37 schools are receiving city water, 28 schools are using water from wells, and 7 school have no water supply facilities. For schools not having water or electric supplies, the Philippine Government will install them before the start of Project construction.

As drainage facilities are not fully installed, the sewage from toilets will pass through septic tanks and be infiltrated into the ground. Rain water and other drainage will also use the ground infiltration method.

Table 3-8 shows the number of Project schools in each school district in Regions II and IV.

Table 3-8 Number of Project Schools in Each School District in Regions II and IV.

Division	Primary School	Secondary School	Total
Region II			
Batanes	0	0	0
Cagayan	2	4	6
Isabela	1	7	8
Nueva Vizcaya	2	6	8
Quirino	0	1	1
Subtotal	5	18	23
Region IV			
Ratangas	4	9	13
Cavite	2	7	9
Laguna	2	3	5
Marinduque	0	0	0
Occidental Mindoro	0	0	0
Oriental Mindoro	0	0	0
Palawan	0	0	0
Quezon	5	8	13
Rizal	1	4	5
Romblon	0	0	0
Aurora	1	1	2
Batangas City	1	0	1
Cavite City	0	0	0
Lipa City	0	0	0
Lucena City	1	0	1
San Pablo City	0	0	0
Subtotal	17	32	49
Total	22	50	72

3-3-5 Outline of Facilities and Equipment

1) Differences from the Phase II Project

The basic design will follow that of the Phase II project; however, the following items were altered after discussions with the Philippine side:

*In order to facilitate emergency evacuation, all classrooms will have two doors. (One door was provided for each classroom under 1st and 2nd Phase.)

*In order for classes to be held in an agreeable atmosphere, electrical wiring and switches for ceiling fans will be installed in all classrooms and science labs. Each classroom will have two fans and each science lab will have three. The fans will be supplied and installed by the Philippine side.

*In order to make the toilets more durable and to simplify their maintenance, the floors will be changed from mortar finish to mosaic tiles.

2) Outline of the Facilities

As stated in Section 3-3-3, the number of classrooms will be decided from the 4 types according to the number of students, and the land and schoolbuilding conditions. Table 3-9 is an outline of the schoolbuilding types.

Table 3-9 Outline of Schoolbuilding Types

Building Type	Building Method	Number of Classrooms	Total Floor Area (m ²)
A Type	Prefabricated Unit Method	2	108
B Type		3	162
C Type		4	216
D Type		5	270
S Type		1	90
Toilet	Local Method	One for males and one for females	25.5

3) Outline of Equipment Plan

The equipment to be installed in Project schools will be the basic educational equipment specified by DECS's local specifications.

The outline is shown in Table 3-10.

Table 3-10 Outline of Equipment to be Provided

School	Type of Room	Name of Equipment Unit
Primary Schools	Classrooms	.Teachers' desks, chairs and closets .Students' desk-chairs, (large, medium and small) and closets .Blackboards and bulletin boards
	Science Laboratories	.Demonstration workbench .Experimental tables and stools .Students' closets .Blackboards and bulletin boards .Storage lockers and steel shelves

3-3-6 Maintenance Plan

The maintenance and management of Project facilities will be conducted by the local offices of the Department of Public Works and Highways (DPWH) in Regions II and IV. The costs will be allotted by DECS.

Since 1980, DECS has been able to secure funds, Maintenance and Other Expenditures (MOOE), for simple repair work, and Capital Outlay (CO) for repair and construction work, and has been conducting repair work at various schools under the guidance of DPWH. When repairs or maintenance becomes necessary, a request is made by the school principal and is forwarded to DECS's regional office for evaluation. After being evaluated, the request is then sent to DECS's Central Office. DPWH's Central Office is then notified of the costs. After being approved by the Department of Budget and Management,

the final budget is decided upon. Based on the budget, DECS's Central Office will determine the amount to be allocated to each school and DPWH's Engineering Section will set up the maintenance and repair program which each school principal will be notified of.

The construction contractors will be chosen by DPWH's Engineering Section and the maintenance and repair work will be conducted under the supervision of DECS and DPWH.

Since 1990, DECS has been able to carry out procedures for small-scale repair work and maintenance quickly with the cooperation of each school district's PTA and local agencies.

The 3-11 shows the flow of school maintenance and repair work. Table 3-12 shows the actual costs for maintenance and repair at DECS's regional offices in Regions II and IV for the past 3 years.

Table 3-11 Flow of Maintenance and Repair Work

Responsible Department	Work Flow Order and Content
DECS	1. Examine the necessity of repair work requested by each school's principal and submit necessary budget and work proposal to DECS's local office.
DECS	2. DECS's local office examines the proposal and submits to DECS's Central Office a list of the schools needing repair work.
DECS	3. DECS's Central Office notifies DPWH of DECS's budget.
DPWH	4. DPWH's Central Office submits a proposal to DBM's Infrastructure Program.
DBM	5. Examine the submitted proposal and budget request and notifies DPWH the limit of available budgetary funds.
DPWH	6. DPWH's Central Office notifies DECS's Central Office of the amount of the budget.
DECS	7. Determine amount of money to be allocated to each school according to the needs of the school and the priority and notifies DPWH.
DPWH	8. DPWH's Central Office delivers the budget document to its Engineering Section.
DPWH	9. DPWH's Engineering Section sets up the repair and maintenance program according to the budget document and notifies each school principal of the program.
DECS	10. Notify each school of the repair and maintenance program.
DECS	11. Manage overall repair and maintenance work.
DPWH	12. Manage repair and maintenance work until its completion.
DPWH	13. Deliver repaired or maintained school facilities to DECS.
DECS	14. Accept repaired or maintained school facilities from DPWH.

Table 3-12 Actually Spent Maintenance and Management Expenditures of DECS's Local Offices In Regions II and IV (1987-1989)

Year	Region II	Region IV	TOTAL
1987	51,321,374.67	77,338,785.63	128,660,160.30
1988	70,588,307.26	125,386,768.86	195,975,076.12
1989	87,521,934.06	129,063,926.02	306,585,860.08
TOTAL	209,431,615.99	421,789,480.51	631,221,096.50

With the addition of new school facilities, teachers to supervise and operate the facilities will become necessary as will the need for securing maintenance costs.

This Project was proposed as part of the Philippine Government's School Construction Plan, and the teaching staff and maintenance costs are planned as part of the entire Project.

The major objective of this Project is to rebuild the schools destroyed by typhoons and thus, as previously stated in the Operation and Management Plan section, maintenance and operations may be adequately carried out with the same number of staff and the same budget as before.

As for the maintenance costs, the equipment and facilities have been chosen so that the actual maintenance may be conducted at low costs. The main structures should be maintenance free; thus, the total costs should be quite low. However, wooden doors, jalousies, color-crete floors and plywood walls that are to be obtained locally will have to be regularly maintained to have them last over a long period of time.

Table 3-13 shows the operation and maintenance costs per schoolbuilding.

Table 3-13 Operation, Management and Maintenance Costs for One Schoolbuilding (C Type)

Item	Material Costs (pesos)	Labor Costs (pesos)	Maintenance Frequency	Remarks
Wooden Doors & Jalousies	1,940	850	Once every other year	Recommended to paint once every two years to prolong jalousie life
Floor (color-crete)	—	460	Once a month	To maintain color texture, monthly waxing is required
Plywood wall & ceiling painting	900	500	Once every five years	Basically, the wall is maintenance free; it will necessary to paint stains and smudges.
Painting of elevated water tank support	240	150	Once every other year	Special cares shall be given to schools located close to the sea coast.
Pump	20,000		Once every seven year	Unit required replacement at seven year intervals.