

TABLE - 13  
SCARP-WISE CROPPING INTENSITIES

Years	Percent of C.C.A.						
	Scarp-I	Scarp-II	Scarp-III	Scarp-IV	Scarp Peshawar	Scarp Khair Pur	Scarp North Rohari
Target	120.00	141.87	126.70	149.40	176.10	152.00	149.20
1959-60	80.23	-	-	-	-	-	-
1960-61	86.12	-	-	-	-	-	-
1961-62	90.42	-	-	-	-	-	-
1962-63	97.56	-	-	-	-	-	-
1963-64	104.72	-	-	-	-	-	-
1964-65	108.20	-	-	-	-	-	-
1965-66	115.67	-	-	-	-	-	-
1966-67	108.83	-	-	-	-	39.49	-
1967-68	102.39	-	-	-	-	105.81	-
1968-69	114.54	-	79.50	65.09	-	105.87	-
1969-70	111.63	-	80.70	69.27	-	107.36	-
1970-71	111.26	-	81.00	75.13	-	99.64	-
1971-72	111.58	-	81.30	81.18	-	105.02	-
1972-73	113.57	94.40	87.10	85.80	-	109.84	88.52
1973-74	114.77	107.51	94.50	89.16	-	110.32	87.48
1974-75	114.63	107.45	93.60	91.31	138.10	111.36	95.28
1975-76	116.64	109.55	96.70	93.18	137.85	112.13	98.80
1976-77	118.35	111.35	98.90	94.34	141.28	113.10	101.19
1977-78	120.53	114.60	98.70	96.90	143.94	113.79	105.42
1978-79	123.23	114.55	106.10	101.99	153.00	114.47	109.87
1979-80	122.41	117.72	107.40	104.45	157.31	136.14	114.64
1980-81	122.48	118.29	112.50	104.56	163.59	137.29	113.54
1981-82	122.18	120.98	115.90	104.19	162.92	137.51	114.15
1982-83	121.16	120.51	120.70	107.51	166.98	137.50	100.26
1983-84	120.58	118.25	124.60	107.28	167.13	117.86	111.33
1984-85	121.39	121.07	120.30	105.58	167.60	118.67	117.66
1985-86	118.10	123.03	121.10	109.22	169.91	118.60	106.89
1986-87	116.84	121.91	128.30	113.49	169.56	117.23	110.71
1987-88	115.20	121.02	128.30	107.42	170.00	119.58	109.58

Source: SCARPS Monitoring Organization, WAPDA, Lahore.

TABLE - 14  
SCARP-WISE CROP YIELDS

Years	Metric ton/Hectare															
	Scarp-I				Scarp-II				Scarp-III				Scarp-IV			
	S.Cane	Cotton	Rice	Wheat	S.Cane	Cotton	Rice	Wheat	S.Cane	Cotton	Rice	Wheat	S.Cane	Cotton	Rice	Wheat
Target	46.10	1.11	2.31	2.31	46.10	1.11	2.30	2.30	69.15	1.38	2.77	2.31	69.16	1.38	3.23	2.77
1959-60	30.40	0.55	1.38	1.11	-	-	-	-	-	-	-	-	-	-	-	-
1960-61	26.20	0.57	0.98	0.89	-	-	-	-	-	-	-	-	-	-	-	-
1961-62	27.40	0.63	1.05	0.80	-	-	-	-	-	-	-	-	-	-	-	-
1962-63	29.00	0.68	1.18	0.79	-	-	-	-	-	-	-	-	-	-	-	-
1963-64	28.10	0.68	1.23	0.93	-	-	-	-	-	-	-	-	-	-	-	-
1964-65	37.00	0.73	1.52	1.27	-	-	-	-	-	-	-	-	-	-	-	-
1965-66	44.90	0.62	1.97	1.35	-	-	-	-	-	-	-	-	-	-	-	-
1966-67	45.80	0.60	1.97	1.53	-	-	-	-	-	-	-	-	-	-	-	-
1967-68	47.90	0.70	2.17	1.68	-	-	-	-	-	-	-	-	-	-	-	-
1968-69	49.30	0.81	2.15	2.25	-	-	-	-	29.51	0.69	1.15	1.15	27.66	0.59	1.33	1.13
1969-70	42.00	0.76	2.08	2.08	-	-	-	-	30.43	0.69	1.20	1.15	27.66	0.59	1.34	1.18
1970-71	41.40	0.63	2.13	2.09	41.02	0.59	1.48	1.38	34.58	0.69	1.29	1.20	28.40	0.59	1.33	1.19
1971-72	43.30	0.64	2.24	2.14	48.43	0.68	1.98	1.94	33.55	0.80	1.30	1.42	28.12	0.60	1.32	1.22
1972-73	32.20	0.69	1.98	1.94	48.58	0.69	2.08	2.03	34.33	0.71	1.45	1.43	28.95	0.58	1.29	1.24
1973-74	43.30	0.62	2.27	1.83	38.19	0.35	2.23	1.84	34.76	0.61	1.46	1.42	29.97	0.58	1.32	1.28
1974-75	40.60	0.63	1.92	1.52	42.83	0.53	2.13	1.92	31.54	0.83	1.29	1.48	31.53	0.59	1.35	1.55
1975-76	38.40	0.66	2.08	1.82	43.70	0.57	2.12	1.95	36.43	0.28	1.42	0.94	33.90	0.53	1.39	1.61
1976-77	38.00	0.48	1.76	1.77	38.31	0.47	1.94	2.06	33.66	0.88	1.47	1.52	34.39	0.51	1.38	1.53
1977-78	38.50	0.66	2.12	1.45	38.96	0.47	2.29	1.83	33.20	0.89	1.71	1.47	34.76	0.46	2.11	1.43
1978-79	36.80	0.52	2.30	1.73	36.84	0.44	2.40	1.94	31.49	0.55	2.03	1.59	36.42	0.40	2.21	1.53
1979-80	39.60	0.62	1.98	2.07	35.20	0.55	2.26	1.91	32.46	0.90	2.17	1.71	39.74	0.56	1.97	1.75
1980-81	44.30	0.86	1.98	2.08	37.93	0.63	2.24	1.96	37.50	0.92	2.19	1.75	45.64	0.54	1.98	1.89
1981-82	41.30	0.60	2.08	1.86	36.53	0.73	2.41	1.85	35.44	0.88	2.15	1.59	41.11	0.58	2.07	1.81
1982-83	36.80	0.54	1.96	1.87	37.80	0.76	1.89	1.83	36.62	0.87	2.23	1.61	37.15	0.50	2.03	1.83
1983-84	39.60	0.52	1.89	1.62	35.23	0.47	1.77	1.69	31.08	0.37	2.20	1.27	39.64	0.43	1.97	1.54
1984-85	37.10	0.68	1.74	1.74	33.98	0.99	1.73	1.69	35.37	0.91	2.21	1.66	36.97	0.43	1.84	1.61
1985-86	35.20	0.91	2.02	2.13	33.45	1.01	1.93	1.99	31.15	1.34	2.20	1.91	34.78	0.76	2.08	2.11
1986-87	41.40	0.67	2.02	1.66	38.79	1.96	1.96	1.72	36.11	1.34	2.19	1.72	40.62	0.56	2.13	1.58
1987-88	39.00	1.05	1.90	1.82	39.47	1.80	1.80	1.95	29.96	1.60	2.15	1.69	38.02	1.11	1.93	1.73

Source: SCARPS Monitoring Organization, WAPDA, Lahore.

Cont'd Table.14

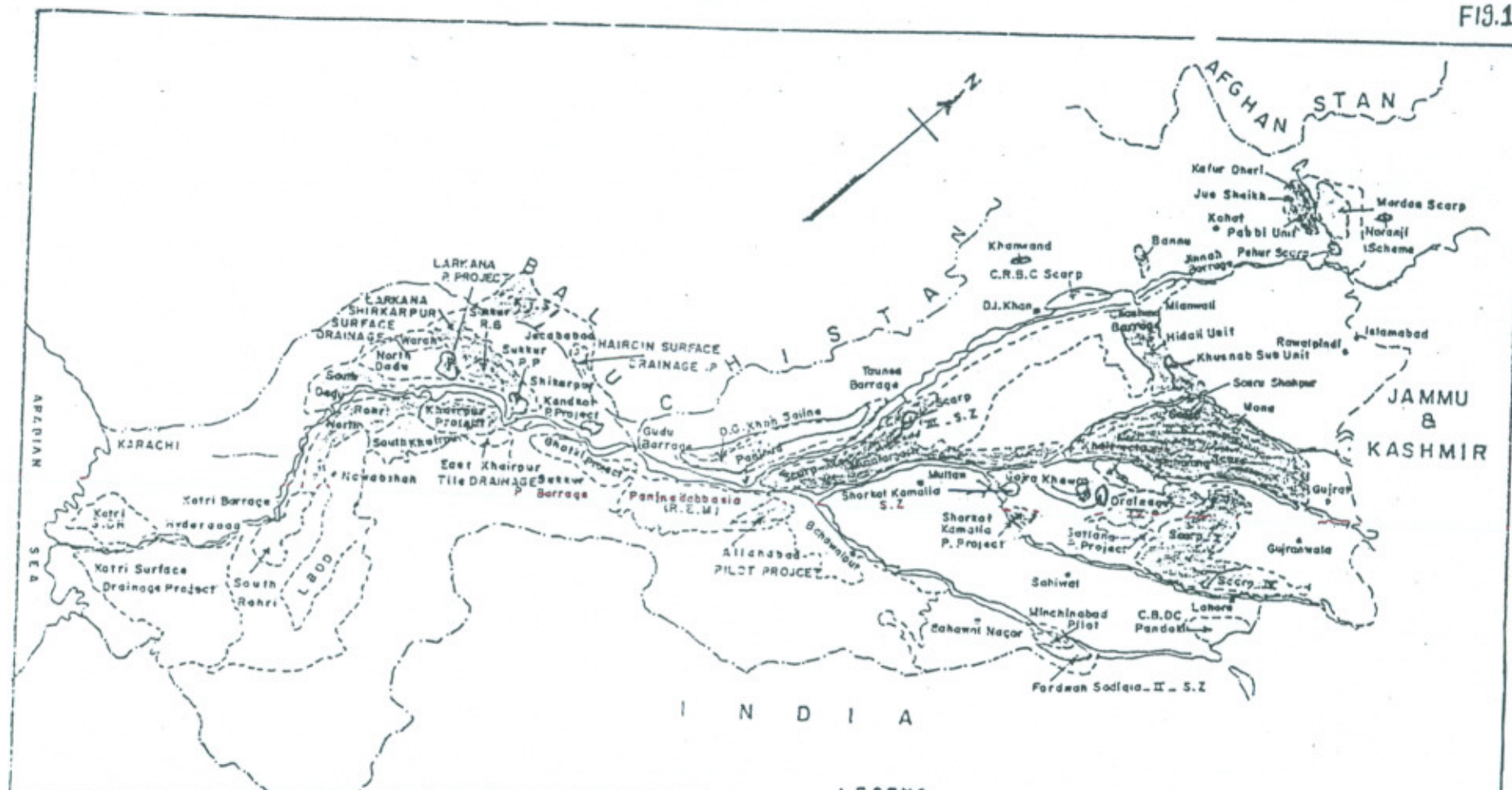
## SCARP-WISE CROP YIELDS

Years	Scarp Peshawar				Scarp Khair Pur				Scarp North Rohari			
	S.Cane	Maize	Rice	Wheat	S.Cane	Cotton	Rice	Wheat	S.Cane	Cotton	Rice	Wheat
Target	97.00	6.00	7.00	6.00	85.29	2.94	5.72	5.07	85.29	2.49	5.72	5.00
1966-67	-	-	-	-	18.40	0.64	0.92	1.23	-	-	-	-
1967-68	-	-	-	-	23.05	0.65	0.89	1.15	-	-	-	-
1968-69	2	-	-	-	27.66	0.74	1.35	1.19	-	-	-	-
1969-70	-	-	-	-	29.97	0.85	1.47	1.56	-	-	-	-
1970-71	-	-	-	-	34.12	1.13	1.71	1.72	-	-	-	-
1971-72	-	-	-	-	36.89	1.19	1.77	1.79	-	-	-	-
1972-73	-	-	-	-	40.58	1.24	1.89	1.84	35.95	0.40	1.40	1.63
1973-74	-	-	-	-	40.58	1.29	1.89	1.89	26.92	0.97	1.40	1.70
1974-75	41.41	1.66	1.29	1.41	41.50	1.29	1.89	1.92	34.57	1.02	1.53	1.65
1975-76	36.85	1.65	1.26	1.59	41.96	1.29	1.98	1.98	34.85	0.90	2.27	1.71
1976-77	41.95	1.52	1.25	1.99	42.42	1.24	1.98	2.02	36.14	0.83	2.26	1.67
1977-78	41.65	1.71	1.41	1.84	43.34	1.29	2.02	2.07	37.86	1.18	2.38	1.65
1978-79	42.01	1.75	1.58	2.20	43.80	1.10	2.04	2.16	39.18	0.95	2.51	1.96
1979-80	42.38	1.92	1.57	2.39	40.58	1.17	2.02	2.23	36.88	1.04	1.44	2.10
1980-81	43.61	1.93	1.67	2.34	40.58	1.24	2.02	2.23	37.89	1.23	1.87	2.26
1981-82	44.12	1.92	1.66	1.86	40.56	1.24	2.03	2.24	46.10	1.33	1.89	2.31
1982-83	44.26	1.92	1.71	2.21	40.64	1.24	2.03	2.22	41.05	1.44	0.88	2.50
1983-84	41.68	1.80	1.73	2.21	34.58	0.74	1.97	1.80	44.09	0.84	1.00	2.30
1984-85	41.65	1.73	1.76	2.17	37.06	0.89	2.02	2.01	34.58	1.01	2.30	1.88
1985-86	41.65	1.77	1.85	2.20	36.66	1.31	1.89	2.15	53.56	1.05	2.03	2.31
1986-87	41.77	1.78	2.07	2.05	39.54	0.99	1.98	2.17	53.56	1.05	2.03	2.31
1987-88	42.80	1.85	2.83	1.96	39.57	0.99	1.97	2.19	73.76	0.92	3.69	2.76

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3. Summary Evaluation and Historic Monitoring Data Release (upto 1987-88) Publication No. S.M. 94.
4. Monitoring and Evaluation of SCARPS (Graphical Presentation) S.M.O. Publication No. 118.
5. Evaluation Report of SCARP Peshawar (Pre-Project to 1986-87).
6. Tubewell Performance Report of SCARP Khairpur 1984-87 S.M. (South), Publication No. 68.
7. tubewell Performance Report of SCARP North Rohri (1984-87) S.M. (South) Publication No. 75.
8. Tubewell Performance Report SCARP-I (1986-88) Hydrological Monitoring Publication No. S.M. 106.
9. Tubewell Performance Report SCARP-II (1987-88) Hydrological Monitoring Publication No. S.M. 203.
10. Tubewell Performance Report SCARP-III (1986-88) Hydrological Monitoring Publication No. S.M. 105.
11. Tubewell Performance Report SCARP-IV (1987-88) Hydrological Monitoring.
12. Manual for operation and Maintenance of SCARP Tubewells. by Dr. Nazir Ahmad.

FIG.1



DETAILS OF SCARPS

Name of SCARP	Gross Area (M.H.)	No. of T/Wells			Year of	
		Fresh	Saline	Total	Commission	Completion
SCARP-I	0.493	2074	-	2074	1960	1963
SCARP-II	0.946	2205	821	3026	1971	1985
SCARP-III	0.518	1635	61	1696	1971	1981
SCARP-IV	0.226	940	-	940	1971	1981
North Rohri	0.321	1083	109	1192	1973	1979
Khair Pur	0.178	175	365	540	1967	1970
Peshawar	0.092	155	-	155	1974	1979

LEGEND

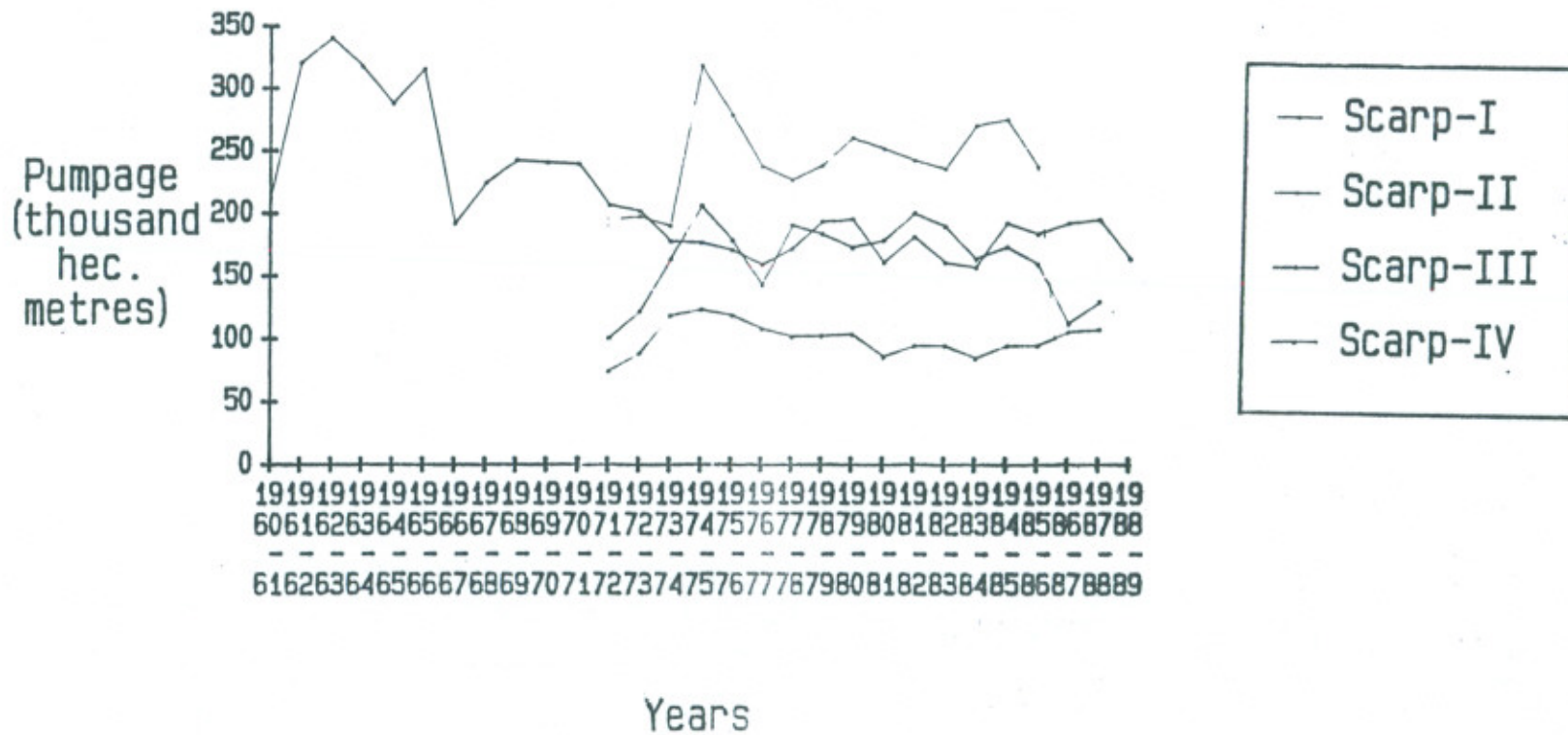
- RIVER
- INTERNATIONAL BOUNDARY
- COMMAND BOUNDARY
- SCARPS COMPLETED
- SCARPS UNDER STUDY



LOCATION MAP OF PAKISTAN  
SHOWING COMPLETED SCARPS  
UNDER STUDY

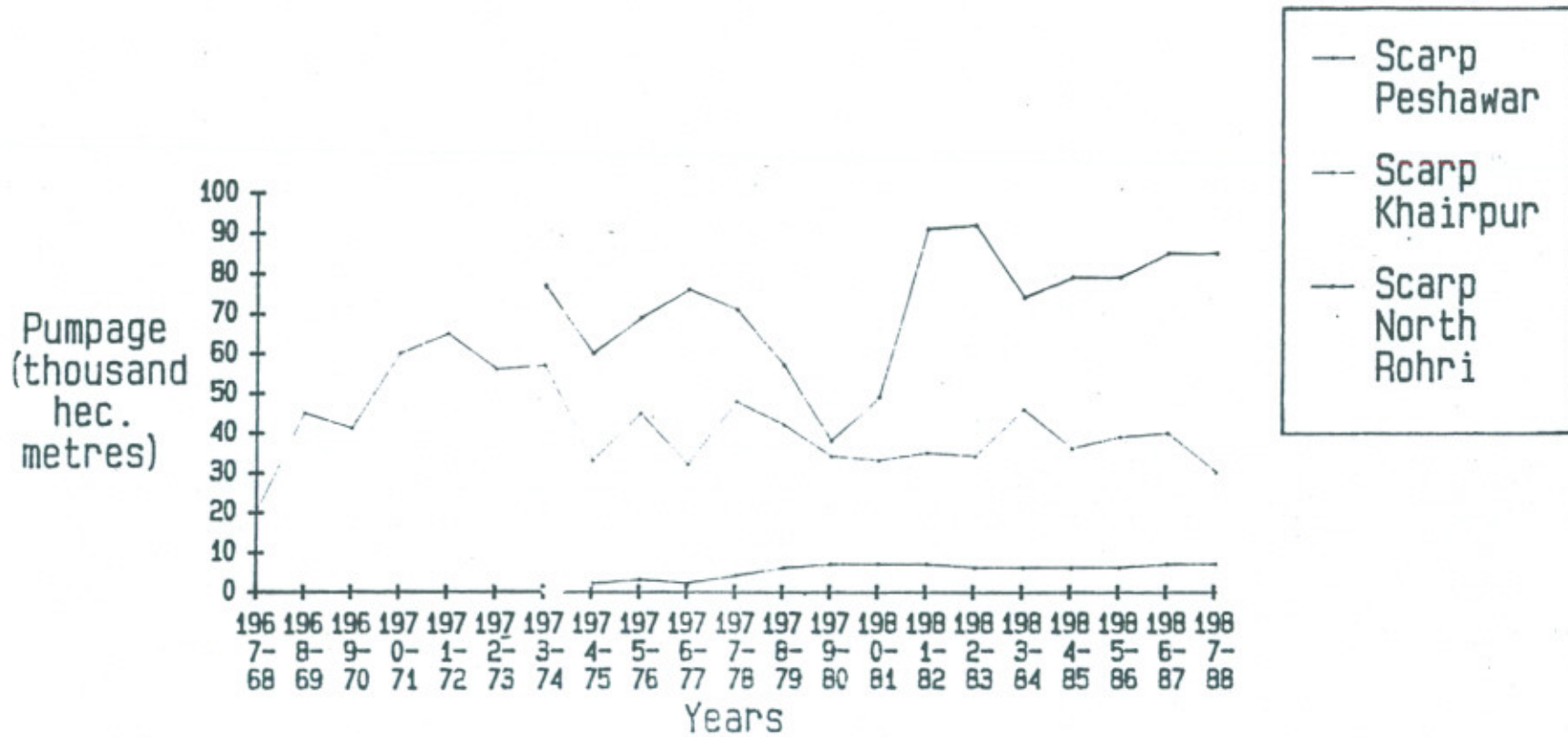
### Scarp wise Pumpage

Fig:- 2



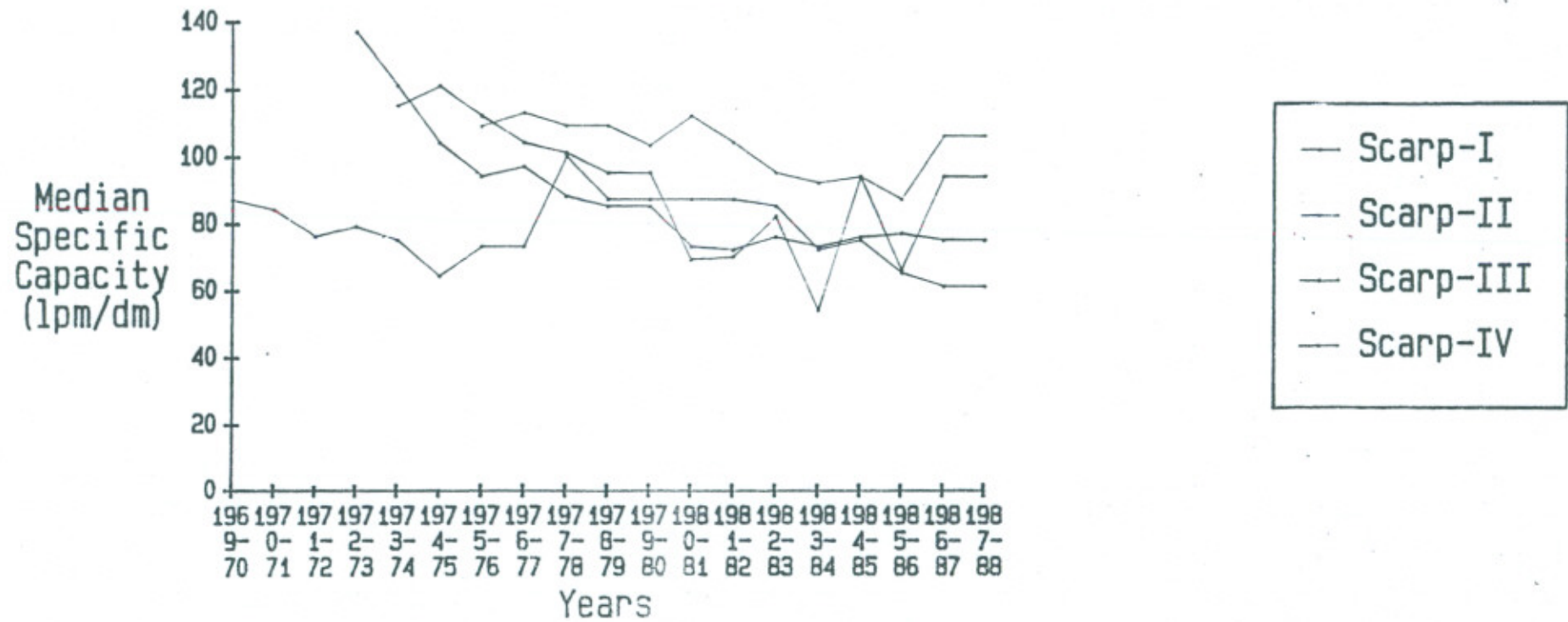
### Scarp wise Pumpage

Fig:— 3



Scarp Wise Median Specific Capacity

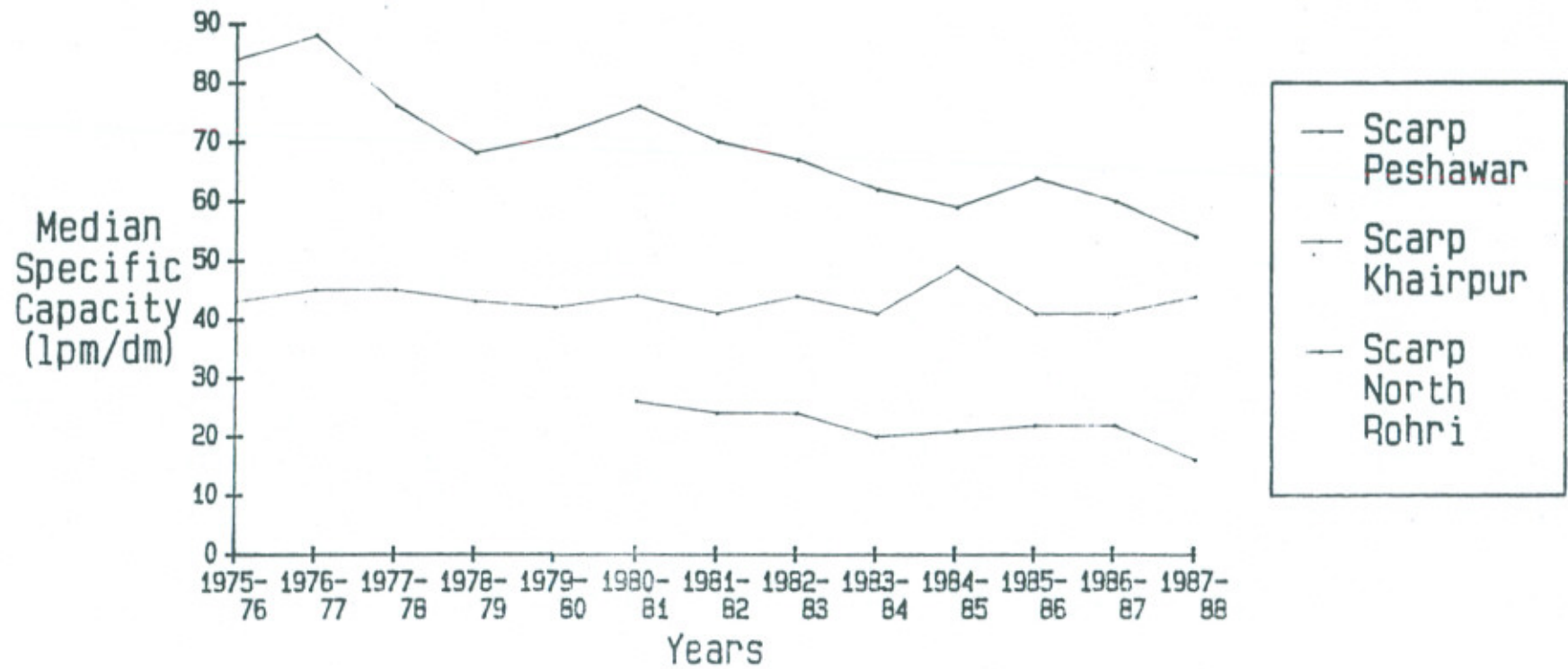
Fig: - 4





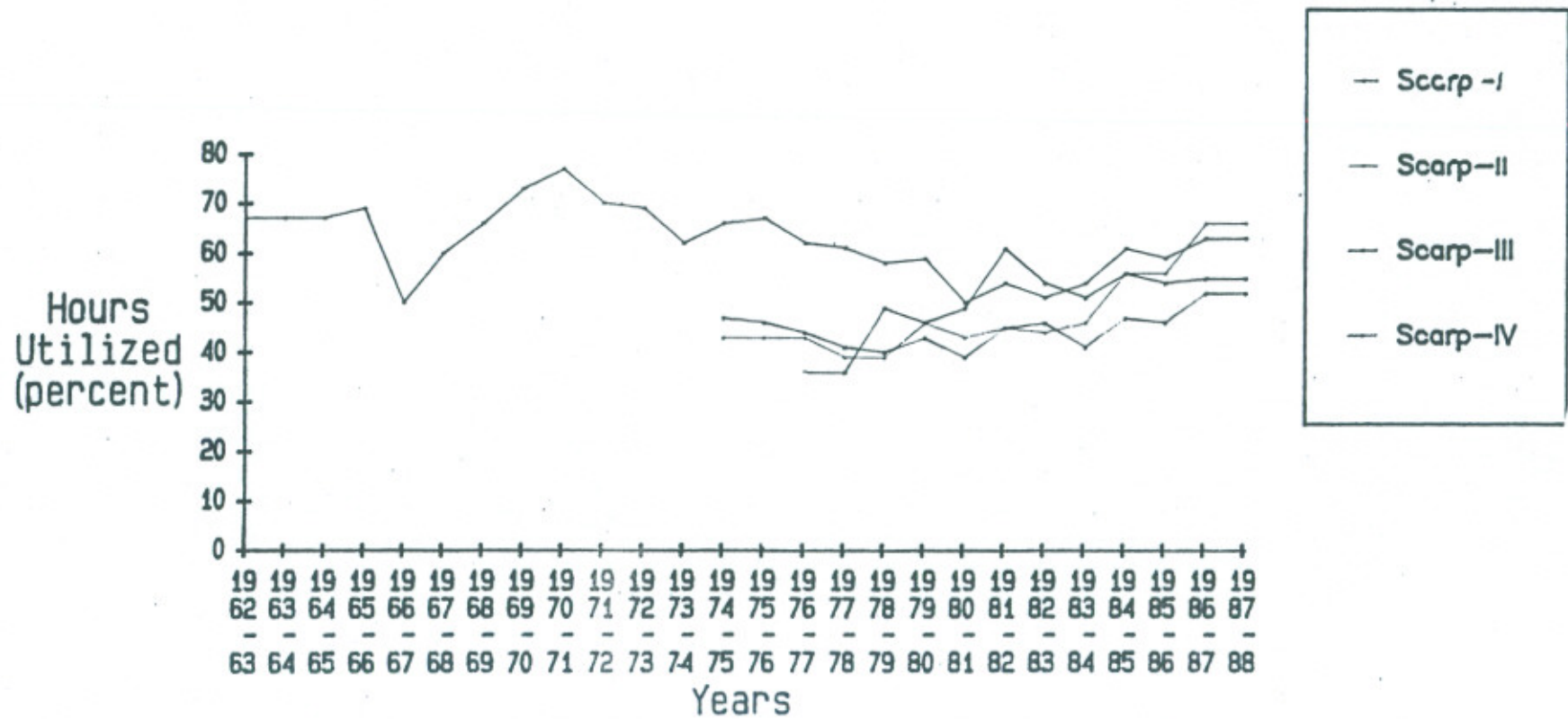
Scarp wise Median Specific Capacity

Fig:- 5



# Scarp wise Utilization Hours

Fig:— 6



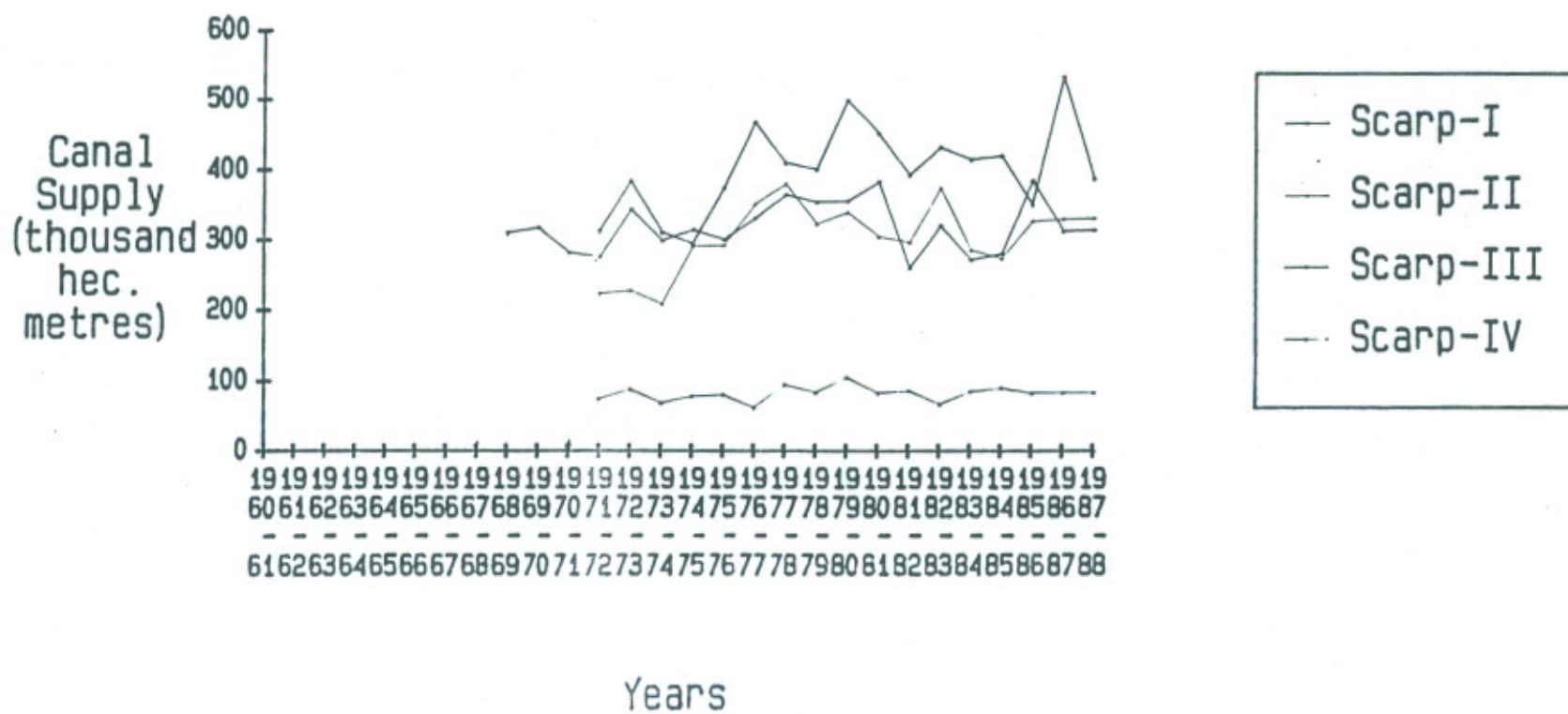
# Scarp wise Utilization Hours

Fig: - 7



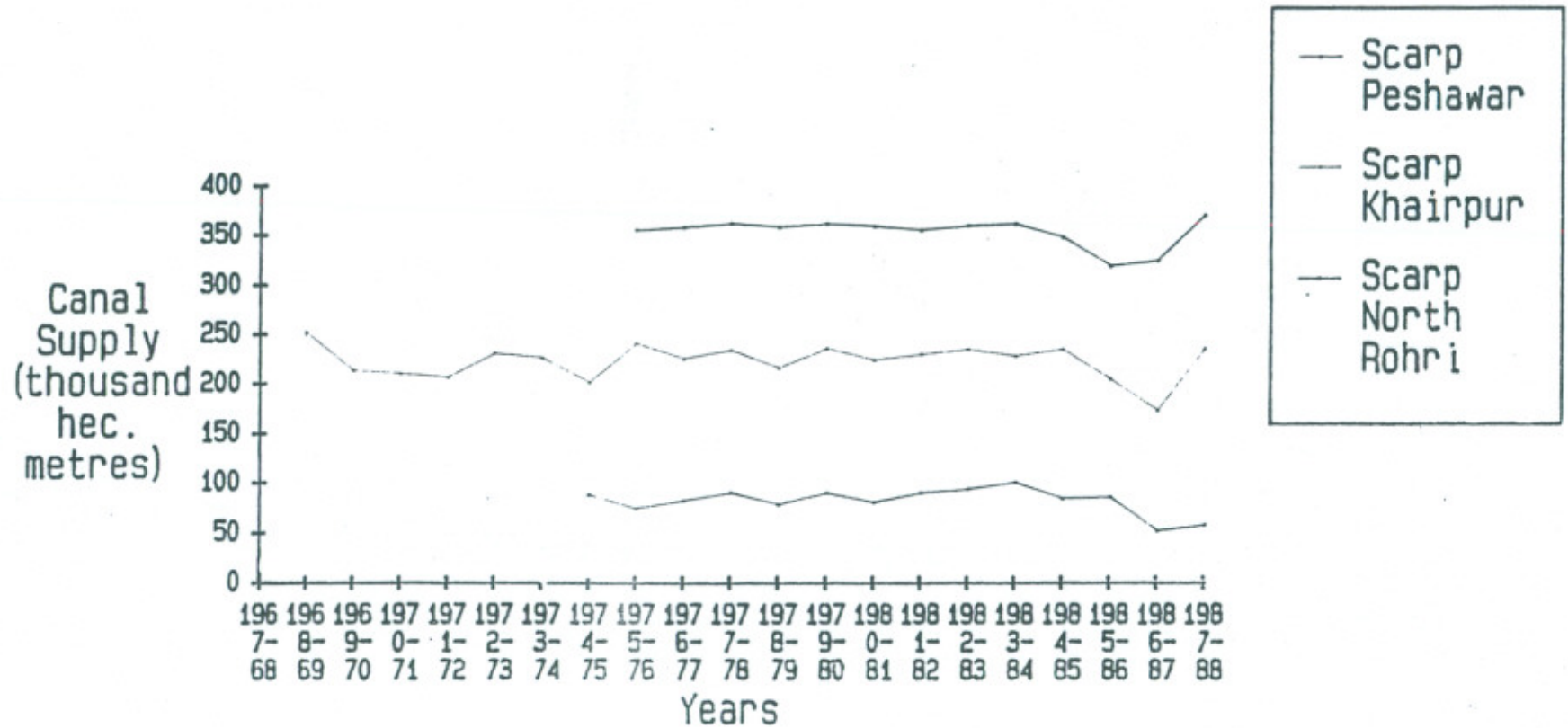
### Scarp wise Canal Supplies

Fig:- 8



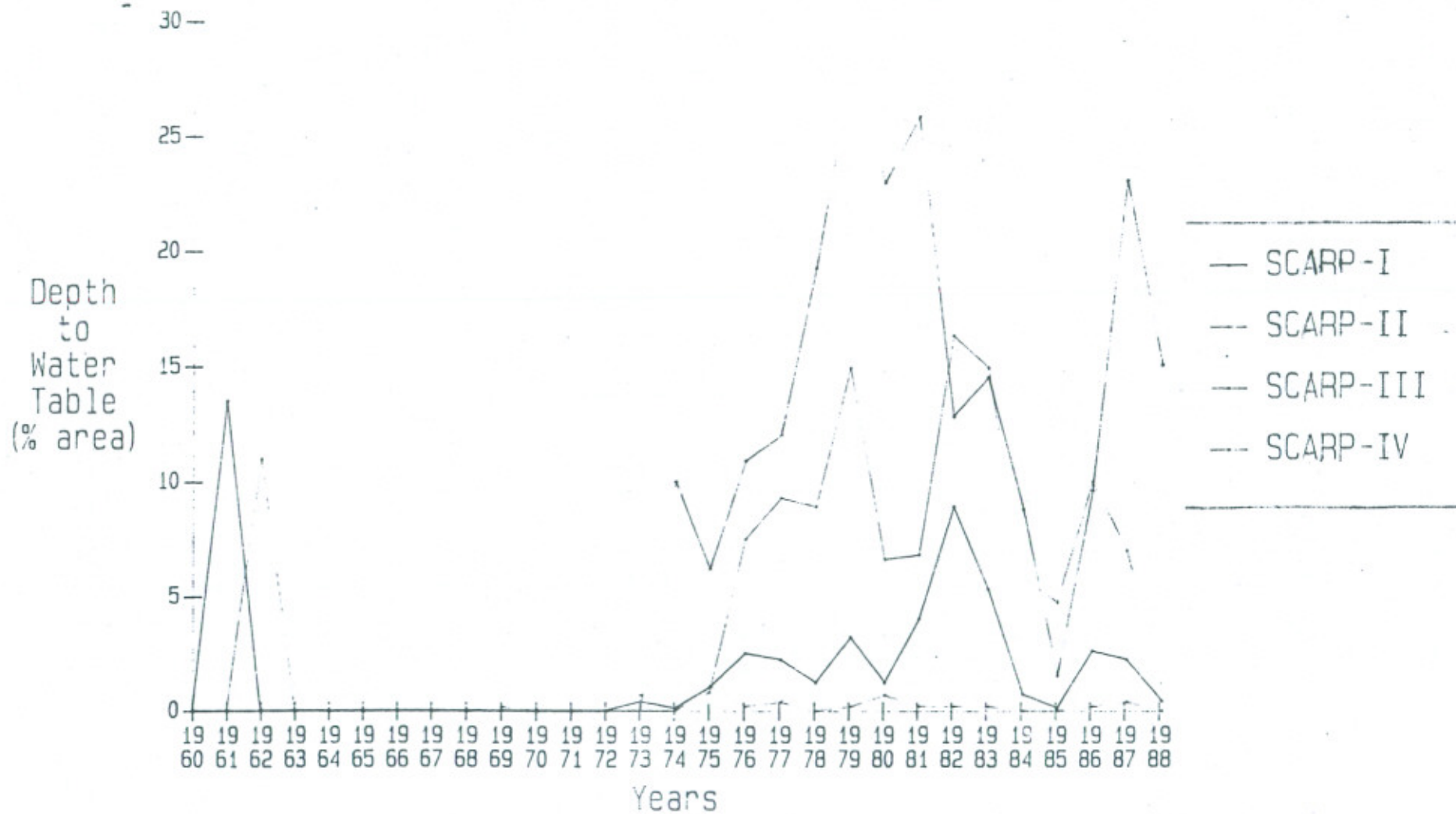
# Scarp wise Canal Supplies

Fig:— 9



Scanwise Area under 0-150 cm Depth to Water Table

Fig:- 10



Scarpwise Area under 0-150 cm Depth to Water Table

Fig:- II

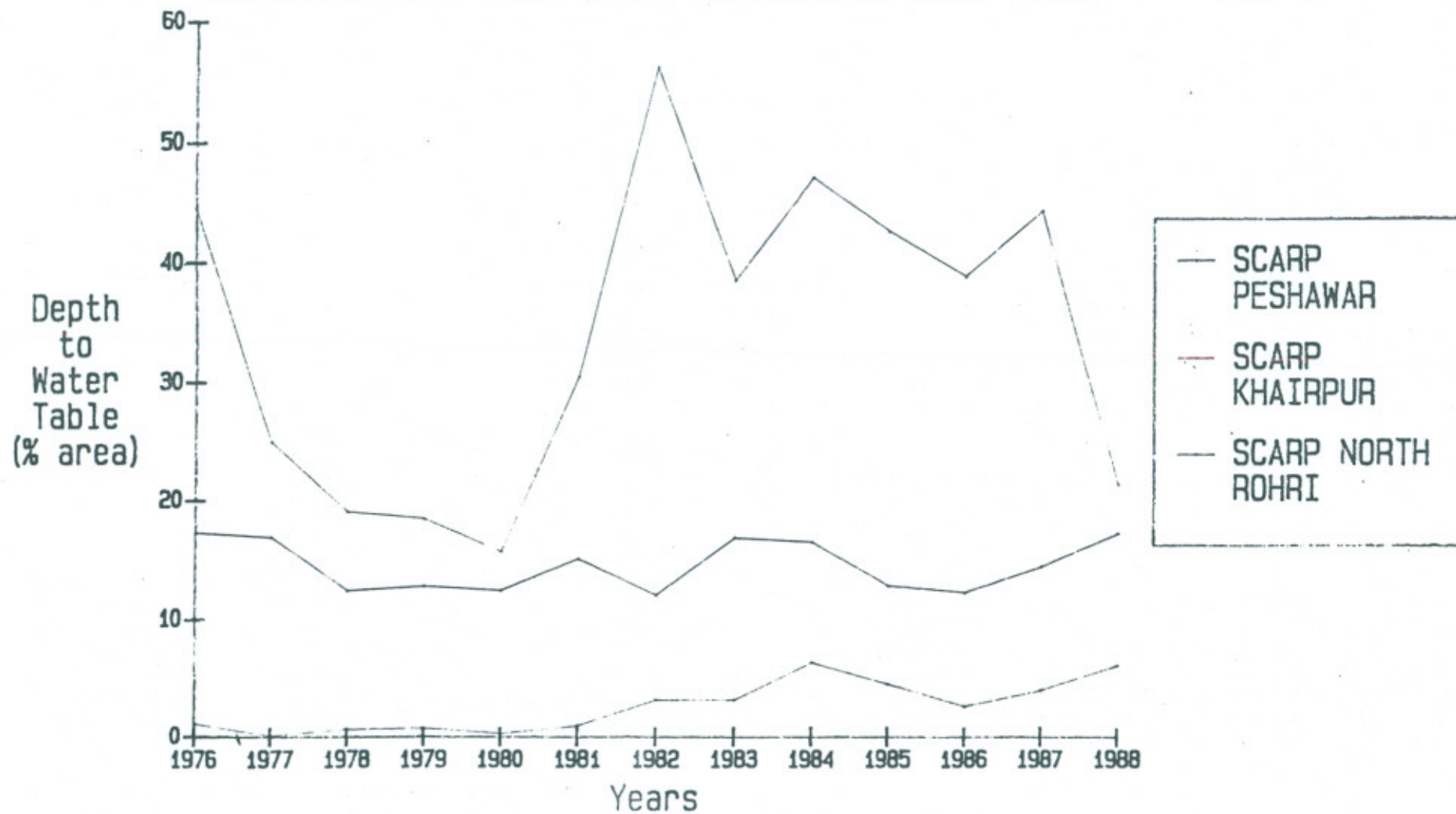
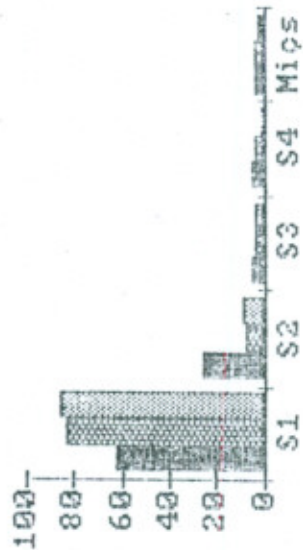
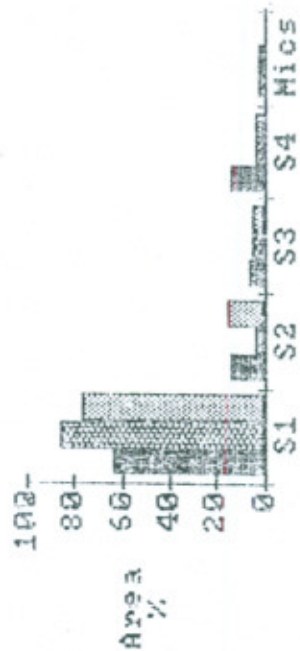


Fig.

Scarp-II



Scarp-I



Scarp-III



Scarp-IV

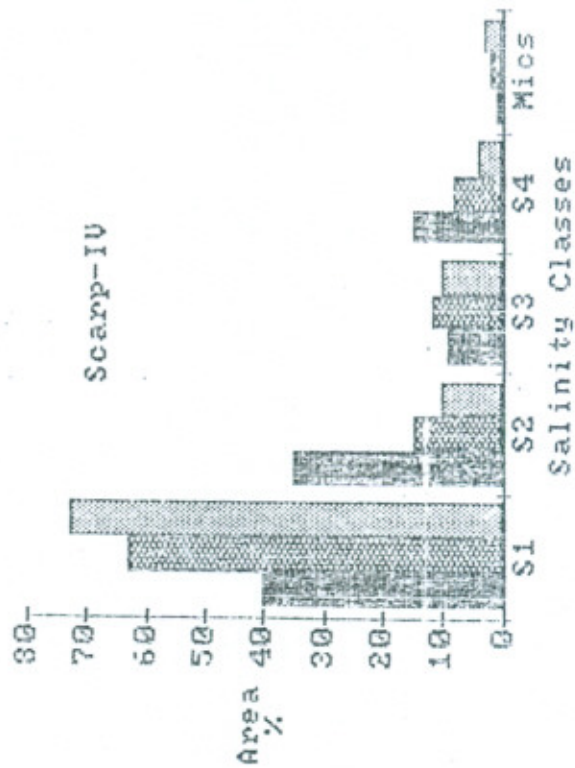




Fig. 17

Scarp Khairpur



Scarp Peshawar



Scarp North Rohri

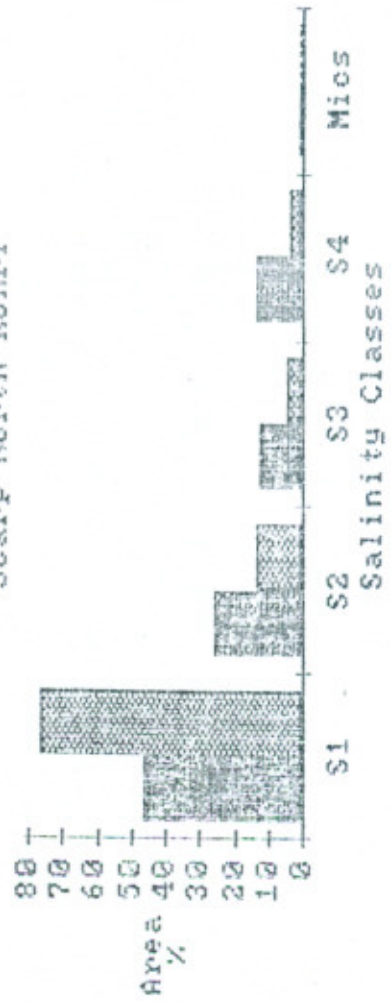


Fig. 14

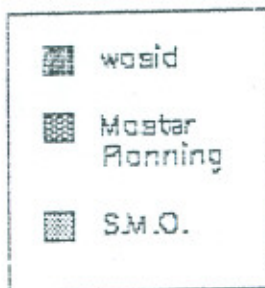
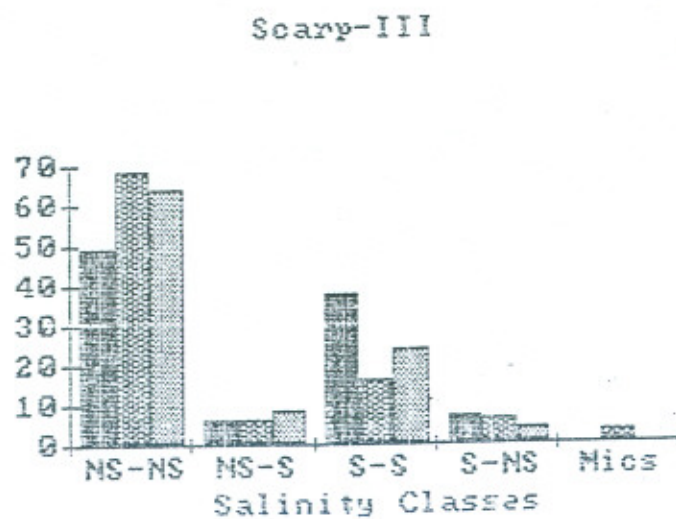
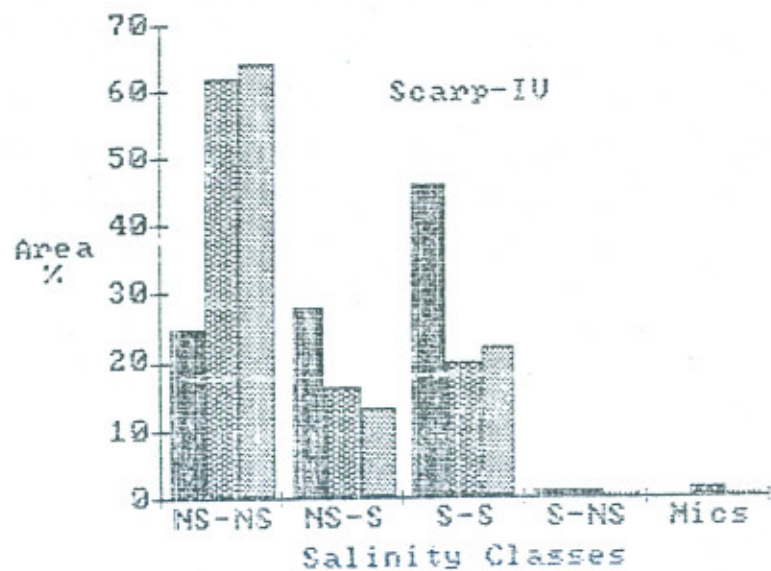
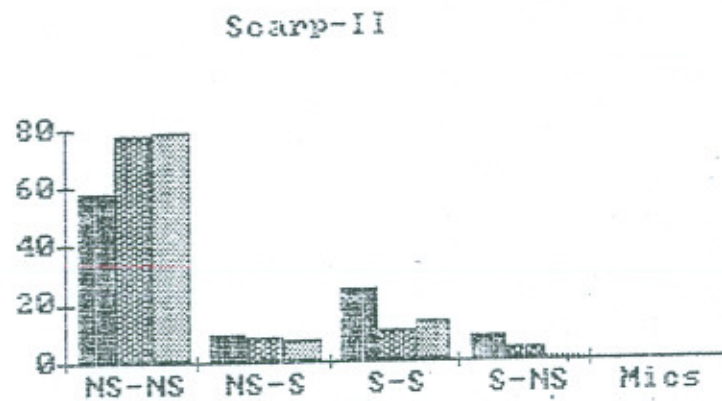
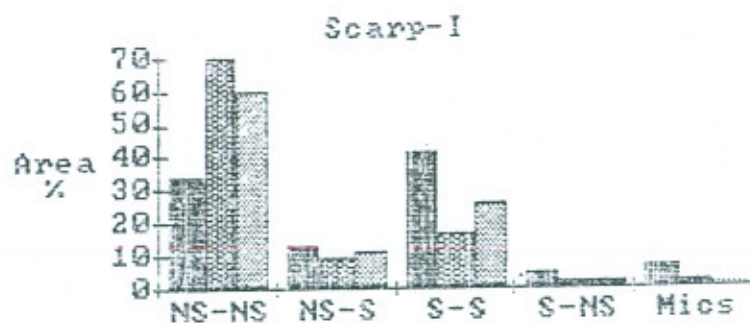


Fig. 15

Scarp Khairpur



Scarp North Rohri

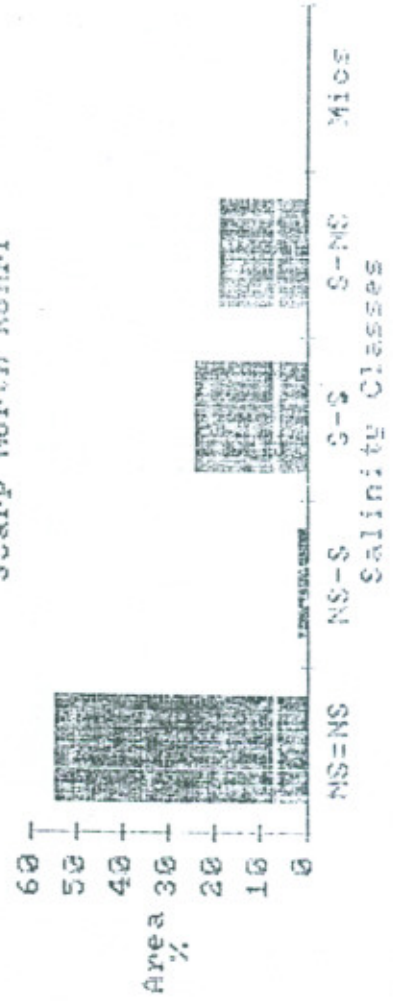


Fig. 16(i)

Water Quality Changes in SCARP-I

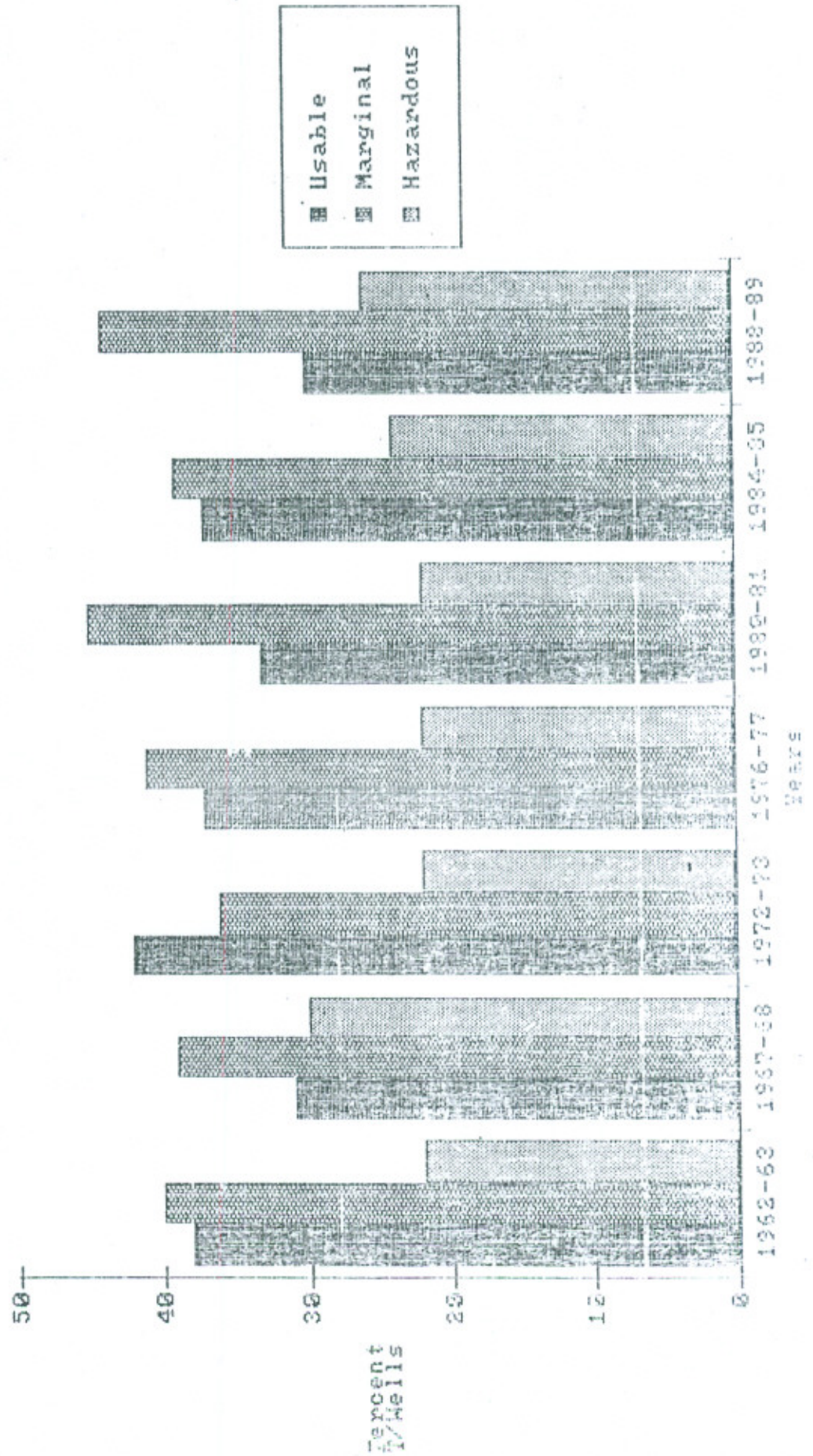


Fig. 16(ii)

Water Quality Changes in SCARP-II

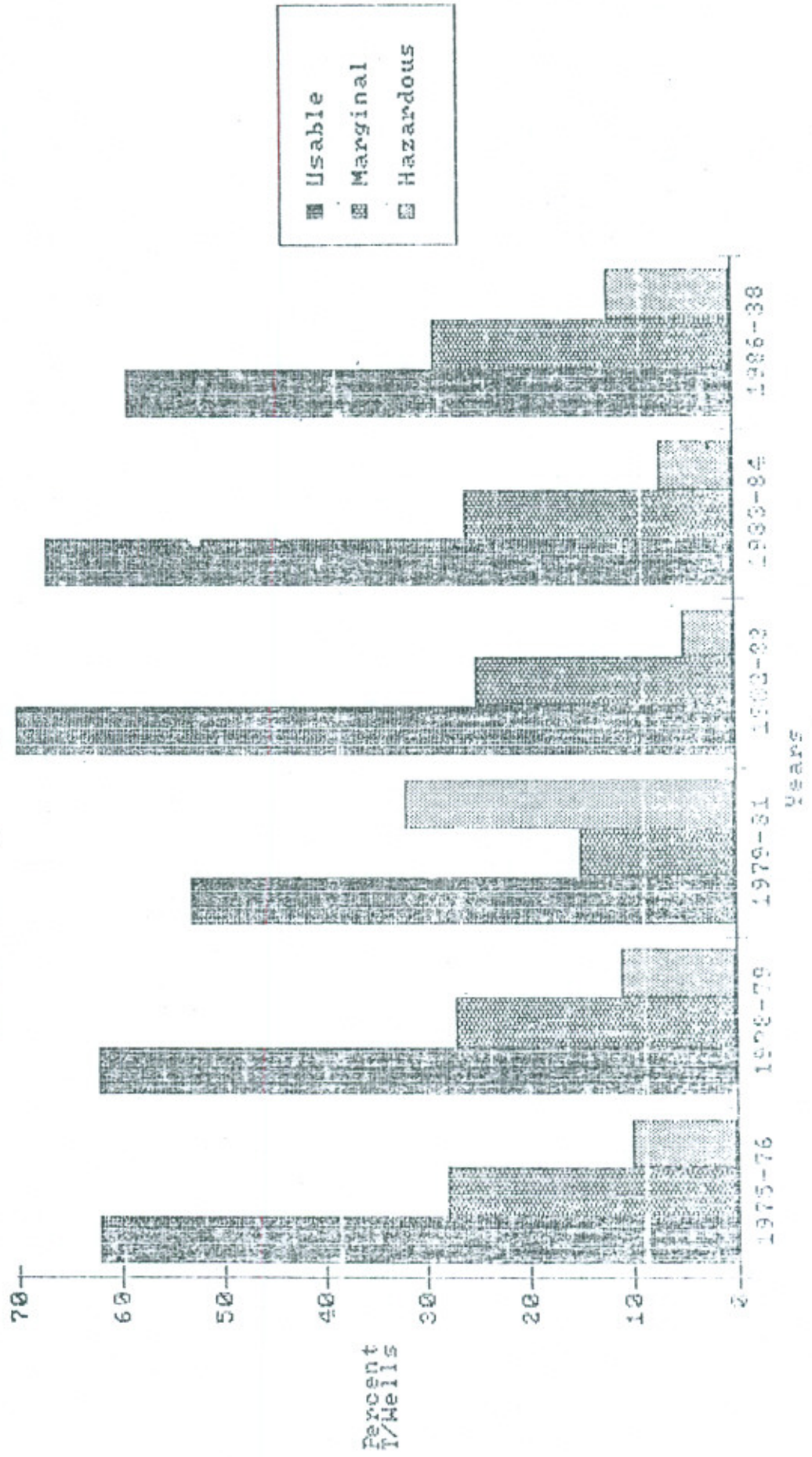


Fig. 16(iii).

Water Quality Changes in SCARP-III

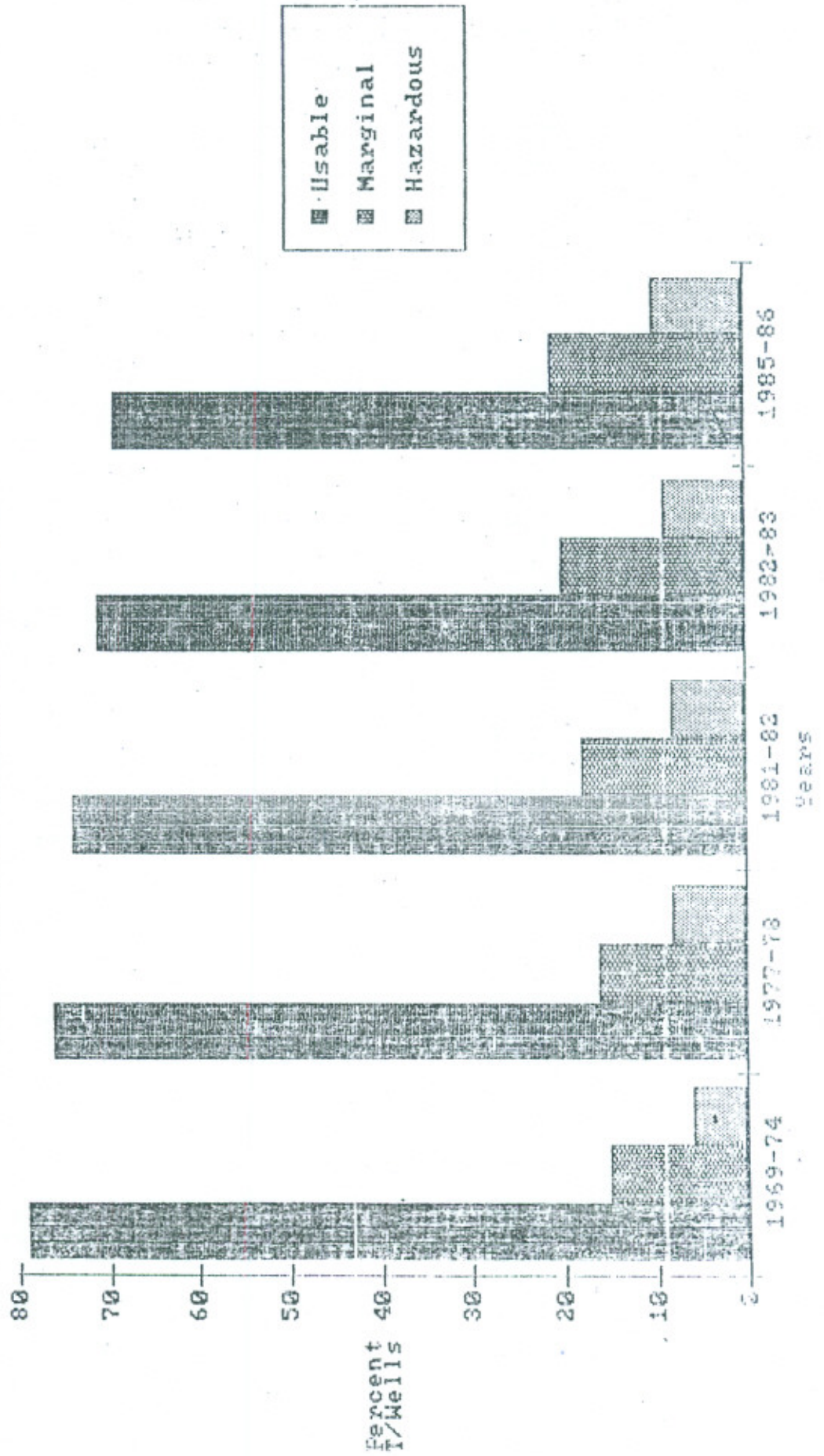


Fig. 16(iv)

Water Quality Changes in SCARP-IV

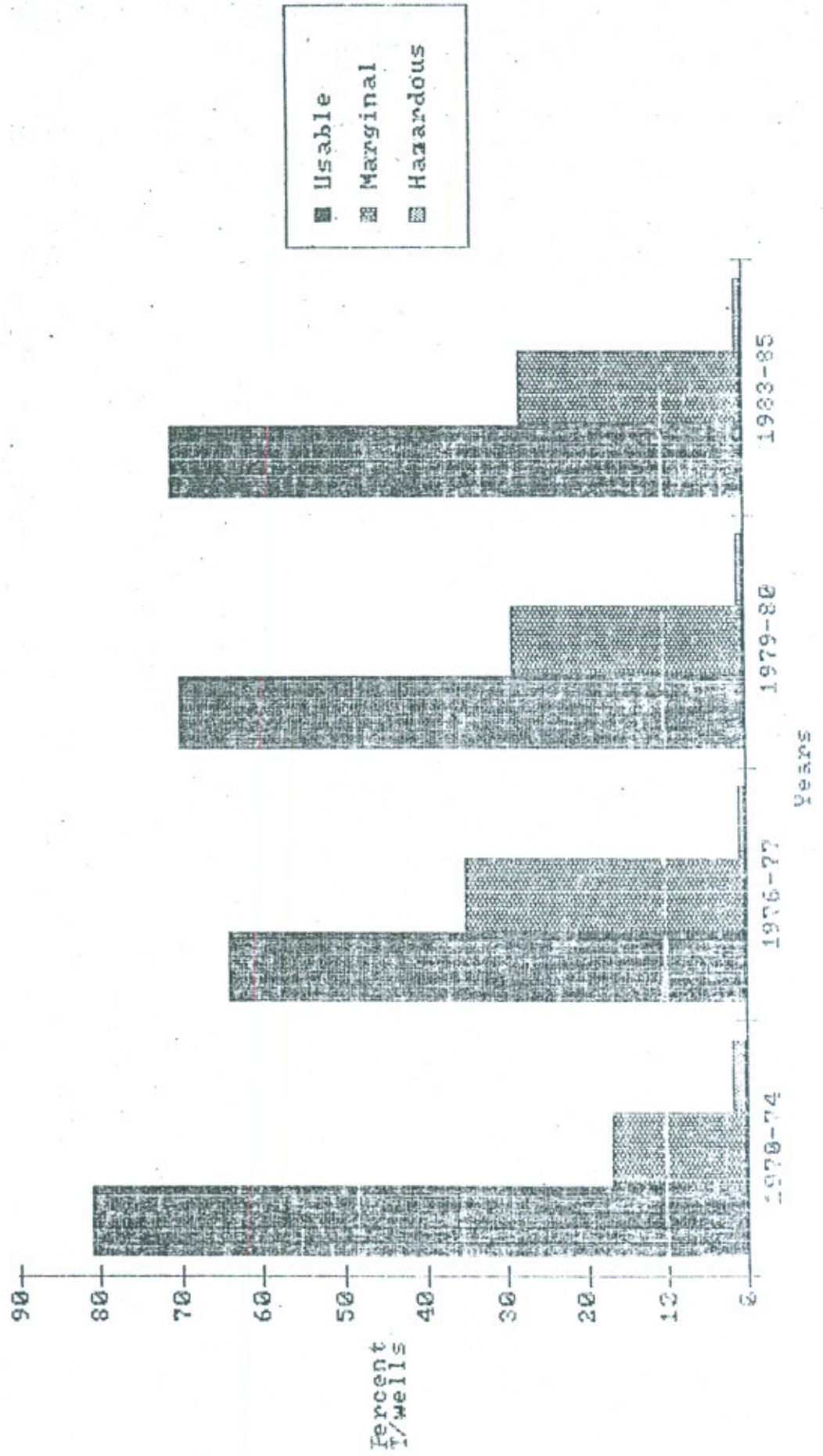


Fig. 16 (v)

Water Quality Changes in SCARP PESHAWAR

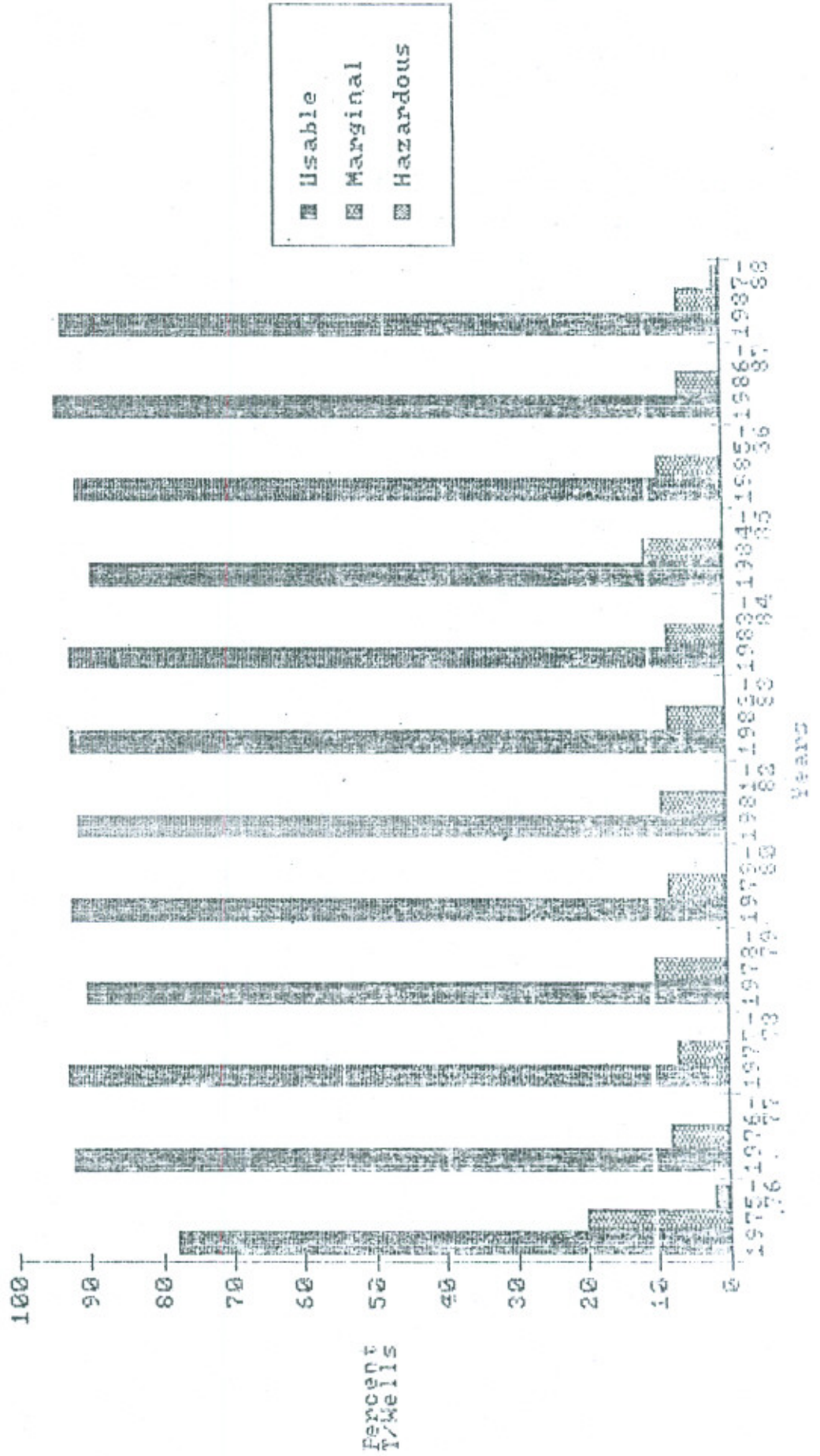
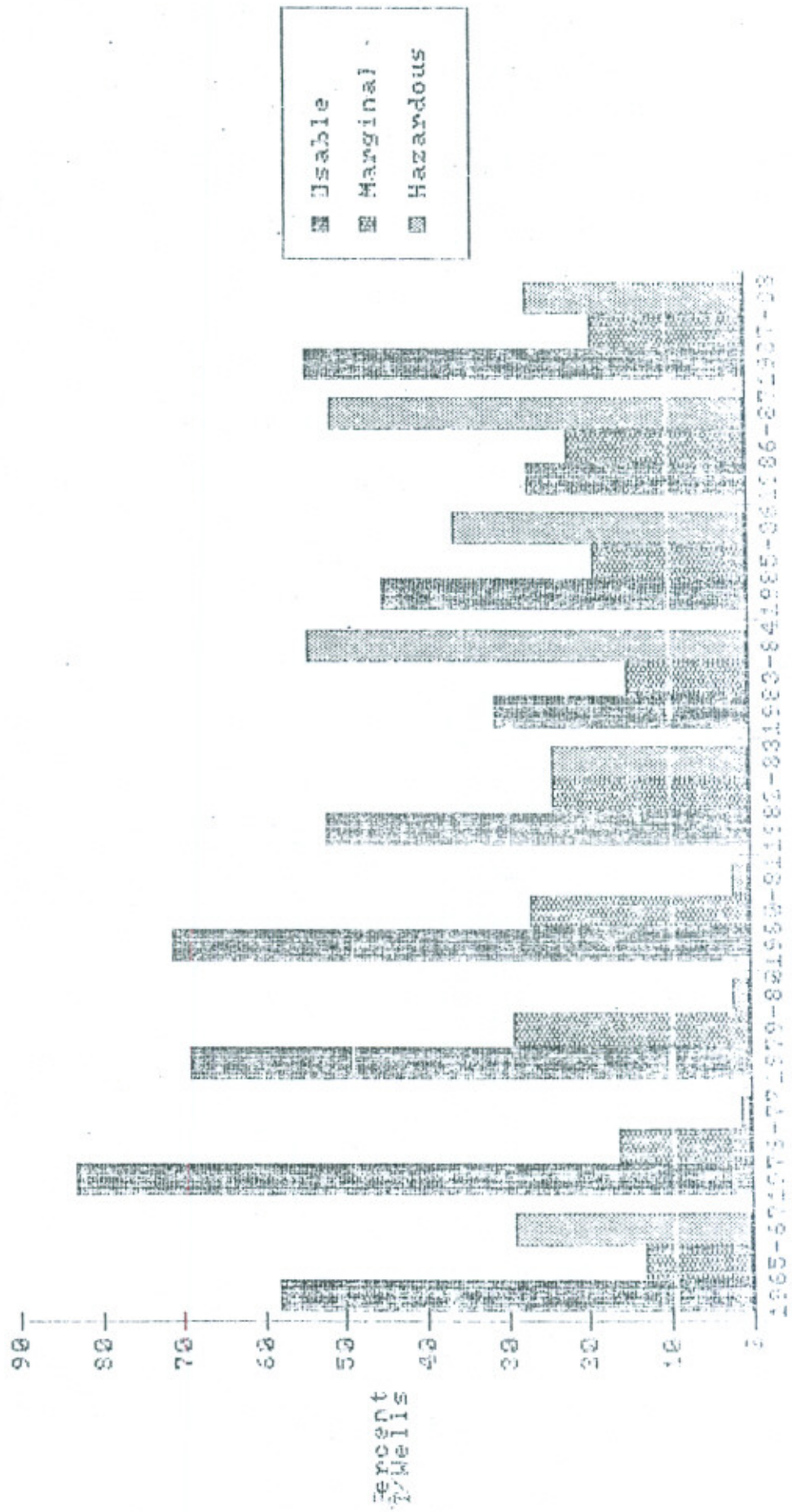




Fig. 16(vi)

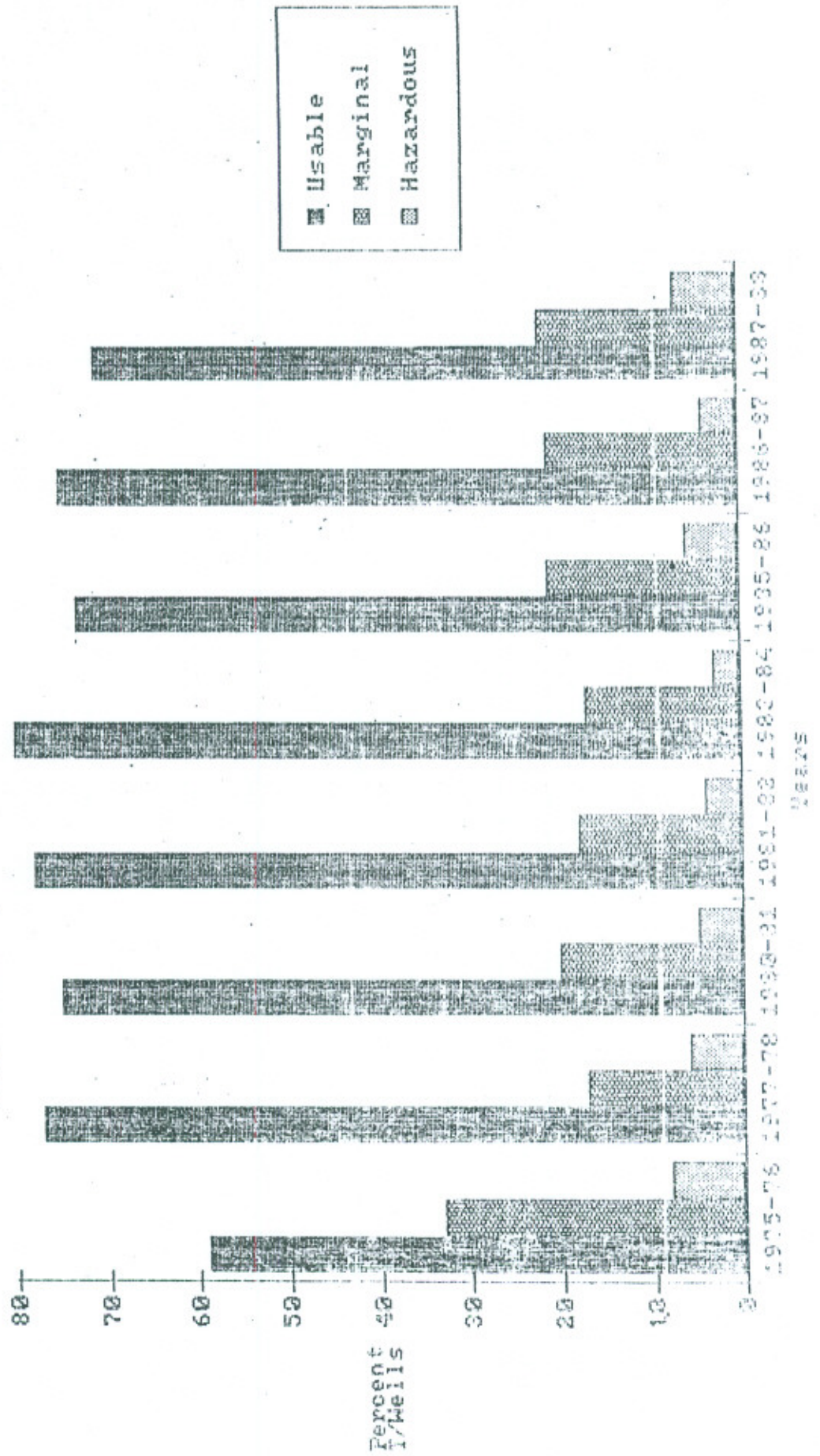
Water Quality Changes in SCARP KHAIRPUR



Years

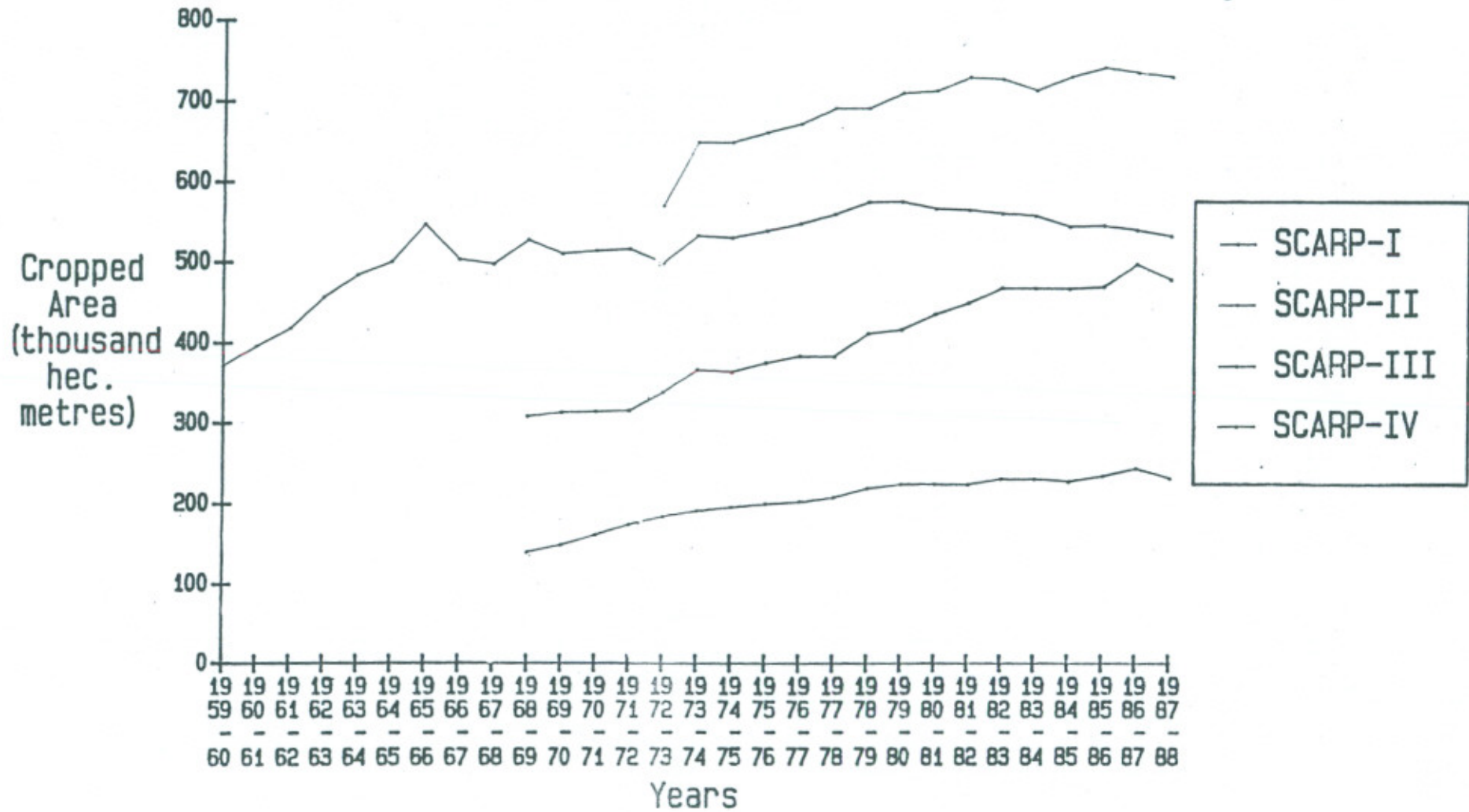
Fig. 16(vii)

Water Quality Changes in SCARP NORTH ROHRI



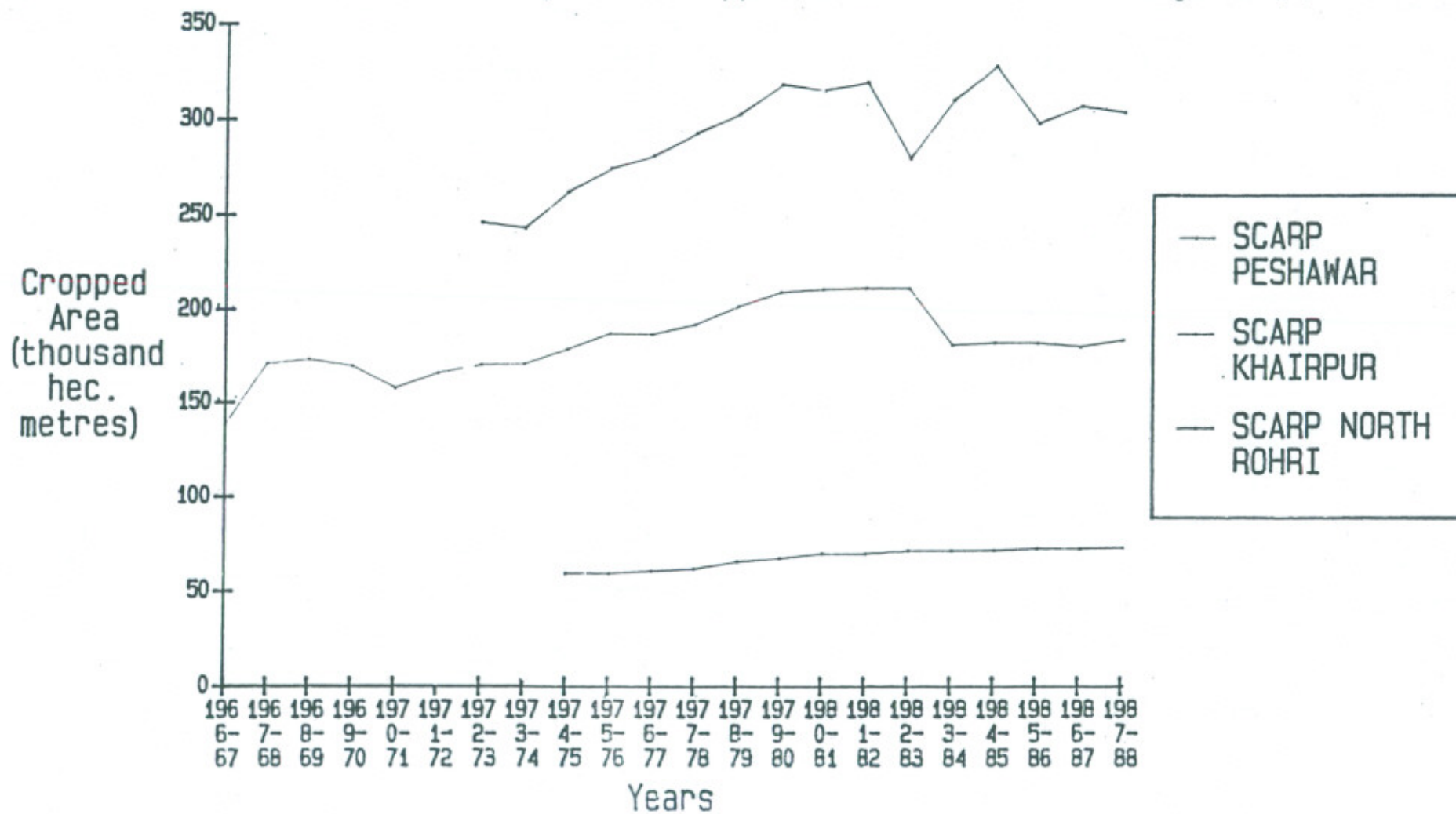
### Scarp wise Cropped Area

Fig:- 17 (A)



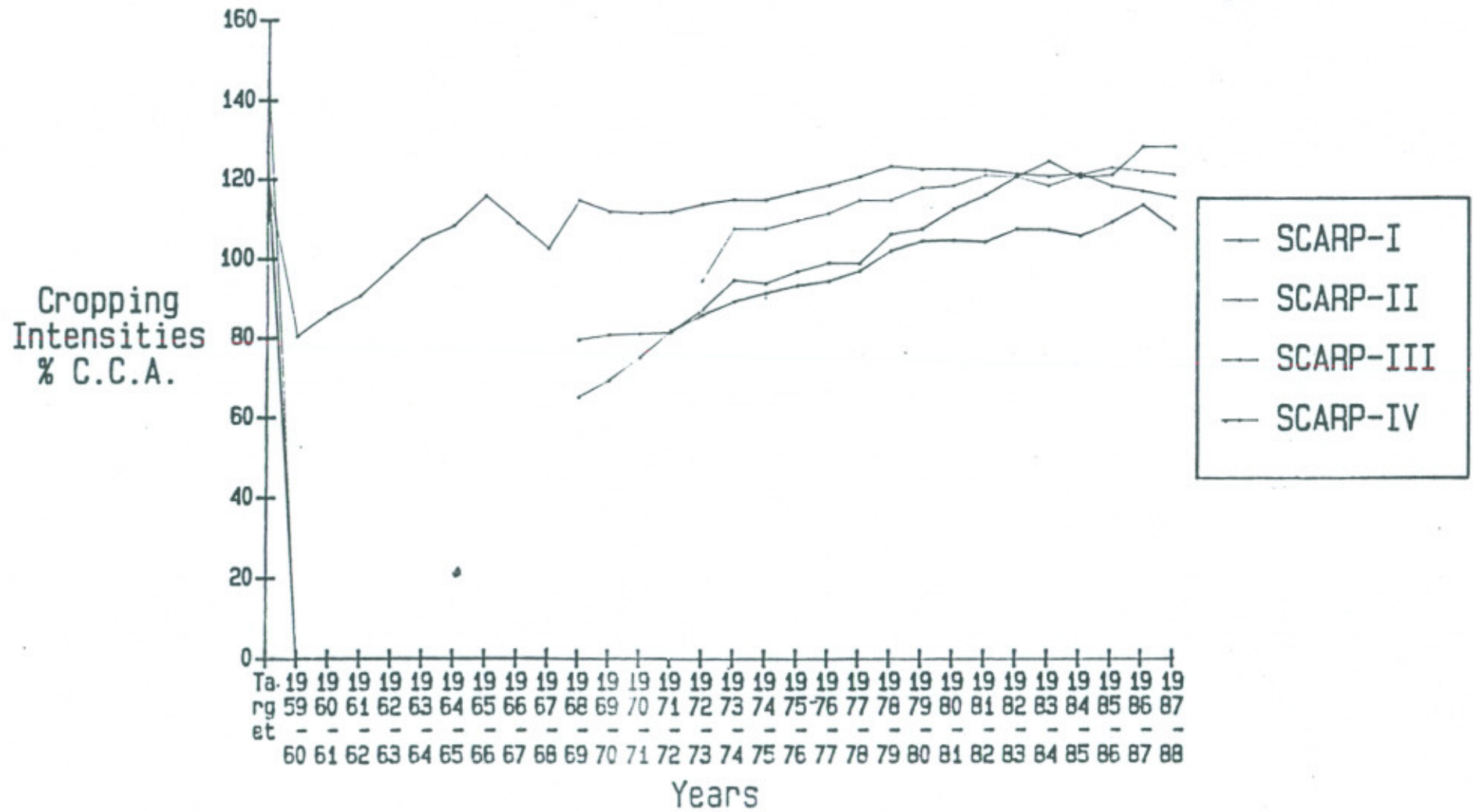
Scarp Wise Cropped Area

Fig:- 17 (B)



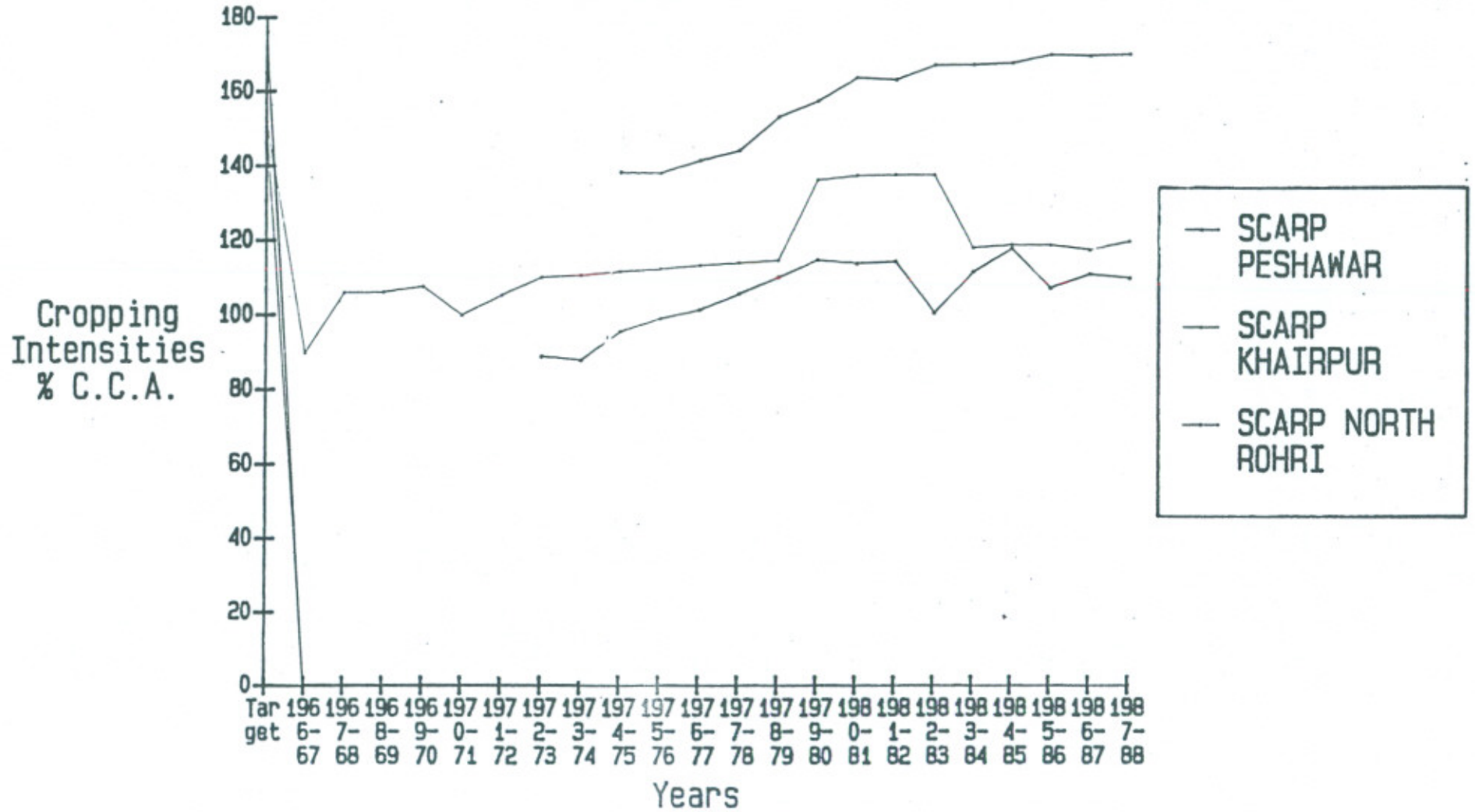
### Scarp wise Cropping Intensities

Fig:-18 (A)

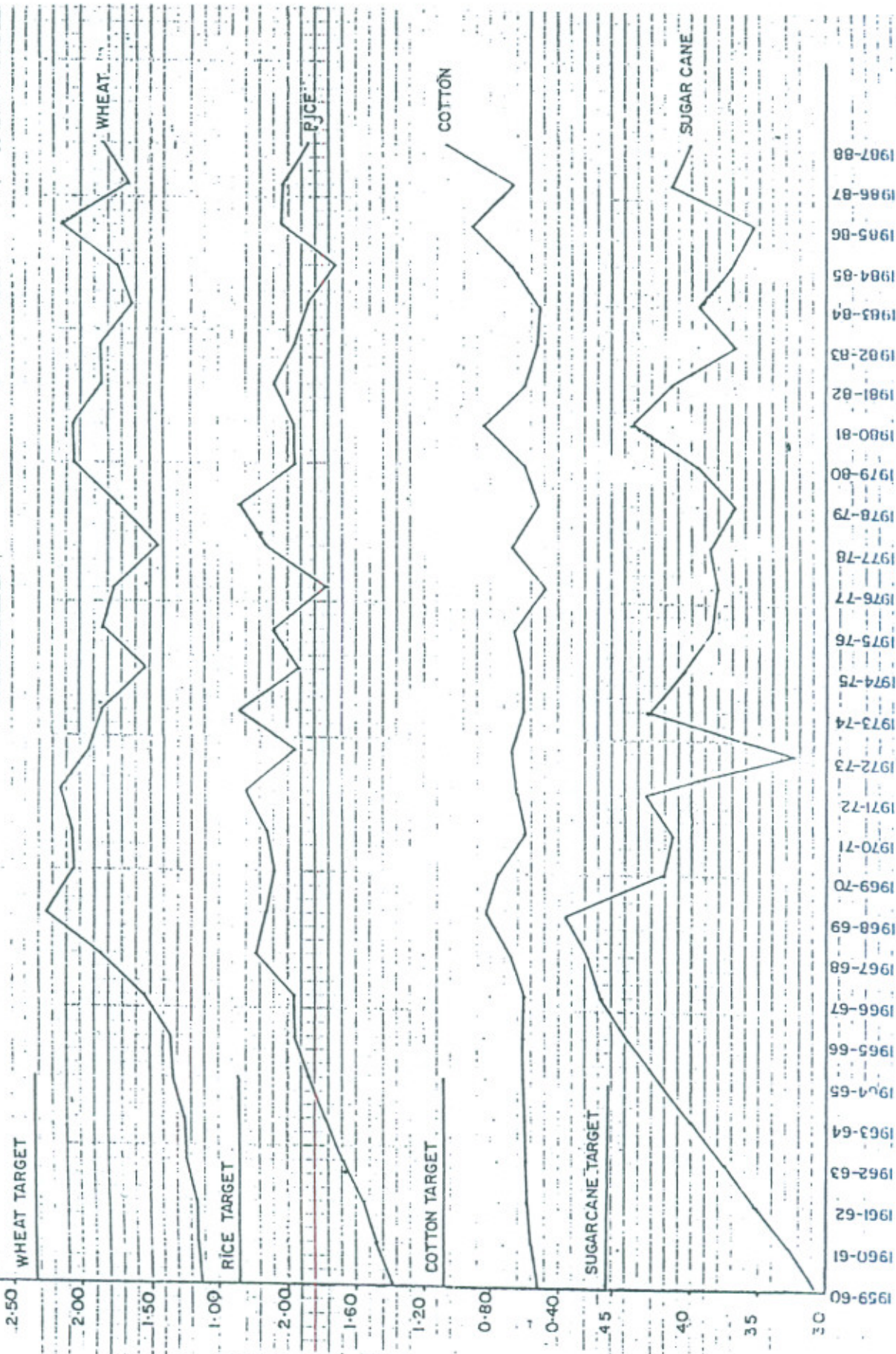


### Scarp wise Cropping Intensities

Fig:— 18 (B)



SCARP - I  
 CROP YIELDS - FIG. 6  
 (METRIC TON/HECTARE)



**SCARP-II**  
**CROP YIELDS 1981-1988**  
**(METRIC TON/HECTARE)**



WHEAT TARGET  
 RICE TARGET  
 COTTON TARGET  
 SUGARCANE TARGET

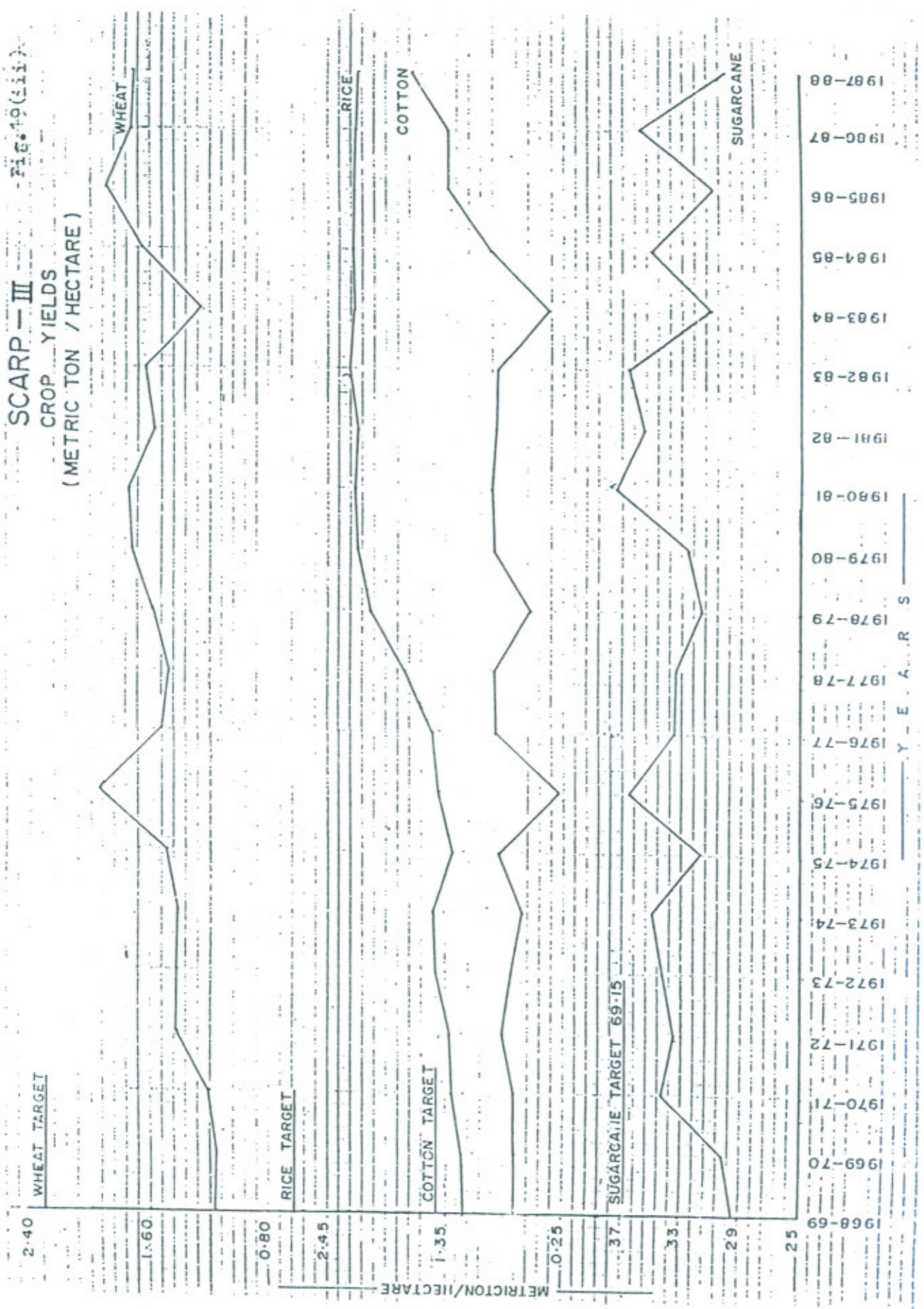
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1.8.0  
1.5.5  
1.3.0  
2.00  
1.50  
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45  
40  
35  
30

1981-82 1971-72 1972-73 1973-74 1974-75 1975-76 1976-77 1977-78 1978-79 1979-80 1980-81 1981-82 1982-83 1983-84 1984-85 1985-86 1986-87 1987-88

B-YEAR Y E A R S



SCARP - III  
 CROP YIELDS  
 (METRIC TON / HECTARE)



Y E A R S

**SCARP - IV**  
**CROP YIELDS**  
**METRIC TON/HECTARE**

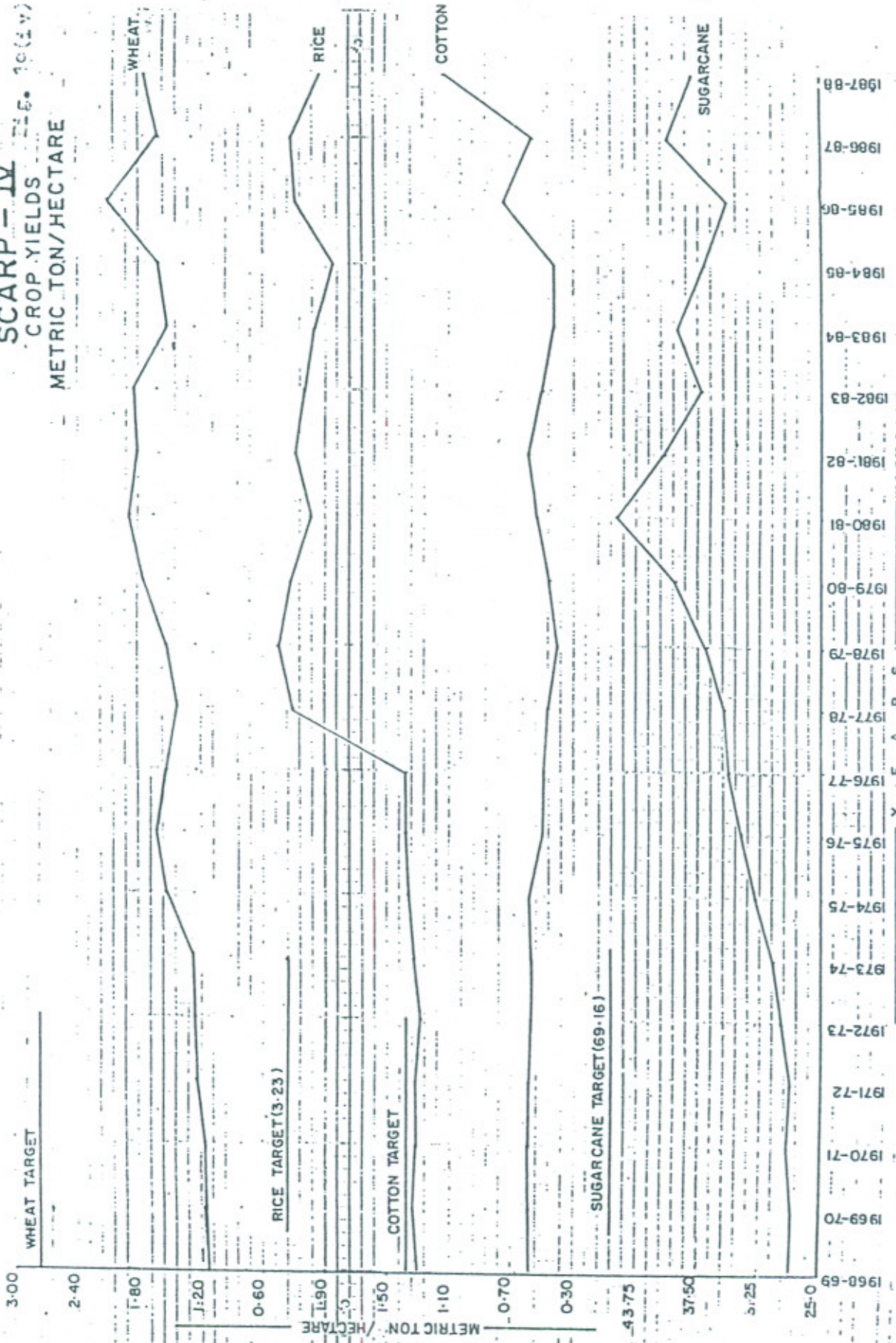


FIG: 19(v)

# SCARP PESHAWAR CROP YIELDS (METRIC TON/HECTARE)

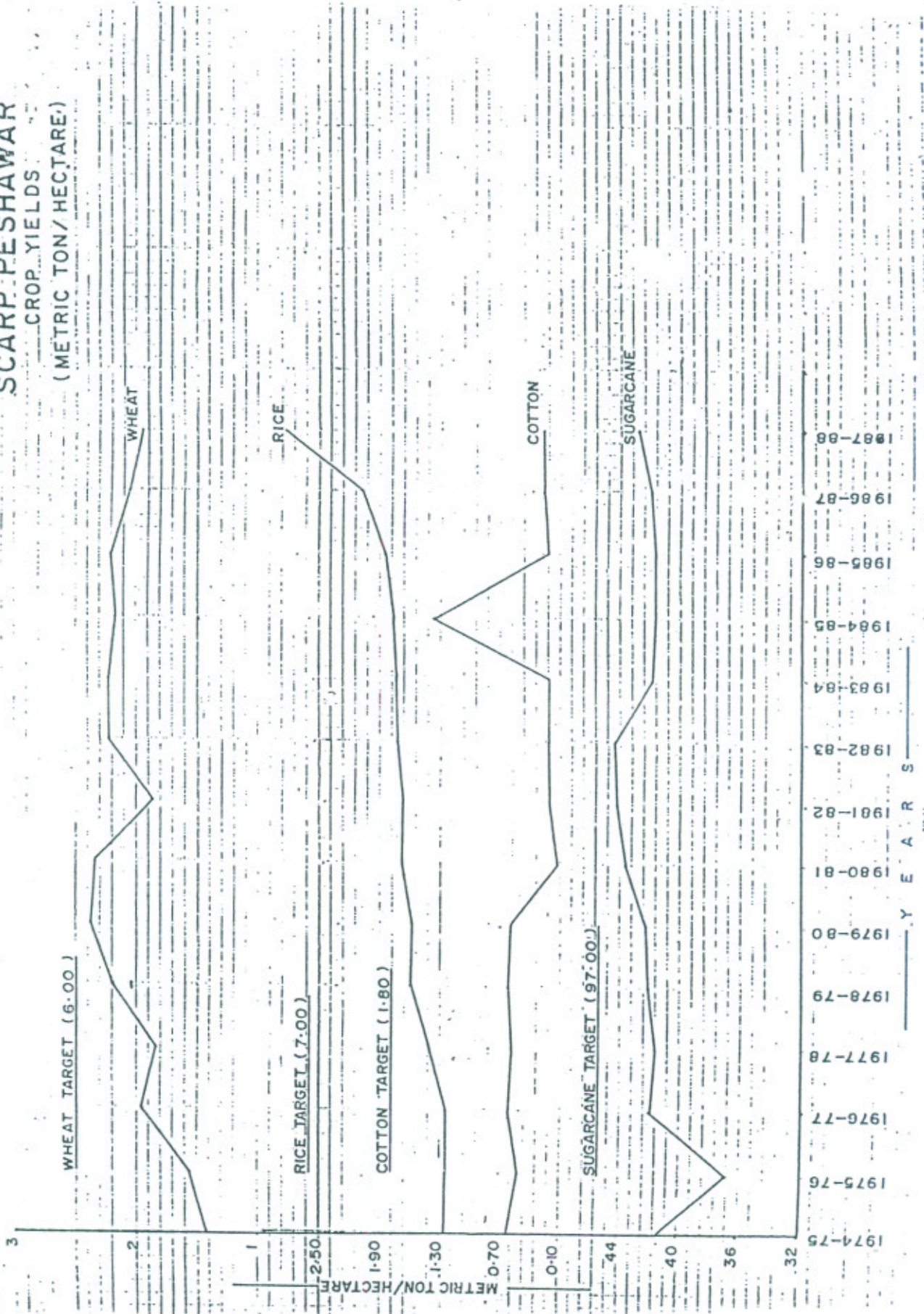
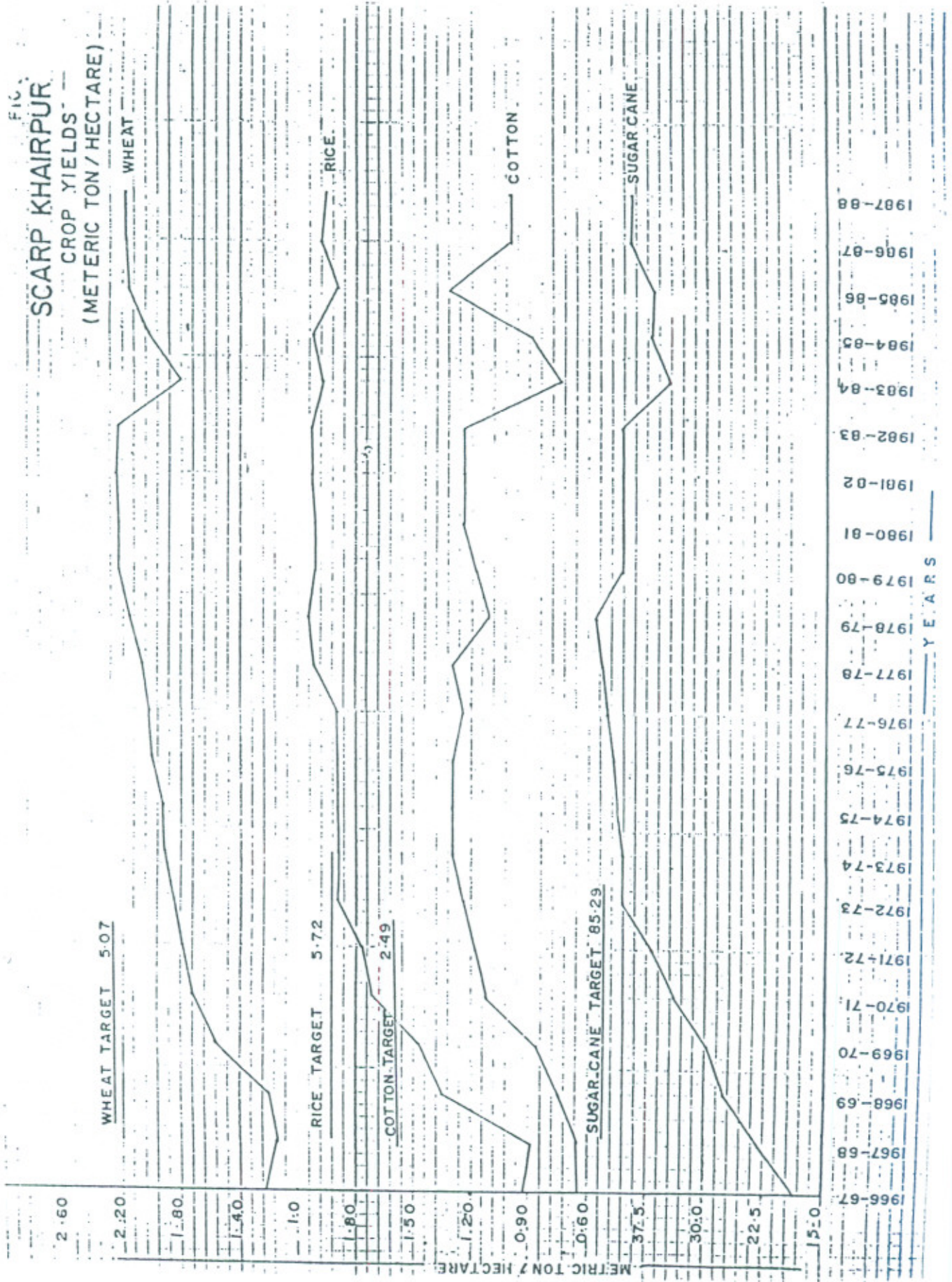


FIG. 2  
SCARP KHAIRPUR

CROP YIELDS  
(METRIC TON/HECTARE)



SCARP NORTH ROHRI

CROP YIELDS  
METRIC TON/HECTARE

