II-7. TABLES AND FIGURES

TABLE II-9
(1 of 2)

ANNUAL DEVELOPMENT PROGRAMME (DRAFT BUDGET) ISLAMABAD ADMINISTRATION 1985-86

Unit : Rs Million

Sector/Scheme	Expected date of completion	Physical target envisaged in the Scheme	Status	Estimated Cost	Demand For 1985-86	Target Proposed for 1986-86
1. Rural Development						
a) Construction of Link Gokina Road	30-6-1986	2.70 km	Approved	2.074	1.037	1.35 km
b) Construction of Link Talhar Road.	30-6-1986	3.60 km	Approved	2.860	1.430	1.80 km
c) Construction of foot bridge over Soan River at Mahfooz Shaheed Bhinher Tarar Road.	30-60-1987	Foot Bridge	Approved	1.400	1.400	Foot Bridge
Total:				6.334	3.867	
2. Public Health Services						
a) Construction of 8 Water tank	30-6-1989	8 Tanks with water pipe line	Unapproved	4.000	1.000	2 Tanks
b) Setting up of 25 Water Supply Schemes.	30-6-1989	21 Schemes	Unapproved	101.000	7.000	2 Schemes
Total:				105.000	8.000	
3. Agriculture Sector						
A. Soil conservation						
a) Replacement/purchase machinary & equipment in ICT.	30-6-1988	6.Buldozors 1-Transporter and 1-Mobile workshop	Approved	6.700	1.275	1-mobile work shop and Transporter 25 pumps
b) Lift irrigation scheme in ICT. (100-Pumps)	30-6-1988	100 Pumps	Unapproved	2.100	0.700	25 Pumps
c) Protection of effected villages/agriculture land by river erosion in ICT.	30-6-1988	Reclaimation of 180 Meter Land.	Unapproved	4.900	1.000	45 Meter
d) Construction of mini dams on sub catchment basis in ICT.	30-6-1988	24 Mini-dams		4.500	1.500	8 Mini-dams
B. Fisheries						
a) Establishment of Fish Sub production farms Mini Hatchery	30-6-1988 Million Fish Seeds per annum	0.500 to 1.000	Approved	4.661	2.087	40%
b) Development of fisheries in rural area of ICT.	30-6-1988	About 30 Fish Farmers/Mini dams for Fish farming	Unapproved	4.991	0.896	25%

- to be cont'd -

TABLE II-9 (2)

(2 of 2)

ANNUAL DEVELOPMENT PROGRAMME (DRAFT BUDGET) ISLAMABAD ADMINISTRATION 1985 - 86

	Expected date of completion	Physical target envisaged in the Scheme	Status	Estimated Cost	Demand For 1985-86	Target Proposed for 1986-86
C. Live Stock						
Expension and improvement of two veterinary hospitals in ICT.	30-6-1987	Building and Equipment	Approved	3.355	1.799	50%
Total:				31.207	9.257	
4. Social Welfare						
Employment exchange Rural Training/Repair Workshop Tarlai ICT.	3-6-1990	Construction of workshop and Training of 150 Craftsmen per year	Approved	4.2	0.94	Construction of workshop
5. Housing and Physical Planning						
a) Islamabad Administration Office/Residential Complex.			Unapproved	198.260 + Cost of land	30.00	
b) Construction of Police Building in Sector H-11 i) 20 Be Hospital ii) Mosque, iii) Residential accommodation Catg. III (Houses-2) Catg. IV, IZ & Catg.) IV.24				12.268	7.361	
c) Construction of Police Accommodation (attached with Police Station) and Police Station at various sectors in Islamabad.			Unapproved	31.558	19.935	
d) Construction of 5 Mosques			Unapproved	10.000	5.000	
e) Addition & Allocation of Mosques				8.000	5.000	
Total:				260.086	65.296	

TABLE II-10

ON-GOING RURAL DEVELOPMENT SCHEMES IN ISLAMABAD ADMINISTRATION

S. No.	Name of Project/ Schemes.	Expected date of completion	Physical Targets Envisaged in the project/scheme.	Total Estimated Cost.	Expenditure to the end of 1983-84.	Percentage of completion till 30-6-84 and targets achieved.	Revised estimate for 1984-85 and targets likely to be achieved.		Budget Estimate for 1985-86.	Target proposed for 1985-86.
							R.Estimate	Target		
1	2	3	4	5	6	7	8		9	10
1.	Sub-urban Villages.	30-6-1988	i) Matalled road 12 miles. ii) Rural Electrification 7 villages. iii) Infiltartion Gallery. 1	9.553	8.599	90% Road 12 miles completed.	0.905	99%	0.049	Extention Bhimber Tarar Road.
2.	R.D. Markiz Tarlai.	30-6-1986	i) Shingle/Metalled road 24 miles. ii) Water Wells. 30 iii) Sanitation. 5 Villages. iv) Fruit Nursery. 1 Acre (3) v) Market. 1 vi) Flow Pumps 20 Nos.	7.444	7.044	95%	0.258	98%	0.142	Remaining target of PC.1.
3.	R.D. Markiz Sihala.	30-6-1986	i) Shingle/Mattled road 20 miles. ii) Water Wells. 40 iii) Flow Pumps. 30 Nos. iv) Sanitation 5 villages v) Fruit Nersery 1 Acre. vi) Market 1.	7.824	7.449	95%	0.358	99%	0.017	Remaining Work.
4.	R.D. Markiz Bharakau.	30-6-1986	i) Road.30.6 miles. ii) Water Wells. 25 Nos. iii) Sanitation 10 villages iv) Fruit/Forest Nursery (1½ Acre). v) Training of formers/ Artisons.	10.779	6.347	70%	2.216	75%	2.216	Remaining Work.
5.	240 Kilometer Road. (Frame work)	30-6-1988	Road 240 kilometers. (PC.1 for 41.14 Km approved)	15.125	1.720	10%	2.000	25%	11.415	30 Kilometers.
6.	Rural Road Survey and purchase of road making machinery.	30-6-1986	i) Road Roller. 1 ii) Tar Boiler. 5 iii) Jeep. 1 iv) Compaction Instruments.	0.516	0.388	75% Road. Roller purchased instruments also purchased.	-	-	0.128	10 Roads having length of 25 Km

TABLE II-10 (2)

S. No.	Name of Project/ Schemes.	Expected date of completion	Physical Targets Envisaged in the project/scheme.	Total Estimated Cost.	Expenditure to the end of 1983-84.	Percentage of completion till 30-6-84 and targets achieved.	Revised estimate for 1984-85 and targets likely to be achieved.		Budget Estimate for 1985-86.	Target proposed for 1985-86.
							R.Estimate	Target		
1	2	3	4	5	6	7	8		9	10
7.	Village Electrification	30-6-1988	69 villages and 90 Dhokes. 6th Five Year Plan. (PC-1 for 22 villages approved.)	9.835	2.580	5%	2.580	52%	4.675	11 Villages.
8.	PUBLIC HEALTH SERVICES.									
	1. Water Supply. Simly Dam	30-6-1986	Water supply scheme. 4 Nos.	10.739	3.730	-	7.000	-	0.010	4 schemes.
9.	AGRICULTURE.									
	1. Fish Culture in	30-6-1988	About 75,000 KG Fish production.	1.298	0.466	25%	-	-	0.653	80%
	2. Soil Conservation in Mini Dam.	30-6-1986	11 Mini Dams.	1.857	0.943	5%	-	-	0.914	100%
10.	HOUSING & PHYSICAL PLANNING.									
	1. Police Buildings in Sector H-11.	30-6-1985	-	32,960	28.160	70%	4.800	100%	-	-
	2. Construction of an Imam quarter	30-6-1985	-	0.200	-	-	0.200	100%	-	-

Note-Health Sector:- Demanded Rs6.247 Million for 1985-86 which should be amended to be read as Rs3.658 Million.

TABLE II-11 STATISTICAL INFORMATION ON THE POST OFFICES

(1) NUMBER OF POST OFFICES IN ISLAMABAD G.P.O. UNIT

	URBAN	RURAL
SUB POST OFFICES.	32	12
BRANCH POST OFFICES.	--	26

(2) NUMBER OF POSTMEN IN ISLAMABAD G.P.O UNIT

URBAN	RURAL
79	11

(3) NUMBER OF POST BOXES INSTALLED IN ISLAMABAD G.P.O. UNIT.

URBAN	RURAL
1382	--

(4) SUB POST OFFICES/BRANCH POST OFFICES IN RURAL AREA

(a) SUB POST OFFICES

1. Bhara Kau
2. Tarlai Kalan
3. Nilore
4. Golra
5. Sihala.
6. Rawat
7. Har-do-Gaher
8. Hummak
9. Charah
10. Kuri
11. Dadocha Kalan
12. Alipur Frash

(b) BRANCH POST OFFICES

1. Pind Begwal
2. Maira Begwal
3. Phulgran
4. Subhan
5. Bhin Nala
6. Shayhdarah
7. Badhana.
8. Jhangi Sayaddan
9. Noon
10 Tarnol
11. Sang Jani
12. Tamair
13. Kirpa
14. Bhimbar Tarar.
15. Mughal
16. Sandu Sayaddan
17. Bhoon
18. Gokina
19. Saidypur
20. Shakyrial
21. Karimabad
22. Khana Dak
23. Jhang Sayaddan
24. Pehont
25. Malpur
26. Jagiot

Source: General Post Office, Islamabad, 1985

TABLE II-12 **STATE OF PLAYING FIELDS IN ISLAMABAD**

Institutions		Total No.	Levelled	Unlevelled	Without fields
Colleges		6	3	2	1
Secondary & Middle Schools					
	(Urban)	30	11	13	6
	(Rural)	44	9	11	24
Primary Schools	(Urban)	42	13	20	9
	(Rural)	145	23	14	108
Total		267	59	60	148

Source: Federal Government Educational Institution Directorate, 1984

TABLE II-13

EDUCATIONAL FACILITIES IN RURAL AREA

SNo.	Union Council	Villages	Population	Age Group	Primary			Secondary				Remarks
					Schools	Intake capacity	Enrolment	Secondary	Middle	Intake capacity	Enrolment	
1.	Kirpa	23	19,480	2,727	16	1,100	2,266	2	2	720	460	
2.	Tarlai	10	12,284	1,720	10	1,300	2,549	1	1	400	251	
3.	Charah	28	18,052	2,527	12	780	1,876	2	1	680	611	including 22 of Intermediate Classes
4.	Rawat	8	9,523	1,333	12	2,000	1,849	3	2	1,055	722	
5.	Phulgran	11	11,117	1,556	9	1,600	1,456	1	2	800	364	
6.	Koral	7	4,646	650	3	700	656	-	1	120	77	
7.	Tamair	9	13,457	1,884	16	2,300	1,480	-	3	360	129	
8.	Bhara Kau	6	9,414	1,314	9	1,700	1,667	1	4	1,040	358	
9.	Sohan	13	6,949	973	3	760	1,348	2	1	560	264	
10.	Sihala	13	13,926	1,950	17	2,055	2,136	4	1	1,760	983	including 28 of Intermediate Classes
11.	Shah Allah Ditta	6	8,076	1,130	7	1,480	865	-	3	360	106	
	Total	114	126,924	17,764	114	15,775	18,148					
12.	Urban Localities	30	-	-	30	4,320	5,759	3	4	1,080	713	
	GRAND TOTAL	144	126,924	17,764	144	20,095	23,907	19	25	8,935	5,088	

Sources: Federal Government Educational Institution Directorate, 1984

TABLE II-14

HIGH SCHOOLS BUILDING FACILITIES (1)

SL. NO.	NAME OF SCHOOLS	CLASS ROOMS	SUBJECT ROOMS	DRAWING ROOM	LIBRARY ROOM	SCIENCE LABORA-TORY	HALL	AGRO-TECHNICAL WORKSHOP	HEADMASTER'S/ HEADMISTRESS' OFFICE	CLERK'S OFFICE	STAFF ROOM	SPORTS GEAR ROOM
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-
	BOYS' HIGH SCHOOLS, FEDERAL AREA											
1.	FG BSS, No. 9 Nilore	8	-	-	-	2	1	1	1	1	1	1
2.	FG BSS, No. 10 Bhara Kau	8	-	-	-	1	1	-	1	1	1	1
3.	FG BSS, No. 11 Noon	11	-	-	-	1	-	-	1	1	-	-
4.	FG BSS, Sihala	14	-	-	-	2	1	1	1	1	1	1
5.	FG BSS, Kuri	12	-	-	-	1	-	1	-	-	-	-
6.	FG BSS, Hummak	11	-	-	1	1	-	-	1	1	1	-
7.	FG BSS, Mughal	Building is to be constructed during 1984-85.										
8.	FG BSS, Golra	10	-	-	-	-	-	-	1	-	-	-
9.	FG BSS, Tarlai	9	-	-	-	-	-	-	1	1	1	-
10.	FD BSS, Bhimbar Tarar	13	-	-	-	-	-	-	1	-	-	-
11.	FG BSS, Rawat	8	-	-	1	1	-	-	1	-	-	-
12.	FG BSS, Jhang Sayaddan	11	-	-	1	-	-	-	1	1	1	-
13.	FG BSS, Chak Shahzad	5	1	-	1	1	1	-	1	1	1	1
14.	FG BSS, Sang Jani	10	-	-	-	-	-	1	1	1	-	-
	GIRLS' HIGH SCHOOLS, FEDERAL AREA											
1.	FG GSS, Hummak	6	-	-	-	-	-	-	1	-	-	-
2.	FG GSS, Har-do-Gaher	6	-	-	-	-	-	-	-	-	-	-
3.	FG GSS, Sihala	8	-	-	-	-	-	-	1	1	-	-
4.	FG GSS, Nilore	7	-	-	-	-	-	-	-	1	-	-
5.	FG GSS, N.H.C.	14	-	-	-	-	-	-	1	-	1	-

Source: Federal Government Educational Institution Directorate, 1984

TABLE II-14

HIGH SCHOOLS BUILDING FACILITIES (2)

SL. NO.	NAME OF SCHOOLS	STORE	TOILET FOR STAFF	TOILET FOR STUDENTS	BOUNDARY WALL	RESIDENTIAL QUARTERS FOR CHOWKIDAR	RESIDENTIAL QUARTERS FOR LADY TEACHERS	ELEC-TRICITY
		-14-	-15-	-16-	-17-	-18-	-19-	-20
	BOYS' HIGH SCHOOLS, FEDERAL AREA							
1.	FG BSS, No. 9 Nilore	1	1	2	-	-	-	Yes
2.	FG BSS, No. 10 Bhara Kau	-	-	-	-	-	-	Yes
3.	FG BSS, No. 11 Noon	-	-	-	-	1	-	-
4.	FG BSS, Sihala	1	2	-	-	-	-	Yes
5.	FG BSS, Kuri	1	-	-	-	-	-	Yes
6.	FG BSS, Hummak	1	-	-	-	-	-	Yes
7.	FG BSS, Mughal							
8.	FG BSS, Golra	-	-	-	-	-	-	Yes
9.	FG BSS, Tarlai	-	-	-	Yes	-	-	-
10.	FD BSS, Bhimbar Tarar	-	-	-	-	-	-	-
11.	FG BSS, Rawat	1	-	-	-	-	-	-
12.	FG BSS, Jhang Sayaddan	2	-	-	-	-	-	Yes
13.	FG BSS, Chak Shahzad	1	1	2	-	1	-	Yes
14.	FG BSS, Sang Jani	1	-	-	-	-	-	Yes
	GIRLS' HIGH SCHOOLS, FEDERAL AREA							
1.	FG GSS, Hummak	-	-	-	-	-	1	-
2.	FG GSS, Har-do-Gaher	1	-	-	-	-	1	-
3.	FG GSS, Sihala	-	1	3	Yes	-	1	Yes
4.	FG GSS, Nilore	-	1	-	Yes	-	1	Yes
5.	FG GSS, N.H.C.	-	2	1	-	-	-	Yes

Source: Federal Government Educational Institution Directorate, 1984

TABLE II-15

BOYS' MIDDLE SCHOOLS BUILDING FACILITIES

SL. NO.	NAME OF SCHOOLS	CLASS ROOMS	SCIENCE LABORA-TORY	HALL	AGRO-TECHNICAL WORKSHOP	HEADMASTER'S/ HEADMISTRESS' OFFICE	CLERK'S OFFICE	STAFF ROOM	STORE	TOILET FOR STAFF	TOILET FOR STUDENTS	BOUNDARY WALL	RESIDENTIAL QUARTERS FOR CHOWKIDARS	ELEC-TRICITY	LIBRARY
-1-	-2-	-3-	-4	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-	-14-	-15-	-16-
	BOYS' MIDDLE SCHOOLS, FEDERAL AREA														
1.	FG BMS, Charah	6	-	-	-	1	1	-	-	-	-	-	-	Yes	-
2.	FG BMS, Chattar	3	-	-	-	-	-	-	-	-	-	-	-	-	-
3.	FG BMS, Kirpa	8	-	-	-	1	1	-	-	-	-	-	-	-	1
4.	FG BMS, Loi Bher	13	-	-	-	1	1	1	1	-	-	-	-	Yes	-
5.	FG BMS, Naugazi	8	-	-	-	1	1	-	1	-	-	-	-	-	1
6.	FG BMS, Noorpur Shahan	13	-	-	-	-	-	-	1	1	1	-	-	Yes	-
7.	FG BMS, Jaba Teli	7	-	-	-	1	-	-	-	-	-	-	-	Yes	-
8.	FG BMS, Pehont	6	-	-	-	1	1	-	-	-	-	-	-	Yes	-
9.	FG BMS, Talhar	10	-	-	-	-	-	-	-	1	-	-	-	-	-
10.	FG BMS, Tamair	6	-	-	-	1	1	-	-	-	-	-	-	-	-
11.	FG BMS, Phulgran	9	-	-	-	1	-	-	-	-	-	-	-	Yes	-
12.	FG BMS, Shah Allah Ditta	6	-	-	-	-	-	-	2	-	-	-	-	-	-
13.	FG BMS, Maira Aku	6	-	-	-	1	-	-	1	-	-	-	-	-	-
14.	FG BMS, Tarnaul	8	-	-	-	1	-	-	1	-	-	-	1	-	-
15.	FG BMS, Shah Darah	8	1	1	-	1	-	-	1	-	-	-	-	-	1
16.	FG BMS, Mohra Noor	8	-	-	-	1	-	-	2	-	-	-	-	Yes	-
17.	FG BMS, Rawal Dam	5	-	-	-	-	-	-	-	-	-	-	-	Yes	-
18.	FG BMS, Pind Begwal	8	-	1	-	1	1	-	1	-	-	-	-	Yes	-
19.	FG BMS, Mohra Nagial	3	-	-	1	1	-	-	-	-	-	-	-	-	-

Source: Federal Government Educational Institution Directorate, 1984

TABLE II-16

GIRLS' MIDDLE SCHOOLS BUILDING FACILITIES

SL. NO.	NAME OF SCHOOLS	CLASS ROOMS	SUBJECT ROOMS	DRAWING ROOM	LIBRARY ROOM	SCIENCE LABORA-TORY	HALL	AGRO-TECHNICAL WORKSHOP	HEADMASTER'S/ HEADMISTRESS' OFFICE	CLERK'S OFFICE	STAFF ROOM	SPORTS GEAR ROOM
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-
1.	FG GMS, Kot Hathial	-	-	-	-	-	-	-	1	-	-	-
2.	FG GMS, Malpur	PRIVATE BUILDING										
3.	FG GMS, Nara Sayaddan	5	-	-	-	-	-	-	-	-	-	-
4.	FG GMS, Panjgran	9	-	-	-	-	-	-	-	-	-	-
5.	FG GMS, Rawat	10	-	-	-	-	-	-	-	-	-	1
6.	FG GMS, Shah Allah Ditta	4	-	-	-	-	-	-	1	-	-	-
7.	FG GMS, Kuri	6	-	-	-	-	-	-	-	-	-	-

STORE	TOILET FOR STAFF	TOILET FOR STUDENTS	BOUNDARY WALL	RESIDENTIAL QUARTERS FOR CHOWKIDAR	RESIDENTIAL QUARTERS FOR LADY TEACHERS	ELEC-TRICITY
-14-	-15-	-16-	-17-	-18-	-19-	-20-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	3	-	-	1	Yes
1	-	-	Yes	1	-	-
1	-	-	Yes	-	1	-
-	-	-	-	-	-	-

TABLE II-17

BOYS' PRIMARY SCHOOLS BUILDING FACILITIES (1)

SL. NO.	NAME OF SCHOOLS	CLASS ROOMS	HALL	H.M's OFFICE	CLERK'S OFFICE	STAFF ROOM	STORE	TOILET FOR TEACHERS	TOILET FOR STUDENTS	BOUNDARY WALL	RESIDENTAL QTRS. FOR		ELECTRICITY	LIBRARY
											LADY TEACHERS	CHOWKIDAR		
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-	-14-	-15-
	BOYS' PRIMARY SCHOOLS, FEDERAL AREA													
	UC KIRPA													
1.	FG BPS, Ali Pur	4	-	1	1	-	-	-	-	-	-	-	Yes	-
2.	FG BPS, Channual Bangial	3	-	-	-	-	-	-	-	-	-	-	-	-
3.	FG BPS, Darwala	2	-	-	-	-	-	-	-	-	-	-	Yes	-
4.	FG BPS, Dhaliala	4	-	-	-	-	-	-	-	-	-	-	-	-
5.	FG BPS, Pind Malakan	4	-	-	-	-	-	-	-	-	-	-	-	-
	UC RAWAT													
1.	FG BPS, Ara Burji	2	-	-	-	-	-	-	-	-	-	-	-	-
2.	FG BPS, Dhok Mai Nawab	2	-	-	-	-	-	-	-	-	-	-	-	-
3.	FG BPS, Mohri	2	-	-	-	-	-	-	-	-	-	-	-	-
4.	FG BPS, Rajwal	2	-	1	-	-	1	-	-	-	-	-	-	-
5.	FG BPS, Rawat(Banni Saran)	6	-	-	-	-	-	1	2	-	-	-	-	-
6.	FG BPS, Bhangril Khurd	1	-	-	-	-	-	-	-	-	-	-	-	-
7.	FG BPS, Mohra Kalu	-	-	-	-	-	-	-	-	-	-	-	-	-
	UC PHULGRAN													
1.	FG BPS, Athal	2	-	-	-	-	-	-	-	-	-	-	-	-
2.	FG BPS, Bobri	2	-	1	-	-	1	-	-	-	-	-	-	-
3.	FG BPS, Dohala Sayaddan	2	-	1	-	-	1	-	-	-	-	-	-	-
4.	FG BPS, Kuri	6	-	-	-	-	-	-	-	-	-	-	-	-
5.	FG BPS, Malot	4	-	-	-	-	-	-	-	-	-	-	-	-
6.	FG BPS, Satra Meel	5	-	-	-	-	-	-	-	-	-	-	-	-
	UC KORAL													
1.	FG BPS, Boora Bangial	2	-	-	-	-	-	-	-	-	-	-	-	-
2.	FG BPS, Koral	4	-	-	-	-	1	-	-	-	-	-	-	-

TABLE II-17

BOYS' PRIMARY SCHOOLS BUILDING FACILITIES (2)

-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-	-14-	-15-
	UC TAMAIR													
1.	FG BPS, Biath	1	-	-	-	-	-	-	-	-	-	-	-	-
2.	FG BPS, Della	4	-	-	-	-	-	-	-	-	-	-	-	-
3.	FG BPS, Siali	2	-	-	-	-	-	-	-	-	-	-	-	-
4.	FG BPS, Mohra Solina	3	-	-	-	-	-	-	-	-	-	-	-	-
5.	FG BPS, Mohra	4	-	1	-	-	1	-	-	-	-	-	-	-
6.	FG BPS, Jandala	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	FG BPS, Maira Begwal	4	-	1	-	-	1	-	-	-	-	-	-	-
8.	FG BPS, Kijnah	2	-	1	-	-	1	-	-	-	-	-	-	-
	UC SHAH ALLAH DITTA													
1.	FG BPS, Gokina	2	-	-	-	-	-	-	-	-	-	-	-	-
2.	FG BPS, Sari Saral	2	-	-	-	-	-	-	-	-	-	-	-	-
3.	FG BPS, Sarai Kharbooza.	2	-	1	-	-	8	-	-	-	-	-	-	-
4.	FG BPS, Dhok Jori	2	-	1	-	-	1	-	-	-	1	-	-	-
	UC CHARAH													
1.	FG BPS, Jagiot	4	-	1	-	1	-	-	-	-	-	-	Yes	-
2.	FG BPS, Harno Thanda Pani	2	-	-	-	-	-	-	-	-	-	-	-	-
	UC SOHAN													
1.	FG BPS, Sohan	2	-	1	-	-	-	-	-	-	Yes	-	-	-
	UC TARLAI													
1.	FG BPS, Tarlai	4	-	-	-	-	-	-	-	-	-	-	-	-
2.	FG BPS, Khana Dak	4	-	1	-	-	-	-	-	-	-	-	-	-
3.	FG BPS, Khana Kak	3	-	-	-	-	-	-	-	-	-	-	Yes	-
4.	FG BPS, Khana Nai Abadi	Rented building												
5.	FG BPS, Sharifabad	3	-	-	-	-	-	-	-	-	-	-	-	-
6.	FG BPS, Chatta Bakhtawar	3	-	-	-	-	1	1	-	-	-	-	-	-

TABLE II-17

BOYS' PRIMARY SCHOOLS BUILDING FACILITIES (3)

-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-	-14-	-15-
	UC SIHALA													
1.	FG BPS, Sihala	6	-	1	-	-	-	-	-	-	-	-	Yes	-
2.	FG BPS, Chak	4	-	-	-	-	-	-	-	-	-	-	-	-
3.	FG BPS, Chak Kamdar	4	-	-	-	-	-	-	-	-	-	-	-	-
4.	FG BPS, Gagri	4	-	1	-	-	1	-	-	-	-	-	Yes	-
5.	FG BPS, Har-do-Gaher	3	-	1	1	1	-	-	-	-	-	-	-	-
6.	FG BPS, Mughal	2	-	-	-	-	-	-	-	-	-	-	-	-
7.	FG BPS, Sihala Mirzian	2	-	-	-	-	-	-	-	-	-	-	Yes	-
	UC BHARA KAU													
1.	FG BPS, Bhara Kau	11	-	-	-	-	-	-	-	-	-	-		-
2.	FG BPS, Subhan	Rented building												
3.	FG BPS, Mangial	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	FG BPS, Lakhwal	2	-	-	-	-	-	-	-	-	-	-	-	-
5.	FG BPS, Bhuddo	3*	-	1	-	-	-	-	-	-	-	-	-	-
6.	FG BPS, Dhok Jarrani	4	-	-	-	-	-	-	-	-	-	-	-	-
7.	FG BPS, Palali	2	-	-	-	-	-	-	-	-	-	-	-	-

* 2 class rooms not fit for use

TABLE II-18 GIRLS' PRIMARY SCHOOLS BUILDING FACILITIES (1)

-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-
	GIRLS' PRIMARY SCHOOLS, FEDERAL AREA											
	UC TAMAIR											
1.	FG GPS, Tamair	4	-	1	-	-	-	-	-	-	-	-
2.	FG GPS, Simly	Temporary building of CDA				-	-	-	-	-	-	Yes
3.	FG GPS, Maira Begwal	2	-	-	-	1	-	-	-	-	-	-
4.	FG GPS, Pehont	2	-	-	-	-	-	-	-	-	-	Yes
5.	FG GPS, Pind Begwal	3	-	-	-	-	-	-	-	-	-	-
6.	FG GPS, Seevra	4	-	-	-	-	-	-	-	-	-	-
7.	FG GPS, Chakhtan	3	-	-	-	-	1	-	-	-	-	-
8.	FG GPS, Bian Nullah	4	-	-	-	-	-	-	-	-	-	-
9.	FG GPS, Kijnah	4	-	-	-	-	-	-	-	-	-	-
	UC SIHALA											
1.	FG GPS, Gagri	1	-	-	-	-	-	-	Yes	-	-	-
2.	FG GPS, Hon Dhamial	4	-	-	-	-	-	-	-	-	-	-
3.	FG GPS, Har-do-Gaher	-	-	-	-	-	-	-	-	-	-	-
4.	FG GPS, Mughal	2	-	1	-	-	-	-	-	1	-	-
5.	FG GPS, Uppra Ghora	2	-	-	-	-	-	-	-	-	-	-
6.	FG GPS, PTC Sihala	C.D.A. Quarters.										
7.	FG GPS, Sihala	Private building										
8.	FG GPS, Jandala	3	-	-	-	1	-	-	-	-	-	-
9.	FG GPS, Kangota Syedan	4	-	-	-	-	1	-	-	-	-	-
10.	FG GPS, Mohri Mughal	-	-	-	-	-	-	-	-	-	-	-
11.	FG GPS, Sihala Mirzian	3	-	-	-	-	-	1	-	-	-	Yes
	UC SOHAN											
1.	FG GPS, Gawala Colony	5	-	1	1	1	1	3	-	2	1	Yes

Source: Federal Government Educational Institution directorate, 1984

TABLE II-18 GIRLS' PRIMARY SCHOOLS BUILDING FACILITIES (2)

-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-
	UC RAWAT											
1.	FG GPS, Mohri	4	-	-	-	-	1	-	Yes	-	1	-
2.	FG GPS, Mohra Nagial	5	-	-	-	-	-	-	Yes	-	1	Yes
3.	FG GPS, Sheikh Pur (Rawat)	3	-	-	-	-	-	-	-	-	-	-
4.	FG GPS, Rajwal	2	-	-	-	-	-	-	-	-	-	-
5.	FG GPS, Bhangril	-	-	-	-	-	-	-	-	-	-	-
	UC PHULGRAN											
1.	FG GPS, Phulgran	7	-	-	-	-	-	-	-	1	-	-
2.	FG GPS, Mohra Noor	4	-	1	-	1	-	-	-	-	-	Yes
3.	FG GPS, Shah Pur	4	-	-	-	-	-	-	-	-	-	-
	UC SHAH ALLAH DITTA											
1.	FG GPS, Gokina	4	-	-	-	-	-	-	-	-	-	-
2.	FG GPS, Joi	3	-	-	-	-	-	-	-	-	-	-
3	FG GPS, Sarai Kharbooza	4	-	-	-	-	-	-	-	-	-	-
	UC CHARAH											
1.	FG GPS, Charah	3	-	-	-	-	-	1	-	-	-	-
2.	FG GPS, Harno Thanda Pani	4	-	1	1	-	-	-	1	-	-	-
3.	FG GPS, Jagiot	3	-	-	-	-	-	-	Yes	-	-	-
4.	FG GPS, Kalia Adna	-	-	-	-	-	-	-	-	-	-	-
5.	FG GPS, Kalia Aala	-	-	-	-	-	-	-	-	-	-	-
6.	FG GPS, Muhrian	2	-	-	-	-	-	-	-	-	-	-
7.	FG GPS, Darkala	4	-	-	-	-	-	3	-	-	-	-
8.	FG GPS, Chappar Ghasota	3	-	-	-	-	-	-	-	-	-	-
9.	FG GPS, Ara	3	-	-	-	-	-	-	-	-	-	-
	UC BHARA KAU											
1.	FG GPS, Lakhwal	2	-	1	-	-	-	-	-	-	-	-
2.	FG GPS, Shah Darah	Private building		-	-	-	-	-	-	-	-	-
3.	FG GPS, Mandala	3	-	-	-	-	-	-	-	-	-	-

TABLE II-18 GIRLS' PRIMARY SCHOOLS BUILDING FACILITIES (3)

-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-
	UC KIRPA											
1.	FG GPS, Ali Pur Farash	2	-	1	-	-	-	-	-	-	-	-
2.	FG GPS, Bhimbar Tarar	4	-	1	1	-	-	-	-	1	-	-
3.	FG GPS, Dhaliala	2	-	-	-	-	-	-	-	-	-	-
4.	FG GPS, Gurah Mast	2	-	1	1	-	-	-	-	1	1	-
5.	FG GPS, Kirpa	2	-	1	1	-	-	-	-	1	-	-
6.	FG GPS, Pind Malakan	4	-	1	1	-	1	-	-	-	-	-
7.	FG GPS, Jhang Sayaddan	2	-	1	-	-	-	-	Yes	-	-	Yes
8.	FG GPS, Peja	2	-	-	-	-	-	-	-	-	-	-
	UC TARLAI											
1.	FG GPS, Tarlai	4	-	1	1	-	1	-	-	1	-	-
2.	FG GPS, Khana Dak	3	-	-	-	-	-	-	-	-	-	-
3.	FG GPS, Khana Nai Abadi	2	-	-	-	-	-	-	-	-	-	-
4.	FG GPS, Shak Rial	Rented building			1	1	-	-	-	-	-	-
	UC KORAL											
1.	FG GPS, Loi Bher	2	-	-	-	-	-	-	-	-	-	Yes

TABLE II-19

HIGH SCHOOLS EDUCATIONAL FURNITURE (1)

SL. NO.	NAME OF SCHOOLS	STUDENTS' CHAIRS (LARGE)	STUDENTS' CHAIRS (SMALL)	STUDENTS' DESKS SINGLE (SMALL)	STUDENTS' DESKS SINGLE (LARGE)	STUDENTS' DESKS DUAL (SMALL)	STUDENTS' DESKS DUAL (LARGE)	TABULAR CHAIRS	DUAL BENCHES	STUDENTS' CHAIRS FOR HALL	STOOLS	TATS	OFFICE DARRI CARPET
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-	-14-
	BOYS'HIGH SCHOOLS, FEDRAL AREA												
1.	FG BSS, No.9 Nilore	200	-	-	250	-	-	33	-	300	30	50	2
2.	FG BSS, No. 10 Bhara Kau	202	33	32	150	-	-	-	-	100	-	55	5
3.	FG BSS, No. 11 Noon	210	-	-	225	-	-	-	-	-	-	-	-
4.	FG BSS, Sihala	-	200	200	-	-	147	-	-	-	-	50	-
5.	FG BSS, Kuri	240	-	280	-	-	-	-	-	-	-	60	-
6.	FG BSS, Hummak	234	126	-	-	-	113	-	3	-	30	125	-
7.	FG BSS, Mughal	-	180	130	90	-	-	-	-	-	-	50	-
8.	FG BSS, Golra	105	150	100	190	-	55	-	-	24	-	-	1
9.	FG BSS, Tarlai	350	-	-	100	-	-	-	-	-	-	30	1
10.	FG BSS, Bhimbar Tarar	195	20	100	100	-	-	-	-	-	-	65	-
11.	FG BSS, Rawat	360	-	134	215	-	-	-	-	-	-	220	-
12.	FG BSS, Jhang Sayaddan	70	60	40	80	50	104	-	-	225	-	225	1
13.	FG BSS, No. 15 Chak Shahzad	-	-	-	-	-	-	300	-	300	-	15	-
14.	FG BSS, Sang Jani	-	150	150	-	-	-	-	-	-	10	6	1
	GIRLS' HIGH SCHOOLS, FEDERAL AREA												
1.	FG GSS, Hummak	46	31	36	20	-	-	-	-	-	-	48	1
2.	FG GSS, Sihala	80	-	12	80	-	-	-	17	-	-	23	-
3.	FG GSS, Nilore	50	175	50	191	-	-	-	-	-	-	20	-
4.	FG GSS, N.H.C.	100	265	259	100	-	-	-	-	-	-	18	-
5.	FG GSS, Har-do-Gaher	115	-	-	100	-	-	-	-	-	-	70	1

Source: Federal Government Educational Institution Directorate, 1984

TABLE II-19

HIGH SCHOOLS EDUCATIONAL FURNITURE (2)

WOODEN BLACK BOARD (PORTABLE)	NOTICE BOARDS	STEEL ALMIRAHS	WOODEN ALMIRAHS	STEEL CABINETS	TEACHERS' CHAIRS	TEACHERS' TABLES	HEADMASTER'S TABLES	SCIENCE LAB. TABLES	LIBRARY TABLES	OFFICE RACKS	ROSTRUMS	SOFA SETS	LIBRARY' ALMIRAHS (GLAZED)	LOUD SPEAKER
-15-	-16-	-17-	-18-	-19-	-20-	-21-	-22-	-23-	-24-	-25-	-26-	-27-	-28-	-29-
4	2	13	3	5	10	11	1	10	4	-	2	2	5	-
1	6	19	-	2	10	6	1	4	15	5	5	2	-	-
-	2	17	-	3	24	15	1	-	-	-	-	-	13	-
9	5	20	6	1	30	10	1	5	4	4	2	-	-	-
10	-	15	2	3	45	10	1	1	-	-	-	1	-	-
14	-	21	-	2	42	13	1	4	-	-	1	-	-	1
17	-	29	8	2	-	7	-	-	3	-	-	-	-	1
10	6	26	6	2	17	7	1	1	-	-	-	-	4	-
11	1	15	-	3	34	12	1	-	-	1	1	1	-	-
10	-	13	-	2	37	8	-	-	-	-	-	-	4	-
15	-	11	1	2	30	5	1	-	-	-	-	-	2	-
1	-	37	-	2	33	23	1	-	-	2	-	1	-	-
4	-	28	-	-	25	12	-	7	-	-	-	-	5	-
7	-	9	1	-	41	11	1	-	-	-	-	-	-	-
6	-	11	-	3	29	3	1	3	-	1	-	-	-	-
9	2	19	9	2	25	7	1	-	-	-	-	1	-	-
-	-	3	-	1	10	10	1	-	-	-	-	-	2	-
1	1	8	6	1	12	8	1	-	-	-	-	-	-	-
4	2	15	-	2	18	12	-	-	-	-	-	-	2	1

TABLE II-20

MIDDLE SCHOOLS EDUCATIONAL FUNITURE (1)

SL. NO.	NAME OF SCHOOLS	STUDENTS' CHAIRS (LARGE)	STUDENTS' CHAIRS (SMALL)	STUDENTS' DESKS SINGLE(SMALL)	STUDENTS' DESKS SINGLE(LARGE)	STUDENTS' DESKS DUAL (SMALL)	STUDENTS' DESKS DUAL (LARGE)	TABULAR CHAIRS	DUAL BENCHES	STUDENTS' CHAIRS FOR HALL	STOOLS	TATS	OFFICE DARRI CARPET
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-	-14-
	BOYS' MIDDLE SCHOOLS, FEDERAL AREA												
1.	FG BMS, Charah	80	5	40	59	-	-	-	-	-	-	50	-
2.	FG BMS, Chattar	15	-	-	15	-	-	-	-	-	-	20	-
3.	FG BMS, Kirpa	57	-	-	-	-	-	-	-	-	-	20	-
4.	FG BMS, Pahg Panwal	243	50	50	225	-	-	-	-	-	-	-	-
5.	FG BMS, Naugazi	50	25	75	-	-	-	10	-	-	-	50	-
6.	FG BMS, Noorpur Shahan	164	20	115	15	-	-	-	-	-	-	84	2
7.	FG BMS, Jaba Tali	50	50	80	-	-	-	-	-	-	-	50	-
8.	FG BMS, Pehont	50	20	79	50	-	-	-	-	-	-	20	-
9.	FG BMS, Talhar	-	100	-	-	-	100	-	-	-	-	35	4
10.	FG BMS, Tamair	109	-	89	-	-	-	-	-	-	-	-	-
11.	FG BMS, Phulgran	50	4	99	-	-	-	-	-	-	-	-	-
12.	FG BMS, Shah Allah Ditta	80	-	50	20	-	-	-	-	-	-	60	-
13.	FG BMS, Maira Aku	-	-	50	-	-	-	-	-	-	-	-	-
14.	FG BMS, Tarnaul	95	83	83	-	-	-	-	-	38	-	-	-
15.	FG BMS, Shah Darah	-	30	20	-	-	-	190	-	-	-	-	-
16.	FG BMS, Mohra Noor	50	-	50	-	-	-	-	-	-	-	-	-
17.	FG BMS, Rawal Dam	50	-	50	-	-	-	-	-	-	-	-	-
18.	FG BMS, Pind Begwal	5	6	9	6	-	-	-	-	-	-	20	-
19.	FG BMS, Mohra Nagial	9	-	-	34	-	-	-	-	-	-	50	-
	GIRLS' MIDDLE SCHOOLS, FEDERAL AREA												
1.	FG GMS, Kot Hathial	114	-	105	30	-	-	-	-	-	-	40	-
2.	FG GMS, Malpur	16	18	47	-	-	-	-	-	-	-	50	-
3.	FG GMS, Nara Sayaddan	-	-	-	-	-	-	-	-	-	-	30	-
4.	FG GMS, Panjgran	100	60	17	17	-	-	-	-	-	-	10	-
5.	FG GMS, Rawat	100	108	-	75	52	-	-	-	11	-	70	1
6.	FG BMS, Shah Allah Ditta	-	-	-	30	-	-	-	-	-	-	20	1
7.	FG BMS, Kuri	-	-	-	-	-	-	-	-	-	-	20	-

Source: Federal Government Educational Institution Directorate, 1984

TABLE II-20

MIDDLE SCHOOLS EDUCATIONAL FUNITURE (2)

WOODEN BLACK BOARD (PORTABLE)	NOTICE BOARDS	STEEL ALMIRAHS	WOODEN ALMIRAHS	STEEL CABINETS	TEACHERS' CHAIRS	TEACHERS' TABLES	HEADMASTER'S TABLES	SCIENCE LAB. TABLES	LIBRARY TABLES	OFFICE RACKS	ROSTRUMS	SOFA SETS	LIBRARY' ALMIRAHS (GLAZED)	LOUD SPEAKER
-15-	-16-	-17-	-18-	-19-	-20-	-21-	-22-	-23-	-24-	-25-	-26-	-27-	-28-	-29-
6	-	7	1	-	14	3	1	-	-	-	-	-	2	-
8	-	-	12	-	13	6	-	-	-	-	-	-	2	-
-	-	8	-	-	16	16	-	-	-	-	-	-	-	-
7	1	20	-	-	13	10	-	-	-	-	-	-	-	-
2	-	11	-	-	13	8	-	-	-	-	-	-	-	-
7	6	14	1	-	14	-	1	4	-	-	-	-	-	-
1	-	5	-	-	10	6	1	-	-	-	-	-	4	-
2	-	5	-	-	4	3	-	-	-	-	-	-	2	-
8	-	10	3	2	12	12	1	-	-	-	-	-	-	-
6	-	14	-	-	7	8	-	-	-	-	-	-	-	-
11	-	-	-	-	18	10	-	-	-	-	-	-	-	-
2	-	3	-	-	12	5	1	-	-	-	-	-	2	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	14	-	-	15	13	-	-	-	-	-	-	-	-
-	-	3	-	-	17	7	1	-	-	-	-	-	2	-
-	-	5	-	1	15	8	-	-	-	-	-	-	2	-
-	2	7	-	-	15	8	1	-	-	-	-	-	-	-
3	1	4	-	-	6	1	1	-	-	-	-	-	-	-
4	-	3	-	-	22	6	-	-	-	-	-	-	-	-
6	-	3	-	1	16	8	1	-	-	-	-	-	-	-
8	-	2	-	-	6	4	1	-	-	-	-	-	-	-
7	-	6	-	-	13	6	1	-	-	-	-	-	3	-
-	-	6	-	-	10	6	1	-	-	-	-	-	-	-
3	-	7	-	-	9	11	-	-	-	1	-	-	1	-
2	-	2	-	-	12	5	1	-	-	-	-	-	-	-
2	-	2	-	-	6	2	1	-	-	-	-	-	-	-

TABLE II-21

BOY'S PRIMARY SCHOOLS EDUCATIONAL FURNITURE (1)

SL. NO.	NAME OF SCHOOLS	TEACHERS CHAIRS	TEACHERS TABLES	STUDENTS' CHAIRS	STUDENTS' DESKS	STEEL ALMIRAHS	WOODEN ALMIRAHS	TATS	TEACHING KITS	LIBRARY BOOKS	BLACK BOARDS
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-
	UC KIRPA										
1.	FG BPS, Ali Pur Farash	10	6	113	86	5	-	15	1	-	5
2.	FG BPS, Channual Bangial	3	-	-	-	-	-	-	1	Adequate	3
3.	FG BPS, Darwala	3	1	-	-	1	-	10	-	Adequate	2
4.	FG BPS, Dhaliala	11	1	-	-	3	-	10	1	Adequate	5
5.	FG BPS, Jhang Sayaddan	5	3	-	-	2	-	10	1	Adequate	2
	UC RAWAT										
1.	FG BPS, Ara Burji	7	2	30	30	-	-	15	-	-	6
2.	FG BPS, Dhok Mai Nawab	5	3	-	-	3	-	10	-	Adequate	3
3.	FG BPS, Mohri	5	3	-	-	2	-	15	1	Adequate	2
4.	FG BPS, Rajwal	7	3	-	-	3	-	10	-	Adequate	2
5.	FG BPS, Rawat (Banni Saran)	2	2	-	-	2	-	70	1	-	2
6.	FG BPS, Bhangril	3	2	-	-	-	-	10	1	-	2
7.	FG BPS, Mohra Kalu	3	2	-	-	-	-	10	1	-	2
	UC PHULGRAN										
1.	FG BPS, Athal	7	4	-	-	2	-	20	1	Adequate	2
2.	FG BPS, Bobri	2	-	-	-	3	-	20	1	Adequate	4
3.	FG BPS, Dohala Sayaddan	6	2	-	-	2	-	9	1	Adequate	3
4.	FG BPS, Kuri	10	6	-	-	-	1	50	1	Adequate	2
5.	FG BPS, Malot	13	2	-	-	1	-	-	1	-	4
6.	FG BPS, Satra Meel	5	4	15	5	2	-	10	-	-	2
	UC KORAL										
1.	FG BPS, Boora Bengrial	5	2	-	-	2	-	20	1	Adequate	4
2.	FG BPS, Koral	4	4	-	-	1	-	15	-	-	2

TABLE II-21

BOY'S PRIMARY SCHOOLS EDUCATIONAL FURNITURE (2)

SL. NO.	NAME OF SCHOOLS	TEACHERS CHAIRS	TEACHERS TABLES	STUDENTS' CHAIRS	STUDENTS' DESKS	STEEL ALMIRAHS	WOODEN ALMIRAHS	TATS	TEACHING KITS	LIBRARY BOOKS	BLACK BOARDS
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-
	UC TAMAIR										
1.	FG BPS, Biath	5	1	-	-	2	-	10	-	-	2
2.	FG BPS, Della	9	8	63	63	4	-	-	1	Adequate	2
3.	FG BPS, Siali	6	1	-	-	1	-	10	-	Adequate	-
4.	FG BPS, Mohra Solina	6	4	-	-	2+1	-	30	-	Adequate	2
5.	FG BPS, Mohra	3	5	30	40	6	-	10	-	Adequate	2
6.	FG BPS, Jandala	-	1	-	-	1	-	10	1	Adequate	2
7.	FG BPS, Maira Begwal	2	6	-	-	2	-	12	1	Adequate	4
8.	FG BPS, Kijnah	3	3	26	28	1	-	10	1	Adequate	2
	UC SHAH ALLAH DITTA										
1.	FG BPS, Gokina	7	5	-	-	4	-	10	1	Adequate	6
2.	FG BPS, Sari Saral	1	1	36	33	2	1	-	-	-	2
3.	FG BPS, Sarai Kharbooza	4	1	-	-	1	-	20	1	Adequate	2
4.	FG BPS, Dhok Jori	13	7	-	-	5	-	-	1	Adequate	3
	UC CHARAH										
1.	FG BPS, Jagiot	12	7	-	-	2	-	-	1	Adequate	4
2.	FG BPS, Harno Thand Pani	5	1	-	-	1	-	15	1	Adequate	3
	UC SOHAN										
1.	FG BPS, Sohan	2	2	-	-	1	-	40	1	Adequate	11
	UC TARLAI										
1.	FG BPS, Khana Dak	3	3	21	27	1	-	20	-	-	4
2.	FG BPS, Khana Kak	6	1	-	-	1	-	-	1	-	4
3.	FG BPS, Khana Nai Abadi	3	1	-	-	2	-	30	-	-	4
4.	FG BPS, Sharifabad	4	1	-	-	1	1	20	-	-	2
5.	FG BPS, Chatta Bakhtawar	4	3	-	-	2	-	15	-	-	2

TABLE II-21

BOY'S PRIMARY SCHOOLS EDUCATIONAL FURNITURE (3)

SL. NO.	NAME OF SCHOOLS	TEACHERS CHAIRS	TEACHERS TABLES	STUDENTS' CHAIRS	STUDENTS' DESKS	STEEL ALMIRAHS	WOODEN ALMIRAHS	TATS	TEACHING KITS	LIBRARY BOOKS	BLACK BOARDS
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-
	UC SIHALA										
1.	FG BPS, Sihala	6	6	-	-	3	-	25	1	-	6
2.	FG BPS, Chak	8	2	-	-	3	-	30	1	-	2
3.	FG BPS, Chak Kamdar	7	5	-	-	3	-	16	1	Adequate	5
4.	FG BPS, Gagri	7	4	-	-	2	-	24	1	-	4
5.	FG BPS, Mughal	5	2	-	-	1	-	50	1	Adequate	5
6.	FG BPS, Sihala Mirzian	7	3	-	-	3	-	-	1	Adequate	2
7.	FG BPS, Har-do-Gaher	5	2	-	-	4	-	25	1	Adequate	5
	UC BHARA KAU										
1.	FG BPS, Bhara Kau	16	6	60	140	9	-	25	1	-	7
2.	FG PBS, Subhan	5	-	-	-	1	-	17	1	Adequate	3
3.	FG BPS, Mangial	3	1	-	-	1	-	5	1	Adequate	2
4.	FG BPS, Lakhwal	6	-	-	-	2	-	30	1	Adequate	4
5.	FG BPS, Bhuddo	5	1	-	-	1	-	10	1	Adequate	3
6.	FG BPS, Dhok Jarrani	4	3	-	-	4	-	20	1	-	2
7.	FG BPS, Palali	1	1	-	-	1	-	-	-	-	2
9.	FG BPS, Pind Malkan	4	4	-	-	2	-	-	-	-	-

TABLE II-22

GIRL'S PRIMARY SCHOOLS EDUCATIONAL FURNITURE (1)

SL. NO.	NAME OF SCHOOLS	TEACHERS CHAIRS	TEACHERS TABLES	STUDENTS' CHAIRS	STUDENTS' DESKS	STEEL ALMIRAHS	WOODEN ALMIRAHS	TATS	TEACHING KITS	LIBRARY BOOKS	BLACK BOARDS
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-
	UC TARLAI										
1.	FG GPS, Tarlai	12	6	-	-	2	1	40	1	Adequate	6
2.	FG GPS, Khana Dak	3	1	25	21	3	-	11	-	Adequate	-
3.	FG GPS, Khana Nai Abadi	5	-	-	-	-	-	-	1	-	4
4.	FG GPS, Shak Rial	8	1	-	-	1	-	44	1	-	6
	UC CHARAH										
1.	FG GPS, Charah	5	3	-	-	2	-	-	1	Adequate	-
2.	FG GPS, Harno Thand Pani	10	2	20	-	1	-	30	1	Adequate	3
3.	FG GPS, Jagiot	7	2	-	-	2	-	23	1	Adequate	3
4.	FG GPS, Kalia Adna	5	3	-	-	1	-	20	1	-	3
5.	FG GPS, Kalia Aala	8	-	-	-	1	-	40	-	-	4
6.	FG GPS, Muhrian	4	2	-	-	1	-	17	-	-	-
7.	FG GPS, Darkala	3	3	-	-	2	-	20	-	-	-
8.	FG GPS, Ara	3	3	-	-	2	-	-	-	-	-
9.	FG GPS, Chappar Ghasota	3	3	-	-	2	-	-	-	-	-
	UC SOHAN										
1.	FG GPS, Gawala Colony	-	-	-	-	-	-	-	-	Adequate	4
	UC PHULGRAN										
1.	FG GPS, Phulgran	3	4	13	13	1	-	20	1	Adequate	3
2.	FG GPS, Mohra Noor	4	-	-	-	2	-	30	-	-	-
3.	FG GPS, Shah Pur	4	4	-	-	2	-	-	-	-	-
	UC KIRPA										
1.	FG GPS, Kirpa	2	5	18	29	5	-	13	1	Adequate	6
2.	FG GPS, Bhimbar Tarar	8	3	40	5	3	-	10	1	Adequate	2
3.	FG GPS, Dhaliala	4	1	-	-	1	-	10	1	Adequate	2
4.	FG GPS, Gurah Mast	12	2	-	20	3	-	16	1	Adequate	-
5.	FG GPS, Ali Pur Farash	3	4	-	-	1	-	16	1	-	2
6.	FG GPS, Pind Malakan	11	3	-	-	4	-	20	-	Adequate	3
7.	FG GPS, Jhang Sayaddan	5	3	-	-	2	-	10	1	Adequate	4
8.	FG GPS, Peja	5	3	-	-	-	-	10	-	Adequate	1

Source: Federal Government Educational Institution Directorate, 1984

TABLE II-22

GIRL'S PRIMARY SCHOOLS EDUCATIONAL FURNITURE (2)

SL. NO.	NAME OF SCHOOLS	TEACHERS CHAIRS	TEACHERS TABLES	STUDENTS' CHAIRS	STUDENTS' DESKS	STEEL ALMIRAHS	WOODEN ALMIRAHS	TATS	TEACHING KITS	LIBRARY BOOKS	BLACK BOARDS
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-
	UC TAMAIR										
1.	FG GPS, Tamair	4	4	-	-	2	-	14	-	-	-
2.	FG GPS, Simly	8	2	42	48	-	-	-	1	-	-
3.	FG GPS, Maira Begwal	-	5	-	-	-	-	-	1	-	4
4.	FG GPS, Pehont	4	2	-	-	2	-	10	-	-	2
5.	FG GPS, Pind Begwal	6	2	-	-	2	-	13	1	Adequate	3
6.	FG GPS, Seevra	5	2	-	-	5	-	-	-	-	-
7.	FG GPS, Chakhtan	3	3	-	-	2	-	10	-	Adequate	-
8.	FG GPS, Bian Nullah	4	4	-	-	2	-	-	-	-	-
9.	FG GPS, Kijnah	4	4	-	-	2	-	-	-	-	-
	UC SIHALA										
1.	FG GPS, Gagri	7	2	-	-	-	2	20	1	-	2
2.	FG GPS, Hon Dhamial	15	-	31	85	5	-	10	1	-	2
3.	FG GPS, Mughal	11	1	30	57	1	2	15	1	Adequate	4
4.	FG GPS, Uppra Ghora	4	2	-	-	1	-	10	1	Adequate	3
5.	FG GPS, PTC Sihala	3	3	30	25	-	1	10	-	-	2
6.	FG GPS, Sihala	15	2	2	3	2	1	23	2	Adequate	5
7.	FG GPS, Jandala	4	-	-	-	2	-	30	-	-	2
8.	FG GPS, Mohri Mughal	6	2	-	-	-	-	24	1	-	2
9.	FG GPS, Gangota Sayaddan	4	4	-	-	1	1	20	-	Adequate	-
10.	FG GPS, Sihala Mirzian	3	3	-	-	2	-	10	-	-	2
	UC RAWAT										
1.	FG GPS, Mohri	5	4	-	-	3	-	10	-	-	-
2.	FG GPS, Mohra Nagial	8	3	46	23	2	1	15	1	Adequate	5
3.	FG GPS, Sheikh Pur	-	3	-	-	-	-	10	-	-	-
4.	FG GPS, Rajwal	2	2	-	-	-	-	10	-	-	-
5.	FG GPS, Bhangril	2	2	-	-	1	-	6	-	Adequate	2
	UC BHARA KAU										
1.	FG GPS, Lakhwal	5	3	46	46	2	-	4	1	-	4
2.	FG GPS, Shah Darah	3	-	-	-	1	-	13	1	-	2
3.	FG GPS, Mandala	4	4	-	-	25	25	-	-	-	1

TABLE II-22

GIRL'S PRIMARY SCHOOLS EDUCATIONAL FURNITURE (3)

SL. NO.	NAME OF SCHOOLS	TEACHERS CHAIRS	TEACHERS TABLES	STUDENTS' CHAIRS	STUDENTS' DESKS	STEEL ALMIRAHS	WOODEN ALMIRAHS	TATS	TEACHING KITS	LIBRARY BOOKS	BLACK BOARDS
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-
	UC KORAL										
1.	FG GBS, Loi Bher	5	2	-	-	2	1	10	-	Adequate	5
	UC SHAH ALLAH DITTA										
1.	FG GPS, Jori	3	3	-	-	3	-	-	-	-	-
2.	FG GPS, Gokina	4	4	-	-	2	-	-	-	-	-
1.	FG GPS, Badia Qadir Bakhash	4	4	-	-	2	-	-	-	-	-

TABLE II-23 MANPOWER OF THE HEALTH DEPARTMENT, ICT

SL. No.	Name of Post	Sanction Post	Post Filled	Post Vacant	Qualification & Experience	Remarks
1.	Drug Inspector, (B-11).	1	-	1		Not to be recruited, up-grandation case is under decision.
2.	Medical Assistant, (B-08).	11	8	3	Matric with science and diploma in said course with two years experience.	To be advertised.
3.	Lady Health Visitor, (B-08).	11	6	5	Matric with science and diploma in LHV course, two years experience in respective field.	2 postspost already advertised by D.C. office.
4.	Sanitary Inspector, (B-08).	3	1	2	Intermideate with diploma in respective field from any Medical Fuculty in Pakistan.	- do -
5.	Malaria Inspector, (B-08)	1	-	1	Intermediate of Matric with science and 5 years experience as Malaria Supervisor.	- do -
6.	Dispensor, (B-05).	1	-	1	Matric with science and diploma in said course.	- do -
7.	Vaccinator, (B-05).	5	4	1	Matric with science vaccination, experience disirable.	To be adveritsed.
8.	Sanitary Patrol, (B-01).	5	3	2	Literate clean and helthy man.	
9.	Misc. staff, (Naib Qasid, Mali, Chowkidar), (B-01).	29	18	11		One Naib Qasid is appointed by the Deputy Commissioner office on adhoc basis for six months.
10.	Mental Officer.	2	2	0		

Source: Health Department, IA, 1985

TABLE II-24

COMPARATIVE CRIME STATEMENT OF RURAL AREA

(FROM 1.1.85 to 30.6.85)

Head of Crime		Reported	Challenged	Cancelled	Untraced	Under Investigation	Convicted	Acquitted	Pending	Property Stolen	Property Recovered
Murder	1985	11	7	1	-	3	-	-	7		
	1984	7	5	-	2	-	3	1	1		
Attempt to Murder	1985	12	8	-	-	4	-	-	8		
	1984	19	13	4	2	-	-	10	3		
Hurt	1985	22	15	-	-	7	-	2	13		
	1984	29	26	3	-	-	1	20	5		
Robbery	1985	1	-	-	-	1	-	-	-	Rs 24,000	Rs 24,000
	1984	-	-	-	-	-	-	-	-	-	-
Burglary	1985	2	-	-	1	1	-	-	-	Rs 4,000	-
	1984	1	-	-	1	-	-	-	-	67,000	-
Ordinary theft	1985	5	1	-	1	3	-	-	1	183,750	140,000
	1984	5	2	1	2	-	-	2	-	4,580	3,000
Car theft	1985	1	1	-	-	-	-	-	1	70,000	70,000
	1984	2	-	-	2	-	-	-	-	90,000	90,000
Fatal accident	1985	20	14	1	1	4	-	-	14		
	1984	17	17	-	-	-	-	9	8		
Nonfatal accident	1985	12	11	-	-	1	-	1	10		
	1984	19	18	1	-	-	2	11	5		
Abduction/Zina	1985	4	2	-	-	2	-	-	2		
	1984	4	2	2	-	-	-	-	2		
Section 3/4 Prohibition Ord: 1979	1985	18	17	-	-	1	-	3	14		
	1984	10	10	-	-	-	5	2	3		
Arms Ord (13/20/65)	1985	39	39	-	-	-	4	-	35		
	1984	38	38	-	-	-	8	13	17		
Receiving stolen property (u/s 411 PPC)	1985	3	2	-	-	-	-	-	2	-	140,000
	1984	4	4	-	-	-	1	3	-		42,352
Customs Act	1985	7	-	-	-	7	-	-	-		
	1984	9	9	-	-	-	-		9		
Miscellaneous	1985	20	13	2	-	5	-	-	13		
	1984	19	16	-	1	2	2	3	11		
Total	1985	177	130	5	3	39	4	6	120	Rs281,750	Rs374,000
	1984	182	160	11	9	2	22	74	64	Rs161,580	Rs135,352

Source: Islamabad Police, 1985

TABLE II-25

COMPARATIVE CRIME STATEMENT OF URBAN AREA

(FROM 1.1.85 to 30.6.85)

Head of Crime		Reported	Challenged	Cancelled	Untraced	Under Investigation	Convicted	Acquitted	Pending	Property Stolen	Property Recovered
Murder	1985	3	1	-	-	2	-	-	1		
	1984	2	-	-	1	1	-	-	-		
Attempt to Murder	1985	3	2	-	-	1	-	-	2		
	1984	7	7	-	-	-	-	1	6		
Hurt	1985	7	4	1	-	2	-	1	3		
	1984	12	10	1	1	-	-	5	5		
Robbery	1985	4	1	-	1	2	-	-	1	85,065	65
	1984	-	-	-	-	-	-	-	-	-	-
Burglary	1985	8	2	1	2	3	-	-	2	178,195	127,095
	1984	16	5	2	9	-	3	1	1	368,240	318,400
Ordinary theft	1985	36	19	1	8	8	2	-	17	499,689	305,370
	1984	21	7	1	13	-	1	2	4	260,095	37,895
Car theft	1985	3	1	-	1	1	-	-	1	170,000	95,000
	1984	4	1	-	2	1	-	-	1	135,000	60,000
Fatal accident	1985	12	8	3	-	1	-	-	8		
	1984	13	10	1	2	-	2	2	6		
Nonfatal accident	1985	45	37	2	1	5	-	-	37		
	1984	50	43	5	2	-	16	14	13		
Abduction/Zina	1985	9	3	3	-	3	-	-	3		
	1984	9	3	6	-	-	1	-	2		
Section 3/4 Prohibition Ord: 1979	1985	28	25	-	-	3	2	1	22		
	1984	18	18	-	-	-	5	2	11		
Arms Ord (13/20/65)	1985	9	8	-	-	1	-	-	8		
	1984	11	11	-	-	-	4	3	4		
Receiving stolen property (u/s 411 PPC)	1985	8	8	-	-	-	-	-	8	-	154,550
	1984	3	3	-	-	-	7	1	-		21,220
Customs Act	1985	3	1	-	-	2	-	-	1		
	1984	3	3	-	-	-	-	-	3		
Miscellaneous	1985	27	12	3	4	8	2	-	10		
	1984	31	22	4	3	2	8	3	11		
Total	1985	205	132	14	17	42	6	2	124	Rs932,949	Rs682,080
	1984	200	143	20	33	4	42	34	67	Rs763,335	Rs437,515

Source: Islamabad Police, 1985

TABLE II-26 (1)

POPULATION OF ISLAMABAD RURAL AREA BASED ON 1981 CENSUS

	Name of Village	Total	Male	Female
I.	UC Koral			
	Koral	862	443	419
	Boora Bangial	686	361	325
	Choocha	425	211	214
	Bhookar	455	216	239
	Panwal	308	156	152
	Pahg	145	75	70
	Loi Bher	1,665	889	776
	Rakh Loi Bher	-	-	-
	8 Villages:	4,546	2,351	2,195
II.	UC Rawat			
	Rawat	3,769	1,991	1,778
	Bhangril Khurd	254	131	123
	Bhangril Kalan	333	177	156
	Sheikn Pur	340	172	168
	Murikhumbal	32	12	20
	Shadi Dhamial	266	153	113
	Niazian	440	221	219
	Kortana	344	174	170
	Hummak	3,745	1,966	1,779
	Kotha Kalan	1,648	849	799
	Bamla Kanyat	284	159	125
	Sud Gangal	-	-	-
	Muhra Amir	-	-	-
	Takht Pari	-	-	-
	14 Villages:	11,455	6,005	5,450

TABLE II-26 (2) 2

Name of Village	Total	Male	Female
III. UC Sihala			
Gagri	1,143	557	586
Nara Sayaddan	571	281	290
Chak Kamdar	286	139	147
Jabbi Gakhran	162	93	69
Sandu	76	40	36
Har-do-Gahr	1,068	538	530
Jandala	379	169	210
Ladhot	443	217	226
Kangota Gujran	560	288	272
Chukkal	428	196	232
Hon Dhamial	2,176	1,556	620
Sihala	4,536	2,377	2,159
Mughal	4,138	2,138	2,000
Chitroh	67	31	36
14 Villages:	16,033	8,620	7,413
IV. UC Bhara Kau			
Shah Darah	1,819	947	872
Subhan	413	206	207
Mandala	327	181	146
Mangial	289	153	136
Kot Hathial	5,066	2,690	2,376
Mohra Noor	2,676	1,375	1,301
6 Villages:	10,590	5,552	5,038

TABLE II-26 (3) 3

	Name of Village	Total	Male	Female
V.	UC Phulgran			
	Kuri	2,248	1,166	1,082
	Malot	1,516	787	729
	Rihara	571	294	277
	Bobri Petha	552	292	260
	Sikrila	212	108	104
	Chattar	16	10	6
	Hotran	114	59	55
	Karlot	132	67	65
	Athal	1,183	602	581
	Phulgran	4,426	2,313	2,113
	Dohala	70	35	35
	Shah Pur	87	48	39
	Rakh Bangla	-	-	-
	Chaneri	-	-	-
	Mangal	15	8	7
	Kathar	106	50	56
	16 Villages:	11,248	5,839	5,409
VI.	UC Shah Allah Ditta			
	Dhok Jori	1,626	845	781
	Shah Allah Ditta	2,241	1,200	1,041
	Talhar	1,291	649	642
	Sinar Sandhori	300	210	90
	Gokina	2,118	1,128	990
	5 Villages:	7,576	4,032	3,544

TABLE II-26 (4)

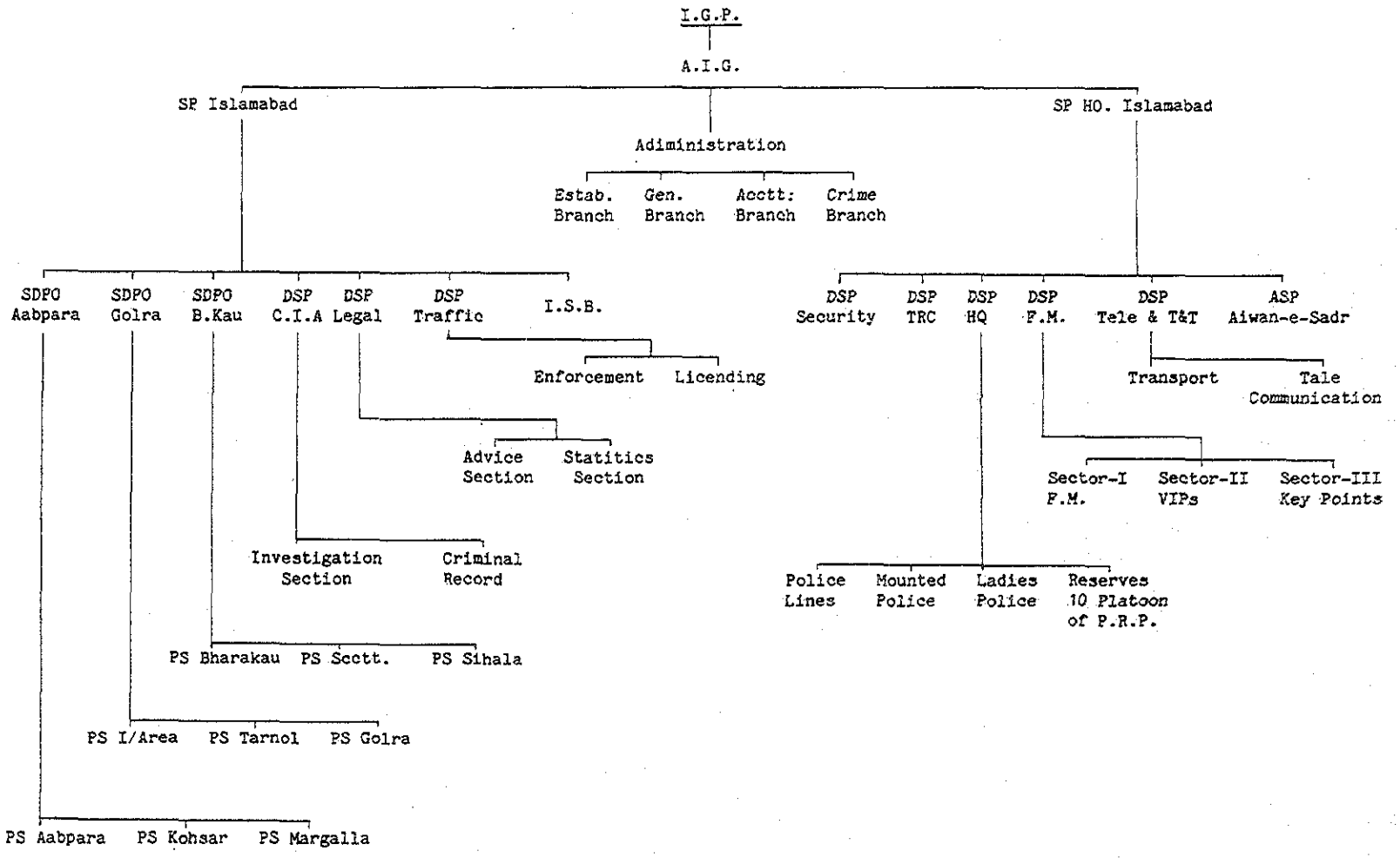
Name of Village	Total	Male	Female
VII. UC Tarlai Kalan			
Chahatta Bakhtawar	863	476	387
Tarlai Kalan	3,568	1,868	1,700
Chhappar Mir Khanal	735	387	348
Suhder	201	108	93
Taramri	132	67	65
Tarlai Khurd	654	335	319
Chora Sardar	279	167	112
Ganhdian	83	48	35
Khana Dak	5,072	2,868	2,204
Gangal	702	375	327
10 Villages:	12,289	6,699	5,590
VIII. UC Sohan			
Sohan Dehat	1,914	1,011	903
Pandori	602	334	268
Khana Kak	208	97	111
Shak Rial	6,213	3,244	2,969
Jaba Teli	680	333	347
Sohana	341	170	171
Bohan	61	38	23
Chak Shadad	1,983	1,091	892
Majohan	295	155	140
Chak Bira Singh	411	276	135
Mohra Jujan	134	65	69
Dhok Sharaf	8	5	3
Lakhwal	312	160	152
13 Villages:	13,162	6,979	6,183

TABLE II-26 (5)

Name of Village	Total	Male	Female
IX. UC Kirpa			
Kipra	4,441	2,254	2,187
Jhang Sayaddan	535	278	257
Sik Nal	483	247	236
Panjgran	867	453	414
Paratal	354	182	172
Farash	1,505	760	745
Ali Pur	1,267	667	600
Khadrir Pur	786	415	371
Tamma	526	271	255
Gurah Mast	851	415	436
Pandori Hathial	63	32	31
Pandori Sayaddan	267	145	122
Saga	158	81	77
Chhani Mohsoo Khan	166	85	81
Pind Malakan	1,450	732	718
Bhimbar Tarar	1,792	854	938
Peja	506	253	253
Darwala	699	362	337
Khatril	389	207	182
Pind Daia	564	293	271
Dhaliala	846	438	408
Kangota Sayaddan	424	205	219
Sher Dhamial	541	263	278
23 Villages:	19,480	9,892	9,588

TABLE II-26 (6) 6

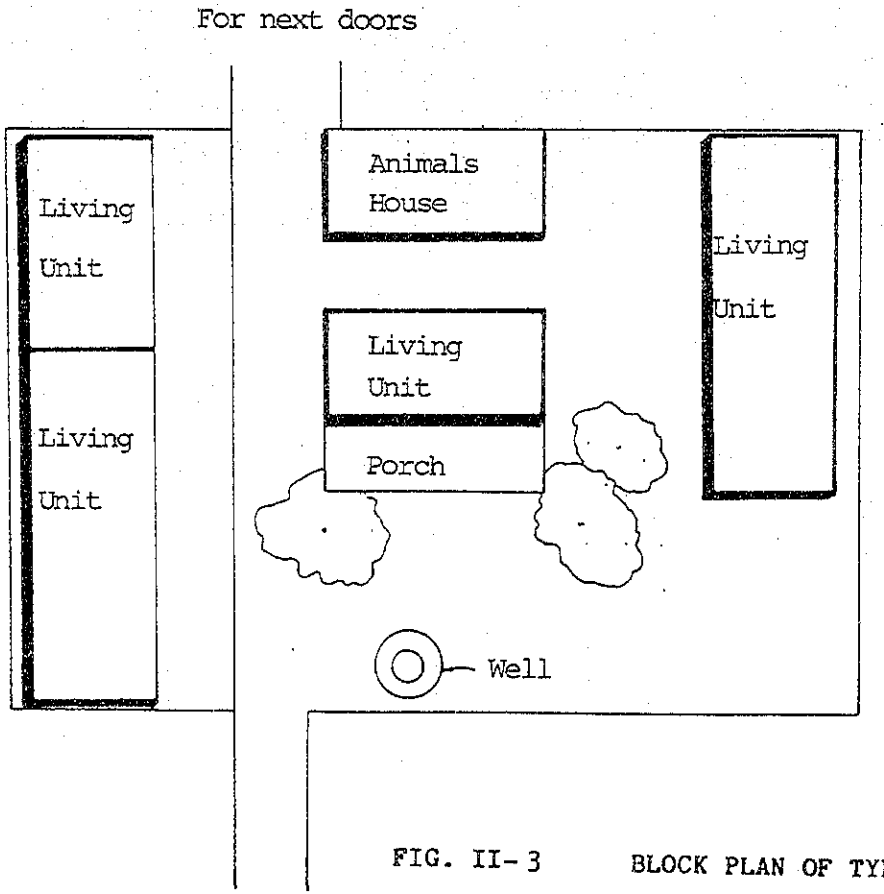
	Name of Village	Total	Male	Female
X.	UC Tamair			
	Tamair	5,851	3,288	2,563
	Kijnah	1,181	582	599
	Siali	939	501	438
	Jandala	259	122	137
	Gahra Thain	148	87	61
	Jand Gran	153	74	79
	Simly	20	12	8
	Dakhain	178	92	86
	Maira Begwal	1,420	753	667
	Pind Begwal	3,489	1,773	1,716
	Rakh Tamair (A)	-	-	-
	Rakh Tamair (B)	-	-	-
	Rakh Tamair (C)	-	-	-
	Rakh Tamair (D)	-	-	-
	Rahk Maira (A)	-	-	-
	Rahk Maira (B)	-	-	-
	16 Villages:	13,638	7,284	6,354
XI.	UC Charah			
	Charah	7,	4,129	3,866
	Harno Thanda Pani	2,978	1,590	1,388
	Darkala	1,190	603	587
	Jagyot	2,597	1,336	1,261
	Naugazi	324	165	159
	Ara	701	345	356
	Muhrian	2,015	1,043	972
	Ghora Baz	37	17	20
	8 Villages:	17,837	9,228	8,609
	GRAND TOTAL:	137,854	72,211	65,373

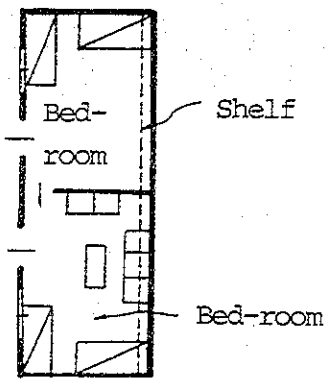


Note:

I.G.P.	Inspector General of Police	R.T.C.	Recruit Training Centre
A.I.G.	Assistant Inspector General of Police	P.R.P.	Provincial Reserve Police
S.P.	Superintendent of Police	F.M.	Foreign Mission
S.D.P.O.	Sub-divisional Police Office	P.S.	Police Station
D.S.P.	Deputy Superintendent of Police		
I.S.B.	Intelligence Service Bureau		
A.S.P.	Assistant Superintendent of Police		
C.I.A.	Criminal Investigation Agency		

FIG. II-2 ORGANIZATION CHART OF ISLAMABAD POLICE





Plan of a Living Unit

FIG. II-3 BLOCK PLAN OF TYPICAL FARM HOUSING

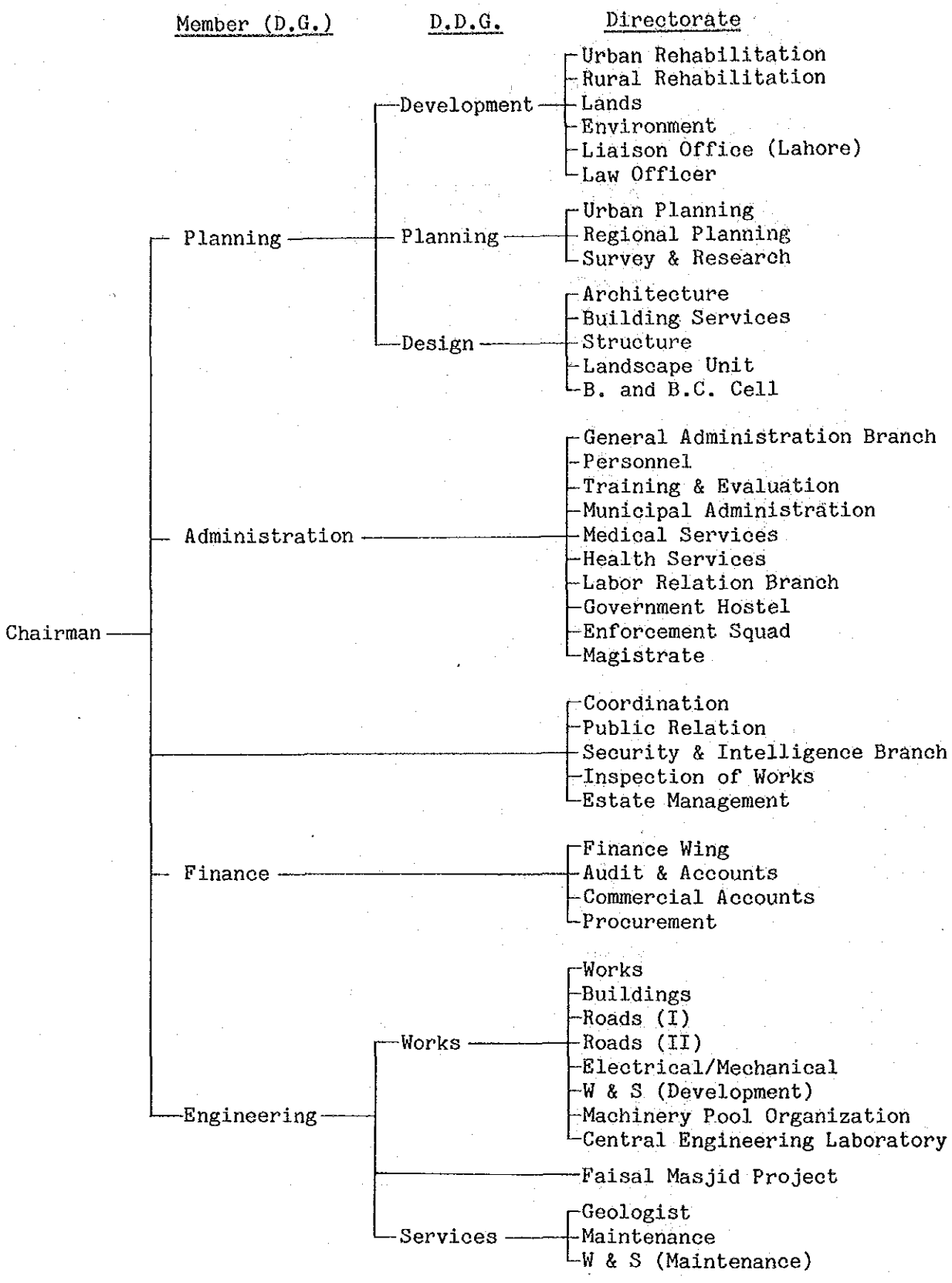


FIG. II-4 **ORGANIZATION CHART OF CDA**

II-8. FORM OF QUESTIONNAIR

Area No.
Sample No.

FORM OF QUESTIONNAIRE

MASTERPLAN STUDY FOR THE
INTEGRATED RURAL DEVELOPMENT PROJECT IN
THE ISLAMIC REPUBLIC OF PAKISTAN

Name of the recorder _____ Date_____

Checked by _____ Date_____

SAMPLE INFORMATION

1. Name of Markaz _____
2. Name of Union Council _____
3. Name of Village _____

4. Where was the householder born ?

   a. Islamabad Capital Territory
   b. Other Rawalpindi District
   c. Other Punjab Province
   d. N.W.F. Province
   e. Sind Province
   f. Baluchistan Province
   g. Others (specify)

   _____

5.1 Total number of family members dependent on the householder (that is, family members eating from same kitchen).

_____

5.2 Total number of adult male members of family living in the household (10 years and over, including householder).

_____

6.1 Total number of family members working on farm.

_____

6.2 Total number of permanently hired labourers.

_____

7.1 Number of family members who can read and write Urdu.

_____

7.2 Number of family members going to primary school presently.

_____

7.3 If the answer to 7.2 is more than 1, how far he/she plies to school daily ?

_____ yards/miles

8.1 Main source of drinking water.

a. Tubewell
b. Concreted Well
c. Dug Well
d. Pond
e. River
f. Spring
g. Others (specify)

_____

8.2 Distance to the drinking water source from house.

yards/miles

8.3 Daily drinking water consumption of the family members.

gallons

9. Type of sanitary facilities.

a. Open space
b. Pit/bucket latrine
c. Water flush
d. Others (specify)

10.1 Availability of electricity in the house.

Yes/No

10.2 If yes, how much is the amount of payment for the electricity every month (average).

Rupees

11. Fuel material used in the house.

a. Cow dung cakes
b. Firewood
c. Charcoal
d. Kerosene
e. Gas
f. Others (specify)

12.1 Total size of land owned by the household.

_____ acres

12.2 Total size of land cultivated by the household.

_____ acres

12.3 Total size of land cultivated by the household for sharecropping, if any.

_____ acres

13.1 Agricultural credit used by the household.

a. None
b. A.D.B.P.
c. Commercial bank
d. Cooperatives
e. Taccavi Loan
f. Friend/relative
g. Others (specify)

_____

13.2 Purpose of above credit.

a. None
b. Labour hiring
c. Land rental
d. Purchase of inputs
e. Purchase of animals
f. Repayment of earlier crop debt
g. Others (specify)

_____

13.3 If the household ever had an account in any commercial banks.

_____ Yes / No

14. If the householder knows the existence of IRD Markaz.

Yes / No

15.1 If the household gets any extention services from government offices.

Yes / No

15.2 If yes, what kind of services ?

a. Agriculture
b. Soil conservation
c. Livestock and dairy
d. Fisheries
e. Cooperatives
f. Others (specify)

_____

16. What the householder will do if any one of his family members suffers from illness.

_____

_____

_____

17.1 Quantity of crops consumed or used annually by the household.

a. Wheat _____ mounds
b. Rice _____
c. Pulse _____
d. Others (specify)

_____

_____

_____

17.2 Kind of vegetables consumed by the household.

a. _____

b. _____

c. _____

18. Livestocks owned by the household.

a. Draft animals (any animals that pulls a plough)	_____ nos
b. Cows (Milking)	_____
c. Buffalo (Milking)	_____
d. Sheep	_____
e. Goat	_____
f. Poultry	_____
g. Donkey	_____
h. Camel	_____
i. Others (specify)	

_____

19. Agricultural implements owned by the household.

a. Hoe	_____ nos
b. Plough	_____
c. Cart	_____
d. Power Pump	_____
e. Power Tiller	_____
f. Thresher	_____
g. Tractor	_____
h. Sprayor (pesticide)	_____
i. Others (specify)	

_____

20. Does the household own any of the followings ?

a. Bicycle
b. Motor cycle
c. Cart
d. Car/truck
e. Radio
f. Tape recorder with radio
g. Television set
h. Sewing machine
i. Refrigerator
j. Others (specify)

_____

21.1 Principal source of non-farm income for householder (indicate by code numbers listed below).

_____

21.2 Principal source of non-farm income for other family members (indicate by code numbers below).

_____

21.3 Which is bigger between the amounts of farm and non-farm incomes.

_____

CODE FOR NON-FARM INCOME

a. Day labour in agriculture
b. Public services
c. Commerce/business
d. Handicraft
e. Driver
f. Factory worker
g. School teacher
h. Foreign remittance
i. Others (specify)

22.1 If any one of family members is engaged in hired labour in agriculture, state how many man-days he/she is hired.

a. During Rabi season _____ man-days
b. During Kharif season _____
c. Not applicable

22.2 Amount of daily wage for above hired work.

a. During Rabi season _____ Rupees
b. During Kharif season _____
c. Not applicable

23.1 Recurrent expenditure of the household during last one year (state amount in Rupees, or otherwise in percentage).

a. Cereal _____ Rupees
b. Other food (including cooking oil, sugar, salt and chili) _____
c. Fuel material _____
d. Clothing _____
e. Education _____
f. Health _____
g. Others (specify)

_____

23.2 How much of the income is saved by the household monthly in terms of Rupees or percentage.

_____

23.3 What such saving is utilized for ?

_____

_____

23.4 Has the householder ever sold any part of his land or property since these 3 years ?

_____ Yes / No

QUESTIONS TO THE MALE MEMBER OF FAMILY

24. On Drinking Water :

24.1 Is he satisfied with the present water supply facility ?

a. Yes
b. No
c. Others

24.2 Quality of the present drinking water.

a. Good
b. Not good
c. Others

24.3 If the water supply facility (through pipes and taps) is connected to his house, is he willing to pay for water charges ?

a. Yes
b. No
c. Others

25. On Firewood and Kitchen Oven :

25.1 Does his family hold a firewood forest on sharing base (co-holding) ?

a. Yes
b. No
c. Others

25.2 Does he think that enough firewoods are collected from his forest or from other source ?

a. Yes
b. No
c. Others

25.3 Is he interested in improving kitchen oven in his house ?

a. Yes
b. No
c. Others

QUESTIONS TO THE FEMALE MEMBER OF FAMILY

26. On Drinking Water :

26.1 When she takes drinking water from the source to her house, what kind of container does she use ?

_____

26.2 How often does she ply between the drinking water source and her house daily ?

_____

26.3 Total quantity of water carried by her daily ?

_____ gallons

26.4 How many hours is she engaged in water intake work daily ?

_____ hours

27. On Firewood and Kitchen Oven :

27.1 How often does she go out to collect firewoods in a week ?

_____ times

27.2 Distance between her house and the place where she collects firewoods.

_____ yards/miles

27.3 Can she collect firewoods without feeling any difficulties ?

a. Yes
b. No
c. Others

27.4 In comparison with the oven presently used in her kitchen, does she want to improve her kitchen by replacing it with new one (such as charcoal oven, kerosene oven, etc.) ?

a. Yes
b. No
c. Others

GENERAL IDEA OF HOUSEHOLDER

28.1 Please list up 3 things he wants to buy most if he has enough financial resource to afford.

a. _____

b. _____

c. _____

28.2 What, in his opinion, would improve the quality of his life ?

a. _____

b. _____

c. _____

28.3 What was the most pleasant occurrence in his past ?

_____

_____

28.4 What was the most sorrowful happening in his past?

_____

_____

28.5 What is most desired by him in his near future ?

_____

_____

☞ Please check if all the questions are cleared !

علاقہ نمبر _____

نمونہ نمبر _____

اسلامی جمہوریہ پاکستان میں مربوط دیہی ترقیاتی منصوبہ کا مطالعہ

اندراج کنندہ کا نام _____ تاریخ _____

پڑتال کنندہ کا نام _____ تاریخ _____

نمونہ معلومات

۱- مرکز کا نام _____

۲- یونین کونسل کا نام _____

۳- موضع کا نام _____

۴- گھر کا سربراہ کہاں پیدا ہوا ؟

الف - وفاقی علاقہ اسلام آباد

ب - دیگر ضلع راولپنڈی

ج - دیگر صوبہ پنجاب

د - صوبہ سرحد

ح - صوبہ سندھ

و - صوبہ بلوچستان

ز - دیگر (وضاحت کیجئے)

۵ا خانوان کے کل افراد کی تعداد جو سربراہ خانوان کے زیر کفالت ہوں (یعنی ایک ہی چولہے پر کھاتے ہوں _____

۵۲ خانوان کے بالغ مرد افراد کی تعداد جو سربراہ خانوان کے ہمراہ رہتے ہوں (دس سال اور اس سے زائد عمر کے بشمول سربراہ خانوان) _____

۶ا خانوان کے افراد کی تعداد جو کھیتوں پر کام کرتے ہیں - _____

۶۲ مستقل مزدوروں کی کل تعداد _____

۷ا خانوان کے افراد کی تعداد جو اردو لکھ پڑھ سکتے ہیں _____

۷۲ خانوان کے افراد کی تعداد جو اس وقت جماعت پنجم تک جاتے ہیں _____

۲ء۷ اگر سوال نمبر ۲ء۷ کا جواب ہاں ہے تو کتنی دور سکول اسی روزانہ آنا جانا پڑتا ہے

_____ گز / میل

۱ء۸ پینے کے پانی کا اصل ذریعہ

الف - نل کنواں (یعنی ٹیوب ویل)

ب - پختہ کنواں

ج - کچا کنواں

د - تالاب

ح - دریا

و - چشمہ

ز - دیگر (وضاحت کیلئے

۲ء۸ گھر سے پینے کے پانی کے ذرائع کا فاصلہ _____ گز / میل

۳ء۸ گھر کے افراد کیلئے پانی کی کل کیفیت _____ گیلن

۹ - حفظان صحت کی سہولیات کی اقسام -

الف - کھلی جگہ

ب - گڑھے / بالٹی والی بیت الخلا

ج - سیل شوبی طریقہ (فلس سسٹم)

۱ء۱۰ گھر میں بجلی موجود ہے - ہاں / نہیں

۲ء۱۰ اگر ہاں اوسطاً ہر ماہ کتنے روپے کے بل کی ادائیگی کی جاتی ہے _____ روپے

۱۱ - گھر میں ایندھن کا استعمال -

الف- اپلے

ب - جلانے کی لکڑی

ج - کوئلہ

د - مٹی کا تیل

ح - گیس

و - دیگر (وضاحت کریں)

۱ء۱۲ خانوان کے سربراہ کا کل رقبہ _____ ایکڑ

۲ء۱۲ کل رقبہ جو خانوان کا سربراہ کاشت کرتا ہے _____ ایکڑ

۳ء۱۲ کل رقبہ جو خانوان کا سربراہ حصہ پر کاشت کرتا ہے (اگر ہے) _____ ایکڑ

ا ع ۱۲ زرعی قرضہ جات جو خانوان کا سربراہ استعمال کرتا ہے -

الف - کسی سے نہیں

ب - زرعی ترقیاتی بینک سے

ج - تجارتی بینک

د - محکمہ امداد باہمی

ح - تکاوی قرضہ

و - دوست / احباب

ز - دیگر (وضاحت کریں)

۲ ع ۱۲ قرضہ حاصل کرنے کا مقصد -

الف - کسی کام کیلئے نہیں -

ب - مزدوروں کی مزدوری کیلئے

ج - زمین کے مالیہ کیلئے

د - کھاد بیج خریدنے کیلئے

ح - مویشی خریدنے کیلئے

و - سابقہ فصل پر حاصل کیے گئے قرضہ کی واپسی کیلئے

ز - دیگر (وضاحت کریں)

۳ ع ۱۲ خانوان کے سربراہ کا کبھی کسی تجارتی بینک میں کھاتہ رہا ہے - ہاں / نہیں

۱۳ - خانوان کا سربراہ مربوط دیہی ترقیاتی مرکز کے وجود کو جانتا ہے - ہاں / نہیں

ا ع ۱۵ کیا خانوان کے سربراہ کو سرکاری دفاتر سے زرعی توسیع کے سلسلہ میں خدمات ملتی ہیں ؟ ہاں / نہیں

۲ ع ۱۵ اگر ہاں کس قسم کی خدمات ؟

الف - زراعت

ب - تحفظ اراضیات

ج - جواش و شیر خانہ

د - ماہی پروری

ح - امداد باہمی

ز - دیگر (وضاحت کریں)

۱۶- اگر گھر کا کوئی فرد بیمار ہو جائے تو سربراہ خانوان ایسی صورت میں کیا کریگا ؟

۱۷- خانوان کے سربراہ کا سالانہ فصلوں کا خرچ

الف - گندم _____ من

ب - چاول _____ من

ج - دالیں _____ من

د - دیگر (وضاحت کریں _____

_____

_____

۱۷ء۲ سبزیوں کی اقسام جو استعمال کی جاتی ہیں

الف - _____

ب - _____

ج - _____

۱۸- خانوان کے سربراہ کے پاس مویشیوں کی اقسام

الف - مویشی جو ہل پر جوتے جاتے ہیں _____ تعداد

ب - دودھ دینے والی گائیں _____ تعداد

ج - دودھ دینے والی بھینسیں _____ تعداد

د - بھیڑیں _____ تعداد

ح - بکریاں _____ تعداد

د - مرغیاں _____ تعداد

ز - گدھے _____ تعداد

ک - اونٹ _____ تعداد

ل - دیگر (وضاحت کریں) _____ تعداد

۱۹- زرعی آلات جو خانوان کے سربراہ کے پاس ہیں

الف - پھاوڑا _____ تعداد

ب - ہل _____ تعداد

ج - چھکڑا _____ تعداد

د- طاقتی پمپ _____ تعداد

ح - گہائی مشین _____ تعداد

و - ٹریکٹر _____ تعداد

ز- پاش کار (وہاکش) _____ تعداد

ک- دیگر (وضاحت کریں) _____ تعداد

۲۰- کیا خانران کلے سربراہ کے پاس مندرجہ ذیل اشیاء ہیں ؟

الف- بائیشیکل

ب - موٹر سائیکل

ج - چھکڑا

د - کار / ٹرک

ح - ریڈیو

و - ٹیپ ریکارڈر بمعہ ریڈیو

ز - ٹیلی ویژن سیٹ

ک - سلائی مشین

ل - فرج

م - دیگر (وضاحت کریں)

۲۱ ا- اصل غیر زرعی آمدنی جو خانران کے سربراہ کو آتی ہے (نیچے دیئے گئے مرموز نمبر سے کام کریں _____

۲۱ ۲- اصل غیر زرعی آمدنی جو خانران کے سربراہ کو دوسرے اہل خانہ سے آتی ہے _____

۲۱ ۳- زرعی آمدنی زیادہ ہے یا غیر زرعی آمدنی ----- _____

مرموز برائے غیر زرعی آمدنی

الف - زرعی مزدوری

ب - سرکاری ملازم

ج - تجارت پیشہ

د- دستکار

ح - ڈرائیور

و - فیکٹری ملازم

ز۔ اندازہ

ک۔ بیرونی رقم مرسلہ

ل۔ دیگر (وضاحت کریں)

۲۱ء۲۲ اگر خانوان کا کوئی فرد زراعت میں مزدوری کرتا ہے - اگر کرتا ہے تو کتنی دہاڑیاں ۔۔۔۔۔

الف۔ فصل ربیع میں _____ دہاڑیاں

ب - فصل خریف میں _____ دہاڑیاں

ج - لاگو نہ ہے _____ دہاڑیاں

۲۲ء۲۲ مندرجہ بالا کام کرنے کی روزانہ مزدوری

الف۔ فصل ربیع کے دوران _____ روپے

ب - فصل خریف کے دوران _____ روپے

ج - لاگو نہ ہے

۲۳ء۲۲۔ پچھلے سال کے دوران گھر کا متوالی خرچ (رقوم روپوں میں یا فیصد میں درج کریں)

الف۔ غلہ

ب۔ دیگر خوراک (جس میں پکانے کا تیل - چینی ،نمک اور مرچیں شامل ہیں)

ج - ایندھن

د۔ کپڑے

ح - تعلیم

و۔ صحت

ز۔ (دیگر وضاحت کریں)

۲۴ء۲۲۔ خانوان کے سربراہ کو ماہانہ کتنی رقم بچتی ہے (رقم روپوں میں یا فیصد _____

۲۵ء۲۲۔ بچت کس کام پر لگائی جاتی ہے _____

۲۶ ء ۲۲۔ کیا خانوان کے سربراہ نے پچھلے تین سالوں میں اپنی زمین کا حصہ یا جائیداد بیچی ہے ؟ _____

خانوان کے مرد افراد سے سوالات

۲۴- پینے کے پانی کے متعلق

۱ء۲۴- کیا وہ موجودہ پانی کی رسد کی سہولت سے مطمئن ہے ؟

الف - ہاں

ب - نہیں

ج - دیگر

۲ء ۲۴) موجودہ پینے کے پانی کے معیار کے متعلق

الف- اچھا ہے

ب - اچھا نہیں ہے

ج - دیگر

۳ء۲۴- اگر پانی کی رسد کی سہولت (بڑیعہ پائپ اور ٹوٹیاں) ان کے گھر پہنچا دی جائیں تو کیا وہ پانی کے اخراجات دینے کو تیار ہے ؟

الف- ہاں

ب - نہیں

ج - دیگر

۲۵- جلانے کی لکڑی اور باورچی خانہ کے متعلق

۱ء۲۵-کیا اس کے خانوان کا جنگلات میں حصہ ہے ؟

الف- ہاں

ب - نہیں

ج - دیگر

۲ء۲۵- کیا اس کے خیال میں اسکے جنگلات سے کافی جلانے کی لکڑی اکٹھی ہو جاتی ہے ؟

الف- ہاں

ب- نہیں

ج - دیگر

۳ء۲۵- کیا وہ چاہتا ہے کہ اسکے گھر میں باورچی خانے کی حالت مزید اچھی ہو ؟

الف- ہاں

ب- نہیں

ج - دیگر

خانران کی خواتین افراد سے سوالات

۲۶- پینے کے پانی کے متعلق

۱ء۲۶- جب وہ پینے کا پانی ذریعہ سے گھر لے جاتی ہے تو کس قسم کے ظروف استعمال کرتی ہے ؟

_____

۲ء۲۶ روزانہ کتنی مرتبہ وہ پینے کے پانی کے ذرائع سے پانی گھر لاتی ہے _____

۳ء۲۶- روزانہ کتنا پانی لاتی ہے _____ گیلن

۴ء۲۶- پانی لانے میں روزانہ کتنا وقت لگ جاتا ہے _____ گھنٹے

۲۷- جلانے کی لکڑی اور باورچی خانے کے متعلق

۱ء۲۷ ایک ہفتہ میں کتنی مرتبہ وہ جلانے کی لکڑی اکٹھی کرنے جاتی ہے - _____

۲ء۲۷- جلانے کی لکڑی اکٹھی کرنے سے گھر تک کا کتنا فاصلہ ہے _____ گز / میل

۳ء۲۷- کیا وہ بغیر کسی تکلیف کے لکڑیاں اکٹھی کر سکتی ہے ؟

۱- ہاں

۲- نہیں

۳- دیگر

۴ء۲۷- اپنے گھر میں موجودہ چولہا کا موازنہ کرتے ہوئے کیا وہ چاہتی ہیں کہ چولہے کی تبدیلی سے اس کے باورچی خانے کی حالت بہتر ہو (یعنی کوئلہ کی انگیٹھی - مٹی کے تیل کا چولہا وغیرہ وغیرہ)

الف- ہاں

ب - نہیں

ج . - دیگر

گھر کے سربراہ کا عام تصور

۲۸ا۔ اگر اس کے پاس کافی رقوم ہوں تو تین چیزوں کی نشاندہی کریں جو وہ اپنے لیے خریدے گا

الف ۔ _____

ب ۔ _____

ج ۔ _____

۲۸ا۲۔ اس کے خیال میں زندگی کا معیار بہتر کرنے کیلئے کیا ہونا چاہیئے ۔

الف ۔ _____

ب ۔ _____

ج ۔ _____

۲۸ا۳۔ اس کے ماضی کا خوشگوار واقعہ

الف ۔ _____

ب ۔ _____

۲۸ا۴۔ اس کے ماضی کا المیہ

الف ۔ _____

ب ۔ _____

۲۸ا۵۔ مستقبل میں وہ کیا خواہش کرتا ہے ۔

الف ۔ _____

ب ۔ _____

ج ۔ _____

نوٹ :۔ براہ کرم پڑتال کر لیں کہ تمام سوالات کے جوابات واضح ہیں ۔

III. AGRICULTURAL SECTOR

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III-1 FARM INCOME FROM AGRICULTURAL SECTOR

III-1.1 Farm Income from the Agricultural Sector - Present and Future with Irrigaiton scheme

Results of studies on present and future (with Irrigation Scheme) farm income from the agricultural sector, are presented in TABLE III-1 to III-18.

TABLE III-1 **PRODUCTION COSTS AND RETURNS PER HA / CROP SECTOR - PRESENT**

	Wheat	Maize	Pulses	Sorghum(Grain)
1. Yield (ton/ha)	1.02	0.70	0.45	0.49
2. Unit Price (Rs/ton)1/	1,950	1,900	5,700	2,200
3. Gross Return (Rs/ha)	1,989	1,330	2,565	1,078
4. Farm Cost (Rs/ha)2/				
- Seeds	200	60	158	56
- Fertilizers3/	266	266	-	-
- Agr. Chemicals	-	-	-	-
- Farm Machinery4/	730	240	120	240
- Draft-Animal4/	690	612	690	690
- Water Charges	-	-	-	-
- Miscellaneous5/	40	40	40	30
- Total	1,926	1,218	1,008	1,016
5. Return (Rs/ha)	63	112	1,557	62
6. By-product (t/ha)6/	1.5	1.4	0.5	1.0
7. Unit price by product (Rs/t)	500	500	500	1,000
8. Return from by-product (Rs/ha)	750	700	250	1,000
9. Net Return (Rs/ha)7/	813	812	1,807	1,062
10. Labour Requirements (man-day/ha)	37.8	45.4	34.7	31.9

1/ Estimated farm gate prices: estimated based on average market prices (1984/85) and data supplied by Agriculture Dept., IA.
2/ Without costing labour
3/ Including farm yard manure
4/ Hiring basis
5/ Tentatively assumed.
6/ Estimated as follows: wheat, maize, pulses, sorghum--stalk/grain ratio; 1.5, 2.0, 1.0, 2.0, respecively.
7/ Return including return from by-product (5+8)

TABLE III-2 **PRODUCTION COSTS AND RETURNS PER HEAD / LIVESTOCK SECTOR - PRESENT**

	Cow	Buffalo cow	Goat
1. Production (kg/head)1/	300 (milk)	1,350 (milk)	25 (annual weight gain)
2. Unit Price (Rs/kg or head)2/	Rs.3.0/kg	Rs.4.0/kg	Rs.380/head
3. Gross Return (Rs/head)	900	5,400	380
4. Cost of Feed			
Annual Requirements (kg/head)3/	2,920	4,380	220
Annual Cost of Feed (Rs/head)4/	1,460	2,190	110
5. Return (Rs/head)5/	-560	3,210	270

1/ Average annual milk production of cow and buffalo cow; average annual weight gain of goat

2/ Based on data supplied by Livestock Development Dept., IA; goat--unit price of goat weighing 25 kg.

3/ Assumed that animals in the Study Area are undernourished and are fed to satisfy only maintenance requirements based on dry matter and TDN.

4/ Assumed that only crop residues and natural grasses are fed. Unit price of feed is assumed as follows; unit price of feed--Rs.50/100kg (price of crop residues as wheat straw). Therefore, annual cost of feed is calculated; Rs.50/100kg x annual requirements.

5/ Other costs primarily consist of family labour cost. Therefore, return is estimated without costing other costs as follows:

Return = Gross return - Annual cost of feed

TABLE III-3 ESTIMATED FARM INCOME FROM AGRICULTURE SECTOR BY FARM SIZE AND TENURE CLASSIFICATION - PRESENT

	Farm Size 0.5 ha		Farm Size 1.0 ha		Farm Size 2.0 ha		Farm Size 5.0 ha	
	Owner	Tenant[6]	Owner	Tenant[6]	Owner	Tenant[6]	Owner	Tenant[6]
1. Crop Sector								
Cropped Area (ha)[1]								
Wheat (55%)	0.28	0.28	0.55	0.55	1.10	1.10	2.75	2.75
Maize (20%)	0.10	0.10	0.20	0.20	0.40	0.40	1.00	1.00
Pulses (20%)	0.10	0.10	0.20	0.20	0.40	0.40	1.00	1.00
Sorghum (10%)	0.04	0.04	0.10	0.10	0.20	0.20	0.50	0.50
Total (105%)	0.52	0.52	1.05	1.05	2.10	2.10	5.25	5.25
Return (Rs)[2]								
Wheat	228	114	447	224	894	447	2,236	1,118
Maize	81	41	162	81	325	163	812	406
Pulses	181	91	361	181	723	362	1,807	904
Sorghum	42	21	106	53	212	106	531	266
Total	532	267	1,076	539	2,154	1,078	5,386	2,694
Cost of Hired Labour (Rs)[3]	-	-	-	-	-	-	1,500	1,500
Income from Crop Sector (Rs)	532	267	1,076	539	2,154	1,078	3,886	1,194
2. Livestock Sector[4]								
Return (Rs)								
Cow (1 head)	-560	-560	-560	-560	-560	-560	-560	-560
Buffalo cow (1 head)	3,210	3,210	3,210	3,210	3,210	3,210	3,210	3,210
Goat (3 heads)	810	810	810	810	810	810	810	810
Total	3,460	3,460	3,460	3,460	3,460	3,460	3,460	3,460
Cost of Feed Stocking Young Animal (Rs)[5]	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Income from Livestock Sector (Rs)	2,360	2,360	2,360	2,360	2,360	2,360	2,360	2,360
3. Farm Income from Agriculture Sector (Rs)	2,892	2,627	3,436	2,899	4,514	3,438	6,246	3,554

1/ Assuming that cropping intensity of 105% and cropping pattern 55 : 20 : 20 : 10 to wheat : maize : pulses : sorghum, for all farm size.

2/ Net return of TABLE III-1, including return from by-products. Without costing labour.

3/ Assuming that hired labour of 50 man-days required for farm size 5 ha.

4/ Assuming that farm households stock 1 adult cow, 1 adult buffalo cow, 3 goats and 1 young large milk animal, irrelevant to farm size.

5/ Cost of Feed for raising young stock is included in estimation of income.

6/ Assuming sharing arrangement of products & costs as follows; Owner : tenant = 50 : 50

7/ Taxes are not considered.

TABLE III-4

WHEAT PRODUCTION COST ESTIMATE/HA - PRESENT

(per ha)

		Requirements and Costs[1]							
		Labor	Draft-animal [2]		Farm Machinery[2]		Other Inputs [3]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage[4]	0.8	-	-	8	480	-	-	480
2.	Nursery	-	-	-	-	-	-	-	-
3.	Seedbed Preparation	11.5	7.5	450	-	-	-	-	450
4.	Sowing/Planting	4.0	1.3	78	-	-	Seed 100kg	200	278
5.	Fertilization	1.0	0.2	12	-	-	DAP 2 bags	266	278
6.	Plant Protection	-	-	-	-	-	-	-	-
7.	Cultivation/Weeding	-	-	-	-	-	-	-	-
8.	Irrigation	-	-	-	-	-	-	-	-
9.	Harvesting/Post Harvesting	20.5	2.5	150	2.5	250	-	-	400
10.	Miscellaneous Costs[5]						Sacks etc.	40	40
	Total (Production Costs)	37.8	11.5	690	10.5	730		506	1926

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr. threshing Rs 100/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag.
Chemicals -- Furadan Rs 25/kg, seed Rs 2/kg.

4/ Plowing & planking during fallow.

5/ Assumed.

TABLE III-5 **MAIZE PRODUCTION COST ESTIMATE/HA - PRESENT**

(per ha)

		Requirements and Costs[1]							
		Labor	Draft-animal [2]		Farm Machinery[2]		Other Inputs [3]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-		-	-
3.	Seedbed Preparation	9.4	5.0	300	4	240		-	540
4.	Sowing/Planting	3.5	2.5	150	-	-	Seed 30kg	60	210
5.	Fertilization	1.0	0.2	12	-	-	DAP 2 bags	266	278
6.	Plant Protection	-	-	-	-	-		-	-
7.	Cultivation/Weeding	-	-	-	-	-		-	-
8.	Irrigation	-	-	-	-	-		-	-
9.	Harvesting/Post Harvesting	31.5	2.5	150	-	-		-	150
10.	Miscellaneous Costs[4]						Sacks etc.	40	40
	Total (Production Costs)	45.4	10.2	612	4	240		366	1218

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag.
Chemicals -- Furadan Rs 25/kg, seed (local) Rs 2/kg.

4/ Assumed.

TABLE III-6 **PULSE PRODUCTION COST ESTIMATE/HA - PRESENT**

(per ha)

	Operation	Requirements and Costs[1] Labor		Draft-animal [2]		Farm Machinery[2]		Other Inputs [3]		Operation Costs
		Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)		(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-		-
2.	Nursery	-	-	-	-	-		-		-
3.	Seedbed Preparation	9.2	5.0	300	2	120		-		420
4.	Sowing/Planting	3.5	2.5	150	-	-	Seed 17.5kg	158		308
5.	Fertilization	-	-	-	-	-		-		-
6.	Plant Protection	-	-	-	-	-		-		-
7.	Cultivation/Weeding	-	-	-	-	-		-		-
8.	Irrigation	-	-	-	-	-		-		-
9.	Harvesting/Post Harvesting	22.0	4.0	240	-	-		-		240
10.	Miscellaneous Costs[4]							40		40
	Total (Production Costs)	34.7	11.5	690	2	120		198		1008

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag.
Chemicals -- Furadan Rs 25/kg, seed Rs 9/kg.

4/ Assumed.

TABLE III-7 SORGHUM(GRAIN) PRODUCTION COST ESTIMATE - PRESENT

(per ha)

	Operation	Requirements and Costs[1] Labor Man-day	Draft-animal [2] Animal-day	Draft-animal [2] Cost (Rs)	Farm Machinery[2] Hour	Farm Machinery[2] Cost (Rs)	Other Inputs [3] Item & Quantity	Other Inputs [3] Cost (Rs)	Operation Costs (Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-		-	-
3.	Seedbed Preparation	9.4	5.0	300	4	240		-	540
4.	Sowing/Planting	3.5	2.5	150	-	-	Seed 20kg	56	206
5.	Fertilization	-	-	-	-	-		-	-
6.	Plant Protection	-	-	-	-	-		-	-
7.	Cultivation/Weeding	-	-	-	-	-		-	-
8.	Irrigation	-	-	-	-	-		-	-
9.	Harvesting/Post Harvesting	20.0	4.0	240	-	-		-	240
10.	Miscellaneous Costs[4]							30	30
	Total (Production Costs)	31.9	11.5	690	4	240		198	1016

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag. Chemicals -- Furadan Rs 25/kg, seed Rs 2.8/kg.

4/ Assumed.

TABLE III-8 **ANTICIPATED NET RETURN PER HA AT FULL DEVELOPMENT STAGE/CROP SECTOR -- WITH PROPOSED IRRIGATION SCHEMES**

	Wheat[1]	Wheat[2]	Rabi Fodder[3]	Kharif Fodder[4]	Rabi Vegetable[5]	Kharif Vegetable[6]	MAIZE[7]	PULSES[7]
1. Yield (ton/ha)[8]	3.5	3.0	35	40	21	18	2.0	0.9
2. Unit Price (Rs/ton)[9]	1,950	1,950	200	125	1,030	1,630	1,900	5,700
3. Gross Return (Rs/ton)	6,825	5,850	7,000	5,000	21,630	29,340	3,800	5,130
4. (Return/Gross Return) x 100 (%)[10]	60	55	70	60	50	50	50	60
5. Return (Rs/ha)	4,100	3,220	4,900	3,000	10,815	14,670	1,900	3,080
6. By-product (ton/ha)[11]	5.0	4.5	-	-	-	-	3.5	0.9
7. Unit Price of By-product (Rs/ton)[11]	500	500	-	-	-	-	500	500
8. Return from By-product (Rs/ha)[11]	2,500	2,250	-	-	-	-	1,750	450
9. Net Return (Rs/ha)	6,600	5,470	4,900	3,000	10,815	14,170	3,650	3,530
10. Estimated Labour Requirements (manday/ha)	46.3	43.8	59.3	48.8	130.8 [12]	232.8 [13]	59.8	47.3

1/ Under irrigation system Type A, (cropping pattern II)
2/ Under irrigation system Type C, (cropping pattern III)
3/ Berseem, under irrigation system Type A & C, (cropping pattern II, III)
4/ Sorghum, under irrigation system Type A.
5/ Average of cauliflower, potato & raddish, under irrigation system Type A.
6/ Average of cucumber, onion & bitter gourd, under irrigation system Type A.
7/ Under irrigation system Type C, with no irrigation. Intensive farming will be introduced.
8/ Anticipated yield at full development stage.
9/ Estimated farm gate prices; estimated based on average market prices (1984/85) and data supplied by Agriculture Dept., IA. Prices of fodder is very high at present, namely about Rs.3,000/t for berseem and Rs.2,500 for sorghum. However, in this table, lower prices are projected considering that present accute shortage of green fodder will be mitigated and prices will go down considerablly at full development stage.
10/ Based on production cost estimates and Studies on Cost of Production of Crops, Planning Unit, Ministry of Food, Agriculture and Cooporatives. Without costing labour.
11/ Stalk/grain ratio: wheat 1.5, Maize 1.5, pulses 1.0
12/ Calculated with cauliflower
13/ Calculated with cucumber

TABLE III-9

ESTIMATED PRODUCTION COSTS AND ANTICIPATED RETURNS PER HEAD AT FULL DEVELOPMENT STAGE/LIVESTOCK SECTOR

WITH PROPOSED IRRIGATION SCHEMES 1/

	Cow	Baffalo Cow	Goat
1. Production (kg/head) 2/	900 (milk)	2,100 (milk)	30 (annual weight gain)
2. Unit Price (Rs/kg or head) 3/	Rs.3.0/kg	Rs.4.0/kg	Rs.450/head
3. Gross Return (Rs/head)	2,700	8,400	450
4. Cost of Feed			
Annual Requirements (kg/head)	3,820	6,780	260
Annual Cost of Feed (Rs/head) 4/	1,910	3,390	130
5. Return (Rs/head) 5/	790	5,010	320

1/ Assuming that feed supplies will be greatly improved under irrigation schemes and dry matter and TDN requirements for cow and buffalo during both lactating and maintenance period will be satisfied, and feed supplies for goat will also be improved. Lactating and maintenance period of both cow and buffalo are assumed as 300 days and 65 days, respectively.

2/ Anticipated annual milk production and annual weight gain of goat.

3/ Same as TABLE III-2.

4/ Same as TABLE III-2.

5/ Same as TABLE III-2.

TABLE III-10 ATICIPATED FARM INCOME FROM AGRICULTURE SECTOR BY FARM SIZE AND TENURE CLASSIFICATION AT FULL DEVELOPMENT STAGE WITH PROPOSED IRRIGATION SCHEMES, TYPE A

	Farm Size 0.5 ha		Farm Size 1.0 ha		Farm Size 2.0 ha		Farm Size 5.0 ha		Remarks
	Owner	Tenant[2]	Owner	Tenant[2]	Owner	Tenant[2]	Owner	Tenant[2]	
1. Crop Sector									
Cropped Area (ha)[1]									
Wheat	0.13	0.13	0.25	0.25	0.50	0.50	2.00	2.00	
Rabi Fodder	0.12	0.12	0.25	0.25	0.50	0.50	2.00	2.00	
Rabi Vegetable	0.25	0.25	0.50	0.50	1.00	1.00	1.00	1.00	
Kharif Fodder	0.12	0.12	0.25	0.25	0.50	0.50	1.00	1.00	
Kharif Vegetable	0.25	0.25	0.50	0.50	1.00	1.00	1.00	1.00	
Total (Cropping intensity %)	0.87 (174)	0.87 (174)	1.75 (175)	1.75 (175)	3.5 (175)	3.5 (175)	7.0 (150)	7.0 (150)	
Return (Rs)									*1
Wheat	860	430	1,650	825	3,300	1,650	13,200	6,600	
Rabi Fodder	590	295	1,230	615	2,450	1,225	9,800	4,900	
Rabi Vegetable	2,700	1,350	5,410	2,705	10,820	5,410	10,820	5,410	
Kharif Fodder	360	180	750	375	1,500	750	3,000	1,500	
Kharif Vegetable	3,670	1,835	7,340	3,670	14,670	7,335	14,670	7,335	
Total	8,180	4,090	16,380	8,190	32,740	16,370	51,490	25,745	
Cost of Hired Labour (Rs)[1]	-	-	-	-	2,100	1,050	6,000	3,000	
Income from Crop Sector (Rs)	8,180	4,090	16,380	8,190	30,640	15,320	45,490	22,745	
2. Livestock Sector									*2
Return (Rs)									
Cow (1 head)	790	790	790	790	790	790	790	790	
Baffalo Cow (1 head)	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	
Goat (3 heads)	960	960	960	960	960	960	960	960	
Total	6,760	6,760	6,760	6,760	6,760	6,760	6,760	6,760	
Cost of Feed Stocking Young Animal (Rs)	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Income from Livestock Sector (Rs)	5,660	5,660	5,660	5,660	5,660	5.660	5,660	5,660	
3. Farm Income from Agriculture Sector (Rs)	13,840	9,750	22,040	13,850	24,980	20,980	51,150	28,405	
4. Present Farm Income from Agriculture Sector (Rs)	2,890	2,630	3,440	2,900	4,510	3,440	6,250	3,550	*3
5. Anticipated Increase of Farm Income (3-4) (Rs)	10,950	7,120	18,600	10,950	20,470	17,540	44,900	24,855	

1/ Assuming that hired labour of 70 and 200 man-days required for farm size 2.0 ha and 5.0 ha, respectively.
2/ Assuming sharing arrangement of products & costs as follows: owner : tenant = 50 : 50
3/ Taxes are not considered.
*1 Net Return of Table III-8.
*2 Assuming that farm households stock 1 adult cow, 1 adult buffalo cow, 3 goats and 1 young large milk animalirrelevant to farm size, see TABLE III-9.
*3 See TABLE III-3.

TABLE III-11

ANTICIPATED FARM INCOME FROM AGRICULTURE SECTOR BY FARM SIZE AND TENURE CLASSIFICATION AT FULL DEVELOPMENT STAGE WITH PROPOSED IRRIGATION SCHEMES, TYPE C

	Farm Size 0.5 ha		Farm Size 1.0 ha		Farm Size 2.0 ha		Farm Size 5.0 ha		Remarks
	Owner	Tenant[2]	Owner	Tenant[2]	Owner	Tenant[2]	Owner	Tenant[2]	
1. Crop Sector									
Cropped Area (ha)									Cropping pattern are assumed as shown in the left columns.
Wheat (80%)	0.40	0.40	0.80	0.80	1.60	1.60	4.00	4.00	
Rabi Fodder (20%)	0.10	0.10	0.20	0.20	0.40	0.40	1.00	1.00	
Maize (25%)	0.13	0.13	0.25	0.25	0.50	0.50	1.25	1.25	
Pulses (25%)	0.12	0.12	0.25	0.25	0.50	0.50	1.25	1.25	
Total (Cropping intensity 150%)	0.75	0.75	1.50	1.50	3.00	3.00	7.50	7.50	
Return (Rs)									Net return of TABLE III-8.
Wheat	2,190	1,095	4,380	2,190	8,750	4,375	21,880	10,940	
Rabi Fodder	490	245	980	490	1,960	980	4,900	2,450	
Maize	470	235	910	455	1,830	915	4,560	2,280	
Pulses	420	210	880	440	1,770	885	4,410	2,205	
Total	3,570	1,785	7,150	3,575	14,310	7,155	35,750	17,875	
Cost of Hired Labour (Rs)[1]	-	-	-	-	-	-	2,400	1,200	
Income from Crop Sector (Rs)	3,570	1,785	7,150	3,575	14,310	7,155	33,350	16,675	
2. Livestock Sector									
Return (Rs)									Animal holding is assumed as shown in TABLE III-10.
Cow (1 head)	790	790	790	790	790	790	790	790	
Buffalo Cow (1 head)	5,010	5,010	5,010	5,010	5,010	5,010	5,010	5,010	
Goat (3 heads)	960	960	960	960	960	960	960	960	
Total	6,760	6,760	6,760	6,760	6,760	6,760	6,760	6,760	
Cost of Feed Stocking Young Animal (Rs)	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Income from Livestock Sector (Rs)	5,660	5,660	5,660	5,660	5,660	5,660	5,660	5,660	
3. Farm Income from Agriculture Sector (Rs)	9,230	7,445	12,810	9,235	19,970	12,815	39,010	22,335	
4. Present Farm Income from Agriculture Sector (Rs)	2,890	2,630	3,440	2,900	4,510	3,440	6,250	3,550	See TABLE III-3.
5. Anticipated Increase of Farm Income (3-4) (Rs)	6,340	4,815	9,370	6,335	15,460	9,375	32,760	18,785	

1/ Assuming that hired labour of 80 man-days required fo farm size 5 ha.
2/ Assuming sharing arrangement of products & costs as follows; owner : tenant = 50 : 50
3/ Taxes are not considered.

TABLE III-12

WHEAT PRODUCTION COST ESTIMATE / HA AT FULL DEVELOPMENT STAGE WITH PROPOSED IRRIGATION SCHEME (TYPE A)

(per ha)

		Requirements and Costs[1]							
		Labor	Draft-animal [2]		Farm Machinery[2]		Other Inputs [3]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-		-	-
3.	Seedbed Preparation	4.8	-	-	8	480		-	480
4.	Sowing/Planting	4.0	2.5	150	-	-	Seed 85kg	196	346
5.	Fertilization	2.0	0.8	48	-	-	DAP 2.5bags Urea 3bag	717	765
6.	Plant Protection	-	-	-	-	-		-	-
7.	Cultivation/Weeding	5.0	1.5	90	-	-		-	90
8.	Irrigation	5.0	-	-	-	-	Water charge[4]	110	110
9.	Harvesting/Post Harvesting	25.5	3.5	210	6	600		-	810
10.	Miscellaneous Costs[4]							100	100
	Total (Production Costs)	46.3	8.3	498	14	1080		1123	2701

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr threshing Rs 100/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag. Seed Rs 2.3/kg.

4/ Assumed.

TABLE III-13 RABI FODDER (BERSEEM) PRODUCTION COST ESTIMATE / AT FULL DEVELOPMENT STAGE/ WITH PROPOSED IRRIGATION SCHEME (TYPE A)

(per ha)

		Requirements and Costs[1/]							
		Labor	Draft-animal [2/]		Farm Machinery[2/]		Other Inputs [3/]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-		-	-
3.	Seedbed Preparation	4.8	-	-	8	480		-	480
4.	Sowing/Planting	5.0	1.3	78	-	-	Seed 50kg	200	278
5.	Fertilization	2.0	0.8	48	-	-	TSP 3bags Urea 1bag	413	461
6.	Plant Protection	-	-	-	-	-		-	-
7.	Cultivation/Weeding	-	-	-	-	-		-	-
8.	Irrigation	10.0	-	-	-	-	Water charge[4/]	70	70
9.	Harvesting/Post Harvesting	37.5	10.0	600	-	-		-	600
10.	Miscellaneous Costs[4/]							80	80
	Total (Production Costs)	59.3	12.1	726	8	480		763	1969

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag. Chemicals--Furadan Rs 25/kg, seed Rs 4/kg.

4/ Assumed.

TABLE III-14 **KHARIF FODDER (SORGHUM) PRODUCTION COST ESTIMATE / AT FULL DEVELOPMENT STAGE/ WITH PROPOSED IRRIGATION SCHEME (TYPE A)**

(per ha)

		Requirements and Costs[1/]							
		Labor	Draft-animal [2/]		Farm Machinery[2/]		Other Inputs [3/]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-		-	-
3.	Seedbed Preparation	4.8	-	-	8	480		-	480
4.	Sowing/Planting	5.0	-	-	-	-	Seed 70kg	196	196
5.	Fertilization	2.0	0.5	30	-	-	Urea 3bag	384	414
6.	Plant Protection	-	-	-	-	-		-	-
7.	Cultivation/Weeding	5.0	1.5	90	-	-		-	90
8.	Irrigation	5.0	-	-	-	-	Water charge[4/]	70	70
9.	Harvesting/Post Harvesting	27.0	8.5	510	-	-		-	510
10.	Miscellaneous Costs[4/]							90	90
	Total (Production Costs)	48.8	10.5	630	8	480		740	1850

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag. Seed Rs 2.8/kg.

4/ Assumed.

TABLE III-15 KHARIF VEGETABLE (CUCUMBER) PRODUCTION COST ESTIMATE / AT FULL DEVELOPMENT STAGE/ WITH PROPOSED IRRIGATION SCHEME (TYPE A)

(per ha)

		Requirements and Costs 1/							
		Labor	Draft-animal 2/		Farm Machinery 2/		Other Inputs 3/		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-		-	-
3.	Seedbed Preparation	7.3	2.5	150	8	480		-	630
4.	Sowing/Planting	15.0	-	-	-	-	Seed 1.5kg	400	400
5.	Fertilization	5.0	2.5	150	-	-	F.Y.M. 12t DAP 3bag Urea 3bag	1503	1653
6.	Plant Protection	6.5	-	-	-	-	Powder 0.6kg Granular 22.0kg Liquid 3.0l	1032	1032
7.	Cultivation/Weeding	20.0	-	-	-	-			
8.	Irrigation	34.0	-	-	-	-	Water charge 4/	200	200
9.	Harvesting/Post Harvesting	145.0	30.0	1800					1800
10.	Miscellaneous Costs 4/							300	300
	Total (Production Costs)	232.8	35.0	2100	8	480		3435	6015

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag, P.Y.M (Farm Yard Manure) Rs 60/t.
Chemicals: Powder--Sevin 85%, Avelon etc; average price Rs 190/kg
Granular--Furadan 3G, Dysiston 10G etc; average price Rs 24/kg
Liguid--Dimecron 100%, Malathion 57% etc; average price Rs 130/l
Seed Rs 26.7/100g (Sialkot Selection)

4/ Assumed.

TABLE III-16 **RABI VEGETABLE (CAULIFLOWER) PRODUCTION COST ESTIMATE / AT FULL DEVELOPMENT STAGE WITH PROPOSED IRRIGATION SCHEME (TYPE A)**

(per ha)

		Requirements and Costs[1]							
		Labor	Draft-animal [2]		Farm Machinery[2]		Other Inputs [3]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	7.0	-	-	1	60	Seed 0.5kg	400	460
3.	Seedbed Preparation	7.3	2.5	150	8	480		-	630
4.	Sowing/Planting	36.0	2.5	150	-	-		-	150
5.	Fertilization	5.0	2.5	150	-	-	F.Y.M. 12t DAP 3bag Urea 3bag	1503	1653
6.	Plant Protection	5.0	-	-	-	-	Powder 0.6kg Granular 22.0kg Liquid 2.0l	902	902
7.	Cultivation/Weeding	20.0	-	-	-	-			
8.	Irrigation	24.0	-	-	-	-	Water charge[4]	200	200
9.	Harvesting/Post Harvesting	26.5	9.0	540	-	-			540
10.	Miscellaneous Costs[4]							240	240
	Total (Production Costs)	130.8	16.5	990		540		3245	4775

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag, F.Y.M (Farm Yard Manure) Rs 60/t.
Chemicals: Powder--Sevin 85%, Avelon etc; average price Rs 190/kg
Granular--Furadan 3G, Dysiston 10G etc; average price Rs 24/kg
Liguid--Dimecron 100%, Malathion 57% etc; average price Rs 130/l
Seed Rs 800/kg (Sialkot Selection)

4/ Assumed.

TABLE III-17

CITRUS (MALTA) PRODUCTION COST ESTIMATE / AT FULL DEVELOPMENT STAGE WITH PROPOSE IRRIGATION SCHEME (TYPE B)

(per ha)

		Requirements and Costs[1/]							
		Labor	Draft-animal [2/]		Farm Machinery[2/]		Other Inputs [3/]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-	-	-	-
3.	Seedbed Preparation	-	-	-	-	-		-	-
4.	Sowing/Planting	-	-	-	-	-		-	-
5.	Fertilization	5.0	2.5	150	-	-	urea 3.5bags TSP 2.5 bags	686	836
6.	Plant Protection	7.5	-	-	-	-	Powder 12kg Liquid 9 L	3417	3417
7.	Cultivation/Weeding	27.7	6.5	390	1	60			450
8.	Irrigation	18.0	-	-	-	-	Water charge[4/]	400	400
9.	Harvesting/Post Harvesting	175.5	37.5	2250	-	-			2250
10.	Miscellaneous Costs[4/]							300	300
	Total (Production Costs)	233.7	46.5	2790	1	60		4803	7653

1/ Excluding labor costs.
2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr.
3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag.
Chemicals: Powder--Sevin 85%, Avelon etc; average price Rs 200/kg
Liguid--Matalhion 57%, Dimecron; average price Rs 113/kg
4/ Assumed.

TABLE III-18 **RABI FODDER (BERSEEM) PRODUCTION COST ESTIMATE / AT FULL DEVELOPMENT STAGE/ WITH PROPOSED IRRIGATION SCHEME (TYPE A)**

(per ha)

		Requirements and Costs[1/]							
		Labor	Draft-animal [2/]		Farm Machinery[2/]		Other Inputs [3/]		Operation Costs
	Operation	Man-day	Animal-day	Cost (Rs)	Hour	Cost (Rs)	Item & Quantity	Cost (Rs)	(Rs)
1.	Preparatory Tillage	-	-	-	-	-		-	-
2.	Nursery	-	-	-	-	-		-	-
3.	Seedbed Preparation	4.8	-	-	8	480		-	480
4.	Sowing/Planting	4.0	2.5	150	-	-	Seed 85 kg	196	346
5.	Fertilization	2.0	0.8	48	-	-	DAP 2.5 bags Urea 3 bags	717	765
6.	Plant Protection	-	-	-	-	-		-	-
7.	Cultivation/Weeding	5.0	1.5	90	-	-		-	90
8.	Irrigation	5.0	-	-	-	-	Water charge[4/]	80	80
9.	Harvesting/Post Harvesting	23.0	3.5	210	6	600		-	810
10.	Miscellaneous Costs							90	90
	Total (Production Costs)	43.8	8.3	498	14	1080		1083	2661

1/ Excluding labor costs.

2/ Hiring basis as follows: draft animal Rs 60/pair, plowing/harrowing by cultivator Rs 60/hr threshing Rs 100/hr.

3/ Unit prices: DAP Rs 133/bag (50kg), urea Rs 128/bag, TSP (triple super phosphate), Rs 95/bag. Seed Rs 2.3/kg.

III-1.2 Farm Income from Livestock Sector - Presnet and Future with Development Schemes

1. Estimated Returns per Head - Present & Future with Development Scehmes

Annual returns per head under present conditions and at the full development stage under the two development schemes, namely irrigation Schemes and Livestock Development Promotion Schemes are estimated based on gross returns and costs of feed as shown below. Other costs are not considered as they consist primarily of family labor costs.

Annual returns = (annual gross returns) - (annual costs of feeds)

Annual increase in returns = (annual returns with schemes)
- (present annual retuns)

Other assumptions adopted are as delineated hereunder.

Feed Practices (TABLE III-19)

Present: Only annual maintenance requirements of TDN and dry matter are satisfied.

With Irrigation Scheme: Nutrient requirementsfor of TDN for maintenance and lactating periods will be satisfied.

With Livestock Development Scheme: Nutrient requirements of TDN and dry matter for maintenance period and of TDN, dry matter and DCP for lactating period will be satisfied.

Nutrient requirements will be satisfied by the rations shown in TABLE III-9.

Anticipated Productions at Full Development Stage

Conditions	Milk (kg/day/head) Cow	Buffaloe cow	Goat (kg/head/year[1/])
Present	1.0	4.5	25
Small Scale Irrigation Scheme	2.5	6.0	30
Livestock Development Scheme	5.0	10.0	30

1/ annual weight gain/head

Estimated annual productions and returns per head are calculated as shown in TABLE III-20 and summarized as below.

Unit: kg

Conditions	Annual Production/Head		Annual Return/Head	
	Production	Increase[1/]	Return	Increase[1/]
Present (kg/year/head)				
Milch Cow	300	--	-560	--
Buffalo	1,350	--	3,210	--
Goat[2/]	25	--	270	--
Irrigation Scheme				
Milch Cow	900	600	790	1,350
Buffalo	2,100	750	5,010	1,800
Goat[2/]	30	5	320	50
Livestock Development Scheme				
Milch Cow	1,500	1,200	1,780	2,340
Buffalo	3,000	1,650	7,140	3,930
Goat[2/]	30	5	320	50

1/ Increase from the present level.

2/ Weight gain/head/year

2. Estimated Returns from Livestock Sector-Present & Fiture with Development Scheme

Estimated returns from the livestock sector for a farm household with average livestock holding are calculated based on the estimated returns per head as follows;

	Returns/Head			No.of Holdings1/	Returns/Household			Increase2/	
	1	2	3		1	2	3	2	3
Cow	-560	790	1,780	1	-560	790	1,780	1,350	2,340
Buffalo	3,210	5,010	7,140	1	3,210	5,010	7,140	1,800	3,930
Goat	270	320	320	3	810	960	960	150	150
Total Returns					3,460	6,760	9,880	3,300	6,420

1. Present
2. With Irrigation Scheme
3. With Livestock Development Promotion Scheme

1/ Assuming the average holding size of a farm household with livestock is 1 cow, 1 buffalo, 3 goats, and 1 young stock of large milch animal

2/ Increase of returns per head or per household from the present level

3/ Cost of feed for raising young is estimated at Rs 1100/head

3. Estimated Increase in Farm Income from Livestock Sector under Development Schemes

Development Schemes	Increase in Farm Income from Livestock Sector1/
Irrigation Scheme	Rs 2,200.-/household
Livestock Development Promotion Scheme	Rs 5,320.-/household

1/ Increase in farm income from the present level is calculated as follows:
Increased return per household under Development schemes
- cost of feed for raising young (Rs 1100/head)

TABLE III-19 **DAILY NUTRIENT REQUIREMENT AND RATION / HEAD**

Growth Stage	Daily Nutrient Requirements (kg/day)1/ Dry Matter	TDN	DCP	Rations (kg/day)2/ Dry Forage3/	Molasses4/	Cotton Seed Cake5/
Cow						
Growth	4.4	2.0	0.17	6	-	-
Maintenance	5.1	2.7	0.24	8	-	-
Lactating6/	8.4	3.7	0.38	11	-	-
" 7/	8.4	4.3	0.47	8	2	1
Buffalo						
Growth	5.5	2.4	0.18	7	-	-
Maintenance	8.9	3.9	0.28	12	-	-
Lactating6/	13.2	7.1	0.73	20	-	-
" 7/	13.2	8.5	0.92	15	3	2
Goat						
Growth8/	0.43	0.21	0.023	0.6	-	-
" 9/	0.48	0.24	0.025	0.7	-	-

1/ Source: Nutrient Requirements of Ruminants in Developing Countries, Utah University.
2/ Rations for growth & maintenance requirements are calculated for dry matter and TDN, disregarding DCP.
Animal weight: Cow 350kg, Buffalo 550kg
3/ Wheat straw, corn stalk & residues of pulses.
Average nutrient contents are assumed as; dry matter 75%, TDN 35% and DCP 1.5%.
4/ Nutrient contents: dry matter 73%, TDN 52% and DCP 2.9%
5/ Nutrient contents: dry matter 89%, TDN 65% and DCP 30%
6/ Lactating & last 3 months of gestation
Rations are calculated for dry matter and TDN, disregarding DCP. Feeding practices assumed under Irrigation Scheme.
7/ Lactating & last 3 months of gestation.
Rations are calculated on dry matter, TDN and DCP. Feeding practices assumed under Livestock Development Promotion Scheme.
8/ Growth & fattening; final weight 25kg.
9/ Grwoth & fattening; final weight 30kg.

TABLE III-20

ESTIMATED ANNUAL PRODUCTION, COST OF FEED AND RETURN PER HEAD UNDER DIFFERENT CONDIITONS[1/]

	Production (kg)			Gross Return (Rs)		Cost of Feed (Rs)		Return (Rs)	
	Daily	Annual	Increase[2/]	Annual	Increase[2/]	Annual	Increase[2/]	Annual	Increase[2/]
Present									
Milch Cow	1.0	300	--	900	--	1,460	--	-560	--
Buffalo	4.5	1,350	--	5,400	--	2,190	--	3,210	--
Goat (weight gain/year)	--	25	--	380	--	110	--	270	--
Small Scale Irrigation Scheme									
Milch Cow	3.0	900	600	2,700	1,800	1,910	450	790	1,350
Buffalo	7.0	2,100	750	8,400	3,000	3,390	1,200	5,010	1,800
Goat (weight gain/year)	--	30	5	450	75	130	20	320	50
Livestock Development Promotion Scheme									
Milch Cow	5.0	1,500	1,200	4,500	3,600	2,720	1,260	1,780	2,340
Buffalo	10.0	3,000	1,650	12,000	6,600	4,860	2,670	7,140	3,930
Goat (weight gain/year)	--	30	5	450	75	130	20	320	50

1/ The following assumptions are adopted:
Lactating period & maintenance period for cow & buffalo is 300 days & 65 days, respectively
Raising period of goat is 1 year.
Costs of feeds : dry forage (wheat straw) Rs 20/40kg, molasses Rs 40/40kg, cotton seed cake Rs 130/60kg
Price of products: Milk (cow) Rs 3.0/kg; milk (buffalo) Rs 4.0/kg; goat: weight 25kg Rs 380, weight 30 kg Rs 450

2/ Increases compared with present conditions

III-2 PROPOSED ACTIVITIES FOR LIVESTOCK DEVELOPMENT RPOMOTION

Proposed activities of the Livestock Pilot Farms and Livestock Development Station for livestock development promotion in the Study Area are delineated hereunder.

1. Activities of Pilot Farms

(1) Establishment and Demonstration of Range Land Development and Management System

Establishment and demonstration of range land development utilizing unculturable wasteland and a range management system primarily aiming at raising goats will be planned. Accordingly, 20ha of affiliated range land will be developed at each Pilot Farm and the same will be utilized for demonstration of regulated grazing to farmers. At the same time, sources of grass root stocks required for future development of range land in the Study Area will be supplied.

(2) Development of Livestock Raising System and Demonstration

Establishment of a demonstration field (2ha) and livestock raising facilities will be planned in order to develop and demonstrate cultivation of fodder crops and a small scale livestock raising system appropriate for the Study Area. Emphasis will be placed on the use of cheap concentrates available in the Study Area, in development of the livestock raising system.

2. Activities of Livestock Development Station

(1) Establishment of Breeding Farm and Distribution of Qualified Livestock

The establishment of a breeding farm at the Station is planned, aiming at distribution of qualified livestock to selected farmers in the Study Area. Animals proposed are heifers and goats because of the strong demand expressed by farmers in the questionnaire survey carried out for each Panchayat.

An outline of the proposed distribution schedule is shown in the following table.

PROPOSED DISTRIBUTION SCHEDULE OF QUALIFIED LIVESTOCK

(Unit: head)

Animal	No. of Breeding Animals		Breed	Annual Distribution
Cow	Cow	100	Cross breed (Sahiwal x Jersey, Sahiwal x Friesian, etc.)	Heifers 1/ 20-25
	Bull	5		
Goat	Nanny	100	Teddy breed	Kids 2/ 120
	Billy	15		

1/ Distributed after raising for 6 months
2/ Distributed after raising for 2 months
3/ Expected milk production of breeding cows: 400-500 l/day, 170 t/year

(2) Expansion of Artificial Insemination

The phased introduction of artificial insemination services for cow and buffalo is envisaged as a principal measure for promotion of genetic quality improvement of livestock in the Study Area. Activities will be carried out by establishing an AI (artificial insemination) and Veterinary Unit in the Station as a nucleous. General features of the proposed activities are as described hereunder.

Extension Program

Frozen semen will be procured from the Semen Producing Unit (S.P.U.) at Qadirabad or Rawalpindi S.P.U. planned for establishment in 1986/87. Breeds to be introduced are proposed as follows:

Cow : Cross breed . . . . . Jersey x Sahiwal,
Friesian x Sahiwal, etc.
Line breed . . . . . Sahiwal, Jersey, Dhanni etc.

Buffalo: Nili Rabi breed

Artificial insemination services will be expanded by stages and the proposed schedule aiming at covering the present holding sizes in the Study Area in the 10th year is shown in the following table.

AI SERVICE SCHEDULE 1/

(Unit: 1000 heads)

Year	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Cow	2	4	8	12	16	20	24	28	32	36
Buffalo	1	2	4	6	8	10	12	14	16	18

1/ Present holding sizes: cows —— 17,000
buffaloes —— 8,400
Assuming two doses of semen are required for fertilization of one cow or buffalo.

Artificial insemination will be performed at the Station and veterinary hospitals. In addition, the Station will be equipped with 3 AI service cars aiming for extensive services (FIG. III-1).

(3) Strengthening of Veterinary Services

Veterinary services will be integrated into the Station activities and will be conducted in close relation with other activities such as the breeding farm and artificial insemination. Similarly, the existing veterinary facilities in the Study Area will be replaced with new facilities which will be constructed in the same UC and 4 additional facilities will be newly established as shown in the following table.

CONSTRUCTION PLAN OF VETERINARY FACILITIES

Type	No.	Functions 1/	Location (UC)
Hospital 2/	4	Veterinary + AI Services	Tarlai, Sihala, Bhara Kau Shah Allah Ditta
Dispensary 2/	5	Veterinary Service	Tamair, Kirpa, Koral, Charah, Rawat

1/ Veterinary services: hospital . . . treatment, vaccination & deworming
dispensary . . vaccination, deworming & medication

Provision of mobile veterinary units at each veterinary hospital is envisioned to ensure intensive service. In addition, in the AI & Veterinary Unit at the Station, applied research activities such as a fact-finding survey on animal health and studies on precautionary measures will be carried out (FIG. III-1).

(4) Establishment of Technical Training System

The establishment of a technical extension system is important activity of the Station. Accordingly, the establishment of training programs are aimed at constructing training facilities in the Station. Training programs for farmers are planned in order to disseminate the importance of animal health and optimum holding size of livestock to the majority of farmers. Training for young farmers is also considered critical in cultivating key farmers for the future development of the livestock sector in the Study Area. Young farmers will be trained repeatedly in a phased manner and the tranining course will include training in basic veterinary services such as vaccination and dosing. In addition, training of agricultural field staffs and mass training will be conducted.

Through these activities, appropriate technology which can be easily assimilated by the farmers in the Study Area will be extended and of farmers will be trained in coordination with other activities such as livestock improvement. Also, marketing and farmers organization should be compulsory subjects for all training programs.

(5) Experimental and Demonstration Activities

Proposed experimental and demonstration activities of the Station are as follows:

a) development and demonstration of fodder crop cultivation, and experiments on new fodder crops through establishment of demonstration farms (5ha).

b) establishment and demonstration of a samll scale livestock raising system; improvement of the nutritional status of livestock by using concentrates and/or urea in feed.

c) development of range management and grazing systems by establishing range land (50ha) and using Pilot Farms.

Three Pilot Farms established in the first phase will be operated as branches of the Station and used as cores for demonstration activities.

(6) Other Activities

1) Distribution of Chicks

For the introduction of the "Fumi" breed suitable for local conditions, distribution of chicks is proposed. Chicks will be procured from Punjab Province and distributed to farmers with 5 females and 1 male in each unit. Distribution of 500 to 1,000 units per year is planned.

2) Development of a Marketing System

Establishment of a marketing system in accordance with the expected future expansion of livestock production is important for development of the livestock sector in the Study Area. Therefore, development and propagation of a marketing system including such activities milk collecting and organization of farmers will be another activity of the Station.

III-3 ESTIMATED CONSUMPTION AND REQUIREMENTS OF VEGETABLES IN ICT AND RAWALPINDI

Present vegetable consumption and requirements based on the balanced diet approach in ICT and Rawalpindi are estimated in the following table.

1. Present Consumption of Vegetables[1/]

	Monthly consumption (kg/head)[2/]	Estimated Annual Consumption (ton)
Urban Areas	2.8	37,500
Study Area	2.3	4,200
Total		41,700[5/]

2. Vegetable requirements based on the Balanced Diet Approach

	Monthly Requirements (kg/head)[3/]	Annual Requirements (ton)
ICT & Rawalpindi[4/]	5.1	75,500[5/]

1/ Estimated as follows:
Monthly consumption/head x population x 12 months,
Estimated population (1985)
- Urban areas: Islamabad urban area - 227,000
Rawalpindi urban area - 888,000
- Study Area: 152,000

2/ Per capita consumption of vegetables by household incomes in Punjab Province.
Urban areas: per capita consumption by household with income of Rs1,350/month
Study Area: per capita consumption by household with income of Rs810/month
Source: Housing Census of Pakistan, 1980

3/ Vegetable requirements based on the Balanced Diet Approach.
Source: CDA PC I document

4/ Estimated population (1985): 1,267,000

5/ Annual cropped area for vegetables required for satisfying consumption and requirements are roughly estimated as follows:

Cropped area required for satisfying present consumption

- average production of vegetable /ha·year 30t (assumed)
- marketing loss 20% (assumed)

41,700 t/year ÷ (30t/ha x 80%) = 1,700ha

Cropped area required for satisfying requirements

75,500 t/year ÷ (30t/ha x 80%) = 3,100ha

III-4. BASIC DATA

TABLE III-21

GENERAL INFORMATION OF AGRICULTURAL SECTOR ACCORDING TO EACH UNION COUNCIL

	Koral	Sihala Rawat	Markaz Sihala	Markaz	Bhara Kau	Markaz Pulgran G.A.D. [10]		Markaz	Tarlai K.	Sohan	Tarlai Markaz Kirpa	Tamair	Charah	Markaz	Study Area
1. Population [1]	4,546	11,455	16,033	32,034	10,590	11,248	7,576	29,414	12,289	13,162	19,480	13,638	17,837	76,406	137,854
2. Total Household	890	1,538	1,869	4,297	1,813	1,883	1,171	4,867	1,524	2,526	2,981	2,175	2,434	11,640	20,804
3. Farm Household [2]	709	981	1,242	2,932	677	872	1,124	2,673	899	678	2,776	1,865	2,367	8,585	14,190
4. Cultivator (household)	630	813	1,033	2,476	458	508	1,006	1,972	835	504	2,600	1,581	2,148	7,668	12,116
5. Landless Livestock Holder (household)	79	168	209	456	219	364	118	701	64	174	176	284	219	917	2,074
6. Household Stocking Livestock	620	990	1,300	2,910	890	1,340	1,090	3,320	500	680	2,020	1,450	1,950	6,600	12,830
7. Household Stocking Poultry	710	1,230	1,840	3,780	1,020	1,390	900	3,310	730	590	2,700	2,170	2,310	8,500	15,590
8. Total Area (ha) [3]	2,123	3,762	4,961	10,846	3,168	5,192	3,262	11,622	2,341	2,468	7,144	8,231	6,488	26,672	49,140
9. Cultivated Area (ha)	1,072	1,516	2,352	4,940	1,177	2,369	1,018	4,564	1,736	645	4,354	3,143	3,735	13,613	23,117
10. Culturable Wasteland (ha)	166	476	481	1,123	193	445	119	757	205	221	403	498	428	1,755	3,635
11. Unculturable [4] Wasteland (ha)	675	1,352	1,625	3,652	1,373	1,815	1,622	4,810	305	1,223	1,822	3,503	1,775	8,628	17,090
12. Total Wasteland 9ha)	841	1,828	2,106	4,775	1,566	2,260	1,741	5,567	510	1,444	2,225	4,001	2,203	10,383	20,725
13. Common Land (ha)	629	618	437	1,684	642	933	1,160	2,735	135	6	595	1,656	1,283	3,675	8,094
14. No. of Livwstock [5] (Adult Cow Units)	1,685	2,411	5,186	9,282	4,177	2,809	2,297	9,283	5,280	4,813	7,893	5,858	6,177	30,021	48,586
15. No. of Poultry	1,000	2,000	6,000	9,000	4,100	6,500	2,200	12,800	15,000	14,100	20,400	13,900	11,200	74,600	96,400
16. No. of Tractor [6] (Units)	5	47	30	82	10	9	1	20	16	27	30	12	16	101	203
17. 9 ÷ 4 [7]	1.7	1.9	2.3	2.0	2.6	4.7	1.0	2.3	2.1	1.3	1.7	2.0	1.7	1.8	1.9
18. 9 ÷ 14 [8]	0.6	0.6	0.5	0.5	0.3	0.8	0.4	0.5	0.3	0.1	0.6	0.5	0.6	0.5	0.5
19. 16 ÷ 9 x 100 [9]	0.5	3.1	1.3	1.7	0.8	0.4	0.1	0.4	0.9	4.2	0.7	0.4	0.4	0.7	0.9

1/ Based on 1981 census.
2/ Cultivator + landless livestock holder
3/ Excluding reserved forests (10,360ha)
4/ Unculturable wasteland excluding institutional area, industrial area & right-of-way
Estimated by reducing the same area assumed to be 23.7% of total unculturable wasteland (5,300ha/22,390hha = 0.237)
5/ No. of livestock converted into adult cow unit
6/ No. of tractors used for land preparation
7/ Average farm size/cultivator (ha/cultivator)
8/ Cultivated area/adult cow unit (ha/adult cow unit)
9/ No. of tractors/100ha of cultivated area (units/100ha)
10/ Shah Allah Ditta
Source: Livestock census conducted by Livestock & Dairy Department, IA, Village survey by LGRD (1985), Land use data prepared by Land Revenue Department, IA.

TABLE III-22

CAPACITY UTILIZATION OF DIFFERENT FERTILIZER PLANTS IN PAKISTAN

Start-up year	Name of the factory	Product	Nutrient percentage: N	Nutrient percentage: P_2O_5	Production capacity 1/: N	Production capacity 1/: P_2O_5	Actual production in 1982-83 2/: N	Actual production in 1982-83 2/: P_2O_5	Capacity utilization: N	Capacity utilization: P_2O_5
					(Thousand tonnes)				(per cent)	
1968	Exxon at Daharki	Urea	46	-	78	-	109.82	-	140	-
1970	Dawood Hercules at Chichoki Mallian	Urea	46	-	160	-	150.42	-	94	-
1958	Pak-American at Iskandarabad	Ammonium sulphate	21	-	19	-	12.83	-	67	-
1979	Pak-Arab at Multan	(i) Calcium ammonium nitrate.	26	-	119	-	88.24	-	74	-
1962	Pak-Arab at Multan	(ii) Urea	46	-	33	-	23.92	-	72	-
1979	Pak-Arab at Multan	(iii) Nitro-phos	23	23	70	70	54.83	54.83	78	78
1980	Pak-Saudi at Mirpur Mathelo	Urea	46	-	258	-	256.24	-	99	-
1982	Hazara at Haripur	Urea	46	-	45	-	41.64	-	92	-
1982	Fauji at Sadiqabad	Urea	46	-	262	-	260.62	-	99	-
	Lyallpur Chemical and Fertilizer Ltd,:									
1957	(i) at Faisalabad	Single super Phosphate	-	18	-	4	-	3.86	-	96
1976	(ii) at Jaranwala	Single super Phosphate	-	18	-	15	-	14.90	-	99
1982	(iii) at Pak Steel Mills Ltd., Karachi	Ammonium Sulphate	21	-	NA	-	1.03	-	-	-
		Total			1,044	89	999.59	73.59	96	83

Sources: 1/ National Fertilizer Development Centre, Planning and Development Division, Government of Pakistan, Islamabad.

2/ Federal Directorate of Fertilizer Import, Government of Pakistan, Lahore.

IV. GROUND WATER EXPLOITATION SURVEY

CONTENTS

LIST OF TABLES AND FIGURES

IV-1 ELECTRIC RESISTIVITY SURVEYS

Electric resistivity surveys measuring electric resistivities of strata are the most effective method of obtaining information of the hydrogeologic environments.

The electric properties of most deposits and rocks vary over a wide range, depending upon the material, density, porosity, water content and quality, and the distribution of the water in the materials. Saturated materials have lower resistivity than unsaturated and dry materials. The higher the porosity of the saturated materials, the lower its resistivity. The presence of clays and conductive minerals also reduces the resistivity of the materials.

Electric resistivity surveying is based on evaluating the apparent resistivity (Ra) of subsurface materials by passing a known electric current through the ground and measuring the potential difference between two points. The electric current is applied with burried metal rods driven into the ground (FIG. IV-1). The distance between the current electrodes depends on the desired depth of observation. The voltage or potential difference is measured with two separate electrodes located symmetrically on a line between the current electrodes.

With the Wenner configuration, the distance between the voltage electrodes (a) is one-third the distance between the current electrodes (L). Apparent resistivity (Ra) is calculated as

$$Ra = \frac{2}{3} L \frac{V}{I} = 2 a \frac{V}{I}$$

Where V is the potential difference between the voltage electrodes, I is the total current in the electric field.

When apparent resistivity (Ra) is plotted against electrode spacing (a) for various spacings at one site, a smooth curve can be drawn through the points.

The interpretation of such a resistivity-spacing (depth) curve in terms of subsurface conditions is a complex problem. A measured apparent resistivity-depth curve is matched by standard theoretical curves and a

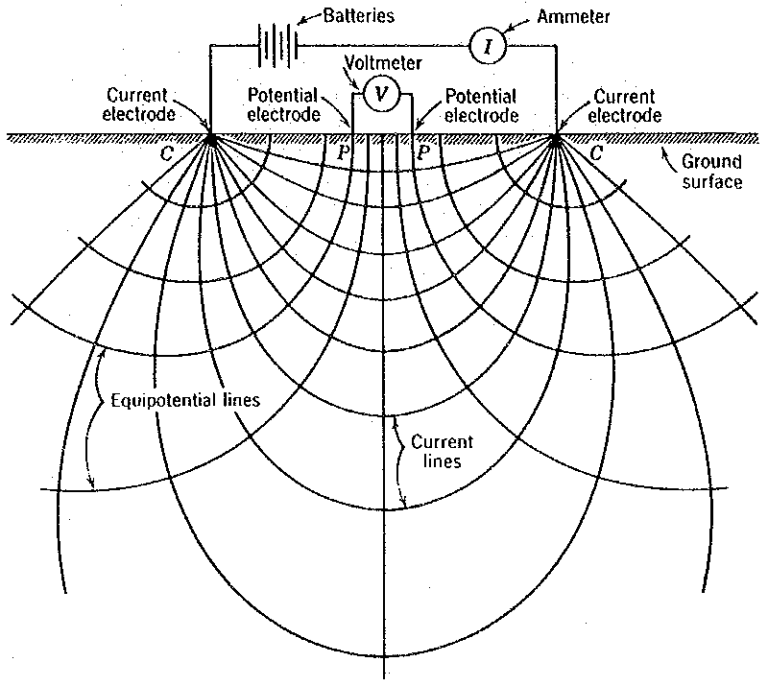
digital computer in order to determine true resistivities of individual layers.

Electric resistivity surveys were carried out at sixty-eight (68) sites to make clear the hydrogeologic structure in Islamabad rural area (FIG. 2). Five (5) sites were selected in UC of Bhara Kau, ten (10) sites in UC of Phulgran, fifteen (15) sites in UC of Tamair, three (3) sites in UC of Sohan, eight (8) sites in UC of Charah, three (3) sites in UC of Tarlai, twelve (12) sites in UC of Kirpa, two (2) sites in UC of Koral, three (3) sites in UC of Sihara, four (4) sites in UC of Rawat, and three (3) sites in UC of Shah Allah Ditta.

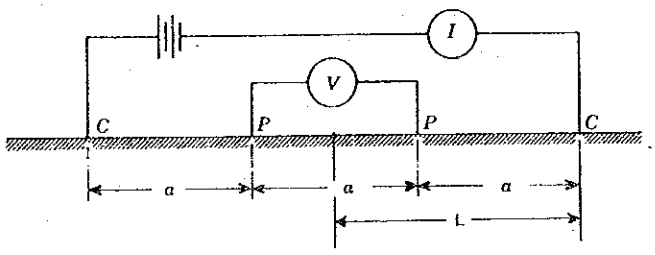
On the basis of true resistivity values, the strata have been classified into three groups, namely, surface soil, Quaternary deposits (subdivided into two layers, a sand and gravel layer and a silt and clay layer) and the Nimadrics as bedrock from the ground surface downward. The strata of true resistivity values less than 15 ohm·m indicate the presence of mostly argillaceous materials, namely, clay or shale. The strata of true resistivity values more than 80 ohm·m indicate mostly the existence of sand or gravel.

The strata of true resistivity values from 15 to 80 ohm·m indicate mostly the presence of arenaceous materials, namely, silt or clay or sandstone.

A



B



ELECTRIC FIELD FOR A HOMOGENEOUS SUBSURFACE STRATUM (A) AND WENNER CONFIGURATION (B)

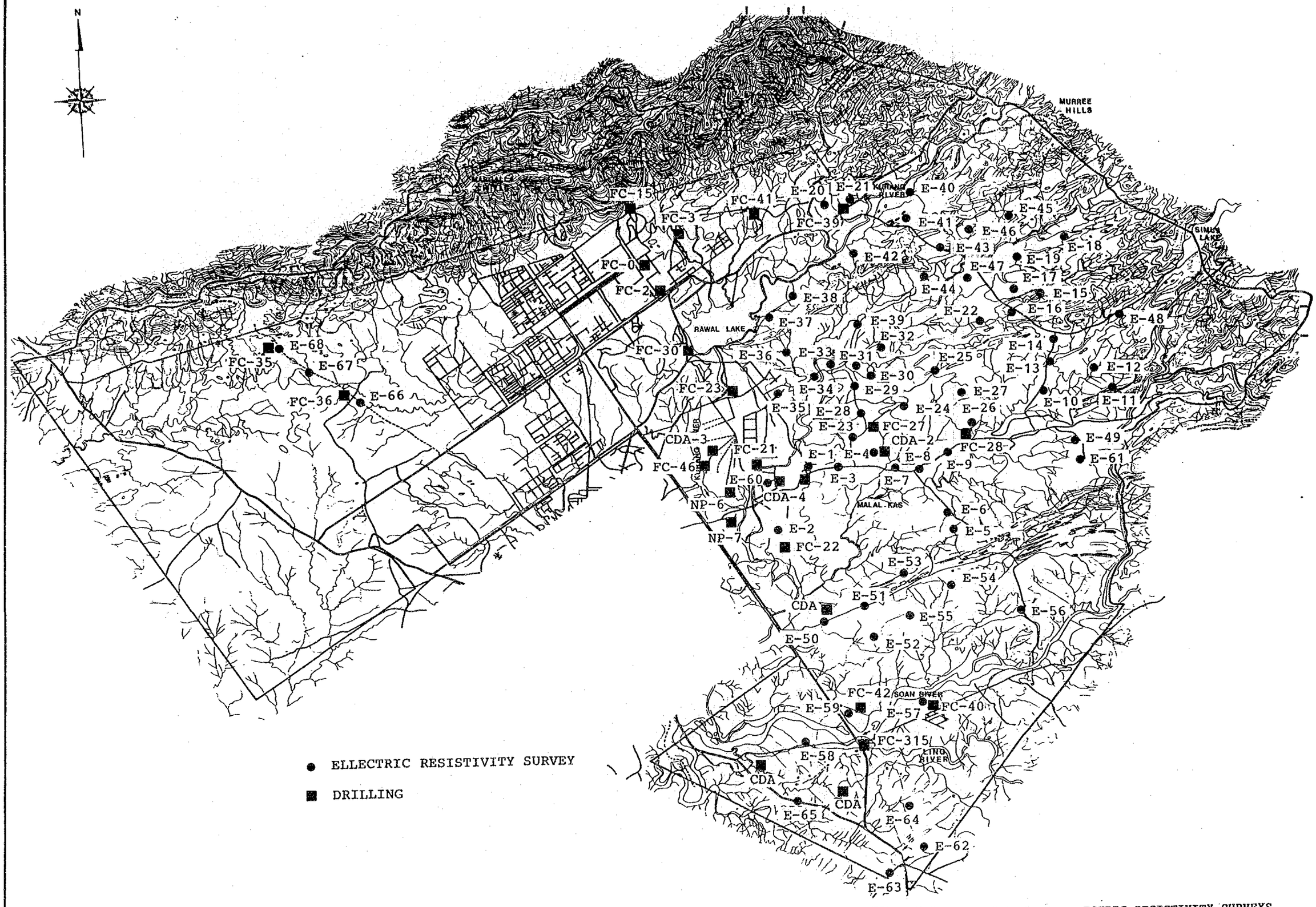


FIG. IV-2 LOCATION OF ELECTRIC RESISTIVITY SURVEYS

IV-2 OCCURRENCE OF UNCONFINED GROUND WATER

There are approximately 1,000 shallow wells in the Project area. Eighty (80) shallow wells were selected and their salient features, water level, pH, electric conductivity, water temperature were observed in the second field observation (TABLE IV-1 and FIG. IV-3). Chemical quality were obtained from WAPDA (1980) including cations, anions, total dissolved solids, pH values, SAR values and calculated total hardness values.

(1) Fluctuations in Water Level

The average depth of the ground water table in the observed shallow wells is 9.3 m (TABLE IV-1). While average well depth is 12.9 m and average water depth is 3.6 m.

Fluctuations in water levels indicate both changes in the actual quantity of water stored in aquifers and movement of ground water. Ground water levels are influenced by seasonal cycles in precipitation, evapotranspiration, and discharge from wells and thus show a seasonal pattern of fluctuation. A continual rise in water level results when recharge is greater than discharge; water levels decline when discharge is greater than recharge.

During the dry season from October to June, water levels fluctuate in response to evapotranspiration losses. Ground water storage is reduced due to absorption by plants and evaporation from the soil.

With the beginning of the wet season in July, water levels rise by direct recharge from precipitation. Water levels of four shallow wells rose by 2 to 5m during the one month transition from dry season to wet season (TABLE IV-1). If effective porosity is assumed to be 10%, recharge from precipitation and movement of ground water ranges from 200 to 500mm.

(2) Ground Water Quality

The chemical characteristics of ground water determine its usefulness for municipal, commercial, industrial, agricultural, and domestic water supplies. In addition, ground water quality data

give important clues to the geological history of rocks and indications of ground water recharge, discharge, movement, and storage.

The most dominant cation in shallow ground water is sodium while the most dominant anions are bicarbonate and sulphate in Tarlai Kalan and Farash village. Shallow ground water is of the sodium-sulphate type.

The dominate cations and anions in deep ground water indicate the independent occurrence of ground water in the bedrock (sandstone) and alluvial aquifers. The deep ground water in the bedrock aquifer is the sodium sulphate type with minor Ca, Mg, Cl, HCO_3. Deep ground water in the alluvial aquifer is the calcium bicarbonate type, indicating that its source of recharge is from the Margalla Hills composed mainly of limestone.

Total dissolved solids in shallow ground water are approximately 1,000ppm and the values in deep ground water are almost equivalent. Hardness of shallow ground water in Tarlai Kalan village is about 400ppm, which is very high. The values in deep ground water range from 1,000 to 1,000ppm.

In summary, ground water quality in terms of total dissolved solids and hardness is suitable for human consumption and other domestic use.

The pH values in shallow ground water range from 7.3 to 10.4 and the overage is 8.2 (TABLE IV-1).

Shallow ground water is weakly alkaline. The electric conductivity values in shallow ground water range from 396 to 3,328μS/cm and the average is 857μS/cm (TABLE IV-1). Higher values, exceeding 2,000 S/cm, are observed near the exposed bedrock uplands. Water of medium salinity with conductivity between 750 to 2,250μS/cm cannot be used without adequate drainage (U.S. Dept. of Agr., 1954). Special management for control of salinity is required and only salt-tolerant plants can be grown in such areas.

The sodium absorption ratio (SAR) is used for studying the suitability of ground water for irrigation purposes (U.S. Dept. of

Agr., 1954). A soil high in exchangeable sodium is undesirable for agricultural use because it can become deflocculated and tends to have a relatively impermeable crust. This condition is further aggravated by water of a high SAR but can be by water containing a high proportion of calcium and magnesium. Soil amendments such as gypsum or lime may correct the situation. The SAR value in the shallow ground water in Taslai Kalan is 4.7 and the water with a sodium content of less than 10 is satisfactory for irrigation purposes.

(3) Detailed Observations of Shallow Ground Water

Detailed observations of shallow ground water were carried out in Kirpa, Tamair, Pind Begwall, and Kuri village.

1) Kirpa (FIG. IV-4)

The village is located on the exposed bedrock upland. A thin unconfined aquifer with low productivity is formed in weathered rocks and the sand and gravel layers of the lower part of the loessic deposits. Water from six observed wells is used for drinking water and other domestic use. Four wells located in the upper part of the ground water basin dry up in dry season.

The topography inclines from southeast to northwest with a 13.5m : 400m slope. The ground water table inclines with a 10m : 400m slope in the same direction as the topography. The average depth of ground water levels, the average depth of wells, and the average depth of water is 11.1, 12.5, and 1.4m, respectively. The pH values range from 7.6 to 8.3 and the overage is 8.0. Electric conductivity values range from 788 to 1,329μS/cm and the average is 1,043μS/cm. The average water temperature is 23.8^{o}C and the average concentration is 0.4 to 0.5ppm.

2) Tamair (FIG. IV-5)

This village is located on the high loessic upland. An unconfined aquifer is formed in weathered rocks and the sand and gravel layers of the lower part of the loessic deposits.

The unconfined aquifer is very thin and has a low productive yield. Ground water of six observed wells is used for drinking water and other domestic use. Two wells located in the upper part of the ground water basin dry up in dry season.

The topography inclines from west to east with a 13m : 300m slope. The ground water table has a slope of 8m : 300m in the same direction. The average ground water depth, average well depth, and the average water depth is 10.0, 11.9, and 1.9m, respectively.

The pH values range from 7.6 to 9.0 with the average at 8.5. Electric conductivity values range from 680 to 891μS/cm with the average at 806μS/cm. The average water temperature is 24.8°C and the average concentration is 0.4 to 0.5ppm.

3) Pind Begwall (FIG. IV-6)

The village is located on the high loessic upland. A thin unconfined aquifer with a low yield is formed in weathered rock and the sand and gravel layers of the lower part of the loessic deposits. Ground water of five observed wells is used for drinking water and other domestic use. Well water is plentiful at all five sites because the recharge area is greater than that in Kirpa and Tamair villages.

The topography inclines from northeast to southwest with a slope of 6m : 200m, and the ground water table slopes 4m : 200m in the same direction.

Average ground water depth, average well depth, and average water depth is 5.2m, 10.7m and 5.5m, respectively.

4) Kuri (FIG. IV-7)

Four wells (W-60 to W-63) are located on the loessic upland and two wells (W-64 and W-65) on the alluvial plain. There is a cliff line with a height of about 20m between the loessic upland and the alluvial plain.

Water from the four shallow wells on the loessic upland is used for drinking water and other domestic purposes. The

average ground water depth, average well depth, and average water depth is 23m, 24.2m, and 1.3m, respectively. The average pH value is 8.0 and the average electric conductivity is 921μS/cm. The average water temperature is 24.3°C.

On the alluvial plain, unconfined and confined aquifers are formed. Water from the two shallow wells is used for drinking and irrigation. The average ground water depth, average well depth, and average water depth is 23m, 24.2m, and 1.3m, respectively. The average pH value is 8.7 and the average water temperature is 24.8°C. Electric conductivity averages 453μS/cm and is half that of water in the shallow wells on the loessic upland.

TABLE IV-1 OBSERVATIONS OF UNCONFINED GROUND WATER

No.	U.C.	Village	Date	Water Level from the ground surface (m)	Water Level elevation height (m)	Well Depth (m)	pH	Electric Conductivity (μS/cm) (25°C)	Water temperature (°C)	Ammonia (ppm)	Water Condition In Dry Season
W-1	Tarlai Kalan	Gangal	85.8.15	4.0	453.1	13.5	9.4	510	24.0	0.4 - 0.5	enough
2	"	Tarlai Khurd	8.15	13.7	479.9	15.0	8.8	743	24.8	0.4 - 0.5	dry
3	"	Tarlai Kalan	8.12	5.7	493.3	8.8	8.6	593	26.4	0.4 - 0.5	enough
4	"	Talai Khurd	7.23	14.0	479.3	-	8.0	1100	25.0	-	
5	"	Tramari	3.28 7.6	8.0 9.5	502.0 500.5	- -	- -	-	- -	- -	enough
6	"	Tramari	3.28 7.6 8.9	3.10 5.5 1.8	502.4 500.0 503.7	6.2	- 7.4 7.3	- 694 858	- 24.0 23.9	- - 0.4 - 0.5	enough
7	"	Chahatta Bakhtawar	7.15 7.27	2.45 2.50	515.3 513.35	4.8	7.7 7.4	800 820	25.6 25.0	- 0.4 - 0.5	
8	Koral	Bhokar	8.10	6.1	521.9	13.2	8.6	703	23.3	-	enough
9	"	Boora Bangial	8.11	7.1	527.9	13.2	8.01	742	23.5	0.4 - 0.5	dry
10	"	Boota Bangial	8.10	2.7	528.9	8.7	8.24	732	24.2	0.4 - 0.5	enough
11	Sihala	Sihala	8.11	5.3	470.2	10.8	-	-	-	-	enough
12	Rawat	Churki Mohra	7.7 7.20 8.12	6.6 3.2 2.0	563.1 566.2 565.0	7.3	7.9 8.0 8.5	937 761 694	24.6 25.6 25.4	- - -	enough
13	"	Churiki Mohra	8.12	14.3	554.8	17.4	8.43	909	25.6	0.4 - 0.5	
14	"	Rawat	8.12	2.4	573.3	6.1	9.3	1256	26.7	0.4 - 0.5	enough
15	Kirpa	Pind Mahakan	8.11	2.2	534.8	15.0	8.45	948	25.6	0.4 - 0.5	"
16	"	Dhaliala	8.10	6.0	546.0	13.5	7.8	570	24.1	-	"
17	"	Pind Daia	8.10	10.4	531.0	14.5	8.2	881	23.8	-	"
18	"	Tamma	8.1	1.8	531.1	4.8	7.6	736	23.9	-	"
19	"	Alipur	7.23	12.5	524.5	-	8.4	731	29.3	-	dry
20	"	Farash	7.23	15.0	524.0	-	8.0	1626	24.2	-	

TABLE IV-1 Observations of Unconfined Ground Water

No.	U.C.	Village	Date	Water Level from the ground surface (m)	Water Level elevation height (m)	Well Depth (m)	pH	Electric Conductivity (μS/cm) (25°C)	Water temperature (°C)	Ammonia (ppm)	Water Condition In Dry Season
W-21	Kirpa	Kirpa	85.7.6	18.0	582.0	-	7.92	3328	23.0	-	
22	"	Kirpa	8.15	8.1	582.5	11.6	8.25	788	24.5	0.4 - 0.5	enough
23	"	Kirpa	"	12.7	588.6	13.2	8.26	1131	23.6	"	dry
24	"	Kirpa	"	12.0	591.0	12.7	8.24	1024	23.8	"	"
25	"	Kirpa	"	10.55	592.5	11.3	7.8	1329	23.9	"	"
26	"	Kirpa	"	7.6	588.7	10.15	7.36	941	23.3	"	enough
27	"	Kirpa	"	15.3	590.0	15.8	-				dry
28	"	Jhang Saydidan	7.24	18.0	524.0	20.0	8.0	1069	241	-	dry
29	"	Tamma	8.1	14.5	526.6	18.0	7.7	559	23.2	0.4 - 0.5	enough
30	"	Alipur	3.30 7.15 7.27	4.7 4.4 3.2	532.7 533.0 534.2	11.9	7.6 7.6 8.2	843 843 831	23.6 23.6 24.3	- - 1.2	enough
31	Charah	Darkala	8.1	3.2	557.1	10.9	7.5	559	23.2	0.4 - 0.5	enough
32	"	Charah	8.12	3.25	581.3	7.35	8.1	1014	24.3	0.4 - 0.5	"
33	"	Charah	8.9	0.7	590.3	6.2	9.0	801	27.3	0.4 - 0.5	"
34	"	Muhlian	8.3	10.1	520.8	13.0	7.7	1344	23.3	-	dry
35	"	Muhlian	8.3	2.3	530.6	9.1	7.9	643	24.0	-	"
36	"	Jagiot Sari	8.1	6.8	541.3	15.1	7.8	534	23.7	-	enough
37	"	Harno	8.2	12.8	546.0	14.2	7.2	1135	23.4	0.4 - 0.5	dry
38	"	Thanda Pani	7.26	6.75	530.65	12.0	7.9	721	24.2	0.4 - 0.5	enough
39	Sohan	Mohra Jajan	8.6	9.0	528.0	16.4	8.0	780	22.4	-	"
40	"	Mujohan	8.5	4.8	514.2	6.1	9.1	642	27.1	0.4 - 0.5	dry

TABLE IV-1 Observations of Unconfined Ground Water

No.	U.C.	Village	Date	Water Level from the ground surface (m)	Water Level elevation height (m)	Well Depth (m)	pH	Electric Conductivity (μS/cm) (25°C)	Water temperature (°C)	Ammonia (ppm)	Water Condition In Dry Season
W-41	Tamair	Pind Begwal	85.8.9	6.3	554.7	13.2	11.9	803	24.8	-	enough
42	"	Pind Begwal	7.28	6.0	583.3	12.0	8.2	667	23.7	-	"
43	"	Sihali	7.28	9.0	572.6	12.0	8.0	708	24.4	-	dry
44	"	Sihali	7.28	10.0	580.7	11.7	-	-	-	-	"
45	"	Jandala	7.29	0.7	602.2	3.7	8.0	653	27.0	-	"
46	"	Pind Begwal	8.19	2.0	558.0	9.7	-	-	-	-	enough
47	"	"	"	5.1	554.9	10.0	-	-	-	-	"
48	"	"	"	7.0	559.0	12.0	-	-	-	-	"
49	"	"	"	8.2	558.8	11.5	-	-	-	-	"
50	"	"	"	3.6	558.4	10.2	-	-	-	-	"
51	" " "	Tamair	7.12 7.27 8.19	9.0 8.8 8.5	569.6 569.8 570.1	10.8	7.6 7.7 7.6	859 826 833	24.5 23.4 26.0	- - 0.4 - 0.5	enough
52	" "	Tamair	7.12 8.19	11.6 11.3	573.4 573.7	12.4	7.6 9.0	810 891	25.0 24.4	- 0.4 - 0.5	"
53	"	Tamair	7.27	14.5	556.4	15.5	8.4	2253	23.8	-	dry
54	"	Tamair	7.26	21.2	542.1	22.7	7.8	708	24.4	-	
55	" "	Tamair	7.27 8.19	11.5 10.7	577.2 589.0	12.0	8.3 9.6	762 1093	23.5 25.3	- -	dry
56	"	Tamair	8.19	5.3	581.2	8.7	8.8	819	23.8	-	enough
57	"	Tamair	"	14.2	581.8	15.6	-	-	-	-	dry
58	"	Tamair	7.27	3.5	581.1	10.0	7.8	581	24.9	-	"
59	"	Tamair	7.27	17.0	589.0	18.0	9.6	1093	25.3	-	"
60	Phulgran	Kuri	8.20	22.6	513.9	28.5	7.7	626	24.5	-	enough

TABLE IV-1 Observations of Unconfined Ground Water

No.	U.C.	Village	Date	Water Level from the ground surface (m)	Water Level elevation height (m)	Well Depth (m)	pH	Electric Conductivity (μS/cm) (25°C)	Water temperature (°C)	Ammonia (ppm)	Water Condition In Dry Season
W-61	Phulagran	Kuri	85.8.20	22.4	517.4	23.7	7.38	826	24.0	-	enough
62	"	Kuri	"	19.7	518.1	20.7	8.47	1524	24.2	-	"
63	"	Kuri	7.15 8.20	25.6 22.95	510.3 514.85	23.95	7.8 8.50	607 706	24.4 24.6	- -	"
64	"	Kuri	"	7.3	513.2	8.7	8.39	463	24.7	-	"
65	"	Kuri	8.3 8.20	4.5 4.75	513.2 511.75	8.0	8.1 9.08	870 443	23.2 24.8	0.4 - 0.5 -	dry
66	"	Rakh Bangala	8.6	5.3	536.7	13.0	7.6	656	22.9	-	"
67	"	Rakh Bangala	8.6	10.2	523.8	15.0	7.7	823	22.9	-	enough
68	"	Rakh Bangala	8.7	23.7	528.6	25.7	7.7	807	23.9	0.4 - 0.5	"
69	Phalgran	Rihara	8.7	10.5	524.0	11.5	8.54	937	23.5	0.4 - 0.5	dry
70	"	Shah pur	8.8	1.6	575.8	9.6	7.65	746	24.9	0.4 - 0.5	enough
71	"	Shah Pur	8.8	8.0	597.5	9.0	7.84	673	24.0	0.4 - 0.5	dry
72	"	Athal	8.9	4.3	568.7	8.6	8.2	551	24.0	-	
73	Bahara Kau	Mohra Nur	8.8	8.0	582.5	10.0	10.4	396	24.2	0.4 - 0.5	enough
74	"	Kot Nathial	3.7 7.4 7.28	20.0 20.0 18.5	558.6 558.6 560.1	20.0	- - -	- - -	- - -	- - -	dry
75	"	Dharek Mohri	8.13	6.3	541.3	18.8	8.35	657	23.7	0.4 - 0.5	
76	Shah Allah Ditta	Pind Sangral	8.13	9.6	607	15.25	8.4	843	23.6	0.4 - 0.5	enough
77	"	Pind Sangral	7.21 8.13	13.0 13.0	612.5 612.5	21.0	8.2 -	526 -	23.4 -	- -	"
78	"	Dhok Jori	7.11	-	-	-	7.34	1076	26.1	-	"
79	Kirpa	Jhang Saidolan	7.24	13.0	512.0	14.0	7.8	516	27.2	-	enough
80	Cherah	Mohra	8.11	1.9	595.3	10.0	7.94	1006	24.7	-	"

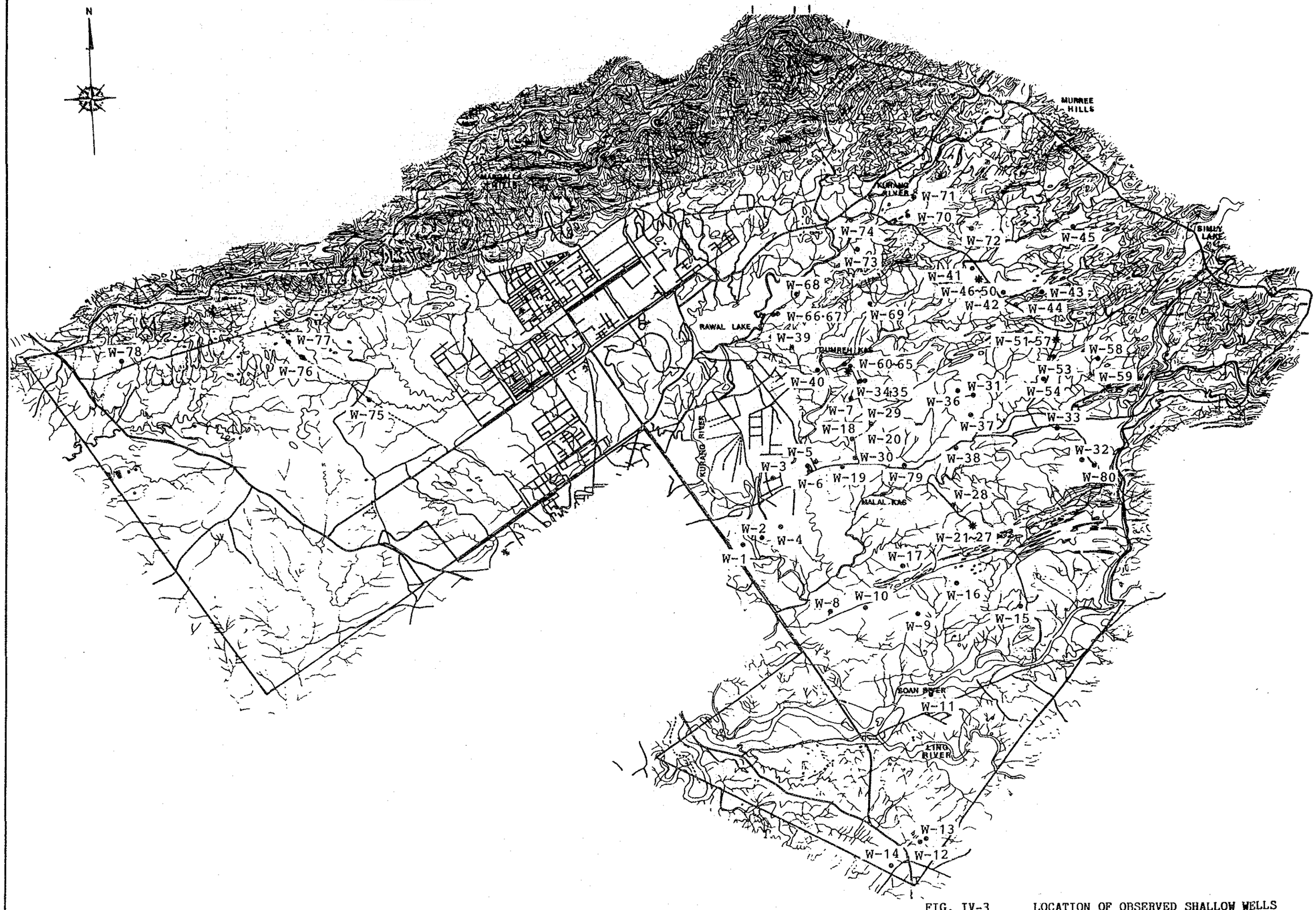


FIG. IV-3 LOCATION OF OBSERVED SHALLOW WELLS

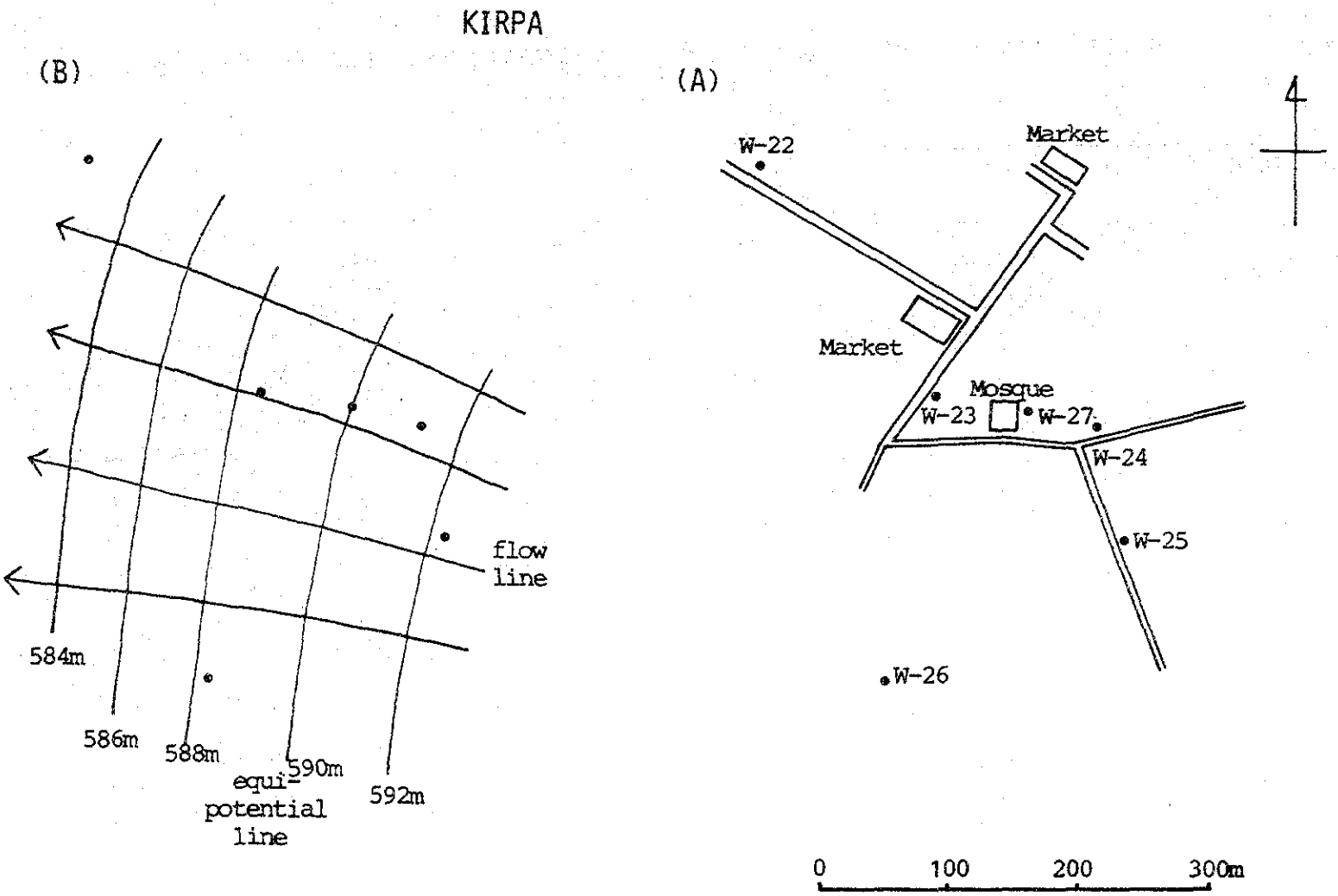


FIG. IV-4 DETAILED OBSERVATIONS OF UNCONFINED GROUND WATER IN KIRPA VILLAGE

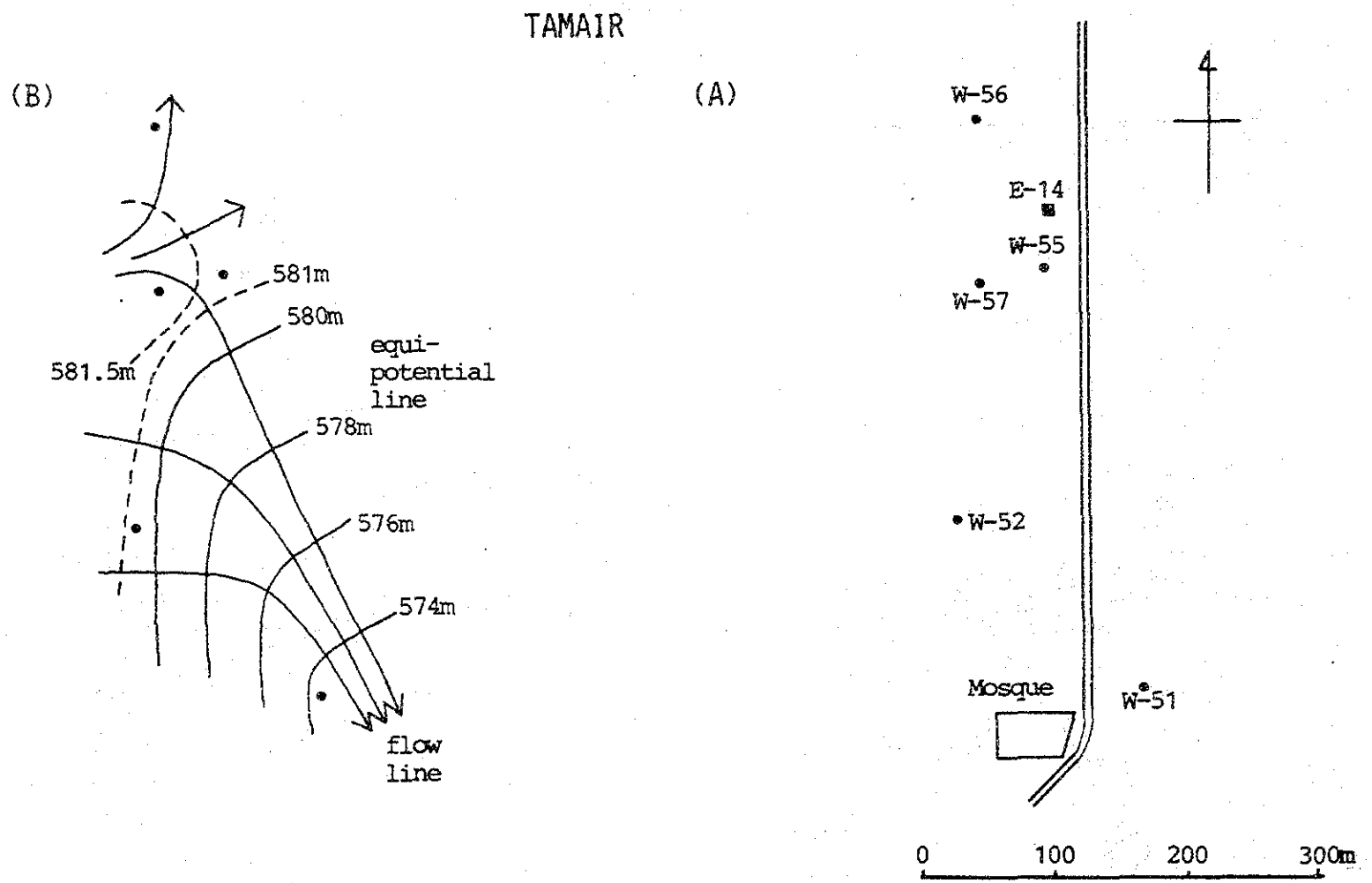


FIG. IV-5 DETAILED OBSERVATIONS OF UNCONFINED GROUND WATER IN TAMAIR VILLAGE

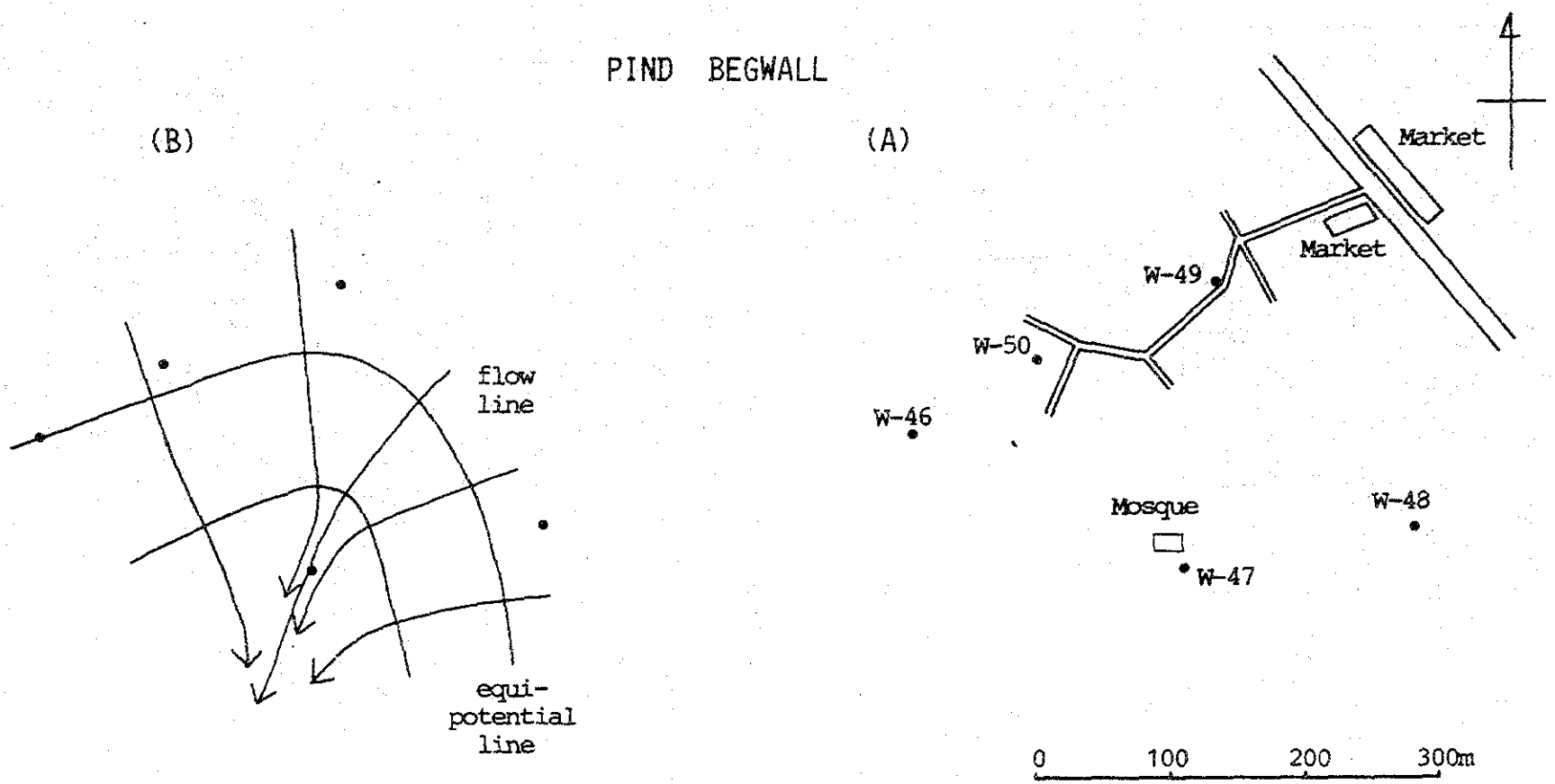


FIG. IV-6 DETAILED OBSERVATIONS OF UNCONFINED GROUND WATER IN PIND BEGWALL VILLAGE

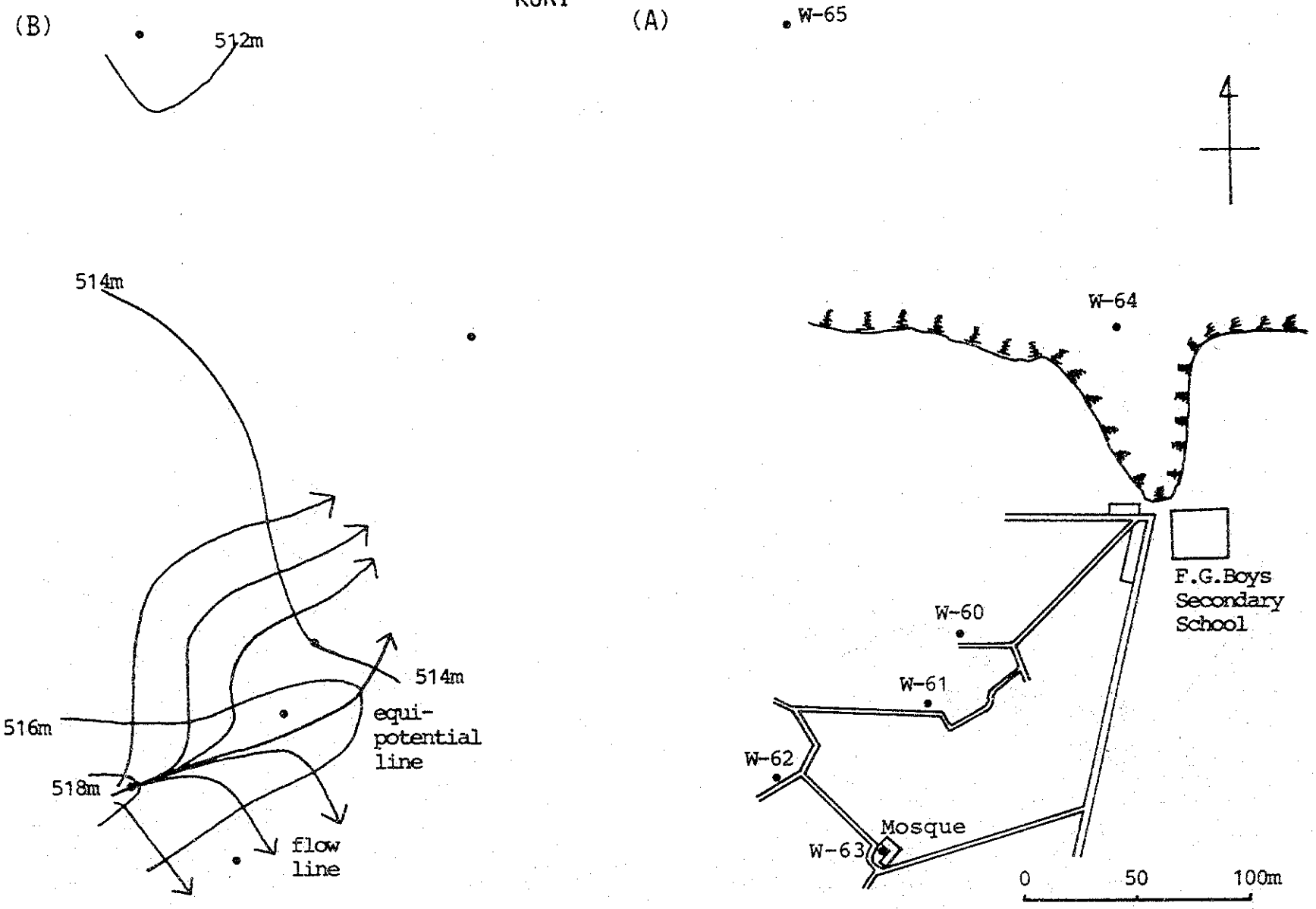


FIG. IV-7 DETAILED OBSERVATIONS OF UNCONFINED GROUND WATER IN KURI VILLAGE