

JAPAN INTERNATIONAL COOPERATION AGENCY

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF HEALTH

BASIC DESIGN STUDY REPORT

ON

THE PROJECT

FOR

THE IMPROVEMENT OF

MEDICAL EQUIPMENT

IN HA NOI CITY

IN

THE SOCIALIST REPUBLIC OF VIET NAM

MARCH, 1994

INTERNATIONAL TECHNO CENTER CO.,LTD

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MARCH, 1994

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**BASIC DESIGN STUDY REPORT
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MARCH, 1994

INTERNATIONAL TECHNO CENTER CO.,LTD

PREFACE

In response to a request from the Government of the Socialist Republic of Viet Nam, the Government of Japan decided to conduct a basic design study on the Project for the Improvement of Medical Equipment in Ha Noi City and entrusted the study to the Japan International Cooperation Agency(JICA).


JICA sent to Viet Nam a study team headed by Mr. Minoru Akiyama, M.D., Bureau of International Cooperation, International Medical Center, the Ministry of Health and Welfare and consisted by members of International Techno Center Co., Ltd. from November 11 to December 9, 1993.

The team held discussions with the officials concerned of the Government of Viet Nam and conducted a field survey at the study area. After the team returned to Japan, further studies were made, and as this result, 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 Socialist Republic of Viet Nam for their close cooperation extended to the terms.

March, 1994



Kensuke Yanagiya

President

Japan International Cooperation Agency

Mr. Kensuke Yanagiya
President
Japan International Cooperation Agency
Tokyo, Japan

Letter of Transmittal

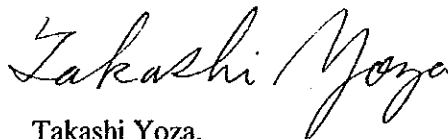
We are pleased to submit to you the basic design study report on the Project for the Improvement of Medical Equipment in Ha Noi City in the Socialist Republic of Viet Nam.

This study has been made by International Techno Center Co., Ltd. under a contract to JICA, during the period November 2, 1993 to March 18, 1994. In conducting the study, we have examined the feasibility and rationale of the project with due full consideration to the present situation of Viet Nam and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

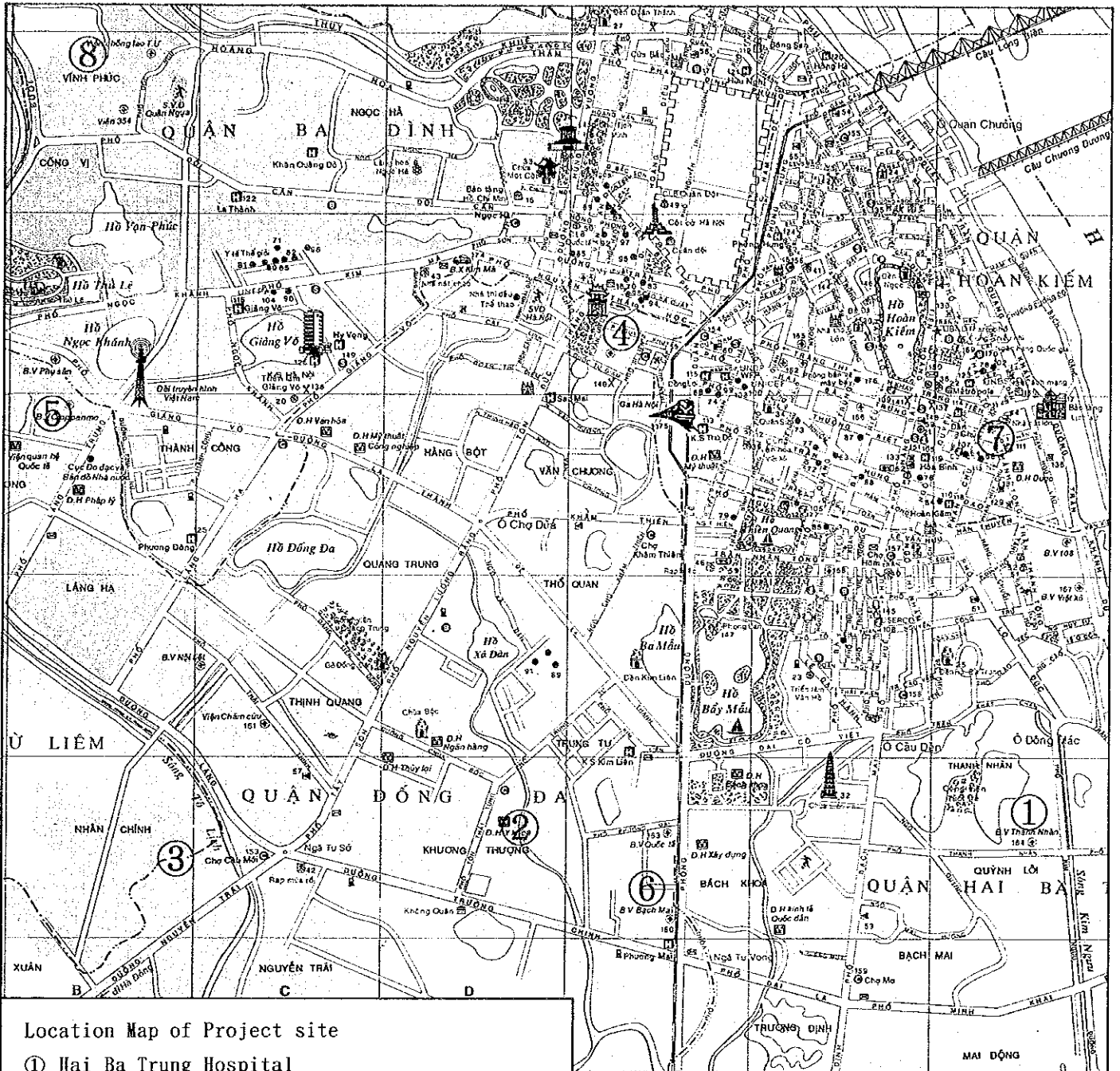
We wish to take this opportunity to express our sincere gratitude to the officials concerned of JICA, the Ministry of Foreign Affairs, the Ministry of Health and Welfare and Embassy of Viet Nam in Japan. We also wish to express our deep gratitude to the officials concerned of Ministry of Health, Ha Noi People's Committee, and Embassy of Japan in Viet Nam for their close cooperation and assistance throughout our field survey.

Finally, we hope that this report will contribute to further promotion of the project.

Very truly yours.

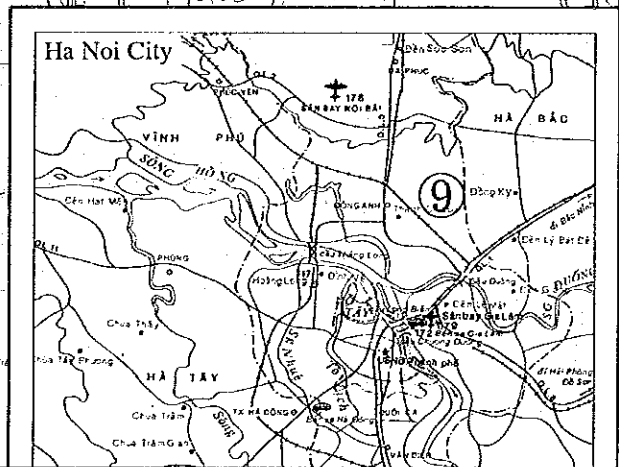


Takashi Yoza,
Project Manager
Basic design study team on
the Project for the Improvement of
Medical Equipment in Ha Noi City
International Techno Center Co., Ltd.

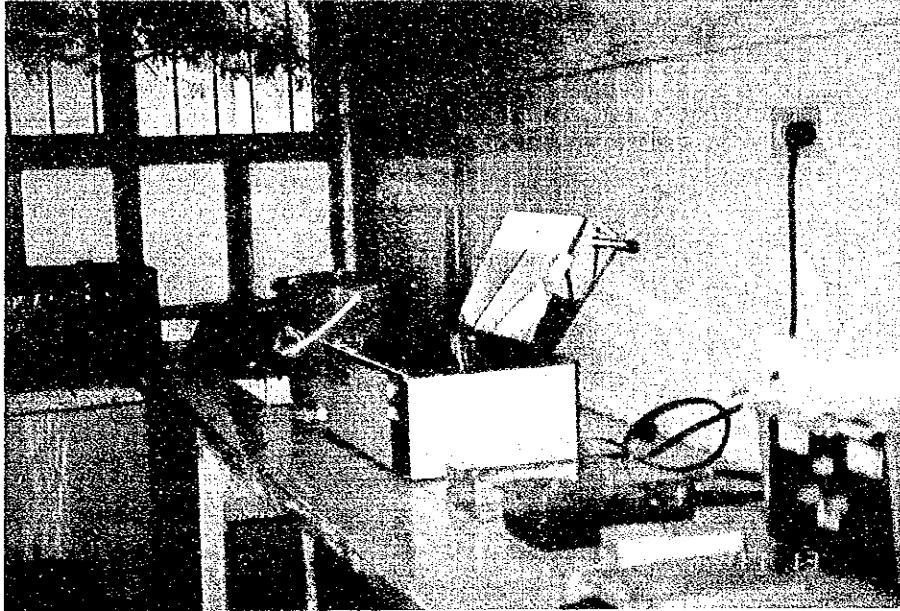


Location Map of Project site

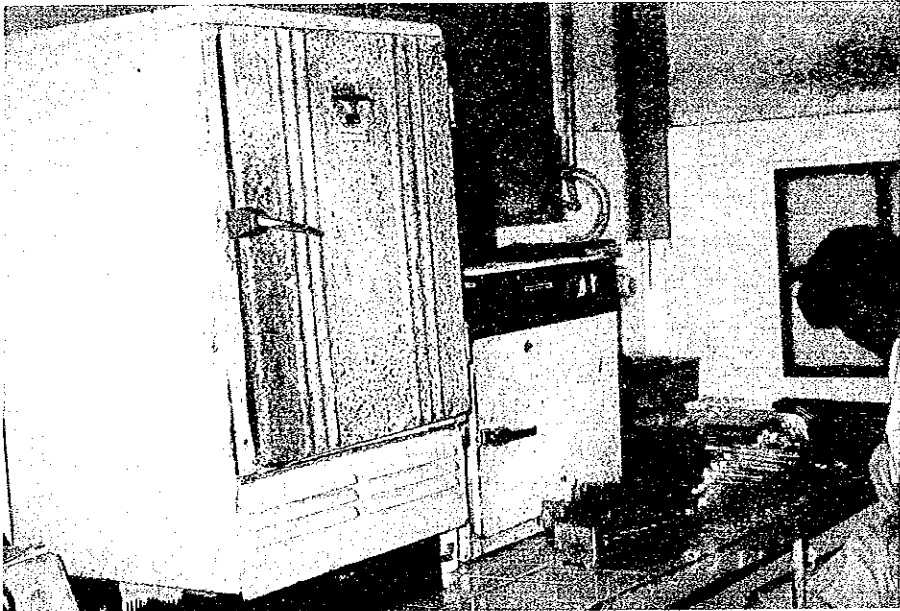
- ① Hai Ba Trung Hospital
- ② Ha Noi Medical College
- ③ National Institute of Malaria, Parasitology and Entomology
- ④ National Institute of Ophthalmology
- ⑤ Gynecology and Obstetric Hospital in Ha Noi
- ⑥ Bach Mai Hospital
- ⑦ Emergency Transfer Center in Ha Noi
- ⑧ National Institute of Tuberculosis and Respiratory Disease
- ⑨ Dong Anh Hospital



1. Hai Ba Trung Hospital

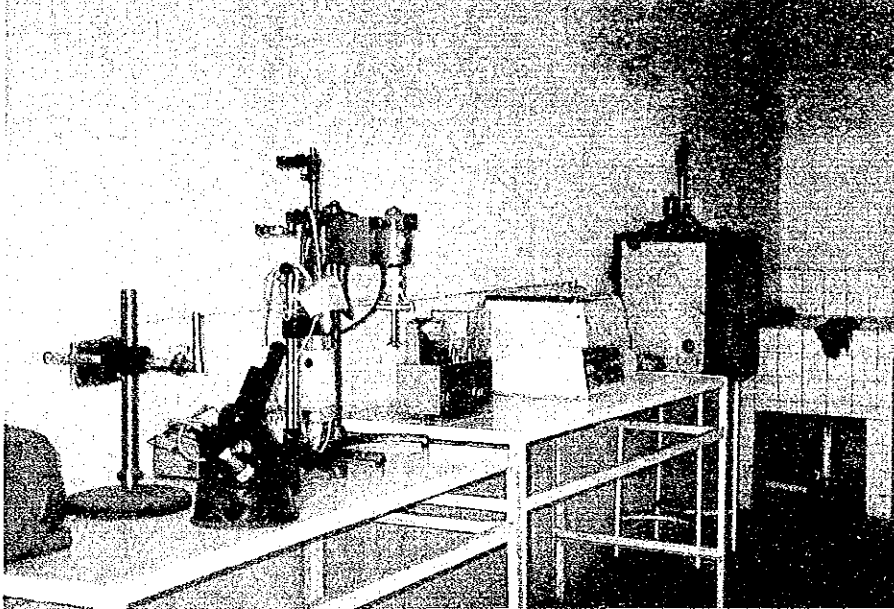


Laboratory (Worn out Electrophoresis Apparatus and Water Bath)



Laboratory (Rusted Incubator)

2. Ha Noi Medical School



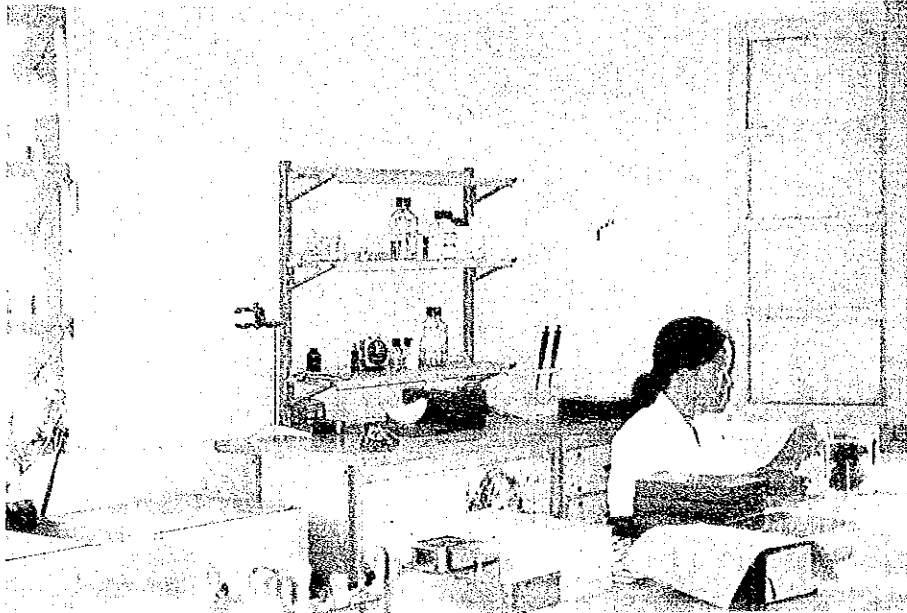
Laboratory

(Front: Microscope being used for 30 Years Back: Drying Oven)

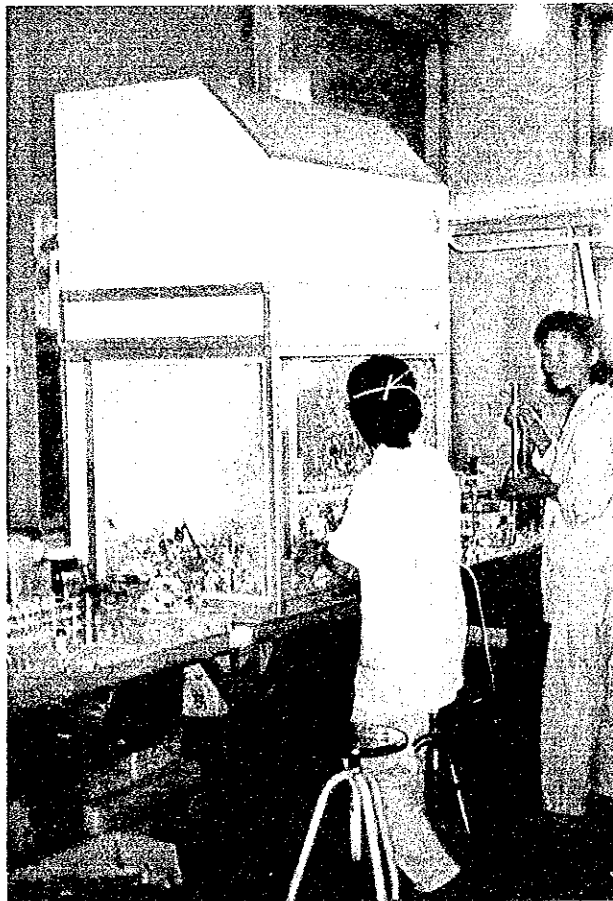


Equipments Placed on the Corridor to Dry

3. National Institute of Malariaology, Parasitology and Entomology

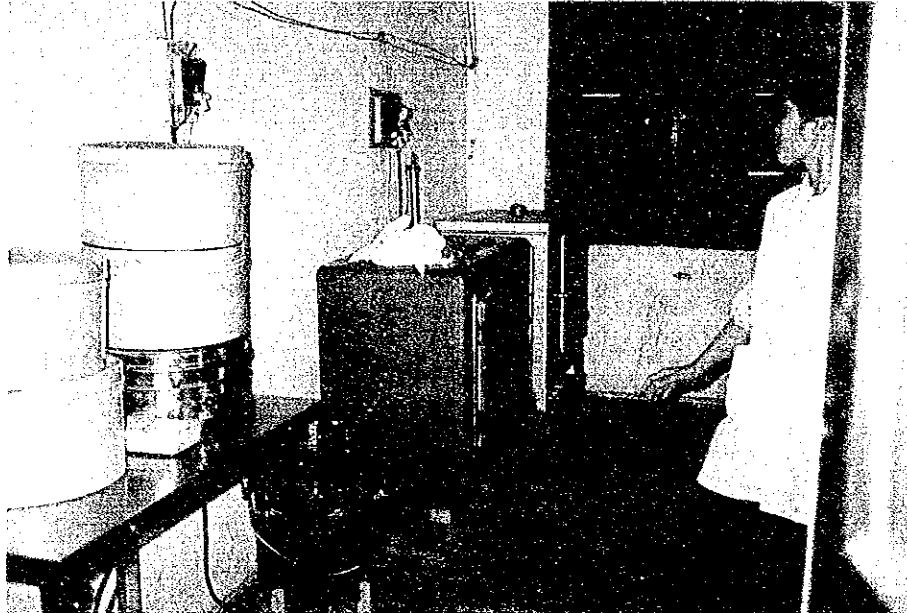


Laboratory (Mainly Basic Equipment)



Laboratory (Cracked Clean Bench)

4. National Institute of Ophthalmology

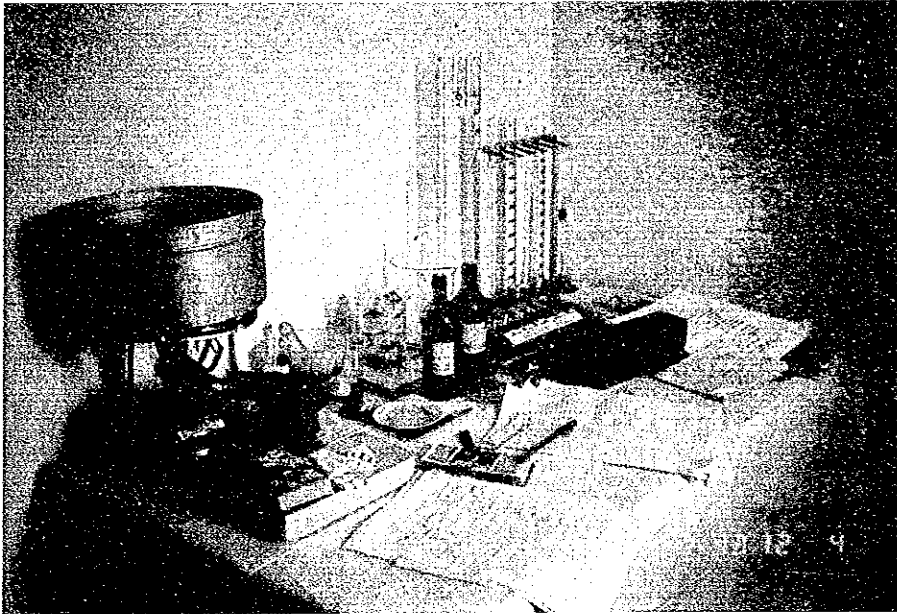


Central Sterilized Supply Room
(Front: Sterilized Drum Back: Drying Oven)



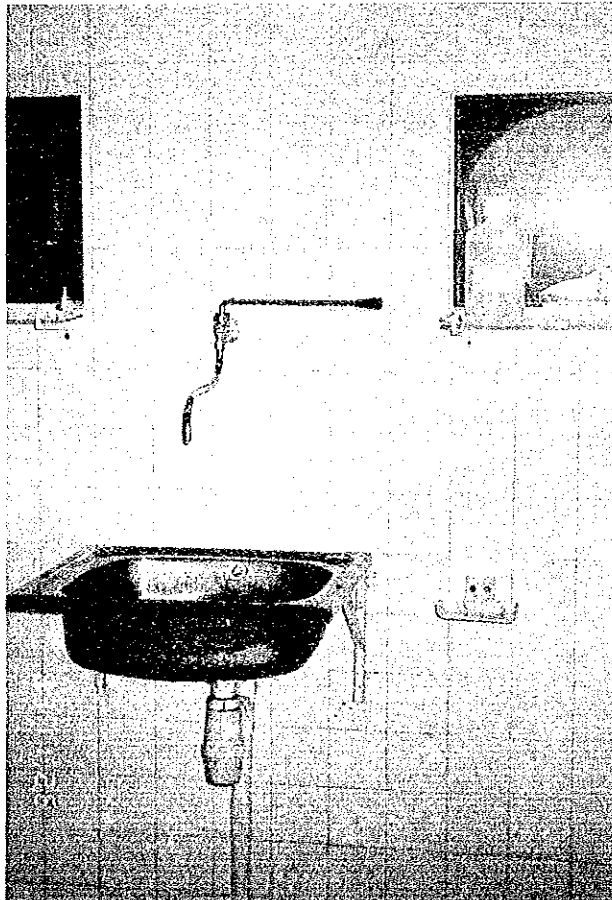
Operation Theater (Equipments are all Poor)

5. Gynecology and Obstetric Hospital in Ha Noi



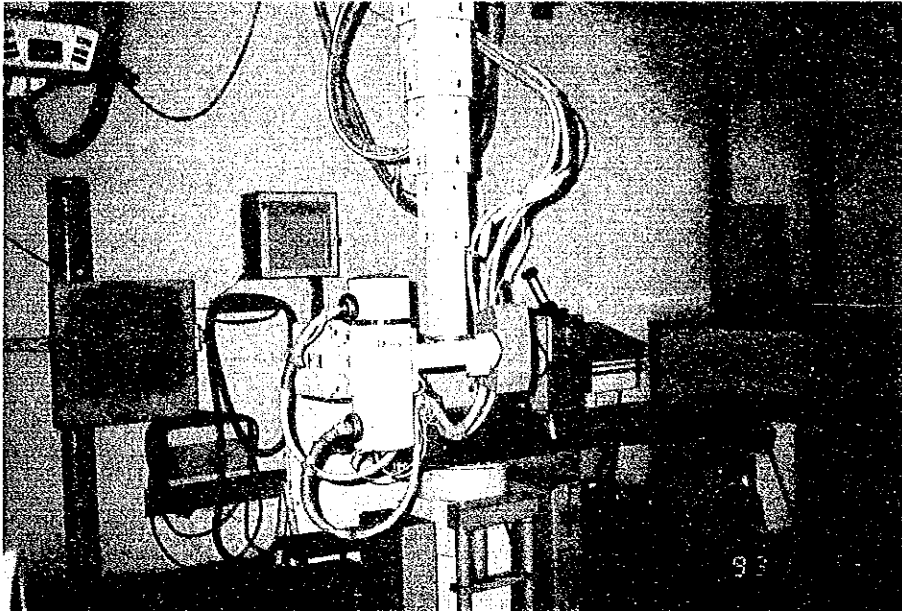
Laboratory

(Front: Instrument Boiling Sterilizer Back: Blood Sedimentation Set)

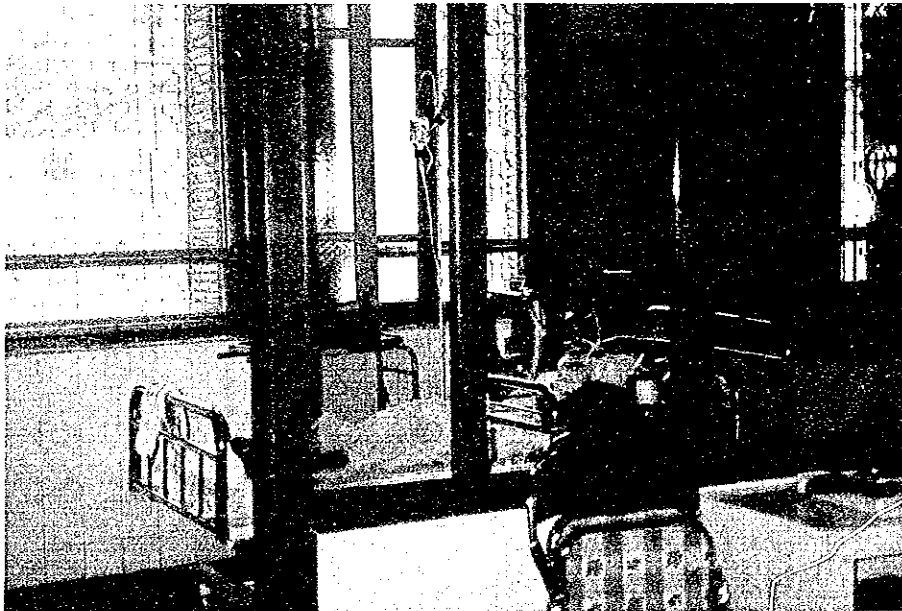


Operating Theater (Water for washing hands is not purified.)

6. Bach Mai Hospital

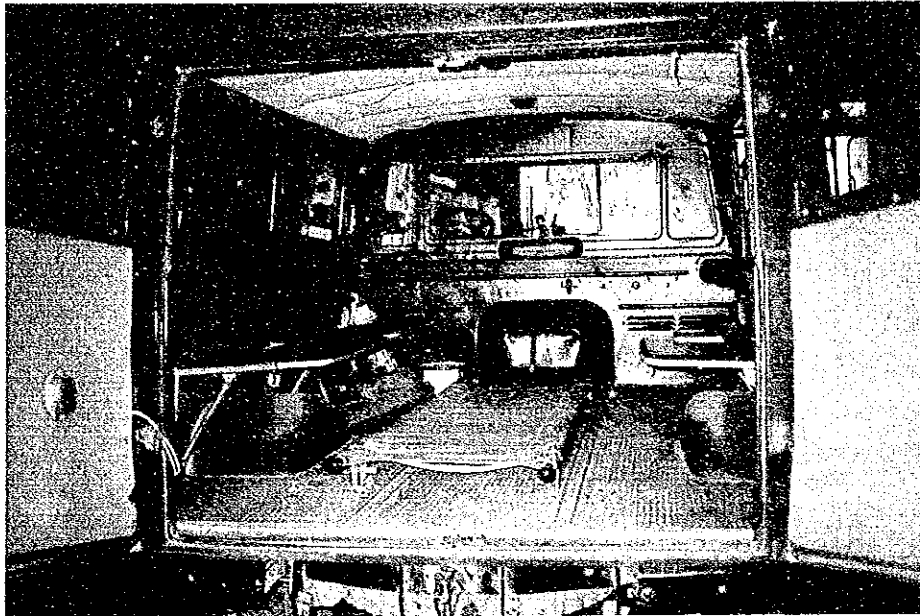


X-ray Room (Worn Out Angiography System)



ICU (Separated by Glass)

7. Emergency Transfer Center in Ha Noi

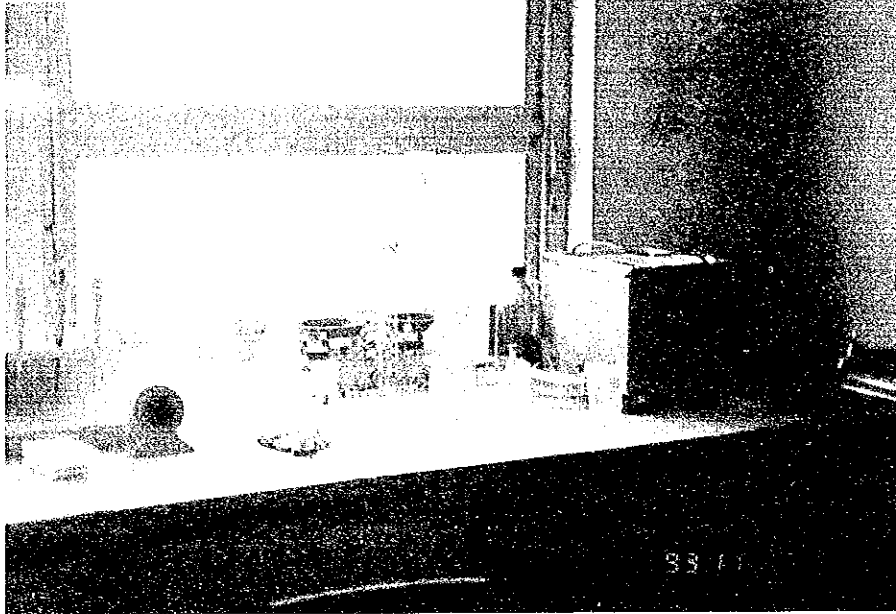


Ambulance (Equipped only with Strechers)

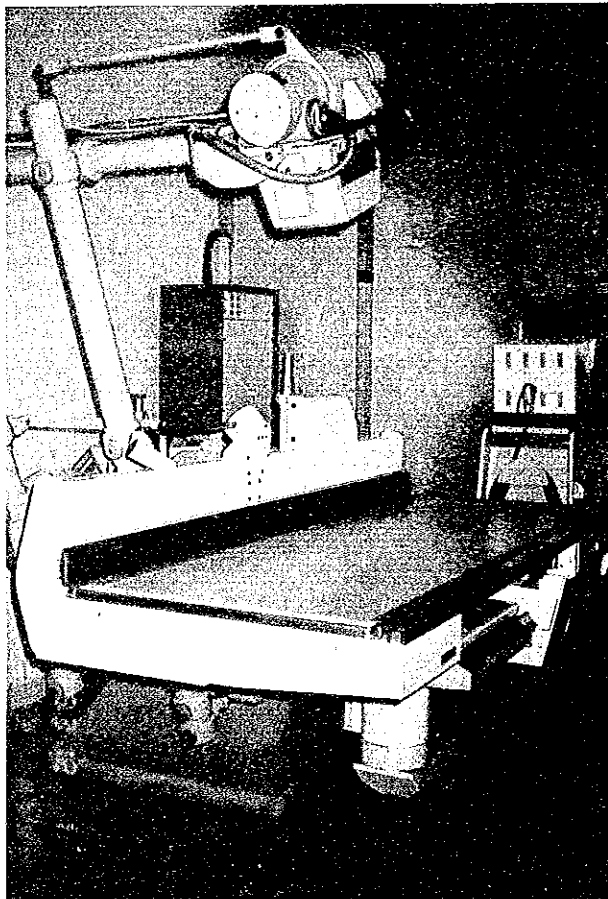


Entranc of the Center

8. National Institute of Tuberculosis and Respiratory Disease

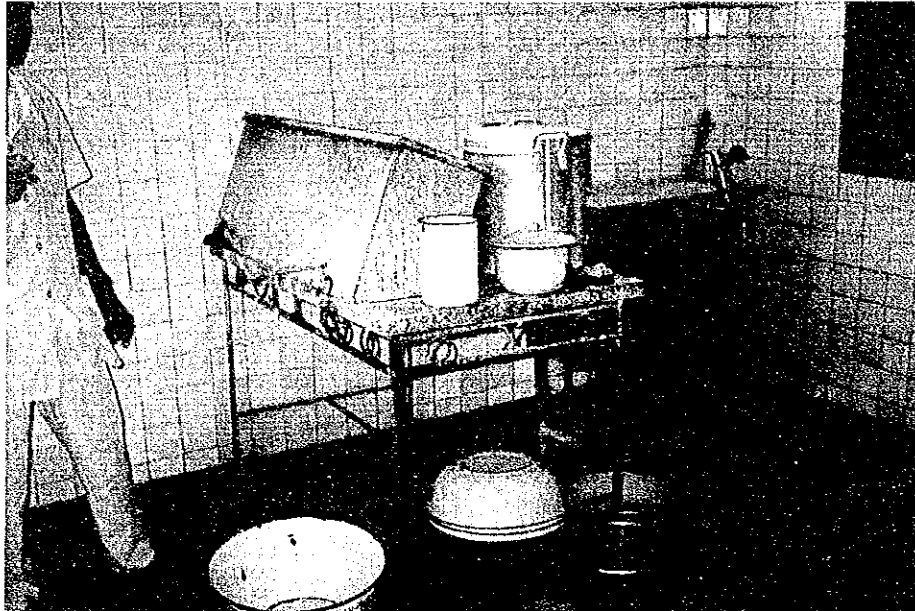


Laboratory (Only equipments such as the water bath are found.)

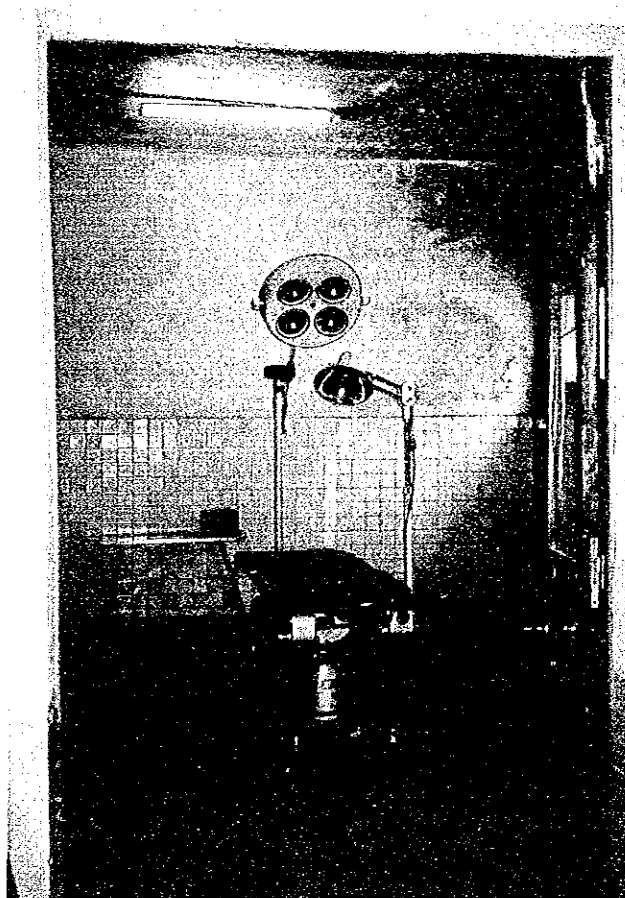


X-ray Room(Ordinary Tomograph donated by NGO)

9. Dong Anh Hospital



Central Sterilized Supply Room (Back: Instrument Boiling Sterilizer)



Operation Theater (Basic equipments are particularly poor.)

SUMMARY

SUMMARY

The Socialist Republic of Viet Nam is located at the east coast of the Indochinese Peninsula and its land area is 330,000Km². It has a population of 66.3 million (1990) and GNP per capita is US\$240 (1991).

In the fourth National 5-Year Development Plan started in 1986, the principal goals are to increase production of food and consumer goods, to promote exports, and to decrease a population growth rate. The previous policy has been changed largely, and the Doi moi which is based on the principles of market economics is introduced. The Government also promotes liberalization and democratization, and improves the relationship with western countries and China.

The life expectancy is 64 years old (1992) and the mortality of children under age 5 is 44/1000. The literacy rate is high and shows 92% of male and 84% of female.

Viet Nam shows a typical disease pattern in developing countries which consists of malaria, salmonella, dysentery, amebiasis, and rabies. Especially, the malaria is the first cause of death. Therefore, malaria control program is the second important activity, which follows the Primary Health Care (PHC) program in the health development plan.

The Government of Japan sent the project formulation study team in December, 1992. The team recognized that institutions and laboratories in Ha Noi city are in trouble with superannuation and shortage of equipment to give medical treatment and examination, although they had a certain level of diagnostic ability about medical technique. As emergency measures, the team suggested to formulate the project for the improvement of medical equipment of the main institutions in Ha Noi city.

The Government of Viet Nam drew up the application form to improve nine health institutions in Ha Noi city and submitted it to the Government of Japan for the grant aid project. In response to this request, after confirming the contents, the background, and the executing agency of the project, the Government of Japan decided to conduct the preliminary study and Japan International Cooperation Agency (JICA) conducted the study.

As a result, JICA recognized the necessity of the basic design study for the grant aid and sent the basic design study team in November, 1993. The team discussed with officials, studied objective institutions, and collected additional information. After the team returned to Japan, the team analyzed the information and made this report.

Objective nine health institutions are listed below. All institutions are located in Ha Noi city or its suburbs, and play the most important role in health service field in Viet Nam.

1. Hai Ba Trung Hospital
2. Ha Noi Medical College
3. National Institute of Malariology, Parasitology and Entomology
4. National Institute of Ophthalmology
5. Gynecology and Obstetric Hospital in Ha Noi
6. Bach Mai Hospital
7. Emergency Transfer Center in Ha Noi
8. National Institute of Tuberculosis and Respiratory Disease
9. Dong Anh Hospital

After careful study on the function and condition of each institution, equipments are selected under following consideration :

- (1) Basic equipments that are necessary and appropriate for treatment and diagnosis
- (2) Equipments that meet the technical level of medical personnel
- (3) Equipments with easy maintenance
- (4) Equipments that requires less maintenance cost
- (5) Equipments that do not require construction
- (6) Equipments that are appropriate for the function and level of institutions

Selected equipments are shown in the Table 1. The equipment list includes audiovisual equipment such as video projector and medical books/AV soft ware, because some institutions have the function for training medical personnel.

Executing agency of this project is the Ministry of Health that administrates the nine health institutions. Budget of those institutions comes from the Ministry of Health, the aid assistance, and the medical insurance system.

Annual operation cost after completion of this project is around 4.9 billion dong (54 million yen), however the actual increase cost is 980 million dong (15 million yen), because most equipments will be for renewal. Considering rapidly increased budget of each institution, the amount of the actual increase cost can be paid by the Viet Nam side.

Implementation of this project will take about eight months each on Phase I and Phase II.

Direct beneficiaries of this project are people who live in Ha Noi city and its suburbs. Since the nine health institutions are the leading organs in Viet Nam, the project will indirectly help to improve the health services in the whole country. Therefore, the project is appropriate for the scheme of Japan's Grant Aid .

Table 1 - Main Equipment

Name of Institution	Name of Equipment
1. Hai Ba Trung Hospital	Ventilator Ventilator portable Patient monitor Operation glove set Duodenofiberscope Endocystoscope system Sigmoidfiberscope Broncho-fiberscope Endoscopy support X-ray mobile unit Fiberscope washer ELISA reader Large capacity refrigerated centrifuge
2. Ha Noi Medical College	RO system Double distillation unit, 1.2L/h Water purification system Clean bench Educational Medical books/AV soft Video projector Public address system TV microscope set Microscope trinocular w/camera Flourescent microscope Flourescent microscope w/camera Cryostat microtome Deep freezer -85 Female figure Male figure Film developing, magnifying set
3. National Institute of Malariology, Parasitology and Entomology	Ultrasound scanner portable TV microscope set Flourescent microscope w/camera Phase contrast microscope w/camera Stereo microscope w/TV ELISA reader
4. National Institute of Ophthalmology	Anesthesia apparatus with Ventilator Patient monitor Operation glove set Cryosurgery unit

Name of Institution	Name of Equipment
	Operational microscope Visual electrophysiology test system Slit lamp with camera Projection perimeter Virectomy apparatus Diathermy unit full system Auto-refractometer Cataract set microsurgery Vitreous surgery instrument set High pressure steam sterilizer, midium Water distiller 20L/h
5. Gynecology and Obstetric Hospital in Ha Noi	Ventilator Infant ventilator Patient monitor Laparoscope set Caesarean operation set Gyne operating instrument set Fetal monitor Equipped Amburance High pressure steam sterilizer for Liquid, large High pressure steam sterilizer, large High pressure steam sterilizer, midium Scrub station Operation light ceiling type Water distiller 30L/h Ultrasound scanner general Power generator Urine analyzer
6. Bach Mai Hospital	Ventilator Broncho-fiberscope Gastro fiberscope CT scanner X-ray apparatus w/TV system X-ray machine general diagnostic X-ray mobile unit Automatic film development machine Equipped Amburance 4WD Amburance Ultrasonic washer Water distiller 30L/h

Name of Institution	Name of Equipment
	Water purification system Ultrasound scanner w/color doppler Ultrasound scanner general ELISA reader Urine analyzer
7. Emergency Transfer Center in Ha Noi	Equipped Ambulance Repair-instrument set for Ambulance Central radio communication unit
8. National Institute of Tuberculosis and Respiratory Disease	Major operation table Anesthesia apparatus with Ventilator Ventilator portable Electro surgical unit Patient monitor Defibrillator Instrument for suture of vascular Instrument for thoracic operation Electronic Scale for Patient Broncho-fiberscope with camera X-ray mobile unit Equipped Ambulance High pressure steam sterilizer for Liquid,large High pressure steam sterilizer,medium Water distiller 30L/h Ultrasound scanner general Microscope trinocular w/camera
9. Dong Anh Hospital	Major operation table Anesthesia apparatus Ventilator Electro surgical unit Patient monitor Minor surgical instrument set X-ray apparatus w/TV system Equipped Ambulance High pressure steam sterilizer for Liquid,medium Scrub station Water distiller 30L/h Ultrasound scanner general Dental unit ENT examination unit Power generator

**BASIC DESIGN STUDY REPORT
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THE IMPROVEMENT OF MEDICAL EQUIPMENT
IN HA NOI CITY
IN
THE SOCIALIST REPUBLIC OF VIET NAM**

CONTENTS

Preface	
Letter of Transmittal	
Map	
Photographs of Project Site	
Summary	
Contents	
CHAPTER 1 INTRODUCTION	1
CHAPTER 2 BACKGROUND OF THE PROJECT	3
2-1 Present State of the Socialist Republic of Viet Nam	3
2-1-1 Geography and Climate	3
2-1-2 Demography	3
2-1-3 National Development Plan	6
2-1-4 Economic Activity	7
2-1-5 Transition of Foreign Aid (International Organization's Related Project)	8
2-1-6 Administrative System	9
2-2 Present State of the Health and Medical Care	11
2-2-1 Present State of the Health and Medical Care	11
2-2-2 Development Programs for Health and Medical Care	14
2-3 Administrative System for Health Care	15
2-3-1 Administrative System for Health Care	15
2-3-2 Annual Budget of the Ministry of Health	19
2-3-3 Health Care System	20
2-3-4 Doctors and Medical Personnel	24
2-3-5 Health Institution	25
2-3-6 Medical Education and Education Institution	26
2-3-7 Maintenance System	27

2-4 Present State of Health Care in Ha Noi City	31
2-4-1 Outline of Ha Noi City	31
2-4-2 Health Care System in Ha Noi City	33
2-4-3 Doctors and Medical Personnel in Ha Noi City	35
2-5 Trend of Foreign Aid	35
2-5-1 International Aid Organization	36
2-5-2 Trend of Bilateral Aid	39
2-6 Background and Outline of the Request	43
2-6-1 Background of the Request	43
2-6-2 Contents of the Request	44
2-7 Present State of Objective Institutions	44
2-7-1 Hai Ba Trung Hospital	44
2-7-2 Ha Noi Medical College	52
2-7-3 National Institute of Malariology, Parasitology and Entomology	55
2-7-4 National Institute of Ophthalmology	59
2-7-5 Gynecology and Obstetric Hospital in Ha Noi	64
2-7-6 Bach Mai Hospital	70
2-7-7 Emergency Transfer Center in Ha Noi	77
2-7-8 National Institute of Tuberculosis and Respiratory Disease	80
2-7-9 Dong Anh Hospital	84
CHAPTER 3 OUTLINE OF THE PROJECT	91
3-1 Objectives	91
3-2 Study and Examination of the Request	91
3-2-1 Examination of Propriety and Necessity of the Project	91
3-2-2 Relations with other Similar Projects	92
3-2-3 Examination of Project Components	93
3-2-4 Operational Plan of the Project	94
3-2-5 Examination of the Requested Equipment	97
3-2-6 Examination of the Necessity of Technical Cooperation	102
3-2-7 Basic Policy of Japan's Grant Aid Assistance	103
3-3 Outline of the Project	104
3-3-1 Executing Agency and Management System	104

3-3-2 Outline of the Equipment	104
3-3-3 Operation and Maintenance Plan	109
3-3-4 Operation and Maintenance Budget	110
CHAPTER 4 BASIC DESIGN	111
4-1 Basic Design Policy	111
4-1-1 Decision Policy	111
4-1-2 Design Policy Relating to Natural Condition	111
4-1-3 Design Policy Relating to the Facility and Architectural Condition	112
4-1-4 Design Policy Relating to Locally Available Equipment	114
4-1-5 Design Policy Relating to the Maintaining and Managing Ability of Executing Organ	114
4-1-6 Design Policy Relating to the Level and the Scope of Equipment	114
4-1-7 Policies Concerning Implementation Schedule	115
4-2 Condition of the Basic Plan	115
4-3 Basic Plan	116
4-3-1 Plan for Equipment	116
4-3-2 Layout Plan	118
4-3-3 Architectural Construction Accompanied with Equipment Setting Up	131
4-4 Implementation Plan	132
4-4-1 Implementation Policy	132
4-4-2 Scope of Work	133
4-4-3 Implementation Procedure	134
4-4-4 Procurement Plan	135
4-4-5 Implementation Schedule	137
4-4-6 Estimated Project Cost	138
CHAPTER 5 EXPECTED EFFECTS OF THE PROJECT AND CONCLUSION	140
5-1 Project Evaluation	140
5-2 Conclusion	145
5-3 Recommendations	145

[Appendices]

- 1. Minutes of Discussions**
- 2. Survey Schedule**
- 3. Member List of Basic Design Study Team**
- 4. Member List of Concerning Party in Viet Nam**

CHAPTER 1 INTRODUCTION

CHAPTER 1 INTRODUCTION

The Government of Viet Nam formulated a project to improve nine main health institutions, which are regarded as the leading organs at Ha Noi city in Viet Nam. In order to materialize the project, the Government of Viet Nam made a request to the Government of Japan for a grant aid assistance.

In response to the request, the Government of Japan decided to study the project, and the Japan International Cooperation Agency dispatched a preliminary study team, headed by Mr. Minoru Akiyama, M.D., Bureau of International Cooperation, International Medical Center, the Ministry of Health and Welfare, to Viet Nam from July 26 through August 9, 1993. The team had a series of discussion with the officials of Viet Nam and confirmed the background and details of the project, implementation system, and other international aid plans.

The preliminary study team reported that the Government of Viet Nam strongly desires the realization of the project as early as possible through assistance from the Government of Japan. The Government of Japan decided to carry out a basic design study for the grant aid. Japan International Cooperation Agency sent a basic design study team, which was again headed by Mr. Minoru Akiyama, M.D., to Viet Nam from November 11 through December 10, 1993 to investigate the following subjects:

Name of institutions:

Hai Ba Trung Hospital
Ha Noi Medical College
National Institute of Malariology, Parasitology and Entomology
National Institute of Ophthalmology
Gynecology and Obstetric Hospital in Ha Noi
Bach Mai Hospital
Emergency Transfer Center in Ha Noi
National Institute of Tuberculosis and Respiratory Disease
Dong Anh Hospital

- (1) Present state of the nine medical institutions.
- (2) Present state of existing medical equipment.
- (3) Examination for the requested equipment.

(4) Project execution agency, personnel plan, operating budget, and scope of work entrusted to the Government of Viet Nam.

(5) Technical level of the medical field, and maintenance technique and system.

This report present the result of the basic design study mentioned in the above.

CHAPTER 2 BACKGROUND OF THE PROJECT

CHAPTER 2 BACKGROUND OF THE PROJECT

2-1 Present State of the Socialist Republic of Viet Nam

2-1-1 Geography and Climate

The Socialist Republic of Viet Nam is located at the east coast of the Indochinese Peninsula and its land area is about 330,000 Km². It has a population of 66.3 million (as of 1990) and per GNP is US\$230 (as of 1990.) Each region of the north, the center, and the south has own climate due to the country's north-south length. The northern region is subtropical and has four seasons. Its long summer is characterized by high temperature and humidity. Its spring and fall are short. The southern region is in a moderate climate of the tropical monsoon that has the dry season and the rainy season. The central region has a mixed climate representing characteristics of the northern and the southern climates.

The major industry is agriculture, and over 70 percent of working population is in agriculture. The staple products are rice and rubber; especially, rice is self-sufficient and moreover exported. Rice is one of the important sources for gaining foreign currency. Most people in the marine products industries engage in freshwater fishery and coast fishery. The cultured shrimps and squids are important exports. The northern region is abundant in mineral resources including Hon Gai coal, which is famous for its high quality, phosphate rocks, and chrome. In the southern region, a commercial production of crude oil has been started in 1986.

In the fourth National 5-Year Development Plan started in 1986 by the Government of Viet Nam, the principal goals are in increasing production of food and consumer goods, promoting exports, and decreasing a population growth rate. The plan is changed largely its previous line and made up the Doi moi whose main policy lies in introduction of principles of market economics. This policy also promotes liberalization and democratization, and improves the relationship with western countries and China.

2-1-2 Demography

Viet Nam has increased population of 11.7 million in the last decay, and the population density (210/Km², 1992) is as six times as its world population density average. The rapid growth of population has caused the delay of social and economic developments. Table 2-1 shows population distribution.

Table 2-1 : Population Distribution by Sex and Urban Rural Area (1992)

No.	Provinces /Cities	Male	Female	Total
1	Ha giang	247,315	258,328	505,643
2	Tuyen quang	304,632	308,963	613,595
3	Cao Bang	301,857	311,930	613,787
4	Lang Son	319,182	336,558	655,740
5	Lai Chau	238,822	242,674	481,496
6	Lao cai	260,436	254,021	514,457
7	Yen bai	301,087	315,615	616,702
8	Bac Thai	547,594	570,913	1,118,507
9	Son La	369,724	383,788	753,512
10	Hoa binh	343,430	355,066	698,496
11	Vinh phu	1,049,551	1,114,891	2,164,442
12	Ha ac	1,065,355	1,156,838	2,222,193
13	Quang Ninh	440,998	432,782	873,780
14	Ha Noi	1,031,965	1,074,086	2,106,051
15	Hai phong	739,554	802,789	1,542,343
16	Hai hunh	1,233,355	1,378,433	2,611,788
17	Ha Tay	1,023,358	1,146,164	2,169,522
18	Thai Binh	818,968	919,189	1,738,157
19	Nam Ha	1,203,692	1,327,625	2,531,317
20	Ninh Binh	394,332	424,130	818,462
21	Thanh hoa	1,552,342	1,680,424	3,232,766
22	Nghe An	1,275,281	1,347,289	2,622,570
23	Ha Tinh	612,343	652,854	1,265,197
24	Quang Binh	347,275	368,524	715,799
25	Quang tri	241,607	263,685	505,292
26	Thua thien-Hue	459,435	485,905	945,340
27	Quang Nam-Da Nang	898,075	983,280	1,881,355
28	Quang ngai	522,825	596,882	1,119,707

No.	Provinces /Cities	Male	Female	Total
29	Binh Dinh	636,914	700,236	1,337,150
30	Phu Yen	334,102	355,327	689,429
31	Khanh hoa	432,538	464,861	897,399
32	Binh Thuan	405,497	424,666	830,163
33	Ninh Thuan	212,692	224,781	437,473
34	Gialai	348,523	359,672	708,195
35	Kon tum	118,935	121,895	240,830
36	Dac lac	561,702	564,590	1,126,292
37	Lam Dong	354,357	374,852	729,209
38	Ho Chi Minh City	1,956,581	2,188,717	4,145,298
39	Song Be	511,628	534,645	1,046,273
40	Tay Ninh	410,881	445,466	856,347
41	Dong Nai	843,451	877,866	1,721,317
42	Ba ria-Vung tau	314,600	322,135	636,735
43	Long An	565,368	631,230	1,196,598
44	Dong thap	693,510	739,083	1,432,593
45	An Giang	908,227	988,155	1,896,382
46	Tien Giang	749,115	842,152	1,591,267
47	Ben tre	602,584	682,189	1,284,773
48	Vinh Long	484,407	540,827	1,025,234
49	Tra Vinh	446,544	477,059	923,603
50	Can Tho	835,634	903,463	1,739,097
51	Soc Trang	554,107	597,598	1,151,705
52	Kien Giang	626,184	673,257	1,299,441
53	Minh Hai	821,138	859,386	1,680,524
	Total	32,873,609	35,387,734	68,261,343

Source : Health Statistics in Viet Nam 1990-1992

The Government of Viet Nam established a state council for a population and family planing and set the minimum age to have children. As for officials and employees of industrial fields in urban area, the women is over 22 and the men is over 24 to have children. In other cases, the women is over 19 and the men is over 21. As a rule, they have the second child three or five years after having their first child, the permissive number of children is two. However, the rate of families following the policy is only 30 percent, and the standard number of children per family is four. The population control is one of crucial policies in the fifth National 5-Year Development Plan. Under cooperation of UNFPA, the objective is to increase the rate of family that follows the policy to 70% until 2000.

2-1-3 National Development Plan

Viet Nam drew up the fifth National 5-Year Development Plan (1991~1995) and its objectives are described below.

1. The average growth rate of GDP, 5.5% ~ 6.5%.
2. The average growth rate of agricultural product, 3.7% ~ 4.5%.
3. The average growth rate of industry, 8.0% ~ 11.0%.
4. The total amount of export, \$12 billion ~ \$15 billion.
5. The total amount of investment, \$ 7.7 billion ~ \$10.5 billion.
6. The population, 69.2 million ~ 75.2 million.

The 7th Congress of the Vietnamese Communist Party on June 1991 adopted "The strategies for stability and development on the economic society toward 2000" and set up its goal that GNP in 2000 will be as twice as it was in 1990. Nguyen Van Linh, General Secretary, who was elected in the 6th National Congress on December 1986, advocated an economic reform plan called Doi moi. The policies of Doi moi don't attach great importance any longer to the government enterprise, emphasizing the decentralization system that brings a big discretion to the private enterprise and the family enterprise. The restructure of agriculture that brings the big discretion to farmers, the tax system reform, the financial reform, the control of flexible price and foreign currency. These reforms gradually bring good results; especially, the increase of products such as food, consumer goods and exports was adopted three main objective of the fourth National 5-year Development Plan at the 6th National Congress and has excellent results as we can see in the case of rice export .

2-1-4 Economic Activity

Viet Nam had a financial deficit equivalent to 12% of GDP in 1985 before Doi moi was started. The government made up the deficit by magnifying a loan from the central bank, namely, printing additional issue of paper money. It resulted in inflation. It is no exaggeration to say that its deficit and inflation were one of the direct motivations to start Doi moi. However, the policy against the financial deficit in Viet Nam didn't only aim to cut down the deficit and to control inflation but also let the national financial system adapt to a new economic system to promote a private sector and consolidate financial independence of the government enterprise.

In 1985, the annual expenditure in Viet Nam accounted for 26.4% of GDP, while the revenue was 14.5% and covered about 55% of the expenditure. The financial deficit mentioned above amounted 12% of GDP. The two third of the annual expenditure equivalent to 18% of GDP was the ordinary expense. While the capital expense or the development of investment budget accounted for about 8% of GDP. Since then, the government cut down the annual expenditure as low as 16.7% of GDP by carrying out sharp cuts of both ordinary and capital expenses in 1986 and 1987. However, since 1987, the expenditure gradually had increased and reached 19.6% of GDP in 1990 after considering the price growth rate.

The leaders of the government had already prepared for the severe situation since 1990 and predicted that they should endure the trails in 1991 caused by the stop of aid from the Soviet Union. By contraries, Viet Nam overcame this trial and moreover improved its economy in 1991. Although agricultural products suffered damage from natural disaster, 21.7 million ton of agricultural products was yield; one million ton of rice was exported. The amount of crude oil production steadily increased, and the amount of power, cement and coal exceeded a little more than in 1990. The export was maintained though the Soviet Union's and East European markets vanished. However, the government had been in financial difficulties and suffered inflation as it lost a large amount of aid from the Soviet Union. The greatest issue was financial deficit through the year. Because of the above, the government introduced a new tax system, strengthened tax collections, put the government enterprise having deficit under the private management, improved export and took a new measure to control foreign currency as well as tried to attract foreign capital. The 1991's foreign investment on the number and the amount was more than in 1990.

2-1-5 Transition of Foreign Aid (International Organizations Related the Project)

Viet Nam joined in Council for Mutual Economic Assistance led by the former Soviet Union (CMEA) and its economic cooperation system on June 1978. Since western countries stopped or restrained their aids to Viet Nam at the end of 1978, the government had depended on an aid only from the Soviet Union since then. However, the Soviet Union and East European countries had changed, and finally the Soviet Union collapsed since the last half of 1989. The aid from the Soviet Union stopped in 1990, and the cooperation with East European countries decreased.

Under these circumstances, Viet Nam had done the best to establish Viet Nam-other countries joint ventures to improve the economic cooperation with other countries and started a pending measure that introduced foreign capital on January 1, 1988. While there was a sign that western countries reopened their aid to Viet Nam in 1988. After signing the Paris Peace Agreement on Cambodia in October 1991, western countries formally worked out their aid to Viet Nam again. In addition, Viet Nam is consolidating the foundation of the new economic relationships with ASEAN countries.

According to the UNDP data, the amount of aid to Viet Nam in 1992 is shown in Table 2-2. The country that grants the most amount of money to Viet Nam is Japan. The second country is Sweden, the third Italy. France, UNDP, WFP, UNICEF, Finland and UNHCR follow them. The objective sectors of the aid is shown in Table 2-3. The top sector is the administration, the second agriculture, the third the health. The economy and the social development follow them.

Table 2-2 Top Ten Donors(1992)

Aid Organization or Country Name	Amount (Unit : Mil.US\$)
1. Japan	359.638
2. Sweden	41.63
3. Italy	21.727
4. France	21.172
5. UNDP	18.966
6. WFP	15.998
7. UNICEF	12.763
8. Finland	12.413
9. UNHCR	11.92

Source : Development Cooperation Viet Nam 1992 Report, September 1993, UNDP

Table 2-3 Top Ten Sectors(1992)

Sector	Amount(Unit:Mil.US\$)
1. Administration	361.455
2. Agriculture	44.541
3. Health	41.044
4. Economy	28.704
5. Social Development	24.66
6. Humanitarian Aid	22.331
7. Human Resource Development	11.278
8. Industry	9.932
9. Communications	7.356
10. Energy	5.18

Source : Development Cooperation Viet Nam 1992 Report, September 1993, UNDP

2-1-6 Administrative System

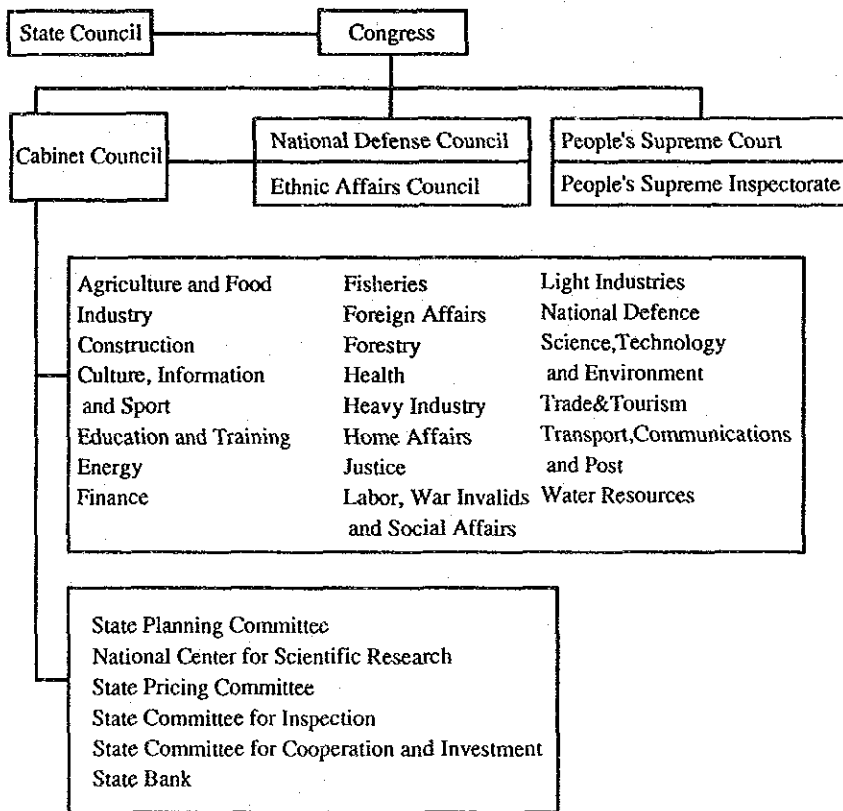
The Congress is the highest authoritative body stipulated in the constitution. The activities of the Congress and other organs basically employ the democratic centralism. The Congress composed of about 500 members, and the term of membership is five years. Per legislator of the Congress represents one million voters. The State Council exercises the authority during the recess of the Congress. The State Council composes of about 10 members. Members of the State Council are elected by the Congress as well as members of the Council of Ministers. The Council of Ministers is equivalent to the cabinets in western countries and composes of the prime minister, nine vice-prime ministers, 18 ministers, five chairmen of State Committee and the president of the central bank. Figure 2-1 shows the central administrative system. The local administrative organ has People's Council and the People's Committee, and function of each organ is described below.

The People's Council takes measures to guarantee fulfillment of the constitution and the law, makes a plan and a budget of the local economic and social development, performs the national defense and the security in local regions, makes the announcement of resolutions about measures to stabilize and improve nation's living standard, executes all tasks assigned by superior organs, and performs duties for the nation. The members are elected by local voters.

The members of the People's Committee are elected by each People's Council. Each People's Committee is an executive organ as well as a local administrative organ. A

People's Committee is responsible for carrying out the constitution, law, documents of superior organs, and decisions of a People's Committee. It promulgates its decisions and instructions, and supervises the execution. The crucial issues of local matters are discussed by a People's Committee and must be obtained a majority on these decisions. The chairman of the People's Committee has rights to suspend a procedure of misjudged paper submitted by the People's Committee and its lower branches, and orders the People's Council to repeal its decision.

Fig. 2-1 Organization of Central Administration



Source : Asia Handbook, p206 Ministry of Foreign Affairs, Asia Division January, 1992

2-2 Present State of the Health and Medical Care

2-2-1 Present State of the Health and Medical Care

The present health and medical care system of Viet Nam is a strategic system considered the maximum effect with the limited budget under the difficult situations. It was established during a period when Viet Nam fought against France and the United States, became independent as a divided country and unified the north and the south. Compared with the health and medical care system of the former south Viet Nam, the present health and medical care system is excellent. At the time of disunion to the south and the north, the health and medical care system in the former south Viet Nam was the worst in spite of a great deal of aid from the United States. In the present health and medical care system, at the lower level, health centers and health stations as the primary medical organ are established in communes, at the middle level, a district hospital or a provincial hospital is established at each district or province, and at the highest level, hospitals and research institutes as the central organ are established. The government has diffused the health and medical care throughout a whole country by the present system and the health network system (HNW.) This policy coincides with the objective of the primary health care (PHC), which WHO promotes in the developing countries with a slogan, "Health for all by 2000."

The basic health indicator in Viet Nam was comparatively good despite the situation considered LLDC with US\$200 per person of GNP (as of 1989) and US\$2 per person of medical expense for one year. The life expectancy was 63 years old (as of 1990), and the mortality rate of children under age 5 was 65/1000. As Table 2-4 shows, these number was good if compared with Laos and Cambodia. However, the disease pattern shows mostly infectious diseases such as diarrhea, respiratory infectious disease, and insect-bone infectious disease, and it shows a typical developing country's disease pattern.

Table 2-4 Health Indicators of Viet Nam, Laos, and Cambodia(1990)

	Viet Nam	Laos	Cambodia
1. Life Expectancy at Birth	63	50	50
2. Crude Birth Rate	31	45	39
3. Crude Death Rate	9	16	16
4. Average Annual Growth Rate	2.20%	2.60%	2.50%
5. Mortality under 5 year of Age	65	152	193
6. Infant Mortality	45	104	123

Source : the State of the World's Children

While, at the recent, health centers and district hospitals cannot provide medical service sufficiently, and it brings the health network in name only. Also, there are some problems such as the superannuated medical equipment, the insufficient administrative system, and the widening gap in medical service between urban and rural regions.

The issue of infectious diseases is the most important as well as the population issue, the government takes measures against malaria, tuberculosis, leprosy, diarrhea, and acute respiratory diseases. Fifteen percent of the population are hepatitis B carriers. Since isolation facilities are in short supply, patients who have diseases such as tuberculosis and leprosy have to be treated at home, which brings domestic infection due to a lack of public health education. Table 2-5 shows 10 leading causes of morbidity and Table 2-6 shows 10 leading causes of mortality

As for infectious diseases, malaria has the highest morbidity and mortality rate, affects every age from children to adults, and requires a long-term treatment and a large sum of medicine expense. The high morbidity of malaria at newly developed economic areas obstructs an economic growth. The malaria control measures in the fourth National 5-Year Plan currently come to a deadlock due to a lack of anti-malaria drugs, appearance of mosquitoes that has tolerance against drugs and insecticides, and a stop of insecticides' supply depending on aid.

Table 2-5 10 Leading Causes of Morbidity (Reported by 60 Provincial Hospitals)

	Disease	Number of Cases	Death / 100,000	Number of Death
1	Acute Bronchitis	20,617	48.04	130
2	Malaria	20,536	47.85	401
3	Other Protozoal Intestinal & Indefined Intestinal Diseases	16,986	39.58	159
4	Pneumonia	16,794	39.13	465
5	Other Digestive Diseases	15,174	35.35	220
6	Symptoms, Signs and Ill-defined	13,789	32.13	115
7	Appendicitis	13,081	30.48	15
8	Respiratory Tuberculosis	11,110	25.89	372
9	Hypertension	10,253	23.89	139
10	Inflammation of Eyes	9,954	23.19	1

Source : Health Statistics of Viet Nam 1990-1992

The government aims to produce all its own vaccines, but under the present circumstances, vaccines except DPT and BCG are supplemented by means of import or grant aid to maintain enough amount of supply. The system of official criteria for the quality of vaccines is not yet established. In addition, there are some problems such as the poor access to regions that has the high morbidity, the increasing morbidity rate at the areas where malaria breaks out, and the insufficient public health education and malaria control education. The vaccinations of BCG, diphtheria, mixed vaccine, and measles are executed. As table 2-7 shows, the vaccination rate is over 86%.

The insufficient measures on environmental hygiene bring outbreak of many water borne infectious disease. For an example, a small-scale of cholera breaks out through service water in Haiphong. In the present circumstance, the diffusion of waterworks is only 17%, and the diffusion of drains is 12.5%.

Table 2-6 10 Leading Causes of Mortality (Reported by 60 Provincial Hospitals)

No.	Disease	Number of Death	Death / 100,000	Number of Cases
1	Cerebro-meningeal Hemorrhage	543	1.27	2,667
2	Pneumonia	465	1.08	16,794
3	Other Forms of Heart	425	0.99	7,283
4	Malaria	401	0.93	20,536
5	Respiratory Tuberculosis	372	0.87	11,110
6	Viral Hepatitis	298	0.69	2,125
7	Other Cerebro-vascular Diseases	234	0.55	3,534
8	Other Digestive Diseases	220	0.51	15,174
9	Intracranial Injury	185	0.43	3,435
10	Viral Meningitis	180	0.42	1,045

Source : Health Statistics of Viet Nam 1990-1992

Table 2-7 Immunization Coverage for Children under 1 Year of Age

	1990	1991	1992
BCG % of coverage	89.9	90.81	86.65
DPT 3 % of coverage	86.7	87.43	82.77
Three Doses of Polio % of coverage	86.5	87.82	83.46
Measles % of coverage	86.6	88.19	84.78
Fully Immunization % of coverage	86.72	87.31	83.34
Tetanus Toxoid Immunization for Pregnant Women			
Number of Pregnant Women received doses TT2	518,478	444,000	636,260
% of coverage	21.9	18.5	31.99

Source : Health Statistics of Viet Nam 1990-1992

2-2-2 Development Programs for the Health and Medical Care

The principal objectives of the health and medical care program in the fifth National 5-Year Development Plan are described below.

1. To decrease the mortality rate of pregnant mothers, infants, and children under age 5.
2. To decrease the morbidity rate on infants and children.
3. To decrease a serious malnutrition.
4. To disseminate child care education.
5. To diffuse safe water and hygienic facilities.
6. To rectify regional differences on health, nutrition, water, and education.
7. To make efforts to increase supports for the mother and child health care plan and to strengthen the education for medical personnel and improve the facilities in local areas.

The Ministry of Health of Viet Nam carries out plans described below under the direction of WHO.

1. To unify the basic network to execute PHC activities.
2. To execute the malaria control plan.
3. To promote the mother and child health care plan and the family planning.
4. To expand medical service, and improve the quality of treatment activities and emergency medical service. Moreover, to develop two treatment methods. One is the method by combining with modern and traditional medicines, and the other is the treatment by doing without any drugs.
5. To supply essential medical drugs and medical equipment.
6. To take measures for the goiter.

The concrete programs of each plan is not ascertained, but these plans require aid from other countries to carry out. The medical network in Viet Nam that was begun at rural region is based on health centers and health stations and considered an effective structure with a limited budget. Under the structure, they have some possibility to prepare for PHC, improve the family planning, and give education on malaria to the areas.

2-3 Administrative System for Health Care

2-3-1 Administrative System for Health Care

The administrative system of Viet Nam has 20 competent authorities, and Ministry of Health is in charge of the health and medical administration. The minister who is in charge of the family planning and Minister of Health are different. The Ministry of Education and Training, which is equivalent to the Ministry of Education in Japan, takes charge of advisory body for entrance examinations for medical schools.

Viet Nam is administratively divided three special zones (of Ha Noi, Haiphong, and Ho Chi Minh) and 50 provinces. Each province is divided into from 10 to 15 districts, and the districts total 430. Each district is divided into from 10 to 15 communes, and the communes total 9,807. The People's Council is a national authority organ in a local region and the People's Committee is a national administrative organ. Since each administrative organization has comparatively big autonomous rights, there are big regional differences on the development of economic reform or the restructure of administrative system.

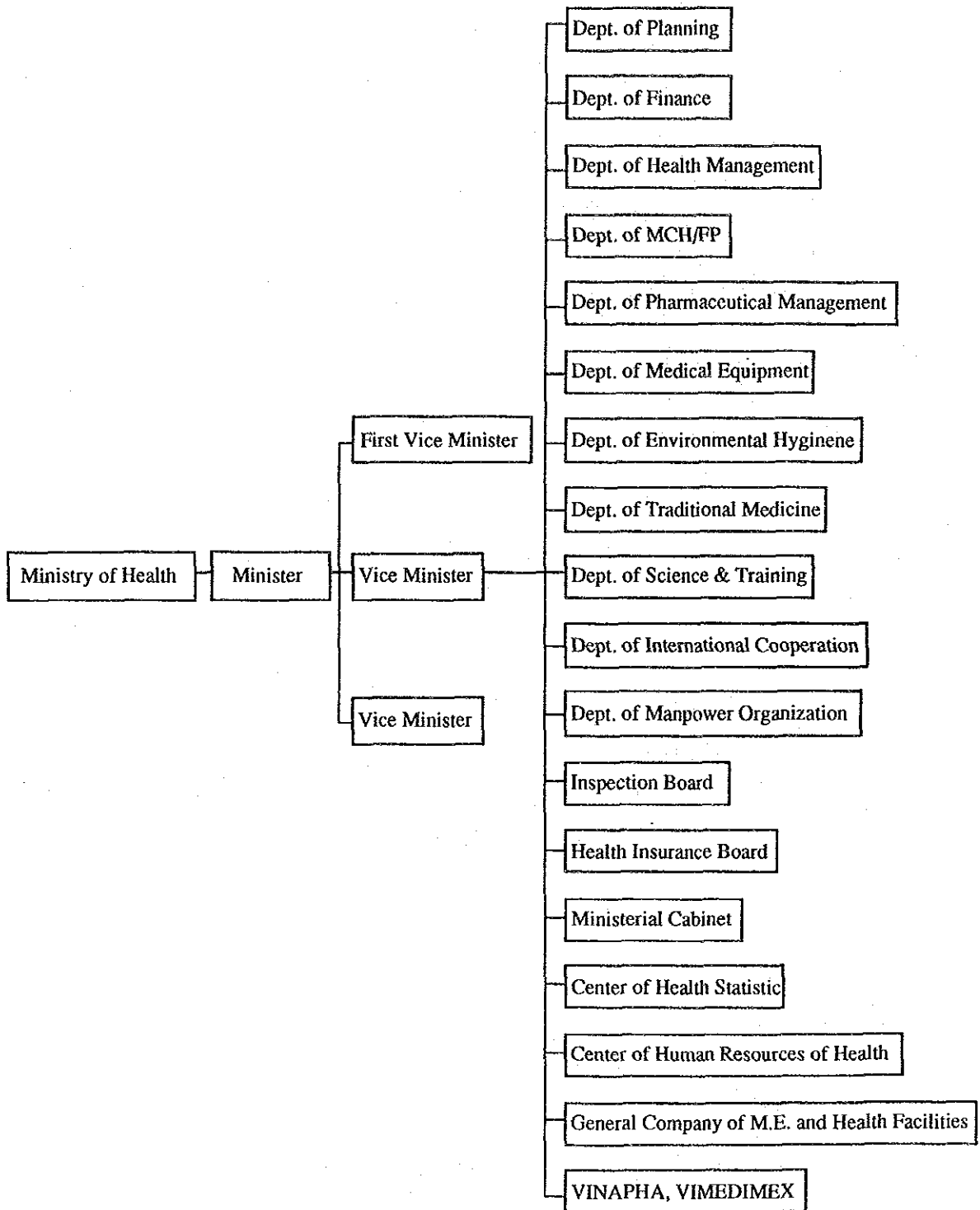
The Ministry of Health managing the health and medical administration consists of 18 departments and, its works includes making policies and a budget for the health care,

negotiating with other countries, supervising and managing medical institutions, managing the supply of medicine and instruments, and leading researches on a traditional medicine. The works each department are described below. Figure 2-2 shows the organization map of the Ministry of Health.

- 1) Department of Planning
To make health policies, to investigate achievement, and to make a budget planning.
- 2) Department of Finance
To enforce financial matters.
- 3) Department of Health Management
To unify and equalize treatment system as well as to plan and to manage for the quality of medical treatment.
- 4) Department of MCH/FP
To lead administration on the mother and child health care plan and the family planning.
- 5) Department of Pharmaceutical Management
To provide medicine, to manage its related enterprises, and to develop medical drugs.
- 6) Department of Medical Equipment
To supply medical equipment and supplies and to manage its related enterprises.
- 7) Department of Environmental Hygiene
To take measures on environmental hygiene, water, EPI, and AIDS.
- 8) Department of Traditional Medicine
To lead researches on traditional medicine.
- 9) Department of Science and Research
To improve scientific knowledge on health and medical treatment, to train medical personnel, to analyze statistical data, and to give an advice to the minister as a think tank.
- 10) Department of International Cooperation
To negotiate issues on the health and medical treatment with other countries, to offer information, and to decide cooperated competent authorities to work together.

- 11) Department of Personnel Management
To manage employees in Ministry of Health and its lower branches.
- 12) Inspection Board
To manage councils on public hygiene administration.
- 13) Health Insurance Board
To establish and to manage a health insurance system.
- 14) Advisory Committee of Ministry of Health
To be established health care policies by two vice-ministries.
- 15) Center of Health Statistics
To collect health information, and to draw up and to renew statistical data.
- 16) Center of Human Resources of Health
To train health personnel.
- 17) General Company of M.E and Health Facility
To give technical advise on health facilities and equipment.
- 18) VINAPHA, VIMEDIMEX
To supply and distribute medical equipment and medicine for medical facilities,
and to produce medicine.

Fig. 2-2 Orgnization of Ministry of Health



2-3-2 Annual Budget of the Ministry of Health

Table 2-8 shows a health budget of Viet Nam and says about 317.1 billion, 470.4 billion, 766.1 billion, 956 billion dong each year from 1989 to 1992. The revenues of objective nine medical institutions in this project improve a tendency to increase. The total amount of revenues on nine institutions was about 2.56 billion dong in 1990 and 8.43 billion dong in 1991, which shows an growth rate of about 60 %. In 1992, the amount became 10.88 billion dong.

Table 2-8 Health Budget Unit : Billion Dong

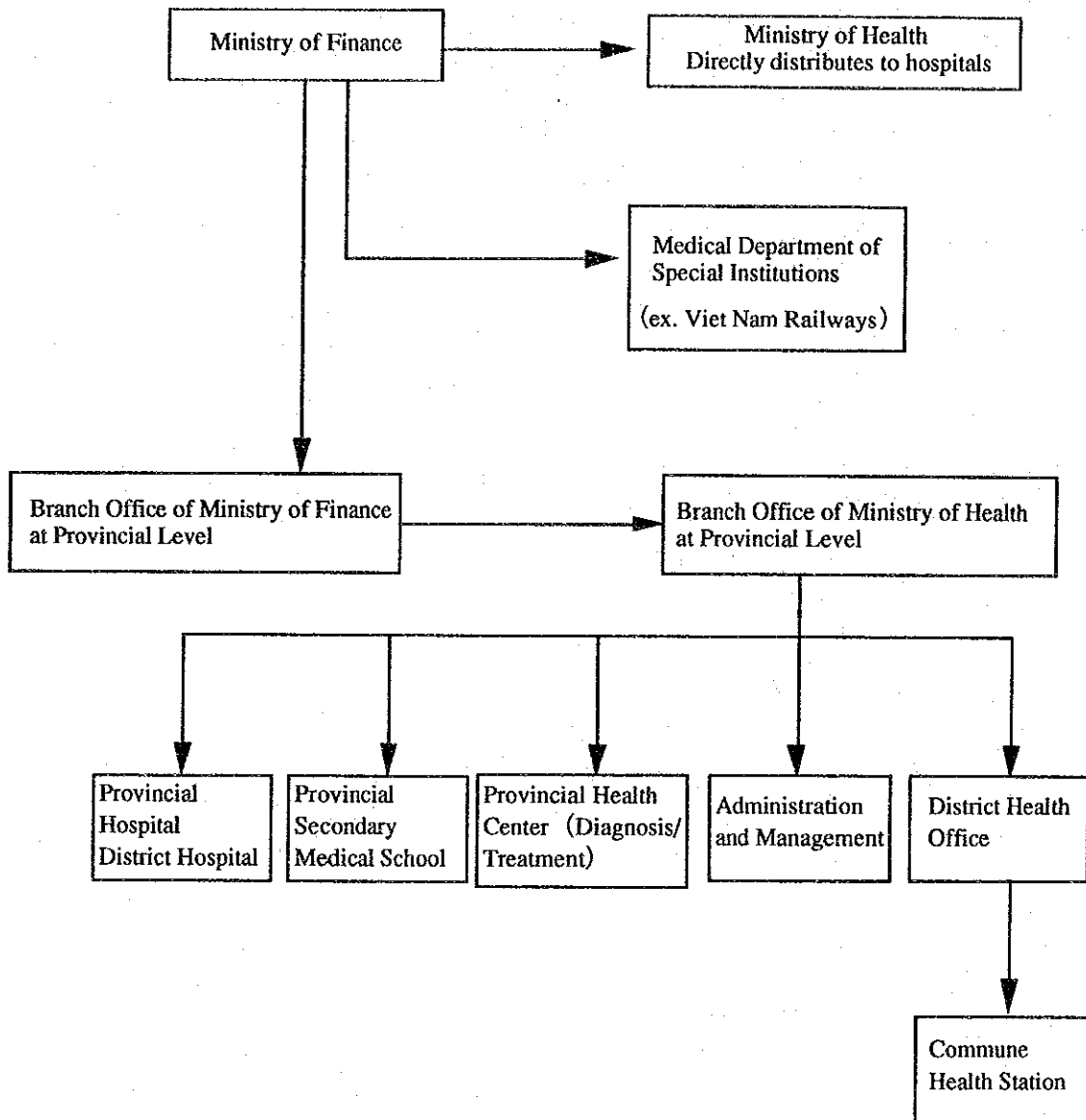
Year	Health budget	Budget		Rate of aid
		Government	Int'l aid	(%)
	A	B	C	D (C/A × 100)
1989	317.10	210.00	107.10	33.77
1990	470.40	358.00	112.40	23.89
1991	766.10	550.00	216.10	28.21
1992	956.00	650.00	235.00	24.58

Source: Health Statistics of Viet Nam 1990-1992

The health budget per person is approved by government only a half requested by the Ministry of Health, and it is in a very severe situation. According to Table 2-8, if the budget in 1992 is assumed 100 %, 73 % is allocated to the government and 27 % to an international aid. The health and medical care budget of Viet Nam is not materialized without the international aid. Figure 2-3 shows cash flow. At the hospital's level, the budget is divided into 23 % of medical organs managed by the Ministry of Health, 47 % of provinces, 26 % of districts, and is accounted over 73 % by medical organs in provinces and districts.

A patient's allotment of the total expense for health service is decided up to each hospital but normally becomes around 5 ~ 15 %. If a patient pays 10 % of medical expense, it is the allotment of the same rate under the Japanese medical insurance system. A medical insurance system of Viet Nam will be described later. Generally, medical expense is free for children under age 5, the minority, the men of merit in war and the war bereaved, and the poor, which total about 30 million people, while 35 million people ought to pay for the medical service. People in the mother and children care plan are also given free of charge.

Fig. 2-3 Flow Chart of Health Budget



2-3-3 Health Care System

(1) Health Network System

The health care system is operated with the health network system structuring a pyramid. The medical care organ is divided into 4 levels. Health stations and centers are established

at rural and hilly districts as the primary medical organ, and then district level and province level follows the primary organ. The national hospitals and institutes are established as the top medical organ. Figure 2-4 shows the health network system of Viet Nam.

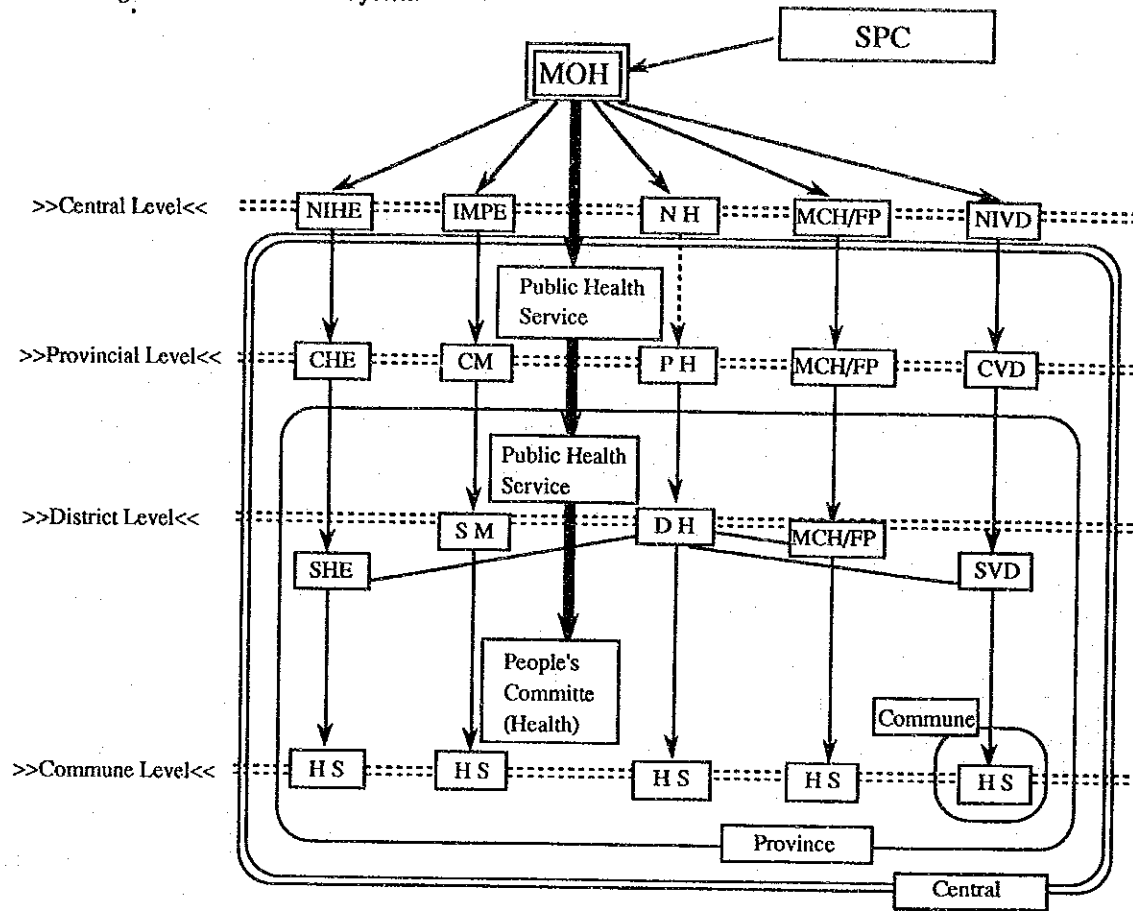
(2) Medical Insurance System

The Doi moi policies also influence the Ministry of Health, and Viet Nam started a card system of medical insurance on October 1, 1993 to improve a self-supporting accounting on each medical institution. Figure 2-5 shows the system that places the Ha Noi Health Insurance Board of the Ministry of Health on the top and branches of the board at each town in 53 provinces. Some provinces have agencies of the branches at commune level.

The medical insurance system aims at officers on active service, retired officers, and employees of private companies, which total 5 million people. About 30 million people including children under age 5, the minority, and the poor are out of the system and receive free medical service. Other 30 million people are the general public who run own business, and most of them don't have the insurance but pay all medical expense by themselves. Hence, the insurance board focuses on 5 million people mentioned above.

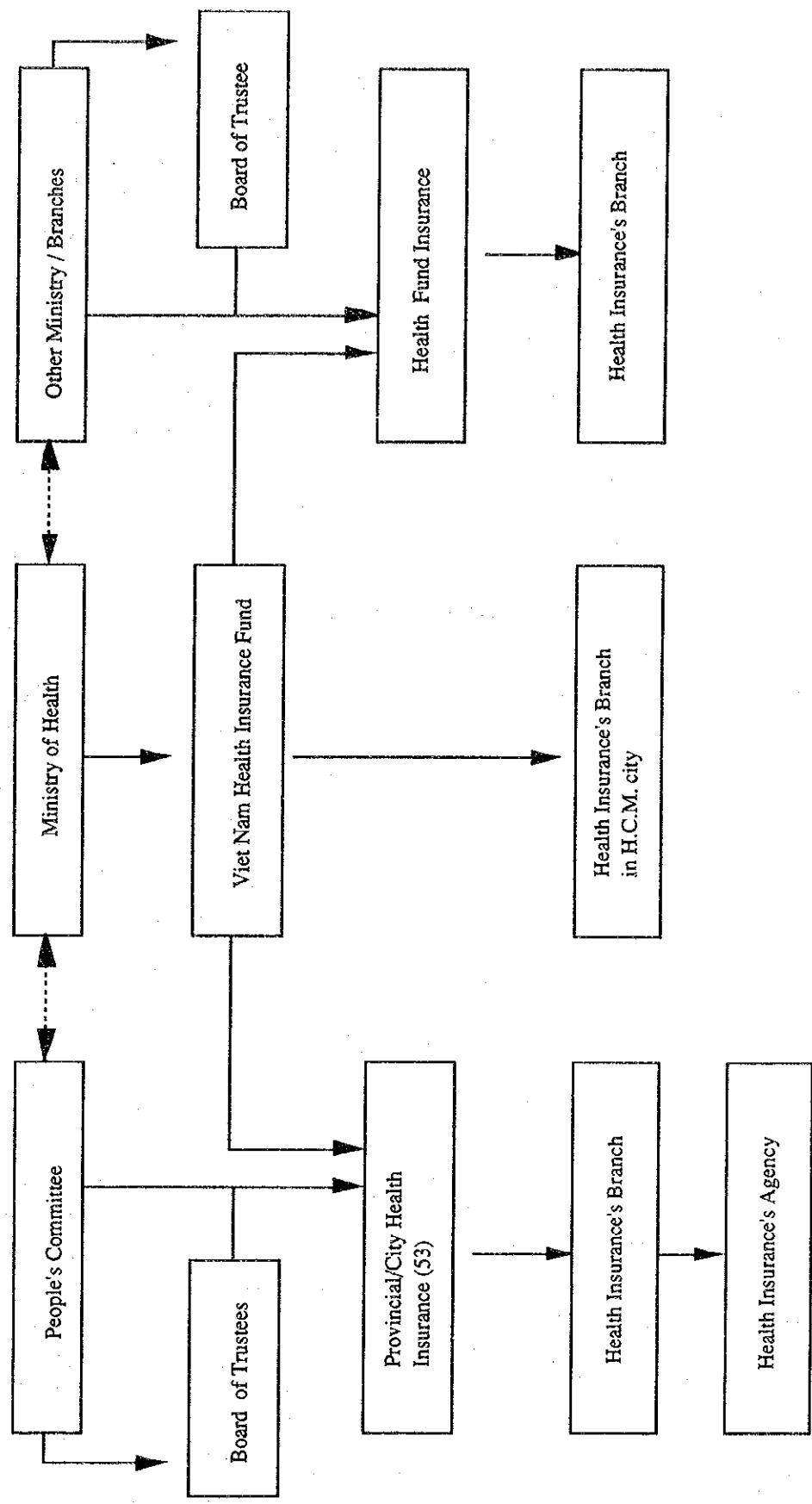
On the private companies, each employee is taken 1 % of his salary as a medical insurance fee every month and the company pays 2 % of his salary to the board. It means that each employee pays 3 % of his salary to the board and receives a medical insurance card in return. The payment from the health insurance board to each medical institute is in a contract system. The health insurance board decides a contract price after it examines a scale, a quality, a technical level of each medical institute. After they sign a contract, the amount of money automatically is paid to each medical institute. The medical institute doesn't ask to pay an medical expense to a patient who has a card but cover it from the amount of money. The expense is cleared up under terms of the contract between the institute and the board.

Fig 2-4 Health Network System



- CHE : Hygiene and Epidemiology Center
- CM : Malaria Center
- CVD : Center of Venereology and Dermatology
- DH : District Hospital
- HS : Health Station
- IMPE : Institute of Malaria, Epidemiology and Parasitology
- MCH/FP : Mother and Child Health Care Center
- NIHE : National Institute of Hygiene and Epidemiology
- NH : National Hospital
- NIVD : National Institute of Venereology and Dermatology
- PH : Provincial Hospital
- SHE : Hygiene and Epidemiology Station
- SM : Malaria Station
- SVD : Venereology and Dermatology Station

Fig.2-5 Organization Chart of Viet Nam Health Insurance System



The patients who have insurance cards can receive free medical service. Since the insurance includes charge for X-ray film and expense for reagent of biochemistry and consumables, the insured has no need to pay any expense for medical service.

2-3-4 Doctors and Medical Personnel

According to the statistical data compiled by the Ministry of Health, the number of doctors is 27,556 in 1991, population rate per doctor is 2,485, per assistant doctor 45,100, and per nurse 58,982. In Japan, population rate per doctor is 600, and in developing country, it is from 4,000 to 5,000. Compared with these numbers, Viet Nam places at the high level of medical care system. However, like medical institutions, there is big difference between rural area and urban area on the number of doctors and medical personnel. To keep medical personnel and to improve their medical skill are a big issue to solve. Table 2-9 shows the change of the medical personnel every year.

Table 2-9 Medical-Personnel

	1990	1989	1988	1987
Doctor	27,165	25,328	22,792	21,911
Pharmacist	5,752	6,817	6,166	6,065
Elementary Doctor	46,961	48,770	48,194	47,506
Medical Technician	5,835	5,872	6,049	56,565
2nd Level Pharmacist	7,327	8,129	6,106	6,200
Pharmacy Technician	1,612	1,928	1,345	1,207
2nd Level Nurse	16,927	17,248	16,507	16,317
2nd Level Midwife	5,065	5,025	4,683	4,606
Elementary Nurse	42,541	56,166	61,040	67,147
Elementary Pharmacist	10,601	13,203	14,760	15,743
Elementary Midwife	8,296	9,593	10,223	10,994
Laboratorian	1,950	2,738	2,531	2,418
Traditional Practitioner	1,768	2,554	3,340	3,557
Total	239,500	258,809	267,809	273,639

Source : Ministry of Health

Since the salary of medical personnel in Viet Nam is low, the case of a job change and an outflow to foreign countries increased in 1988 and 1989. For example, doctor's starting salary is US\$10, senior assistant's on the medical staff US\$30, director's or assistant director's of a hospital from US\$30 to 40. So, most doctors have to let their wives to maintain their lives. Recently, the medical practitioner has appeared and shows a sign of nationwide dissemination under the Doi moi policies. When a doctor starts the practice, an authorization from the country is required. The doctor who engages in another hospital

has to be registered and can practice only when he is off. Since the Ministry of Health recognizes to be fulfilling medical personnel, the number of students at medical colleges has been reduced since 1991.

2-3-5 Health Institution

Table 2-10 shows the number of health institution on the whole country, which was reported by the Center of Health Statistics of the Ministry of Health. The institutions and hospitals placed on the top of the health network and well-equipped institutions managed by provinces concentrate on big cities such as Ho Chi Minh. Since hospitals under the private management are authorized to open, the rich patients tend to go to such well-equipped hospitals. Consequently, the large number of patients move to the hospitals in big cities to receive well health service, which makes a health network system hollow.

Table 2-10 Bed and Medical Institution in Viet Nam (1991)

Institution · Region	Medical Institution	Bed
1. Central (Total)	(33)	(2101,36)
Institutes	8	1,750
General Hospital	12	5,791
Special Hospital	7	3,110
Sanatorium	2	280
Leprosarium	2	200
Polyclinic	2	10
2. Local (Total)	(1,1026)	(171,315)
a. Provincial (Total)	(239)	(53,522)
Special Hospital	90	14,423
General Hospital	87	32,258
Health Station in Leprosy	7	436
Leprosy Center	18	3,347
Sanatorium	37	3,058
b. District (Total)	(1,376)	(55,113)
District Hospital	516	46,822
Polyclinic	796	7,210
Maternity Hospital	64	1,081
c. Village Health Center	9,411	62,680
Other Medical Institution (Total)	(1,513)	(27,680)
General Hospital	62	8,445
Sanatorium	73	5,860
Polyclinic	73	810
Health Center	1,305	12,565
Grand Total	12,572	210,136

Source: Ministry of Health

2-3-6 Medical Education and Education Institution

There are 9 colleges that have 6-year curriculum divided into 2-year basic medical science and 4-year clinical practice. After graduating, the students automatically receive doctor's licenses. Also, there are two public hygiene colleges for an administrative positions, which require B.M. to enter. Aside from the colleges, there are 6 specialist schools each at the state level and at the province level to train assistant doctors and nurses. It takes three years to finish the courses. The budgets of medical colleges and specialist schools for medical personnel are under the control of proper authorities in the Ministry of Health, and the Ministry of Education advises about their entrance examinations.

The number of graduates had increased from 1981 to 1988 but decreased a lot in 1989 because the Ministry of Health recognized there were sufficient medical personnel and cut the fixed number on each institution. Figure 2-6 shows the medical education system and Table 2-11 shows names of medical colleges and pharmaceutical colleges.

Fig. 2-6 Education System

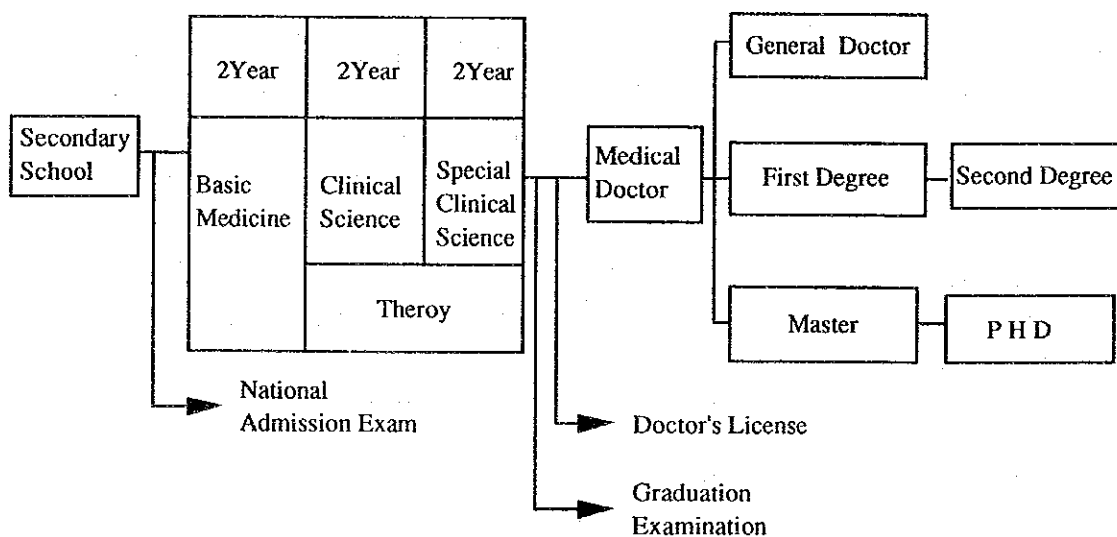


Table 2-11 Medical College · Pharmaceutical College

No	Name
1	Hue Medical College
2	Ho Chi Minh City College of MD Pharmacy
3	Faculty of MD in Tay Nguyen & Can Tho University
4	Viet Bac College of Medicine
5	Thai Binh College of Medicine
6	Ha Noi Medical College
7	Ha Noi College of Medicine

Source : Ministry of Health

2-3-7 Maintenance System

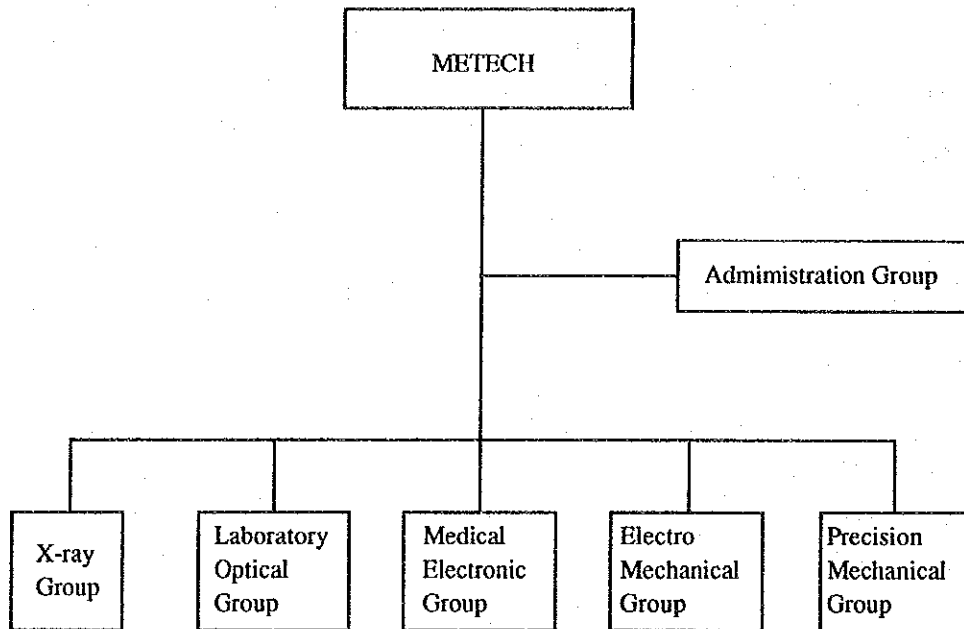
(1) Maintenance System

Engineers employed by each institute normally repair and inspect medical equipment. When they cannot repair themselves, the Institute of Medical Equipment and Health Facility as well as the Workshop for Repairing Medical Equipment under the control of the General Company of Health Facilities and Medical Equipment which belong to the Ministry of Health had made up for them. But, under the restructure of the Doi moi policies, these companies were restructured to semi-governmental organization on a self-supporting account system. At present, the companies can send engineers if institutes ask but they charge for their service now although their service used to be free before the restructure.

Under the restructure, each institute asks to repair and to inspect to private companies with the same conditions of semi-governmental companies. And also, each institute asks and sends engineers for some equipment to the other institute with charge. For example, engineers at the Department of Maintenance in Bach Mai Hospital are dispatched to hospitals in Ha Noi and in other local places if asked, and institutes that asked to send engineers pay for their works.

Figure 2-7 shows the organization chart of METECH. At present, it is renamed METECH: MEDICAL EQUIPMENT ENTERPRISE and has 36 employees. Positions of employees are showed Table 2-12.

Fig. 2-7 Organization Chart of METECH



(2) Supply System for parts and consumables

VIMEDIMEX and MEDINSCO managed by the Ministry of Health have authorities to import medical equipment and medical drugs and export raw materials of a herbal medicine. These public corporations used to be in a part of the administrative system but became a semi-governmental organization as well as Institute of Medical Equipment and Health Facilities and Workshop under the restructure in the Doi moi policies. So it employs a self-supporting account system and its head is appointed by the Ministry of Health.

Table 2-12 METECH

Department	Number of staff	
Administration	Chief	1 person
	Store keeper	1 person
	Accountant	1 person
X-ray	Engineer	4 person
	Technician	6 person
Laboratory and Optical	Engineer	6 person
	Technician	2 person
Medical Electronic	Engineer	5 person
	Technician	3 person
Electronical-Mechanical	Engineer	2 person
	Technician	5 person

Since VIMEDIMEX used to be a board of the Ministry of Health, it imports medical equipment and medical drugs and exports raw materials of a herbal medicine after restructured. The head is appointed by the Ministry of Health, and the company is run on

a self-supporting basis. Before restructured, it received a budget from the Ministry of Health, supplied medical equipment and others, and distributed to each institute free of charge following an instruction of the Ministry of Health. At present, as each institute directly receives a budget from the Ministry of Health, VIMEDIMEX supplies medical equipment, parts, consumables, and medical drugs with charge only if required. It has a service system to install medical equipment after supplying but a poor service system for maintenance, and holds only several engineers. Figure 2-8 shows the organization chart of VIMEDIMEX.

MEDINSCO used to be a lower branch of VIMEDIMEX and worked practically for medical equipment and medicinal drugs but became a company on self-supporting account basis like VIMEDIMEX after the restructure of the Ministry of Health. At present the company runs separately from VIMEDIMEX. The head is appointed by the Ministry of Health. It can supply mainly medical equipment, parts, consumables, and reagents. It procures medical equipment mainly from China and East Europe but Japan has sent ultrasound scanners and ventilators so far. When it supplies a medical equipment, it can install and maintain for it, but most institutes ask private companies that offer better terms to maintain.

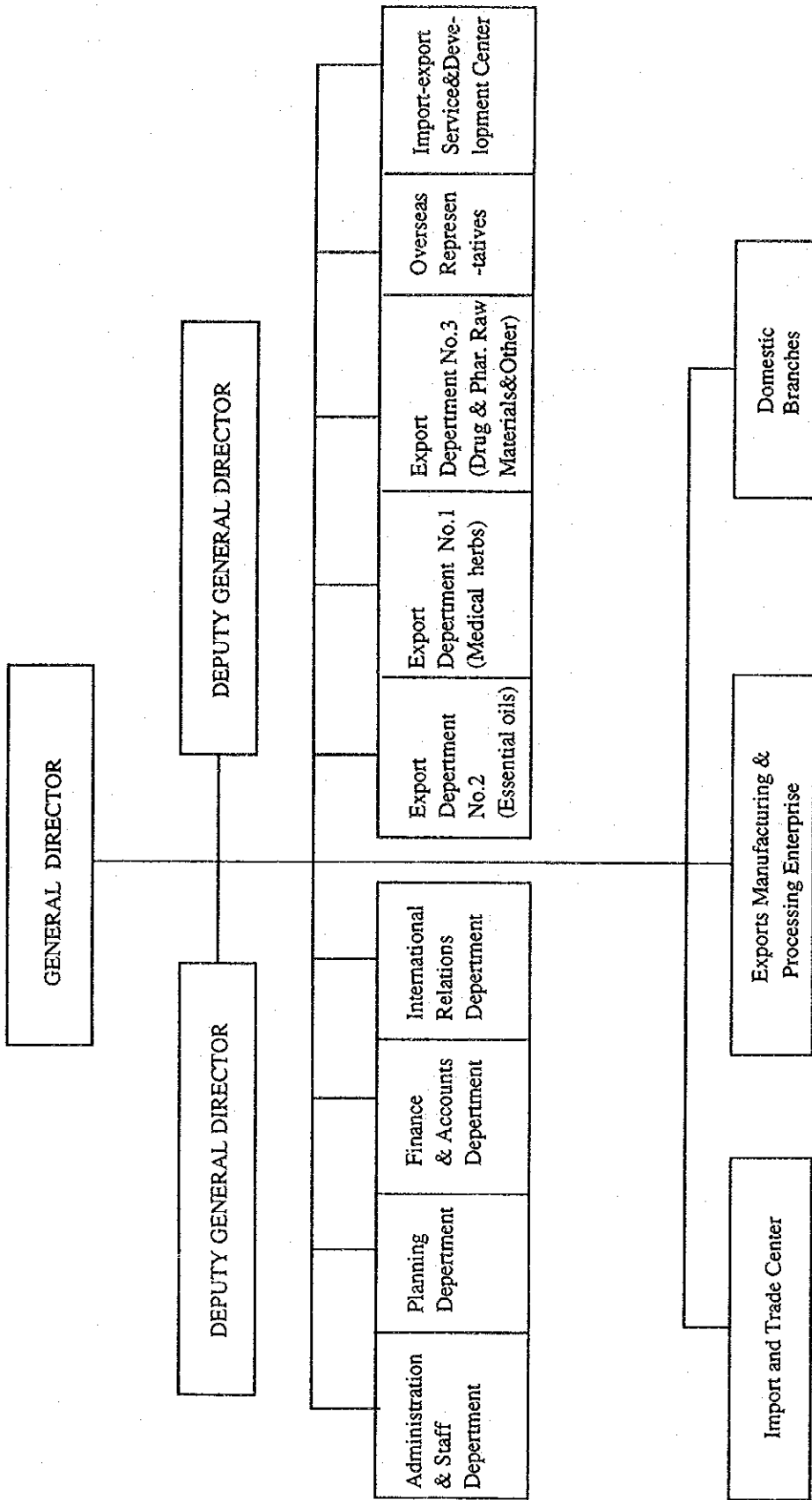
There is the other company named TECHNO IMPORT under a control of the Ministry of Commerce, but its activity is unknown. Two main companies mentioned above supply equipment on the health and medial field. These companies have branches in Ho Chi Minh and other places. There are cases that the branches import and export by themselves. The equipment supplied by the companies are sold to other public enterprises in Viet Nam. Table 2-13 shows a physical distribution of medical equipment and Instrument.

Table 2-13 Manufacture, Commerce Medical Equipment Unit : 1,000 Dong

		Turnover		1992	
		Implemented	1991	Value	Tax to Government
	General Company of Medical				
	Equipment construction	29,584,406		37,247,000	2,434,094
1	MEDINSCO-HANOI	11,539,630		11,000,000	563,000
2	VIMEX-HO CHI MIN City	6,617,318		8,330,000	481,094
3	Center of Support for Developing Medical Technology	1,384,815		1,200,000	12,000
4	Factory of Medical Equipment & Instrument No. 2	3,868,227		7,817,000	262,000
5	Factory of Medical Rubber	3,192,697		7,000,000	909,000
6	Medical Equipment Workshop	2,826,036		1,900,000	207,000
7	Company of Medical Construction	155,701		0	0

Source: General Company of Medical Equipment & Construction, Health Statistics of Viet Nam 1990-1992 p52

Fig. 2-8 Organization Chart of VIMEDIMEX



2-4 Present State of Health Care in Ha Noi City

2-4-1 Outline of Ha Noi City

Table 2-14 shows the present state the capital city, Ha Noi, based on the data from the Public Health Services of Ha Noi People's Committee. The city covers totally an area of 920 km² of which the inner city covers an area of 40 km² and the outer of city covers 883 km². Ha Noi has the population of 2.1 million. The population growth rate remarkably increases to 17.3%. What people move to the city to get better jobs is one of the reasons to increase population.

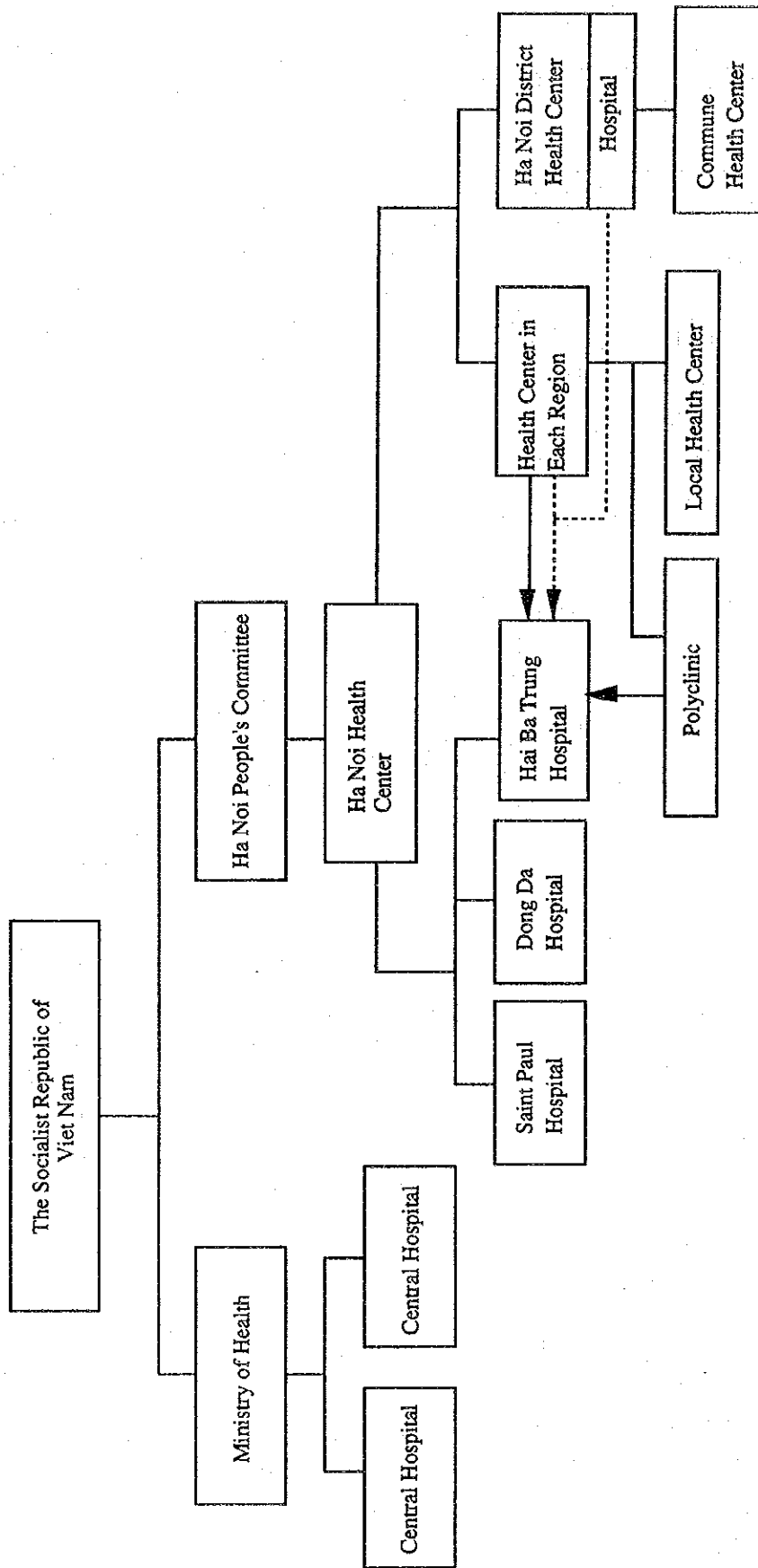
Table 2-14 Outline of Ha Noi

Areas	Ha Noi city	40Km ²	4 province (48 towns)				
	Ha Noi Suburb	882.8Km ²	5 province (129 villages + 9 towns)				
Population	Male	1,206,112	Age group	0 - 14	695,124 --- 33.1%		
				15 - 64	1,293,532 --- 61.7%		
	Female	1,073,408		65 -	102,864 --- 5.2%		
	New born in 199	44,854	Male	22,866			
			Female	21,986			
	2,097,520	Growth Rate	17.3%	Fertility Rate	21.4%	Mortality Rate	0.47%
		Infant Mortality		Within 24 hours after delivery (Hospital delivery) 216 cases			
			Within 1 year after delivery (Mortality) 32.0%				
			Within 1 - 4 year after delivery (Mortality) 7.2%				
	Fertility		Ha Noi city	18,739			
			Province (Village & Town)	26,038			

Source : Health Department of Ha Noi People's Committee

Ha Noi People's Committee is in charge of administration of Ha Noi city. Administratively, the city is divided into four Quarters which are divided into 48 Sub Quarters. The outer of the city consists of five Prefectures which consists nine towns and 129 communes. Quarter consists of Sub Quarters, Prefecture consists of towns, town consists of communes. Each administrative unit had People's Committee which includes Public Health Services. The right of self-government of Ha Noi city is big as well as the local governments of Viet Nam. Hospitals in the inner and the outer of Ha Noi city excluding national institutes and laboratories managed by the Ministry of Health and military hospitals receive budgets form each People's Committee. Figure 2-9 shows the relation between the Ministry of Health and Ha Noi People's Committee.

Fig. 2-9 Ministry of Health and Ha Noi People's Committee



2-4-2 Health Care System in Ha Noi City

There are 14 hospitals managed by the Ministry of Health which have 4,640 beds, four hospitals managed by the military and public safety commissions which have 1,400 beds, and three hospitals managed by the Ministry of Post and Telecommunications, the Ministry of Transport, and the Ministry of Railroad which have totally 740 beds. Also there are hospitals directly managed by Ha Noi People's Committee including eight hospitals, four delivery houses, and nine polyclinics in four Quarters and five hospitals and eight polyclinics in five Districts. There are 27 family planning centers in the city. Table 2-15 shows institutions managed by the Ministry of Health in Ha Noi city and Table 2-16 shows institutions managed by Public Health Services of Ha Noi People's Committee. Figure 2-10 shows the health service system in Ha Noi city.

Table 2-15 Medical Institutions under the Control of Ministry of Health (Ha Noi)

	Name	Bed
1	Institute of Gynecology and Obstetrics	260
2	The Palme Institute for the Protection of Children's Health	450
3	Viet-Xo Hospital	400
4	Viet-Duc Hospital	380
5	Bach Mai Hospital	970
6	K Hospital	150
7	E Hospital	550
8	Hospital of Endocrinology	50
9	National Institute of Tuberculosis and Respiratory Disease	400
10	National Institute of Traditional Medicine	300
11	National Institute of Ophthalmology	220
12	International Hospital	50
13	National Institute of ENT	130
14	Odontology Institute	30
15	National Institute of Acupuncture	150
16	Central Psychology Hospital	400
17	National Institute of Derma-Venereology	100
18	Hospital No.74	600

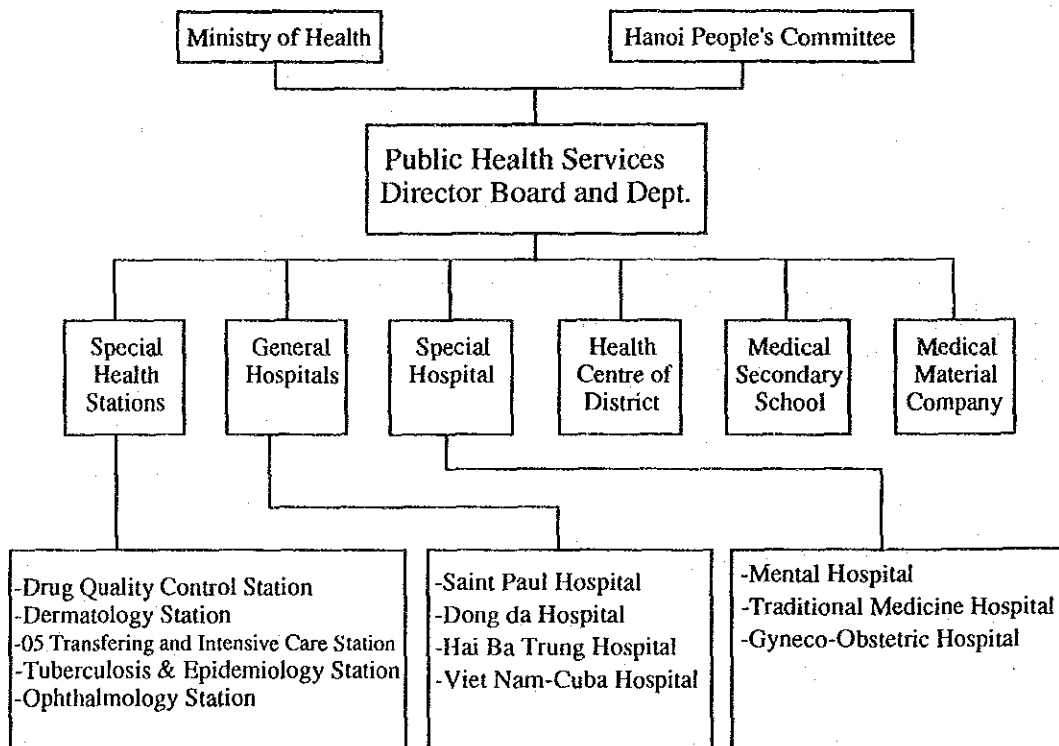
Source : Ministry of Health

Table 2-16 Medical Facilities in Hanoi

Beds Number of Medical Facilities in Hanoi (Except Facilities Belong to Ministry of Health) 3,200 beds			
Medical facilities and Beds Number	City 2,200 Beds	Saint Paul Hospital	500 Beds
		Hai Ba Trung Hospital	600 Beds
		Dong Da Hospital	200 Beds
		Viet Nam-Cuba Hospital	150 Beds
		Traditional Medicine Hospital	100 Beds
		Maternity Hospital	200 Beds
		Mental Hospital	300 Beds
		Private Clinic	50 Beds
		Suburb 1,000 Beds	Thanh Tri Hospital
	Tu Liem Hospital	100 Beds	
	Socc Son Hospital	100 Beds	
	Dong Anh Hospital	200 Beds	
	Gia Lam Hospital	200 Beds	
	Leprosy	100 Beds	
	Medical facilities	20 Beds/10,000	
Doctor No. Ratio	Doctor 6.65/10,000		

Source : Public Health Services of Ha Noi People's Committee

Fig. 2-10 Health Service System in Ha Noi



Source : Public Health Services of Ha Noi People's Committee

2-4-3 Doctors and Medical Personnel in Ha Noi City

Table 2-17 shows doctors and medical personnel in Ha Noi city. Under the Doi moi policies, hospitals under the private management is authorized in 1989. To open private hospitals requires to be authorized and be registered. Doctors who still engage to other hospitals have to work at private hospitals after finishing their duties, and doctors who already retire can work at private hospitals

Table 2-17 Health Personnel in Ha Noi
(Under the Control of Ha Noi People's Committee)

	Number
Doctor	1,266
Pharmacist	289
Assistant Doctor	369
Nurse	1,236
Engineer	149
Midwife	281
Assistant Pharmacist	217
Advanced Nurse	15
Elementary Nurse	369
Elementary Midwife	22
Elementary Pharmacist	231
Personnel on lease from Research Institutions	118
Personnel on lease from Colleges	149
Total	4,711

Source : Public Health Services of Ha Noi People's Committee

2-5 Trend of Foreign Aid

The close economic relationship between Viet Nam and the former Soviet Union and Eastern European countries has reduced sharply since 1991. Although the Government of Viet Nam still regards the former Soviet Union and Eastern European countries as important trading markets, it expects aid from Western countries on economic cooperation. Western countries except Sweden and Finland gave aid only for disaster emergency case to Viet Nam, but France, Italy, Germany, and Australia have stated their reopening aid one after another. The scale of cooperation fund of western countries is growing each year until 1993. Table 2-18 shows the amount of foreign aid to the Ministry of Health.

Table 2-18 Accumulation of External Aid Assistance

(Unit : 1000 US\$)

	1991	1992	1993	1994	1995	Total
UNDP	30	29	27	26	37	149
WHO	3,923	2,000	3,000	2,000	3,000	13,923
UNFPA	2,850	3,000	2,900	2,900	3,000	14,650
WFP	8,420	8,420	8,420	8,420	8,420	42,100
UNICEF	5,100	5,100	5,100	5,100	5,100	25,500
SIDA	5,627	6,400	6,400	6,400	6,400	31,227
Others	1,550	1,500	1,500	1,500	1,500	7,550
NGOs	1,900	3,500	3,000	3,000	3,000	14,400
Total	29,400	29,949	30,347	29,436	30,357	149,496

Source : Ministry of Health, Department of Finance, 1990

2-5-1 International Aid Organization

(1) WHO

WHO started its activities on Viet Nam in 1975. The budget is made every other year. Seven development plans in medical field executed in 1994-1995 are showed below.

1. To strengthen the PHC system.
2. To execute the mother and child health care plan.
3. To improve techniques of treatment, clinical examination, and X-ray diagnosis.
4. To disseminate a vaccination.
5. To make a malaria control program.
6. To cooperate in producing indispensable pharmaceuticals and vaccines
7. To take measures for the goiter.

Under a memorandum, the grants such as for medical equipment, medicine, and agricultural chemicals in WHO program aren't given directly to each institutions but to the Ministry of Health. It means WHO cannot be concerned in distributed institutions or take the field study either. Other organs give their aid throughout the Ministry of Health after the field study.

The supplied materials are procured in Manila, Philippines and transported to Viet Nam. As described in the memorandum, WHO cannot distribute directly to each institution. So, it provides supplied materials to the Ministry of Health once, and then it sometimes examines the condition at each institution after providing supplied materials from the Ministry of Health.

WHO can procure air conditioners, computers, and stationary in Viet Nam and others such as X-ray apparatus and microscopes in Manila. However, since there is an agency of Siemens (German manufacturer,) the possibility of the supply of such product in Viet Nam is upon the demand of each institute. The Ministry of Health steps out in this case.

WHO has a special 3-year budget on AIDS. It estimated US\$18 million from 1991 to 1993 and US\$20 million from 1994 to 1996. Test kits for AIDS were given to 4 institutes (each Pasteur Institute in Ha Noi and Ho Chi Minh, Hai Phong Health Center, and Phu Yen Health Center.) It sent some experts to foreign countries for training on the spot.

There are 18 programs centered on PHC. A budget for supplied materials out of a 1994-1995 budget accounts for 54.57 percent and US\$3,445,000, and is shared with 18 programs. The items and budgets for the programs are shown in Table 2-19.

(2) UNICEF

UNICEF which activity is stressed on PHC conducts following aids.

1) The mother and child health care:

Vaccination, diarrhea control, ARI control, supplies of medical equipment and medicine and a training for personnel at health stations, a education on environmental hygiene and nutrition.

2) Vaccination:

The promotion of EPI (Expansion program of Immunization), a supply of needles for injectors, cooperation for producing BCG/DPT vaccines.

3) The reinforcement of PHC:

The improvement for the condition of health stations and hospitals at the province level, the improvement for the mother and child health education.

Table 2-19 WHO Project Summary Table 1994-1995

		LTS	STC	FEL	S&E	LC	VEH	STU	Total	%
HST	001	0	10,000	8,300	14,700	12,800	0	25,200	71,000	1.12%
MPN	002	0	30,000	133,500	44,700	111,800	0	74,800	394,800	6.25%
PHC	004	0	60,000	178,800	99,900	92,900	0	64,400	496,000	7.86%
PHC	006	0	0	0	843,000	10,000	17,000	0	870,000	13.78%
PHC	007	0	30,000	102,700	400,018	59,000	0	8,400	600,118	9.50%
HRH	002	0	30,000	146,700	164,000	130,600	0	61,600	532,900	8.44%
IEH	001	0	10,000	16,800	22,100	12,100	0	0	61,000	0.97%
OCH	002	0	30,000	43,300	132,900	40,000	0	16,800	263,000	4.17%
HBE	001	0	10,000	28,400	39,800	14,500	0	0	92,700	1.47%
MND	001	0	10,000	43,000	53,200	10,800	14,000	0	131,000	2.07%
CWS	001	220,300	10,000	16,800	52,882	12,500	0	0	312,482	4.95%
EDV	001	0	40,000	83,600	495,400	53,100	0	30,800	702,900	11.13%
TRM	001	0	10,000	14,000	34,600	11,200	0	11,200	81,000	1.28%
MAL	001	220,400	40,000	23,600	868,700	30,100	0	61,600	1,244,400	19.71%
OCD	001	0	20,000	40,900	100,000	38,100	0	28,000	227,000	3.60%
PBD	002	0	20,000	24,900	35,000	12,100	0	0	92,000	1.46%
CAN	001	0	10,000	24,900	22,400	5,300	0	8,400	71,000	1.12%
CVD	001	0	10,000	33,200	22,500	5,300	0	0	71,000	1.12%
	Total	440,700	380,000	963,400	3,445,800	662,200	31,000	391,200	6,314,300	
	%	6.98%	6.02%	15.26%	54.57%	10.49%	0.49%	6.20%	100.00%	

These amounts are not a part of the country planning figures.

Provision is made for technical expertise to be shared among the neighboring countries.

The funds may be transferred to other countries or programs at the discretion of the Regional Director.

HST	: Health Statistics	LTS	: Local Trained Staff
MPN	: Managerial Process Network	STC	: Short Term Consultant
PHC	: Primary Health Care	FEL	: Fellowship
HRH	: Human Resources for Health	S&E	: Supply Equipment
IEH	: Improving Health Education	LC	: Local Course
OCH	: Occupational Health	VEH	: Vehicle
HEE	: Health of the Elderly	STU	: Study Tour
MND	: Mental and Neurological Disorders		
CWS	: Community Water Supply and Sanitation		
EDV	: Essential Drugs and Vaccines		
TRM	: Traditional Medicine		
MAL	: Malaria		
OCD	: Other Communicable Disease		
PBD	: Prevention of Blindness and Deafness		
CAN	: Cancer		
CVD	: Cardiovascular disease		

2-5-2 Trend of Bilateral Aid

(1) Sweden

Sweden started a grant aid to Viet Nam in 1978, but it had informally assisted in the family planning before then. The current budget plan for three years from June 1990 to June 1993 has been prolonged until June 1994. After 1994, the Sweden government is making the 5-year plan from July 1, 1994 to June 30, 1999. Under the current plan, following 11 projects are in operation.

- 1) QNPHC (Quang Ninh Province Primary Health Care)
PHC activities for Quang Ninh Province.
- 2) VPPHC (Vinh Phu Province Primary Health Care)
PHC activities for Vinh Phu Province.
- 3) TQPHC (Tuyen Quang Province Primary Health Care)
PHC activities for Tuyen Quang Province.
- 4) HGPHC (Ha Giang Province Primary Health Care)
PHC activities for Ha Giang Province.
- 5) UBGH & DH (Uong Bi General Hospital)
Continuous assistance to Uong Bi General Hospital.
- 6) IPCH (Institute for the Protection of Children's Hospital)
Continuous assistance to Institute for the Protection of Children's Hospital.
- 7) TSS (Training of Social Specialist)
The training program for PHC personnel.
- 8) POD (Pharmaceutical Operation Development)
This is the program for producing medicine. The government assisted to draw up laws and regulation in relation to medicine, to train for the quality inspection, to improve pharmaceutical companies, and to supply raw materials for medicine until 1992.

9) ME (Medical Equipment)

Sweden government granted a small amount of money for medical equipment. Though it received the request from the Government of Viet Nam many times, it refused it due to the insufficient budget. However, tools for repairing at workshops and equipment for inspection were granted to Viet Nam, and the expense to purchase Spare Parts for equipment at hospitals under the control of the Ministry of Health were managed by the Sweden government. In addition, the Sweden government bears the expense to send two persons a year to foreign countries for training since 1986. There are some persons who trained in Japan. The program is working under the current the 3-year plan but is not include in the next 5-year plan.

10) CLI (Central Level Integration)

Since most hospitals are independent every special field in Viet Nam, there is the trouble to integrate. The program adjust each hospital into a whole.

11) CF (Central Fund)

The program to manage other 10 projects.

In these projects, the first assisted Uong Bi General Hospital and Institute for the Protection of Children's Hospital were worked out a design in 1978 and has been operated since 1980. The Sweden government continues to assist them due to an insufficient budget in Viet Nam.

The investment for POD accounts for 30 percent of the budget and is the highest in the whole. The investment for Uong Bi General Hospital and Institute for the Protection of Children's Hospital accounts for 20 percent of the whole and 50 percent if added in the POD budget. The budget for the PHC activities accounts about for 10 percent of the whole.

The investments to UBGH, IPCH, and ME make profits in a special fields, and the profits are used for service to the general public and management expenses in other programs. Especially, TSS and POD make profits in the whole country.

The Sweden government granted US\$30 thousand for ICU and Department of Biochemistry at Bach Mai Hospital in the current 3-year Plan. The grant was used for purchase of small equipment and expense for study. However, these equipment made

only a small profit because the hospital is in a position of leadership. As a result, the grant will be cut in the next plan.

Payees of grants from CF is listed below.

1. National Gynecology and Obstetric Hospital.
2. Bach Mai Hospital.
3. National Nose, Ear, and Throat Hospital.
4. Department of Medical Insurance.
5. No.1, No.2 Children's Hospital. (Ho Chi Minh City)
6. Institute of Public Hygiene.

Most of these programs explained above will be cut, and aid projected in the next 5-year Plan is showed below.

1) Improvement of administrative management capacity in the Ministry of Health

To assist each department and organ and to conduct studies about medical care policies.

To advise about drawing up the medical care laws and regulations.

To make development plans on the medical care field (a master plan.)

2) Aid to the poor and the remote rural and the mountainous areas.

To expand the sphere of PHC activities in three provinces (excluded Quang Ninh Province).

3) To continue aid to Uong Bi General Hospital and Institute for the Protection of Children's Hospital.

Hospitals that have over 400 beds have not received a full scale of grant, but a small scale of grant. Since PHCs that can make big profits with a small amount of money were concentrated their attention by aid organs, the big hospitals couldn't be raised the level. SIDA received a request of aid to big hospitals from Viet Nam but rejected due to an inadequate budget.

ME was investigating medical equipment the recent year and granted hardware and software to conduct maintenance by the computers to the department of Medical Equipment in the Ministry of Health.

(2) France

France stopped an economic cooperation excluding a small scale of aid to the culture, science and engineering field (about FF20 million a year,) aid for disaster, food, and humanity, and cooperation through NGO and ACCT. In 1989, an agreement of economic, industrial, cultural, scientific cooperation was reached between France and Viet Nam, and France reopened the relationship of the economic cooperation with about a grant aid of FF45 million. As soon as the Investment of Mutual Protection Agreement between Viet Nam and France was reached, France granted FF1.3 million. The cooperating fields in 1990~1992 are listed below.

- 1) Infrastructure: water supply, restoration of electric power, communications network, airport, and medical institute.
- 2) Training of personnel: financial administration and bank management.
- 3) Production: processed farm products and light industries.

France has ever granted materials to hospitals in Hanoi, Da Nang, and Ho Chi Minh cities but mainly assists training. The activities are mostly related to the health and medical service and mostly done by NGO. However, it is difficult to grasp an actual situation because each NGO has a different situation on variety, a scale, and financial source of an activity.

There is a French specialist on a long-term visit at Institute of Pasteur in Ho Chi Minh City and most of other specialists are on a short-term visit. In France there are many doctors who are interested in Viet Nam, and if necessary, the institute invites Vietnamese doctors on its account. So the French government hardly pays for it.

(3) Italy

Italian Cooperation for Development decided Viet Nam to be the second priority country for aid and signed the Viet Nam-Italy Agreement of Economics and Science of Technology in February 1992. Italy offered a three-year plan for Viet Nam and reopened. The fields in its cooperation are listed below.

1. Water supply in Ho Chi Minh city
2. Service for south-north communication.
3. Silk goods factories.
4. Sewage system in Ha Noi city.
5. Supply of medicine.
6. Protection for mother, children and infants.
7. Processed marine products.
8. Others, mine production, supply of small engine generator.

2-6 Background and Outline of the Request

2-6-1 Background of the Request

Viet Nam has an important assignment to improve health and medical service, education, and water supply at the social developing field in the fourth 5-Year Plan. As to health and medical service, training medical personnel, improving nourishment condition, improving the mother and children insurance, and family planning are subjects to be done. The health index of Viet Nam in 1990 reported that life expectancy was 63 years old, the neonatal mortality rate was 45/1,000, and the mortality rate of age under 5 was 65/1,000, which were comparatively good rate in Asia region except ASIAN. However, malaria, salmonella infectious disease, and dysentery account 70% of the total patients and it is the typical disease distribution pattern of the developing country.

The Government of Japan sent the project formulation study team in December, 1992. The team recognized that institutions and laboratories in Ha Noi city are in trouble with superannuation and shortage of equipment to give medical treatment and examination, although they had a certain level of diagnostic ability about medical technique. As emergency measures, the team suggested to formulate the project for improvement of medical equipment of the main institutions in Ha Noi city .

In response of this proposal, the Government of Viet Nam drew up the application form to improve seven medical institutions in Ha Noi city in April, 1993 and submitted to the Government of Japan for the grant aid project. Japan International Cooperation Agency sent the preliminary study team in July, 1993, studied seven requested institutions and situations of other institutions, and discussed and confirmed about realization of contents of the request. As the result, National Institute of Tuberculosis

and Respiratory Disease and Dong Anh Hospital were added into seven requested institutions under consideration of urgent, needs, and the condition of facilities. The two institutions will be provided equipment in minimum requirement.

2-6-2 Contents of the Request

The contents requested on this project are to provide medical equipment to the following 9 health institutions.

- (1) Hai Ba Trung Hospital
- (2) Ha Noi Medical College
- (3) National Institute of Malariology, Parasitology and Entomology
- (4) National Institute of Ophthalmology
- (5) Gynecology and Obstetric Hospital in Ha Noi
- (6) Back Mai Hospital
- (7) Emergency Transfer Center In Ha Noi
- (8) National Institute of Tuberculosis and Respiratory Disease
- (9) Dong Anh Hospital

Table 2-20 shows the list of equipment that they requested each institute.

2-7 Present States of Objective Institutions

2-7-1 Hai Ba Trung Hospital

(1) Present State

This institute is the city hospital directly managed by the Department of Health in Ha Noi People's Committee and has 18 medical departments. Under the medical equipment preparation plan of the Hai Ba Trung Hospital given as the grant aid cooperation by Japan in 1992, basic medical equipment was mostly supplied. However, it is still necessary to strengthen Department of Infectious Disease and Laboratory. The former was not included and the latter was implemented limitedly in the last Japanese grant aid. Figure 2-11 shows the organization chart and Table 2-21 shows the personnel structure.

Table 2-20 Summary of Requested Equipment

Institution	Requested Equipment
1. Hai Ba Trung Hospital	Ventilator, Patient monitor, Duodenofiberscope, Endocystoscope system, Sigmoidfiberscope, Broncho-fiberscope, Endoscopy support, X-ray mobile unit, Fiberscope washer, ELISA reader, others
2. Ha Noi Medical College	RO system, Double distillation unit, Water purification system, Clean bench, Video projector, Public address system, TV microscope set, Flourescent microscope, Cryostat microtome, Deep freezer, Female/Male Figure, Educational Medical books, others
3. National Institute of Malariology, Parasitology and Entomology	Ultrasound scanner, TV microscope set, Flourescent microscope, Phase contrast microscope w/camera, Stereo microscope w/TV, ELISA reader
4. National Institute of Ophthalmology	Anesthesia apparatus with Ventilator, Patient monitor, Cryosurgery unit, Visual electrophysiology test system, Slit lamp with camera, Projection perimeter, Virectomy apparatus, Diathermy unit full system, Autorefractmeter, Cataract set microsurgery, Clear jelly operation instrument set, High pressure steam sterilizer, Water distil, others
5. Gynecology and Obstetric Hospital in Ha Noi	Ventilator, Infant ventilator, Patient monitor, Caesarean operation set, Gyne operating instrument set, Fetal monitor, Ambulance, High pressure steam sterilizer for Liquid, Operation light, Water distill, Ultrasound scanner, Power generator, Urine analyzer, others
6. Bach Mai Hospital	CT scanner, X-ray apparatus TV system, X-ray machine general diagnostic, Ventilator, Broncho-fiberscope, Oesogastro intestinal fiberscope, X-ray mobile unit, Ultrasound scanner w/color doppler, Ultrasound scanner general, Equipped Ambulance 4WD, Ultrasonic washer, Water purification system, Water distill, others
7. Emergency Transfer Center in Ha Noi	Ambulance, Repair-instrument set, radio communication unit, others
8. National Institute of Tuberculosis and Respiratory Disease	Operation table, Ventilator, Electro surgical unit, Patient monitor, Defibrillator, Instrument for suture of vascular, Instrument for thoracic operation, Broncho-fiberscope with camera, X-ray mobile unit, Ambulance, High pressure steam sterilizer for Liquid, High pressure steam sterilizer, Scrub station, Water distill, Ultrasound scanner general, Fiberscope washer, Microscope trinocular w/camera, others
9. Dong Anh Hospital	Operation table, Anesthesia apparatus, Ventilator, Electro surgical unit, Patient monitor, Laparotomy instrument set, Minor surgical instrument set, X-ray apparatus TV system, Ambulance, High pressure steam sterilizer for Liquid, Scrub station, Ultrasound scanner general, Dental unit, ENT examination unit, Power generator, others

Table 2-21 Personnel

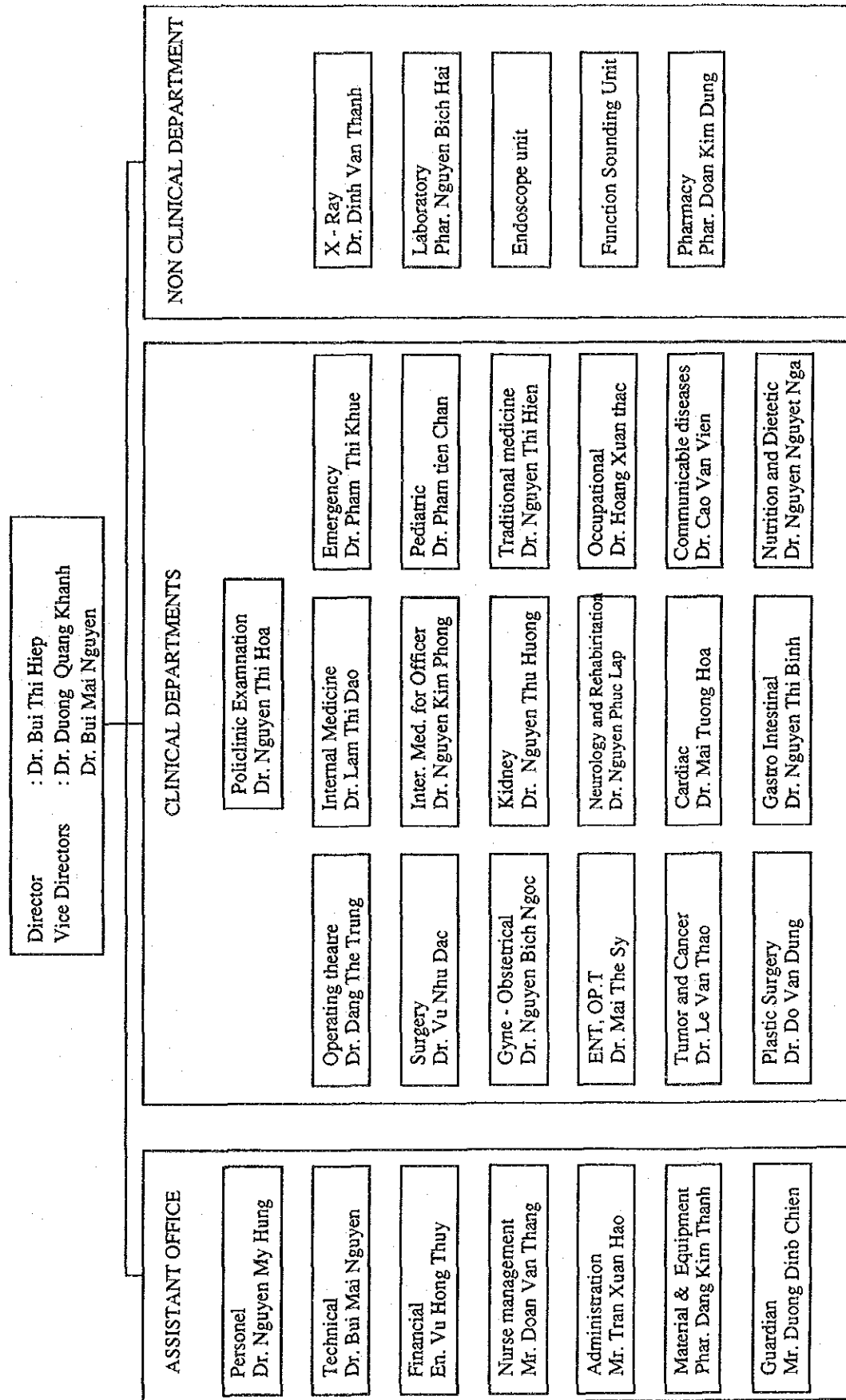
Department	Bed	Doctor	Nurse	Midwife	Other	Paramedical Staff	Non Medical Staff	
Internal Medicine	200	28	39	--	8	--	Administration	
Surgery	70	9	15	--	3	--	Office Worker	47
Pediatrics	50	10	15	--	2	--	Maintenance	1
Gyne. & Obstetrics	25	9	--	11	4	--	Cooking Staff	6
Orthopedics	20	4	8	--	2	--	Driver	4
ENT	15	2	3	--	1	--	Helper	51
Ophthalmology	5	2	2	--	1	--	Other	87
Dermatology	--	--	--	--	--	--	Total	196
Urology	20	7	8	--	2	--		
Traditional Medicine	--	--	--	--	--	--		
Dental	5	2	3	--	1	6		
ICU · CCU	10	13	18	--	2	--		
Other	275	40	76	--	26	--		
Laboratory		--	--	--	--	32		
X-ray	--	--	--	--	--	4		
Physical Therapy	--	--	--	--	--	2		
Pharmacy	--	--	--	--	--	19		
Total	600	126	187	11	46	63		
					Total	629		

Source : Hai Ba Trung Hospital

In addition, this is a referral institute for hospitals in Ha Noi city and takes a leading part in an clinical organ and city hospitals. The works listed below are executed.

1. Diagnosis and treatment for residents in Ha Noi city and the northern part of Viet Nam.
2. A clinical practice for medical students in Ha Noi Medical College.
3. Education and training for chief nurses.
4. Receiving patients needed the infectious diseases and cancers treatments by a Cobalt-60 radiation treatment.

Fig. 2-11 Hai Ba Trung Hospital



(2) Finance

Table 2-22 shows a financial situation from 1990 to 1992. The revenues in the budget on this institute is not clear. The reported revenues were all distributed by the Ha Noi People's Committee and did not include items from the recently introduced medical insurance system and patients' share of medical expenses. In the annual expenditure, the rate of labor costs was the highest and accounts 30 ~ 40%. Then, the maintenance expenses for institutions, facilities, medical equipment accounted 12 ~ 27% and the purchase of medicine 11 ~ 27%, and the utility expenses followed. However, in the 1992 budget, the Ha Noi People's Committee added up a special budget for an facility improvement expense to receive medical equipment by the Project for the Improvement of Medical Equipment in Hai Ba Trung Hospital.

Table 2-22 Revenue · Expenditure (1990-1992)

(Unit : Dong)

	Revenue		Expenditure	
	Item	Amount	Item	Amount
1992	Government Budget	42,200,000,000	1 Labor Cost	700,000,000
			2 Medical Supplies	600,000,000
			3 Food	
			4 Transport	
			5 Utilities	470,000,000
			6 Maintenance	1,430,000,000
			7 Other	38,300,000,000
	Total	42,200,000,000	Total	42,000,000,000
1991	Government Budget	1,866,000,000	1 Labor Cost	633,855,000
			2 Medical Supplies	226,572,000
			3 Transport	
			4 Utilities	219,109,000
			5 Maintenance	854,195,000
			6 Other	167,000,000
	Total	1,866,000,000	Total	2,074,027,000
1990	Government Budget	1,261,624,000	1 Labor Cost	440,218,000
			2 Medical Supplies	128,000,000
			3 Transport	
			4 Utilities	125,954,000
			5 Maintenance	236,555,000
			6 Other	117,704,000
	Total	1,261,624,000	Total	1,049,331,000

Source : Hai Ba Trung Hospital

(3) Main Diseases

On an average, 200 ~ 300 outpatients visit the hospital everyday. The malignant tumors such as cancer are on the top and bronchitis and trauma, tuberculosis, infectious diseases such as malaria, rheumatism, high blood pressure, and stomach ulcer follow it. The lead poisoning and chest disease are treated as a vocational diseases. The cancers are treated by Cobalt 60, which they have only two apparatus in Viet Nam, and by other radiotherapy apparatus. Table 2-23 shows the number of outpatient in Hai Ba Trung Hospital.

Table 2-23 Total Number of Outpatients

	Name of Disease	1992	1991	1990	1989
1	Internal Diseases	15,160	27,117	20,124	11,921
2	Infection Diseases	7,622	7,715	8,301	6,045
3	Surgery	15,204	24,887	16,523	11,207
4	Gynecology and Obstetrics	3,627	6,856	6,822	2,043
5	ENT	9,474	17,930	13,261	7,699
6	Ophthalmic Diseases	6,562	16,470	12,201	4,445
7	Dental	12,970	18,248	12,016	7,344
8	Skin Diseases	5,532	13,460	9,271	4,381
9	Occupational Diseases	219	515	2,156	284
10	Pediatric Diseases	7,622	6,886	7,303	9,961
Total Number of Patients		125,126	165,087	122,878	158,599

Source : Hai Ba Trung Hospital

Table 2-24 shows the number of inpatients classified by diseases. The chronic bronchitis is on the top and infectious diseases such as tuberculosis and heart diseases, acute and chronic nephritis, gastrointestinal diseases, and rheumatism follow it. Since National Institute of Tuberculosis and Respiratory Disease and Hai Ba Trung Hospital in Ha Noi city are primary organs for treating tuberculosis and respiratory, they receive patients of tuberculosis from Bach Mai Hospital and other hospitals. Table 2-25 shows the cases of operation. The operations for extracting malignant tumors have been on the top since 1989 and the operations for the dental surgery and trauma follow it. Other operations are undergone for stomach and digestive organs, appendicitis, Caesarean section, myoma of the uterus, and urinary organs in order.

Table 2-24 Total Number of Inpatients

	Name of Disease	1992	1991	1990	1989
1	Rheumatic Fever	198	207	198	164
2	Hypertension	164	140	164	156
3	Heart Failure	294	190	294	256
4	Chronic Failure	414	439	414	350
5	Tuberculosis	355	273	240	152
6	Stomach Ulcer	125	266	207	192
7	Nephritis	90	262	173	280
8	Helminthiasis	54	182	124	250
9	Malaria	72	151	57	126
10	Asthma	153	182	153	250
Ratio of Occupancy a Year (%)		79.00	80.00	87.50	77.00

Source : Hai Ba Trung Hospital

Table 2-25 Surgical Operation

		1992	1991	1990	1989
1	Gastro-Surgery	33	39	46	62
2	Appendicitis	83	82	103	128
3	Caesarean Operatopm	75	45	80	61
4	Uterine-Myoma Surgery	89	30	38	16
5	Urinary Surgery	72	37	49	26
6	Trauma Surgery	84	106	150	32
7	Ophthalmic Surgery	3	22	14	32
8	E.N.T.	49	82	93	171
9	Dental-Plastic Surgery	347	179	220	82
10	Cancer Surgery	172	385	375	--
Total		1,275	1,149	1,540	1,349

Source : Hai Ba Trung Hospital

In Paramedical Section, a rectoscopy, a cystoscopy, and a biopsy in an endoscopy are performed. Table 2-26 shows examinations cases. Laboratory Section is divided into hematology, biochemistry, bacteriology, and a blood bank, and performs 13,000 ~ 20,000 examinations a year. The blood bank places close to hematology and performs collecting blood from close relatives of patients and people who sell blood. In Department of X-ray, fluoroscopy and general X-ray photographs are taken. They don't have monitors or TV system on fluoroscopes but watch directly screens of

fluoroscopes. In a grand aid plan, X-ray TV system was granted last year. Table 2-27 shows the number of cases of clinical examination and radiation photograph.

Table 2-26 Endoscopy Examination

	1992	1991	1990	1989
Proctoscopy	65	105	95	70
Cystoscopy	125	143	86	52
Biopsy	194	178	1,243	978

Source : Hai Ba Trung Hospital

Table 2-27 Present Activity of Laboratory and X-ray Examination

	1992	1991	1990	1989
Hematology	98,761	77,420	51,216	46,751
Biochemistry	89,724	54,352	85,142	82,726
Other	38,917	21,435	12,576	10,243
Plain roentgenography	6,810	10,768	13,572	17,663
Fluoroentgenography	7,207	9,382	10,752	5,657

Source : Hai Ba Trung Hospital

(4) Buildings and Facility

This institution was begun constructing in 1972 and completed in 1985. This building has been 20 years and is remarkably superannuated because the building was constructing under a lack of materials in the war and poorly maintained after completing. The soft ground by nature and poor foundation works under the war causes subsidence, and the building has many damages such as cracks. The situation of facilities for electric power, air conditioning, and water supply and draining barely keeps medical activities but is too superannuated to work.

(5) Equipment

The basic equipment in the operation rooms, ICU, Obstetric, and Radiology were superannuated or not enough to perform medical activities but was improved by Japan's Grant Aid under the plan the year before. However, Department of Infectious Disease and Laboratory need to be further strengthened. The former was not included and the latter was implemented limitedly in the last Japanese grant aid. Since only this hospital and National Institute of Tuberculosis and Respiratory Disease have the equipment related to the endoscopy, they are not enough to cope with increasing patients or worn out. They must be urgently improved.