

4-2-3. Equipment List

(1) Equipment for R.H.C.

	Description	Specification	Quantity
1.	Ambulance	Diesel engine 2 WD modified van. first aid treatment accessories.	96
2.	Mobile Shadowless Light	4 lamp extensible arm type with automatic charge battery	205
3.	Binocular microscope	Illumination lamp built-in type, 40-1,000 magnifications. Slide glasses, cover glasses, Hemacytometer	89
4.	Standby Generator	Diesel engine, rated output A.C 3.0 Kw, 50 Hz	267
5.	Diagnostic	Basic Diagnostic set with storage case	283
6.	Manual Resuscitator	For adult and child	203
7.	Sphygmomanometer	Desk type mercurial sphygmomanometer	265
8.	Centrifuge	Portable centrifuge (15 ml x 8, 4,000 rpm)	81

(2) Equipment for BHU

	Description	Specification	Quantity
1.	Binocular Microscope	Reflective mirror type 40 - 1,000 magnification	1,463
2.	Diagnostic Set	Basic diagnostic tool set with storage case.	1,582
3.	Sphygmomanometer	Desk type mercurial sphygmomanometer	1,582

CHAPTER 5. PROJECT IMPLEMENTATION

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5-1 Implementation Method

5-1-1. Implementing Bodies

The Project will be implemented with the cooperation of the Government of Pakistan, the Japanese Consultant, and the Equipment Supplier.

(1) Implementing Authority

The implementing authority of the Project is the Government of the Islamic Republic of Pakistan. The Planning and Development Section of Ministry of Health, Special Education and Social Welfare will take charge of the project in collaboration with the Health Department of Punjab Government. The Directorate Health Services, Health Department of Punjab Province will take charge of detailed planning for equipment allocation and the delivery of the equipment to the RHCs and BHUs.

(2) Consultant

Immediately after the Exchange of Notes (E/N) concerning a grant for the Project by both the Governments of Pakistan and Japan, the Government of Pakistan will enter into contract with a Japanese Consultant for the following consultant services;

- 1) Preparation of the detailed specifications of equipment and other technical data.
- 2) Assistance in the selection of equipment supplier and contracting.
- 3) Supervision of equipment supply.

(3) Equipment Supplier

Upon completion of the tender documents by the Consultant, the Government of Pakistan shall proceed with tendering in accordance with the tender documents.

Equipment suppliers shall be a Japanese nationals selected by the tendering procedure. They will be responsible for manufacturing, supplying and turning over the equipment. The delivery will be made at a designated warehouse in Lahore.

5-1-2. Scope of Responsibility

The Project includes the work to be covered by the Japanese Grant, and the work to be implemented by the Government of Pakistan as specified hereunder.

(1) Responsibility of Japan

The responsibilities of the Japanese side are for consulting services for the provision of equipment and the supply of equipment to the RHCs and BHUs in Punjab Province. The contents of the work are as follows;

- 1) Supply of medical equipment specified in the Equipment List, paragraph 2 of Chapter 4 as well as the consulting services.
- 2) Marine and inland transportation of the equipment and its delivery at a designated warehouse in Lahore.

(2) Responsibilities of the Government of Pakistan

- 1) To prepare a detailed plan for equipment allocation and to deliver the equipment to the RHCs and BHUs from a warehouse in Lahore.

- 2) To Complete construction and upgrading of RHCs and BHUs, including such building facilities as power supply, water supply and drainage.
- 3) To secure and station medical staff and other personnel required for the operation and maintenance of the RHCs and BHUs.
- 4) To defray commissions to a Japanese foreign exchange bank based on the Banking Agreement.
- 5) To bear all expenses necessary for transportation and installation of equipment other than those covered by the grant.
- 6) To ensure maintenance and proper and effective use of the equipment provided under the grant.
- 7) To exempt or bear custom duties, taxes and other fiscal levies which are normally imposed in the Republic of Pakistan.
- 8) To accord Japanese nationals whose services is required in connection with the supply of products and services under a verified contract, such facilities as may be necessary for their entry into Pakistan and stay therein for the performance of their work.

5-1-3. Procurement of Equipment

(1) Selection of Supplier and the Contract

The Supplier of the equipment shall be a person or company duly registered in Japan. An open tender will be performed and an evaluation will be made to select a supplier for the Project.

A lump sum contract will be used. However, every item of equipment will specify the manufacturer, type, specifications and the quantity.

(2) Procurement of the Equipment

The equipment to be supplied under the Project will be procured in Japan.

(3) Transportation of the Equipment

The equipment will be transported by ship from a port in Japan to Karachi Port.

Vehicles will be used for inland transportation in Japan and after unloading at Karachi Port in Pakistan.

5-2 Implementation Schedule

(1) Schedule

Following the Exchange of Notes (E/N) for a grant, the Project will be implemented under the following process:

- 1) Exchange of Notes (E/N) by both Governments.
- 2) Banking Arrangement (B/A) between the Government of Pakistan and a Japanese foreign exchange bank in accordance with the Notes.
- 3) Conclusion of a consultant contract between the Ministry of Health, Spacial Education and Social Welfare, as representative of the Government of Pakistan, and a Japanese consulting firm.
- 4) Verification of the consultant contract by the Government of Japan.

- 5) Detailed design and preparation of tender documents by the Consultant.
- 6) Approval of the tender documents by the Ministry of Health, Special Education and Social Welfare, preparation of a tender by the Consultant.
- 7) Execution of the Tender and evaluation.
- 8) Conclusion of contract for the procurement of equipment between the Ministry of Health, Spacial Education and Social Welfare and the selected Japanese firm.
- 9) Verification of the Contract mentioned above by the Government of Japan.
- 10) Implementation of equipment supply and supervision.
- 11) Handing and taking over the equipment in Lahore.

(2) Implementation Period

The period required for the Project will be 12.5 months in total, following conclusion of the Exchange of Note, as shown below:

1)	From conclusion of E/N to tendering	3.5 months
2)	Contract and verification	1.0 "
3)	Manufacture and procurement of equipment	6.0 "
4)	Transportation and delivery	1.5 "
5)	Final Inspection and Turn-over	0.5 "
	Total	12.5 months

Refer to Table 5-1 for the above.

Table 5-1. Project Schedule

Work	Month															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
E/N																
Consultant		■														
Contract																
Detailed		■	■	■												
Design																
Tendering				■	■	■										
Supplier																
Contract					■	■	■	■	■	■	■	■	■	■	■	■
Manufacture																
of Equipment																
Delivery													■	■	■	■
Inspection and																
turn-over														■	■	■

5-3 Estimated Project Cost

The Government of Pakistan shall bear the cost required for transportation of equipment from the warehouse in Lahore to each RHC and BHU.

The total estimated cost for this is about 380,000 rupees.

The above estimate is made according to the following conditions:

- 1) Transportation method :
Ambulances will be driven and other equipment will be transported by lorries.
- 2) Transportation distance :
Assumed average distance from Lahore to each District Health Office is 320 km.
- 3) Unit Cost : Ambulance : Rs 5/unit.km
Other equipment : Rs 1.25/m3.km

CHAPTER 6. OPERATION AND MAINTENANCE PLAN

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6-1 Maintenance System

The equipment to be supplied under the Project has neither sophisticated electronic circuits nor complicated mechanisms, requiring periodic inspections by skilled technicians.

Therefore, daily checks, simple repairs and parts changes by the operations staff will insure good maintenance of equipment.

However, in case of breakdown, equipment other than vehicles must be repaired by professionals. The "Medical Equipment Repairing Workshops (MERWs)" being established by the Government of Punjab under a loan from the Asian Development Bank will be available. But, at the present, only one MERW is in operation with 4 engineers in Lahore. Therefore, repairs to the equipment will mainly rely on the manufacturer's agents, until the MERWs became more prevalent in the province.

As for ambulances, private workshops can be utilized for repairs.

6-2 Maintenance Method

The following method are recommended under the present condition of the maintenance structure mentioned above to carry out proper maintenance of the equipment.

- (1) The operations staff should be familiar with the structure and proper operating method of the respective equipment, because daily check, simple repairs and parts changes must be done by the staff.

- (2) Equipment that has broken down beyond the staff's repairing capabilities shall be repaired at the MERW or by manufacturer's agents.
- (3) Specialized ambulance driver shall be employed in every RHC to be provided an ambulance. Daily maintenance and checks shall be done by the driver; however, periodic inspection and change of expendable parts shall be performed according to proper maintenance schedule.

6-3 Operation and Maintenance Costs

The operating and maintenance costs for the equipment include the cost of expendable articles and spare parts. Operating and maintenance cost of equipment other than the ambulance and standby generator are very small. Therefore, only the cost for the ambulance and generator will be considered.

These are calculated as follows:

- (1) Annual operation and maintenance cost per unit.

- 1) Ambulance

Estimated yearly driving distance is 20,000 km, based on an average of 100 km per day for transporting patients from BHUs and to an upper-grade hospital, and 200 operating days a year.

The factors included in the calculation are as follows;

- a) Fuel: Diesel Fuel, driving distance per liter 8 km.
- b) Oil change : at 5,000 km intervals
- c) Tire change: at 20,000 km intervals
- d) Part change for engine and electric system : at 20,000 Km intervals

The operating and maintenance cost of an ambulance is calculated to be Rs. 14,850/year.unit.

2) Standby Generator

Estimated yearly operating hours will be 300 hours, on the assumption that power failures take place 100 days a year and last 3 hours.

The factors included in the calculation are as follows;

- a) Fuel : Diesel Fuel 1.2 liter per hour
- b) Oil change : once in a year

The operation and maintenance cost of a standby generator is calculated to be Rs. 1,280/ year.unit.

(2) Estimated Total of Yearly Maintenance Cost

1) Ambulance :

Rs. 14,850/year.unit x 96 units =Rs 1,425,600 /year

2) Generator :

Rs. 1,280 /year.unit x 267 units= Rs 341,760 /year

3) Grand total: Rs. 1,767,000/year

CHAPTER 7. PROJECT EVALUATION

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7-1 Expected Benefits from the Project

The rural areas of Pakistan, which 70% of the entire population inhabit, are still behind in health and medical services despite the efforts made by the Government of Pakistan. This situation is one of the most important problems to be urgently solved for promoting the public health. To improve in quality and quantity both the facilities and staffing of RHCs and BHUs, the Government of Pakistan proposed the new, BHU/RHC Establishment Plan.

With the support of the federal government, each provincial government is presently executing this plan. The Provincial Government of Punjab has also been working on the Plan since fiscal 1986/87. This is essential for improving the health and medical services in rural areas and lessening the imbalance in these services between urban and rural areas.

In the implementation of the Plan, some essential equipment, mainly medical, will be purchased from abroad. However, it is quite difficult for Pakistan to secure the foreign currency required for purchasing this foreign equipment, which represents an obstacle to implementation of the Plan.

The Project will enable the Government of Punjab Province to procure this equipment through the grant aid program of the Government of Japan. This would solve part of the problem stated above and contribute to the Plan's realization. If the Project is implemented, the essential equipment required for the establishment and improvement of RHCs and BHUs will be provided as planned. The following benefits can be expected:

- 1) At present, many Union Councils still lack medical care facilities in the province, but this will be changed. All of inhabitants of the rural areas will be able to receive health and medical services within their respective Union Councils, because at least one RHC or BHU with adequate medical staff and equipment will be established there.
- 2) As the result of the establishment of medical service networks in the rural areas, inhabitants will be able to receive adequate care appropriate to the nature of the illness. The network will be established by a referral system organized among BHUs, a RHC and a secondary medical care hospital.
- 3) Primary health care will be provided with more efficiency to people in the rural areas, because essential buildings, equipment and staffing will be improved.
- 4) As a result of the effects mentioned above in 1), 2) and 3), the gap in the quality and quantity of health and medical services in the urban and rural areas should be alleviated.

Consequently, it is expected that the neonatal and infant mortality rates will be lowered, and life expectancy will increase.

As a result, the Project would also raise health standards throughout Punjab Province.

7-2 Appropriateness of the Project

(1) Financial Burden to be Borne by Pakistan

However great the benefits, the Project will be pointless if Pakistan has to bear an excessively large financial burden. Therefore, when assessing the Project, it is necessary to determine whether the burden for Pakistan exceeds an appropriate amount.

Pakistan will incur the following costs:

1) Initial Cost

The only initial cost that Pakistan is required to cover is that for distribution of the equipment from the storehouse in Lahore to the facilities included in the Project. This will be an estimated 380,000 rupees.

2) Operating Costs

Pakistan is required to cover the costs of operation and maintenance of the equipment, a total of 1,770,000 rupees. This does not exceed the amount which can be appropriated as ordinary expenditures in the national budget, because the unit cost per facility is not very high.

Consequently, the burden for Pakistan is considered to be adequate.

(2) Verification of Benefits

As is discoursed in Section 3-3-2 of Chapter 3, all the items of equipment requested by Pakistan are indispensable to the completion of the BHU/RHC Establishment Plan.

They are all foreign made and must be purchased with foreign currency. The Government of Pakistan is faced with the problem of supplying the required foreign currency. In contrast, the Government of Pakistan is procuring other necessary equipment on its own. In other words, all the necessary items of equipment for the completion of the above Plan will have been obtained, once the Project is implemented. Thus the benefits outlined in the previous section 7-1 can be anticipated.

The dental unit should be allocated to RHC when considering the fact that there are many periodontal patients in Punjab Province. However, as stated in the section 3-2-2 of Chapter 3, the Project does not include dental units. This was an unavoidable decision reached in consideration of the staffing difficulties and the progress in construction RHCs and BHUs.

The quantity of each item of equipment is determined in accordance with the basic policies of design clarified in Paragraph 4-1 of Chapter 4. The effects to be brought by the decided quantity are examined as follows:

- 1) Ambulances will be supplied to 96 of the total 272 RHCs. Ambulances will be provided to those RHCs that are newly constructed or upgraded by the end of March 1988. These RHCs will be provided with the necessary staff members, including ambulance drivers. Although all RHCs should ultimately be provided with ambulances, it is not recommended to do so at the present, because the ambulances provided to RHCs other than the above 96 RHCs might be no use due to the lack of necessary staff members for operation. Consequently, the proposed number of ambulances is considered to be adequate.

- 2) As for the shadowless light, generator and manual resuscitator, the proposed numbers of these items will enable all 272 RHCs to have one of each item in addition to the existing equipment. This is sufficient to care for prospective patients at each RHC.
- 3) The number of other items of equipment to be provided to RHCs is to be determined considering the probability of recruiting medical staff and the quantity of existing equipment. As a result, 96 RHCs will be furnished with 3 diagnostic sets and 3 sets of blood pressure apparatus.

The remaining 176 RHCs will be provided with 2 sets each.

74% of the 272 RHCs will be furnished with one centrifuge and microscope each. These RHCs will be able to secure necessary laboratory technicians who use this equipment in their work.

- 4) The equipment to be supplied to BHUs is as follows:

- a) Diagnostic set and Sphygmomanometer

80% of the total 1977 BHUs (existing and under construction) will be furnished with one diagnostic set and sphygmomanometer each, because a medical doctor capable of using them will be present at each of these BHUs.

- b) Microscope

74% of the total 1977 BHUs (existing and under construction) will be furnished with a microscope, because a technician capable of using this will be present at each of these BHUs.

Therefore, the proposed items and respective quantity of equipment are adequate and will be effectively utilized for strengthening of the services of RHCs and BHUs.

CHAPTER 8. CONCLUSIONS AND RECOMMENDATIONS

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8-1 Conclusions

The basic design study team first confirmed the Pakistani request and then collected data and information required for the basic design of the Project. They focused on the contents and present progress of the BHU/RHC Establishment Plan, carrying out a field survey in Punjab Province. The field survey was completed 22 of the 29 districts located in 6 of the 8 divisions of the Province, after having first grasped the gist of the Plan through discussions with representatives of the Federal and Provincial Governments.

The team visited existing RHCs and BHUs in order to investigate the present state of building construction, the availability of existing equipment, as well as the capability and ability of the present staff. After returning to Japan, the team analyzed the data and information that had been collected and acknowledged the need for implementing the Project. As mentioned in Chapter 3, the team summarized the contents of the Project according to the results of the analysis and prepared the basic design for equipment procurement presented in Chapter 4.

Providing more and better equipment to the RHCs and BHUs through the means described in this report should lead to the results discussed in Paragraph 7-1 of the previous chapter. On the other hand, if the Project is not implemented, it will be almost impossible for the Government of Punjab Province to procure such essential equipment in the near future. This will mean a long delay in the completion of the BHU/RHC Establishment Plan that the Provincial Government is now implementing. Therefore, the Project needs to be implemented, if the health and medical services in Punjab Province are to be improved.

However the objectives of the Project cannot be accomplished nor can its expected benefits be realized unless the equipment is used properly. Thus, the Project does not attempt to cover all the RHCs and BHUs included in the above plan, they have been selected on the basis of an analysis of the progress of the BHU/RHC Establishment Plan and the health and medical services in Punjab Province. The contents and scope of the Project proposed in this report are judged to be the most appropriate under the circumstances.

It is recommended, therefore, that the Project be implemented under the grant aid program of the Government of Japan.

8-2 Recommendations

The true objective of the Project is to raise the health standard of the rural inhabitants of Punjab Province by improving the health and medical services. To realize this, goal the Federal and Provincial Government will be required to solve the following problems.

(1) Securing medical staff

In Pakistan, doctors and co-medical workers usually prefer to work in the cities and eschew work at such rural facilities as RHCs or BHUs. This is indicated by the overall lack of medical staff at the existing RHCs and BHUs. It is very important, therefore, to secure the necessary medical staff by all possible means, however difficult.

(2) Establishing a referral system

A referral system is currently in operation at 36 RHCs in Punjab Province, which comprises to one seventh of the total number of RHCs in the province. However this referral system is not known to all member of the medical staff of RHCs and BHUs, or to officials of the District Health Offices in Punjab Province. This might be due to a lack of sufficient information about the current system and the roles of the specific facilities concerned.

The existing system must be reviewed in order to determine whether or not it can be utilized in its present form in the BHU/RHC Establishment Plan. If not, the system must be revised or replaced by an entirely new referral system. Any such changes must then be communicated to all concerned.

(3) Adequate staffing and retraining of Medical Staff

In order to operate the referral system effectively, competent staff members must be distributed evenly, according to their expertise to insure proper balance. Well-trained staff members are also required for operation and management. Consequently, the existing staff members need to be retrained, in their respective specialties.

(4) Promoting primary health care

Insuring adequate primary health care for the rural inhabitants requires improving facilities for public hygiene and the living environment as well as upgrading medical care facilities. An important issue in the promotion of primary health care is how to implement the said improvements, because other governmental agencies are involved with public hygiene and environmental matters. Thus, an organization encouraging interaction and cooperation among different authorities clearly needed.

(5) Cooperation with related programs

RHCs and BHUs, which provide primary health care to the local population, are closely related to such nation-wide programs as the Primary Health Care Project, Expanded Programmes of Immunization, Malaria Control Programme, and others. However these programs are currently being promoted independently by separate authorities without proper interaction.

In order to achieve good results from those programs, the officials concerned with the BHU/RHC Establishment Plan need to cooperate with the authorities involved in these programs, so that BHUs and RHCs can be Fully utilized for above-stated programs.

(6) Covering Operation and Maintenance Expenses

When the facilities and staff of a RHC or BHU are improved, operating and maintenance costs will clearly increase owing to the following factors: increased purchases of drugs and consumables, more effective maintenance of the buildings and equipment; effective maintenance and salaries for a larger staff. However, the operating costs estimates for RHCs and BHUs in the BHU/RHC Establishment Plan are too low to be applied to future operations. They were calculated on the bases of operating costs during 1985/86, before the Plan started. Operating costs should, therefore, be revised and the necessary budget secured.

All the problems noted above must be solved so as to obtain fruitful results from the BHU/RHC Establishment Plan, as distinct from the Project itself. Of course, these problems can not be solved in a short time, but, it is recommended that both the Federal and Provincial Governments continue their efforts toward this end.

Lastly, it would be desirable for the Government of Pakistan to conduct series of follow-up surveys on the activities of the facilities to be provided with the subject equipment together with the state of equipment usage, and refer to the results of such surveys in requesting a grant for the RHC/BHU Establishment Plan in the remaining three provinces.

APPENDIX

- 1) Organization of the Basic Design Study Team**
- 2) Survey Diary**
- 3) Minutes of Discussions**
- 4) List of Officials Interviewed**
- 5) Organization Charts**
- 6) List of Collected Data and Information**

1. Organization of the Basic Design Study Team

(1) Basic Design Study (18th. Jan. ~21th. Feb. 1988)

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|--------------------------------|--|
| 1) Team Leader | Dr. Hideaki Suzuki
Deputy Director of Hospital Guidance Division,
Health Policy Bureau,
Ministry of Health and Welfare |
| 2) Project Coordinator | Ms. Harumi Kitabayashi
First Basic Design Study Division ,
Grant Aid Planning and Survey Department,
Japan International Cooperation Agency |
| 3) Medical Equipment Planner-1 | Mr. Kenji Miyazaki
K. Ito. Architects and Engineers |
| 4) Medical Equipment Planner-2 | Mr. Takaharu Nishimi
K. Ito. Architects and Engineers |
| 5) Medical Equipment Planner-3 | Mr. Masato Utsunomiya
K. Ito. Architects and Engineers |
| 6) Facilities Planner | Mr. Koichi Suzuki
K. Ito. Architects and Engineers |

(2) Explanation of Draft Final Report (15th. Apr. ~25th. Apr. 1988)

- | | |
|------------------------------|---|
| 1) Team Leader | Dr. Hideaki Suzuki
Deputy Director of Hospital Guidance Division,
Health Policy Bureau,
Ministry of Health and Welfare |
| 2) Medical Equipment Planner | Mr. Kenji Miyazaki
K. Ito. Architects and Engineers |

2. Survey Diary

(1) Basic Design Study (18th Jan, —21st. Feb. 1988)

Team A : Dr. H. Suzuki (Leader) Ms. H. Kitabayashi
 Team B : Mr. K. Miyazaki Mr. K. Suzuki
 Team C : Mr. T. Nishimi Mr. H. Utsunomiya

DATE		TEAM	PLACE TO VISIT	ACTIVITIES
18 Jan.	Mon.	A. B. C	A.M. · Departure from Narita P.M. · Arrival at Islamabad	
19 Jan.	Tue.	A. B. C	A.M. · JICA Pakistan Office · Embassy of Japan P.M. · JICA Pakistan Office	· Courtesy call · Discussion on schedule
20 Jan.	Wed.	A. B. C	A.M. · Ministry of Health, Special Education and Social Welfare · Ministry of Planning and Development · Ministry of Finance and Economic Affairs	· Courtesy call · Explanation on inception report · Request to prepare necessary data and information
21 Jan.	Thu.	A. B. C	· Health Department, Gov. of Punjab Prov.	· Courtesy call · Explanation on inception report · Discussion on schedule · Request to prepare necessary documents and data
22 Jan.	Fri.	A. B. C	· Stay in Lahore	· Inspection of RHCs, BHUs, and T.H.Q. Hospitals
23 Jan.	Sat.	A. B. C	· Dental college in Lahore · Medical Equipment Repairing Workshop, Lahore	· Inspection · Inspection
24 Jan.	Sun.	A. B. C	· Health Department, Gov. of Punjab Prov.	· General discussion
25 Jan.	Mon.	A. B. C	A.M. · Health Department, Gov. of Punjab Prov.	· Discussion on consensus of the Minutes of Discussions
		A. B	P.M. · Leaving for Islamabad	
		C	P.M. · Stay in Lahore	· Team meeting

DATE		TEAM	PLACE TO VISIT	ACTIVITIES
26 Jan.	Tue.	A. B	A.M. • JICA Pakistan Office P.M. • Ministry of Health, Special Education and Social Welfare	• Progress reporting • Discussion on Consensus of the Minutes of Discussions
		C	A.M. • Leaving for Multan P.M. • Division Health Directorate Multan	• Discussion and collection of data
27 Jan.	Wed.	A. B	• Ministry of Health, Special Education and Social Welfare	• Discussion on consensus of the Minutes of Discussions
		C	• Sahiwal District	• Inspection of RHCs
28 Jan.	Thu.	A. B	A.M. • Stay in Islamabad	• Data assortment • Confirmation of investigation results
		A	P.M. • Departure from Islamabad	
		B	P.M. • Leaving for Lahore	
		C	• Vehari District	• Inspection of RHCs
29 Jan.	Fri.	A	• Arrival at Narita	
		B	• Leaving for Faisalabad	
		C	• Stay in Multan	• Data assortment • Schedule arrangement
30 Jan.	Sat.	B	• Division Health Directorate, Faisalabad	• Discussion and collection of data • Inspection of RHCs
		C	• Kanewal	• Inspection of RHCs
31 Jan.	Sun.	B	• Faisalabad District	• Inspection of RHCs
		C	• Nishitar Medical College, Multan • Multan Building Construction Office	• Inspection • Hearing about construction schedule of RHCs and BHUs
1 Feb.	Mon.	B	• Toba Tek Singh District	• Inspection of RHCs
		C	A.M. • Paramedical school, Sahiwal	• Discussion and collection of data
2 Feb.	Tue.	B	• Jhang District	• Inspection of RHCs
		C	A.M. • Leaving for Bahawalpur P.M. • Division Health Directorate • Paramedical School Bahawalpur	• Discussion and collection of data • Inspection

DATE		TEAM	PLACE TO VISIT	ACTIVITIES
3 Feb.	Wed.	B	A.M. • Leaving for Sargodha P.M. • Division Health Directorate, Sargodha • Paramedical School, Sargodha	• Discussion and collection of data • Inspection of RHCs
		C	A.M. • Leaving for Rahim Yar Khan P.M. • Rahim Yar Khan District	• Inspection of RHCs
4 Feb.	Thu.	B	A.M. • Bhalwal T.H.Q. Hospital P.M. • Sandkabad District	• Inspection • Inspection of RHCs
		C	A.M. • Rahim Yar Khan District • Sandkabad T.H.Q. Hospital	• Inspection of RHCs • Inspection
5 Feb.	Fri.	B	• Leaving for Khushab	
		C	• Leaving for Bahawalpur	
6 Feb.	Sat.	B	A.M. • Khushab District P.M. • Leaving for Kalabagh	• Inspection of RHCs
		C	• Bahawalpur District	• Inspection of RHCs
7 Feb.	Sun.	B	A.M. • Mianwali District P.M. • Leaving for Darya Khan	• Inspection of RHCs
		C	A.M. • Leaving for Bahawalnagar P.M. • Bahawalnagar District	• Inspection of RHCs
8 Feb.	Mon.	B	A.M. • Bhakkar District P.M. • Leaving for Faisalabad	• Inspection of RHCs
		C	A.M. • Bahawalnagar District P.M. • Haroon Abad T.H.Q. Hospital • Leaving for Multan	• Inspection of RHCs • Inspection
9 Feb.	Tue.	B	• Leaving for Lahore	
		C	A.M. • Division Health Directorate • Leaving for Lahore	• Discussion and collection of data
10 Feb.	Wed.	B.C	A.M. • Stay in Lahore P.M. • Health Department, Gov. of Punjab Prov.	• Data assortment • Collection of check lists and other data
			• Health Department, Gov. of Punjab Prov.	• Collection of data on provincial health care program • Collection of statistical data on health services

DATE		TEAM	PLACE TO VISIT	ACTIVITIES
12 Feb.	Fri.	B.C	• Stay in Lahore	• Schedule arrangement • Preparation of additional questionnaires
13 Feb.	Sat.	B.C	A.M. • Health Department, Gov. of Punjab Prov.	• Request to prepare additional data
		B	P.M. • Division Health Directorate	• Discussion and collection of data
		C	P.M. • Leaving for Rawalpindi	
14 Feb.	Sun.	B	• Kasur District	• Inspection of RHCs
		C	A.M. • Division Health Directorate	• Discussion and collection of data
			P.M. • Ministry of Health, Special Education and Social Welfare	• Discussion and collection of data • Request to prepare additional data
15 Feb.	Mon.	B	• Sheikhpura District	• Inspection of RHCs
		C	• Jhelum District	• Inspection of RHCs
16 Feb.	Tue.	B	• Okara District	• Inspection of RHCs
		C	• Attock District	• Inspection of RHCs
17 Feb.	Wed.	B	A.M. • Lahore District	• Inspection of RHCs
			P.M. • Health Department, Gov. of Punjab Prov.	• Discussion and collection of additional data
		C	• Chackwal District	• Inspection of RHCs
18 Feb.	Thu.	B	A.M. • Health Department, Gov. of Punjab Prov.	• Confirmation of Questionnaires
			P.M. Leaving for Islamabad	
		C	A.M. • Division Health Directorate Rawalpindi P.M. • Ministry of Health, Special Education and Social Welfare	• Discussion and Collection of data • Collection of additional data
19 Feb.	Fri.	B	• Stay in Islamabad	• Data assortment
		C	• Rowalpindi District	• Inspection of RHCs
20 Feb.	Sat.	B.C	A.M. • JICA Islamabad Office P.M. • Departure from Islamabad	• Progress reporting
21 Feb.	Sun.		• Arrival at Narita	

(2) Explanation of Draft Final Report(15th Apr. -25th Apr. 1988)

DATE		PLACE TO VISIT	ACTIVITIES
15 April	Fri.	A.M. · Departure from Narita P.M. · Arrival at Islamabad	
16	Sat.	· JICA Pakistan Office	· Discussion on schedule
17	Sun.	· Ministry of Health, Special Education and Social Welfare	· Explanation of Draft Final Report
18	Mon.	A.M. · Ministry of Finance and Economic Affairs P.M. · Embassy of Japan	· ditto · Courtesy Call
19	Tue.	A.M. · Leaving for Lahore P.M. · Health Department, Gov. of Punjab Prov.	· Explanation of Draft Final Report
20	Wed.	A.M. · ditto P.M. · Leaving for Islamabad	· Discussion and Confirmation on consensus of the Minutes of Discussions
21	Thu.	· Ministry of Health, Special Education and Social Welfare	· ditto
22	Fri.		· Team Meeting
23	Sat.	· Ministry of Health, Special Education and Social Welfare	· Signing of the Minutes of Discussions
24	Sun.	A.M. · Embassy of Japan P.M. · JICA Office · Departure from Islamabad	· Progress reporting · ditto
25	Mon.	· Arrival at Narita	

3. Minutes of Discussions

(1) Basic Design Study

THE MINUTES OF DISCUSSIONS
ON
THE PROJECT FOR THE ESTABLISHMENT OF BASIC HEALTH UNITS AND RURAL HEALTH
CENTRES IN PUNJAB PROVINCE IN THE ISLAMIC REPUBLIC OF PAKISTAN

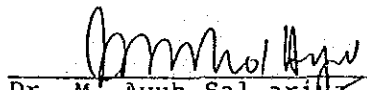
In response to the request of the Government of the Islamic Republic of Pakistan, the Government of Japan decided to conduct a basic design study on the Project for the Establishment of Basic Health Units and Rural Health Centres in Punjab Province and entrusted the study to the Japan International Cooperation Agency (JICA). JICA sent to Pakistan the basic design study team headed by Dr. Hideaki Suzuki, Deputy Director of Hospital Guidance Division, Health Policy Bureau, Ministry of Health and Welfare, from January 18 to February 21, 1988. The team had a series of discussions on the Project with officials concerned of Pakistan and conducted a field survey in Punjab Province.

As the result of the discussions and survey, both parties have agreed to recommend to their respective Governments to examine the major point of understandings reached between them, herewith attached, towards the realization of the Project.

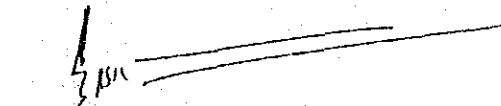
Islamabad 27 January, 1988



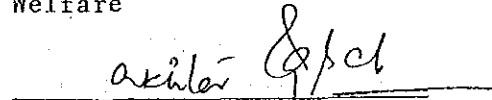
Dr. Hideaki Suzuki
Team Leader
Basic Design Study Team
Japan International
Cooperation Agency



Dr. M. Ayub Salariya
Additional Secretary
(Technical)
Health Department
Government of Punjab



Dr. Qazi Abdus Saboor Khan
Assistant Director General
Health Division
Ministry of Health,
Special Education & Social
Welfare



Mr. Akhtar Iqbal
Deputy Secretary
Economic Affairs Division
Ministry of Finance and
Economic Affairs

ATTACHMENT

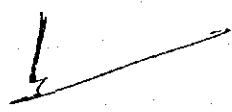
1. The objective of the Project is to improve the health and medical activities of Basic Health Units (BHU) and Rural Health Centers (RHC) in Pakistan (Punjab Province) which are being established under the Rural Health Program of Pakistan.
2. The principal function of BHU and RHC are respectively as follows:
 - 1) The BHU provides primary health care to inhabitants of a union council.
 - 2) The RHC too, provides primary care in a group of union councils and also acts as a midway house between secondary care hospitals and BHUs.
3. As a result of the discussions, the request of the Government of Pakistan regarding Punjab Province has been revised into such items of equipment as listed in Annex-1. The basic design study team will convey to the Government of Japan the request of the Government of Pakistan regarding Punjab Province. The team shall also convey to the Government of Japan the request of the Government of Pakistan for inclusion of X-ray unit and dental unit with X-ray which the Government of Pakistan very strongly feels to be provided but the team does not agree to include in the Project due to the Japanese law against radiation hazards.
4. The project sites ^{to be considered} are limited to BHUs and RHCs in Punjab Province that meet the conditions listed in Annex-2.
5. The feature and nature of equipment will be proposed by the team based on the results of analysis of data and information to be collected through the field survey in consultation with the Government of Pakistan.
6. The implementing authority of the Project is the Government of Pakistan through Government of Punjab Province. The Planning and Development Section of Ministry of Health, Government of Pakistan will take charge of the execution of administrative matters including contracts for the Project in consultation with the Government of Punjab Province represented by Additional Secretary (Technical), Health Department, Government of Punjab. But all necessary documents shall be signed by the Federal Government.
7. The Government of Pakistan and the Government of Punjab Province have understood the grant aid system of Japan explained by the team including the principle of use of Japanese consultant firm and trading firm in the implementation stage of the Project.
8. The Government of Punjab Province, together with the Federal Government will take necessary measures as listed in Annex-3, on condition that a grant aid by the Government of Japan is extended to the Project.

ANNEX _ 1 LIST OF EQUIPMENT REQUESTED

1. EQUIPMENT FOR RHCs

- (1) Ambulance with accessories for patient's transportation
- (2) Dental Unit with accessories (without X-ray)
- (3) Mobile Emergency Shadowless Light for Operation Theater
- (4) Binocular Microscope with allied lab tools
- (5) Stand-by generator for refrigerator and mobile emergency shadowless light
- (6) Diagnostic Set
- (7) Ambu-Resuscitation Kit
- (8) Blood Pressure Apparatus
- (9) Centrifuge

2. EQUIPMENT FOR BHUs

- (1) Binocular Microscope (mirror type) with allied lab. tools.
 - (2) Diagnostic Set
 - (3) Blood Pressure Apparatus
- 

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Michael R. Rye

ANNEX -2 CONDITIONS FOR PROVISION

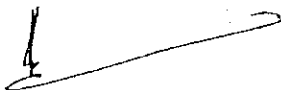
1. RHCs

- (1) Existing RHCs with completed buildings and those being upgraded, or new RHCs currently being constructed which are to be constructed/upgraded with adequate space, rooms for the equipment, under the Prime Minister's five-point program by March 31, 1989.
- (2) RHCs which are so far not equipped with the requested items by the Government of Punjab. The items provided under the grant aid by the Government of Japan should not duplicate the plan of procurement of various equipment by the Government of Pakistan.
- (3) As for dental unit, the RHCs with completed room with necessary infrastructures such as water supply drainage and electricity by June, 1988.
- (4) The Government of Pakistan requested that the date in (3) above should be December 1988, as Japan's fiscal year overlaps next fiscal year in Pakistan.
The team stated that, in order to complete the field survey, it is difficult to extend the date as requested by the Government of Pakistan.

2. BHUs

Existing BHUs with completed buildings or new BHUs currently being constructed.

3. The items under the grant aid by the Government of Japan are for exclusive use for RHCs and BHUs in Punjab.

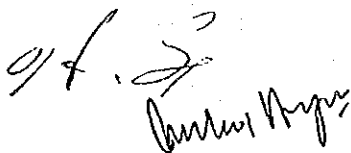
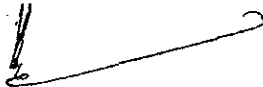


94. 3
Anwar Arif

ANNEX-3 UNDERTAKING OF PAKISTANI SIDE

The following arrangements will be taken by the Government of Punjab Province with cooperation extended by the Federal Government of Pakistan.

1. To complete construction and expansion of BHUs and RHCs including such building facilities as electricity, water and drainage.
2. To secure and station such staff members as medical doctors, dentists, nurses and other personnel required for the operation and maintenance of BHUs and RHCs.
3. To bear commissions to a Japanese foreign exchange bank based on the Banking Arrangement.
4. To bear all expenses necessary for transportation and installation of the equipment other than to be borne by the grant.
5. To ensure maintenance and proper and effective use of the equipment purchased under the grant.
6. To exempt or bear custom duties, taxes and other fiscal levies which may usually be imposed to products imported in the Republic of Pakistan.
7. To accord Japanese nationals whose services is required in connection with the supply of the products and services under a verified contract, such facilities as may be necessary for their entry into Pakistan and stay therein for the performance of their work.



(2) Explanation Of Draft Final Report

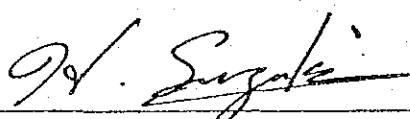
MINUTES OF DISCUSSIONS
ON
THE PROJECT FOR THE ESTABLISHMENT OF BASIC HEALTH UNITS AND
RURAL HEALTH CENTERS IN PUNJAB PROVINCE
IN
THE ISLAMIC REPUBLIC OF PAKISTAN

In response to the request made by the Government of the Islamic Republic of Pakistan, the Government of Japan decided to conduct a basic design study on the Project for the Establishment of Basic Health Units and Rural Health Centers in Punjab Province (hereinafter referred to as "the Project") and the Japan International Cooperation Agency (JICA) sent a basic design study team headed by Dr. Hideaki Suzuki, Deputy Director, Hospital Guidance Division, Health Policy Bureau, Ministry of Health and Welfare from January 18 to February 21, 1988.

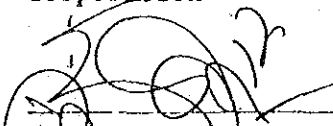
As a result of the study, JICA prepared a Draft Final Report and dispatched a team also headed by Mr. Hideaki Suzuki to explain it and discuss with the relevant authorities of the Government of Pakistan from April 15 to 25, 1988.

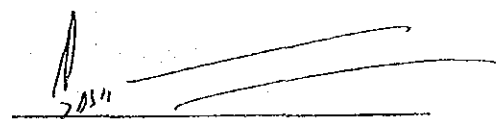
As a result of the discussions both parties agreed to recommend to their respective Governments that the major points of understanding reached between them, attached herewith, should be examined towards the realization of the Project.

April 23, 1988

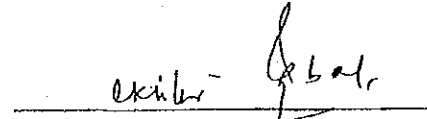


Dr. Hideaki Suzuki
Team Leader
Basic Design Study Team
Japan International
Cooperation

For 
Mr. Ijaz Ahmed Bhatti, Dy Secy,
Additional Secretary (Technical)
Health Department
Government of Punjab



Dr. Qazi Abdus Saboor Khan
Assistant Director General
Health Division
Ministry of Health, Special
Education & Social Welfare



Mr. Akhtar Iqbal
Deputy Secretary
Ministry of Finance and
Economic Affairs

ATTACHMENT

1. The Pakistani side has in principle agreed to the basic design proposed in the draft final report.
2. The Pakistani side has reconfirmed that the necessary measures should be taken by Pakistani side for the realization of the Project shown in Annex-3 as agreed upon in the Minutes of Discussions dated January 27, 1988.
3. The final report (10 copies) will be submitted to the Government of Pakistan by the end of June, 1988.

NOTE: The Pakistani side proposed to the Basic Design Study Team to reconsider including dental units and X-rays, if possible.

In reply, the Team expressed the inability to include them in the project due to the reasons given in the Report.

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exhibit 8/9
21/4/88

4. List of Officials Interviewed

1) Ministry of Health, Special Education and Social Welfare

Dr. Fazlur Rahman Khan	Secretary
Dr. Quazi Abdus Saboor Khan	Assistant Director General Health
Mr. Shahien Ashraf	Statistical Officer

2) Ministry of Planning and Development

Dr. Bashir ul Haq	Deputy Chief Health Section
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3) Ministry of Finance and Economic Affairs

Mr. Akhtar Iqbal	Deputy Secretary
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4) Health Department, Government of the Punjab

Mr. Pervaz Masud	Secretary
Dr. Mohammad Ayub Salariya	Additional Secretary
Dr. Z. A. Khan	Director Health Services Punjab
Mr. Ijaz Ahmad Bhatti	Deputy Secretary (Development) Health Department

5) Planning and Development Department, Government of the Punjab

Ch. Ghulam Qadir	Senior Chief ECA & H
------------------	----------------------

6) Division Health Directorate, Faisalabad

Dr. Mohammad Asghar Nayyar	Deputy Director Health Services, Faisalabad Division
Dr. Anwar Mohyiddin Chavdry	District Health Officer, Faisalabad
Dr. Masood Akhtar	District Health Officer, Toba Tek Shingh
Dr. Masood ur Rasul	District Health Officer, Jhang

7) Division Health Directorate Sargodha

Dr. Mohammad Saleem	Deputy Director Health Services Sargodha Division
Dr. Mohammad Nazir Ahmad	Assistant Director Health Services Sargodha Division
Dr. Mohammad Ashraf	District Health Officer, Sargodha

Dr. M. Mazhar Khan	District Health Officer, Khushab
Dr. Anwar. A. Bugvi	District Health Officer, Mianwali
Dr. M. Tahir Anis	District Health Officer, Bhakkar

8) Division Health Directorate, Lahore

Dr. M. Aslam Khan	Deputy Director Health Services, Lahore Division
Dr. Muhammad Afzal	Assistant Director Health Services, Lahore Division
Dr. Muhammad Rafique	District Health Officer, Kasur
Dr. Mohammad Anwar Khan	District Health Officer, Sheikhpura
Dr. Muhammad Sadiq	District Health Officer, Okara
Dr. Muhammad Rais	District Health Officer, Lahore

9) Division Health Directorate, Multan

Dr. Qauf Bes Hiaza	Deputy Director Health Services, Multan Division
Dr. Z. A. Wasti	Assistant Director Health Services, Multan Division
Dr. Ghulam Sarwar Mirza	District Health Officer, Multan
Dr. Khurshid Ahmad	District Health Officer, Sahiwal
Dr. Muhammad Rahim Paracha	District Health Officer, Vehari
Dr. Gardzi	District Health Officer, Khanewal

10) Division Health Directorate, Bahawalpur

Dr. Nisar Ahmad Bajwa	Deputy Director Health Services, Bahawalpur Division
Dr. S. Talib Hussain Shah	District Health Officer, Rahimyarkhan
Dr. Muhammad Iqbal Hussain	District Health Officer, Bahawalnagar
Dr. S. M. Dilbar Hassan	District Health Officer, Bahawapur

11) Division Health Directorate, Rawalpindi

Dr. Javaid Rasool Zar	Deputy Director Health Services, Rawalpindi Division
Dr. Major Mohammad Lateef	District Health Officer, Rawalpindi

- | | |
|--------------------|---------------------------------|
| Dr. Mushtaq Ahmad | District Health Officer, Attock |
| Dr. M. Afzal Malik | District Health Officer, Jhelum |
- 12) Medical Institutions
- | | |
|------------------------|---|
| Prof. M. Saleem Cheema | Principal, de Montmorency College
of Dentistry, Lahore |
| Dr. Faiz Ullah Khan | Principal, Paramedical School
Sargodha |
| Dr. Zamir Akhtarmirza | Principal, Paramedical School
Sahiwal |
| Dr. Ausat Hussain | Principal, Paramedical School
Bahawalpur |
- 13) Tehsil Head Quarter Hospitals
- | | |
|-------------------------|---|
| Dr. Mumtaz M. S. | Medical Superintendent, Bahawal
T.H.Q Hospital |
| Dr. Abdul Wahab | Medical Superintendent, Sandikabad
T.H.Q Hospital |
| Dr. M. Manzoor Ul Auqui | Medical Superintendent, Haroon Abad
T.H.Q Hospital |
- 14) Others
- | | |
|-----------------------|---|
| Mr. Muhammad Asghar | Director, Medical Equipment Repairing
Workshop, Lahore |
| Mr. Muhammad Ismail | Executive Engineer, Building
Construction Department, Multan |
| Dr. S. Wajih ul Hasan | Officer Incharge, Govt. Medical
Store Depot, Lahore |

15) Embassy of Japan

Mr. Shunji Kobayashi

Ambassador

Mr. Jiro Kobayashi

Minister

Mr. Shuji Obu

First Secretary

Mr. Shigeo Karimata

First Secretary

16) JICA Pakistan Office

Mr. Kazuo Tanigawa

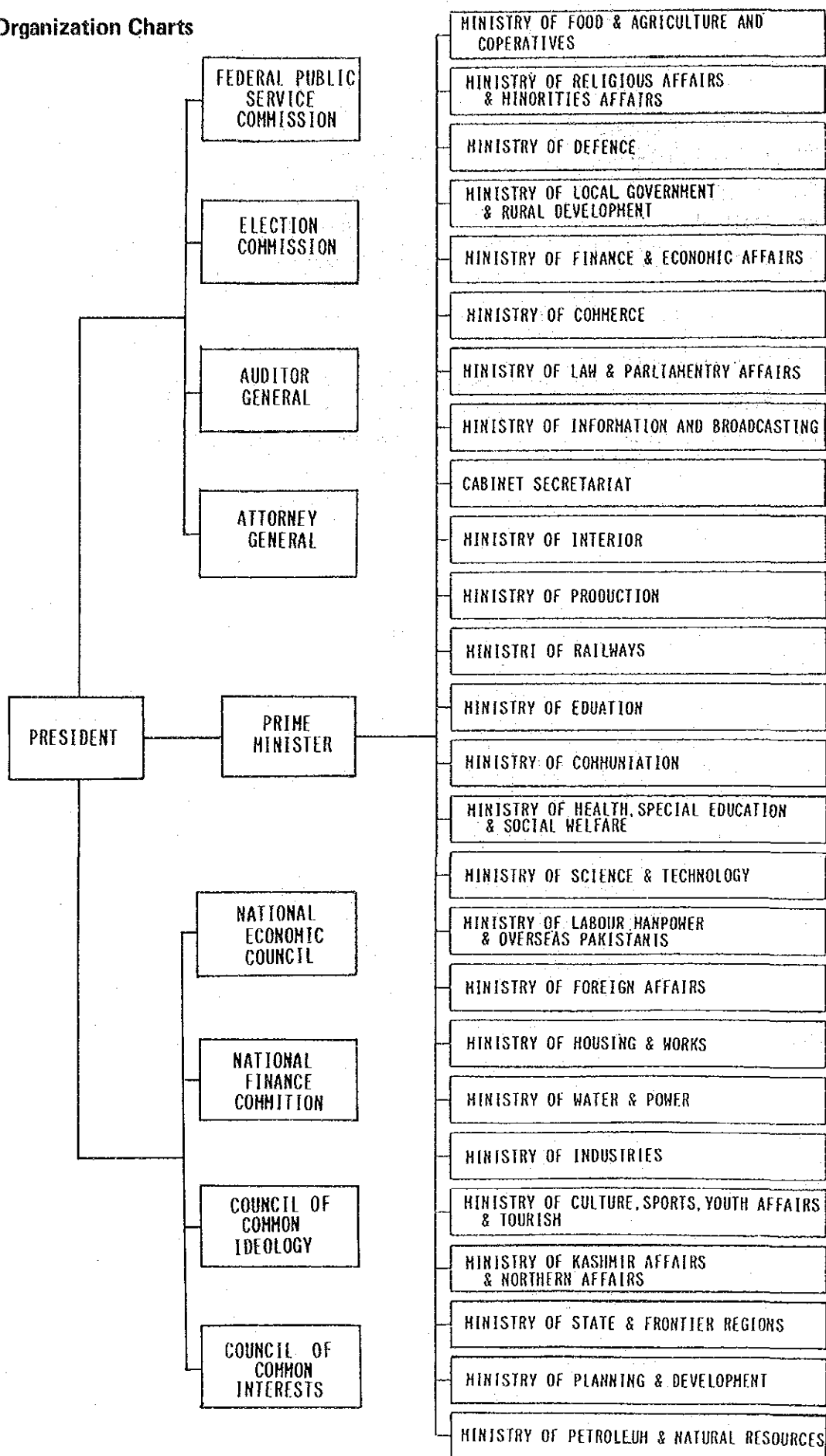
Resident Representative

Mr. Masaru Tateishi

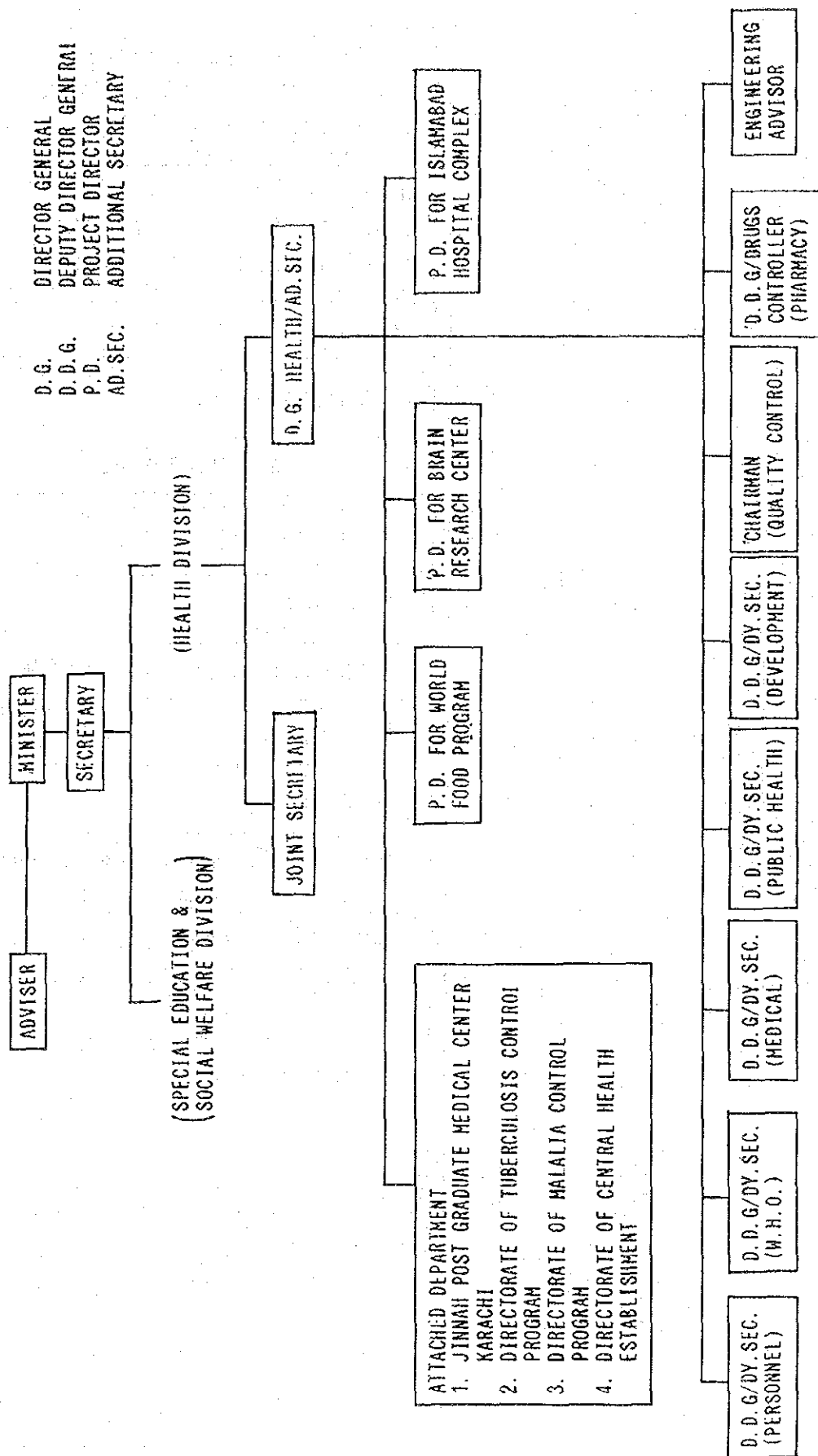
Assistant Resident Representative

5. Organization Charts

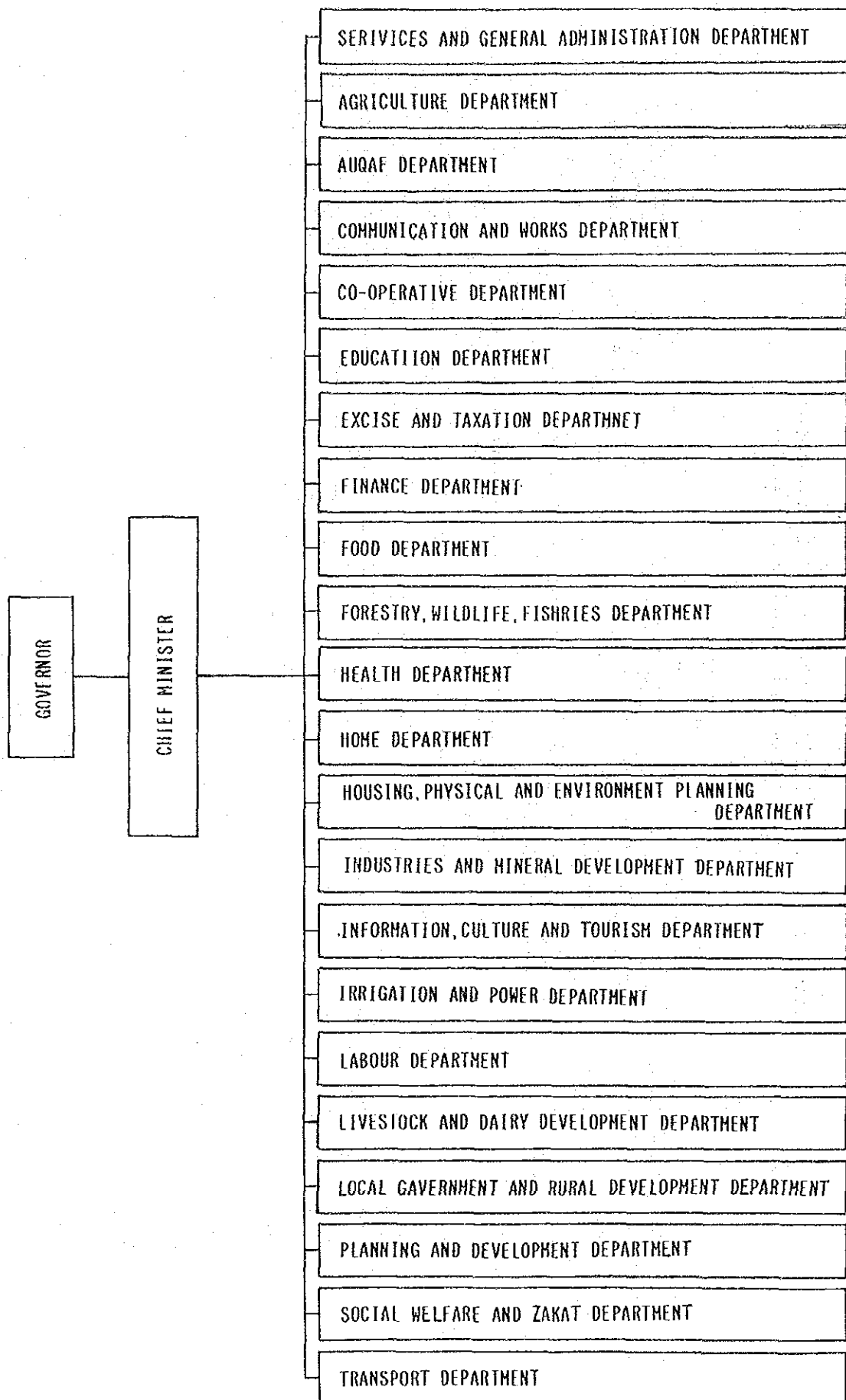
Organization Chart of the Federal Government of Pakistan



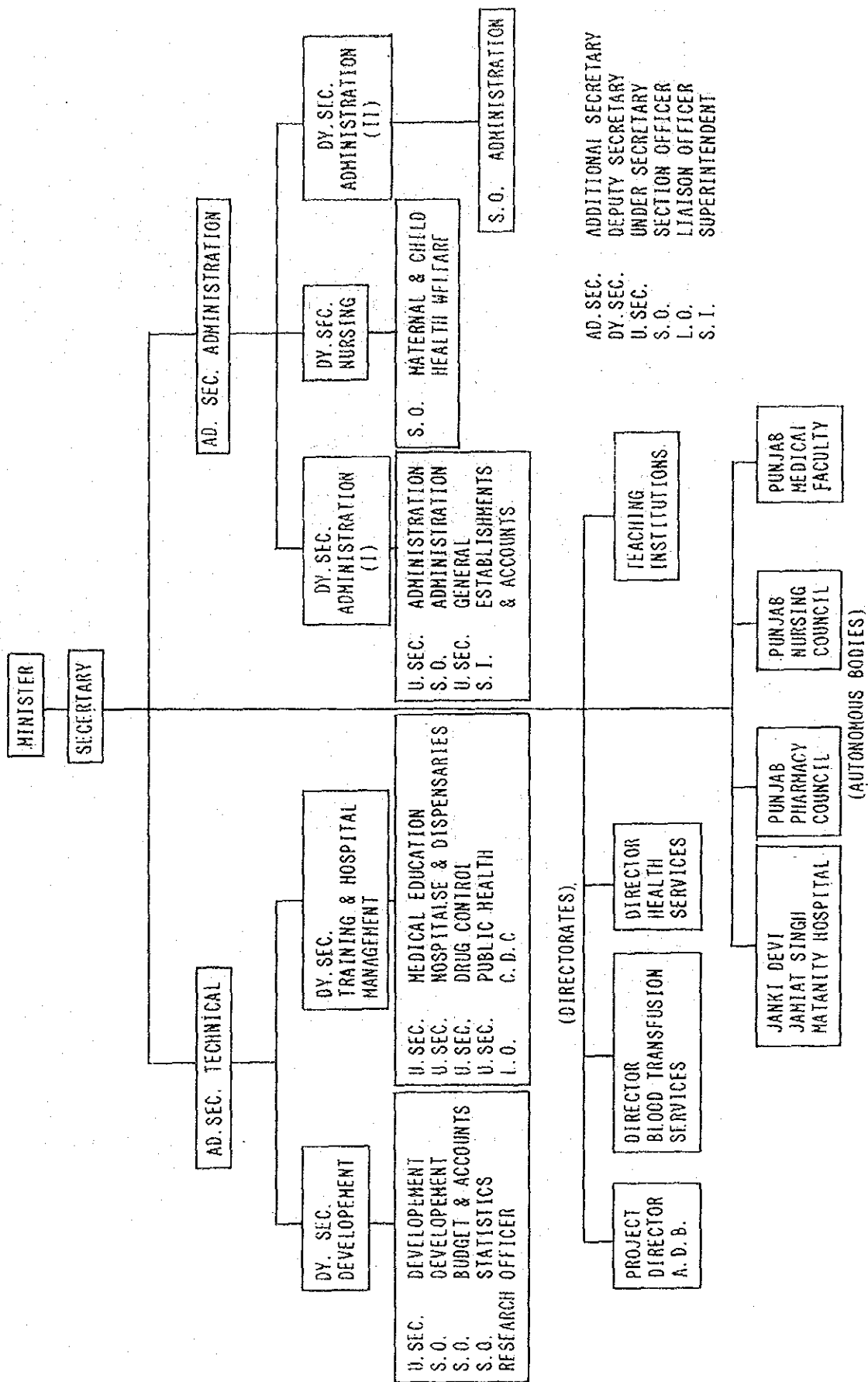
Organization Chart — Ministry of Health, Special Education and Social Welfare (Health Division)



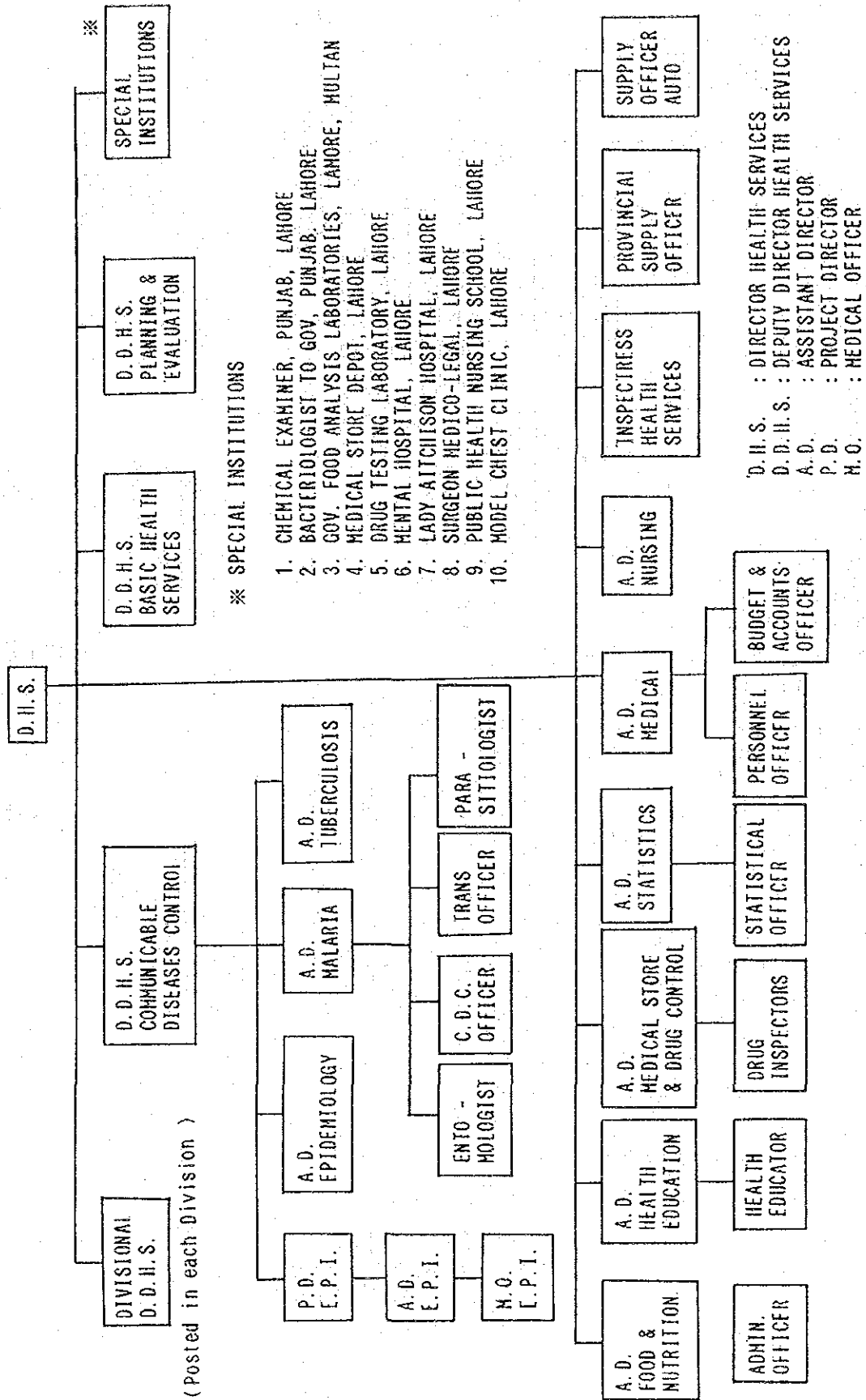
Organization Chart of the Provincial Government of Punjab



Organization Chart — Health Department, Government of the Punjab

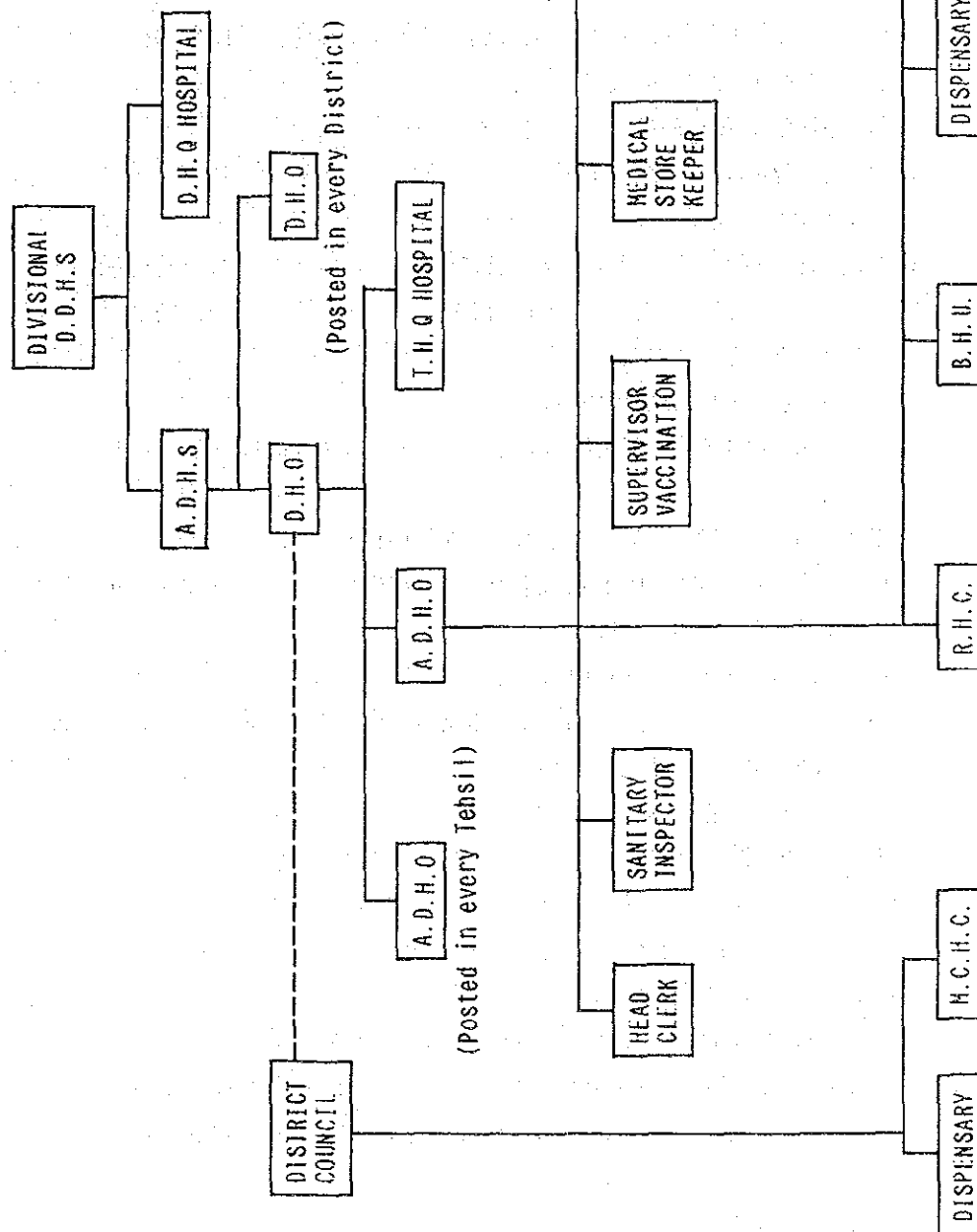


Organization Chart — Directorate Health Services, Punjab



Organization Chart — Division Health Directorate

D. D. H. S. : DEPUTY DIRECTOR
HEALTH SERVICE
A. D. H. S. : ASSISTANT DIRECTOR
HEALTH SERVICE
D. H. O. : DISTRICT HEALTH
OFFICER
A. D. H. O. : ASSISTANT DISTRICT
HEALTH OFFICER
D. H. Q. : DISTRICT HEAD
QUARTER
T. H. Q. : TEHSIL HEAD
QUARTER
R. H. C. : RURAL HEALTH CENTER
B. H. U. : BASIC HEALTH UNIT
M. C. H. C. : MATERNITY & CHILD
HEALTH CENTERS



6. List of Collected Data and Information

1. THE SIXTH FIVE YEAR PLAN (1983 — 88) :
PLANNING COMMISSION 1983
2. PAKISTAN REVIEW OF THE SIXTH FIVE-YEAR PLAN :
WORLD BANK Sep. 1984
3. PAKISTAN BUDGETS 1987-1988 :
ECONOMIC ADVISER'S WING, MINISTRY of finance, Oct. 1987
4. DETAILED ANNUAL PLAN 1987-1988 :
PLANNING COMMISSION MAY 1987
5. DETAILED ANNUAL PLAN 1986-1987 :
PLANNING COMMISSION MAY 1986
6. ANNUAL REPORT OF THE DIRECTOR GENERAL HEALTH Jul. 1983-Jun. 1984 :
HEALTH DIVISION, MINISTRY OF HEALTH · SPECIAL EDUCATION AND
SOCIAL WELFARE 1985
7. RURAL HEALTH PROGRAMME OF PAKISTAN :
PLANNING AND DEVELOPMENT DIVISION, MINISTRY OF PLANNING AND
DEVELOPMENT July 1986
8. EVALUATION OF THE RURAL HEALTH PROGRAMME IN PAKISTAN :
PLANNING AND DEVELOPMENT DIVISION, MINISTRY OF PLANNING AND
DEVELOPMENT NOV. 1984
9. STATISTICAL POCKET BOOK OF PAKISTAN 1987 :
FEDERAL BUREAU OF STATISTICS, STATISTICS DIVISION, MINISTRY OF
FINANCE AND ECONOMIC AFFAIRS MAY 1987
10. PUNJAB DEVELOPMENT STATISTICS 1986 :
BEREAU OF STATISTICS, GOV. OF THE PUNJAB NOV. 1986
11. 1986 STATISTICAL POCKET BOOK OF THE PUNJAB :
BEREAU OF STATISTICS, GOV. OF THE PUNJAB NOV. 1986
12. PUNJAB DENTAL JOURNAL 1986-1987 :
de' MONTHORENCY COLLEGE OF DENTISTRY 1986
13. BASIC HEALTH UNITS AND RURAL HEALTH CENTRES IN RURAL PAKISTAN :
PLANNING AND DEVELOPMENT DIVISION, MINISTRY OF PLANNING AND
DEVELOPMENT 1986
14. ECONOMIC SURVEY 1986-1987 :
ECONOMIC ADVISER'S WING, MINISTRY OF FINANCE June 1987

15. 1981 CENSUS REPORT OF PAKISTAN Vol.10. :
STATISTICS DIVISION, MINISTRY OF FINANCE AND ECONOMIC AFFAIRS
Dec. 1984
16. CURRENT MEDICAL RESERCH AND OPINION :
N.B CLAYTON BSC Nov. 1986
17. S&T DEVELOPMENT IN PAKISTAN 1987 :
PAKISTAN COUNCIL FOR SCIENCE AND TECHNOLOGY, MINISTRY OF SCIENCE
AND TECHNOCOGY 1987
18. S&T MANPOWER DEVELOPMENT IN PAKISTAN "A CRITICAL APPRAISAL" 1985 :
PAKISTAN COUNCIL FOR SCIENCE AND TECHNOLOGY
MINISTRY OF SCIENCE AND TECHNOLOGY 1985
19. GUIDE BOOK GOVERNMENT OF THE PUNJAB HEALTH DEPARTMENT :
HEALTH DEPARTMENT, GOV. OF THE PUNJAB Jan. 1983
20. REPORT OF THE WORKING GROUPS ON SEVENTH AND PERSPECTIVE PLANS
"HEALTH AND NUTRITION SECTOR " :
PLANNING AND DEVELOPMENT DIVISION
MINISTRY OF PLANNING AND DEVELOPMENT Dec. 1986
21. PAKISTAN STATE OF THE ECONOMY :
INSTITUTE OF POLICY STUDIES 1986
22. PAKISTAN RURAL WATER, HEALTH AND SANITATION SECTOR REVIEW :
WORLD BANK FEB. 1988
23. PROSPECTS OF THE PARAMEDICAL SCHOOLS IN THE PUNJAB :
HEALTH DEPARTMENT, GOV. OF THE PUNJAB 1987
24. REGULATIONS FOR THE DEGREE OF BACHELOR OF DENTAL SURGERY :
PAKISTAN MEDICAL AND DENTAL COUNCIL
25. ATLAS OF HEALTH FACILITIES
PLANNING AND DEVELOPMENT DIVISION, MINISRY OF PLANNING AND
DEVELOPMENT June 1986
26. MAP OF PAKISTAN, 1981
SURVEY OF PAKISTAN 1981
27. ISLAMABAD/RAWALPINDI GUIDE MAP, 1985
SURVEY OF PAKISTAN 1985
28. MAP OF PUNJAB
SURUEY OF PAKISTAN 1984

29. TECHNICAL ASSISTANCE TO THE ISLAMIC REPUBLIC OF PAKISTAN FOR THE
THIRD HEALTH AND POPULATION PROJECT

ASIAN DEVELOPMENT Bank May 1986

30. DELEGATION OF POWERS UNDER THE FINANCIAL RULES

FINANCE DEPARTMENT, GOV. OF THE PUNJAB APRIL 1983

31. PRIMARY HEALTH CARE IN PAKISTAN

PLANNING AND DEVELOPMENT DIVISION

MINISTRY OF PLANNING AND DEVELOPMENT May 1983

32. DRAWINGS OF RHCs

ARCHTECTURE DEPARTMENT, GOV. OF THE PUNJAB

