

## 資料編 I

1. 調査団の派遣
2. ミニッツ
3. 質疑解答
4. 機材リスト
5. ボーリングデータ
6. 類似施設の現況



## 1. 調査団の派遣

本プロジェクトの計画・設計に当たり、基本設計調査のため下記調査団が派遣された。

## 1) 調査団の構成

## □ 基本設計調査団 (1984年8月2日～8月21日)

団長	細野 豊	国際協力事業団無償資金協力部
医療技術者訓練計画	小島 健一	新潟大学医療技術短期大学部
看護婦訓練計画	大嶽 泰子	(前)武蔵野赤十字病院看護部
看護教育計画	志摩チヨ江	財団法人国際看護交流協会
計画管理	勝田 幸秀	国際協力事業団研修事業部研修第二課
建築計画	石原 和夫	(株)久米建築事務所
建築設計	榎本 繁	"
設備計画	堀江 宣男	"
資機材計画	加藤 彰一	"

## □ 基本設計確認調査団 (1984年10月8日～10月17日)

団長	小島 健一	新潟大学医療技術短期大学部
計画管理	寺西 義英	国際協力事業団 無償資金協力部基本設計課
建築計画	石原 和夫	(株)久米建築事務所
建築設計	榎本 繁	"
	加藤 彰一/金井 憲一	"

2) 調査協力者

本件の調査に当たり、下記の方々に御協力頂いた。

パキスタン側関係者

・ EAD(Economic Affairs Division)

Mr. F. I. Malik : Joint Secretary (無償担当)  
Mr. M. Faheem : Deputy Secretary (無償担当)  
Mr. Anwarul Haque : Section Officer (無償担当)

・ MOH(Ministry of Health)

Prof. Dr. Basharat Jazbi : Minister  
Mr. Iqbal Masud : Secretary  
Mr. S. H. Rizvi : Joint Secretary  
Commodore M. Mohsin Pal : Director General,  
Health Additional Secretary  
Brig (Rtd) Tanwir-UI-Haq : Project Director, IHC  
Mr. Iqbal Ahmad : Engineering Advisor, MOH  
Dr. Mrs. S. B. Agha : Deputy Director General (Development)  
Ms. G. P. Khakwani : Nursing Superintendent, IHC  
Mrs. Kaniz Mowla : Nursing Advisor

日本側関係者

・ 在パキスタン日本大使館 梁井 新一 大使  
杉野 明 公使  
田口 悟 一等書記官  
・ JICAイスラマバード事務所 和田 欽次郎 所長

## 3) 調査団行程

□ 基本設計調査（1984年8月2日～8月22日）

日順	月日	曜日	行 程	調 査 内 容
1.	8/2	木	16:50 ↓	成田空港発 ↓ LH649 (バンコク経由)
2.	8/3	金	01:20 07:00 ↓ 08:55 09:30-11:00 14:00-17:00	カラチ空港着 カラチ空港発 ↓ PK300 イスラマバード空港着 JICA 和田所長と打合せ 団内打合せ
3.	8/4	土	09:00-11:30 12:00-14:00 16:00-18:00	IHC 小児病院視察 建設予定地踏査 資料整理
4.	8/5	日	09:00-11:00 11:00-11:45 11:45-12:30 12:30-14:30 15:30-17:00	日本大使館表敬 Economic Affairs Division 表敬 Planning & Development Division 表敬 Ministry of Health 表敬/第1回打合せ IHC Project Director 第1回打合せ
5.	8/6	月	09:00-11:30 14:00-17:00	IHC Project Director 第2回打合せ 団内打合せ (追加質疑書/機材リスト)
6.	8/7	火	08:30-12:30 14:30-17:00	IHC 総合病院視察 MOH 第2回打合せ
7.	8/8	水	08:30-12:00 12:00-14:00 15:00-17:00	National Institute of Health 調査 Rawalpindi 総合病院調査 IHC Project Director 第3回打合せ
8.	8/9	木	08:30-11:30 11:30-13:00 14:30-15:30 16:00-20:00 23:00-24:00	Central Gov't Poly Clinic 調査 Holy Family 病院調査 MOH 次官に中間報告 団内打合せ 堀江団員合流打合せ
9.	8/10	金	10:05 ↓ 11:55 14:00-18:00	イスラマバード空港発 ↓ PR301 カラチ空港着 市場調査/団内打合せ

調査団の派遣

日順	月日	曜日	行 程	調 査 内 容
10.	8/11	土	09:00-11:30 11:30-12:00 12:00-13:00 13:00-14:30 18:00 ↓ 20:10	JPMC School of Nursing, College of Nursing 調査 JPMC School of Physiotherapist 調査 College of Physicians & Surgeons 調査 Agakhan Univ. School of Nursing 調査 カラチ空港発 ↓ PK306 ラホール空港着
11.	8/12	日	08:30-10:30 10:30-11:30 11:30-12:30 12:30-13:30 18:55 ↓ 20:00	Mayo Hospital 及び看護学校調査 州庁舎にて保健局長に会見 Public Health School 調査 Punjab Medical Faculty 調査 ラホール空港発 ↓ PK656 イスラマバード空港着
12.	8/13	月	09:00-11:00 11:00-12:00 12:00-14:30 14:30-16:30	IHC Project Director 第4回打合せ MOH にて保健大臣に会見 IHC Project Director 第5回打合せ ファイナルドラフトミニッツ作成
13.	8/14	火	午前	施設見学
14.	8/15	水	08:30-15:00 16:00-17:30	ミニッツ準備 ミニッツ署名
15.	8/16	木	10:00-12:30 14:30-17:00 19:05	大使館報告 国内打合せ 細野団長、小島、大嶽、志摩、勝田団員帰国
16.	8/17	金	終日	資料整理
17.	8/18	土	09:00-12:30 14:00-16:00	建設予定地踏査 家具工場視察
18.	8/19	日	09:00-11:00 11:00-12:00 14:00-17:00	IHC Project Director 第6回打合せ 国立モスク建設現場視察 資料整理
19.	8/20	月	09:00-12:30 14:00-15:30 19:05 ↓ 21:00	IHC Project Director 第7回打合せ 大使館及び JICA 報告 イスラマバード空港発 ↓ PK309 カラチ空港着
20.	8/21	火	04:45	カラチ空港発 ↓ LH646/JL468 成田空港着

## □ 基本設計確認調査（1984年10月8日～10月17日）

日順	月日	曜日	行 程	調 査 内 容
1.	10/8	月	19:40	成田発 SR195 便（カラチ経由）
2.	10/9	火	09:00 11:00-12:00 午後	イスラマバード着（PK300） 大使館及び JICA 表敬 団内打合せ
3.	10/10	水	09:00-10:45 10:00-11:00 11:00-12:10 午後	EAD 表敬 MOH 表敬 IHC P. D. 第1回打合せ 資料整理、団内打合せ
4.	10/11	木	09:00-12:30 14:00-15:00 15:30-18:30	IHC P. D. 第2回打合せ IHC P. D. 第3回打合せ 敷地調査／大使館 JICA 打合せ
5.	10/12	金		市内視察
6.	10/13	土	午前 午後	図面修正、 市場調査、団内打合せ
7.	10/14	日	08:30-09:30 10:00-12:00 14:30-18:00	大使館打合せ IHC P. D. 第4回打合せ IHC エンジニア打合せ
8.	10/15	月	09:00-10:30 10:30-12:00 14:30-15:00 15:00-16:00	EAD 打合せ（ミニッツ下打合せ） MOH 打合せ EAD. ミニッツ調印 大使館及び JICA 報告
9.	10/16	火	午前 19:05  21:00	資料整理／大使館 JICA 打合せ イスラマバード発 ↓ PK309 カラチ空港着
10.	10/17	水	00:25  15:30	カラチ空港発 ↓ JL472 成田空港着

ミニッツ

## 2. ミニッツ

Minutes-1 基本設計調査時 (1984年 8月15日署名)

Minutes-2 基本設計確認調査時 (1984年10月15日署名)



Minutes of Discussions

ミエツツ

on

The Establishment of  
The College of Nursing & Para Medical Institute  
in the Islamic Republic of Pakistan

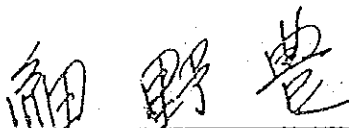
In response to the request made by the Government of the Islamic Republic of Pakistan for the establishment of the College of Nursing and Para Medical Institute (hereinafter referred to as "the Project"), the Government of Japan has sent, through the Japan International Cooperation Agency (hereinafter referred to as "JICA"), a team headed by Mr. Yutaka HOSONO, Deputy Director of Grant Aid Department, JICA, to conduct a basic design study from August 3rd to August 21st, 1984. The team has carried out field surveys, held a series of discussions and exchanged views with the authorities concerned of the Project.

Study Team visited institutions shown in Annex V to conduct surveys into related facilities and to hold discussions with responsible officials of the institutions.

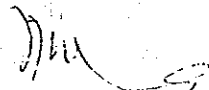
As the result of the study and discussions, both parties have agreed to recommend to their respective Governments to examine the results of the study attached herewith towards the realization of the Project.

August 15th 1984

Islamabad



Mr. Yutaka Hosono  
Team Leader  
Basic Design Study Team  
JICA

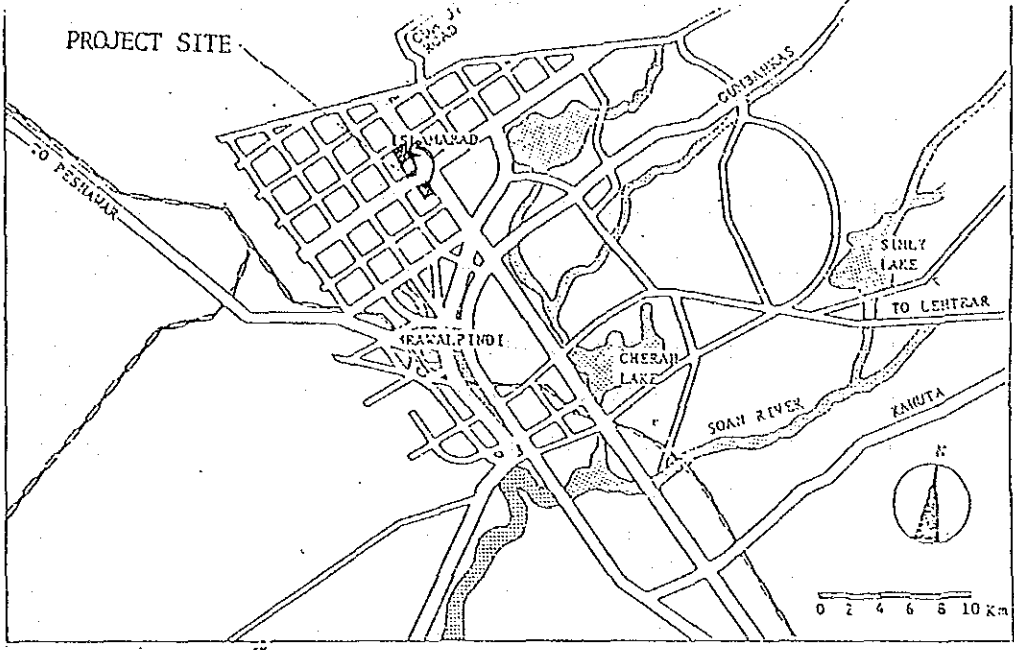


Mr. F. I. Malik  
Joint Secretary  
Economic Affairs Division  
Government of Pakistan

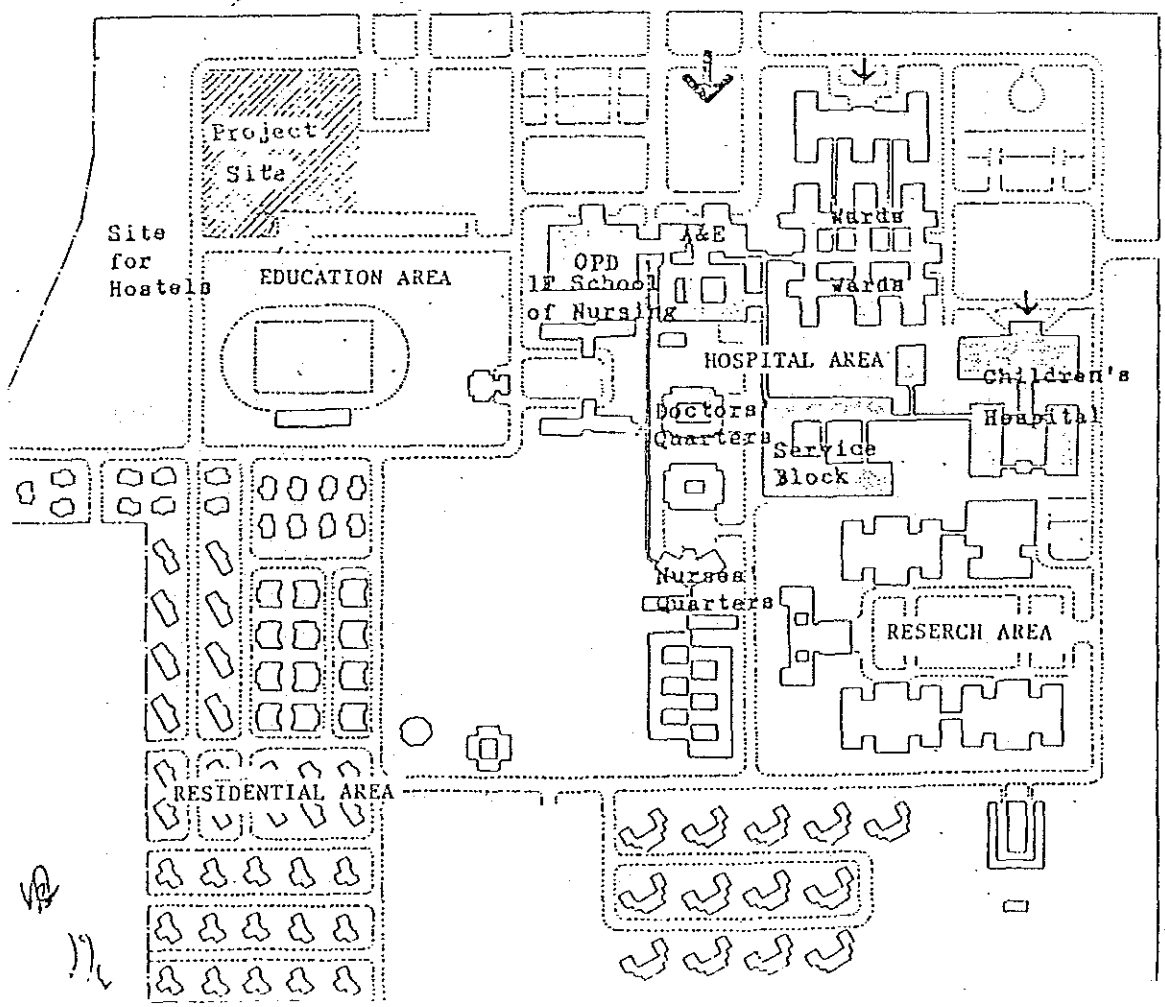
ATTACHMENT

1. The objective of the College of Nursing & Para Medical Institute Project is to train skilled nurses and para medical staff and impart necessary knowledge and techniques, thus contributing to the development of health services of Pakistan.
2. The scope of the Project is to provide necessary building, facilities and equipment for the College of Nursing & Para Medical Institute (hereinafter referred to as "the Institutions").
3. The proposed site of the Project is located in the Islamabad Hospital Complex, the possession of which is with the Ministry of Health, Government of Pakistan (hereinafter referred to as "the Project Site"). The location of the Project Site is shown in Annex I.
4. The Pakistan side proposed to conduct training courses in the Institutions as shown in Annex II.
5. The Japanese Survey Team will convey to the Government of Japan the desire of the Government of Pakistan that the Government of Japan take necessary measures to co-operate in implementing the Project and provide the building and other items listed in Annex III within the scope of Japanese economic cooperation programme in grant form.
6. The Government of Pakistan have understood Japan's grant aid system explained by the Japanese Survey Team which includes principle of the use of a Japanese Consultant Firm and a Japanese General Contractor for implementation of the Project.
7. The Government of Pakistan will take necessary measures listed in Annex IV on condition that the grant aid by the Government of Japan is extended to the Project.
8. The Government of Pakistan requests that under the Japanese Technical Cooperation programme, through JICA, necessary teaching staff may be sent from Japan for the two institutions and Pakistani teaching staff may also be trained in Japan for a period of six to twelve months.

ANNEX I



- UNDER CONSTRUCTION
- PLANNING FACILITIES



College of Nursing

<u>Speciality training of following disciplines</u>	<u>No. of Students</u>
1. Nursing in Paediatrics	20 (one year)
2. Nursing in Operation Theatre Techniques	10 (one year)
3. Nursing in Anesthesia	10 (one year)
4. Nursing in Intensive/Coronary Care	10 (one year)
5. Public Health Nursing	20 (one year)
6. Nursing in Neuropsychiatry	19 (one year)
7. Teachers for basic training schools	50 (25 x two year)
<hr/>	
Total	130

Para Medical Institutes

<u>Field</u>	<u>No. of Students</u>
1. Broad based technicians	40 (one year)
2. Operation Theatre Technicians	10 (one year)
3. X-Ray technicians	40 (20 x two year)
4. Physiotherapists	60 (20 x three year)
5. Orthoptists	10 (one year)
6. Dental Hygienists	10 (one year)
7. Dietary Technicians	10 (one year)
8. Medical Electronics & Engineering Technicians	5 (one and half year)
<hr/>	
Total	185

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 10/11  
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ANNEX III

Items requested for the Project by the Government of Pakistan.

A. Facilities

1. College of Nursing

- Lecture Rooms
- Practical Training Rooms (types are shown with Equipments)
- Preparatory Rooms
- Director Room
- Instructor Rooms
- Audio-Visual Rooms
- Student W.C.
- Instructor W.C.
- Storage
- Meeting Rooms
- Miscellaneous

2. Para Medical Institute

- Lecture Rooms
- Practical Training Rooms (types are shown with Equipments)
- Preparatory Rooms
- Director Room
- Instructor Rooms
- Audio-Visual Rooms
- Student W.C.
- Instructor W.C.
- Storage
- Meeting Rooms
- Miscellaneous

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3. Common Space

- Office - Registrar's - Board of Examination
  - Superintendent
  - Clerks
- Library
- Stack Room
- Large Lecture Hall for 200 students
- Cafeteria
- Kitchen
- General Administration Office
- Production Room
- Miscellaneous

B. Equipment

Related equipment for the project is shown below together with types of Practical Training Rooms where most of them shall be installed.

3/12 2

List of Equipment Disciplines	Equipment
No. Basic Nursing	Model Ward Equipment listed on attached sheets Sheet 10. Specimen Model Sheet 11. Nursing Education (Basic) Sheet 12. Nursing Education (Special)
N1. Nursing in Paediatrics	Model NICU to be combined with Model ICU.CCU and to be attached to Model Ward Incubator Photo Therapy Unit Resuscitator for Infant
N2. Nursing in Operation Theatre Techniques	Corner of Model ICU.CCU shall be used in Practical Training with Operating Instrument Set Instrument Tray Instrument Trolley Compact High Speed Sterilizer Hot Air Sterilizer
N3. Nursing in Anesthesia	Corner of Model ICU. CCU shall be used in Practical Training with Anesthesia Apparatus Anesthetic Ventilator Endotracheal Tube Set Rubber Masks
N4. Nursing in Intensive/ Coronary Care	Model ICU. CCU ICU bed Bed Side Monitor Central Monitor Defibrillator Resuscitator Suction Unit X-Ray Film Illuminator Haemodialysis Unit Peritonium-dialysis Unit

310

11

- N5. Public Health Nursing
  - Mobile Dispensary
  - Visiting Bag
- N6. Nursing in Neuropsychiatry
- N7. Teachers for basic training schools
  - Audio-Visual Room with
    - Video Set (video-tapes)
    - Overhead Projector
    - Slide Projector
    - Tape Recorder
    - Record Player
  - Production Room with
    - Plain Paper Copier
    - Printing Machine
  - Dark Room with
    - Photographic Developing & Printing Set
- P1. Broad Based Technician
  - Clinical Laboratory with
    - Slide Staining Set
    - Large Sledge Microtome
    - Incubator
    - Electro-Balance
    - Counter Balance
    - Monocular Microscope for Student
    - Binocular Microscope for Instructor
    - Microscope for Instructions
    - Magnetic Stirrer
    - Water Bath
    - General Laboratory Centrifuge
    - Micro Centrifuge for Cell Washing
    - Haematocrit Centrifuge
    - Micro Titer System
    - Gas Pack System
    - pH Meter
    - Hand Protein Refractometer
    - Pump
    - Electrophoresis Equipment Unit
    - Densitometer

3/12  
7/12



- UV -VIS Spectrophotometer 9
- Deep Freezer
- Flame Photometer
- Diposal Microtome Blade Set
- Low Temperature Cabinet (Refrigerator)
- Hemacytometer
- Cell Counter and Slides
- Autostill

- Physiological Laboratory with
  - ECG
  - EEG
  - Polygraph
- Chemistry Laboratory

P2. Operation Theatre Technicians

to use the same equipment provided for N2. Operation Theatre course in the College of Nursing.

P3. X-Ray Technician

- Model X-Ray Room with
  - Diagnostic X-ray Apparatus
  - X-Ray Film Illuminator
- Model Dark Room with
  - Table Top Automatic Film Processor
  - Film Processing Set

P4. Physiotherapists

- Model Rehabilitation Room with
  - Micro Wave Therapy Apparatus
  - Infrared Ray Lamp
  - Heat-Less Ultra Violet Ray Lamp
  - Hirschmann's Galvanic and Faradic Apparatus
  - Exercise Bicycle
  - Wrist Roll
  - Training Bed
  - Paraffin Bath Unit
  - Over Head Frame
  - Turning Wrist
  - Restorator

*Handwritten scribbles*

P5. Orthoptists	Practice Room with Instrument Set Eye Test Chart (1.Distant 2.Near 3.Color Vision) Refracting Eye Test Unit Trial Frame Set of Trial Lens Measure Model Dark Room with Ophthalmoscope Indirect Ophthalmoscope Tonometer Refractometer Perimeter Slit Lamp Microscope	10
P6. Dental Hygienists	Practice Room with Dental Treatment Unit with Chair Instrument Set	
P7. Dietary Technicians	Practice Room with Cooking Unit Show Case and Models	
P8. Medical Electronics and Engineering	Workshop with Electronic Tester Oscilloscope Vise Lathe Set of Tools	
Common	Furniture and Books defined as Tools of Training	

2/10  
17  
13

## 10. Specimen Model

- 1001 Anatomical Human Body (Articulated & Disarticulated)
- 1002 Human Skeleton (Articulated & Disarticulated)
- 1003 Circulatory System
- 1004 Skull
- 1005 Anatomical Heart
- 1006 Respiratory Organs
- 1007 Digestive Organs
- 1008 Brain and Nervous System
- 1009 Muscle
- 1010 Section of Skin
- 1011 Structure of Eye/Ear
- 1012 Structure of Teeth
- 1013 Structure of Nasal Cavity/Throat/Pharynx
- 1014 Kidney and Urinary System
- 1015 Pelvis
- 1016 Pregnant Uterine
- 1017 Development Stages of Foetus
- 1018 Conception Control Training
- 1019 Conception System
- 1020 Parasites in Human Body
- 1021 Feces of Child
- 1022 Trachoma
- 1023 Alveolar Pyorrhea
- 1024 Pathogenic Microbes
- 1025 Show Cases for Models
- 1026 Anatomical Charts

2/10  
1

11. Nursing Education (Basics)
- 1101 Gatch Bed
- 1102 Standard Bed
- 1103 Paediatric Bed
- 1104 Neo Natal Bassinet
- 1105 Incubator for Premature Baby
- 1106 Bed Side Table/Chair
- 1107 Over Bed Table
- 1108 Training Dummy
- 1109 Training Dummy for Stomach Pump
- 1110 Training Dummy for Dressing
- 1111 Training Dummy for Baby Bath
- 1112 Baby Bath Tub
- 1113 Measuring Rod (Adult/Child)
- 1114 Weighing Scale (Adult/Child)
- 1115 Sitting Height Measuring Rod
- 1116 Shampoo Cart, Bed Bath Cart
- 1117 Shampoo Tray
- 1118 Back Rest
- 1119 Over-bed Cradle
- 1120 Wheel Chair
- 1121 Stretcher
- 1122 Invalid Walker
- 1123 Litters
- 1124 Splint
- 1125 X-ray Fil Viewer
- 1126 Phantom
- 1127 Spirometer
- 1128 Dynamometer
- 1129 Back Dynamometer
- 1130 Sphygmomanometer
- 1131 Pelvimeter
- 1132 Traube's Stethoscope
- 1133 Oxygen Flow Meter
- 1134 Oxygen Density Meter
- 1135 Oxygen Inhalation Device
- 1136 Nebulizer
- 1137 Round Sitting Sandbag

- 1138 Examination Instrument Set  
Stethoscope  
Eye Speculum  
Tongue Forcep  
Hammer for Tendon  
Perception Test Sect  
Measure etc.
- 1139 Enema Set
- 1140 Syringe Set  
Hypodermic Injection  
Intra Venous Injection  
Intra Venous Feeding  
Large Amount Hypodermic etc.
- 1141 Temperature Taking Set
- 1142 Medication Tray Set
- 1143 Set for Face Washing & Bed Bath
- 1144 Set for Baby Bath
- 1145 Set for Milk Preparation
- 1146 Set for Stomach Pump
- 1147 Blade Holders and Blades, assorted
- 1148 Knives, assorted
- 1149 Catheters, assorted
1150. Forceps, assorted
- 1151 Hooks, assorted
- 1152 Ear Scope, Nasal Scope
- 1153 Proctoscope, Vaginascope
- 1154 Boiling Sterlizer
- 1155 Gauze Sterlizer
- 1156 Water Boiler
- 1157 Irrigator Stand
- 1158 Bedpan Rack
- 1159 Screen
- 1160 Decubitous Protecting Mattress
- 1161 Show Cases

- 12 Nursing Education (Special)
  - 1201 Resuscitation Training Dummy (Adult)
  - 1202 Resuscitation Training Dummy (Child)
  - 1203 Clinical Thermometer
  - 1204 Suction Unit
  - 1205 Continuous Suction Unit
  - 1206 Oxygen Density Meter
  - 1207 Oxygen Tent
  - 1208 Resuscitator
  - 1209 Emergency Instrument Set
  - 1210 Automatic Resuscitator
  - 1211 Phono-cardiograph, ECG
  - 1212 Instrument Set for Small Size Surgery
    - Tracheotomy
    - Artificial Abortion
  - 1213 Instrument Table
  - 1214 Surgery Light, Stand Type
  - 1215 Linen for Surgery
  - 1216 Orthopaedic Instrument Set
    - Traction Set
    - Gypsum Set
  - 1217 Exchange Blood Transfusion Instrument Set (new born)
  - 1218 Normal Delivery Set
  - 1219 Abnormal Delivery Set
  - 1220 Training Set for Mammary Massage
  - 1221 Miling Device (Automatic, Hand Type)
  - 1222 Phantom
  - 1223 Incubator for Premature Baby
  - 1224 Hand Scrub Unit
  - 1225 Baby Bath Unit
  - 1226 Microscope
  - 1227 Cabinet
  - 1228 Dummy for Midwifery
  - 1229 Dummy for Baby Care
  - 1230 Midwifery Instrument Set
  - 1231 Reading Laboratory for 10 students

Following arrangements are required to be taken by the Government of Pakistan.

1. To secure a lot of land necessary for the construction of facilities and to clear, fill and level the site as needed before the start of the construction.
2. To provide necessary data and information for the basic design.
3. To provide facilities for distribution of electricity, telephone, water supply, gas and other identical facilities to the proposed project site.
4. To take necessary measures for the construction of Student Hostels for the timely implementation of Training in the Institutions.
5. To ensure prompt unloading, tax exemption, customs clearance at ports of disembarkation in Pakistan, and prompt internal transportation therein of the products purchased under the grant.
6. To maintain and use properly and effectively the facilities constructed and equipment purchased under the grant.
7. To undertake incidental civil works such as gardening, fencing gates and exterior lighting, as needed.

Note:                   Regarding the Student Hostels (item 4 mentioned above) Government of the Islamic Republic of Pakistan earnestly requests to the Government of Japan and would deeply appreciate if hostel accommodation for students of the College of Nursing and Paramedical Institute is also constructed by the friendly Government of Japan as grant aid. This request has been made due to financial constraints in the country. It is considered that the hostel accommodation should be simultaneously constructed to correspond with the establishment of the College of Nursing and Paramedical Institute.

The Japanese Team will transmit to the Government of Japan the above mentioned requests.

Survey of Related Facilities

Children's Hospital, Islamabad Hospital Complex, Islamabad.

General Hospital, Islamabad Hospital Complex, Islamabad.

National Institute of Health, Islamabad.

Rawalpindi General Hospital, Rawalpindi.

School of Nursing, Rawalpindi General Hospital, Rawalpindi.

Central Government Poly Clinic, Islamabad.

School of Nursing, Central Government Poly Clinic, Islamabad.

Holy Family Hospital, Rawalpindi.

School of Nursing, Holy Family Hospital, Rawalpindi.

Jinnah Post Graduate Medical Centre, Karachi

College of Nursing, JPMC, Karachi

School of Physiotherapists, JPMC, Karachi

College of Physicians and Surgeons, Karachi

School of Nursing, Aga Khan University, Karachi

Mayo Hospital, Lahore

School of Nursing, Mayo Hospital, Lahore

Public Health Institute of Nursing, Lahore

Punjab State Medical Faculty, Lahore.



MINUTES OF DISCUSSION

ミニッツ

ON  
THE DRAFT REPORT OF THE BASIC DESIGN STUDY  
ON

THE ESTABLISHMENT PROJECT OF  
THE COLLEGE OF NURSING & PARAMEDICAL INSTITUTE  
IN THE ISLAMIC REPUBLIC OF PAKISTAN

The Government of Japan has sent, through Japan International Cooperation Agency (JICA), a Basic Design Study Team to the Islamic Republic of Pakistan, from 8th to 17th October, 1984 for the purpose of presenting and explaining the Draft Final Report of the Basic Design Study (the Report) on the Establishment Project of the College of Nursing & Paramedical Institute in the Islamic Republic of Pakistan (the Project).

The Team held meetings with the Pakistani officials to explain and discuss on the Report. As a result of the discussions, both parties have confirmed the following items. Also, a note regarding the Technical Cooperation is attached.

1. The Pakistani Side has agreed in principle to the basic design proposed in the Draft Final Report.
2. Final Report (10 copies in English) on the Project with the amendments mutually agreed will be submitted to the Government of the Islamic Republic of Pakistan by the end of January 1985.
3. The Pakistani Side understood the system of Japan's Grant Aid Programme and the arrangements to be taken by the Pakistani Side for realization of the Project.

October 15th, 1984  
Islamabad

小島 健一

Dr. Kenichi Kojima  
Draft Report of  
Basic Design Study Team, JICA

F. I. Malik

Mr. F. I. Malik  
Economic Affairs Division  
Government of Pakistan

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Note:

The Pakistani Side strongly desired that under the Japanese Technical Cooperation Programme, through JICA, necessary teaching staff may be sent from Japan and Pakistani teaching staff may also be trained in Japan for the smooth and effecient functioning of the College and Institute at the initial stage.

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11

3. 質疑解答

BASIC DESIGN STUDY  
ON  
THE CONSTRUCTION PROJECT OF  
THE COLLEGE OF NURSING & PARA MEDICAL INSTITUTE (IHC)  
IN THE ISLAMIC REPUBLIC OF PAKISTAN

QUESTIONNAIRE

AUGUST 1984

JAPAN INTERNATIONAL COOPERATION AGENCY  
(JICA)

## Questions

1. There is already 2-year course for Public health nurse. The new 1-year course thereof included in the College of Nursing seems to be inconsistent with the above mentioned.
  - The one year course included in College of Nursing is meant for graduate nurses who after training will perform the duties of management, supervision and teaching in public health field; as such there seems to be no conflict.
2. Please clarify the curriculum for the dispenser.
  - Training in Hospital Pharmacy, Sterilization, dispensing of drugs dressing techniques, elementary knowledge of vaccines and sera, first aid and emergency procedures and routine blood/sputum/urine examination.
3. Please clarify the detail of works which "the broad based technicians" cover. Can they select only one or a few subjects during 1-year course to become specialists in one speciality or do they have to take all the subjects to become allaround technicians?
  - Broad Based Technician will be taught a number of subjects to be "an allround technician".
4. What specialities are included in the curriculum of "the broad based technicians"?

Urinalysis, hematology, parasitology, microbiology (bacteriology, virology), surgical pathology (pathological anatomy), clinical physiology (ECG, EMG, EEG, Cardioechography, respiratory function), cell biology, medical electronics, medical mechanics (engineering), others (what else?).

  - The Broad Based Technician will be trained in rotation in the broad specialities like medical ward, general surgical ward, Eye, ENT wards, cardiology, paediatrics and operation theatre. Detailed curriculum will be developed later on with the assistance of tutors involved in the training, and curriculum committee. Period of training might have to be extended beyond one year.

5. Please clarify the allocation of hours of lectures, practices at the school, and practices at the hospital lab.
  - 50% for lectures
  - 50% for practicals
  
6. Are the other hospitals planned to be used for the practice hospitals of the students?
  - Islamabad Hospital Complex will be self sufficient to take care of hospital training of the students.
  
7. Is there any state examination after the training?
  - At present State Medical Faculty is conducting examinations of dispensers (Pharmacists C Grade and B Grade) Sanitary Inspectors and Laboratory Technicians. The same faculty will be entrusted with the jobs of conducting examination of these paramedics and will award diploma - some spade work will have to be done by the Health Division to get these categories recognised and enlisted with the State Medical Faculty.
  
8. Do the trainees get any title or qualification after the training?
  - The trainees will be awarded diploma and the titles have been suggested in the PC-I.
  
9. Please estimate an approximate number of patients of IHC per day in the coming 5 years.
  - 4000 patients per day by the end of 5 years.
  
10. Does IHC has the dental clinics? If yes, what specialities will be opened?
  - Islamabad Hospital Complex has five dental clinics and laboratories (all Oro - dental specialities have been included.
  
11. About the rehabilitation facilities.
  - 1) Do you have sufficient number of qualified teaching staff for physical, occupational and speech therapists (PT, OT, and ST)?
    - Teaching staff is available but they will have to be provided further training to improve their knowledge regarding latest techniques.

- 2) What kinds of diseases are the main subjects for PT (congenital malformation, wounded, cerebral vascular accident, chronic illness, etc)?
- Mainly injuries due to accidents, chronic illnesses cerebro-vascular accidents, congenital aburruateties, poliomyelitis, parkinsonism and post coronary rehabilitation.
12. About the patients with renal failure with regard to artificial kidney.
- 1) Number of renal centres in the whole country.
    - Seven Kidney Centres are functioning in the country having a strength of 186 beds. Another centre is coming up in the Islamabad Hospital Complex. These centres are poorly manned and inadequately equipped.
  - 2) Number of patients with acute and chronic renal insufficiency.
    - In Western World there are estimated to be: 120000 New cases of renal failure every year. The estimate indicate a much higher incidence in Pakistan due to poor preventive services.
  - 3) Number of patients under chronic hemodialysis and continuous peritoneal dialysis (CPD).
    - Chronic Hemodialysis: Nil
    - Continuous Peritoneal Dialysis: Negligible
  - 4) Number of kidney transplantation performed in the past 5 years.
    - Number of Kidney transplantation: Negligible
13. Please clarify the number of ICU and CCU in your country and the number of accommodated patients in those facilities.
- Twenty ICU and twenty CCU units are functioning in the country including those attached to the teaching hospitals four hundred and thirty beds are provided in these units to provide indoor treatment.

14. Please clarify the difference of works between "coronary care nurse" in College of Nursing and "coronary care technician" in Paramediacal Institute.

- The Coronary Care Nurse will provide the bed side nursing care while the coronary care technician will perform the clinical physiology tests. He will also be called upon to assist the coronary care nurse.

15. Are nurse teachers included in the instructors of College of Nursing?

- Nurse teachers are included in the instructors of the College of Nursing.

16. Please clarify the reason why more "lab techn. (6)" are listed in the teaching personnel of College of Nursing than in Paramedical Institute (4)?

- Actually four Laboratory Technicians (Grade 16) and 6 Assistant Laboratory Technician (Grade 9) have been proposed for both College of Nursing and Paramedical Institute. For simplicity's case posts of Laboratory Technicians have been put in Paramedics Institute and Assistant Laboratory Technician in College of Nursing.

17. Do you expect male nurse student for College of Nursing and female technicians students for Paramedical Institute?

- Co-education will be allowed both in CN and paramedics institue.

18. About reagents for laboratory tests.

1) Are the clinically used reagents easily available, or do you have to but a lot of them in one time and to store them?

- Reagents are generally easily available from the open market.

2) Are the most routine reagents ready-made and provided as kits, or do you have to prepare them?

- Routine Reagents are generally provided ready made.

19. Please clarify if the following equipments or apparatus are to be set up in IHC?

質疑解答

- 1) autoanalyzer of blood chemistry  
- Yes
- 2) automatic microplate dropper and diluter  
- Yes
- 3) laser nephelometer  
- Yes later on
- 4) computers  
- Hospital is under active consideration for computer programming.
- 5) automatic blood cell counter  
- Yes
- 6) echocardiograph  
- Yes
- 7) computed tomograph  
- Yes
- 8) high speed X-ray apparatus for angiography  
- Yes for peripheral angiography only.
- 9) respirator  
- Yes
- 10) defibrillator  
- Yes

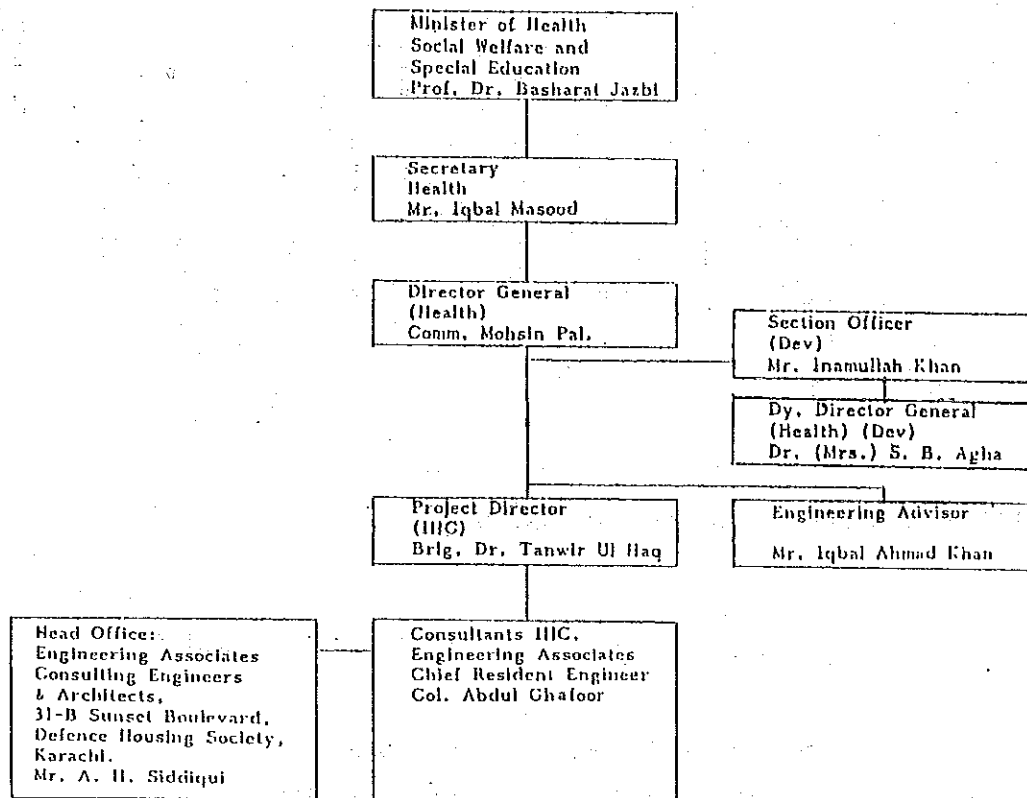


PART ONE: GENERAL CONDITIONS OF THE PROJECT

101. Execution Body of the Project

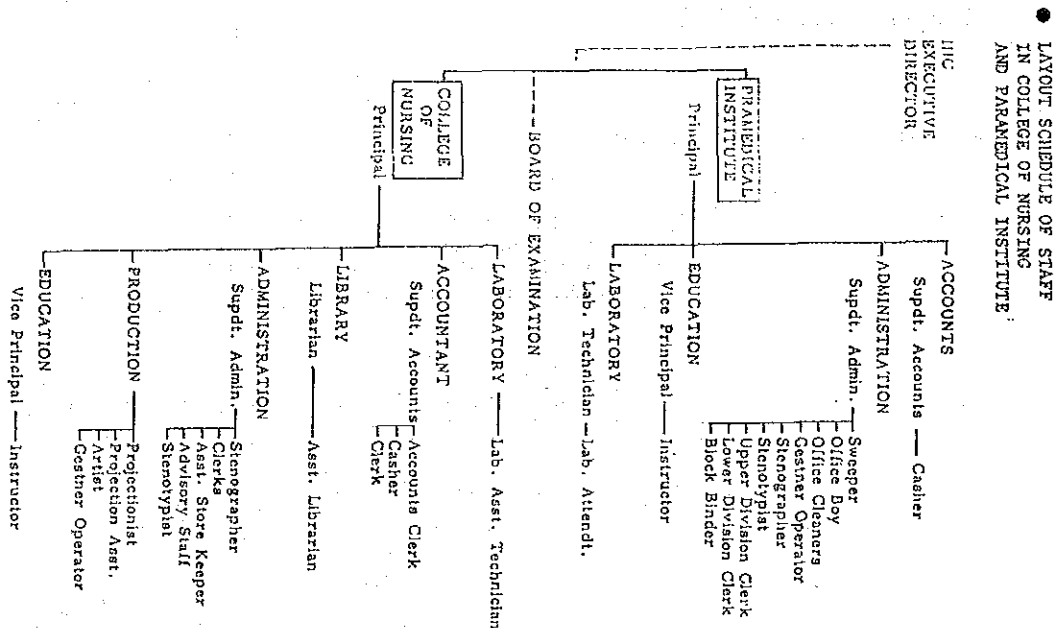
Please complete Chart 1.

● EXECUTION BODY OF THE PROJECT



102. Organization of College and Institute

Please draw the Organization of College and Institute as Chart 2.



103. Operation of College and Institution

1). Curriculum

Please complete Chart 3.

Chart 3. Curriculum of College and Institute

Please make necessary amount of copies to clarify the contents of each discipline or field.

Discipline: Each Discipline  
 Content: Yet to be decided by Curriculum Committee  
 Number of Students:                      male                      female                       
 Duration: 48 weeks days-weeks-months  
 Beginning of Term: September each year  
 Method of Training: Lectures and Practical  
 Required Training Material & Equipment:  
Not yet finalized - However the list provided by Japanese Consultant appears adequate.  
 Practical Training (Place & Duration):  
Islamabad Hospital Complex. 50% of the time will be spent for practical training.

- 2). Trainee Recruiting Method  
Open competition/merit
- 3). Qualifications of Trainees  
(Required Certificate, Educational Backgrounds, etc.)  
For postgraduate Nursing:  
Four Years training in Nursing & Midwifery.  
For Paramedics  
1st Division Matriculates with Science (10 years Schooling)
- 4). Qualifications of Instructors  
- Yet to be finalised.
- 5). Qualifications to be given out to the successful Trainees  
- Award of diploma in the subject.
- 6). Expected Areas of Employment  
- Teaching Hospitals, Specialist Hospitals, District Hospitals, Tehsil Hospitals.

#### 104 Staff Allocation Plan

Please complete Chart 4.

- Staff Allocation Plan

Distribution of Instructors in various disciplines is only possible. One Instructor each in basic sciences and clinical subjects will be allocated for each discipline except for teachers for basic teachers for Basic Training Schools which will have two tutors each in basic sciences and clinical subjects.

Rest of the staff will be a common pool for management, supervision, sectorial assistance and ancillary work.

#### 105. Budgetary Plan

- 1). Please clarify the initial budget for the construction cost to be covered by the recipient side.  
- Already provided in Islamabad Hospital Complex.
- 2). Responsible Organization for the operation cost of this College and Institution:  
- Ministry of Health, Special Education & Social Welfare.
- 3). Process of Budgeting carried out by the above Organization:  
- As provided by Government of Pakistan.

- 4). Independency of the above budget from that of IHC:
  - As part of Islamabad Hospital Complex.
- 5). Amount of above budget:
  - Cannot be identified as it is included in the over-all budget of (IHC).
- 6). Amount of Training Fee that each Trainee shall pay annually:  
Percentage of above figure against the total required training fee for each trainee:
  - Not yet decided, under consideration.
- 7). Breakdown of Training Fee
  - Trainers Expenses: - As above
  - Training Materials: "
  - Meal Expenses: "
  - Tuition Fee: "
  - Lodging Fee: "
  - Others: "
- 8). Please clarify the salaries and wages of staff by completing Chart 5.
  - Chart 5 attached.

Chart 5. Salaries and Wages of Staff

(i) College of Nursing

Name of Post	No. of Post	Grade	Salaries & Wages
1. Principal	1	19	Rs 3200-166-4480
2. Vice Principal	1	18	Rs. 2100-156-3600
			Plus Special Pay
3. Instructors			
Basic Sciences	10	17	Rs. 1600-120-3040
Clinical Subjects	10	17	-do-
4. Librarian	1	17	-do-
5. Asst. Librarian	1	16	Rs. 1050-80-2250
6. Supdt. Admin.	1	16	-do-
7. Supdt. Accoutns	2	16	-do-
8. Stenographer	1	15	Rs. 900-55-2000
9. Production Asstt.	1	14	Rs. 850-50-1850
10. Projectionists	2	14	-do-
11. Artist	1	14	-do-
12. Stenotypist	1	12	Rs. 750-40-1550
13. Lab. Asstt. Technician	6	9	Rs. 620-29-1200
14. Upper Division Clerk	3	7	Rs. 560-23-1020
15. Accounts Clerks	2	7	-do-
16. Cashier	1	7	-do-
17. Asst. Store Keeper	1	7	-do-
18. Lower Division Clerk	5	5	Rs. 520-18-880
19. Gestetnor Operator	1	2	Rs. 460-12-700
20. Dftri (Book Binder)	1	2	-do-
21. Lab. Attendants	6	2	-do-
22. Naib Qasid (Office Boy)	10	1	Rs. 440-10-640
23. Frash (Office Cleaners)	4	1	-do-
24. Khakrobe (Sweeper)	<u>4</u>	1	-do-
Total	77		

(ii) Para Medical Institute

Name of Post	No. of Post	Grade	Salaries & Wages
1. Principal	1	19	Rs. 3200-160-4480
2. Vice Principal	1	18	Rs. 2100-150-3600
3. Instructors	20	17	Rs. 1600-120-3040
4. Supdt. Admin.	1	16	Rs. 1050-80-2250
5. Supdt. Accounts.	1	16	-do-
6. Lab. Technician	4	16	-do-
7. Stenographer	1	15	Rs. 900-55-2000
8. Stenotypist	1	12	Rs. 750-40-1550
9. Cahier	1	7	Rs. 560-23-1020
10. Upper Division Clerk	4	7	-do-
11. Lower Division Clerk	6	5	Rs. 520-18-880
12. Daftri (Book Binder)	1	2	Rs. 460-12-700
13. Gestetnor Operator	1	2	-do-
14. Lab. Attendant	10	2	-do-
15. Frash (Office Cleaner)	5	1	Rs. 440-10-640
16. Naib Qesid (Office Boy)	12	1	-do-
17. Khakrobe (Sweeper)	4	1	-do-
Total	64		

(iii) Board of Curriculum & Examinations

Name of Post	No. of Post	Grade	Salaries & Wages
1. Registrar	1	18	Rs. 2100-150-3600
2. Office Supdt.	1	16	Rs. 1050-80-2250
3. UDC (Upper Division Clerk)	4	7	Rs. 560-23-1020
4. LDC (Lower Division Clerk)	1	2	Rs. 460-12-700
5. Daftri (Book Binder)	1	2	-do-
6. Gestetnor Operator	1	2	-do-
7. Naib Qasid (Office Boy)	4	1	Rs. 440-10-640
Total	13		

Grand Total 154

106. Future Forecast of Trainee Recruit Plan

1). Expected Number of Trainee

	<u>1985</u>	<u>1990</u>
Nurses:	125	150
Para Medicals:	185	200

- (The increase is to cater or any new specialists which may come up).

2). From what type of Organizations and Schools the Trainees are expected to come from in the future.

Nurses: - School of Nursing under Federal & Provincial Control and from Hospitals.

Para Medicals: - Public Schools in the country and in-service trainees from provinces.

3). Expected area of Employment

- Employment in hospitals, medical centres, professional colleges, Rural Health Centre & Basic Health Units.

107. Existing IHC School of Nursing for basic nursing for 100 nurses.

1). Roles and Functions

- To train students in basic nursing for 3 years and one year midwifery.

To teach Islamic Studies and Pakistan Studies.

To impart training in character building.

2). Location

- In the Islamabad Hospital Complex.

3). Organization

- As per PC-1 already given.

4). Staff Allocation

- Copy of staffing pattern attached (Handed over to basic study team).

5). Operation Budget

- As part of Islamabad Hospital Complex budget.

108. Hostel

Please clarify the following.

Location                      Availability to Trainees

Total Capacity              Availability to Staff

- No hostel is provided for nurses and paramedical.

PART TWO: ISLAMABAD HOSPITAL COMPLEX

201. Role and Functions

Please describe in detail.

- 1. To provide health care facilities to the federal employees and their families and the general public of Islamabad and the surrounding areas.
- 2. To serve as a referral centre for specialized treatment.
- 3. To cater for foreign mission and international agencies located in Islamabad when required.
- 4. To serve as teaching hospital for postgraduate medical studies.
- 5. To provide teaching facilities for nursing and midwifery and paramedics.
- 6. To act as centre of excellence for research and development programme in health sciences.

202. Organization and Staff Allocation

Please draw the Organization of IHC as Chart 6 including Proposed College and Institute and the describe the Staff Allocation for IHC.

Chart 6. Organization Chart of IHC. Attached next page.

203. Budget

Please clarify the budget for the Construction and the Operation of IHC.

1). Construction

- Rupees 300 million (Rupees three hundred) Million.

2). Operation

- Rupees 82 million (including component of rupees 9 million).

204. Master Plan & Present Development

Please present a set of drawings and documents to clarify the following.

A. Building

- 1) Construction Program
- 2) Present Accomplishments
- 3) Date of Completion of each building



B. Equipmentation

1) Procurement Program

2) Present Accomplishments

3) Date of Completion

- Electromedical equipment has already been procured, other equipments such as central laundry and central sterilization has also been procured. In built equipment such as heating, ventilation, Air-conditioning, Ketchen equipment and food service equipments, hospital type lifts etc. is under procurement, expected date of completion is June 1985.

C. Utilities

1) Provision Program

2) Present Accomplishments

3) Date of Completion

- Under procurement by Health Division.

205. Children's Hospital in IHC

1) Please point of the position in the Organization Chart of IHC (Chart 6).

- Copy of organization chart is attached.

2) Is the Budget for operation of Children's Hospital from that of IHC.

- No

206. Infrastructure

1). Please prepare for us a map showing infrastructure in Islamabad/ proposed site; Electricity, Telephone, Water, Sewarage, Gas, etc.

2). Soil Conditions

Please prepare the Boring Data.

3). Mechanical Service

Please clarify the Following.

Operation TTerm of Air-Conditioning usually in Islamabad

	Period	Design Temp. and Humidity
o Cooling: May	Jun, July	outdoor ... 42.9°C 30%
		indoor .... 23.65 $\pm$ 1°C 50%
o Heating: Dec	Jan, Feb	outdoor ... 1.66°C 80%
		indoor .... 23.65 $\pm$ 1°C 50%

4). Plumbing Service

Please clarify the Following.

4-1. Data of City Water in Islamabad

o Size of Supply Main Pipe ( $\phi$ mm):

6"AC 12", 4"PVC 18", 6"AC 12", 6"AC 12"

o Water Supply Pressure ( $\text{kg}/\text{cm}^2$ ): 100' - 120'

o Material of Pipe : AC, PVC

o Water Quality:

Transparency, pH value, mineral component:

Hardness and content of sodium chloride etc.:

Soft Water, Fit for drinking purpose.

o Charge ( $\text{Rp}/\text{m}^3$ ):

Rs 5/1000 gallon

4-2. Data of well water near the proposed site:

Tupe Well G-8/4

o Necessary depth (GL-m):

148'

o Water level (GL-m):

27' (Drawn down 21')

o Supply capacity (liter/minute): 14000 gallon/h.

o Data of water quality:

Soft Water, Fit for Drinking

4-3. Data of Fuel Gas Service in Islamabad

o Liquefied Petroleum Gas (LPG):

Type of Gas:

Name of Supply Company:

Capacity of Supply per day or week:

- Not Necessary

Regulation for Gas Installment:

Charge ( $\text{Rs}/\text{m}^3$ ):

- o City Gas Supply of available
  - Type of Gas (Kcal/Nm<sup>3</sup>): 970 BTU/c.ft
  - Material of Pipe: Mild Steel
  - Size of Supply Main Pipe: 6"
  - Gas Supply Pressure: 30 lps/sq.inch
  - Charge (Rs/m<sup>3</sup>): Rs 18/1000 ft<sup>3</sup>

5). Electrical Service

Please clarify the Following

5-1. Data of Power Supply Service in Islamabad

- o Name of Supply Authority Concerned: WAPDA
- o Frequency of Stoppage of Electricity: Negligible
- o Frequency and Range of Droppage of Electric Voltage: Negligible
- o Charge (Rs/W): Rs 1/KWH

5-2. Position of the nearest Sub-Station and the date of its completion.

No. 5 (No. 6)

5-3. Data of Telephone Service in Islamabad

- o Name of Supply Company Concerned: T & T
- o Charge: Rs. 0.60/call (Local)

PART THREE: BASIC DATA

301. Data and Informations

Please prepare the reports on following points.

1). Health Data

1.1 Government Organization Chart (Chart 7)

- Attached

1.2 Position and Functions of Pakistan Nursing Council

- Attached

1.3 Health Service Networks (Chart 8)

- Attached

1.4 Total health budget and details

Capital Outlay for Health Sector

Sl. -No.	Sub-sector	Million Rs.	Per cent
(i)	Medical education	975	7.50
(ii)	Hospital beds including teaching beds	3,259	
(iii)	Preventive programmes	1,490	11.46
(iv)	Rural health programme	5,660	43.54
(v)	Provision of dental care in the existing facilities.	250	1.92
(vi)	Medical research	*85	0.65
(vii)	Traditional medicine	375	2.89
(viii)	Disabilities	500	3.85
(ix)	Nutrition programmes	250	1.92
(x)	Miscellaneous	120	6.92
Total:		13,000	100.00

\* The total allocation for medical research is Rs. 320 million and the balance is reflected under other sub-sectors.

(ii) Recurring expenditure. - The public health sector will be requiring about Rs. 4.5 billion per annum (current prices) towards the end of the Sixth Plan. This has been worked out on the following basis.

	Million Rs.
(i) 7000 BHUs	875
(ii) 729 RHCs	218
(iii) 17,000 teaching beds	850
(iv) 15,700 non-teaching beds in DGQ/ THQ hospitals	315
(v) Drugs and medicines for the public health system for out-patients	500
(vi) District, Provincial Headquarters, health Division and other contingencies	500
	3,258
Add User Charges:	1,250
	4,508

It will be worthwhile to review the growth of recurring expenditure during the Fifth Plan period. This has increased from Rs. 646 million in 1978-79 to Rs. 1,299 million during 1982-83 as indicated in the table below:

Recurring Expenditure on Health, 1978-83

Year	Expenditure
1978 - 79	646.20
1979 - 80	727.40
1980 - 81	763.80
1981 - 82	986.00
1982 - 83	1299.00

The recurring expenditure has increased at an annual rate of 15 percent. The Sixth Plan envisages a growth of 20 percent per year. At this rate, the expenditure will increase to Rs. 3,234 million in the last year of the Sixth Five Year Plan. This will be

supplemented by Rs. 1.25 million to be collected by introduction of user charges.

1.5 Financial background for Health Training from Government and external sources

- For health training we are sending doctors, nurses, LHV and other para medics in the country and abroad. For training in the country budget is provided by the respective Federal and Provincial Governments each year. For International training abroad budget is provided by WIO, UNICEF, UNDP and other International agencies as part of Government share.

1.6 Disease Structure

- The three leading causes of death for each category of age are given below:

<u>Age group</u>	<u>Causes of death</u>
All ages	Diarrhoea Pneumonia Complex Metabolic disorders including cardiovascular disorder Malignancy.
Under 1 year	Causes of perinatal mortality diarrhoea diseases Pneumonia.
1-4 years	Pnaumonia Diarrhoeal diseases Other communicable diseases.
5-14 years	Accidents Pneumonias Malignant neoplasms
15-44 year	Accidents Tuberculosis Cardiovascular diseases
46-64 years	Cardiovascular diseases Malignant neoplasms Pneumonias

- While accidents are among the three causes of death, they represent a significantly smaller proportion of all deaths. This is because of the greater mortality associated with excessive incidence of infections, parasitic and respiratory diseases in preschoolers.

1.7 Number and job of workers stationed abroad

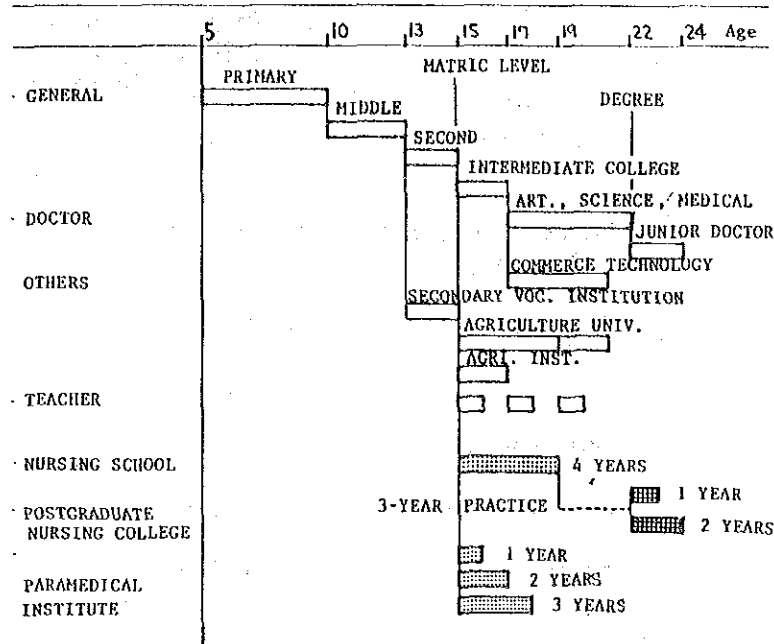
- Not availabe.

2). Education Data

2.1 Education system and pyramid in connection with Health training (Chart 9)

- Education system and pyramid in connection with Health training (Chart 9)

● EDUCATION SYSTEM IN PAKISTAN



2.2 Number of graduates and institutions by each educational step

- Number of graduates and institutions by each educational step

2.3 Location and size of secondary/higher education institutions by province

- Location and size of secondary/higher education institutions by province.

2.4 Total education budget and details

- Total education budget and details

- Please see page 359-362 of Sixth Five Year Plan 1983-88 on Education.

3). Health Training

3.1. Please clarify the Following Training Facilities in each Province

Number

- Estimates of Current Numbers of Staff Employed,  
Training Institutions and Annual Training Output

	In post (1981)	No. of Training Institutions	Annual Training Output	Annual Training Intake
Doctors				
P-G doctors	16,501	16 4	4,000	
Nurses (inc. nurse midwives)	9,251	44	972	978
Midwives	4,705	46	359	N.A.
LHVs	3,473	10	312	N.A.
Dispensers	16,161	50	1,500	N.A.
Med. Technicians	2,000	26	600	N.A.
Health Inspectors.	1,000	-	-	N.A.

Annual Intake and Output in recent 5 years

	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Nurses	767	659	736	972	909
LHVs	309	313	341	247	308
Midwives	307	313	369	739	941
Med. Technicians	29	27	36	39	39
Dispenser	1207	729	1209	1011	1149
Sanitary Inspector	86	43	72	67	37
Physiotherapist	12	22	Nil	14	9

Ratio of male to female among the Students

- 95% femal for nursing and 95% males for paramedics training

Managing Organization

- Universities for doctors, Nursing Council for nurses and State  
medical Faculty for paramedics



Budget of Operation

- a. Salaries and Wages
- b. Training Material
- c. General Expenses
  - Not available

Future Programs

- Attached

3.2. Health Manpower

Please clarify the following in each Province

Type of Government health professions

Roles and Responsibilities of above

Number of above in each Province

Training Method for above

- Will be provided Later-on.

3.3. Health Campaign Program

Please describe the type of professions essential to the current Health Campaign Programs and their training plans.

- May be seen in the Sixth Five Year Plan (1983-88)  
(Attached Herewith).

3.4. Authorized Qualifications of Nurses and Paramedics

Please clarify the type(s) of authorized qualifications and the Authority(s) which give(s) out the Certificates.

Types of Authorized Qualifications	Authority
A. Nurses	
1) Head Nurse	_____
2) Registered Nurse	_____
3) Special Nurse	_____
1. Paediatrics	_____
2. Psychiatry	_____
3. Operation theatre	_____
4. Anesthesia	_____
5. Intensive care	_____
6. Public health nurse	_____
7. Coronary care	_____
8. Teachers for basic training schools	_____

- Provincial Nursing Examination Board issue Diploma in General Nursing, Midwifery, Lady health visiting, Ward Admin. and teaching and other special courses. The General trained nurse and midwife can appear in examinations in English, Islamiat Ethics and Pakistan studies B.Sc. Courses of the University and successful candidates are awarded B.Sc. Degree.

B. Para Medics

- 1) Broad based technicians \_\_\_\_\_
- 2) Operation theatre technicians \_\_\_\_\_
- 3) X-Ray Technicians \_\_\_\_\_
- 4) Coronary care technicians \_\_\_\_\_
- 5) Physiotherapists \_\_\_\_\_
- 6) Speech therapists \_\_\_\_\_
- 7) Audiometrician \_\_\_\_\_
- 8) Orthoptists \_\_\_\_\_
- 9) Dental Hygienists \_\_\_\_\_
- 10) Dietary technicians \_\_\_\_\_
- 11) Dialysis assistants \_\_\_\_\_

- State Medical Faculty issue certificates to Paramedics.

3.5. Expected Career for Nurses and Para Medics.

Please describe in detail.

- Already provided.

302. Latest National Records

Please present or renew a copy of following reports or booklets;

- o Health Report (latest issue)
- o "The 6th Five Year Development Plan" ('83-'88)
- o Economic Report (latest issue)
- o Regional Development Plan - Islamabad
- o "NESPAK Price Index" (latest issue)
- o "Building and Equipments for the School of Nursing"
- o Education Report (latest issue)
- o Manpower Development Plan
- o Statistical Year Book (latest issue)

303. Climatic and Geological Condition

Please prepare copies of Report on the Following.

Data of Climatic Condition

- 1) Meteorological Record.
  - o Record of Max. Temperature and Frequency (°C)
  - o Record of Min. Temperature and Frequency (°C)
  - o Frequency of relative Humidity (%)
  - o Record of Rain falls
    - Max. per day (mm/day)
    - Day per Month (day/month)
- 2) Record of Max. Wind Velocity and Frequency.
- 3) Record of Magnitude and Frequency of Earthquake.
- 4) Record of Sand-storm.
- 5) Record of Lightning.

Data of Geological Condition, etc.

- 1) Geological Map of Islamabad/proposed site.
- 2) Land use Map as above.

- Already provided during the implementation of Children Hospital.

304. Building Construction Condition

Please prepare following booklets.

National Law, Local Regulations and Standards Concerned

- 1) Pakistan Fire Code
- 2) Standard Specification for Construction Work of NESPAK, CDA, etc.
- 3) Price Index of Construction Materials of NESPAK
- 4) Contract Form of NESPAK, CDA, etc.

- 5) Methods of Measurement of CDA.
- 6) Sample of Bill of Quantities in Actual construction
- 7) Termite Control Method and Cost Dept. of Agriculture
- 8) Laws or Regulations concerned for Project

- Already provided during the implementation of Children Hospital.

Procedure of Building Permit

Should we get the permit from Authority or exempt because of the National Project?

- Already provided during the implimentation of Children Hospital.

ADDITIONAL QUESTIONNAIRE

001. Please specify names of major diseases in following group.

- a) infections and communicable diseases
- Malaria
  - Typhoid
  - Polio - Myelitis
  - Measles
  - Whooping Cough
  - Diphtheria
  - Tetanus
  - Tuberculosis
  - Viral Hepatitis
- b) diarrhoeal diseases
- Infective Diarrhoeas
  - Viral
  - Amoebic Dysentery
  - Bacillary Dysentery
  - Shigella
- c) anaemia
- Iron - Deficiency
- d) cardiovascular diseases
- Hypertension
  - Acute Myocardial Infarction
  - Angina
- e) cancer
- Cancer Breast
  - Cancer Cervix
  - Cancer lung
  - Cancer oral Cavity

002. Please show the breakdown of total hospitals in Pakistan (626) and average number of beds

- a) Federal
- |                  |        |
|------------------|--------|
| No. of Hospitals | - 2    |
| No. of Beds      | - 1050 |
- b) Provincial
- | <u>Punjab</u>    |         | <u>Baluchistan</u> |        |
|------------------|---------|--------------------|--------|
| No. of Hospitals | - 237   | No. of Hospitals   | - 30   |
| No. of Beds      | - 24729 | No. of Beds        | - 2594 |
| <u>Sind</u>      |         | <u>FATA</u>        |        |
| No. of Hospitals | - 141   | No. of Hospitals   | - 49   |
| No. of Beds      | - 16448 | No. of Beds        | - 1566 |
| <u>NWFP</u>      |         | <u>AJK</u>         |        |
| No. of Hospitals | - 145   | No. of Hospitals   | - 16   |
| No. of Beds      | - 9038  | No. of Beds        | - 873  |
- c) Private
- No registration available

- d) Military
  - Not known (information classified)
- e) Others
  - Not known

003. Please clarify the following on Nurses

- a) Number of nurses. The number shown in PC-I Form is 7,561, while the information received on our arrival is about 15,000.
  - Number of nurses is 7561 and not 15000.
- b) Actual number of nurses on job. (total and by province)
  - Not known
- c) Number of nurses who graduated from JPMC and those with BSc. Nursing. (total and by province)
  - Not known
- d) Number of Nurse-Midwives
  - 4000
- e) Is Public Health Nurse a new profession in Pakistan
  - Yes
- f) Number of Public Health Nurse
  - Nil
- g) How long is the career as a Nurse. Average length of duration as a Nurse.
  - Not know

004. Please clarify the following on 6th 5-year Development Plan.

- a) What measures are taken to achieve the target number of increased nurses.
  - By adding more nursing schools in teaching hospitals and district hospitals.
- b) Within the estimation in the increase of nurses are those who shall drop out from training schools and those who shall retire from job included.
  - Normal wastage.
- c) What is the estimated ratio of those who shall acquire the job posts after graduation against the total number of graduates.
  - 100%

005. Please clarify the following on Nurses Training.
- a) Total number of candidates to Nursing School annually.
    - Nursing Schools -44, Number of students -840.
  - b) Total number of female matrications annually.
    - Not known.
006. Please clarify the following on Nursing College.
- a) The role and functions of Anesthesia Nurse  
Is she to replace Anesthetist or is she to support Anesthetist.
    - Basically supportive and substitution during emergency.
  - b) Basis of calculation on number of students in each discipline.
    - Estimated requirements.
  - c) Is it appropriate to increase the Specialist Nurses when the total number of General Nurses is insufficient.
    - Yes, due to lack of special nurses in the country; shortage is being made up in 6th plan period.
  - d) Relations of Proposed Nursing College to existing JPMC and the division of functions between the two.
    - Supplementary and additional in respect of specialised nursing. Administratively both will be under the control of Ministry of Health, Special Education and Social Welfare.
007. Please clarify the types and the number of each type of Nursing Auxillaries.
- No information could be gathered.
008. Please describe the jobs and workposts for women in Pakistan and the social position of Nurses among them.
- Scientists, Doctors, Nurses, Teachers, Secretariat Jobs, Library Services, Computer Programming, Telecommunication, Air-Hostesses, Receptionists, Hotel Management etc. The position of nurses among other working women is respectable despite the existing socio cultural barriers.
009. Please clarify the ration of hospital deliveries to home deliveries in maternity situation of Pakistan.
- 95% to 5%.

010. Please clarify what kinds of works following professions do.
- a) Lady Health Visitors
    - Mother and child health care.
  - b) Sanitary Inspectors
    - Environmental support, communicable diseases control and immunization etc.
  - c) Laboratory Technicians
    - Functional and supervision
  - d) Dispensers
    - Pharmacy assistance
  - e) Graduates from institutions for mid level auxiliars
    - Primary health care
011. Please confirm the types of works the following technicians engage in.
- a) Broad Based Tech:
    - Cardiology, ICU, Clinical Chemistry General Medicine.
    - Yes, as rotatory worker in all disciplines.
  - b) Clinical Pathology Tech:
    - Urinalysis, Hematology, Parasitology, Microbiology, Pathologic Anatomy, Serology
    - Yes
  - c) Clinical Physiology Tech:
    - ECG, EEG, EMG, Respiratory Functions
    - Yes
  - d) Blood Bank Tech:
    - Blood banking technology
    - Yes
012. Please show the priorities in the opening or the start of Para Medical Institute.
- a) Fields to be omitted or postponed.
    - None
  - b) Reduction of number of trainee for certain period of time
    - Start with 100 students to reach the proposed ceiling in course of time; we may also increase the total intake to 200.
  - c) Lengthening Study Periods in some of the Fields
    - Physiotherapy, Laboratory Technicians, and Radiology etc. e.g. Speech Therapy Technician. ■



#### 4. 機材リスト

College of Nursing  
and  
Paramedical Institute  
in  
Islamabad  
Pakistan

List  
of  
Equipments

October 1984

## 機材リスト

Room	Equipment	Q'ty
Museum	101 Anatomical Human Body Male	1
	102 Anatomical Human Body Female	1
	103 Human Skeleton, Articulated	1
	104 Human Skeleton, Disarticulated	1
	105 Circulatory System	1
	106 Skull	1
	107 Anatomical Heart	1
	108 Respiratory Organs	1
	109 Digestive Organs	1
	110 Brain and Nervous System	1
	111 Muscle	1
	112 Section of Skin	1
	113 Structure of Eye/Ear	1
	114 Structure of Teeth	1
	115 Structure of Nasal Cavity/Throat/Pharynx	1
	116 Kidney and Urinary System	1
	117 Pelvis	1
	118 Pregnant Uterine	1
	119 Development Stages of Foetus	1
	120 Conception Control Training	1
	121 Conception System	1
	122 Parasites in Human Body	1
	123 Feces of Child	1
	124 Tracoma	1
	125 Alveolar Pyorrhoea	1
	126 Pathogenic Microbes	1
	127 Show Cases for Models	1 set
	128 Anatomical Charts	2 sets

Room	Equipment	Qty
Model Ward	201 Standard Bed w/Mattress, Sheets, Pillow, etc.	5
	202 Bed Side Table	5
	203 Bed Side Chair	5
	204 Over Bed Table	5
	205 Training Dummy	2
	206 Training Dummy for Stomach Pump	1
	207 Training Dummy for Dressing	1
	208 Training Dummy for Baby Bath	2
	209 Baby Bath Set	2
	210 Measuring Rod (Adult/Infant)	1 each
	211 Weighing Scale (Adult/Infant)	1 each
	212 Sitting Height Measuring Rod	1
	213 Shampoo Cart	1
	214 Bed Bath Cart	1
	215 Shampoo Tray	3
	216 Back Rest	1
	217 Over-Bed Cradle	5
	218 Wheel Chair	2
	219 Stretcher	2
	220 Invalid Walker	1
	221 Litters	1
	222 Splint, assorted	3 sets
	223 X-Ray Film Viewer	1
	224 Phantom for Delivery	2
	225 Dynamometer, Back Dynamometer	1
	226 Sphygmomanometer, Portable Type	5
	227 Pelvimeter	2
	228 Traube's Stethoscope	5
	229 Nebulizer, Stand Type	1
	230 Nebulizer, Portable Type	1
	231 Round Sitting Sand Bag, assorted	3 sets

## 機材リスト

Room	Equipment	Q'ty
232	Examination Instrument Set	5
	Stethoscope	
	Eye Speculum	
	Tung Forcep	
	Hammer for Tendon	
	Perception Test Sect	
	Pencil Type Lamp	
	Measure etc.	
233	Enema Set	3
234	Syringe Set, Disposal	100
	Hypodermic Injection	
	Intra Venous Injection	
	Intra Venous Feeding	
	Large Amount Hypodermic etc.	
235	Temperature Taking Set	10
236	Medication Trolley Set	
237	Set for Milk Preparation	1
238	Set for Stomach Pump	1
239	Ear Scope	1
240	Nasal Scope	1
241	Proctoscope	1
242	Vaginoscope	1
243	Boiling Sterilizer	1
244	Gauze Cast, Large/Small	1
245	Irrigator Stand	2
246	Bedpan Rack	1
247	Screen, portable	3
248	Decubitus Protecting Mattress	1
249	Blood Sedimentation Rack w/Pipettes	1
250	Cabinet, steel	3
251	Resuscitation Training Dummy (Adult) & Infant	1 each
252	Resuscitator	1
253	Automatic Resuscitator	1
254	ECG, Portable Type	1
255	Emergency Instrument Set	1
256	Operating Instrument Set	2

Room	Equipment	Q'ty
	257 Instrument Trolley	2
	258 Surgery Light, Stand Type	1
	259 Linen for Surgery	2
	260 Orthopaedic Instrument Set	2
	261 Traction Set	1
	262 Gypsum Set	2
	263 Delivery Set	2
	264 Training Set for Mammary Massage	1
	265 Milking Device, Hand Type	1
	266 Dummy for Midwifery	1
	267 Dummy for Baby Care	2
	268 Catheter Set	1
	269 Tracheostomy Instrument Set	1
	270 Abortion Instrument Set	1
Model	281 Paediatric Bed w/Mattress, Sheets,	2
Paediatric	Pillow, etc.	
Ward	282 Neo Natal Bassinet	2

## 機材リスト

Room	Equipment	Q'ty
Model ICU.	301 ICU Bed, w/Mattress, Sheets, Pillow, etc.	2
CCU	302 Bed Side Monitor	2
	303 Central Monitor	1
	304 Defibrillator	1
	305 Resuscitator	1
	306 Suction Unit	1
	307 X-Ray Film Illuminator	1
	308 Haemodialysis Unit	1
	309 Peritoneal-dialysis Unit	1
	310 Sphygmomanometer, Stand Type	2
	311 Operating Instrument Set	2
	312 Instrument Trolley	2
	313 Compact High Speed Sterilizer	1
	314 Hot Air Sterilizer	1
	315 Anesthesia Apparatus	1
	316 Anesthetic Ventilator	1
	317 Endotracheal Tube Set	1
	318 Rubber Masks	2
	319 Oxygen Flow Meter	1
	320 Oxygen Inhalation Device	2
	321 Suction Unit	1
	322 Continuous Suction Unit	1
	323 Oxygen Tent	1
	324 Hand Scrub Unit	2
Model NICU	351 Incubator	2
	352 Photo Therapy Unit	1
	353 Resuscitator for Infant	1
	354 Weighing Scale for Infant	1
	355 Oxygen Density Meter	1
	356 Clinical Thermometer, Electronic Type	1
	357 Exchange Blood Transfusion Set (new born)	2

Room	Equipment	Q'ty
Public Health	401 Mobile Dispensary Set	1
Practic Room	402 Visiting Bag	2
Audio Visual	451 Video Set (video-tapes)	2
Room	452 Overhead Projector	3
	453 Slide Projector	10
	454 Tape Recorder	2
	455 Record Player	2
	456 Audio Tape Set	1
	457 Vido Tape Set	1
Production	461 Plain Paper Copier	2
Room	462 Printing Machine	1
Dark Room	471 Photographic Developing & Printing Set	1

## 機材リスト

Room	Equipment	Q'ty
Clinical	501 Slide Staining Set	100
Laboratory	502 Large Sledge Microtome	1
	503 Incubator	2
	504 Electro-Balance	1
	505 Counter Balance	5
	506 Monocular Microscope for Student	20
	507A Binocular Microscope for Instructor	1
	507B Binocular Microscope with Photographic Unit	1
	508 Discussion Microscope	1
	509 Magnetic Stirrer	2
	510 Water Bath	5
	511 General Laboratory Centrifuge	3
	512 General Laboratory Centrifuge w/extra rotar	2
	513 Haematocrit Centrifuge	1
	514 Micro Titer Set	2
	515 Gas Pack Set	5
	516 PH Meter	1
	517 Hand Protein Refractometer	2
	518 Aspirator	5
	519 Electrophoresis Equipment Unit	2
	520 Densitometer	1
	521 VIS Spectrophotometer, Single Beam	5
	522 UV-VIS Spectrophotometer, Double Beam	1
	523 Deep Freezer	1
	524 Flame Photometer	1
	525 Disposal Microtome Blade Set, Blade 1 doz.	2
	526 Low Temperature Cabinet (Refrigerator)	2
	527 Haemacytometer	20
	528 Hand Tolly Counter	20
	529 Autostill	1
	530 Blood Sedimentation Rack w/Pipettes	2 sets
	531 Standard Hemometer	2



Room	Equipment	Q'ty
Physiological	551 ECG	1
	552 Phonocardiograph	1
	553 EEG	1
	554 Polygraph	1
	555 Measuring Rod	1
	556 Spirometer	1
	557 Weighing Scale	1
	558 Examination Couch	3
Chemistry/ Physics Laboratory	580 Laboratory Equipment Set	1
Model X-Ray Room	601 Diagnostic X-Ray Apparatus	1
	602 X-Ray Film Illuminator	2
	603 Table Top Automatic Film Processor	1
	604 Film Processing Set	2
	605 X-Ray Accessories	1

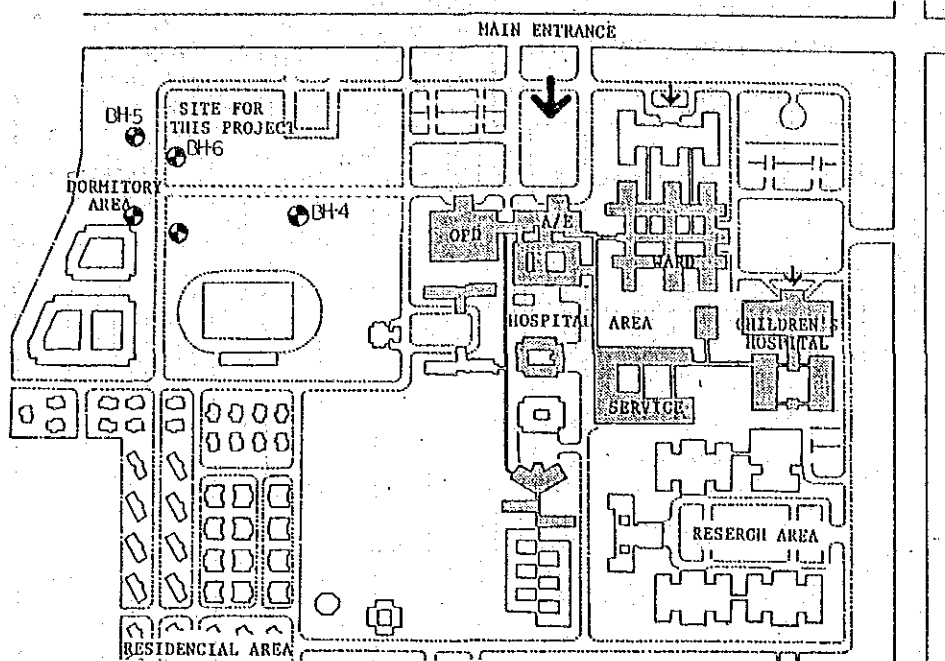
## 機材リスト

Room	Equipment	Q'ty
Model	651 Micro Wave Therapy Apparatus	1
Rehabilitation	652 Infrared Ray Lamp	1
Room	653 Heat-Less Ultra Violet Ray Lamp	1
	654 Hirschmann's Galvanic and Faradic Apparatus	1
	655 Exercise Bicycle	1
	656 Wrist Roll	1
	657 Training Bed	4
	658 Paraffin Bath Unit	1
	659 Over Head Frame	1
	660 Turning Wrist	1
	661 Restorator	1
	662 Orthopaedic Instrument Set	2
	663 Traction Set	1
	664 Gypsum Set	2
	665 Invalid Walker	1
	666 Splint, assorted	1
	667 Full Length Mirror	1
Orthoptists	701 Test Chart Projector	1
Practice Room	702 Eye Test Chart	4
	704 Set of Trial Lens	2
	705 Ophthalmic Measure	1
	706 Instrument Set	1
Orthoptists	721 Ophthamoscope	2
Practice	722 Indirect Ophthamoscope	2
Dark Room	723 Tonometer	1
	725 Perimeter	1
	726 Slit Lamp Microscope	1
	727 Fundus Camera	1

Room		Equipment	Q'ty
Dental	751	Dental Treatment Unit with Chair	1
Practice Room	752	Instrument Set	1
Model	801	Cooking Unit	5
Kitchen	802	Show Case and Food Models	1
Workshop	851	Electronic Tester	5
	852	Oscilloscope	1
	853	Vise	5
	854	Lathe	1
	855	Set of Tools	5
	856	Computer Model	2
Library	901	Reading Laboratory	5



5. ボーリングデータ



Client : GOVT. OF PAKISTAN MINISTRY OF HEALTH		BORING NO. 4	
Consultants ENGINEERING CONSULTANTS		DATE OF EXECUTION 25-4-1979/26-4-1979	
Project ISLAMABAD HOSPITAL COMPLEX SECTOR G-8/3 ISLAMABAD		PROCESS OF EXECUTION Percussion	
		GROUND ELEVATION 1809.83	
		GROUND WATER TABLE STRUCK AT Not Struck	

REDUCED ELEVATION IN FEET	DEPTH IN FEET	THICKNESS IN FEET	STRATA ENCOUNTERED	LOG	DIAMETRE	SAMPLES	S.P.T. Blows/Ft.	CORE RECOVERY			SCALE
								Difference	Recovery in Feet	Recovery in %	
1784.83	2-6	2-6	Grey silty CLAY with organic materials, fine gravel present.				27				
	6-2	3-8	Whitish-grey stiff silty CLAY with gravel.				48				
		6-1	Greyish-yellow hard silty CLAY.				36				
	12-3	2'-10"	A				34				
	15-1	0'-11"	B				31				
	16-0	4-2	Light-brown hard silty CLAY.								
	20-2	4-10	Brown hard silty CLAY.								
	25-0										

LEGEND

A. Yellowish-brown hard silty CLAY with medium to coarse gravel.

B. Light-brown hard silty CLAY with gravel & pebbles.

KEY TO SAMPLES	DISTURBED <input type="checkbox"/>	UNDISTURBED <input checked="" type="checkbox"/>
	WATER SAMPLES <input type="checkbox"/>	S.P.T. BLOWS/FT <input checked="" type="checkbox"/>
	CORE RECOVERY (%) <input type="checkbox"/>	G.W.T. <input type="checkbox"/>

FOUNDATION ENGINEERING LTD.  
CONTRACTORS FOR SPECIAL FOUNDATIONS  
AND HYDRAULIC WORKS.  
KARACHI.

Client : GOVT. OF PAKISTAN MINISTRY OF HEALTH				BORING NO. 5											
Consultants ENGINEERING CONSULTANTS				DATE OF EXECUTION 30-4-1971-5-1979											
Project ISLAMABAD HOSPITAL COMPLEX SECTOR G-8/3 ISLAMABAD				PROCESS OF EXECUTION Percussion/Rotary											
				GROUND ELEVATION 1804.17											
				GROUND WATER TABLE STRUCK AT Not Struck											
REDUCED ELEVATION IN FEET	DEPTH IN FEET	THICKNESS IN FEET	STRATA ENCOUNTERED	LOG	DIAMETRE	SAMPLES	S.P.T. Blows/Ft.	CORE RECOVERY					SCALE		
								Difference	Recovery in Feet	Recovery in %	PERCENT				
											S.P.T. Blows/Ft.				
									10	30	50	70	90		
	2-8	2-8	Light greyish yellow silty CLAY with medium to fine gravel.		8.0										
	5-0	2-4	Greyish yellow stiff sandy silty CLAY with gravel.		10.0										
	10-0	5-0	Grey hard sandy CLAY with gravel, pebbles & pieces of boulders.		10.0										
	15-2	5-4	GRAVELS & BOULDERS.		11-0										
	21-0	5-8	Grey dense coarse to medium SAND.		11-0										
1779-17	25-0	4-0	Grey fine SAND with silty clay.		22-0										

Client : GOVT. OF PAKISTAN MINISTRY OF HEALTH				BORING NO. 6											
Consultants ENGINEERING CONSULTANTS				DATE OF EXECUTION 29-4-1979/30-4-1979											
Project ISLAMABAD HOSPITAL COMPLEX SECTOR G-8/3 ISLAMABAD				PROCESS OF EXECUTION Percussion/Rotary											
				GROUND ELEVATION 1806.35											
				GROUND WATER TABLE STRUCK AT Not Struck											
REDUCED ELEVATION IN FEET	DEPTH IN FEET	THICKNESS IN FEET	STRATA ENCOUNTERED	LOG	DIAMETRE	SAMPLES	S.P.T. Blows/Ft.	CORE RECOVERY					SCALE		
								Difference	Recovery in Feet	Recovery in %	PERCENT				
											S.P.T. Blows/Ft.				
									10	30	50	70	90		
	1-6	1-6	A		6.0										
	4-6	3-0	Greyish yellow stiff silty CLAY with few gravel.		10.0										
	7-0	2-6	Yellow hard silty CLAY with gravel.		10.0										
	10-0	3-0	Light brown stiff silty CLAY with medium to coarse gravel.		10.0										
	11-6	1-6	B		11-0										
	18-6	7-0	SAND with gravel, pebbles & Boulders.		11-0										
	21-6	3-0	GRAVEL PEBBLES & pieces of BOULDERS.		11-0										
1781-35	25-0	3-6	GRAVEL PEBBLES & BOULDERS with sandy clay		24-0										

LEGEND:  
 A..... Grey silty CLAY with organic materials.  
 B..... Light greyish-brown fine SAND with medium to coarse gravel.

## 6. 類似施設の現況

施設名 COLLEGE OF NURSING, JPMC

所在地 KARACHI

運営主体 MOH

学 科 ・ WARD ADMINISTRATION コース (1年次)

・ NURSING INSTRUCTOR コース (2年次)

学生数 (出身地別)

	PNJ	SND	NWFP	BLC	CNT	軍	私費	合計
1年次	18	11	3	-	2	4	7	44
2年次	13	4	1	-	2	1	4	24

予 算 1983-84 RS 386,000

1984-85 RS 646,000

蔵 書 約1,000 冊

組 織

## DIRECTOR PRINCIPAL

## ACCADEMIC SECTION

## • EDUCATION

INSTRUCTORS 8

STUDENTS 68

## • HOSTEL

SUPERVISOR 1

COOKS 3

BEARERS 5

HELPERS 2

CHOWLCIDARS 3

SANIT. WORKERS 5

## ADMINISTRATION

## • OFFICE

HEAD CLERK 1

STENOTYPIST 1

LIBRARIAN 1

LOW DIV. CLERK 2

GESTETNER OP. 1

DAFTERI 1

NAID QASID 2

## • STORE &amp; TRANSPORT

ASST. STORE KEEPER 1

DRIVERS 2





## 資料編 II

1. 国情一般
2. 気象条件
3. 建設事情



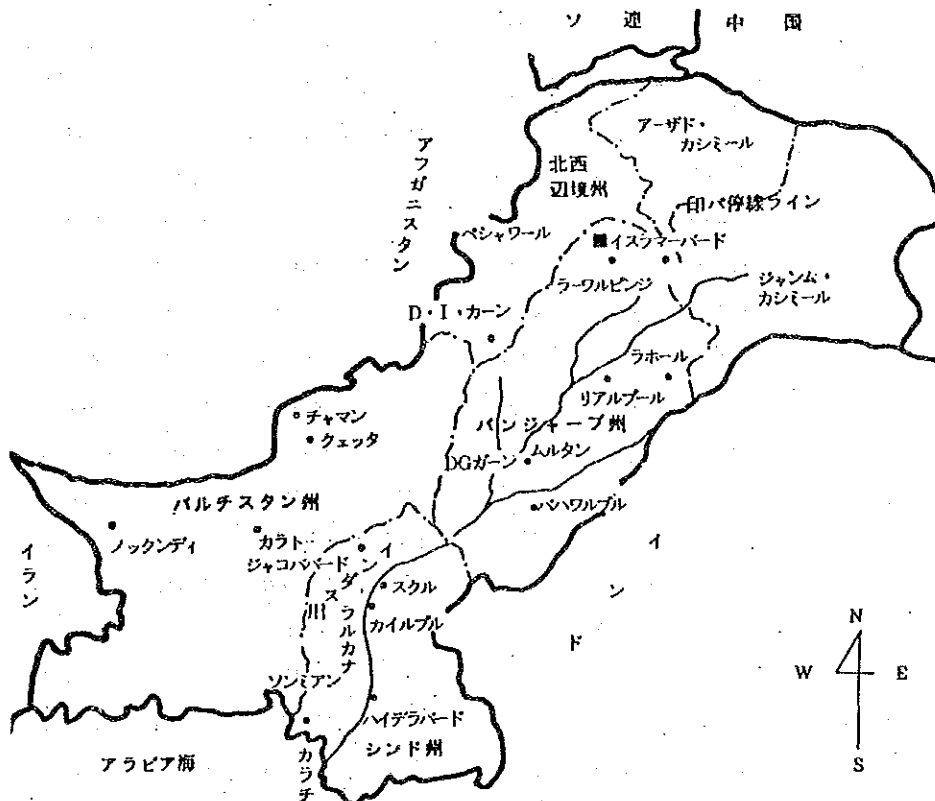
# 1. 国情一般

## 1) 地理

パキスタン回教共和国 (The Islamic Republic of Pakistan) は、イラン、アフガニスタン、中国、インドに国境を接し、南はアラビア海に面しており、戦略的に極めて重要な地勢を占めている。

位置は、北緯 23 度 30 分から 36 度 45 分、東経 61 度から 75 度 30 分の範囲にあって東西約 885 km 南北 約 1,600 km の広がりを持ち、国土の総面積は約 79 万 6,095 km<sup>2</sup> で日本の 2.1 倍強である。

地勢を大別すると、ヒンズークシ、ヒマラヤ、スレイマンの諸山脈から成る北西部山岳地帯、インダス河流域のヒンドゥスタン平原、デカン高原に移行する地帯のタール砂漠があり、行政的にはシンド、パンジャブ、北西辺境、バルチスタンの四州と連邦政府直轄のアーザド・カシミール地方に分けられている。



2) 人口

1982年1月現在の総人口は8,565万人であり、1981年の調査による人口増加率は2.98%と、途上諸国の中でも極めて高い。人口密度は全国平均が105人/km<sup>2</sup>で、パキスタン第二の都市ラホールや首都イスラマバードを含むパンジャブ州では229人/km<sup>2</sup>、最大の商工業都市カラチのあるシンド州では134人/km<sup>2</sup>で全国平均を上廻り、面積で43.6%を占めるこの両州に全人口の80%が集中している。逆に、バルチスタン州は面積で43.6%を占めながら、全人口の5.14%しか居住しておらず、極めて過疎である。

年齢別では19才以下が約60%近くを占め、55才以上は10%に満たないという、若年人口構成となっている。

各州別人口と人口密度

(In thousands)

	1972			Density persons per sq. km	1981			Density persons per sq. km
	Total	Male	Female		Total	Male	Female	
Pakistan	65,309	34,833	30,476	82	83,782	43,960	39,822	105
Urban	16,593	9,027	7,566	-	23,729	12,459	11,270	-
Rural	48,716	25,806	22,910	-	60,053	31,501	28,552	-
NWFP	8,389	4,363	4,026	113	10,885	5,652	5,233	146
Urban	1,196	647	549	-	1,658	861	797	-
Rural	7,193	3,716	3,477	-	9,227	4,791	4,436	-
Punjab	37,845	20,341	17,505	183	47,116	24,788	22,328	229
Urban	9,259	5,023	4,236	-	12,971	6,824	6,147	-
Rural	28,586	15,318	13,268	-	34,145	17,964	16,181	-
Sind	14,156	7,574	6,582	100	18,966	9,935	9,031	134
Urban	5,726	3,131	2,595	-	8,226	4,309	3,917	-
Rural	8,430	4,443	3,987	-	10,740	5,626	5,114	-
Baluchistan	2,428	1,289	1,139	7	4,205	2,274	2,031	12
Urban	399	218	181	-	672	355	317	-
Rural	2,029	1,071	958	-	3,633	1,919	1,714	-
FATA	2,491	1,266	1,225	92	2,175	1,129	1,046	80
Urban	13	8	5	-	-	-	-	-
Rural	2,478	1,258	1,220	-	2,175	1,129	1,046	-
Islamabad (FCA)	235	130	105	259	335	182	153	369
Urban	77	46	31	-	202	110	92	-
Rural	158	84	74	-	133	72	61	-

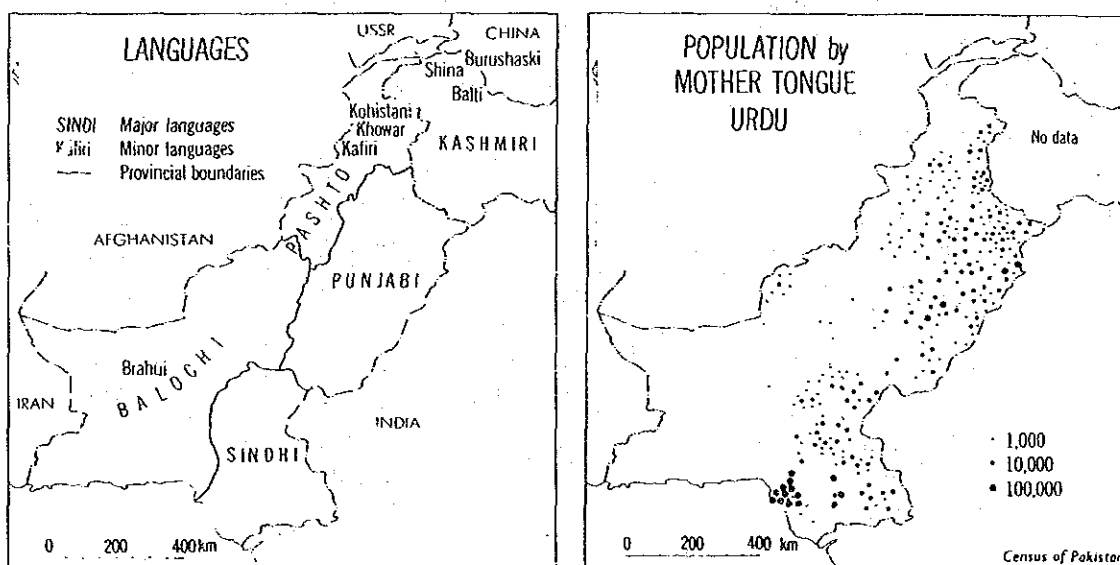
150 FATA: Federally Administered Tribal Areas.  
FCA: Federal Capital Area.

Source: Pakistan Census Organisation

### 3) 宗教・言語

回教を国教とし、回教の教義に基づく社会、経済体制の確立を主要政策としている。全人口の97%が回教徒(スンニー派が主力)で、キリスト教徒は2%強、その他はヒンズー教徒、仏教徒、パーシー教徒などである。

公用語はウルドゥーと英語の二つであり、各地方ごとにシンディ、パンジャビ、ハシュト、パロチなどの言語が使われているが国語としてのウルドゥーの通用度は高く英語は都市部、政府機関、財界で広く通用する。文化・教育の水準は、かなり低く全国平均識字率は24%であるが、シンド、パンジャブ両州に比べて他の地方が、又男子に比べ女子が夫々極めて低く格差が大きい。又82/83年度の初等教育の就学率は48%(1983)であり、このため政府は初等教育の拡充や識字教育に力を入れている。



4) 経 済

国内貯蓄の著しい低率と経常収支の大巾赤字という難問を抱えながらも、着実に発展・成長の軌道にのっていると見られる。

81/82年の実質GDP成長率は6.6%で、GDPの1/3を占める農業生産は政府の積極的農業振興策もあって前年度なみの4%の成長を示し、製造部門では12.1%と高度成長をしめした。

政府は企業国有化政策を改め、一部国営企業の民営移管、民間投資の奨励に力を入れているが、内外の政情不安定、財政難、インフラ未整備、中近東への流失による熟練労働者の不足などから民間の経済活動は未だ活発化していない。

貿易も年々拡大しているが、輸出の主力が米、綿花、綿糸布、輸入の主力が石油・石油製品、機械という構造もあって、年間20億ドルに達する出稼ぎ送金を入れても経常収支の大巾赤字は続いて居り、外国援助の受け入れ増大、債務救済要請及び外銀からの短期借入れを余儀なくされている。

経 済 指 標

	1979 / 80	1980 / 81	1981 / 82
国民総生産 (名 目)	百万ルピー 230,658	百万ルピー 272,102	百万ルピー 315,033
(実 質) 1959 / 1960 ベース	53,292	56,321	59,636
一人当りGNP (名 目)	ルピー 2,878	ルピー 3,294	ルピー 3,706
(実 質)	668	682	702
消費者・物価指数 1969 / 70=100	311.83	355.02	399.47
就 労 人 口	千人 23,130	千人 23,805	千人 24,501
海外出稼労働者	千人 118	千人 133	千人 153

	1978 / 79	1979 / 80	1980 / 81	1981 / 82	1982 / 83
(単位：百 万ルピー)	16,925.00	23,410.10	29,279.50	26,269.90	34,441.70
輸 出 額					
輸 入 額	36,388.10	46,929.10	53,543.70	59,481.50	68,150.80
対日輸出額	1,670.-	1,813.-	1,877.-	2,232.94	2,824.22
対日輸入額	4,149.-	5,422.-	6,188.-	7,256.74	9,132.21

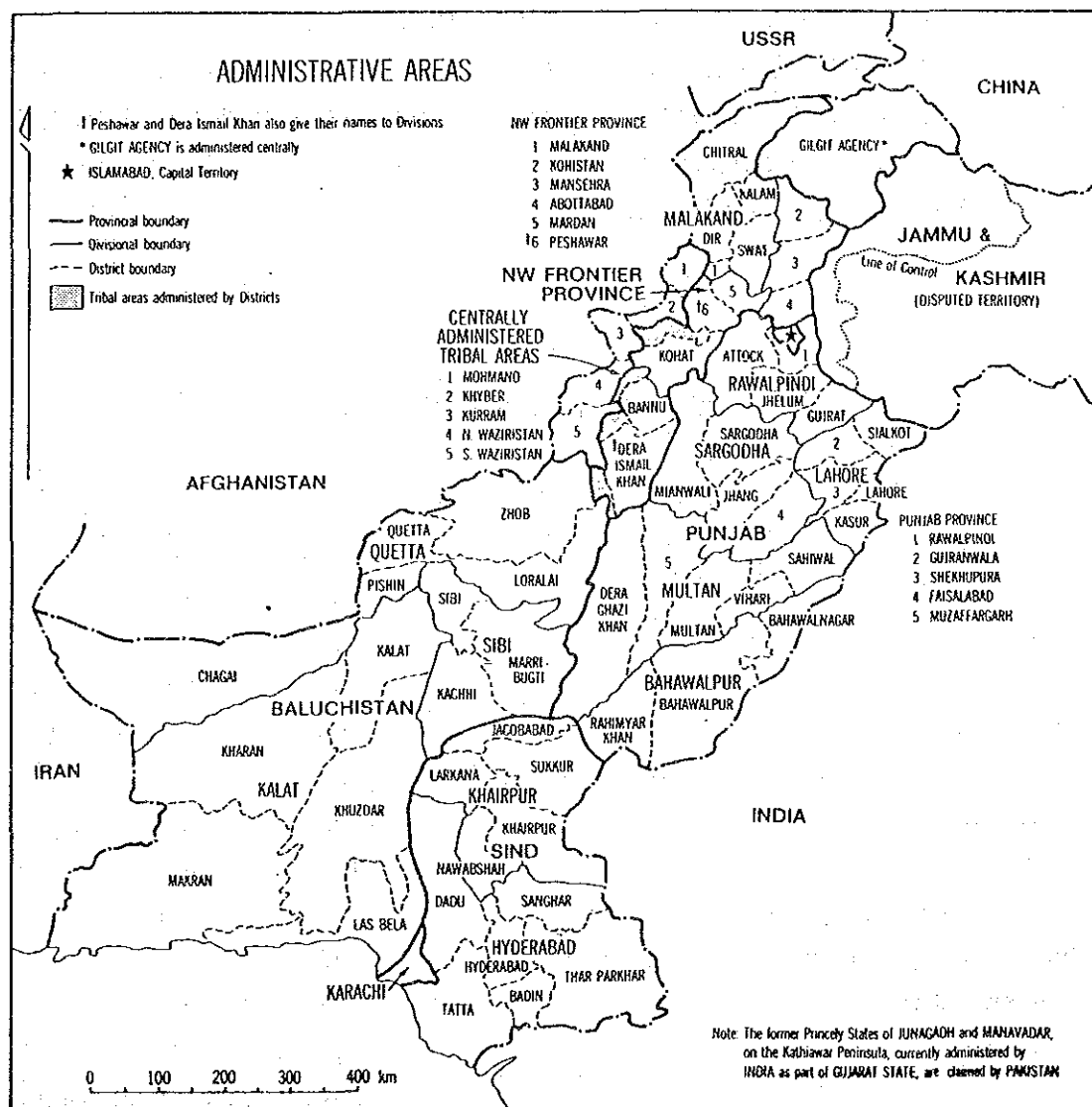
日本の無償資金協力：1981年6月迄のE/Nベース累計 207億400万円  
(一般無償 117億、KR 67.52億、債務救済 22.52億)

5) 行政

連邦共和制をとり、行政区分としてはシンド州、パンジャブ州、北西辺境州、バルチスタン州の4州と、連邦政府直轄のアザド・カシミール州に分けられている。現政権は、1977年7月以降実質上の軍事政権制をとっており、元首であるジアウル・ハク大統領は戒厳令総指令官を兼務し、上記四州の知事はその地方の戒厳令指令官が兼務している。

1977年7月以来国会・州議会は廃止されたままであり、政党も1979年10月に解散となったまま立法組織はない状態にある。1985年春には民政移管の選挙が予定されており、行政の正常化が期待されているが情勢は尚流動的である。

行政区域図



6) 教 育

制度としては、小学校5年、中学校3年、高等学校2年、その上の職業訓練学校、カレッジ（通常の文科系、理系その他、専門職用のもの）と最高段階としての総合大学（2～6年制）がある。

82 / 83年現在の学校数と学生数は別表の通りであるが、小学校の学生数712万人は就学率50%に相当しこの向上が教育における最大の課題となっている。このため82 / 83年度の教育予算は前年度の49.1%増額され75億Rpでこのうち31.2%が小学校拡充にふり向けられた。

又、都市部の定員オーバーの小学校や小学校低学年クラスをMosqueに委託したり、町内会組織のMohallahスクールで小学校教育を行う努力が払われている。又、学校に行っていない青年、成人に対する識字その他の成人教育にも力が注がれている。

これら初等教育拡充や一般大衆の識字率の改善は国民の教育水準向上という大命題となっているが、これと並んで、熟練労働力不足問題の解決のため政府は技術教育と訓練の拡充に重点をおいて居り、職業指導員訓練、職種別労働者訓練などのために各地に訓練所を設けて人材教育の強化に力を注いでいる。

教育水準（1981年）

(In thousand)

Level	Both Sexes	Male	Female
Primary	5,851	4,092	1,759
Middle	3,084	2,281	803
Matric	2,241	1,830	591
Intermediate	709	518	191
Certificate/Diploma (Less than Degree)	131	104	72
B.A./B.Sc.	478	351	127
MA/MSc.	134	101	33
B.Sc. Engineering and above	27	26	1
MBBS/BDS and above	26	20	6
LLB and above	37	36	1
Others	7	6	1

Source: Population Census Organisation



## 7) 交 通

国内輸送においては道路・鉄道による陸運が主力となっている。道路延長距離は約 113,000 km (1983 年) で舗装率 40 % であるが、道路密度は 0.16 km と途上国に比べ 1 / 3 以下である。しかし、この即設道路も老朽化していたり雨季に冠水する部分も多く、さらに北西辺境州やバルチスタン州などの後発地域との格差もはげしい。鉄道は全長 8,823 km で国内主要都市を結ぶと共に、隣国インド、イラン、アフガニスタンとも連結されて居る。鉄道の輸送絶対量は増加傾向にあるものの、車輛・軌道・橋などの老朽化や非効率的な管理システムにより増大する輸送需要に追いつかず、鉄道輸送のシェアは年々減少し道路輸送中心となりつつある。

旅客輸送ではシェアは小さいものの急成長を示しているのが国内航空で、6 つの国際空港と 16 の国内空港を結び 82 / 83 年では 5 年前に比べて 33 % 増加して 340 万人の旅客を輸送した。

### 道路延長距離

(キロメートル)

年 次	合 計	高級道路	低級道路
1950-55 平 均	28,794	11,337	17,457
1955-60 平 均	31,179	13,564	17,615
1960-65 平 均	33,960	14,987	18,974
1965-70 平 均	31,966	17,083	14,883
1970-71	32,508	18,167	14,341
1971-72	34,741	19,311	15,430
1972-73	35,750	19,985	15,855
1973-74	38,983	22,629	16,354
1974-75	38,632	22,294	16,338
1975-76	49,773	27,111	22,662
1976-77	51,123	31,004	20,119
1977-78	93,415	31,249	62,166 *
1978-79	95,222	33,176	62,046 *
1979-80	95,660	33,611	62,049 *
1980-81	96,436	34,487	61,949
1981-82	96,800	38,653	58,147
1982-83 (予 想)	97,519	39,372	58,147

\* a) 62,166 km のうち、14,259 km は地方行政府の管理下にある低級道路 (Katcha Roads) である。1980-81 年は 48,343 km が地方行政府下となった。

b) 低級道路の減少は高級に改良された為である。

資料: Pakistan Economic Survey, 1982 / 83

西南アジア6カ国基礎指標(1)

国情一般

項目	単位 基準年	ビルマ (ビルマ連邦 社会主義共和国)	ネパール (ネパール王国)	バングラデシュ (バングラデシュ 人民共和国)	インド (インド共和国)	パキスタン (パキスタン イスラム共和国)	アフガニスタン (アフガニスタン 民主人民共和国)
首都		ラングーン	カトマンズ	ダッカ	ニューデリー	イスラマバード	カブール
政体	1980	社会主義共和国	立憲君主制	共和制	連邦共和制	連邦共和制	共和制
独立年月		1948.1	-	1971.3	1947.8	1947.8	1919
元首	1980	ネ・ウイン大統領	ビレンドラ国王	ジヤウル・ラマン 大統領	ネーラム・ランシハ レディ大統領	ムハマド・ジヤウル ハク大統領	バブラフ・カルメル 革命評議会議長
人口	100万人 1978年央	32.2	13.6	84.7	643.9	77.3	14.6
面積	1000km <sup>2</sup>	677	141	144	3288	804	647
人口密度	人/km <sup>2</sup> 1978年央	47.5	96.4	588.1	196.1	96.1	22.5
年平均人口成長率	% 1970-78	2.2	2.2	2.7	2.0	3.1	2.2
宗教	主たる	仏教	ヒンズー教・仏教	イスラム教	ヒンズー教 イスラム教	イスラム教	イスラム教
公用語	主たる	ビルマ語	ネパール語	ベンガル語	ヒンディー語・英語	ウルドゥー語・英語	プシュトゥン語 ダリ語
主要な人種構成	(内%)	ビルマ族(60) カレン族(5) シャン族(4) カチン族(1)	グルカ族 ネワール族 グルン族 ラナ族	ドラビダ系 モンゴル系	インド・アリア系 ドラビダ系 モンゴロイド系 ネグロイド系	パンジャビー族 シンディー族 パトーン族 パロター族	パシュトゥン族(50) タジーク族(25) ウズベク族(9) ハザー族(9)
成人識字率	% 1975	67	19	26	36	21	12
出生時平均寿命	歳 1978	53	43	47	51	52	42
幼児死亡率	% (1-4歳) 1978	15	23	23	18	17	27
都市人口比率	% 1980	27	5	11	22	28	15
都市人口年平均成長率	% 1978-80	4.0	4.7	6.6	3.3	4.3	5.6
産業別労働力の分布	農業	53	93	74	74	58	79
	工業	20	2	11	11	19	9
	サービス	27	5	15	15	23	12

西南アジア6カ国基礎指標(2)

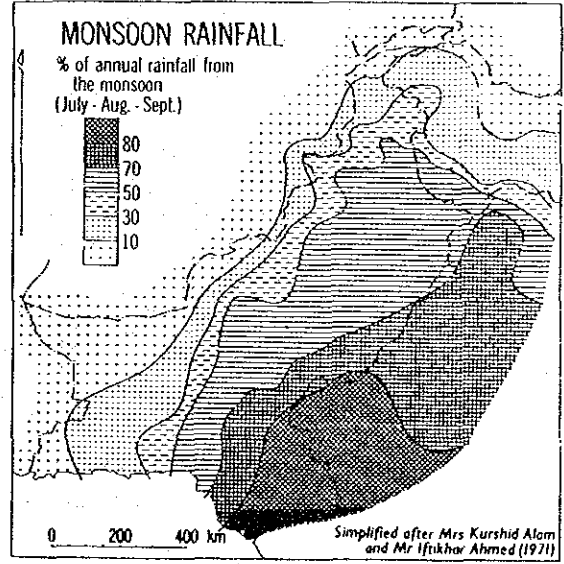
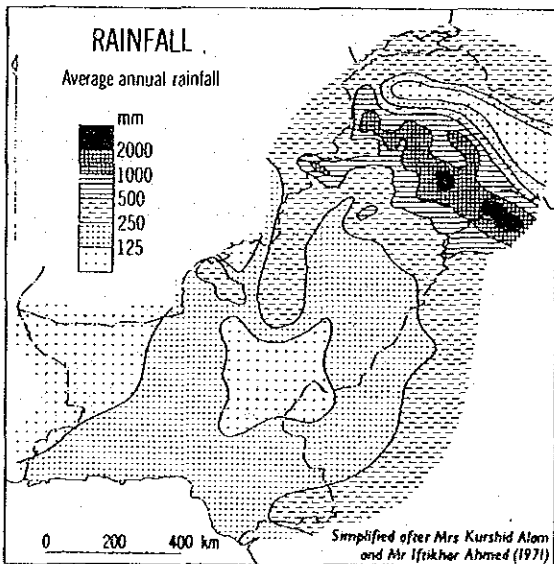
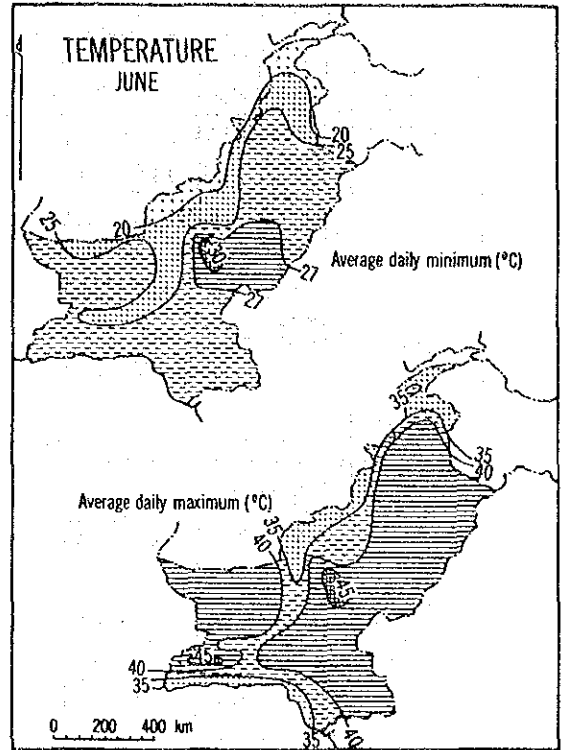
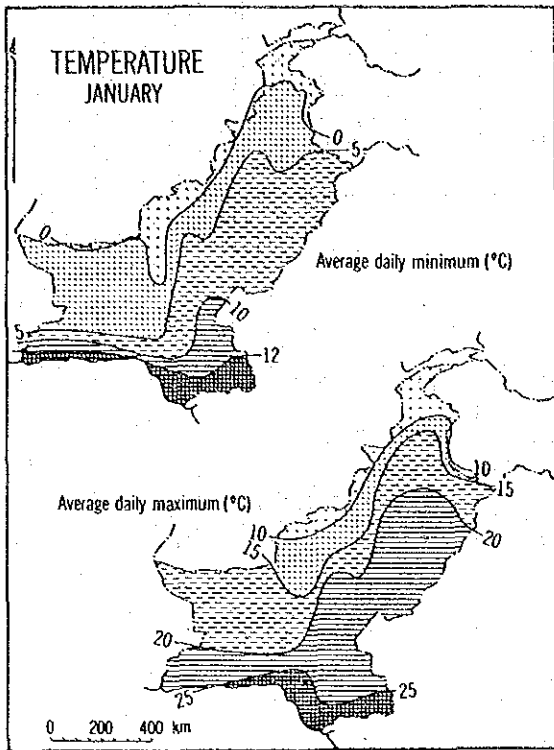
項目	単位	ビルマ ビルマ連邦 (社会主義共和国)	ネパール (ネパール王国)	パングラデシュ (パングラデシュ 人民共和国)	インド (インド共和国)	パキスタン (パキスタン イスラム共和国)	アフガニスタン (アフガニスタン 民主人民共和国)	
1人当りGNP	U.S.\$	150	120	90	180	230	240	
	1978							
1人当りGNP 年平均成長率	%	1.0	0.8	△0.4	1.4	2.8	0.4	
	1960-78							
GDP年平均成長率	%	4.0	2.7	2.9	3.7	4.4	4.6	
	1970-80							
産業別平均 GDP成長率	農業	3.6	-	1.6	2.6	1.9	3.5	
	工業	4.5	-	5.0	4.5	4.8	5.3	
	製造業	4.2	-	5.3	4.6	3.5	4.0	
	サービス	4.2	-	4.7	4.6	6.2	6.1	
GDP	100万U.S.\$	4,156	1,233	8216	101,483	14,511	3,411	
		(76/77)	(74/75)	(77/78)	(77/78)	(76/77)	(77/78)	
1人当りGDP	U.S.\$	129	90	97	157	187	233	
		(76/77)	(74/75)	(77/78)	(77/78)	(76/77)	(77/78)	
商貨輸出	100万U.S.\$	243	87	576	6,614	1,471	322	
品島輸入	1978	309	227	1,294	7,954	3,275	681	
商貨輸出 年平均成長率	%	0.5	-	△4.7	6.0	△1.3	2.4	
品島輸入	1970-78	△4.6	-	△2.9	3.2	5.9	8.1	
対GNP債務返 済比率	%	1.2	0.2	1.3	0.8	2.1	1.3	
	1978							
支払済対外公 債務残高	100万U.S.\$	818	88	2,798	15,326	7,568	1,216	
	1978							
対GNP支払済対 外公の債務残高	%	18.1	5.4	38.2	13.1	40.80	30.8	
	1978							
対外貸借高	100万U.S.\$	151	181	322	8,316	795	606	
	1978							
対外貸借高輸 入支払現月数	月	3.7	7.8	2.3	10.2	2.3	10.4	
	1978							
通貨		チャット (K)	ネパールルピー (NRs)	タカ (TK)	ルピー (Rs)	パキスタンルピー (PRs)	アフガニ (Afis)	
為替レート	対U.S.\$	6.17K	11.9NRs	14.8TK	7.6Rs	9.7PRs	45Afis	
	(1980.9調査時点)						(1979.4)	
財政	歳入	100万U.S.\$	2566	257	818	13,942	3,345	324
	うち税収		384	125	627	9,840	2,503	-
	歳出	100万U.S.\$	2,664	257	632	14,459	3,441	260
	収支	100万U.S.\$	△98	0	186	△517	△97	64
		(76/77)	(77/78)	(77/78)	(79/80)	(79/80)	(76/77)	

(出所) 世界銀行, 世界開発報告1980

アジア経済研究所, アジア動向年報1980

ティービーエス・ブリタニカ年報, ブリタニカ国際年報1979

Europe Publications Limited, The Far East Australasia 1979-80



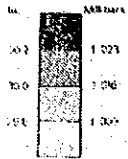
## 2. 気象条件

### 1) 気温

- 年間最高平均気温 : 過去の統計から各地とも6～7月が最高平均気温月であり、中央・西部内陸部の一部が45°C、内陸部の大部分が40°Cであり海岸のカラチは34～35°Cである。
- 年間最高気温 : 中央内陸部 Jacobabad で52°C (6月、7月)、カラチ東方 Hyderabad 及びラホール西南 Multan で6月に50°C、Peshawar で7月に50°Cが記録されている。
- 年間最低平均気温 : 各地とも1月が最低平均気温月であり、図2-5の如く、西部・北部の高地の一部が0°C以下となるが、内陸部の大部分は0°C～5°C帯である。
- 年間最低気温 : 最北部の高山地帯を除いての観測記録では、西部バルチスタン州都 Quetta で1月に-15°Cが記録されている。
- イスラマバードの気温 : 5月から8月は日中40°C (平均湿度40～80%) が連続し最高46°Cに達することがある。一方11月から3月始め迄は日中15°C～20°Cで夏・冬共夜間は日中より20°C程温度が下がる。年間平均最高気温は28°C同最低気温14.4°C
- カラチの温度 : 平均気温は4月～10月が27°C～31°C (平均湿度71～82%) で6月には35°Cに達することがある。過去の最高温度としては5月に48°Cを記録したことがある。11月～3月の平均気温は19°C～25°C (平均湿度33～57) 最低温度記録は1月の4°C。

Pressure/Winds

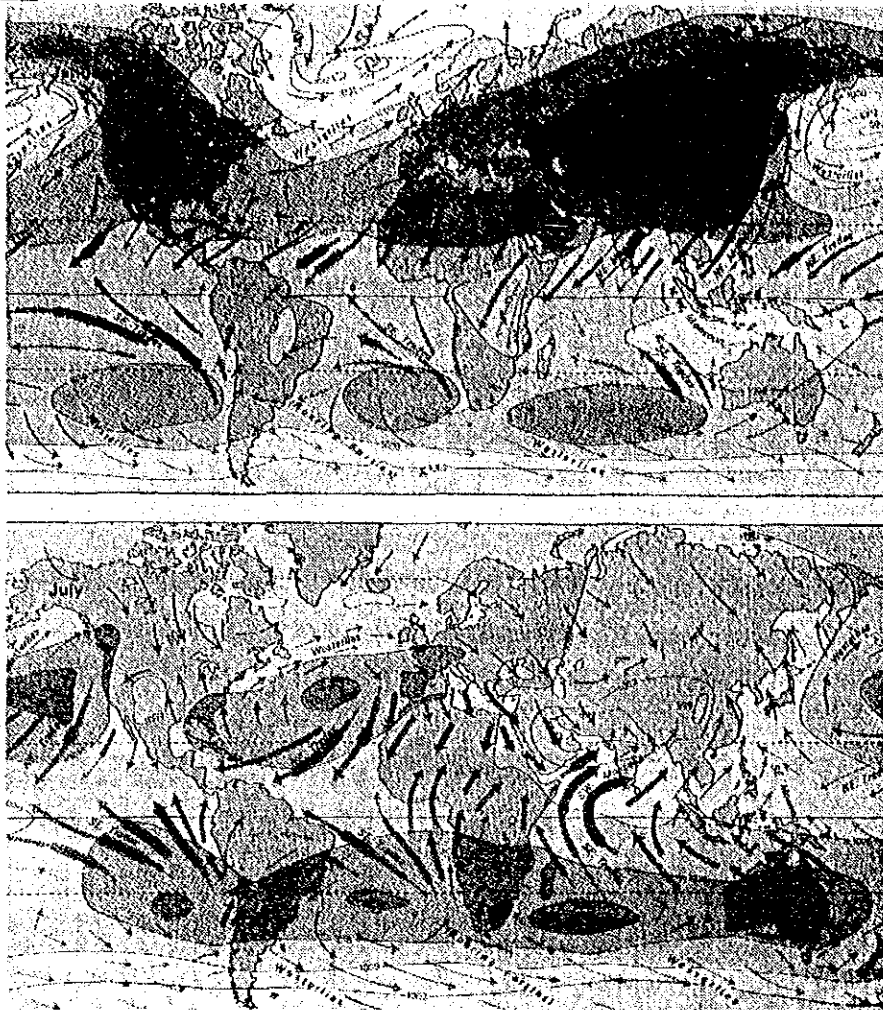
Atmospheric pressure



1021 to 1024 hPa  
 1000 to 1020 hPa  
 1000 to 1020 hPa  
 1000 to 1020 hPa  
 1000 to 1020 hPa

Prevailing winds

Arrows indicate  
 wind direction. The  
 length of the arrow  
 indicates the  
 strength of the wind



年間平均恒風 (%)

Table - 2 年間の風向の割合 (%) - 2)

	北	北東	東	南東	南	南西	西	北西	微風
午前8時	2	22	2	6	2	12	2	2	51
午後5時	1	22	2	5	3	19	8	6	34

※ Pakistan Meteorological Department による ISLAMABAD の BASED ON 5 YEARS RECORD 1981 年以前のデータ

## 2) 降 雨

- 降 雨 量 : 全国平均で年間降雨量は 250mmと非常に少なく、全土の約80%が 250 mm以下、約 20 %は 125 mm以下である。500 mmをこえる地域は北部の山麓地帯の限られた地域である。
- インダス平地の降雨 : インダス河流域平地では年間の半分以上の降雨はモンスーン期間の7月～9月に集中しているが、平均 32°C～40°Cの高温のため蒸発が高く夏季における降雨の効果が減殺されている。
- イスラマバードの降雨 : 7月の雨季入りと共に殆ど毎日何時間か雨が降るが、その降り始めに熱風と砂嵐が吹き、やがて雷を伴った豪雨となる。雨のあとは、温度が下がりしのぎ易くなる。
- カラチの降雨 : 7月の平均が 100 mm弱 8～9月は何れも平均 50 mmで他の月は殆ど降らず年間降雨日数は 10 日前後であるが、何年に一回といった大雨が降る年がありこの時は排水設備が不備なので洪水となる。

## 3) 恒 風

夏場はアラビア海より吹きこむ南西の季節風があり、冬場は逆にカラコルム山系より吹きおろす北東の風にかわる。夏場は室内に南西の風を取り入れる配慮が必要であり、冬場は北東の風が吹きこまぬようにする必要がある。

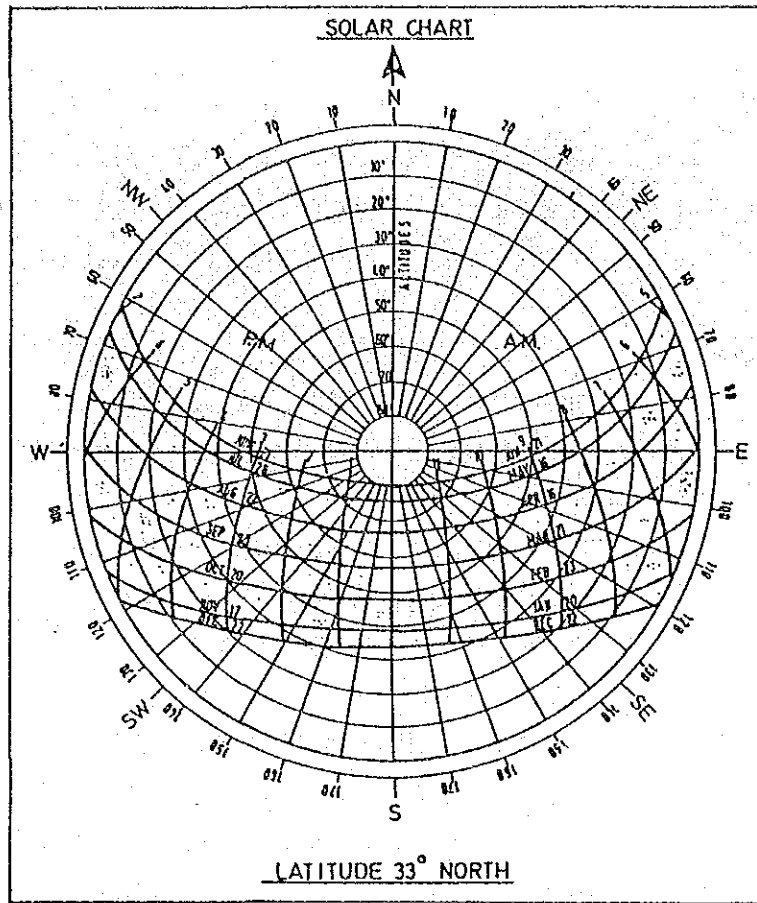
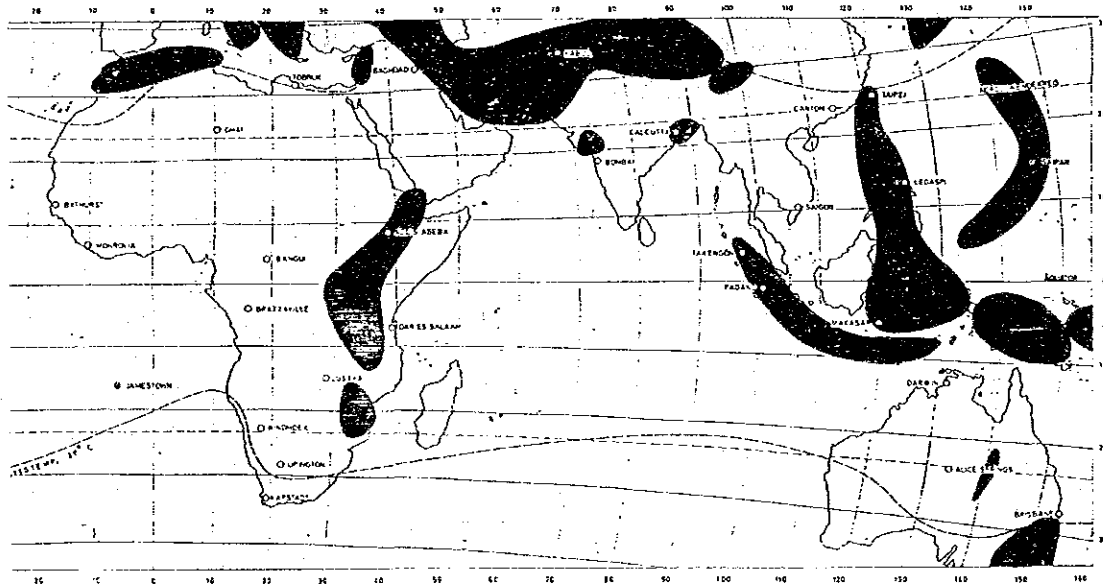


Fig. 71 Earthquake areas in the tropics





#### 4) 日射・日照

イスラマバード（北緯 33 度、東経 73 度）における太陽軌跡図を左頁に示す。当地の夏（6月～8月）の日射は非常に強く、建築計画上、庇・ルーバー等による日照の調整、外壁や屋根の受熱面材料の選定に特別な配慮が必要である。特に西側壁面は午後の気温上昇ピークと重なる為、受熱を最少限におさえる必要がある。反面、冬（11～3月）は気温がさがる為、庇の張出しを充分考慮して日照を室内に取り入れる。

#### 5) 地 震

イスラマバード付近で発生した地震についての明確な観測記録はないが、文献によれば、パキスタン国は欧亚地震帯が縦断しており、地震が発生しているとされている。現地でのヒアリングでも、体感できる地震が過去にあったとの事である。

#### 6) 落 雷

現地には避雷針の設置基準はないが、スコール状の降雨には通常落雷をとまなう為、安全上十分な避雷対策が必要である。

CAPITAL DEVELOPMENT AUTHORITY  
ISLAMABAD BUILDING REGULATIONS, 1963.

APPLICATION FOR APPROVAL OF PLANS—FORM A—1

Rawalpindi \_\_\_\_\_  
(Date of Delivery at Authority's  
Office.)

To  
The Capital Development Authority,  
Rawalpindi.

Dear Sir,

I hereby apply for your permission to erect/re-erect/make additions to and/or alterations in/a building on plot No.....Sector.....Islamabad in accordance with the Building Plans sent herewith (in triplicate) for your approval.

The following particulars are certified to be true:—

1. Plot No.....Sector.....Area in sq. yds.....
2. Reference to Title Deed .....,.....
3. Intended use of proposed building.....
4. Description of the proposed building works.....
5. Nature of soil below foundation.....
6. Specification of foundation.....
7. Specification of plinth.....
8. Specification of superstructure.....
9. Specification of floor.....
10. Specification of roof.....
11. Method of Drainage and Sewerage.....
12. (a) The Architect employed to prepared the plans.....
- (b) The Architect/Engineer employed to supervise the construction.....

Mr.....

Address.....

is hereby authorised by me to do all acts and things required to be done in this regard under the ISLAMABAD BUILDING REGULATIONS for me and on my behalf.

Yours faithfully,

\_\_\_\_\_  
(owner)

Dated.....19

Address.....

### 3. 建設事情

#### 1) 法規

パキスタン国全体に共通する建築法規はいまだ作成されておらず、イスラマバードのCDAとカラチのKDAが、それぞれ建築基準法を発行している。また、全国的な建築規定として「National Building Code of Pakistan」が、KDAにて検討されている。

イスラマバード首都圏に於いては、1960年の遷都後に設立された首都圏開発局CDAにて、次の2つの法規が作成されている。

イスラマバード建築規定 : 「Islamabad  
Building Regulations 1963」

イスラマバード住居地区区画規定 : 「Islamabad  
Residential Sectors Zoning Regulation  
1967」

いずれも英国基準(B. S.)を手本にパキスタン国の実情にアレンジしたもので本計画に於いても参考とすべきであるが、CDA-Directorからのヒアリングでは、本規定が古く改訂中であり、また本計画が訓練センターとして特殊の性格を持つ為、設計の段階で打合わせしたいとの事であった。

その他、建築設備工事、電気工事、消防などについても規定はなく、それぞれCDA、WAPDA、FIRE OFFICE に文書にて工事申請し、図面確認の後、現場説明を行うシステムになっている。

#### 2) 計画規準

CDA発行の建築規定の中で計画基準について若干ふれているが、極めて低い基準であったり又は、その逆(教室の天井高さ $\geq$  3.6メートル)など、実情に合わない点が多い為、設計段階でCDAと打合わせする必要がある。

NOTICE OF COMPLETION

FORM B-1

SCHEDULE No. 1

Rawalpindi  
(Date of Delivery at Authority's office.)

To

Capital Development Authority,  
Rawalpindi.

Dear Sir,

I hereby give notice of completion of building/additions and/or alterations in the building on plot No ..... and of drainage and water supply arrangements therein, and apply for your permission to occupy the said building.

The said work has been carried out in accordance with the Building Plans approved under your No.

date.....  
(Delete whatever is implicable)

Yours faithfully,

\_\_\_\_\_  
(owner)

Dated .....19

Address .....

LICENSED ARCHITECT/ENGINEER'S CERTIFICATE

FORM B-2

SCHEDULE No. 1

To

The Capital Development Authority,  
Rawalpindi.

Dear Sir,

I hereby certify that the building/additions and/or alterations in the building on Plot No ..... has/have been completely/partly completed under my supervision and to my satisfaction in accordance with the Building Plans approved under the CDA.

No ..... dated.....  
(Delete whatever is inapplicable)

Yours faithfully,

Dated .....19

\_\_\_\_\_  
Licensed Architect/Engineer.

## 3) 申請手続

同上の建築規定第1章は、建築申請、監理者届、完了届などの申請手続について規定しており、本計画に於いても以下の手順にて届出を行う必要があると思われる。

## (1) 建築許可申請 (FORM A-1)

設計者の有資格証明書 (FORM A-2) と共に次の図面を添付して提出する。

- a) 配置図 縮尺 200分の1程度
- b) 平面・立面・断面図 縮尺 100分の1程度
- c) 給排水計画図 給水は接続申請書を添付 (FORM A-3)  
排水は方法を明記
- d) 構造計画書 床荷重について明記
- e) その他、関係当局が必要とする図面・文書

## (2) 建築線確認申請 (FORM D)

## (3) 工事完了届

完了後1ヶ月以内に工事監理者の確認書 (FORM B-2) を添え提出する。

## (4) 検査

次の4つの時期に渡りCDAの検査が行われる。

- a) 建築許可申請に基づく現状確認の検査。
- b) 工事期間中の進捗検査。
- c) 工事完了届に基づく完了確認検査。(30日以内)
- d) 完成後の随時検査。

4) 工事に関する手続き

(1) 現場事務所の設置届

下記の書類を添付してCDAに提出する。

- a) 契約書類
- b) 会社定款 (但し、在東京パキスタン大使館の翻訳証明あるもの)
- c) 本社役員表
- d) 本社、現場事務所の所在地を明記した書類。

(2) その他の手続

a) 仮設電力及び自家発電機

WAPDAに受電申請及び設置申請を行い、検査官が配電盤までの配線を行う。

b) 労働基準局

労働基準法に従い、基準局の監督を受ける。

## 5) 建設工事の実態

## (1) 建設業界

政府統計（1982年）によれば全就労人口約25百万人の4%に当たる100万人が建設業に従事している。しかし、就労労働力の主力が15才から29才の年齢層であり、熟練労働力の海外流出（総数約15万人）が国内では深刻な問題となっている。

建設業者の数は多く、イスラマバード周辺だけで1,000社はあると推定され、この地区で一流業者と認められるのは次の3社であり、この他にBクラスでは20社程ある。

## a) GAMMON PAKISTAN LTD.

エンジニア・スタッフ約1,500名を有し、建設用機械を約300台保有する、建築・土木・設備・電気の総合請負業者である。“A”クラスの施工能力を持つが、現地コンサルタントの評価では他の業者より見積りは割高であるとの事。

所在地：400/2 Peshawar Road, RAWALPINDI

## b) MACDONALD LAYTON &amp; COMPANY LTD.

エンジニア・スタッフ約5,000名を有し、建設用機械を約200台保有する、総合請負業者である。“A”クラスの施工能力を持ち、現地コンサルタントの評価も高く、見積りも適性価格とのこと。

所在地：(カラチ) P.O. BOX 4133, West Wharf, KARACHI

(イスラマ) CA-168, Saidpur Road, RAWALPINDI

## c) INTERHOM LTD.

エンジニア・スタッフ約75名を有し、建設用機械を約60台保有する、総合請負業者である。“B”クラスの施工能力を持ち、現地コンサルタントの評価は中程度である。

所在地：313, Sector I-9, ISLAMABAD

現地コンサルタントとしては、次の2社が高い評価を得ている。

## a) NESPAK - National Engineering Services (Pakistan) LTD.

エンジニア及びスタッフ約1,000名を有する総合設計コンサルタントで1973年にパキスタン政府により組織された。同国内及び海外の大規模プロジェクトを幅

広く手がけると同時に、年2回発行される“PRICE INDEX”もここで統計処理されている。

所在地： 417, WAPDA HOUSE, P.O. BOX 1351, LAHORE

b) PEPAC

-Pakistan Environment Planning & Architectural Consultants LTD.

スタッフ約 200 名を有し、設計コンサルタントとして入札図書の準備、設計、施工監理等を業務としている。

所在地： 2-A, Agha khan Road , Shalimar 6-4 ISLAMABAD

(2) 建設用資材

パキスタンにおける自国生産資材について調査を行った。

当国では、骨材、セメント、簡単な鋼材等を除き外国からの輸入に依存している為、価格は一般に国際相場に追随する。

建設建材以外の空調・衛生・給排水・電気等の設備機器・資材については、一部自国内で製造しているものもあるが生産能力が低い為、大半は輸入品を利用している現状である。又、輸入資材については 50~200 %の税が課せられる為、設備工事費は急騰している。

以下は現地にて調達される各建設資材の概要である。

a) 骨材

粗骨材については、イスラマバード周辺にマルガラ山系の岩を砕石するプラントが数 10 ヶ所あり、硬度、粒度分布、供給量とも問題はない。現地では泥の付着・混入に無関心な為、使用前に充分散水し泥を流し出す必要がある。

細骨材については一般に川砂が使用されており、若干粒度が細かいが問題はないと思われる。これも採集場所によってはシルト・泥等の混入がある為、使用に際しては注意を要する。

b) セメント

政府統計によれば年間約 400 万トン (1983 年) を生産しているが、国内需要をようやく賄う程度と想定される。供給は政府が管理しており、施主による予約枠の先取りや 1 ヶ月前に支払い金を前納するなど、入手には手間がかかる為、半月分のストックは常時確保する必要がある。品質は BS 規格であり問題はない。



## c) 鉄筋

異形・丸鋼ともに生産されているが、供給量充分でなく品質にもバラツキがある。供給される鉄筋長さは全て12 m前後で、運搬のために中央で曲げられており、これを使用することは大変なロスになる。

## d) レンガ

最も一般的な材料であり良質の焼レンガが入手できる。寸法は3"×4.5"×9" (75 mm×112 mm×225 mm) が標準であり、ハンド・メイドの下地用からマシン・メイドの化粧積用まで、種類も豊富である。

## e) 木材

化粧材として使用される良質の木材(チーク等)は、ビルマ・バングラディッシュからの輸入にたよっている。国内で入手できるシーシャム(SHISHAM)は、家具・ドア等に使用されているが供給量に問題がある。

## f) テラゾー

最も一般的な仕上材料であり、品質も良好である。大面積の研ぎ出しは不慣れで、30~45 cm角のテラゾー・ブロックを作り、貼付け後に再度研ぎ出しして不陸を揃える。

## g) セラミック・タイル

タイルもイスラム建築等に広く利用されているが、日本の規格に比べれば品質にムラがある。寸法は、204×204×8 mm、151×151×5 mm、108×108×5 mmの3種類で、これ以外は充分な納期をもって注文生産となる。

## h) 大理石

種類は多いが採石の方法が原始的な為、大型の石は取れず600 cm角が限度である。9"×4 1/2"のマーブルタイルは安価であり、仕上材として広く使用されている。

## i) 建具

木製建具は現地材を使用したものは品質良くなく、輸入材を使用したものは高価である。ドアは良質のベニア材がない為ムク材によるものが多い。スチール建具は一般的であるが精度良くなく、供給能力も小さい。アルミ建具は1980年より

製造開始したが、品質はまだ良くない。

j) 塗料

BS規格による良質の塗料が製造されているが、色数（特に中間色）が限られるため注文色とするか現場配合する必要がある。特殊ペイントを除き、供給に問題はない。

k) ガラス

5mm以下の板ガラスを製産しているが、表面が円滑でなく、ゆがみがみられる。

l) 天井扇

天井扇は一般居室に広く使用されており、メンテナンスや修理を考慮すれば現地製にて充分と考えられる。現地ではクーラーの入った居室でも天井扇を併用している場合が多い。又、工場などでも作業位置ごとに天井扇が設けられている。

m) 衛生陶器

現地にて入手できるが、クラックや歪みが多く、破損の恐れがある為、現地式便器のみ使用する事とする。

n) 電線

現地製は被覆が3色しかない為、結線ミスを犯し易い。これ以上の色については特注となる。

o) コンセント

現地ではBS規格の3ピン式に2ピンを加えた5ピン式が使用されている為、コンセントは現地製を使用する。

p) ビニール管

コンデュイット管は現地にて硬質ビニール管が入手できるが、肉薄の為にコンクリート打設時に破損しやすい。

q) 電球

バルブ・チューブとも現地製を使用する。

## 6) 建設コスト

## (1) パキスタンと日本の建設コスト比較

単位：円 1984年5月現在

項 目	単 位	パキスタン単価	日 本 単 価
根切	m <sup>3</sup>	550	3,500
碎石地業	〃	3,700	6,870
鉄筋コンクリート	〃	19,700	12,500
型枠	m <sup>2</sup>	2,600	3,000
鉄筋	ton	200,000	60,000
ブリック積(塗下)t=120.	m <sup>2</sup>	2,500	—
モルタル塗(床)	〃	740	1,350
〃 (カベ)	〃	630	2,200
タイル貼(床)	〃	6,000	7,500
〃 (カベ)	〃	6,000	7,000
ペンキ塗(0.9)	〃	550	1,000
テラゾーブロック敷	〃	2,750	33,600
Pタイル貼	〃	1,800	1,600
石膏ボード貼	〃	1,200	900

## (2) パキスタン(ラワルピンデイ)と日本の労務賃金比較

単位：円(1984年5月現在)

項 目	単 位	パキスタン	(RP)	日 本
大工		690~1,340	1,030 (60)	8,977
コンクリート工		690~2,000	1,370 (30)	8,977
ブリック工		690~2,230	1,540 (90)	—
鉄筋工		860~2,230	1,540 (90)	12,235
鉄骨工		1,200~2,800	2,570 (150)	11,598
大工		1,200~2,230	1,720 (100)	13,524
アスファルト工		860~2,230	1,540 (90)	12,830
建具工		1,200~3,090	1,720 (100)	12,743
左官工		850~2,230	1,540 (90)	13,459
タイル工		1,030~3,350	1,720 (100)	16,250
塗装工		690~1,800	1,370 (80)	13,459
事務		1,030~2,330	1,720 (100)	
ガードマン		600~690	690 (40)	12,000
運転手		1,030~1,370	1,370 (80)	10,533
配管工		1,030~1,370	1,200 (70)	12,013
電工		1,030~1,370		10,636







JICA