HIS MAJESTY'S GOVERNMENT OF NEPAL
MINISTRY OF WATER RESOURCES
WATER AND ENERGY COMMISSION SECRETARIAT
SINGHDURBAR

FINAL REPORT
ON
INVENTORY STUDY OF TUBEWELLS
IN
DHANUSHA AND MAHOTTARI DISTRICTS

JULY 1993

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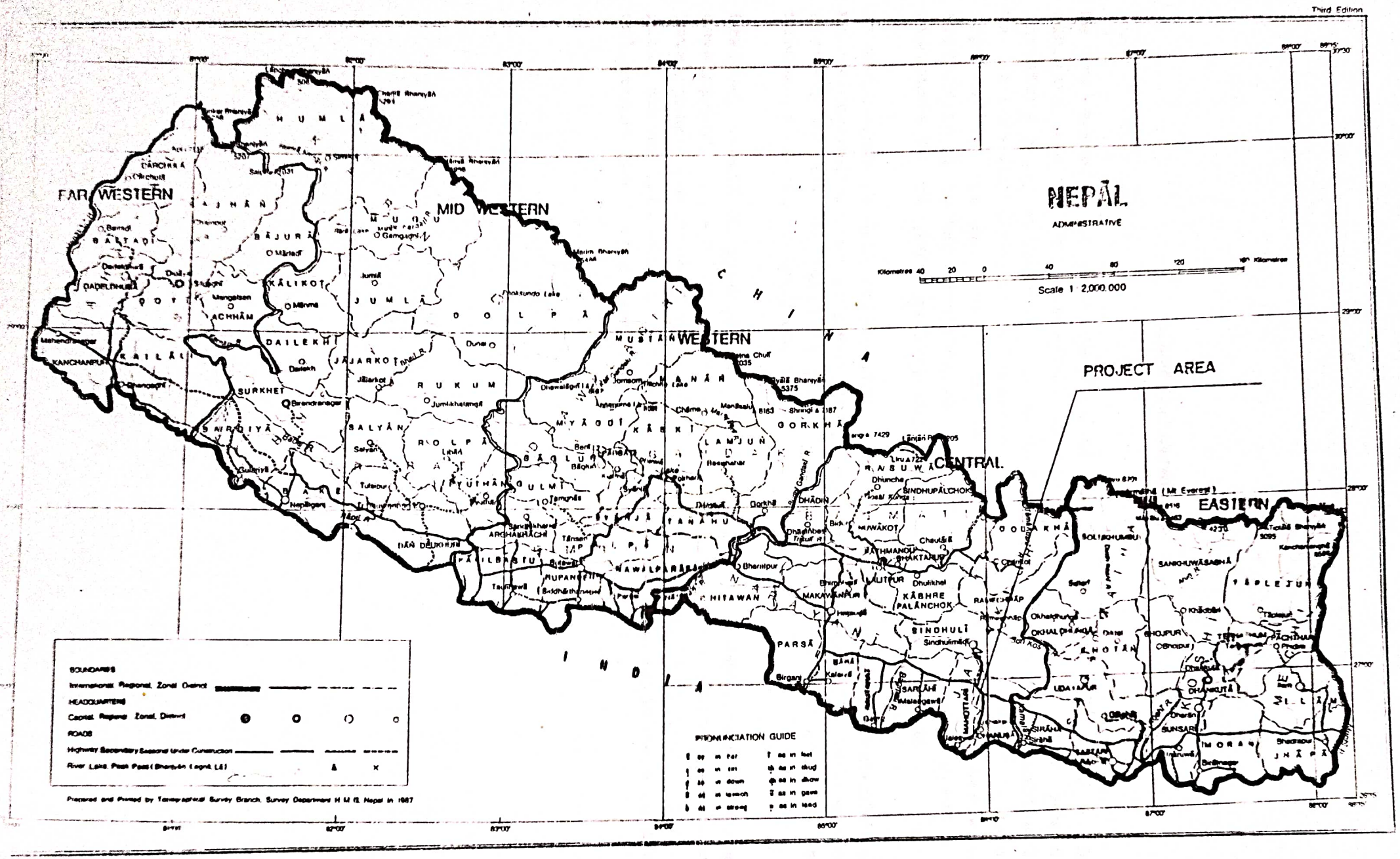
Third Edition
NEPAL
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PROJECT AREA
FAR WESTERN
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PRONUNCIATION GUIDE
Prepared and Printed by Topographical Survey Branch, Survey Department H M G, Nepal in 1987

Figure-1a

ACKNOWLEDGMENT

We are grateful to WECS, especially to Mr. K. P. Rijal, Mr. A. D. Adhikari and Mr. D. Bhattarai, for entrusting us with the job of inventory study of tubewells in the districts of Dhanusha and Mahottari. We, at Luna Consultancy and Construction Co. Pvt. Ltd., take this as an opportunity and as a challenge as well to prove our confidence of performing up to the expectations of all concerned. We also express our assurance to produce a quality report on the inventory study.

In the course of data collection in Kathmandu, co-operation extended to us by Agriculture Development Bank\Nepal and Ground Water Development Project by way of furnishing with useful and relevant data on the tubewells is also highly appreciated.

Besides, branch offices of ADB/N at Janakpur and Jaleswor, Agricultural Development Project at Naktajhijha, Janakpur, Groundwater Resource Development Committee at Mahottari and all local people contacted during field survey deserves our sincere gratitude for their assistance in data collection and data verification.

1. INTRODUCTION

It has been recognized that groundwater is a very important component of the overall water resources of Nepal. Consequently, this study is being undertaken to assess the current and proposed future exploitation of groundwater through the use of tubewells.

This study on the inventory of tubewells in Dhanusha and Mahottari districts is made as per agreement between Water and Energy Commission Secretariat (WECS) and Luna Consultancy and Construction Co. Pvt. Ltd., signed by both parties on 2049-08-29.

2. OBJECTIVES OF THE STUDY

The major objective of the study is to conduct a survey and prepare an update inventory of groundwater use by farmers for irrigation in particular which includes the following investigations;

i. Sources of water for tubewells/ boreholes (springs, ponds, groundwater etc.)

ii. Availability of groundwater in relation to seasonal requirements.

iii. Quantity of groundwater currently being used and planned for future use.

iv. Irrigation area covered by such individuals tubewells/bore holes (season-wise or crop-wise)

v. Indicative quantification of groundwater use for non-irrigation purposes.

3. METHODOLOGY

The objective of the study was achieved partly through desk study of various available information. The collected information was further confirmed, and up-dated in the field during the field survey. The whole study has been carried out in three stages:

3.1 Pre-Field study

The 49-day period from 10th Falgun, 2049 to 30th Chaitra, 2049 was used mainly for the activities mentioned below:

(a) Data collection : All relevant data including reports and maps were collected and reported.

(b) Data Interpretation : We consider data are primary inputs for any analysis and report. Thus, we have given due attention to proper collection, logging, interpretation, and evaluation of relevant available data.

(c) Questionnaire and Forms : After necessary study of the available data and keeping in view the requirements of the project, a few questionnaires and field investigation formats were prepared. Care was taken to avoid omission of any information to be collected in the field.

(d) Desk Study Report : A comprehensive report on the desk study along with a programme of field work was thus prepared, covering all the aspects considered necessary. The result was the Desk Study Report that was submitted to the WECS.

3.2 Field Study

During the field study of 51 days, the following activities were carried out :

(a) Data collection : Field data were collected from various offices in the district as well as wards and project sites.

(b) Filling in of the Questionnaires : The pre-prepared questionnaires were duly filled up in the field site and relevant data collected.

(c) Interview : A number of persons were interviewed for necessary information, various relevant questions were asked and their opinions collected along with the technical information which was used to fill in the questionnaires.

3.3 Post-Field Studies

About 13 weeks time was spent during the post field study and the following tasks were carried out.

(a) Computerization of the Data : All technical and statistical data were computerized.

(b) Up-dating the Desk Report : The Desk Report submitted, was up-dated on receiving comments from WECS. New field data were added and necessary changes made in the Desk Study Report to make it more comprehensive and relevant.

(c) Interpretation and Evaluation : Some aspects of the Study based on field observation were re-evaluated and aspects like comparative study etc. were prepared. Further, wherever applicable, the new field data were used in report preparation.

4. DESCRIPTION OF THE STUDY AREA :

4.1 DHANUSHA DISTRICT :

4.1.1 Location:

The study area, which is the entire district area of Dhanusha, is situated in Janakpur Zone of the Central Development Region of Nepal, with the Headquarters in Janakpur. This district is surrounded by Siraha district in the east, Sindhuli district in the north, Mahottari district in the west and shares a portion of international boundary with India in the south. The global location of the district is between 26°34'38" and 27°15'54" north latitude, and between 85°56'24" east longitude and 26°43'22" north latitude. The district occupies an area of 1180 sq. Km.

4.1.2 Accessibility:

The East-West highway establishes a good linkage between this district and almost all major parts of eastern, central and western Nepal, including the capital. A metalled road, approximately 26 k.m. long, connects Janakpur to the highway.

An all-weather airport about 3 km. south of Janakpur provides air services for the quickest movement between the district and other parts of the country.

4.1.3 Climate:

Temperature :

Meteorological data recorded at Janakpur station give the representative climatic condition of the whole district of Dhanusha. Thus, on the average, April to June are the hottest months. Table-1 shows mean temperature and absolute extremes as recorded at Janakpur Station from 1978-1987.

Table - 1

Mean temperature and absolute extreme in Janakpur station

Latitude : 26°43'

Longitude : 85°58'

Elevation : 90 m (MSI)

	Jan		Feb		Mar		Apr		May		June		July		Aug		Sep		Oct		Nov		Dec	
Year	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1978	21.6	8.9	24.0	10.3	29.6	14.0	34.2	20.8	33.4	24.6	33.4	25.7	32.4	25.7	32.6	27.4	30.7	24.1	30.7	21.9	27.1	16.7	24.9	10.6
1979	24.0	8.8	24.8	10.0	32.0	13.7	37.6	21.0	39.3	22.1	36.3	24.8	34.5	25.4	33.4	26.0	33.0	24.1	30.7	20.7	29.0	17.4	24.2	11.0
1980	22.7	6.4	25.5	10.0	N.A	N.A	N.A	N.A	N.A	N.A	34.7	25.4	34.0	24.4	34.0	25.3	33.9	23.4	30.6	19.7	N.A	N.A	25.9	9.7
1981	24.5	7.4	27.4	8.2	31.2	12.4	N.A	21.1	33.7	21.6	35.6	25.6	33.0	26.0	33.3	25.4	N.A	24.9	N.A	20.7	N.A	14.5	N.A	10.2
1982	22.9	8.7	25.2	10.5	29.9	14.9	34.3	20.5	37.5	24.0	33.8	24.4	33.2	25.4	33.7	26.5	32.5	24.3	31.8	21.3	27.6	13.2	24.5	9.2
1983	21.5	7.9	25.3	8.4	31.2	13.2	32.8	18.0	33.3	22.5	35.7	25.4	33.1	25.6	33.0	24.9	31.9	24.0	31.2	22.8	29.3	17.6	24.2	10.7
1984	22.3	7.2	24.2	10.8	31.6	15.4	36.2	20.4	32.9	24.4	32.8	26.2	31.8	25.3	33.6	26.7	31.5	24.8	32.5	22.6	28.8	13.5	24.8	10.3
1985	23.6	9.0	26.0	9.8	33.1	16.1	36.3	21.5	34.3	23.7	34.2	23.9	31.5	23.5	32.8	24.7	31.4	23.2	30.5	20.4	28.3	13.6	25.2	9.8
1986	2.34	7.5	25.4	10.7	32.3	14.9	34.4	20.4	33.1	21.8	35.9	26.5	32.8	26.3	33.4	26.6	31.9	24.8	30.4	20.7	29.4	16.5	25.1	11.7
1987	23.0	10.7	27.2	10.9	30.1	16.2	34.4	20.1	35.9	22.9	34.9	21.5	31.4	21.1	31.6	24.5	31.8	25.6	30.8	22.6	29.5	16.3	26.2	11.9
Abs. Extreme During 1978 to 1987	28.0	4.0	31.0	0.0	38.6	6.0	40.0	10.4	42.0	18.0	41.8	20.0	38.0	20.5	37.6	21.0	37.0	20.4	35.0	17.0	32.2	8.0	30.0	5.0
	26.82	4.83	26.87	6.87	30.86	10.79	25.85	1.83	26.82	25.86	6.79	6.85	5.80	29.84	11.86	24.83	9.82	28.66	3.78	22.87	7.79	30.82	1.87	31.83

Source : Climatological Record of Nepal, DIHM

Annual rainfall as recorded at Janakpur meteorological station from 1979 to 1988 are tabulated in Table-2

Table - 2

Year	1979	1980	1982	1982	1983	1984	1985	1986	1987	1988
(mm)	1011	1049	1201	581	1726	1829	1939	1282	2389	2059

The monthly distribution of the annual rainfall (mm) of the year 1981-1990 is shown in the table - 3.

Table - 3

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990	.3	23	22.5	36.5	211.1	54.9	444.9	159.6	390.8	4.6	0	15.9
1989	14.1	12	21	0	131.6	122.1	539	193	352.4	16	0	7
1988	0	57.9	38.1	107.5	51.5	303.1	670.4	608.5	139.3	58.5	0	24
1987	1	39.5	.7	78.3	12.4	222.5	528.5	912.6	422.7	168.2	0	2.3
1986	0	15	1	47	82	27	386	371	152	122	0	79
1985	23	0	0	79	159	118	509	358	492	175	12	14
1984	1	25	2	37	142	217	913	88	381	10	0	13
1983	22	0	4	51	232	49	696	362	133	148	0	29
1982	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1981	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.1.4 **Topography :**

The topography of the study area is generally plain. Major part of the district in the south is almost flat while a narrow strip in the north constitutes the foothills of the Siwalik mountains. The elevation varies from 60 m. to 457 m. within the entire north-south range. Kamala river, which originates from the middle mountains and flows along the border with Siraha, is the main river system of the district. Jamuni, Bilauti khola and Aurahi nadi are other major rivers.

4.1.5 **Demography :**

The total population of the district is 541975 as per preliminary results of 1991 census, with male/female ratio of 1:0.93. The density of population is 459.30 persons per sq. km. and the estimated growth rate of population as of 1991 is 2.53% per annum. V.D.C. or municipality wise population of the district is shown in Table - 4.

Table - 4

Population of DHANUSHA District

S.NO.	Village / Town Development Committee	Total No of House	Total No of Household	Total
1	Andupatti	421	513	2772
2	Aurahi	583	721	4261
3	Bafai	362	373	2198
4	Bagchaura	695	814	4561
5	Baheda Bela	575	808	4691
6	Bahuarba	494	636	3918
7	Balabakhar	911	1122	5825
8	Balaha Kathal	462	563	2758
9	Balaha Sadhara	493	556	3074
10	Ballagoth	389	536	3280
11	Baniniya	466	561	3251
12	Baramajhiya	747	780	3865
13	Basahoiya	593	739	4435
14	Basbitti	295	351	1999
15	Bateswor	825	889	4820
16	Beja Shivapur	637	894	4891
17	Begawar	1430	1534	8054
18	Bharatpur	2125	2150	11350
19	Bhuchakrapur	675	709	4022
20	Bhutahi Paterwa	668	738	3701
21	Bindhi	583	737	4142
22	Bisarbhora	565	715	3853
23	Chakkar	619	799	4452
24	Chora Koilpur	546	705	3707
25	Debadina	795	831	5169
26	Deuri Parbaha	491	652	3637
27	Devopura Rupetha	931	962	5790
28	Dhabouli	890	1037	5483
29	Dhalkebar	1282	1379	7714
30	Dhanauji	843	972	5571
31	Dhanusa Govindapur	1166	1292	6529

32	Dhanusadham	1199	1261	6482
33	Digambarpur	1200	1353	1750
34	Dubarikot Hathaletwa	820	1012	5424
35	Duhabi	739	992	5842
36	Ekarahi	522	648	3712
37	Fulgama	1369	1548	8531
38	Ghodghans	533	614	4386
39	Gidddha	567	714	4142
40	Gopalpur	637	711	4160
41	Goth Kohelpur	480	578	3020
42	Hansapur Kathpula	616	668	3982
43	Hariharpur	1061	1137	6023
44	Harine	572	779	4245
45	Hathipur Harbara	492	687	3141
46	Inarwa	519	522	2723
47	Itaharwa	501	562	3350
48	Jadukoha	688	854	4509
49	Janakpur N. P.	838	971	55021
50	Jhatiyahi	825	852	4381
51	Jhojhi Kataiya	447	514	3162
52	Kachuri Thera	728	818	4540
53	Kajara Ramaul	620	661	4021
54	Kanakpatti	569	680	4119
55	Kapileswar	682	694	4016
56	Khajuri Chanha	710	967	5239
57	Khariyani	1117	1357	7308
58	Kurtha	853	981	5422
59	Labatoli	598	679	3273
60	Lagmagadha Guthi	407	666	3706
61	Lakhouri	405	476	2791
62	Lakkad	509	647	3565
63	Laxminiwas	413	461	2656
64	Laxmipur Bagewa	877	949	5472
65	Lohana	628	838	5062
66	Machi Jhitkaiya	1126	1439	7040
67	Madhukarahi	638	748	4002
68	Mahendranagar	1733	1920	10144
69	Mahuwa(pra.khe)	616	673	3617
70	Mahuwa (pra.ko)	604	732	4062
71	Mansingpatti	448	569	3181
72	Mithileswar Mauwahi	548	600	3093
73	Mithileswar Nikas	923	941	4958

74	Mokhandha	819	972	5022
75	Mukhiyapatti	1540	738	4637
76	Nagarain	493	689	4409
77	Naktajhijh	916	1020	6195
78	Nauwakhore	555	625	3191
79	Nunpatti	459	534	2805
80	Pachaharwa	406	547	2692
81	Paterwa	549	589	3359
82	Paudeswar	758	907	5530
83	Patanuka	346	456	2590
84	Puspalpur	358	380	2053
85	Raghunathpur	1658	1961	9797
86	Ramaidaiya	773	939	4700
87	Sabela	1134	1248	6964
88	Sapahi	916	1119	6000
89	Satosar	795	883	4869
90	Shantipur	638	686	3976
91	Singyahi Maidan	1165	1296	7109
92	Sinurjoda	912	1105	6302
93	Sonigama	727	926	5370
94	Suganikas	524	543	3145
95	Godar	1141	1215	6205
96	Tarapatti	960	1110	6326
97	Thadi Jhijh	910	1022	5832
98	Thila Jaduwa	410	501	2717
99	Tulsi Chauda	635	640	3365
100	Tulsiyahi Nikas	437	595	3671
101	Tulsiyani Jabdi	585	796	4438
102	Umaprempur	1495	1769	9376
103	Yagyabhumi	1971	2169	1088
	District Total	83983	98239	541975

Source: National Population Census 1991

Agriculture, the main occupation of 35.7% economically active population as of 1981, engages approximately 80.5% of it.

Percentage of population on various occupations as per 1981 census is shown in Table - 5.

Table - 5

S.No.	Occupation	Percentage
1.	Agriculture/Forestry	80.5
2.	Community Service	13.9
3.	Commerce	2.9
4.	Manufacturing	1.2
5.	Others	1.5

The ethnic composition of the district population is shown in the Table - 6. The ethnicity is based on mother languages.

Table - 6

S.No.	Ethnic Group	Percentage (1981 census)
1.	Maithali	86.12
2.	Bhojpuri	0.66
3.	Newars	0.23
4.	Tamang	0.75
5.	Others	12.24

4.1.6 **Education :**

The percentage of literate populace is 14.95%, as per 1981 census, while total numbers of primary schools is 231 as of 1988/89. Similarly, a total of 66 lower secondary and 36 secondary schools, as of 1988/89, are operating in the district in the educational field.

4.1.7 **Food and Agriculture :**

The district produces paddy in the highest amount, Paddy produawion as of 1989/90 is 127190 M.Ton, followed by 35700 M.Ton of wheat, 4760 M.Ton of maize and 950 M.Ton of millet for the same year. The present irrigation status[1] of agricultural land (Ha) based on LRMP is as shown below.

Unirrigated	Monsoon Irrigated	Year Round Irrigated	Total Irrigated	Total Irrigable	Overall Total
45676	5482	11767	27249	72925	72925

1 Source: Agricultural Statistics of Nepal, 1990.
Table 7 & 8 present area, production, and yield of cereal and cash crops of the district respectively.

Table - 7

AREA, PRODUCTION AND YIELD OF CEREALS CROPS IN DHANUSHA

YEAR	PADDY			MAIZE			MILLET			WHEAT			BARLEY		
	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD
1975 /76	58000	1900	110200	6200	1205	7471	1920	807	1549	15895	1140	18120	280	775	217
1976 /77	61110	1420	86776	4100	1100	4510	1920	807	1549	16213	1050	17024	260	773	201
1977 /78	55220	1679	92714	3140	1201	3771	2730	927	2531	15930	1306	20805	210	762	160
1978 /79	53720	1794	96374	3140	1401	4399	2730	927	2531	18000	1150	20700	200	800	160
1979 /80	54840	1840	100906	2980	1255	3740	2730	927	2531	18000	1140	20520	200	850	170
1980 /81	54800	1901	104175	3180	1601	5091	2730	930	2539	17940	1350	24219	870	494	430
1981 /82	57680	1700	98056	3180	1604	5101	2730	949	2591	15320	1150	17618	870	701	610
1982 /83	44990	729	32798	3790	1802	6830	1150	696	800	24260	1190	28869	510	784	400
1983 /84	58180	2171	126309	2510	2120	5321	1150	843	969	19770	1200	23724	510	804	410
1984 /85	57000	1868	106476	2090	1713	3580	500	1000	500	18290	1370	25057	140	929	130
1985 /86	52830	2000	105660	3230	1997	6450	540	927	501	17450	1214	21184	510	804	410
1986 /87	49120	1312	64445	3400	1750	5950	600	1000	600	19000	1300	24700	470	936	440
1987 /88	54200	2012	109050	2510	1594	4001	700	900	630	19990	1370	27386	410	805	330
1988 /89	54170	2211	119770	2210	2068	4570	800	1025	820	20050	1650	33083	300	967	290
1989 /90	54170	2211	119770	2210	2068	4570	800	1025	820	20050	1650	33083	300	967	290
1990 /91	54200	2012	109050	2510	1594	4001	700	900	630	19990	1370	27386	410	805	330
1991 /92	5160	2002	102420	2700	1889	5100	840	1000	840	19100	1628	31100	300	933	280

Note : Area in Hectare, Production in Metric Ton and Yield in Kg. per hectare.

Source: Agricultural Statistics of Nepal, 1992

Table - 8

AREA,PRODUCTION AND YIELD OF CEREALS CROPS IN DHANUSHA

YEAR	OILSEED			POTATO			TOBACCO			SUGARCANE		
	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD
1975 /76	1800	470	846	460	7120	3275	1340	751	1006	540	16298	8801
1976 /77	2520	399	1005	353	7119	2513	1474	826	1218	540	16298	8801
1977 /78	5920	449	2658	40	6750	270	1500	807	1211	1040	16971	17650
1978 /79	7370	600	4422	370	5000	1850	1480	750	1110	840	17000	14280
1979 /80	5000	590	2950	370	4000	1480	1450	752	1090	850	17494	14870
1980 /81	2400	700	1680	310	5000	1550	1140	798	910	250	20000	5000
1981 /82	680	706	480	310	5194	1610	1100	691	760	190	20000	3800
1982 /83	2420	698	1689	580	6000	3480	2560	672	1720	950	15000	14250
1983 /84	1780	399	710	600	6000	3600	2590	799	2069	1040	20000	20800
1984 /85	2240	500	1120	360	6500	2340	1260	849	1070	800	24000	19200
1985 /86	2250	502	1130	400	4875	1950	1480	372	551	800	20000	16000
1986 /87	2300	509	1171	650	4000	2600	1400	600	840	920	20000	18400
1987 /88	3500	603	2111	660	7591	5010	890	697	620	930	25000	23250
1988 /89	3220	627	2019	700	9000	6300	1270	803	1020	1200	28000	33600
1989 /90	3500	603	2111	660	7591	5010	890	697	620	930	25000	23250
1990 /91	3500	603	2111	660	7591	5010	890	697	620	930	25000	23250
1991 /92	3070	531	1630	440	9000	6660	1250	984	1230	1260	31000	39060

Note : Area in Hectare, Production in Metric Ton and Yield in Kg. per hectare.

Source : Agricultural Statistics of Nepal,1992.

4.1.8 Livestock

Livestock and its products are another factor which play a very important role in the socio-economic condition of the country.Further it overall provides the information about the availability of protenious food for the people of the district.Population of five major livestock categories for five years from 1984/85 to 1988/89 is shown below.

Dhanusha

Categori	1984/85	1985/86	1986/87	1987/88	1988/89
Cattle	122540	124023	120820	108030	104897
Buffalo	33532	34615	37500	34500	34569
Sheep	200	204	208	155	150
Goat	75743	78106	77325	75930	76461
Pig	463	469	953	955	1003

Source : Livestock Statistics of Nepal.

4.1.9 Health Services

A 50 bed zonal hospital and Janaki Eye Hospital both at Janakpur provide basic health services to the district, supported by 9 ilaka health posts, 4 general hospitals and 4 other sub-health posts.

4.1.10 Postal Services

The district is being served by one district post office, 7 ilaka post offices and 22 additional post offices in the field of postal communication.

4.1.11 Banking & Credit Facilities

Various banks which are operating to facilitate and promote economic activities in the district are shown in detail below.

Nepal Rastra Bank

Branch Office	Janakpur
Exchange Counter	Inarwa

Nepal Bank Limited

Branch Office	Janakpur
" "	Janakpur Cigarette Factory Ltd.
Sub Branch Office	Sabaila
" " "	Khajuri
" " "	Godar

Rastriya Banijya Bank

Branch Office	Janakpur
" "	Mahendra Nagar
" "	Jadukoha
" "	Pidari Chowk

Agriculture Development Bank

Supervision & Control Office	Janakpur
Branch Office	Janakpur
" "	Khajuri
Sub Branch Office	Nagarain
" " "	Dhalkewar
" " "	Sabaila

4.1.12 **Rivers & Drainage**

The district is drained by 13 main and minor rivers which mostly originate from the middle mountains of Mahabharat & Chure range. The rivers are as named below:

(a) Jamuni Nadi
(b) Jaladh Nadi
(c) Amariya Nadi
(d) Bhus Nadi
(e) Kamala Nadi
(f) Baluwa Khola
(g) Bilauti Khola
(h) Jaladh Khola
(i) Aurhi Nadi
(j) Basi Khola
(k) Sukajor Nadi
(l) Dharnath Khola
(m) Bighi Khola

4.2 MAHOTTARI DISTRICT :

4.2.1 Location :

The project area is situated in Janakpur zone of the Central Development Region of Nepal with the head-quarters at Jaleswar. This district borders with Dhanusha district in the east, Sindhuli in the north, Sarlahi in the west and Indian state of Bihar in the south. The study area is globally located between 85° '48" and 85°57'36" east longitude, and between 26°36'49" and 27°41'44" north latitude. The headquarters, Jaleswar, can be spotted on the globe at 85°46'48" east longitude and 26°37'54" north latitude. This district covers an area of 1002 sq. km.

4.2.2 Accessibility :

The East-West highway passes through this district, linking it to major parts of eastern, central and western Nepal. A 40 km. long metalled road connects the headquarters to the E-W highway via Janakpur of Dhanusha district. The airport at Janakpur is the nearest point of air service.

4.2.3 Climate :

Temperature :

In terms of absolute extreme values, May is the hottest month and February is the coldest month of the district. In terms of average, however, April to June can be considered hot months. Table - 9 below shows mean temperature and absolute extremes as recorded at Janakpur station, the nearest one for the district, from 1978-1987.

Table - 9

Mean temperature and absolute extreme in Janakpur station

Latitude : 26°43'

Longitude : 85°58'

Elevation : 90 m (MSI)

	Jan		Feb		Mar		Apr		May		June		July		Aug		Sep		Oct		Nov		Dec	
Year	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1978	21.6	8.9	24.0	10.3	29.6	14.0	34.2	20.8	33.4	24.6	33.4	25.7	32.4	25.7	32.6	27.4	30.7	24.1	30.7	21.9	27.1	16.7	24.9	10.6
1979	24.0	8.8	24.8	10.0	32.0	13.7	37.6	21.0	39.3	22.1	36.3	24.8	34.5	25.4	33.4	26.0	33.0	24.1	30.7	20.7	29.0	17.4	24.2	11.0
1980	22.7	6.4	25.5	10.0	N.A	N.A	N.A	N.A	N.A	N.A	34.7	25.4	34.0	24.4	34.0	25.3	33.9	23.4	30.6	19.7	N.A	N.A	25.9	9.7
1981	24.5	7.4	27.4	8.2	31.2	12.4	N.A	21.1	33.7	21.6	35.6	25.6	33.0	26.0	33.3	25.4	N.A	24.9	N.A	20.7	N.A	14.5	N.A	10.2
1982	22.9	8.7	25.2	10.5	29.9	14.9	34.3	20.5	37.5	24.0	33.8	24.4	33.2	25.4	33.7	26.5	32.5	24.3	31.8	21.3	27.6	13.2	24.5	9.2
1983	21.5	7.9	25.3	8.4	31.2	13.2	32.8	18.0	33.3	22.5	35.7	25.4	33.1	25.6	33.0	24.9	31.9	24.0	31.2	22.8	29.3	17.6	24.2	10.7
1984	22.3	7.2	24.2	10.8	31.6	15.4	36.2	20.4	32.9	24.4	32.8	26.2	31.8	25.3	33.6	26.7	31.5	24.8	32.5	22.6	28.8	13.5	24.8	10.3
1985	23.6	9.0	26.0	9.8	33.1	16.1	36.3	21.5	34.3	23.7	34.2	23.9	31.5	23.5	32.8	24.7	31.4	23.2	30.5	20.4	28.3	13.6	25.2	9.8
1986	2.34	7.5	25.4	10.7	32.3	14.9	34.4	20.4	33.1	21.8	35.9	26.5	32.8	26.3	33.4	26.6	31.9	24.8	30.4	20.7	29.4	16.5	25.1	11.7
1987	23.0	10.7	27.2	10.9	30.1	16.2	34.4	20.1	35.9	22.9	34.9	21.5	31.4	21.1	31.6	24.5	31.8	25.6	30.8	22.6	29.5	16.3	26.2	11.9
Abs. Extreme During 1978 to 1987	28.0	4.0	31.0	0.0	38.6	6.0	40.0	10.4	42.0	18.0	41.8	20.0	38.0	20.5	37.6	21.0	37.0	20.4	35.0	17.0	32.2	8.0	30.0	5.0
	26.82	4.83	26.87	6.87	30.86	10.79	25.85	1.83	26.82	25.86	6.79	6.85	5.80	29.84	11.86	24.83	9.82	28.66	3.78	22.87	7.79	30.82	1.87	31.83

Source : Climatological Record of Nepal, DIHM

Rainfall:

Annual rainfall as recorded at Janakpur meteorological station from 1979 to 1988 are tabulated in Table - 10 below.

Table - 10

Year	1979	1980	1982	1982	1983	1984	1985	1986	1987	1988
Rainfall (mm)	1011	1049	1201	581	1726	1829	1939	1282	2389	2059

Table - 11 shows the monthly distribution of the annual rainfall of the years 1981-1990.

Table - 11

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1990	0.3	23	22.5	36.5	211.1	54.9	444.9	159.6	390.8	4.6	0	15.9
1989	14.1	12	21	0	131.6	122.1	539	193	352.4	16	0	7
1988	0	57.9	38.1	107.5	51.5	303.1	670.4	608.5	139.3	58.5	0	24
1987	1	39.5	0.7	78.3	12.4	222.5	528.5	912.6	422.7	168.2	0	2.3
1986	0	15	1	47	82	27	386	371	152	122	0	79
1985	23	0	0	79	159	118	509	358	492	175	12	14
1984	1	25	2	37	142	217	913	88	381	10	0	13
1983	22	0	4	51	232	49	696	362	133	148	0	29
1982	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1981	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2.4 **Topography :**

The terrain of this district is generally plain in the Terai while a narrow band in the north is the lower range of Siwalik mountains. The elevation within the district varies from 57 m to 760 m (AMSL). Hardinath Khola along its border with Sarlahi and Margha river, both originating from the Siwalik mountains, are two major rivers of the district. Rato Nadi and Jangha Nadi are two other major rivers.

4.2.5 **Demography :**

The population figure for this district is 440774, as per the preliminary results of 1991 census, with male/female ratio of 1:0.93.

The density of population is thus 439.9 persons per sq. km. and estimated growth rate as of 1991 is 2.21% per annum.The VDC wise population is presented in Table - 12.

Table - 12

Population of Mahottari District

S.NO.	Village / Town Development Committee	Total No of Houses	Total No of Households	Total
1	Anakar	571	700	4128
2	Aurahi	970	1137	5982
3	Bagada	672	878	4602
4	Bagiya Banchauri	730	954	5127
5	Bairagiya Laxminiya	349	479	2527
6	Banauli Donauli	587	681	3935
7	Banauta	716	841	4048
8	Bardibas	1054	1091	5961
9	Basabiti	576	813	4084
10	Bathanaha	971	1204	7208
11	Belghachi	769	821	4381
12	Bharatpur	1023	1132	6664
13	Bhatauliya	455	640	3519

14	Bijayalpura	980	1005	5023
15	Brammarpura	937	1276	7165
16	Damhimaid	1292	1412	7778
17	Dhamaura	1406	1712	9215
18	Dharampur	596	868	4242
19	Dhirapur	815	1072	6402
20	Ekarhiya	973	1157	7035
21	Ekdara	873	1091	6464
22	Etaharwakatti	688	859	4794
23	Fulahatta Parikauli	517	738	4206
24	Fulakaha	759	894	4655
25	Gaitha Bhelpur	481	712	3874
26	Gauribas	470	811	4324
27	Gaushala	1713	1936	10435
28	Gonarpur	911	1027	5623
29	Halkhori	579	720	4481
30	Hariharpur	859	1030	5245
31	Hathilet	812	860	4446
32	Hathisarwa	481	985	5339
33	Jaleswar N. P.	2452	2954	18161
34	Khairbanni	872	1042	5779
35	Khayar Mara	1156	1162	6327
36	Khopi	793	1046	5627
37	Khuttapipradhi	1044	1384	7129
38	Kisan Nagar	1088	1189	6036
39	Kolhusa Bagaiya	770	977	5344
40	Laxminiya	1280	1445	7539
41	Loharpatti	1105	1252	6449
42	Mahadaiyatapapur	684	819	4622
43	Mahottari	2019	2108	8055
44	Maisthan	1262	1272	6744
45	Majhora Bishnupur	739	739	4285
46	Manara	799	891	5196
47	Matihani	1017	1294	6889
48	Meghnath Gorhanna	542	824	4618
49	Nainhi	598	803	5487
50	Nigauli	716	841	4571
51	Padaul	736	816	4697
52	Balawa	873	1129	6414
53	Parsa Pateli	424	515	2962
54	Parsadewadh	984	1238	6850
55	Pashupatinagar	500	561	3262

56	Pigouna	412	563	3270
57	Pokharbinda	496	701	3440
58	Raghunathpur	578	744	4079
59	Ramgopalpur	1219	1355	6875
60	Ramnagar	884	953	5179
61	Ratauli	713	788	4330
62	Sahasola	701	935	5109
63	Sahodawa	713	831	4602
64	Sandha	527	618	3784
65	Sarpallo	946	1225	7146
66	Samsi	715	956	5116
67	Sripur	1152	1476	7863
68	Simardahi	523	708	3891
69	Sinyahi	940	1208	6271
70	Siswakataiya	738	1004	5899
71	Sonama	975	1330	7104
72	Sonamai	946	1125	5999
73	Sonaul	439	506	2842
74	Suga Vawani	547	765	4743
75	Sundarpur	1489	1769	9051
76	Vangaha	1641	1853	9772
77	Pipra	951	1143	6433
	Total	66983	80396	440774

Source : National Population Census 1991.

About 40% of the total population (1981 census) is economically active, engaged in various economic activities. Table - 13 below gives an account of percentage distribution of the economically active population in various occupations.

Table - 13

S.No.	Occupation	Percentage
1.	Agriculture/Forestry	89.5
2.	Community Service	6.7
3.	Commerce	1.9
4.	Others	2.4

The populace of the district is dominated in number by Maithili speaking people, followed by Nepali speaking group. The ethnic distribution based on mother languages of the district population is shown in Table - 14.

Table - 14

S.No.	Ethnic Group	Percentage (1981 census)
1.	Maithali	74.4
2.	Nepali	12.7
3.	Bhojpuri	1.4
4.	Magar	1.3
5.	Others	10.2

4.2.6 Education:

Almost 13% of the district population as of 1981 is literate. As of 1988/89, 176 primary schools, 58 lower secondary and 24 secondary schools are operational in the district.

4.2.7 Food & Agriculture:

Paddy is the main crop of the district with annual production of 105200 M.Ton as of 1989/90. Other major crops are wheat, maize and millet with annual productions (89/90) of 29050 M.Ton, 6090 M.Ton and 1570 M.Ton respectively. Details with regard to area, production and yield of cereal and cash crop in the district are shown in Table - 15 and Table - 16 respectively.

Table 15

AREA,PRODUCTION AND YIELD OF CEREALS CROPS IN MAHOTTARI

YEAR	PADDY			MAIZE			MILLET			WHEAT			BARLEY		
	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD
1975 /76	60230	1840	110823	6390	1269	8109	1000	1010	1010	12140	1140	13840	260	808	210
1976 /77	65825	1400	92155	6070	1333	8091	1500	869	1304	13961	1003	14003	312	808	252
1977 /78	68600	1400	96040	4500	1258	5661	1420	1021	1450	13900	1080	15012	490	796	390
1978 /79	68600	1700	116620	4500	1400	6300	1420	1000	1420	11000	1200	13200	390	795	310
1979 /80	68260	1657	113107	4100	1400	5740	1500	1200	1800	11100	1250	13875	380	789	300
1980 /81	68500	1793	122821	4700	1600	7520	1450	938	1360	14670	1250	18338	490	506	248
1981 /82	63010	2000	126020	4700	1611	7572	1450	952	1380	14230	919	13077	790	696	550
1982 /83	38290	562	21519	2730	2179	5949	4780	600	2868	15320	850	13022	680	500	340
1983 /84	51430	1965	101060	2800	2089	5849	3350	899	3012	15110	940	14203	580	793	460
1984 /85	52530	1716	90141	3150	1844	5809	1050	895	940	14790	1000	14790	110	1000	110
1985 /86	47930	2000	95860	3250	1957	6360	1000	800	800	16610	1200	19932	130	923	120
1986 /87	43620	1586	69181	3270	1602	5239	1100	818	900	15830	1100	17413	140	929	130
1987 /88	46650	2059	96052	2670	1659	4430	1150	870	1001	16380	1300	21294	290	690	200
1988 /89	50330	2212	111330	2700	1933	5219	1200	992	1190	17050	1599	27263	200	950	190
1989 /90	46650	2059	96052	2670	1659	4430	1150	870	1001	16380	1300	21294	290	690	200
1990 /91	50330	2212	111330	2700	1933	5219	1200	992	1190	17050	1599	27263	200	950	190
1991 /92	46550	2127	89990	3280	1970	6460	1800	1078	1940	16280	1670	27190	280	893	250

Note : Area in Hectare, Production in Metric Ton and Yield in Kg. per hectare.
Source : Agricultural Statistics of Nepal,1992.

Table 16

AREA,PRODUCTION AND YIELD OF CEREALS CROPS IN MAHOTTARI

YEAR	OILSEED			POTATO			TOBACCO			SUGARCANE		
	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD
1975 /76	2000	500	1000	480	6498	3119	1220	826	1008	140	16000	2240
1976 /77	2100	415	872	490	6498	3184	1230	826	1016	246	16000	3936
1977 /78	3770	499	1881	450	6444	2900	1400	829	1161	1190	16025	19070
1978 /79	3700	600	2220	420	5000	2100	1250	696	870	1200	17000	20400
1979 /80	2460	541	1331	420	5190	2180	1180	703	830	1150	17496	20120
1980 /81	1880	590	1109	450	5000	2250	1100	727	800	1080	18000	19440
1981 /82	2900	600	1740	500	5200	2600	1060	689	730	1000	20000	20000
1982 /83	820	402	330	920	6000	5520	1640	890	1460	870	22000	19140
1983 /84	850	729	620	460	6000	2760	1640	890	1460	960	20000	19200
1984 /85	1410	603	850	600	5900	3540	1000	860	860	790	24000	18960
1985 /86	1520	599	910	610	4803	2930	830	602	500	550	20000	11000
1986 /87	1420	599	851	510	4000	2040	1650	552	911	620	22000	13640
1987 /88	1400	557	780	630	7000	4410	1450	703	1019	700	25000	17500
1988 /89	1540	597	919	630	9000	5670	1550	800	1240	1210	33000	39930
1989 /90	1400	557	780	630	7000	4410	1450	703	1019	700	25000	17500
1990 /91	1540	597	919	630	9000	5670	1550	800	1240	1210	33000	39930
1991 /92	1120	500	560	650	12169	7910	1400	893	1250	1400	35000	49000

Note : Area in Hectare, Production in Metric Ton and Yield in Kg. per hectare.

Source : Agricultural Statistics of Nepal,1992.

Shown below is the present status of agricultural land (in Ha.) based on LRMP.

Unirrigated	Monsoon Irrigated	Year Round Irrigated	Total Irrigated	Total Irrigable	Overall Total
32963	11329	16357	27686	60633	60648

4.2.8 **Livestock**

Population of major livestock for five years from 1984/85 to 1988/89 is presented below.

Mahottari

Category	84/85	85/86	86/87	87/88	88/89
Cattle	109765	111093	108205	107535	99164
Buffalo	33280	34355	37206	37040	37298
Sheep	-	-	-	-	1285
Goat	93107	98074	97093	95345	97965
Pig	1981	2008	2034	1960	1905

4.2.9 **Health Service**

The district is equipped with a 25 bed district level hospital at Jaleswar and nine (9) other Ilaka H.P. and three (3) sub H.P.

4.2.10 **Postal Service**

The postal communication service for the district is being provided by one district post office at Jaleswar together with seven Ilaka post offices and twenty two additional post offices scattered all over the district.

4.2.11 Banking and Credit Facilities

An account of various banking offices working in different locations of the district to support and boost its economic activities is given below.

Nepal Rastra Bank

Exchange Counter	Bhittamor
" "	Samasi

Nepal Bank Limited

Sub-branch office	Matihani
" "	Gaushala

Rastriya Banijya Bank

Branch office	Jaleswar
" "	Loharpatti
" "	Balwa
" "	Pipra
" "	Bardiwas

Agriculture Development Bank/Nepal

Branch office	Jaleswar
Sub-branch office	Balwa
" "	Loharpatti
" "	Gaushala

4.2.12 **Rivers & Drainage**

A total of 17 big and small rivers originating from the Mahabharat and Chure mountain range drain this district. The rivers are as listed below:

(a) Kutmusari Nadi
(b) Bigahi Nadi
(c) Rato Nadi
(d) Marha Nadi
(e) Ghaghar Nadi
(f) Ankushi Nadi
(g) Path Nadi
(h) Thalhi Nadi
(i) Gipsi Nadi
(j) Juri Nadi
(k) Jangha Nadi
(l) Marha Khola
(m) Kantwa Nadi
(n) Burhawa Khola
(o) Barbha Nadi
(p) Khani Nadi
(q) Barkhuli Nadi

5. IRRIGATION PROJECTS IN THE STUDY AREA

The main government agency that is responsible for irrigation development of the country is department of irrigation (DOI). In addition to DOI, ADB/N is also involved in irrigation development and provides loan for shallow tubewells for irrigation to farmers. There are many irrigation projects, where DOI is involved.

5.1 DHANUSHA

In this district there are altogether two irrigation projects of DOI covering about 1751 ha of command area in total. They are as below:

5.1.1 Sagar Nath Irrigation Projects

This project lies in Dhanusha District is completed by now and irrigates about 500 ha. The project however provides irrigation facility during monsoon season only.

5.1.2 Ground Water Project

This project is completed by now and plans to irrigate about 1251 ha of command area year around.

6. Underground Water

People are expected to exploit the ground water through tubewells for their various needs like irrigation, drinking, washing, bathing etc. Hydrologically, ground water is that water which is below the water table level and is on the Saturation zone.This ground water or the zone of saturation forms a huge natural reservoir that feeds springs, streams, and wells. The upper surface of this zone of saturation is referred as water table. All the pores and spaces on this zone are filled with water and depth of this zone depends upon the local geology and other related factors .

Above the water table and below the ground surface there are many zones, like zone of aeration, capillary fringe, and many important activities like evaporation, absorption by plant roots, increase of soil moisture content, etc. All these activities play important roles to raise or lower the water table of any area.

7. DATA COLLECTION

Various relevant maps,reports, data and water information were collected from various offices of Kathmandu. Some of these informations were presented in the desk report and some of the field findings are presented in the field report. further in-depth study of the reports and necessary data interpretation are done during the preparation of the final draft report, along with the up-dating of the various information available on tubewells during the field survey.

7.1 Luna Consultancy & Construction Co. (P) Ltd.

The references used to facilitate collection of report, maps and data relevant to the present project are presented below.

i) Master Plan for irrigation development in Nepal
ii) Land resources mapping project report prepared by Kenting Earth Science Limited, March 1983, Main Report, 3 volumes of maps
iii) Population census- 1991, by Central Bureau of Statistics, National Planning Commission Secretariat HMG of Nepal
iv) Climatological records of Nepal .
v) Part of the Topo sheet and related maps.
vi) Study of Groundwater Development Strategies for Irrigation on the Terai. Volume 1-6 by Ground Water Development Consultants (GDC) International Ltd. Cambridge U.K.
vii) Ground Water Resources of Nepal by Dr.C.K.Sharma .

7.2 Land Resources Mapping Project (LRMP)

The LRMP work included land resources mapping of mid development region and whole of Terai region.

The report deals in fair detail the soil, and land resources of the study area and the result presented in one main report and few volumes of maps. This report was widely used by GDC during their study of ground water development strategies for irrigation on the Terai.

The report divides the country into 5 physiographic regions; Terai (T), Siwalik (S), Middle Mountain (MM), High Mountain (HM) and High Himal (HH). All of these physiographic regions are further sub-divided into land systems. For example the Terai physiographic regions is divided (Fig. No. 3) in to land system 1, which includes areas on lower ground adjunct to major rivers, and is further sub-divided to 1a - present river channel, 1b - sand and gravel bars, 1c - low terrace, 1d - high terrace, land system 2 - which includes areas on slightly higher ground that support a large portion of the Terai population, is further divided to 2a - depressional, 2b - intermediate position- level, 2c - intermediate position - undulating, 2d -high position, and land system 3, which includes the upper pediment and further divided into 3a very gentle slope <10 , 3b gentle slope 1-5o , 3c - undulating 1-3o , 3d slope, highly dissected 0-20o, slope. These three land system are further subdivided into 12 land units based on landscape characteristics such as position, slope, surface dissection, flooding frequency and soil characteristics such as drainage, depth, texture, profile development and PH. Similarly other physiographic regions, like Siwalik physiographic region is divided into 5 land system and 11 land units, middle mountain physiographic regions into 4 land system and 7 land units, higher mountain physiographic regions into 3 land system and 8 land units, and higher Himalaya physiographic units into 2 land system and 6 land units.

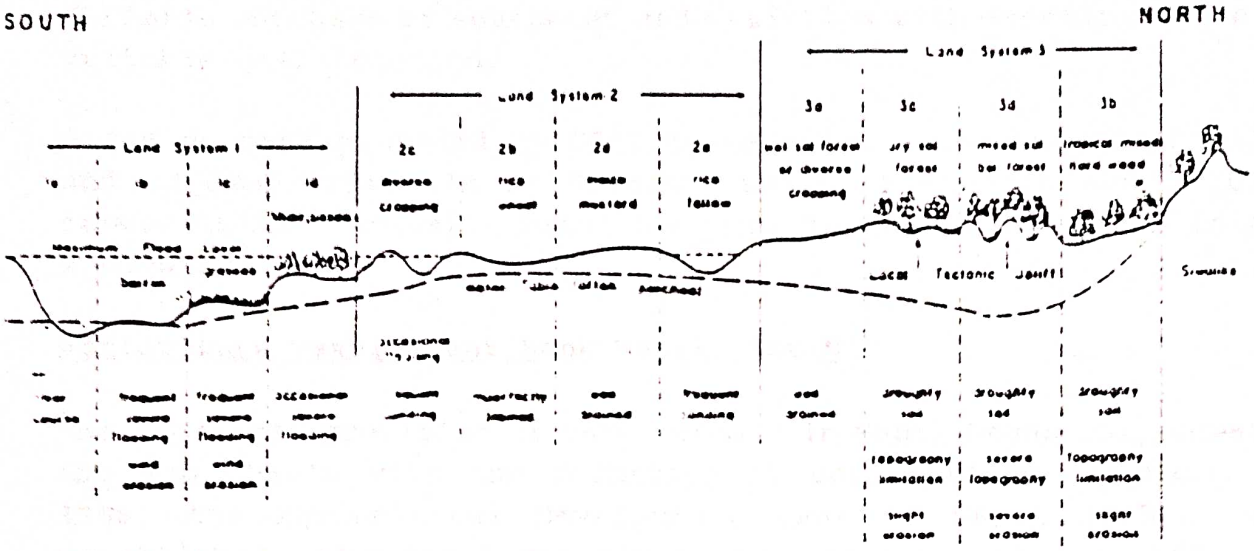
Thus within the land system or land unit there is a complex of land types which are too small to be identified on the air photographs but are readily recognizable in the field, and each physiographic region has its own exclusive land system due to which geomorphologically similar areas may fall on different mapping unit, depending upon the physiographic region. Map unit 3 covers alluvium fans in Terai and similar alluvium fans in high mountains comes under map unit 13, in the same way sloping land of Siwalik is within map unit 7, whereas sloping land of middle mountain falls on map unit No. 11 (Fig. No. 1).

7.3 Ground Water Resources Development Board

GWRDB, which is administered through DOI's Ground Water Division is only organization responsible to promote the development of Nepal's

Schematic Cross Section of Land Systems In the Terai Region

(Vertical scale greatly exaggerated)



TERAI REGION — Quaternary alluvium, Subtropical

Land System	Land form	Land Unit	Dominant Soils	Dominant Slopes	Dominant Texture	Seasonal Range of Depth to Water Table	Drainage
1	Active Alluvial Plain (depositional)	1a present river channel	—	—	—	—	—
		1b sand and gravel bars	Ustorthents Psamments	<1°	Sandy/ Cobbly	0 – 2m	subject to severe river flooding
		1c low terrace	Ustifluvents Fluvaquents	<1°	Sandy	0 – 2m	variable; subject to severe river flooding
		1d higher terrace	Ustochrepts Haplaquepts	<1°	Loamy	0 – 4m	variable; subject to occasional river flooding
2	Recent Alluvial Plain "Lower Piedmont" (depositional and erosional)	2a depressional	Haplaquepts	<1/2°	Fine Loamy	0 – 2m	poor
		2b intermediate position, level	Haplaquepts (Aeric)	<1/2°	Loamy	0 – 6 m	Imperfect
		2c intermediate position, undulating	Haplaquepts Ustochrepts	<1°	variable	dependent on position	variable; low areas subject to flooding
		2d high position	Haplustalfs Ustochrepts	<1°	Loamy	1 – 10m	moderately well
3	Alluvial Fan Apron Complex "Upper Piedmont" (erosional)	3a very gentle slopes	Haplustalfs Dystochrepts Ustochrepts	<1°	Loamy	1 – 10m	moderately well
		3b gentle slopes	Haplustalfs	1–5°	Loamy/ Bouldery	2 – 10m	rapid
		3c undulating	Haplustalfs	1–3°	Loamy	2 – 10m	well
		3d highly dissected	Ustochrepts	0–20°	Loamy	>2m	rapid

ground water resources and to provide technical guidance to other agencies that are involved in ground water development like ADB/N. In addition to its resource inventory and monitoring roles, the GWRDB has STW development programme which is based on subsidizing farmer's purchase of equipment and assisting with identification of suitable well location.

Based on data provided by GDP, there exist altogether 23 shallow and 25 deep tubewells in Dhanusha while 15 shallow and 36 deep tubewells in Mahottari. Details of the Tubewells are given in the Appendix - I.

7.4 **Agriculture Development Bank Nepal (ADB/N)**

The organized provision of rural credit in Nepal began only towards the mid 1960's with the formation of cooperatives (Sajhas). In 1968, the Agricultural Development Bank of Nepal (ADB/N) was established under the Aagriculture Development Bank Act. 2024. It replaced the cooperative bank & took over its function. The ADB/N opened normal banking offices in urban and rural areas. It has 218 branches and 298 small farmer's development programme or SFDP offices in all 75 districts of Nepal.

The ADB/N's general shallow tubewell (STW) loan programme, which is HMG's principal vehicle for financing STW development by individual farmers, uses relatively simple procedures and is responsive to farmer demand. A subsidy of 40% on the capital cost is paid by ADB/N with the balance financed by a "soft" loan that is repayable over 3-5 years.

This activity of ADB/N allowed it to have more or less good record of all loan provided to the farmers under STW facility. We were able to obtain altogether 638 numbers of STW data from ADB/N Central Office Kathmandu which show that altogether they have provided loans for 127 number of tubewells in Dhanusha and 92 numbers of tubewells in Mahottari. The details of the tubewells information is provided in Appendix-I, and overall number of tubewells for the two district along with VDC is provided in the Appendix-I.

7.5 **Topographical Survey Branch, Department of Survey**

Necessary topographical and district maps as well as other studies of the project area were bought for preparing a study area reference map.

7.6 **Ministry of Agriculture**

Agriculture Department as well as other offices laike the Department of Food and Agriculture marketing Services etc., were visited and relavant information collected.

8. Water Resources

In an overall sense, Nepal can be regarded as a "water rich" country. However, the spatial and temporal distribution of Nepal's surface water resources creates surpluses at some times and places and shortages at others. Surpluses occur in many areas at the height of the monsoon season, and shortages occur during the dry season on the medium and small Terai rivers and streams as most of them do not cross the MCT (Main Central Thrust) and attains only up to 4th order. Thus although Nepal's overall water resources should theoretically provide sufficient water for all irrigable lands, water supply limitations at many demand points prevent the full exploitation of the land resource. At this juncture, the exploitation of ground water by Tubewells becomes imperative.

The three main sources of water for irrigation are rain water, surface water and ground water. The seasonal dependence and considerable variation of rain water, makes it practically impossible to fully rely upon rain water for all agricultural purpose.

The next source of water for irrigation is exploitation of ground water, which the present available data on Tubewell suggest, is quiet impressive in Dhanusha and Mahottari. The ground water table in the district at few places within few meters and enough quantity of water is expected to be available for use by Tubewells in the both the districts.

9. Compilation of Tubewell Data

Detailled compilation of the Tubewell data of the district was possible only after field survey and up dating the available information. Compilation of data is provided herewith to give a general idea about the existing condition of the Tubewells. The ADB/N data shows presence of STWs in 43 VDC only out of 103 VDC in Dhanusha. Similarly out of 77 VDC of Mahottari the ADB/N data shows presence of STWs only in 37 VDC.

10. Field Survey Work

Field survey is one of the major part of the present inventory study of Tubewells in Dhanusha and Mahottari districts. The main objectives of the field survey are:

i. To verify the data collected from various Kathmandu offices during the desk study.
ii. To seek additional up to date information on the spot,about Tubewells and related information on ground water to fulfill the required information as per TOR.

10.1 Field Study Programme & Procedure

We proposed two engineers, four surveyors and eight field assistants (local) to conduct the field work.We hope that if the field team personnel work from early morning to late evening,the field study could be completed within six weeks time. The procedure was to be the following:

One engineer could collect data from various local offices and update the collected information and provide necessary orientation and guide the surveyors as discussed in office. Depending upon the local situation,engineer would provide necessary guidance based on the completed survey performance of the surveyor as required.
One overseer/surveyor with the help of two local assistants would collect necessary data visiting each village development committee of the districts.

Each field survey team, of each district was expected to collect data on at least two VDC every day. This would require 51 team days to complete Dhanusha district with about 103 VDC and 38 team days to complete Mahottari district with about 77 VDC. with two field urvey teams of 3 persons each, working in each district, We expected to complete the field survey work of VDC of both districts by six weeks time keeping some time for contingency. The tentative schedule of the field work is given in Annex I.

10.2 Field Survey Questionnaire Format

Consultant had prepared one format for field investigation (Annex-A) which was properly filled in on the spot, along with questionnaire (Annex-B). All the informations collected through this questionnaire were used to update the various informations where applicable.

11. STUDY OF SHALLOW TUBEWELLS

11.1 Dhanusha District

11.1.1 Number of Tubewells :

There are 103 village Development Committees (VDCs) and 1 Nagar Palika (Janakpur) in Dhanusha District, where tubewells exist in 43 VDCs. However, no tubewells were noticed in the rest VDCs. In total, 132 tubewells exist in the district, out of which only 40 are DTWs.

Out of the 132 tubewells, 92 are financed by ADB/N through its various branches and the small farmers development programme, 40 by JADP. All tubewells are in good condition.

11.1.2 Command Area Covered :

The area of land covered by tubewells in the district is 2222 ha. The average command area of each tubewell is calculated to be 19.25 ha.

11.1.3 General Size of Boreholes :

The boreholes size of shallow tubewells were found to be 100 mm in diameter. The boring size of the tubewells installed by the tubewell project and JADP were found to be more than 150 mm in diameter.

11.1.4 Operating Season :

During the site visits, it was found that owners of small land holdings (less than Bigha) operate their tubewells the year round. Other tubewells are operated only in the summer season. Generally lands of landlords are cultivated only for one season. Shallow tubewells with on an average of 5-6 hrs. a day are operated for 3 months.

11.1.5 Operating Mode :

All the tubewells are being operated by diesel engine pumps, which consume 1.00 to 1.5 litres of fuel per hour. In some cases, one pump is being used in several tubewells.

11.1.6 Average Depth of Tubewells :

Depth of tubewells boring varies from place to place. The depths of both the ADB/N- funded and private tubewells range from 15m to 50m. and JADP financed tubewells are found to be more than 100m in depth .

11.1.7 Yield :

As mentioned earlier, the intensity of the crop varies from place to place depending upon the type and nature of the soil, ethnic groups and their land holdings. Most of the land held by small farmers give 150% cropping intensity. Average intensity of crop is noted to be 180%. With an average of discharge of water per tubewell by 3.5 liter/sec. The average Yield of the crops in this district was noted to be 3.67 ton/ha for paddy and 2.2 ton/ha for wheat and 7.35 for potato.

11.1.8 VDC wise List of Tubewells :

The list of tubewells in the district indicating the type of tubewells and funding agencies are shown in Annex B.

11.1.9 VDC wise Distribution of Tubewells and command Area :

The total number of tubewells, the average discharge and the command area covered in each VDC are shown in Annex-I, Figure 2, 3 and 4 respectively.

11.2 Mahottari District

11.2.1 Number of Tubewells :

Mahottari District comprises of 77 village Development Committees and 1 Nagar Palika (Jaleshwor) having a total number of130 tubewells out of which 95 are shallow tubewells and 34 DTW. ADB/N has financed the installation of 95 shallow tubewells through its branch offices and 30 tubewells were installed by Ground Water Development Project While 4 tubewells were installed by JADP and 1 by Private individuals. Out of 130 tubewells, 129 are in working condition,and 1 is damaged.

11.2.2 Command Area Covered :

Area of land commanded by tubewells in the district is 1988 ha. The average command area of each tubewells calculated to be 19.18 ha.

11.2.3 General Size of Boreholes :

Most of the tubewells in the district are shallow tubewells with 100 mm diameter boreholes. Deep tubewells have varying sizes ranging from 100 mm to 250 mm diameter.

11.2.4 Operating Season :

Except in a few cases, the tubewells operate for 2 seasons in a year. The shallow tubewells operate for 6 to 10 months in each season for about 8 hours a day. The deep tubewells, on the other hand, work for 6 months in one season with an average of 8 to 10 hours a day.

11.2.5 Operating Mode :

All of the tubewells are operated by diesel engines (pumps), which consume 1.0 to 1.5 liters of diesel per hour. Some of the tubewells are artisan .

11.2.6 Average Depth of Tubewells :

The depth of the tubewell boring varies from one place to another. However, on average, it could be taken as 60m. Some of the deep tubewells have a depth of 160m.

11.2.7 Yield :

Depending upon various geological conditions, soil texture and other factors, the yield of crops varies from village to village. On average, the intensity of crop in the district is 180%. Similarly, the Yield of different crops also varies from place to place. The average yield of crops in this district was noted 3.69 ton/ha. for paddy and 2.21 ton/ha. for wheat.

11.2.8 VDC wise List of Tubewells :

The list of tubewells in the district, indicating the type and condition of tubewells, financing agencies, and shown in Annex A.

11.2.9 VDC Distribution of Tubewells and Command Area :

The total number of tubewells, the average discharge and the total command area covered in each VDC are shown in Annex-J, figures, 5, 6 and 7.

12. Comparative study of Tubewells

Various sources were used to collect all the relevant data during the desk study and the data were updated during the field study. The comparative study of tubewells in Dhanusha and Mahottari district are shown below.

Distribution of shallow tubewells in the project area.

DISTRICT	ADB/N	JADP	GWP	PVT.	TOTAL
Dhanusha	92	-	-	-	92
Mahottari	95	-	-	1	96

Distribution of deep tubewells in the project area.

DISTRICT	ADB/N	JADP	GWP	PVT.	TOTAL
Dhanusha	-	40	-	-	40
Mahottari	-	4	30	-	34

Comparative study of tubewells in Dhanusha District.

S.N	Source	Financing Agency				
		ADB/N (STW)	JICA (DTW)	GWP	PVT	TOTAL
1.	Field study	92	40	-	-	132
2.	Desk study	127	25	-	-	152

Comparative study of tubewells in Mahottari District.

S.N	Source	Financing Agency ADB/N (STW)	JICA (DTW)	GWP	PVT	TOTAL
1.	Field study	95	4	30	1	130
2.	Desk study	144	-	36	-	180

CONCLUSION

We consider that this type of inventory study report dies not call for a thorough analysis of the various data collected during desk study as well as field survey, and thus we have limited ourselves to the systematic presentation of the inventory data and relevant information.

During the desk study, the Consultants limited themselves to providing all the relevant available information that was collected from various sources. During the field study, various data were collected and they were used to up-data the Desk Study Report, where applicable.

The basic data specially on the agriculture products requiring major thrust to increase the production. In this context we consider the tubewells play important role to provide necessary facilities for irrigation to increase the agriculture products. The present information show there is still considerable potential for the further development of tubewells in both the districts.

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ABBREVIATIONS

WECS	:	Water and Energy Commission Secretariat
GWP	:	Ground Water Project
JADP	:	Janakpur Agriculture Development Project
LRMP	:	Land Resources Mapping Project
GWRDB	:	Ground Water Resources Development Board
ADB/N	:	Agriculture Development Bank, Nepal
STWs	:	Shallow Tube Wells
DTWs	:	Deep Tube Wells
VDC	:	Village Development Committee
JICA	:	Japan International Co-operation Agency

INVENTORY STUDY OF TUBEWELLS
DHANUSHA AND MOHOTTARI DISTRICTS
TENTATIVE TIME SCHEDULE
FOR
FIELD SURVEY

	Falgun 2049			Chaitra 2049				Baishakh 2050			
DISTRICT	2	3	4	1	2	3	4	1	2	3	4
DHANUSHA	2 VDC per day starting from Janakpur										
MOHATTARI	2 VDC per day starting from Jaleshwar										

WORK SCHEDULE

S.N.	Description of Work	Months																								Remarks
		Paush				Magh				Falgun				Chaitra				Baisakh				Jestha				Asadh			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1.	Desk Study Work and Report Submission																									
2.	Field Work and Field Work Reporting																									
3.	Comparative Study of Field Data and Draft Reporting																									
4.	Final Reporting																									

ANNEX - A
FIELD QUESTIONNAIRES

Sample Questionnaire for
Inventory Study of Tubewells
(Individual Survey Questionnaire Sheet)

1.	<u>Location</u>	
1.1	Name of the Project	:
1.2	District	:
1.3	Village	:
1.4	V.D.C.	:
1.5	Ward No.	:
1.6	Elevation	:
1.7	Longitude	:
1.8	Latitude.	:

2. <u>Accessibility</u>

2.1 Description of Route

3. Type of organization structure developed by farmers to manage the project for both the Government and Farmers managed schemes.

4.	Tubewell Details	
4.1	Size (mm)	:
4.2	Depth (m)	:
4.3	Discharge (lps)	:
4.4	Type	: Shallow/Deep
4.5	Recharging Source	:
4.6	Fluctuation of Watertable	:
4.7	Present Condition	: Running/Damaged/Defunct
4.8	Other Water-uses Than Irrigation	: Drinking/Washing/Both/Others
4.9	Area of Land Being Irrigated at Present	:
4.10	Is there any other source of water for irrigation	: Yes/No

5.	Pump Details	
5.1	Type	:
5.2	Horse Power	:
5.3	Company	:
5.4	Total Head	:
5.5	Type of Power Required	:Manual/Electricity/Fuel/Artisan
5.6	If Manual Man-hours/day	:
5.7	If Electricity K.W.H./month	:
5.8	If Diesel, L.P.H.	:
5.9	If Petrol, L.P.H.	:

6. Operation Details

6.1 Operating Season : Year Round/10-6 Months/3-5 Months/<3 Months

6.2 Daily Operating Hour:

6.3 Operating Agency : Individual Owner/V.D.C./Farmers' Cooperative

6.4 Frequency of Mechanical Troubles : Often/Sometimes/Rare/Not Yet

6.5 Annual Maintenance Cost :

6.6 Agency Bearing the Maintenance Cost :

7. Financial Details

7.1 Source of Finance : Loan/Private/Co-operation

7.2 Financing Agency :

7.3 Total Cost of Installation :

7.4 Amount of Loan :

7.5 Interest Rate :

7.6 Repay Time :

7.7 Condition of Co-operation :

8. Command Area Details

8.1 Gross Command Area :

8.2 Cultivated Command Area :

8.3 Intensity :

8.4 Cropping Pattern and Yield :

Crop	Area (Bigha)	Yield (t/Bigha)	Prodn. (t)	Planting months	Harvesting months

8.5 Agricultural Inputs:

Crop	Seed kg/bgh.	Fertilizer kg/bgh.	Pesticides kg/bgh.	Human Labour	Bullock Labour

9. Name of Persons Contacted:

10. Name of the Owner :

11. Date of Installation:

12. Any other information related to groundwater:

LOCATION MAP

(Showing Canal Alignment and Command Area)

ANNEX - B
FIELD INVESTIGATION FORMAT

DISTRICT :
VDC :

SAMPLE FORMAT FOR
TUBEWELL DATA COLLECTION

S. No.	Owner's Name		Village	Location		Tubewell Details				Command Area				Crops and Yeilds			Operation		Pump Details			Fuel Expns.				
	First Name	Last Name		V.D.C.	Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	B.	K.	D.	Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operating Season (S/W/YR)	Daily Operating Hours	Type	H.P.	Company	Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks

NOTE:

B: BIGHA K: KATHA D: DHURI Ha: HECTARE GWP: GROUND WATER PROJECT

ANNEX - C
SUMMARY OF TUBEWELLS IN DHANUSHA DISTRICT

DISTRICT :DHANUSHA

SUMMARY OF TUBEWELLS

S. N	NAME OF VDC	WARD NOS										CONDITION OF TUBEWE					TYPE OF TUBEWELL					FINANCING AGENCY				AGRICULTURAL DATAS			
		1	2	3	4	5	6	7	8	9	TOT	RUN	DAM	FAIL	U/C	TO	STW	DTW	R/P	A/I	TO	AD	GWP	IICA	Pvt	TOT	T.C.L.	A.C.I.	A.Int.	Av.Q
1	Janakpur Nagar Palika	-	-	-	1	-	-	-	1	1	3	3				3	1	2			3	1		2		3	108.00	36.00	150	35.00
2	Depura Rupaitha	1								1	2	2				2				2	2	2				2	6.67	3.34	150	3.50
3	Bekehsura									2	2	2				2	2				2	2				2	24.00	12.00	150	12.00
4	Laxmipur Bageba	1			3	1			1		6	6				6				6	6	6				6	16.00	2.67	150	2.58
5	Bharatpur				1	1					2	2				2		2			2			2		2	51.33	25.67	150	22.50
6	Patmuka	1	1	1			1	1			5	5				5	5				5	5				5	66.66	13.33	150	13.20
7	Balha Kathal	1	1					1			3	3				3	3				3	3				3	30.33	10.11	150	13.66
8	Khajuri Chanha	1	1				1	1	2	1	7	7				7	7				7	7				7	100.00	14.29	150	15.14
9	Phalgama					1	2			4	7	7				7	7				7	7				7	57.33	8.19	150	8.71
10	Santipur							1	1		2	2				2		2			2			2		2	45.00	22.50	150	22.50
11	Ramdaiya	1				1				1	3	3				3		3			3			3		3	155.00	51.67	150	34.00
12	Bhalwa Bela	1	4								5	5				5	5				5	5				5	46.00	9.20	150	9.60
13	Yaga Bhumi		1		2	1			1		5	5				5	2	3			5	2		3		5	112.66	22.53	150	12.20
14	Nakta Jhijh	1	1								2	2				2		2			2			2		2	72.67	36.34	150	35.00
15	Mahuwa		2		1			1			4	4				4	4				4	4				4	60.00	15.00	150	15.25
16	Enrba		1					1			2	2				2	2				2	2				2	24.00	12.00	150	12.00
17	Balha Saghara		2	1			1				4	4				4	4				4	4				4	49.33	12.33	150	12.50
18	Singyahi Maran	2						1			3	3				3	3				3	3				3	52.29	10.73	150	10.66
19	Basahiya	1		1		1		1	1		5	5				5		5			5			5		5	238.00	47.60	150	47.00
20	Hariharpur	1				1			1		3	3				3		3			3			3		3	85.33	28.44	150	17.66
21	Dhabauli		1		1				1		3	3				3		3			3			3		3	32.00	10.67	150	13.66
22	Dubarkot Hathletwa	1		1		1				1	4	4				4	4				4	4				4	36.00	9.00	150	9.00
23	Lakar	1			1				1	2	5	5				5	5				5	5				5	46.00	9.20	150	9.00
24	Sakhuwa Mahendra Nagar			1							1	1				1		1			1			1		1	29.33	29.33	150	3.00
25	Sonapara		1								1	1				1		1			1			1		1	50.00	50.00	150	50.00
26	Hansapur Kathapula					1					1	1				1		1			1			1		1	7.00	7.00	150	7.00
27	Paudeshwor		1		2						3	3				3	3				3	3				3	37.33	12.44	150	13.33
28	Suga Madhukari				1	1					2	2				2	2				2	2				2	14.00	7.00	150	7.00
29	Sapahi	2			1	1		1		1	6	6				6	2	4			6	2		4		6	150.00	25.00	150	26.83
30	Lagma Gadha Guthi	1	1								2	2				2	2				2	2				2	20.00	10.00	150	10.00
31	Uma Prempur			1			1		3		5	5				5	2	3			5	2		3		5	56.66	11.33	150	3.00
32	Kajara Ramauli									1	1	1				1		1			1			1		1	30.00	30.00	150	30.00
33	Debdiha	1	2			1	1		1		6	6				6	6				6	6				6	50.00	8.33	150	9.16
34	Mukhiya Patti	1						1			2	2				2	2				2	2				2	22.00	11.00	150	11.00
35	Ghorghas						1		1	2	4	4				4	4				4	4				4	35.30	8.83	150	8.12
36	Godar						1				1	1				1		1			1			1		1	35.00	35.00	150	36.67
37	Jhatiyahi				1						1	1				1		1			1			1		1	25.00	25.00	150	25.00
38	Tulsiyahi Jabdi				1						1	1				1	1				1	1				1	11.00	11.00	150	11.00
39	Dhalkebar			1							1	1				1		1			1			1		1	34.67	34.67	150	38.00
40	Tulsiyahi Nikas	1					1	1	1		4	4				4	4				4	4				4	46.00	11.50	150	11.50
41	Nagrayan		1								1	1				1		1			1			1		1	52.67	52.67	150	55.00
42	Kanak Patti		1								1	1				1	1				1	1				1	10.00	10.00	150	10.00
43	Machi Jhitkaiya								1		1	1				1	1				1	1				1	12.00	12.00	150	12.00
	TOTAL	20	22	7	16	12	10	11	17	17	132	132	0	0	0	132	84	40	0	8	132	92	0	40	0	132	2222.5	19.18	150	19.16

NOTE

1 RUN = No. of tubewells in working condition.
2 DAM = No. of tubewells in not working condition.
3 FAIL = No. of tubewells in not working condition,since its installation.
4 U/C = Tubewells under construction.
5 STW = No. of Shallow tubewells.
6 DTW = No. of Deep tubewells.
7 A/I = No. of Artezinal tubewells.
8 R/B = No. of Rower Pumps.
9 T.C.L. = Total land commanded by tubewells in hactares.
10 A.C.L. = Average land commanded by tubewells in hactares.
11 A.Int. = Average cropping intensity.
12 Av.O. = Average discharge per tubewell in litre per second.

Conversion factors used:

100 Dhur = 20 Kattha = 1 Bigha = 72900 sft. = 0.67 Ha. (approximately).

ANNEX - D
SUMMARY OF TUBEWELLS IN MAHOTTARY DISTRICT

DISTRICT :MAHOTTARY

SUMMARY OF TUBEWELLS

S. N	NAME OF VDC	WARD NOS												CONDITION OF TUBEW					TYPE OF TUBEWELL					FINANCING AGENCY					AGRICULTURAL DATA			
		1	2	3	4	5	6	7	8	9	10	11	TOT	RUN	DAM	FAIL	U/C	TOT	STW	DTW	R/P	A/J	TOT	AGB	GON	PRIV.	TOT	T.C.L.	A.C.L.	A.Int.	Av.Q.
1	Jaleswor Nagar Palika							1		1	3	2	7	7				7	5	2			7	4	2	1	7	92	13.14	150	7.89
2	Susauta						1						1	1				1				1	1				1	7	7.00	150	7.00
3	Sarpallo	2	1										3	3				3	3				3				3	27	9.00	150	6.33
4	Parsa Debar	1	1										2	2				2	2				2	2			2	18	9.00	150	6.00
5	Badiya Banchaura									1			1	1				1	1				1	1			1	13	13.00	150	15.00
6	Gaidha Dhetpur		2		1	2	1	2	3	1			12	12				12	12				12	12			12	84	7.00	150	9.00
7	Lonar PaTTI		2	1		1	2						6	6				6				6	6	6			6	26	4.33	150	2.83
8	Sonamai									1			1	1				1				1	1	1			1	3	3.00	150	2.00
9	Basbitti						2		1				3	3				3				3	3	3			3	9	3.00	150	2.25
10	Dharampur						1		1				2	2				2				2	2	2			2	7	3.50	150	2.50
11	Kisan Nagar					1		1					2	2				2		2			2		1	1	2	33	16.50	150	20.63
12	Aruni		1										1	1				1		1			1		1		1	20	20.00	150	20.00
13	Gaushala							1					1	1				1		1			1		1		1	70	70.00	150	80.00
14	Saborwa	3	1			1				1			6	6				6	5	1			6	5		1	6	118	19.67	150	17.66
15	Ram Nagar	1	1				1						3	3				3		3			3		2	1	3	155	51.67	150	36.00
16	kathilet		1				1		1				3	3				3		3			3		2	1	3	75	25.00	150	27.33
17	Bhangha				1								1	1				1		1			1		1		1	28	28.00	150	28.00
18	Pashupati Nagar					1							1	1				1		1			1		1		1	52	52.00	150	66.66
19	Pipra		1					1		1			3	3				3	2	1			3	2	1		3	31	10.33	150	3.00
20	Matihani				1			1					2	1	1			2		2			2		2		2	23	11.50	154	10.06
21	Bel Gachhi									1			1	1				1		1			1		1		1	85	85.00	150	24.00
22	Dhirapur			1		1				1			3	3				3	2	1			3	3			3	40	13.33	150	3.00
23	Harinmari	1	1						2				4	4				4	4				4				4	14	3.50	150	2.25
24	Ram Gopalpur	2			1		1		4				8	8				8	8				6	7	1		8	53	6.65	150	2.20
25	Mahadaiya Tapanpur				1	3							4	4				4	4				4	4			4	19	4.75	150	3.25
26	Dhamaura	2	1	3			4			1			11	11				11	10	1			11	10	1		11	71	6.45	150	4.22
27	Baiba	3							3				6	6				6	6				6	6			6	53	8.83	150	11.33
28	Ekdarabela				1		1						2	2				2	2				2	2			2	15	7.50	150	9.00
29	Gonapur									1			1	1				1	1				1	1			1	5	5.00	150	10.00
30	Bhantoliya							1					1	1				1	1				1	1			1	11	11.00	150	16.00
31	Khutta Piprahi		2				1			1			4	4				4	3	1			4	3	1		4	53	13.25	150	7.82
32	Ekraniya	2	1	2						1			6	6				6	5	1			6	5	1		6	85	13.83	150	15.00
33	Laxminiya	1		1				1					3	3				3		3			3		3		3	153	51.00	150	41.00
34	Bajalpura		1		1				1				3	3				3		3			3		3		3	193	64.33	150	45.00
35	Sundarpur					1			1				2	2				2		2			2		2		2	11	5.50	150	8.00
36	Sripur					1							1	1				1		1			1		1		1	30	30.00	150	22.00
37	Mahottari	2				1		3	3				9	9				9	7	2			9	7	2		9	229	25.44	150	17.84
	Total	20	17	8	7	13	16	12	20	12	3	2	130	129	1	0	0	130	83	34	0	13	130	95	30	4	1	130	1966	19.25	150	16.73

NOTE

1 RUN = No. of tubewells in working condition.
2 DAM = No. of tubewells in not working condition.
3 FAIL = No. of tubewells in not working condition,since its installation.
4 U/C =Tubewells under construction.
5 STW = No. of Shallow tubewells.
6 DTW = No. of Deep tubewells.
7 A/J = No. of Artezinal tubewells.
8 R/B = No. of Rower Pumps.
9 T.C.L. = Total land commanded by tubewells in hectares.
10 A.C.L. = Average land commanded by tubewells in hectares.
11 A.Int. = Average cropping intensity.
12 Av.Q. = Average discharge per tubewell in litre per second.

ANNEX - E
DETAILED INFORMATION ON TUBEWELLS
(DHANUSHA DISTRICT)

DISTRICT Dhanusha
VDC : Janakpur Nagar Palika

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Ram Pratap Sah
Ram Krishan Yadav
Ram Charitra Raut

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	JADP		Hanuman Nagar	Janakpur Municipality	9	355.6/ 203.2	173.8	50	Deep	72			48.00	Paddy	83	3.67	6-10	8-10	VT	72	Fiat	10		JICA	—	
														Wheat	55	2.2	Months									
2	JADP		Rani Bazar	"	8	355.6/ 203.2	212	45	"	75			50.00	Paddy	82	3.67	"	"	"	72	"	8		"		
														Wheat	46	2.2										
														Potato	22	7.35										
3	Raso Devi Raut		Mujeliya	"	14	101.6	18	10	Shallow	15			10.00	Paddy	80	3.67	"	10-12	CP	7	Narayani Kirloskar	1.5		ADB/N Janakpur	30,651.00	
														Wheat	46	2.2										
														Potato	26	7.35										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Dhanusha
VDC : Depura Rupaitha

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Kapil Dev Sah
Jagdish Thakur Bashi

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P	Pump Details Company	Fuel Expns. (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Kapil Sah		Depura	Depura Rupaitha	1	38.1	123	3	Shallow	4.5			3.00	Paddy	66	3.67	Year	Artesan						ADB/N Janakpur	11,586.00	
														Wheat	44	2.05	Round									
2	Jagdish Bashi		Rupaitha	"	9	38.1	130	4	"	5.5			3.67	Paddy	72	3.67	"	"						"	12,966.00	
														Wheat	54	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Bakchaura

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Hira Yadav
Bindeshwar Sah

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Hira	Yadav	Bakchaura	Bakchaura	9	101.6	37	12	Shallow	18			12.00	Paddy	77	3.67	6-10	10-12	CP	8	Bharat	L5		ADB/N	45,469.35	
														Wheat	55	2.2	Months							Janakpur		
4	Kausheelya	Devi	"	"	9	101.6	43	12	"	18			12.00	Paddy	77	3.82	"	"	"	8	Narayani	L5		"	48,557.65	
														Wheat	55	2.05					Kirloskar					

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Laxamipur Bageba

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Ram Dev Karmi
Chandra Dev Raut Karmi
Pratap Narayan Mishra
Ram Prasad Yadav

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Sita Devi	Karmini	Bhagwatipur	Laxamipur Bageba	1	38.1	94.5	4	Shallow	6			4.00	Paddy	66	3.67	Year	Artesan						ADB/N	10,244.00	
														Wheat	50	2.05	Round							Janakpur		
														Potato	16	7.35										
2	Chandra	Karmi	Laxamipur Bageba	"	4	38.1	95	4	"	6			4.00	Paddy	66	3.67	"	"						"	10,511.00	
														Wheat	33	2.2										
														Potato	33	8.82										
3	Tribeni Devi	Mishra	Khamnaura	"	8	38.1	95.5	2	"	3.5			2.33	Paddy	71	3.67	"	"						"	11,029.00	
														Wheat	71	2.2										
4	Ram	Yadav	"	"	5	38.1	65	2	"	3			2.00	Paddy	66	3.67	"	"						"	7,962.00	
														Wheat	66	2.2										
5	Manji	Yadav	Laxamipur Bageba	"	4	38.1	85	1.5	"	3			2.00	Paddy	70	3.67	"	"						"	9,139.00	
														Wheat	70	2.2										
6	Smt. Manju	Mishra	"	"	4	38.1	93	2	"	3			2.00	Paddy	70	3.67	"	"						"	10,182.00	
														Wheat	70	2.2										

NOTE:

DISTRICT Dhanusha
VDC : Bharatpur

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Ram Sebak Yadav
Ram Bahadur Magar

S. N	Owner's Name	Location		Tubewell Details					Command Area				Crops and Yeilds			Operation		Pump Details			Fuel Expns.		Financing Agency/ Private	Cost of Instal-lation (N Rs.)	Remarks
	First Name Last Name	Village	V.D.C.	War No.	Size (mm)	Depth (m)	Dis-charge (lps)	TYPE	B.	K		Ha.	Crops	Copping Intens-ity (%)	(mt/ha.)	Operating Season (S/W/YR)	Daily Operating Hours	Type	H.P	Company	Diesel (LPH)	Elect. (KWH)			
1	JADP	Birendra Bazar	Bharatpur	4	355.6/ 203.2	124	25	Deep	45			30.00	Paddy Wheat Maize	71 26 44	3.2 1.76 2.05	Year Round	10-12	VT	72	Fiat	8		JICA	–	
2	JADP	Bharatpur	"	5	355.6/ 203.2	82	20	"	32			21.33	Paddy Wheat Maize Potato	87 37 46 21	3.08 8.76 1.91 7.35	"	8-10	"	47	ISUZU	5		"	–	

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Dhanusha
VDC : Patnuka

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Jadhuni Thakur Hajam
Swarup Mahato Koiri
Manshif Gotham

S. N	Owner's Name	Location		Tubewell Details					Command Area				Crops and Yeilds			Operation		Pump Details			Fuel Expns.		Financing Agency/ Private	Cost of Instal-lation (N.Rs.)	Remarks
	First Name Last Name	Village	V.D.C.	War No.	Size (mm)	Depth (m)	Dis-charge (lps)	TYPE	B.	K		Ha.	Crops	Copping Intens-ity (%)	(mt/ha.)	Operating Season (S/W/YR)	Daily Operating Hours	Type	H.P	Company	Diesel (LPH)	Elect. (KWH)			
1	Jaduni Hajam	Patnuka	Patnuka	7	101.6	15.5	18	Shallow	28			18.33	Paddy Wheat	65 43	3.67 2.2	6-10 Months	10-12	CP	5	Narayani Kirloskar	1.25		ADB/N khajuri	29,033.00	
2	Swarup Koiri	Banarjula	"	2	101.6	13	14	"	21			14.00	Paddy Wheat	85 47	3.67 2.2	"	"	"	7	"	1.5		"	26,580.40	
3	Manshif Gotham	"	"	3	101.6	12.5	12	"	18			12.00	Paddy Wheat Potato	72 44 22	3.67 2.2 7.35	"	"	"	5	"	1.25		"	25,543.00	
4	Maksudan Goit	Patnuka	"	1	101.6	13	12	"	17			11.33	Paddy Wheat Potato	70 47 23	3.67 2.2 8	"	"	"	7	"	1.5		"	27,200.00	
5	Moti Sah	"	"	6	101.6	13	10	"	16			10.67	Paddy Wheat Potato	70 45 25	3.67 2.2 7.35	"	"	"	5	"	1.25		"	26,250.00	

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Balha Kathal

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Bramh Dev Roy
Gangai Raut Yadav

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Cropping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Bramh	Roy	Balha Kathal	Balha Kathal	7	101.6	13	12	Shallow	18			12.00	Paddy	83	3.67	6-10	10-12	CP	7	Narayani	1.5		ADB/N	28,763.00	
														Wheat	55	2.2	Months				Kirloskar			Khajuri		
2	Gangai	Yadav	Enarbe	"	1	101.6	13	9	"	14			9.00	Paddy	74	3.67	"	8-10	"	7	Usha	1.5		ADB/N	24,740.00	
														Wheat	37	2.2								Khajuri		
3	Amat Nath	Kirhar	Balha Kathal	"	2	101.6	15	10	"	14			9.33	Paddy	75	3.67	"	"	CP	7	"	1.5		ADB/N	26,360.00	
														Wheat	40	2.2								Khajuri		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Khajuri Chauha

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Bindeswar Mandal
Ram Charitra Sah
Ram Bilas Sah Seri

S. No	Owner's Name: First Name	Owner's Name: Last Name	Location: Village	Location: V.D.C.	Tubewell Details: Ward No.	Tubewell Details: Size (mm)	Tubewell Details: Depth (m)	Tubewell Details: Discharge (lps)	Tubewell Details: TYPE	Command Area: B.	Command Area: K	Command Area: D	Command Area: Ha.	Crops and Yeilds: Crops	Crops and Yeilds: Cropping Intensity (%)	Crops and Yeilds: (mt/ha.)	Operation: Operating Season (S/W/YR)	Operation: Daily Operating Hours	Pump Details: Type	Pump Details: H.P.	Pump Details: Company	Fuel Expns.: Diesel (LPH)	Fuel Expns.: Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Bindeswar	Mandal	Khajuri	Khajuri	9	101.6	12.5	14	Shallow	21			14.00	Paddy	76	3.67	6-10	10-12	CP	7	Narayani	1.5		ADB/N	29,999.00	
														Wheat	47	2.2	Months				Kirloskar			Khajuri		
2	Palat	Sah	"	"	3	101.6	15.5	16	"	18			12.00	Paddy	75	3.67	"	"	"	7	"	1.5		"	34,235.00	
														Wheat	45	2.2										
3	Ram	Sah	"	"	6	101.6	15.5	18	"	27			18.00	Paddy	77	3.67	"	"	"	7	"	1.5		"	34,343.00	
														Wheat	44	2.2										
4	Ram Asis Pd.	Sah	"	"	8	101.6	16	18	"	25			16.67	Paddy	75	3.67	"	"	"	7	"	1.5		"	35,620.00	
														Wheat	50	2.2										
5	Ram	Seri	"	"	7	101.6	12.5	12	"	18			12.00	Paddy	72	3.67	"	"	"	7	"	1.5		"	31,226.00	
														Wheat	44	2.2										
6	Ashok Kumar	Mahto	"	"	8	101.6	15	16	"	23			15.33	Paddy	70	3.67	"	"	"	7	"	1.5		"	34,130.00	
														Wheat	45	2.2										
7	Shankar Bd.	Karki	"	"	1	101.6	15.5	12	"	18			12.00	Paddy	78	3.67	"	"	"	7	"	1.5		"	34,300.00	
														Wheat	51	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Phulgama

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Ram Charitra yadav
Ram Prit Yadav

S. No	Owner's Name	Location		Tubewell Details					Command Area					Crops and Yeilds			Operation		Pump Details				Fuel Expns.		Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
	First Name Last Name	Village	V.D.C.	Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	B.	K	D	Ha.		Crops	Copping Intensity (%)	(mt/ha.)	Operating Season (S/W/YR)	Daily Operating Hours	Type	H.P.	Company	Diesel (LPH)	Elect. (KWH)			
1	Ram Charitra yadav	Phulgama	Phulgama	9	101.6	18.5	9	Shallow	14			9.00		Paddy	74	3.67	6-10	8-10	CP	5	Bharat	1.25		ADB/N	31,437.50	
														Wheat	37	2.35	Months				Shakti			Narayan		
														Potato	29	8.82										
2	Ram Prit Yadav	"	"	9	101.6	13	8	"	12			8.00		Paddy	75	3.67	"	10-12	"	5	"	1.25		"	29,690.00	
														Wheat	41	2.32										
														Potato	33	8.82										
3	Sant Thakur Hajam	"	"	6	101.6	12	12	"	15			10.00		Paddy	75	3.67	"	10-12	"	5	Narayani	1.5		"	29,700.00	
														Wheat	45	2.32					Kirloskar					
														Potato	35	8.82										
4	Raj Kumar R.Yadav	"	"	9	101.6	27	7	"	12			8.00		Paddy	73	3.67	"	10-12	"	5	Narayani	1.5		"	37,900.00	
														Wheat	41	2.21					Kirloskar					
														Potato	30	8.82										
5	Binderwar yadav	"	"	6	101.6	13	10	"	14			9.00		Paddy	75	3.67	"	10-12	"	5	Narayani	1.5		"	31,165.00	
														Wheat	40	2.21					Kirloskar					
														Potato	30	8.82										
6	Syty Narayan Thakur	"	"	5	101.6	16	12	"	15			10.00		Paddy	70	3.67	"	10-12	"	5	Narayani	1.5		"	32,465.00	
														Wheat	40	2.35					Kirloskar					
														Potato	35	8.82										
7	Nathuni Yadav	"	"	9	50.8	123	3	"	5			3.33		Paddy	75	3.67	Year	Artesan						"	20,116.00	
														Wheat	45	2.35	Round									

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Sanyipur

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Shyam Prasad Niraula
Vijaya Mahara

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Mangalpur	Sanyipur	8	355.6/ 203.2	173	20	Deep	30			20.00	Paddy	93	3.23	6-10 Months	10-12	VT	47	ISUZU	55		JICA		
														Wheat	40	2.05										
														Potato	43	7.35										
2	JADP		Bateshore	"	7	355.6/ 203.2	120	25	"	38			25.00	Paddy	82	3.58	"	"	"	72	fiat	6		"		
														Wheat	48	2.2										
														Potato	29	7.35										
														Wheat												

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

SAMPLE FORMAT FOR TUBEWELL DATA COLLECTION

DISTRICT : Dhanusha
VDC : Ramdaiya

PERSONS CONTACTED: Shogarath Mandal
Gopal Prasad Sharma
Ghan Shyam Sah

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Ramdaiya	Ramdaiya	9	304.8/ 203.2	130	43	Deep	65			43.33	Paddy	84	3.38	Year Round	10-12	CP	16	Kubuta	2.5		JICA		
														Wheat	32	1.91										
														Potato	16	7.35										
														Maize	24	2.05										
2	JADP		"	"	5	304.8/ 203.2	201	24	"	37			24.67	Paddy	83	3.52	"	"	"	16	"	2.5		"		
														Wheat	40	2.2										
														Potato	27	8.82										
														Maize	29	1.91										
3	JADP		"	"	1	304.8/ 203.2	130	35	"	53			35.00	Paddy	87	3.38	"	8-10	"	16	"	2.5		"		
														Wheat	38	2.05										
														Potato	9	7.35										
														Maize	40	1.91										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Bhahera Bela

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Ram Sifit Yadav
Khater Yadav

S. No	Owner's Name: First Name	Owner's Name: Last Name	Location: Village	Location: V.D.C.	Tubewell Details: Ward No.	Tubewell Details: Size (mm)	Tubewell Details: Depth (m)	Tubewell Details: Discharge (lps)	TYPE	Command Area: B.	Command Area: K	Command Area: D	Command Area: Ha.	Crops and Yields: Crops	Crops and Yields: Copping Intensity (%)	Crops and Yields: (mt/ha.)	Operation: Operating Season (S/W/YR)	Operation: Daily Operating Hours	Pump Details: Type	Pump Details: H.P.	Pump Details: Company	Fuel Expns.: Diesel (LPH)	Fuel Expns.: Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	Ram Yadav		Bhahera Bela	Bhahera Bela	2	101.6	24.5	12	Shallow	18			12.00	Paddy	72	3.82	6-10	3-10	CP	7	Narayani	1.5		ADB/N	37,800.00	
														Wheat	44	2.2	Months				Kirloskar			Narayan		
														Potato	22	8.82										
2	Khater Yadav		"	"	2	101.6	18.5	10	"	15			10.00	Paddy	73	3.67	"	"	"	5	Bharat	1.25		ADB/N	33,135.00	
														Wheat	40	2.35					Shakti			Narayan		
														Potato	33	7.35										
3	Chulhai Yadav		"	"	2	101.6	23	8	"	12			8.00	Paddy	75	3.67	"	"	"	5	Bharat	1.25		ADB/N	35,965.00	
														Wheat	40	2.21					Shakti			Narayan		
														Potato	30	8										
4	Bechan Yadav		"	"	2	101.6	15	8	"	12			8.00	Paddy	70	3.67	"	"	"	5	Bharat	1.25		ADB/N	31,300.00	
														Wheat	45	2.35					Shakti			Narayan		
														Potato	30	7.35										
5	Laxmi Yadav		"	"	1	101.6	18	10	"	15			8.00	Paddy	73	3.67	"	"	"	5	"	1.25		"	32,945.00	
														Wheat	40	2.35										
														Potato	33	7.35										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Yaga Bhumi

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: 9

S. No	Owner's Name First Name	Last Name	Location Village	V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Mugiya	Yaga Bhumi	2	355.6/ 203.2	122.7	20	Deep	35			23.33	Paddy	80	3.08	Year	10-12	VT	72	Fiat	8		JICA		
														Wheat	30	1.76	Round									
														Maize	42	2.05										
2	JADP		Dhara Pani	"	4	355.6/ 203.2	158	5	"	75			50.00	Paddy	66	3.23	"	"	VT	72	Fiat	8		JICA		
														Wheat	26	1.76										
														Maize	40	2.05										
														Potato	26	7.35										
3	JADP		Keshar Kutti	"	8	355/ 203.2	165	30	"	47			31.33	Paddy	85	3.38	"	8-10	VT	72	Fiat	8		JICA		
														Wheat	29	1.76										
														Maize	42	1.91										
														Potato	25	8.82										
4	Hobyang Tamangni		Dhara Pani	"	4	50.8	108	3	Shallow	6			4.00	Paddy	85	3.23	"	8-10	CP	7	Narayani	1.5		ADB/N Dhalkebar	30,170.00	
														Wheat	45	1.76										
														Maize	35	2.05										
5	Hadish Nadaf Daniya		Dhara Pani	"	5	50.8	105	3	"	6			4.00	Paddy	80	3.23	"									
														Wheat	40	1.76		8-10	CP	7	Narayani	1.5		"	29,970.00	
														Potato	30	8.00										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Naktajhij

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Upendra Yadav
Raghabendra Yadav

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Jadp		Naktajhij	Naktajhij	2	355.6/ 203.2	134	35	Deep	54			36.00	Paddy	74	3.52	6-10 Months	10-12	VT	72	Fiat	8		JICA		
														Wheat	40	2.2										
														Potato	25	8.82										
2	Jadp		"	"	1	355.6/ 203.2	133	35	"	55			36.67	Paddy	74	3.52	6-10 Months	10-12	"	42	ISUZU	5		JICA		
														Wheat	36	1.91										
														Potato	20	8.82										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Mahua

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Gyani Sah Teli
Mahajan Sah
Bandula Mahato Nuniya

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Gyani Teli		Mahua	Mahua	7	101.6	15.5	15	Shallo	23			15.00	Paddy	75	3.67	6-10 Months	8-10	CP	7	Narayani Kirloskar	1.5		ADB/N khajori	29,993.00	
														Wheat	44	2.35										
2	Mahajan Sah		"	"	2	101.6	15.5	16	"	24			15.67	Paddy	76	3.67	"	9-10	"	5	"	1.25		ADB/N khajori	33,653.00	
														Wheat	42	2.35										
3	Bandul Nuniya		"	"	4	101.6	14.5	15	"	23			15.00	Paddy	71	3.67	"	10-12	"	7	"	1.5		ADB/N khajori	29,045.00	
														Wheat	44	2.2										
4	OM Prasad Sah		"	"	2	101.6	16	15	"	20			13.33	Paddy	70	3.67	"	"	"	7	"	1.5		ADB/N khajori	34,100.00	
														Wheat	45	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Enarba

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Sahdev Khirhar Yadav
Baidhanath Goetman

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Sahdev	yadav	Phulbariya	Enarba	2	101.6	12.5	14	Shallo	21			14.00	Paddy	76	3.67	6-10	8-9	CP	7	Narayani	1.5		ADB/N	26,540.00	
														Wheat	47	2.2	Months				Kirloskar			Khajuri		
2	Baidhanath	Goetman	Enarba	"	7	101.6	15.5	10	"	15			10.00	Paddy	86	3.82	"	10-12	"	7	"	1.5		"	34,568.00	
														Wheat	53	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Balha Saghara

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Banarsi Sahu
Pachuwa kabari

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Banarsi	Sahu	Balha Saghara	Balha Saghara	3	101.6	12.5	10	Shallo	15			10.00	Paddy	73	3.67	6-10	10-10	CP	7	Narayani	1.5		ADB/N	26,403.00	
														Wheat	53	2.2	Months				Kirloskar			khajuri		
2	Ram Aseswor	Salhaita	"	"	2	101.6	15	10	"	15			10.00	Paddy	75	3.67	"	"	"	7	"	1.5		"	28,630.00	
														Wheat	55	2.2										
3	Pachuwa	Kabari	"	"	6	101.6	12.5	18	"	26			17.33	Paddy	84	3.82	"	"	"	7	"	1.5		"	28,763.00	
														Wheat	46	2.05										
4	Ram Aseswor	Das	"	"	2	101.6	13	12	"	18			12.00	Paddy	80	3.67	"	"	"	7	"	1.5		"	27,760.00	
														Wheat	50	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Singyahi Marwa

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Bindeswar mandal
Shyam K. Chaudhari

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Instalation (N.Rs.)	Remarks
1	Bindeswar mandal		Singyahi Marwa	Singyahi Marwa	7	101.6	18	12	Shallow	18			12.00	Paddy	72	3.67	6-10 Months	10-12	CP	7	USHA	1.5		ADB/N Khajuri	35,993.00	
														Wheat	69	2.05										
														Potato	30	7.35										
2	Sumitra Chaudhari		"	"	1	101.6	16.5	10	"	15			10.00	Paddy	88	3.67	"	"	"	7	Narayani Kirloskar	1.5		"	34,203.00	
														Wheat	60	2.2										
3	Sunil Kumar Chaudhari		"	"	1	101.6	16	10	"	15			10.20	Paddy	75	3.67	"	"	"	7	"	1.5		"	33,932.00	
														Wheat	60	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Basahiya

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Ram Sebak Sharma
Ran Chandra Yadav
Chandeswar Lal Kara
Ashok Sah
Bilta Malah

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Instalation (N.Rs.)	Remarks
1	JADP		Basahiya	Basahiya	1	355.6/ 203.2	200	55	Deep	78			52.00	Paddy	83	3.67	6-10 Months	10-12	VT	72	Fiat	10		JICA		
														Wheat	51	2.2										
2	JADP		"	"	7	"	200	45	"	70			46.67	Paddy	87	3.67	"	8-10	"	47	ISUZU	6		Nissara Company Japan		
														Wheat	42	2.35										
														Potato	22	7.35										
3	JADP		"	"	8	"	199	45	"	71			47.33	Paddy	95	3.67	"	"	"	47	ISUZU	6		"		
														Wheat	56	2.2										
														Potato	19	7.35										
4	JADP		"	"	5	"	198	45	"	70			46.67	Paddy	88	3.67	"	8-10	"	47	ISUZU	6		"		
														Wheat	42	2.2										
														Potato	18	8.82										
	JADP		"	"	3	"	195	45	"	68			45.33	Paddy	86	3.67	"	"	"	47	ISUZU	6		"		
														Wheat	44	2.35										
														Potato	17	7.35										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Harihar Pur

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Debendra bahadhur
Hari Kishor Yadav
Endra Dev Thakur

S. N.	Owner's Name First Name	Last Name	Location Village	V.D.C.	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	JADP		Harihar Pur	Harihar Pur	4	355.6/ 203.2	120	33	Deep	52			34.67	Paddy	84	3.58	Year Round	8-10	VT	72	Fiat	9		JICA		
														Wheat	38	1.91										
														Maize	30	1.76										
2	JADP		"	"	1	"	123	25	"	38			25.51	Paddy	80	3.23	"	10-12	"	47	ISUZU	5		"		
														Wheat	26	1.91										
														Maize	37	2.05										
3	JADP		"	"	7	"	128	25	"	38			25.85	Paddy	81	3.23	"	8-10	"	47	ISUZU	5		"		
														Wheat	26	1.91										
														Potato	23	8.82										
														Maize	34	2.05										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Dhabauli

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Yadubanshi Mandal
Bhola Nath Das

S. N	Owner's Name First Name	Last Name	Location Village	V.D.C.	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	Yadubanshi Mandal		Dhabauli	Dhabauli	2	101.6	16	12	Shallo	18			12.00	Paddy	77	3.67	6-10 Months	10-12	CP	5	Narayani Kirloskar	1.25		ADB/N Khajuri	30,705.00	
														Wheat	55	2.35										
2	Bhola Das		"	"	3	101.6	15.5	10	"	15			10.00	Paddy	86	3.67	"	8-10	"	7	"	1.5		"	30,933.00	
														Wheat	53	2.35										
3	Kameshwore Mandal		"	"	7	101.6	16	10	"	15			10.00	Paddy	80	3.67	"	"	"	7	"	1.5		"	30,970.00	
														Wheat	50	2.35										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Dubarkot Hathletaba

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Mahadev Mandal
Jawahar Mandal

S. N	Owner's Name First Name	Last Name	Location Village	V.D.C.	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Mahadev Mandal		Bubarkot Hathletaba	Bubarkot Hathletaba	3	101.6	12.5	10	Shallo	15			10.00	Paddy	80	3.67	6-10 Months	10-12	CP	7	Narayani Kirloskar	1.5		ADB/N Khajuri	26,493.20	
														Wheat	53	2.2										
2	Bindeshwor Mandal		"	"	8	101.6	12	8	"	12			8.00	Paddy	80	3.67	"	"	"	7	"	1.5		"	26,130.60	
														Wheat	55	2.2										
3	Jawahar Mandal		"	"	5	101.6	11	8	"	12			8.00	Paddy	83	3.67	"	"	"	7	"	1.5		"	26,104.00	
														Wheat	66	2.2										
4	Harihar Mandal		"	"	1	101.6	12.5	10	"	15			10.00	Paddy	85	3.67	"	"	"	7	"	1.5		"	26,830.00	
														Wheat	55	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Lahar

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Ram Dev Yadad
Ram Khelaban Yadav
Bireswar Yadav

S. N	Owner's Name		Location		Tubewell Details				Command Area				Crops and Yeilds			Operation		Pump Details			Fuel Expns.		Financing Agency/ Private	Cost of Instal-lation (N.Rs.)	Remarks
	First Name	Last Name	Village	V.D.C.	War No.	Size (mm)	Depth (m)	Dis-charge (lps)	TYPE	B.	K	Ha.	Crops	Copping Intens-ity (%)	(mt/ha.)	Operating Season (S.W/YR)	Daily Operating Hours	Type	H.P	Company	Diesel (LPH)	Elect. (KWH)			
1	Basanti Devi Yadav		Lahar	Lahar	8	101.6	12.5	8	Shallo	12		8.00	Paddy	75	3.67	6-10	8-12	CP	7	Bharat	1.5		ADB/N	26,714.00	
													Wheat	50	2.2	Months							Khajuri		
2	Bireswar Yadav		"	"	4	101.6	13	10	"	15		10.00	Paddy	70	3.67	"	"	"	5	Narayani	1.25		"	27,100.00	
													Wheat	50	2.2					Kirloskar					
3	Ram Yadav		"	"	8	101.6	12.5	8	"	13		8.33	Paddy	72	3.67	"	10-12	"	7	Bharat	1.5		"	25,195.00	
													Wheat	48	2.2										
4	Pooja Devi Paswan		"	"	7	101.6	12.5	9	"	14		9.33	Paddy	70	3.67	"	8-10	"	7	"	1.5		"	25,300.00	
													Wheat	45	2.2										
5	Navin kumar Goit		"	"	1	101.6	15	10	"	15		10.00	Paddy	75	3.67	"	"	"	7	"	1.5		"	28,000.00	
													Wheat	50	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Sakhuwa Mahendra Nagar

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: JADP
Shyam Thapa

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Location War No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K.	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Mahendra Nagar	Sakhuwa Mahendra Nagar	3	355.6/ 203.2	118	30	Deep	44		29.33	Paddy	79	3.52	6-10 Months	10-12	VT	47	ISUZU	5		JICA	NA	
													Wheat	45	1.91										
													Potato	20	7.35										
												0.00	Paddy												
													Wheat												

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Sonapara

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: JADP
Mr. Rajendra Prasad Thakur

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Location War No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K.	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Sonapara	Sonapara	2	355.6/ 203.2	175	50	Deep	75		50.00	Paddy	86	3.67	6-10 Months	10-12	VT	72	Fiat	10		JICA	NA	
													Wheat	53	2.2										
													Potato	9	7.35										
												0.00	Paddy												
													Wheat												

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Hansapur Kattapulla

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: JADP

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area Ha.	Crops and Yeilds Crops	Cropping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Hansapur Kattapulla	Hansapur Kattapulla	5	355.6/ 203.2	175	7	Deep	11		7.00	Paddy	76	3.67	6-10 Months	10-12	VT	47	ISUZU	4		JICA	NA	
													Wheat	47	2.2										
													Potato	28	8.82										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Dhanusha
VDC : Paudeshwar

TUBEWELL DATA COLLECTION

PERSONS CONTA Raj Kishor Yadav
Ram Bilas Sah

S. N	Owner's Name First Name	Last Name	Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Raj Kishor	Yadav	Paudeshwar	Paudeshwar	4	101.6	32	12	Shallow	18			12.00	Paddy	77	3.67	6-10	10-12	CP	8	Bharat	1.5		ADB/N	40,317.00	
														Wheat	55	2.2	Months				Shakti			Janakpur		
2	Rukmini Sah		"	"	2	101.6	26.5	12	"	18			12.00	Paddy	72	3.67	"	"	"	8	"	1.5		"	12,782.86	
														Wheat	44	2.2										
3	Aneshwor	Yadav	"	"	4	101.6	36	16	"	20			13.33		75	3.67	"	"	"	8	"	1.5		"	48,116.00	
															45	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Dhanusha
VDC : Suga Madhukari

TUBEWELL DATA COLLECTION

PERSONS CONTA Mukul Nadaf
Tapsi Yadav

S. N	Owner's Name First Name	Last Name	Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Mukul	Nadaf	Narhiya	Suga Madhukari	5	101.6	36	6	Shallow	9			6.00	Paddy	77	3.52	6-10	10-12	CP	7	Narayani Kirloskar	1.5		ADB/N Janakpur	46,399.00	
														Wheat	55	2.2	Months									
2	Tapsi	Yadav	"	"	4	101.6	32.5	8	"	12			8.00	Paddy	75	3.52	"	"	"	5	"	1.25		"	45,657.00	
														Wheat	50	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Saphi

TUBEWELL DATA COLLECTION

PERSONS CONTACT Chaudhary Sahu Teli
Kameshwar Yadav

S N	Owner's Name First Name	Last Name	Location Village	V.D.C.	W No	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns Diesel (LPH)	Elect (KWH)	Financing Agency/ Private	Cost of Installation (in Rs.)	Remarks
1	Chaudhary Teli		Saphi	Saphi	1	38.1	71	4	Shallow	4		2.67	Paddy	66	3.67	Year	24	CP					ADB/N	6,750.00	
													Wheat	33	2.2	Round							Janakpur		
2	Cameswar Yadav		Banigama	"	1	38.1	70.5	3	"	3		2.00	Paddy	66	3.67	"	"	"					"	8,244.00	
													Wheat	44	2.2										
3	JADP		Saphi	"	5	304.8/	146	39	Deep	60		40.00	Paddy	86	3.82	6-10	10-12	"	16	Kubota	2.5		JICA		
						203.2							Wheat	46	2.05	MONths									
													Potato	30	8.82										
4	JADP		"	"	9	304.8/	130	35	"	51		34.00	Paddy	88	3.82	"	"	"	16	"	2.5		"		
						203.2							Wheat	43	2.2										
													Potato	29	8.82										
5	JADP		"	"	7	304.8/	130	36	"	52		34.67	Paddy	88	3.5	"	"	"	16	"	2.5		"		
						203.2							Wheat	42	2.35										
													Potato	36	8.82										
6	JADP		"	"	4	304.8/	130	44	"	55		36.67	Paddy	88	3.67	"	8-10	"	16	"	2.5		"		
						203.2							Wheat	32	2.35										
													Potato	27	8.82										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Lagma Gadha Guthi

TUBEWELL DATA COLLECTION

PERSONS CONTAC Ram Shovit Mandal

S N	Owner's Name First Name	Last Name	Location Village	V.D.C.	Tubewell Details W N	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Gulab Devi Mandal		Lagma Gadha Guthi	Lagma Gadha Guthi	2	101.6	12	10	Shallow	15			10.00	Paddy	80	3.82	6-10 Months	8-10	CP	7	Narayani Kirloskar	1.5		ADB/N Narayan	33,385.00	
														Wheat	33	2.05										
														Potato	40	7.35										
2	Binda Ojhain		"	"	1	101.6	18.3	10	"	15			10.00	Paddy	80	3.52	"	"	"	5	Usha	1.25		"	32,665.00	
														Wheat	40	2.2										
														Potato	35	8										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Umaprempur

TUBEWELL DATA COLLECTION

PERSONS CONTAC Dorik Yadav

S N	Owner's Name First Name	Last Name	Location Village	V.D.C.	Tubewell Details W N	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Umaprem	Umaprempur	3	355.6/ 203.2	129	40	Deep	65			43.33	Paddy	80	3.52	Year Round	10-12	VT	72	Fiat	10		JICA		
														Wheat	38	2.2										
														Maize	40	2.05										
2	Shyam Sunder Mishra		"	"	6	50.8	108	3	Shallow	5			3.33	Paddy	80	3.67	6-10 Months	8-10	CP	7	Narayani Kirloskar	1.5		ADB/N Dhalkeba	26,130.00	
														Wheat	50	2.2										
3	Bhola Sah		"	"	8	50.8	105	3	"	5			3.33	Paddy	85	3.67	"	"	"	7	"	1.5		"	25,840.00	
														Wheat	50	2.2										
4	Jagat Nath Sah		"	"	8	50.8	105	3	"	5			3.33	Paddy	80	3.67	"	"	"	7	"	1.5		"	26,320.00	
														Wheat	55	2.2										
5	Jog Kumar Mahato		"	"	8	50.8	108	3	"	5			3.33	Paddy	85	3.67	"	"	"	7	"	1.5		"	26,840.00	
														Wheat	55	2.2										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT JADP: Janakpur Agriculture Development Project

DISTRICT : Dhanusha
VDC : Kajara Ramaul

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Rajendra Singh

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details W No	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/h	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Laliya	Kajara Ramaul	9	355 & 203.2	165	30	Deep	45			30.00	Paddy	84	3.67	6-10	8-10	VT	47	ISUZU	5		JICA		
														Wheat	44	2.2	Months									
														Potato	22	7.35										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Debdiha

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Subash Tatma

S. N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details W No	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/h	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Subash Tatma		Debdiha	Debdiha	1	101.6	41.5	10	Shallow	15			10.00	Paddy	80	3.67	6-10	8-10	CP	7	Narayani Kirloskar	1.5		ADB/N Narayan	48,225.00	
														Wheat	40	2.35	Months									
														Potato	33	7.35										
2	Jageshwor Mandal		"	"	6	101.6	12	12	"	15			10.00	Paddy	75	3.67	"	"	"	7	"	1.5		"	34,785.00	
														Wheat	45	2.35										
														Potato	30	7.35										
3	Rasi Lal Yadav		"	"	5	50.8	120	2	"	5			3.33	Paddy	80	3.69	Year	Artesan						"	22,060.00	
														Wheat	40	2.21	Round									
4	Ram Ratan Bherinar		"	"	2	101.6	36	12	"	15			10.00	Pady	80	3.69	6-10	8-12	"	8	Bharat Shakti	1.5		"	55,060.00	
														Wheat	40	2.21	Months									
														potato	30	8										
5	Sya Ram Yadav		"	"	2	101.6	36	11	"	15			10.00	Paddy	75	3.69	"	"	"	7	Narayan Kirloskar	1.5		"	44,175.00	
														Wheat	45	2.21										
														Potato	30	8.8										
6	Pratap Narayan Jha		"	"	8	101.6	30	8	"	10			6.67	Paddy	75	3.69	"	"	"	5	Bharat Shakti	1.5		"	36,765.00	
														Wheat	45	2.21										
														Potato	30	8										

NOTE:

DISTRICT : Dhanusha
VDC : Mukhiya Patti

TUBEWELL DATA COLLECTION

PERSONS CONTAC Dayanand Yadav

S N	Owner's Name First Name	Last Name	Village	Location V.D.C.	W N	Tubewell Details Size (mm)	Depth (m)	Dis-charge (lps)	TYPE	Command Area B.	K	Ha.	Crops and Yeilds Crops	Copping Intens-ity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financ-ing Agency/ Private	Cost of Instal-lation (N.Rs.)	Remarks
1	Dayanand	Yadav	Musarniya	Mukhiya Patti	1	101.6	15.5	10	Shallow	15		10.00	Paddy	80	3.67	6-10	8-10	CP	5	Bharat	1.25		ADB/N	31,065.00	
													Wheat	40	2.2	Months				Shakti			Narayan		
													Potato	33	7.35										
2	Ram Prit	Sah	"	"	7	101.6	62	12	"	18		12.00	Paddy	80	3.67	"	"	"	5	Narayani	1.5		"	52,205.00	
													Wheat	45	2.2					Kirloskar					
													Potato	35	8.83										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Ghorghas

TUBEWELL DATA COLLECTION

PERSONS CONTAC Phugan Raut

S N	Owner's Name First Name	Last Name	Village	Location V.D.C.	W N	Tubewell Details Size (mm)	Depth (m)	Dis-charge (lps)	TYPE	Command Area B.	K	Ha.	Crops and Yeilds Crops	Copping Intens-ity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financ-ing Agency/ Private	Cost of Instal-lation (N.Rs.)	Remarks
1	Jamunawati	Devi	Ghorghas	Ghorghas	9	101.6	21.5	12	Shallow	18		12.00	Paddy	77	3.67	6-10	8-10	CP	5	Narayani	1.25		ADB/N	34,785.00	
													Wheat	44	2.2	Months				Kirloskar			Narayan		
													Potato	33	8.82										
2	Mahesh	Jha	"	"	6	101.6	40	9	"	15		10.00	Paddy	75	3.67	"	"	"	5	Bharat	1.5		"	46,480.00	
													Wheat	43	2.21					Shakti					
													Potato	40	8										
3	Kuseshwar Lal	Karn	"	"	9	101.6	30	9	"	15		10.00	Paddy	75	3.67	"	"	"	5	"	1.5		"	40,130.00	
													Wheat	45	2.21										
													Potato	40	8.82										
4	jata Dhar	Roy	"	"	8	50.8	128	2.5	"	5		3.33	Paddy	65	3.67	Year	Artesan						"	22,499.00	
													Wheat	45	2.36	Round									

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Godar

TUBEWELL DATA COLLECTION

PERSONS CONTAC Sumant Rimal

S N	Owner's Name First Name	Last Name	Village	Location V.D.C.	W N	Tubewell Details Size (mm)	Depth (m)	Dis charge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intens-ity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Instal lation (N.Rs.)	Remarks
1	JADP		Godar	Godar	6	355.6/ 203.2	112.5	35	Deep	55			36.67	Paddy	80	3.23	Year	10-12	VT	72	Fiat	8		JICA		
														Wheat	36	2.05	Round									
														Potato	18	8.82										
														Maize	36	1.91										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Jhatiyahi

TUBEWELL DATA COLLECTION

PERSONS CONTAC Bipin Yadav

S N	Owner's Name First Name	Last Name	Village	Location V.D.C.	W N	Tubewell Details Size (mm)	Depth (m)	Dis-charge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intens-ity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Instal-lation (N.Rs.)	Remarks
1	JADP		Jhatiyahi	Jhatiyahi	4	355.6/ 203.2	160	25	Deep	38			25.00	Paddy	85	3.52	6-10	10-12	VT	47	ISUZU	5		JICA		
														Wheat	40	2.35	Months									
														POtato	29	8.82										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Tulshiyahi Jabdi

TUBEWELL DATA COLLECTION

PERSONS CONTACT Mahabir mahato Suri

S N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details WN	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	Mahabir mahato Suri		Tulshiyahi Jabdi	Tulshiyahi Jabdi	4	101.6	29	11	Shallow	17			11.00	Paddy	84	3.82	6-10 Months	10-12	CP	5	Narayani Kirloskar	1.25		ADB/Narayani	39,950.00	
														Wheat	48	2.05										
														Potato	36	8.82										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Dhalkebar

TUBEWELL DATA COLLECTION

PERSONS CONTACT Ramji Niraula

S N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details WN	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	JADP		Dhalkebar	Dhalkebar	3	355.6/ 203.2	122.5	38	Deep	52			34.67	Paddy	90	3.23	Year Round	8-10	VT	72	Fiat	8		JICA		
														Wheat	38	1.76										
														Potato	19	8.82										
														Maize	48	1.91										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Tulsiyahi Nikas

TUBEWELL DATA COLLECTION

PERSONS CONTACT Bindeshwor Teli

S N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C	Tubewell Details WN	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Bindeshwor	Teli	Tulsiyahi	Tulsiyahi Nikas	7	101.6	15.5	12	Shallow	18			12.00	Paddy	72	3.82	6-10	10-12	CP	7	Narayani	1.5		ADB/N	28,970.00	
														Wheat	38	2.2	Months				Kirloskar			Narayani		
														Potato	27	8.82										
2	Sitaram	Mahto	"	"	8	101.6	15.5	12	"	18			12.00	Paddy	73	3.69	"	"	"	7	"	1.5		"	31,950.00	
														Wheat	40	2.2										
														Potato	28	3.32										
3	Raudi	Thakur	"	"	1	101.6	15.5	10	"	15			10.00	Paddy	75	3.69	"	"	"	5	Bharat	1.25		"	30,765.00	
														Wheat	40	2.2										
														Potato	30	8.82										
4	Janak Kishor	Mahase	"	"	6	101.6	30	12	"	18			12.00	Paddy	70	3.69	"	"	"	7	Narayani	1.5		"	38,730.00	
														Wheat	40	2.2					Kirloskar					
														Potato	30	8										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Nagrayan

TUBEWELL DATA COLLECTION

PERSONS CONTACT Binod Kumar Lal

S N	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C	Tubewell Details WN	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K		Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Nagrayan	Nagrayan	2	355.6/	166	55	Deep	79			52.67	Paddy	86	3.67	6 10	8 10	VT	72	Fiat	10		JICA		
														Wheat	50	2.05	Months									
														Potato	18	3.82										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Dhanusha
VDC : Kanakpatti

TUBEWELL DATA COLLECTION

PERSONS CONTAC Bilat Sah Teli

SN	Owner's Name First Name	Owner's Name Last Name	Village	Location V.D.C.	WN	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Are B.	K.	D.	Ha.	Crops	Crops and Yeilds Copping Intensity (%)	(mt/ha)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Bilat Teli		Kanakpatti	Kanakpatti	2	101.6	21.5	10	Shallow	15			10.00	Paddy Wheat	80 66	3.82 2.2	6-10 Months	10-12	CP	7	Narayani Kirloskar	1.5		ADB/N Janakpur	32,650.00	

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Dhanusha
VDC : Machi Jhitkaiya

TUBEWELL DATA COLLECTION

PERSONS CONTAC Shovit Goetman

SN	Owner's Name First Name	Owner's Name Last Name	Village	Location V.D.C.	WN	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Are B.	K.	D.	Ha.	Crops	Crops and Yeilds Copping Intensity (%)	(mt/ha)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Shovit Goetman		Machi Jhitkaiya	Machi Jhitk	8	101.6	16	12	Shallow	18			12.00	Paddy Wheat Potato	77 44 33	3.52 2.2 8.82	6-10 Months	8-10	CP	7	Usha	1.5		ADB/N Khajuri	33,650.00	

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

ANNEX - F
DETAIL INFORMATION ON TUBEWELLS
(MAHOTTARY DISTRICT)

DISTRICT : Mahottari
VDC : Jaleswar Nagar Palika

TUBEWELL DATA COLLECTION

PERSONS CONTACTED : Mr. Madan Thakur
Mr. Santhos Sah
Mr. Ram Kalesh Thakur

S. No	Owner's Name First Name	Last Name	Location Village	V.D.C.	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	G.W.P.		Jaleswar	Jaleswar Nagar Palika	9	152.4	140	12	Deep	18	-	-	12.00	Paddy	44	1.48	Year round		C.P.	5	Kirloskar	1.25		GWP/N	NA	
														Paddy	83	4.13		8-10								
														Wheat	56	2.36										
2	Madan Thakur		Sari	"	10	101.6	18.5	7	Shallow	13			8.67	Paddy		3.54	6-10	8-10	C.P.	5	Bharat	1.00		Private	32,000.00	
														Wheat	46	1.92	Months									
3	G.W.P.		Bharag-aat	"	7	254/ 152.4	46		Deep	68			45.33	Paddy	88	3.69	6-10	8-10	B.T.	38	Mitsu-dutze	7.00		GWP/N	NA	
														Wheat	59	2.36	Months									
4	Shiv Narayan Thakur		Sari	"	10	101.6	18	7	Shallow	13			8.67	Paddy	80	3.54	6-10		C.P.	5	Bharat	1.25		ADB/N	31,340.00	
														Wheat	45	1.92	Months									
5	Lakhan Pandey		Sari	"	10	101.6	18	7	Shallow	13			8.67	Paddy	79	3.69	6-10		C.P.	5	Bharat	1.25		ADB/N	32,000.00	
														Wheat	45	2.21	Months									
6	Anil Kumar		Sari	"	11	101.6	19	7	Shallow	13			8.67	Paddy	80	3.69	6-10		C.P.	5	Bharat	1.25		ADB/N	31,920.00	
														Wheat	45	2.21	Months									
7	Ram Asish Kumar		Sari	"	11	101.6	19	7	Shallow	13			8.67	Paddy	80	3.69	6-10		C.P.	5	Bharat	1.25		ADB/N	32,000.00	
														Wheat	45	2.21	Months									

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Sasaulla

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Mr. Ram Prit Mahato

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Location Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Ramprit	Mahato	Sasaulla	Sasaulla	6	50.8	122	7	Shallow	11			7.33	Paddy	82	3.69	Yr	Artesan						ADB/N, Balba	23,445.00	
														Wheat	64	2.36										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Sarpallo

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Mr. Rajendra Mahato
Mr. Kishori Raut

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Location Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Rajendra	Mahato	Sarpallo	Sarpallo	1	101.6	20	9	shallow	13			8.67	Paddy	77	3.84	6-10	8-10	CP	8	Bharat	1.5		ADB/N	33,925.00	
														Wheat	62	2.21	Months				Shakti			Balba		
2	Kishori	Raut	Sarpallo	Sarpallo	3	101.6	20	8	shallow	13			8.67	Paddy	77	3.84	6-10	8-10	CP	8	BEC	1.5		ADB/N	34,375.00	
														Wheat	62	2.21	Months							Balba		
3	RamBilash	Mahato Kari	Sarpallo	Sarpallo	1	101.6	18	8	shallow	14			9.33	Paddy	80	3.69	6-10	8-10	CP	8	BEC	1.5		ADB/N	30,915.00	
														Wheat	48	2.21	Months							Balba		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Parsa-Debar

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Mr.Manu Sah Teli
Mr.Nanu Sah Teli

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Cropping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Manu Sah Teli		Parsa-Debar	Parsa-Debar	1	50.8	46	8	Shallow	12			8.00	Paddy	67	3.69	Year	Arteran						ADB/N	18,910.00	
														Wheat	42	2.21	Round							Balba		
														Potato	25	10.33										
2	Nanu Sah Teli		Parsa-Debar	Parsa-Debar	2	50.8	46	8	Shallow	12			8.00	Paddy	75	3.69	Year	Arteran						ADB/N	18,910.00	
														Wheat	58	2.21	Round							Balba		
														Potato	17	8.86										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Badiya Banchauri

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Mr.Bittu Sah Sari

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Cropping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Bittu Sah Sari		Badiya	Badiya Banchauri	9	101.6	21.5	15	Shallow	19			12.67	Paddy	79	3.84	6-10	7-8	CP	8	Bharat	1.5		ADB/N	31,475.00	
														Wheat	53	2.21	Months				Shakti			Balba		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Gaidha Bhetpur

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Mr. Raghubar Pandit Kumhar
Mr. Ramprit Yadav
Mr. Dinesh Roy Yadav

S. No	Owner's Name First Name	Last Name	Location Village	V.D.C.	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Cropping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency Private	Cost of Installation (N.Rs.)	Remarks
1	Raghubar P.	Kumhar	Gaidha	Gaidha Bhetpur	5	50.8	107	9	Shallow	12			8.00	Paddy	75	3.84	Year	Artesan						ADB/N	18,335.00	
														Wheat	50	2.21	Round							Balba		
2	Ram Prit	Yadav	Bhetpur	"	9	38.1	107	7	"	10			6.67	Paddy	80	3.84	"	"						"	10,055.00	
														Wheat	50	2.21										
3	Dinesh Roy	Yadav	Gaidha	"	4	50.8	113	9	"	12			8.00	Paddy	83	3.84	"	"						"	16,045.00	
														Wheat	67	2.21										
4	Ganesh	Roy	Bhetpur	"	8	50.8	107	8	"	12			8.00	Paddy	85	3.69	"	"							23,355.00	
														Wheat	50	2.21										
5	Lal Babu	Roy Yadav	Bhetpur	"	6	50.8	107	9	"	12			8.00	Paddy	83	3.84	"	"							18,610.00	
														Wheat	70	2.21										
6	Dashaiya	Roy	"	"	8	50.8	107	8	"	10			6.67	Paddy	75	3.69	"	"							18,535.00	
														Wheat	50	2.21										
7	RajNarayan	Ram Barai	Gaidha	"	2	50.8	107	7		9			6.00	Paddy	75	3.84	"	"								
														Wheat	55	2.21									18,750.00	
8	Jaisi	Barai	"	"	2	50.8	107	8		12			8.00	Paddy	80	3.69	"	"							18,135.00	
														Wheat	50	2.21										
9	Kaliya	Devi	Bhetpur	"	7	38.1	107	7		9			6.00	Paddy	70	3.69	"	"							13,210.00	
														Wheat	50	2.21										
10	Raj Karan	Yadav	"	"	7	38.1	69	7		9			6.00	Paddy	80	3.69	"	"							10,865.00	
														Wheat	50	2.21										
11	Rajendra Roy	Yadav	"	"	8	50.8	107	8		10			6.67	Paddy	80	3.89	"	"							18,135.00	
														Wheat	50	2.21										
12	Ram Pd.	Roy Yadav	"	"	5	38.1	107	7		9			6.00	Paddy	80	3.69	"	"							13,815.00	
														Wheat	50	2.21										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Makottari
VDC : Loharpatti

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Mr. Madan Kumar Misra
Mr. Ram Chandra Misra

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location VDC	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yields Crops	Cropping Intensity (%)	(mcha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Repair Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (NRs.)	Remarks
1	Madan Kumar	Misra	Loharpatti	Loharpatti	2	50.8	93	4	shallow	8			5.33	Paddy	75	3.69	Year	Artesan						ADB/N		
														Wheat	50	2.21	Round							Loharpatti	16,223.00	
2	Ram Chandra	Misra	"	"	3	50.8	95	3	"	7			4.67	Paddy	71	3.84	"	"						"	16,675.00	
														Wheat	43	2.5										
3	Ram Sebak	Sah	"	"	5	50.8	95	3	"	7			4.67	Paddy	70	3.69	"	"						"	16,365.00	
														Wheat	45	2.5										
4	Shiv Shanker Pd.	Sah	"	"	6	50.8	68	2		5			3.33	Paddy	70	3.69									11,925.00	
														Wheat	50	2.21										
5	Rahman	Kabari	"	"	6	50.8	66	2		5			3.33	Paddy	75	3.69									11,950.00	
														Wheat	45	2.21										
6	Nagendra	Misra	"	"	2	50.8	95	3		7			4.67	Paddy	72	3.69									16,340.00	
														Wheat	45	2.21										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Makottari
VDC : Sonamai

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Ram Sigasan Thakur

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Ram Sigasan	Thakur	Bhawani Garh	Sonamai	9	50.8	81	2	Shallow	5			3.33	Paddy	60	3.54	Year	Artesan						ADB/N		
														Wheat	40	2.21	Round							Loharpatti	13,665.00	

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Basbitti

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Ganga Mahatto
Sukdev Mahatto

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Ganga Mahatto		Basbitti	Basbitti	6	50.8	105	2	shallow	5			3.33	Paddy	60	3.69	Year	Artesan						ADB/N	18,975.00	
														Wheat	60	2.21	Round							Loharpatti		
2	Sukdev Mahatta		"	"	8	50.8	105	3	"	5			3.33	Paddy	80	3.54	"	"							18,895.00	
														Wheat	60	1.77									
3	Kisan Mahatta		"	"	6	50.8	107	1.8	"	4			2.67	Paddy	75	3.69	"	"							19,227.00	
														Wheat	50	2.21									

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Dharampur

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Md. Majid Kabari
Mr Mahendra Yadav

S. No	Owner's Name First Name	Owner's Name Last Name	Village	Location V.D.C.	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Finance Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Md. Majid	Kabari	Dharampur	Dharampur	6	50.8	79	2	shallow	5			3.33	Paddy	60	3.69	Year	Artesan						ADB/N		
														Wheat	40	2.21	Round							Lohariptti	14,576.00	
														Potato	20	7.38										
2	Mahendra	Yadav	"	"	8	50.8	76	3	"	6			4.00	Paddy	67	3.69	"	"						"	13,980.00	
														Wheat	50	2.36										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Kishan Nagar

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Mr.Jibacha Baehar

S. No	Owner's Name First Name	Owner's Name Last Name	Village	Location V.D.C.	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Finance Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	JADP		Kishan Nagar	Kishan Nagar	7	335.6/ 203.2	165.3	38	Deep	50			33.33	Paddy	84	3.54	Year	10-12	V.T.	47	Isuzu	5		JICA		
														Wheat	30	1.92	Round		Pum		(Japanese)					
														Maize	40	1.77										
2	GWP		"	"	5	254/ 152.4	118.54		"															GWP/N Mahottari		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT JADP: Janakpur Agriculture Development Project

DISTRICT : Mahottari
VDC : Aurhi

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Mr. Ram Naresh Yadav

S. No	Owner's Name First Name	Owner's Name Last Name	Village	V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Crops and Yeilds Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Aurhi	Aurhi	2	254/ 152.4	139.48	20	Deep	30			20.00	Paddy	87	3.69	Year	10-12	V.T.	38	Mitsubisi	5		GDP/N		
														Wheat	33	2.21	Round		Pum		(Japanese)			Mahottari		
														Maize	50	2.07										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Ganshala

TUBEWELL DATA COLLECTION

PERSONS CONTACTE GWP

S. No	Owner's Name First Name	Owner's Name Last Name	Village	V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Crops and Yeilds Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Ganshala	Ganshala	7	50.8	183.5	40	dEEP	105			70.00	Paddy	67	3.69	Year	10-12	V.T	38	Mitsubisi	5		GDP/N		
														Wheat	29	2.36	Round		Pum					Mahottari		
														mAIZE	38	2.07										
													0.00	Paddy												
														Wheat												

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Sahorwa

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Satya Narayan Yadav
Mohan Sah
Ram Dev Sah

S. No	Owner's Name First Name	Last Name	Location Village	V.D.C.	Tubewell Details Ward No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yields Crops	Cropping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Satya Narayan	Yadav	Sahorwa	Sahorwa	1	101.6	16	14	Shallow	21			16.00	Paddy	83	3.69	6-10	8-10	CP	7.5	Narayani	1.5		ADB/N	42,240.00	
														Wheat	71	2.21	Months				Kirloskar			Jaleswar		
2	JADP		"	"	5	355.6/	210	45	Deep	66			44.00	Paddy	68	3.84	Year	Artesan						JICA		
						203.2								Wheat	45	2.21	Round									
3	Suriya Devi		"	"	9	101.6	36.5	15	Shallow	25			16.67	Paddy	80	3.69	6-10	8-10	CP	7	Bharat	1.25		ADB/N	49,145.00	
														Wheat	60	2.36	Months				Shakti			Jaleswar		
4	Chedi Pd. Gareri		"	"	2	101.6	35	10	"	20			13.33	Paddy	75	3.69	6-10	8-10	CP	7	Bharat	1.25		ADB/N	48,185.00	
														Wheat	55	2.21	Months				Shakti			Jaleswar		
5	Gulai Raut Bhertihar		"	"	1	1061.6	26	12	"	22			14.67	Paddy	78	3.69	6-10	8-10	CP	7	Bharat	1.25		ADB/N	46,120.00	
														Wheat	68	2.21	Months				Shakti			Jaleswar		
6	Sidheswar	Yadav	"	"	1	101.6	23	10	"	20			13.33	Paddy	69	3.69	6-10	8-10	CP	7	Bharat	1.25		ADB/N	44,840.00	
														Wheat	58	2.21	Months				Shakti			Jaleswar		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Ram Nagar

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Ganga Mahatto
Sukdev Mahatto

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yelids Crops	Crops and Yelids Copping Intensity (%)	(mt/ha.)	Operation Operating Session (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (EWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	GWP		Ram Nagar	Ram Nagar	2	254/ 152.4	142.37	16	Deep	55			36.67	Paddy	100	3.69	Year	8-10	V.T.	38	Mitsubisi	3		GDP/N Mahottari		
														Wheat	36	2.21	Round									
														Maize	54	2.07										
2	GWP		"	"	6	"	148.55	50	"	110			73.33	Paddy	95	3.84	"	10-12	"	"	"	6		"		
														Wheat	36	2.36										
														Maize	54	2.07										
3	JADP		Kusmari	"	1	355.6/ 203.2	96.8	42	"	65			43.33	Paddy	82	3.54	"	"	"	47	Isuzu	6		JICA		
														Wheat	31	1.92										
														Maize	38	1.77										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Hathilet

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Ram Natha Mahato
Subodha Singh Damubar
Jog Kumar Mahato

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Hathilet	Hathilet	2	254/ 152.4	115.08	21	Deep	31			20.67	Paddy	90	3.69	Year	8-10	CP	41	Kirloskar	3		GWP/N		
														Wheat	39	1.92	Round				India					
														Maize	48	2.21										
2	GWP		"	"	3	"	108.3	26	"	39			26.00	Paddy	90	3.84	"	"	V.T.	38	Mitsudute	4		"		
														Wheat	38	1.77										
														Maize	51	2.21										
3	JADP		"	"	6	355.6/20	118	25	"	42			28.00	Paddy	76	3.39	"	10-12	"	72	Fiat	8		JICA		
														Wheat	36	1.92					Italian					
														Maize	29	1.77										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Bhangha

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Bhola Sah

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Bhangha	Bhangha	4	254/ 152.4	92.68	28	Deep	42			28.00	Paddy	90	3.69	Year	8-10	V.T.	38	Mitsubisi	5		GWP/N		
														Wheat	36	2.21	Round							Mahottari		
															48	1.77										

NOTE:

DISTRICT : Mahottari
VDC : Pashupati Nagar Banajuta

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Ram Chandra Yadav

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Location Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Pasupati Nagar Banjuta	Pasupati Nagar Banjuta	5	50.8	160	52	Deep	100			66.67	Paddy Wheat Maize	77 30 40	3.69 2.21 1.77	Year Round	8-10	VT	38	Mitsubisi	8		GWP/N Mahottari		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Pipra

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Jashar Chaudhary

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Location Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Copping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Pipra	Pipra	2	254/ 152.4	222	25	Deep	37			24.67	Paddy Wheat Ans Pa	68 40 27	3.54 2.36 1.77	Year Round	Artesan						GWP/N Mahottari		
2	Mahendra N. Mishra	"	"	9	50.8	36	3	Shallow	5			3.33	Paddy Wheat	70 50	3.67 2.21	6-10 Months	8-10	CP	7	N.K.	LS		ADB/N Jaleswar	32,300.00	
3	Hari Shanker Misra	"	"	7	50.8	42	3	"	5			3.33	Paddy Wheat	70 50	3.67 2.21	"	"	"	7	"	LS		"	33,160.00	

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Matihani

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Dhrub Prasad Sah

S. No	Owner's Name First Name	Last Name	Village	Location V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Matihani	Matihani	4	254/ 152.4	132		Deep	35			23.33	Paddy	85	3.69	Year	Artesan						GWP/N		
														Wheat	43	2.21	Round							Mahottari		
														Aus Pa	29	1.77										
2	GWP		"	"	7	"	128.21		"				0.00	Paddy												
														Wheat			DAMAGED									

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Belgachi

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Anil Sharma

S. No	Owner's Name First Name	Last Name	Village	Location V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Belgachi	Belgachi	9	50.8	121.19	34	Deep	95			63.33	Paddy	63	3.69	Year	8-10	V.T.	38	Mitsubisi	4		GWP/N		
														Wheat	32	2.21	Round							Mahottari		
														Maize	53	2.07										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Dhirapur

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Amar Thakur

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Cropping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	GWP		Dhirapur	Dhirapur	9	50.8	199.94	15.5	Deep	50			33.33	Paddy	50	3.98	Year	Artesan						GWP/N		
														Wheat	30	2.36	Round							Mahottari		
2	Muneswar Yadav		"	"	5	50.8	65	3	Shallow	5			3.33	Paddy	65	3.67	6-10	8-10	CP	7	N.K.	1.5		ADB/N	39,145.00	
														Wheat	35	2.21	Months							Jaleswar		
3	Nirshan Thakur		"	"	3	50.8	59	3	"	5			3.33	Paddy	68	3.67	"	"	"	7	"	1.5		"	29,460.00	
														Wheat	36	2.21										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Harismari

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Ram Chandra Yadav
Shatrughan Pd. Singh

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Cropping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P.	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	Ram Sanar Devi		Harisamari	Harisamari	2	50.6	62	3	Shallow	6			4.00	Paddy	67	3.69	Year	Artesan						ADB/N		
														Wheat	50	2.21	Round							Loharpatti	10,525.00	
2	Shatrughan Pd. Singh		Ajgeba	"	8	50.8	92	2	"	5			3.33	Paddy	60	3.54	"	"						"	16,255.00	
														Wheat	40	2.21										
3	Smt.Sanmaya Devi Singh		"	"	8	50.8	74	2	"	5			3.33.	Paddy	65	3.69	"	"						"	13,120.00	
														Wheat	40	2.21										
4	Ram Dev Yadav		"	"	1	50.8	80	2	"	5			3.33	Paddy	70	3.69	"	"						"	13,895.00	
														Wheat	40	2.21										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Mahadaiya Tapaupur

TUBEWELL DATA COLLECTION

PERSONS CONTACTED:

S. No	Owner's Name: First Name	Owner's Name: Last Name	Location: Village	Location: V.D.C.	Tubewell Details: Ward No.	Tubewell Details: Size (mm)	Tubewell Details: Depth (m)	Tubewell Details: Discharge (lps)	Tubewell Details: TYPE	Command Area: B.	Command Area: K	Command Area: D	Command Area: Ha.	Crops and Yeilds: Crops	Crops and Yeilds: Cropping Intensity (%)	Crops and Yeilds: (mt/ha.)	Operation: Operating Season (S/W/YR)	Operation: Daily Operating Hours	Pump Details: Type	Pump Details: H.P.	Pump Details: Company	Fuel Expns: Diesel (LPH)	Fuel Expns: Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	Ram Sagarnath	Yadav	Mahadaiya Tapaupur	Mahadaiya Tapaupur	4	50.8	82	3	Shallow	7			4.67	Paddy	71	3.84	Year	Artesan						ADB/N	14,980.00	
														Wheat	57	2.21	Round							Lohorpatti		
2	Rajendra	Sahani	"	"	5	50.8	95	4	"	8			5.33	Paddy	75	3.69	"	"						"	16,360.00	
														Wheat	50	2.21										
3	Viswanath	Yadav	"	"		50.8	82	3	"	7			4.67	Paddy	70	3.34	"	"						"	14,775.00	
														Wheat	60	2.21										
4	Nurul Md.	Kabari	"	"		50.8			"	7			4.67	Paddy	75	3.69	"	"						"	14,756.00	
														Wheat	55	2.36										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Ramgopalpur

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Suraj Yadav
Ram Dev Mahato

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Location Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	Tubewell Details TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Cropping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H P	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	GWP		Bisam-vapur	Ramgopal-pur	0	254/152.	104	26	Deep	15			30.00	Paddy	89	3.84	Year	Artesan						GWP/N Mahottari		
														Wheat	55	2.21	Round									
2	Ram Dev Mahato		Ramgopal-pur	"	8	50.8	105	4	Shallow	7			4.67	Paddy	71	3.69	"	"						ADB/N Loharpatti	17,395.00	
														Wheat	57	2.07										
3	Pradip Kumar Singh		"	"	8	50.8	102	1.8	"	5			3.33	Paddy	70	3.69	"	"						"	16,695.00	
														Wheat	45	2.21										
4	Ram Ashis Mahato		"	"	8	50.8	104	2.5	"	5			3.33	Paddy	80	3.69	"	"						"	17,905.00	
														Wheat	50	2.21										
5	Yogendra Pd. Mahto	Koiri	"	"	8	50.8	102	1.8	"	4			2.67	Paddy	75	3.69	"	"						"	18,184.00	
														Wheat	45	2.21										
6	Ram Chandra Roy Yadav		"	"	4	50.8	107	2	"	5			3.33	Paddy	70	3.69	"	"						"	19,235.00	
														Wheat	45	2.21										
7	Mahendra Yadav		"	"	1	38.1	104	1.5	"	4			2.67	Paddy	70	3.69	"	"						"	10,530.00	
														Wheat	50	2.21										
8	Smt. Jagiya Devi		"	"	1	38.1	106	1.8	"	5			3.33	Paddy	80	3.69	"	"						"	13,233.00	
														Wheat	45	2.21										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Ramgopalpur

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Suraj Yadav
Ram Dev Mahato

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	TYPE	Command Area B.	Command Area K	Command Area D	Command Area Ha.	Crops and Yeilds Crops	Crops and Yeilds Cropping Intensity (%)	Crops and Yeilds (mt/ha.)	Operation Operating Season (S/W/YR)	Operation Daily Operating Hours	Pump Details Type	Pump Details H.P	Pump Details Company	Fuel Expns. Diesel (LPH)	Fuel Expns. Elect. (KWH)	Financing Agency Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Bisam-vapur	Ramgopal-pur	6	254/152	104	26	Deep	45			30.00	Paddy	89	3.84	Year	Artesan						GWP/N Mahottari		
														Wheat	55	2.21	Round									
2	Ram Dev Mahato		Ramgopal-pur	"	8	50.8	105	4	Shallow	7			4.67	Paddy	71	3.69	"	"						ADB/N Lohanpatti	17,595.00	
														Wheat	57	2.07										
3	Pradip Kumar Singh		"	"	8	50.8	102	1.8	"	5			3.33	Paddy	70	3.69	"	"						"	18,954.00	
														Wheat	45	2.21										
4	Ram Ashis Mahato		"	"	8	50.8	104	2.5	"	5			3.33	Paddy	80	3.69	"	"						"	17,905.00	
														Wheat	50	2.21										
5	Yogendra Pd. Mahto Koiri		"	"	8	50.8	102	1.8	"	4			2.67	Paddy	75	3.69	"	"						"	18,184.00	
														Wheat	45	2.21										
6	Ram Chandra Roy Yadav		"	"	4	50.8	107	2	"	5			3.33	Paddy	70	3.69	"	"						"	19,235.00	
														Wheat	45	2.21										
7	Mahendra Yadav		"	"	1	38.1	104	1.5	"	4			2.67	Paddy	70	3.69	"	"						"	10,530.00	
														Wheat	50	2.21										
8	Smt. Jagiya Devi		"	"	1	38.1	106	1.8	"	5			3.33	Paddy	80	3.69	"	"						"	13,233.00	
														Wheat	45	2.21										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Dhamaura

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Mr.Mohan Barma
Mr.Chandeshwor Mandal
Mr.Ram Ratan Ray

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details Ward No.	Tubewell Details Size (mm)	Tubewell Details Depth (m)	Tubewell Details Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Cropping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	GWP		Dhamaura	Dhamaura	3		182	22	Deep	45			30.00	Paddy	62	3.84	Year	Artesan						GWP/N	0.00	
														Wheat	33	2.51	Round							Mahottari		
2	Chandeshwor	Mandal	Adyanpur	Dhamaura	3	50.8	107	7	Shallow	10			6.67	Paddy	80	3.69	Year	Artesan						ADB/N	16,985.00	
														Wheat	50	2.36	Round							Balba		
3	Ram Ratan	Roy	Dhamaura	Dhamaura	9	50.8	69	3	Shallow	8			5.33	Paddy	75	3.69	Year	Artesan						ADB/N	13,609.00	
														Wheat	50	2.21	Round							Loharjatti		
4	Bilta	Yadab	Dhamaura	Dhamaura	2	50.8	82	2	Shallow	6			4.00	Paddy	80	3069	Year	Artesan						ADB/N	12,240.00	
														Wheat	40	2.21	Round							Loharjatti		
5	Smt.Dautiliya	Goyarni	Dhamaura	Dhamaura	6	50.8	82	1.8	Shallow	5			3.39	Paddy	75	3.84	Year	Artesan						ADB/N	12,475.00	
														Wheat	45	2.36	Round							Loharjatti		
6	Soophi	Sah	Adyanpur	Dhamaura	3	50.8	104	1.5	Shallow	5			3.33	Paddy	75	3.69	Year	Artesan						ADB/N	15,856.00	
														Wheat	50	2.21	Round							Balba		
7	Bilta	Kabari	Dhamaura	Dhamaura	1	50.8	94	1.5	Shallow	5			3.33	Paddy	75	3.69	Year	Artesan						ADB/N	17,541.00	
														Wheat	45	2.36	Round							Balba		
8	Yogendra Pd.	Yadav	Dhamaura	Dhamaura	6	38.1	85	1.8	Shallow	4			2.67	Paddy	70	3.69	Year	Artesan						ADB/N	10,624.00	
														Wheat	45	2.36	Round							Balba		
9	Smt.Jaleha	Khatun	Dhamaura	Dhamaura	1	50.8	79	2	Shallow	5			3.33	Paddy	70	3.69	Year	Artesan						ADB/N	12,540.00	
														Wheat	45	2.36	Round							Balba		
10	Gaur	Yadav	Dhamaura	Dhamaura	6	50.8	64	3	Shallow	8			5.42	Paddy	75	3.69	Year	Artesan						ADB/N	23,000.00	
														Wheat	50	2.36	Round							Balba		
11	Smt.Meniya	Devi	Dhamaura	Dhamaura	6	50.8	92	2	Shallow	5			3.33	Paddy	75	3.69	Year	Artesan						ADB/N	14,980.00	
														Wheat	45	2.21	Round							Balba		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Makottari
VDC : Balba

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Mr. Purushotam Kr Mathema
Mr. Rudra narayan Yadav
Mr. Ram Sevit Kalbar

S. No	Owner's Name First Name	Last Name	Location Village	V.D.C.	Ward No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H P.	Company	Fuel Expns. Diesel (LPH)	Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N Rs.)	Remarks
1	Purushotam	Mathema	Balba	Balba	1	101.6	21.5	9	Shallow	10			6.67	Paddy	67	3.69	10-6Months	10-12Hours	Centri	7	Narayan	1.25		ADB/N	31,337.00	
														Wheat	53	2.21			bugal		Kirlosaker			Balba		
2	Rudra	Yadav			3	101.6	18.5	15	"	18			12.00	Paddy	78	3.69		8-10Hours		7	Narayan	1.25			36,908.27	
														Wheat	48	2.36			"		Kirlosaker			"		
3	Ganga Devi	Kalbarani	"	"	1	50.8	103	5	"	9			6.00	Paddy	75	3.69	Year	Artesan	"					"	17,136.00	
														Wheat	42	2.36	Around									
4	Dukha Ram	Yadav			8	101.6	18	12	"	12			8.00	Paddy	75	3.84	10-6hours	10-12hours		5	BEC	1.5		"	30,980.00	
														Wheat	45	2.21										
5	Smt.DukhiyaR.	Yadav	"	"	8	101.6	19	12	"	10			8.12	Paddy	70	3.69	"	"		8	Bharat	1.25		"	38,802.00	
														Wheat	50	2.36					Shakti					
6	Jaybahadur kunju		"	"	1	101.6	27	15	"	18			12.24	Paddy	80	3.69	"	"		7	"	1.25		"	38,680.00	
														Wheat	50	2.36										
													0.00	Paddy												

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT : Mahottari
VDC : Ekdara Bela

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Bijaya Mahato
Sanjay K. Jha

S. No	Owner's Name: First Name	Owner's Name: Last Name	Location: Village	Location: V.D.C.	Location: Ward No.	Tubewell Details: Size (mm)	Tubewell Details: Depth (m)	Tubewell Details: Discharge (lps)	TYPE	Command Area: B.	Command Area: K	Command Area: D	Command Area: Ha.	Crops and Yields: Crops	Crops and Yields: Copping Intensity (%)	Crops and Yields: (mt/ha.)	Operation: Operating Season (S/W/YR)	Operation: Daily Operating Hours	Pump Details: Type	Pump Details: H.P.	Pump Details: Company	Fuel Expns.: Diesel (LPH)	Fuel Expns.: Elect. (KWH)	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Bijaya Mahato		Ekdara	Ekdara Bela	6	101.6	21.5	8	Shallow	10			6.67	Paddy	77	3.83	6-10	8-10	CP	7.5	Bharat	1.25		ADB/N	41,680.00	
														Wheat	61.5	2.21	Months				Shakti			Baiba		
2	Sanjaya Jha		"	"	4	101.6	121.92	10	"	12			8.00	Paddy	80	3.69	"	"	"	7	Narayani	1.25		"	111,385.00	
														Wheat	67	2.21					Kirloskar					

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Mahottari
VDC : Gonarpur

TUBEWELL DATA COLLECTION

PERSONS CONTAC Rameswar Mahato

S. N	Owner's Name First Name	Owner's Name Last Name	Village	Location V.D.C.	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns Diesel (LPH)	Elect. (KW	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Rameswar	Mahato	Hirduwa	Gonarpur	9	101.6	37.5	10	Shallow	12			8.00	Paddy	80	3.69	6-10	6-10	CP	5	Bharat	1.5		ADB/N	31,365.60	
														Wheat	53	2.21	Months				Shakti			Baiba		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Mahottari
VDC : Bhatolliya

TUBEWELL DATA COLLECTION

PERSONS CONTAC Sukdev Sah

S. N	Owner's Name First Name	Owner's Name Last Name	Village	Location V.D.C.	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns Diesel (LPH)	Elect. (KW	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Sukdev	Sah	Bhatolliya	Bhatolliya	7	101.6	36.5	16	Shallow	16			10.67	Paddy	73	3.69	6-10	8-10	CP	7.5	Narayan	1.5		ADB/N	46,870.00	
														Wheat	55	2.36	Months				Kirlaskar			Jaleswor		

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Mahottari
VDC : Khutta Piprahi

TUBEWELL DATA COLLECTION

PERSONS CONTACT Jay Karan
Ganaur Yadav
Baidhanath Yadav

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KW	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	Jay Karan		Khutta Piprahi	Khutta Piprahi	9	101.6	20	10	Shallow	13			8.67	Paddy	81	3.54	6-10	8	CP	"	Narayani Kirloskar	1.25		ADB/N Loharpatt	32,592.00	
														Wheat	56	2.21	months									
2	Ganaur Yadav		"	"	2	50.8	107	4	"	6			4.00	Paddy	75	3.54	Year	Artesian						"	19,175.00	
														Wheat	37.5	2.21	Round									
														pOTAT	75	8.86										
3	GWP		"	"	3	50.8	184.1	15.5	Deep	55			36.67	Paddy	100	3.69	"	"						GWP/H.M.G.		
														Wheat	73	2.21										
4	Ram Sebak Chaudha		"	"	6	50.8	85	1.8	Shallow	5			3.33	Paddy	75	3.69	"	"						ADB/N LOharpat	15,296.00	
														Wheat	40	2.21										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Mahottari
VDC : Ekrahiya

TUBEWELL DATA COLLECTION

PERSONS CONTACT GWP

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	Tubewell Details War No.	Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KW	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Ekrahiya	Ekrahiya	3	50.8	208.5	15	Deep	27			18.00	Paddy	74	3.61	Year	Artesan						GWP H.M.G.		
														Wheat	55.5	2.21	Round									
														Potato	29.6	8.85										
2	Bhola Yadav		"	"	1	101.6	38.5	18	Shallow	20			13.33	Paddy	85	3.69	6-10	7-8	CP	7	Kirloskar	1.25		ADB	46,720.00	
														Wheat	65	2.36	Months				India			Jaleshwor		
														Potato	20	8.85										
3	Bhadra Kant Mishra		"	"	1	101.6	37	12	"	15			10.00	Paddy	67	3.61	"	"	"	7.5	Bharat	1.25		ADB	44,000.00	
														Wheat	33	2.21					India			Jaleshwor		
														Potato	20	4.43										
4	Kamla Kant Mishra		"	"	2	101.6	36.5	16	"	17			11.33	Paddu	100	3.84	"	8-10	"	7.5	Narayani	1.5		ADB	49,926.00	
														Wheat	58.8	2.21					Kirloskar			Jaleshwor		
														Potato	29.4	8.85										
5	Tapeswor Mahato		Dhokaha	"	3	101.6	47	14	"	22			14.90	Paddy	81.8	3.69	"	10-12	"	7.5	"	1.5		"	51,930.00	
														Wheat	63.6	2.21										
6	Ram Tej Mishra		Alipatti	"	9	101.6	18.5	15	"	24			16.26	Paddy	63	3.98	"	8-10	"	7	Bharat	1.25		"	30,237.00	
														Wheat	34	2.21					Shakti					
														Potato	20.8	10.33										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Mahottari
VDC : Sundarpur

TUBEWELL DATA COLLECTION

PERSONS CONTACT Shyam Thapa

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KW	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Sundarpur	Sundarpur	5	254	112.5	8	Deep	17			11.33	Paddy	71	3.69	Year	Artesan						GWP		
						152.4								Wheat	17	2.36	Round							Mahottari		
														Maize	59	1.92										
2	GWP		"	"	8	"	"		"																	

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Mahottari
VDC : Sripur

TUBEWELL DATA COLLECTION

PERSONS CONTACT Shyam Narayan Sah

S. No	Owner's Name First Name	Owner's Name Last Name	Location Village	Location V.D.C.	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yeilds Crops	Copping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P	Company	Fuel Expns. Diesel (LPH)	Elect. (KW	Financing Agency/ Private	Cost of Installation (N.Rs.)	Remarks
1	GWP		Sripur	Sripur	5	254	110	29	Deep	45			30.00	Paddy	67	3.69	Year	Artesan						GWP		
						152.4								Wheat	33	2.21	Round							Mahottari		
														Maize	44	2.07										

NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

DISTRICT Mahottari
VDC : Mahottari

TUBEWELL DATA COLLECTION

PERSONS CONTACT GWP

S. No	Owner's Name First Name	Owner's Name Last Name	Village	Location VDC	War No.	Tubewell Details Size (mm)	Depth (m)	Discharge (lps)	TYPE	Command Area B.	K	D	Ha.	Crops and Yields Crops	Cropping Intensity (%)	(mt/ha.)	Operation Operating Season (S/W/YR)	Daily Operating Hours	Pump Details Type	H.P.	Company	Fuel Expns Diesel (LPH)	Elect. (KW	Financing Agency Private	Cost of Installation (N Rs.)	Remarks
1	GWP		Mahottari	Mahottari	5	254/ 152.4	139	28	Deep	95			63.33	Paddy Wheat	100 52.6	3.84 2.51	6-10 Months	7.8	VT	34	Mitsubishi	5		GWP/N Mahottari		
2	GWP		Phulbatta	"	7	50.8	213	38	"	90			60.00	Paddy Wheat	100 50	3.69 2.21	"	8-10	"	33	Mitsubishi	5		"		
3	Mrs.ShyamaDevi Th		Parsa	"	1	101.6	17.5	15.6	Shallow	25			16.67	Paddy Wheat	80 60	3.69 2.36	"	"	CP	7.5	Narayani Kirloskar	1.5		ADB/N Jaleswor	88,752.00	
4	Nagendra Mauyar		Anutha	"	7	101.6	18.5	16	"	28			18.67	Paddy Wheat	85.7 53.6	3.84 2.21	"	10-12	"	7	Bharat Shakti	1.25		"	41,000.00	
5	Manorma Devi		Parsa	"	1	101.6	18	12	"	20			13.33	Paddy Wheat	86 45	3.69 2.21	"	8-10	"	5	"	1.25		"	35,100.00	
6	Ram Chandra Yadav		"	"	8	101.6	49	13	"	22			14.67	Paddy Wheat	80 50	3.69 2.21	"	"	"	5	"	1.25		"	39,300.00	
7	Mantauria Devi		"	"	8	101.6	18	12	"	20			13.33	Paddy Wheat	85 53	3.69 2.21	"	"	"	5	"	1.25		"	38,500.00	
8	Mohar Yadav		Anutha	"	7	101.6	18.5	14	"	23			15.33	Paddy Wheat	80 55	3.69 2.36	"	"	"	5	"	1.25		"	40,550.00	
9	Badri Yadav		"	"	8	101.6	18	12	"	20			13.50	Paddy Wheat	82 53	3.69 2.21	"	"	"	5	"	1.25		"	38,950.00	

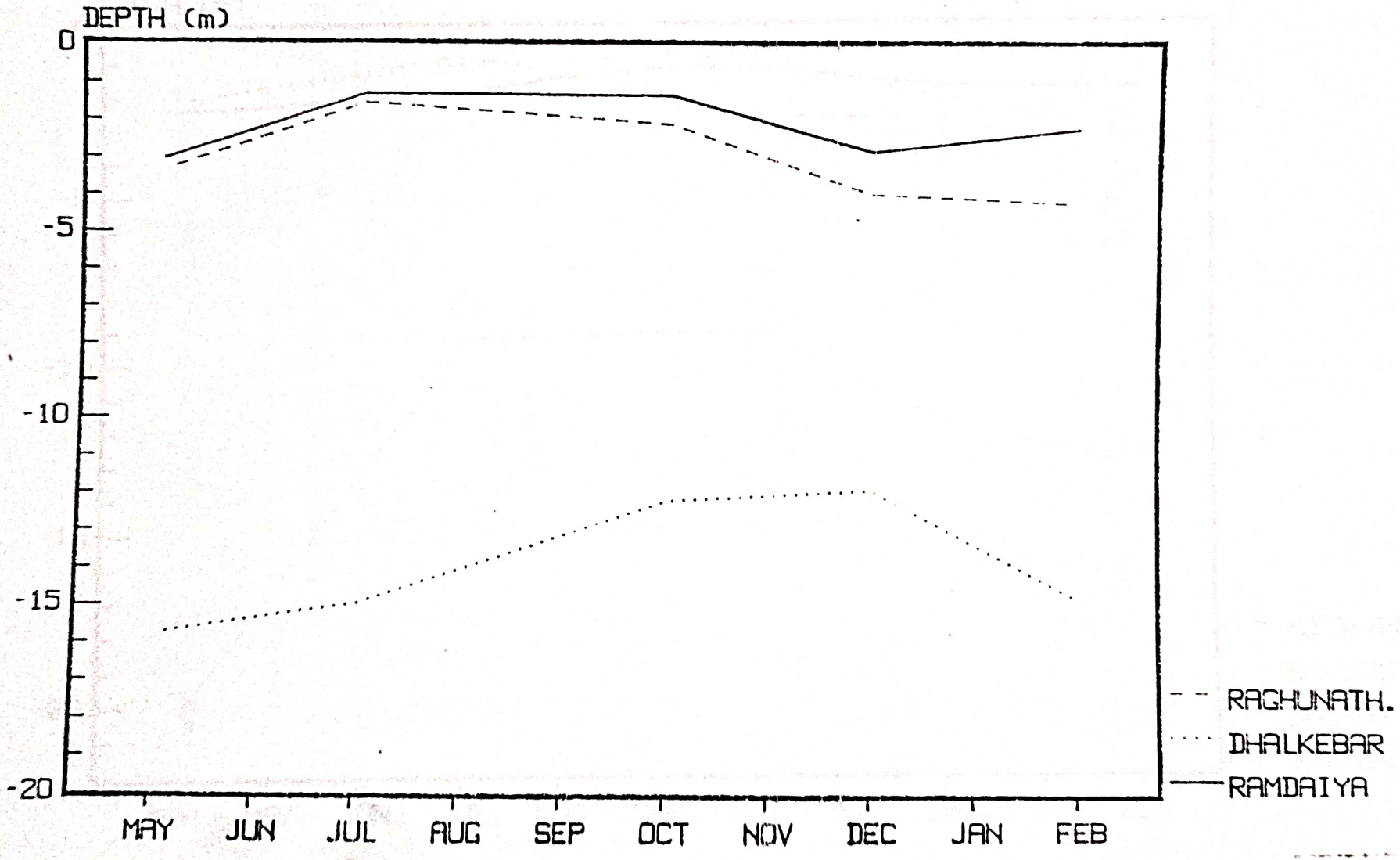
NOTE:

B: BIGHA K: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

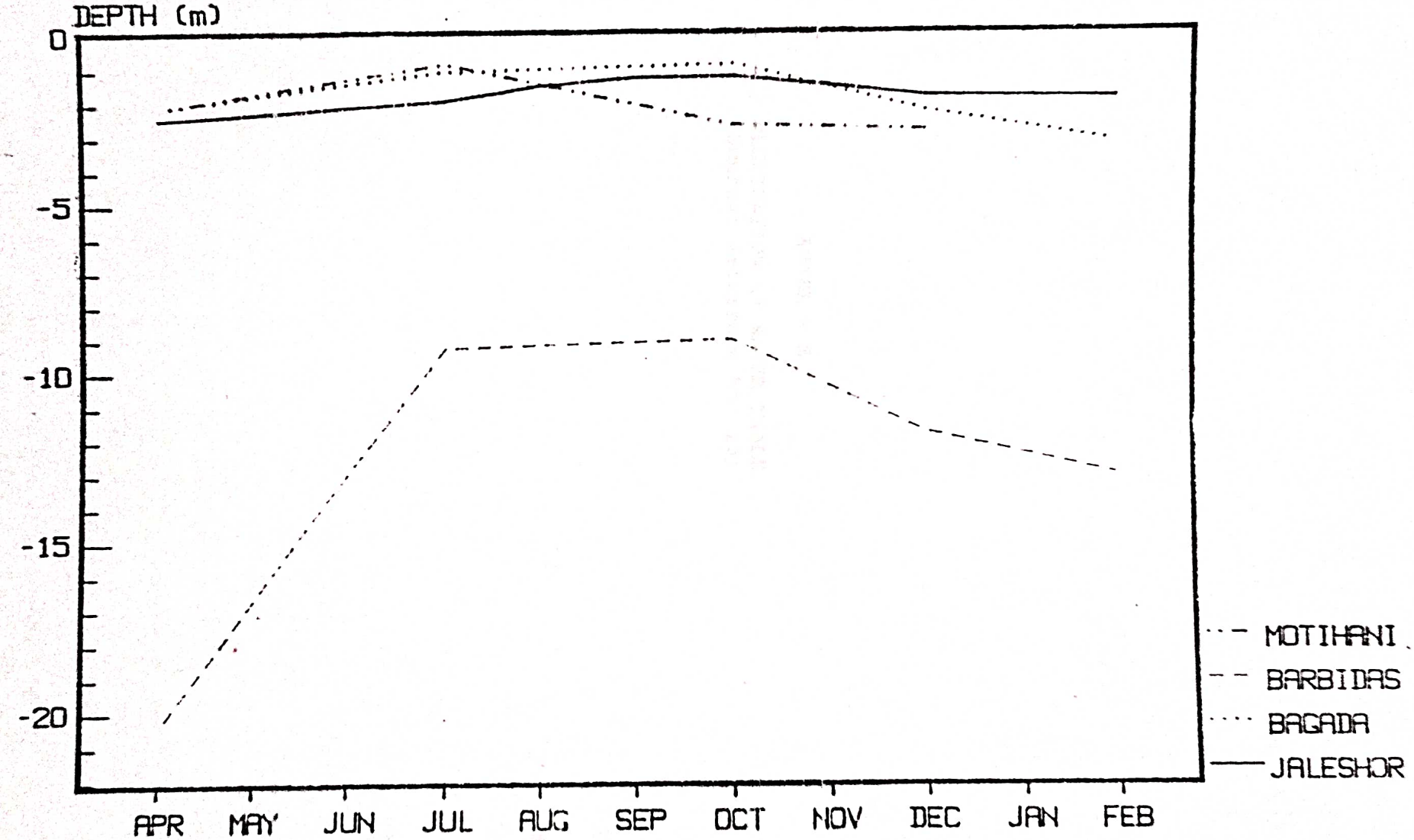
ANNEX - G

WATER TABLE DEPTH
(Source: Reference No. 13)

NEP/86/025 DEPTH TO WATER TABLE 1987/88
DHANUSHA



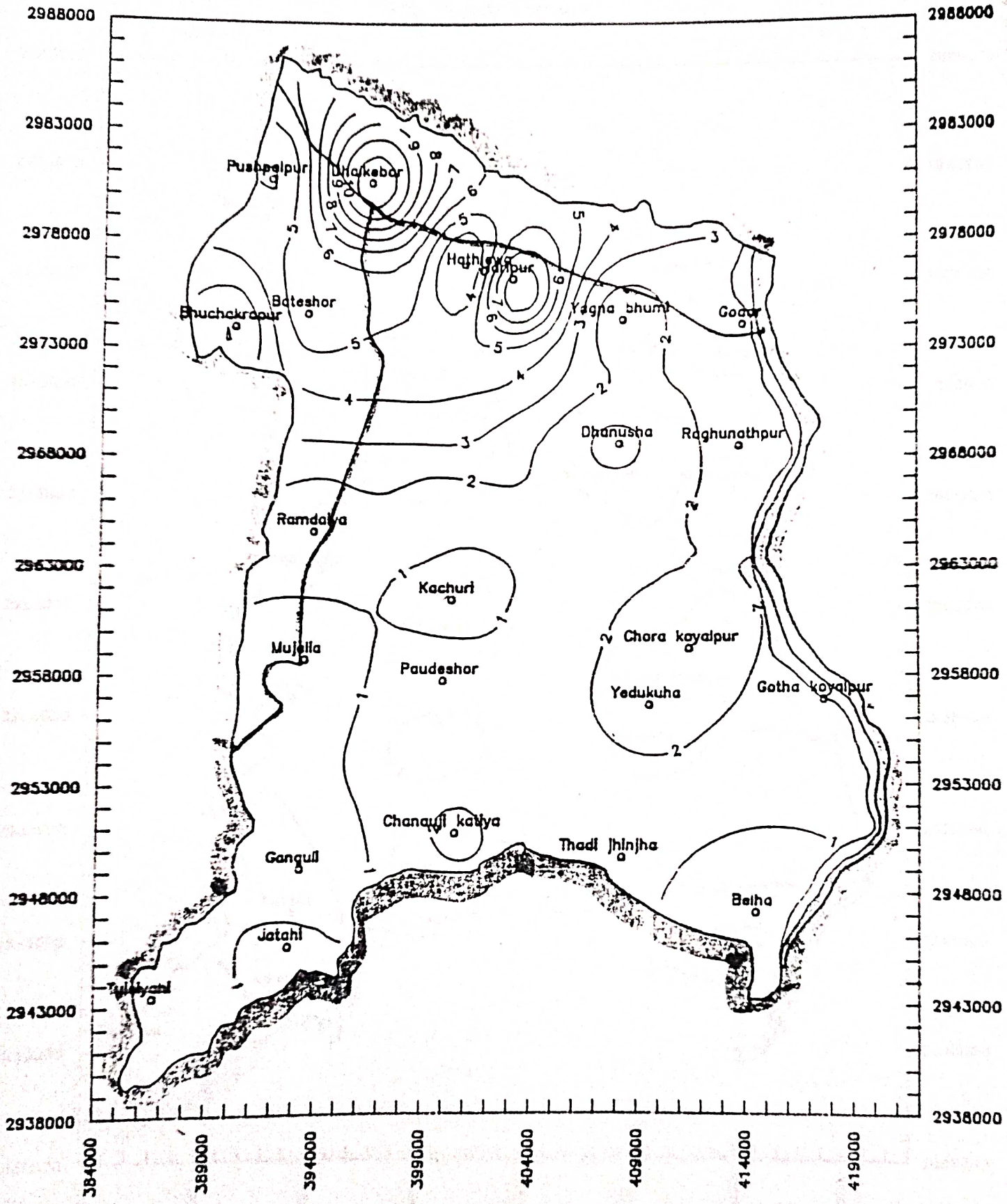
NEP/86/025 DEPTH TO WATER TABLE 1987/88
MAHOTTARI



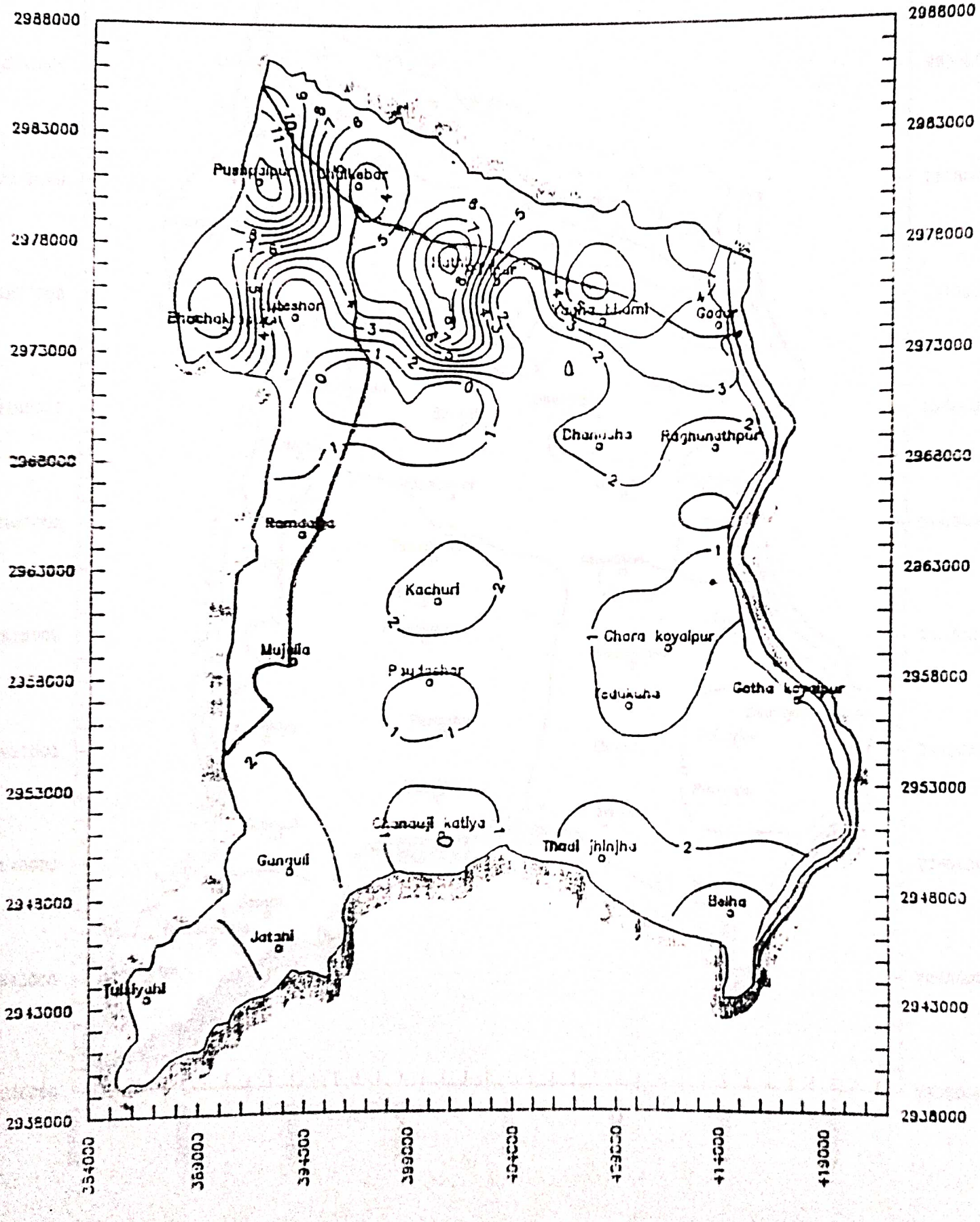
ANNEX - H

FLUCTUATION OF WATER TABLE
(Source: Reference No. 13)

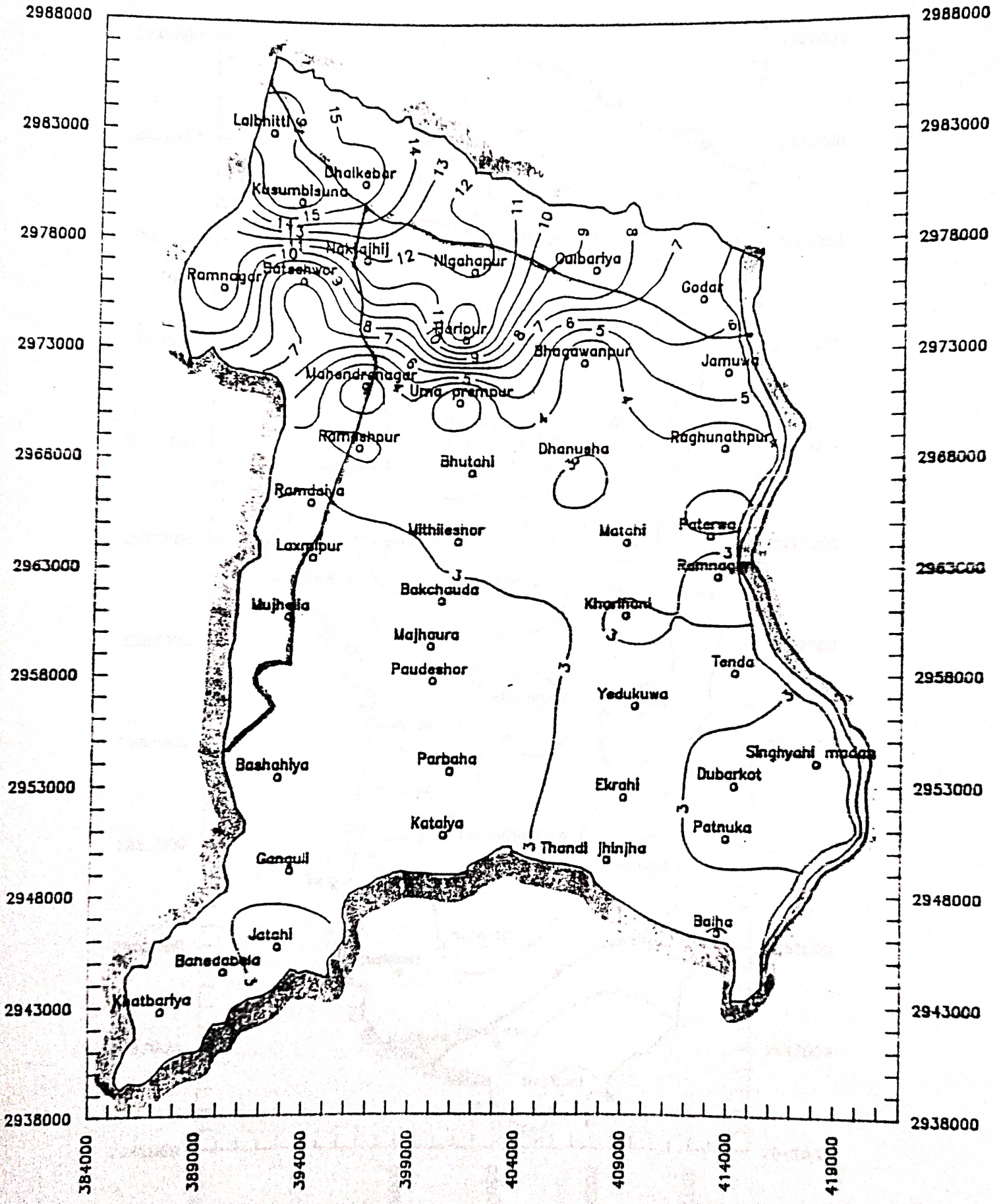
DEPTH TO WATER TABLE IN OCTOBER 1988
(DHANUSHA DISTRICT)



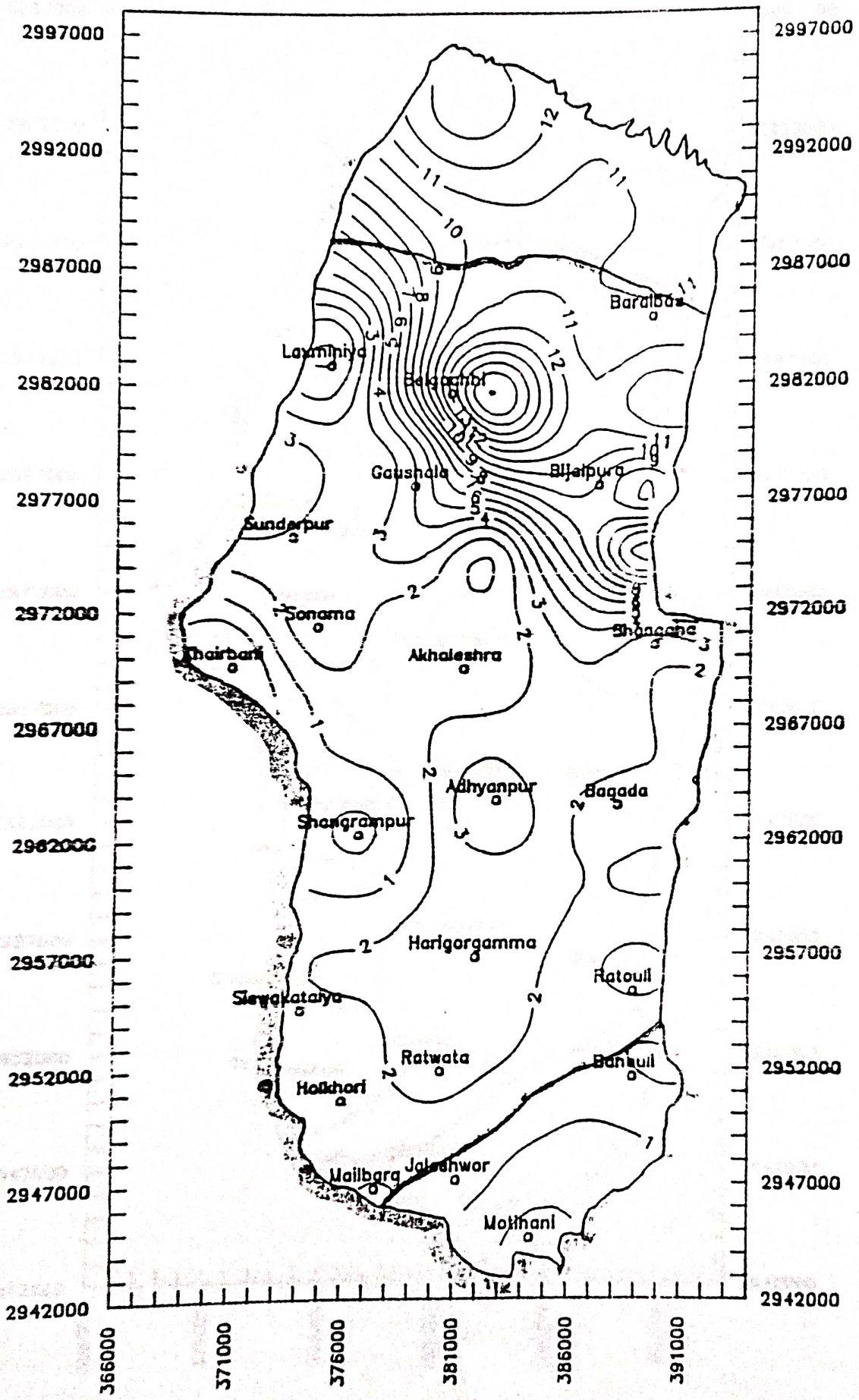
RISE OF WATER TABLE IN MAY - OCTOBER 1987
(DHANUSHA DISTRICT)



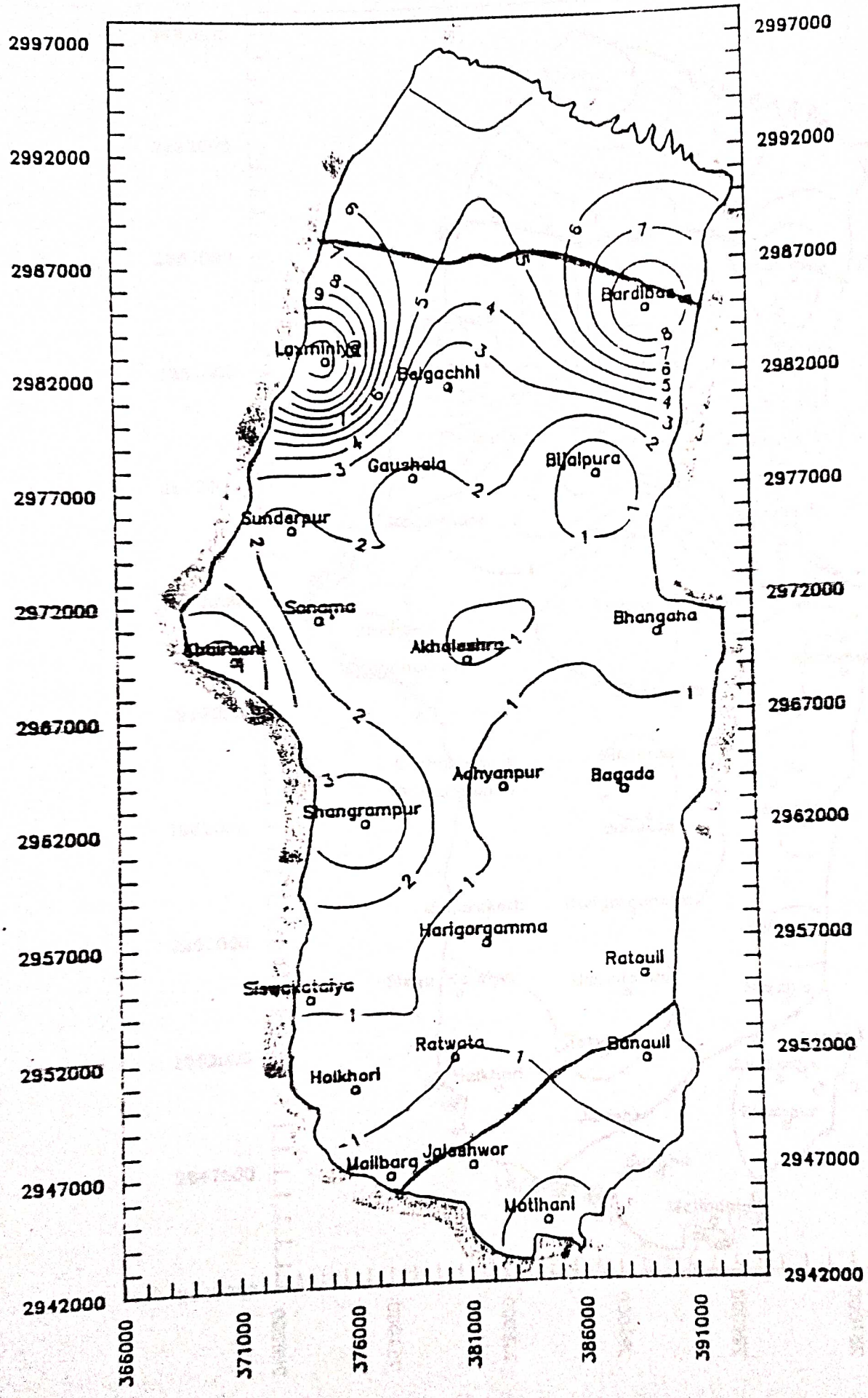
DEPTH TO WATER TABLE IN MAY 1988
(DHANUSHA DISTRICT)



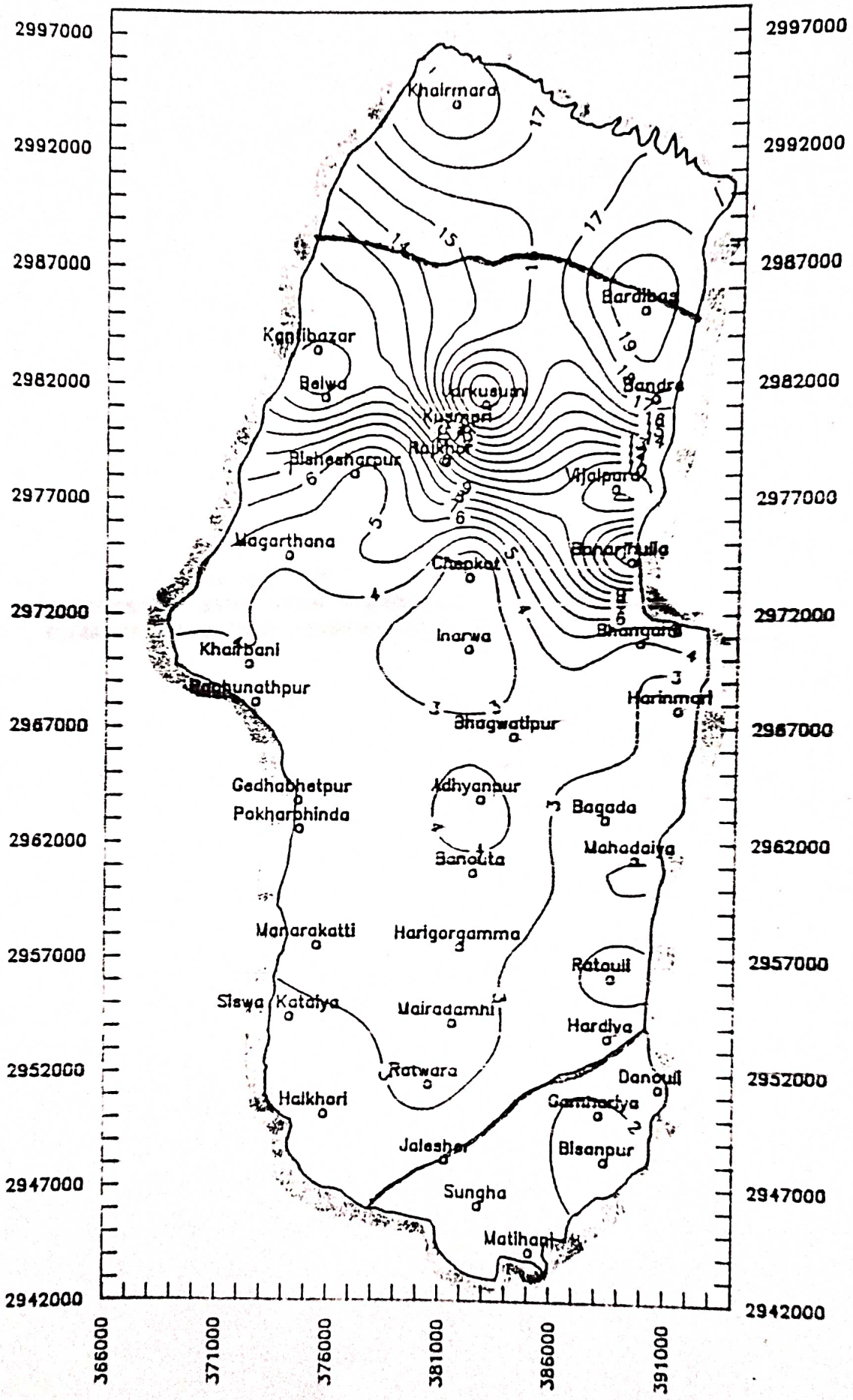
RISE OF WATER TABLE IN APRIL - OCTOBER 1987
(MAHOTTARI DISTRICT)



DEPTH TO WATER TABLE IN OCTOBER 1988
(MAHOTTARI DISTRICT)



DEPTH TO WATER TABLE IN APRIL 1988
(MAHOTTARI DISTRICT)



ANNEX - I
DISTRICT MAPS WITH TUBEWELLS COMMAND AREA AND DISCHARGEINPUT

Fig.2 DISTRIBUTION OF TUBEWELLS
(DHANUSHA DISTRICT)

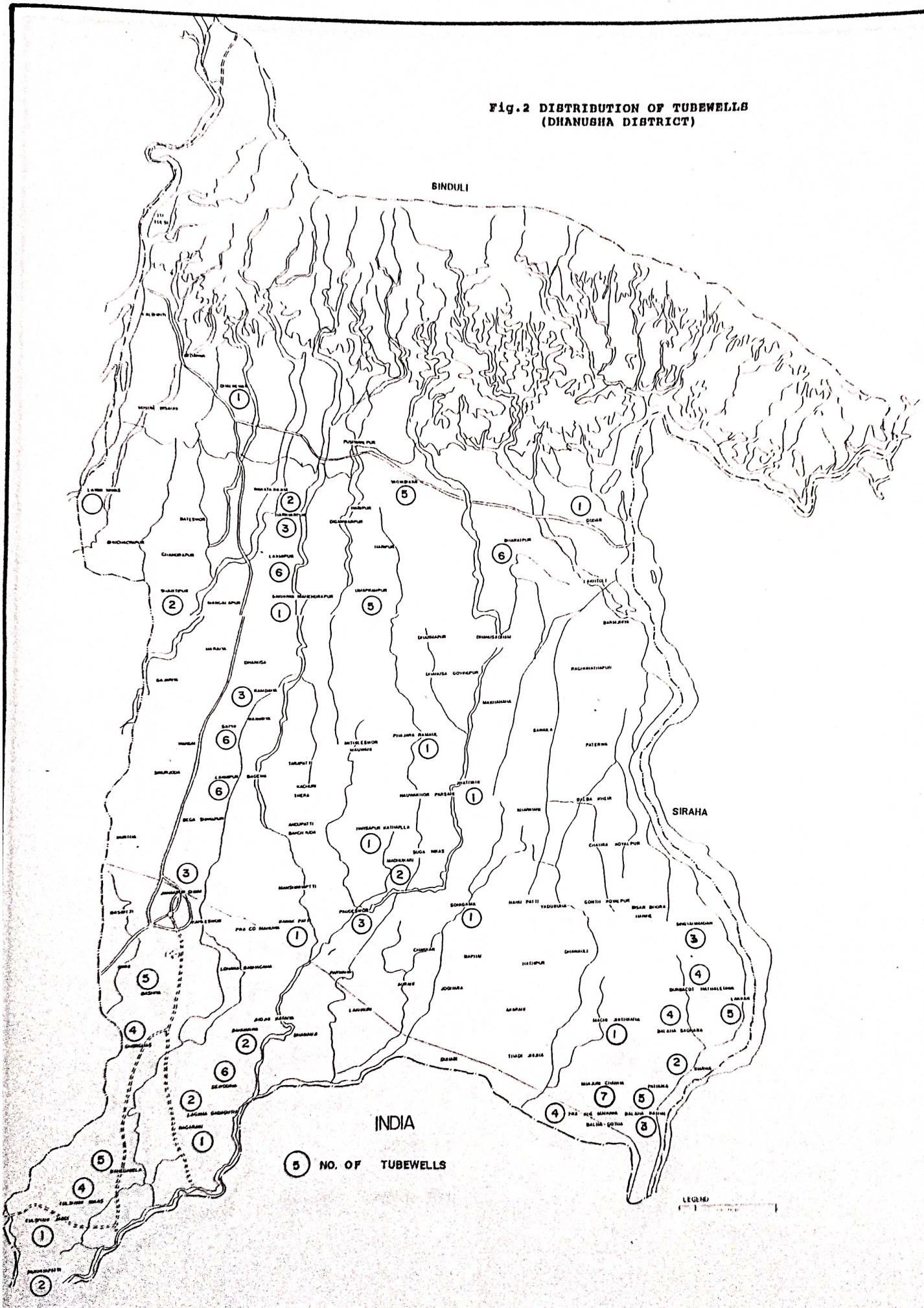


Fig.3 COMMAND AREA OF TUBEWELLS (Ha)
(DHANUSHA DISTRICT)

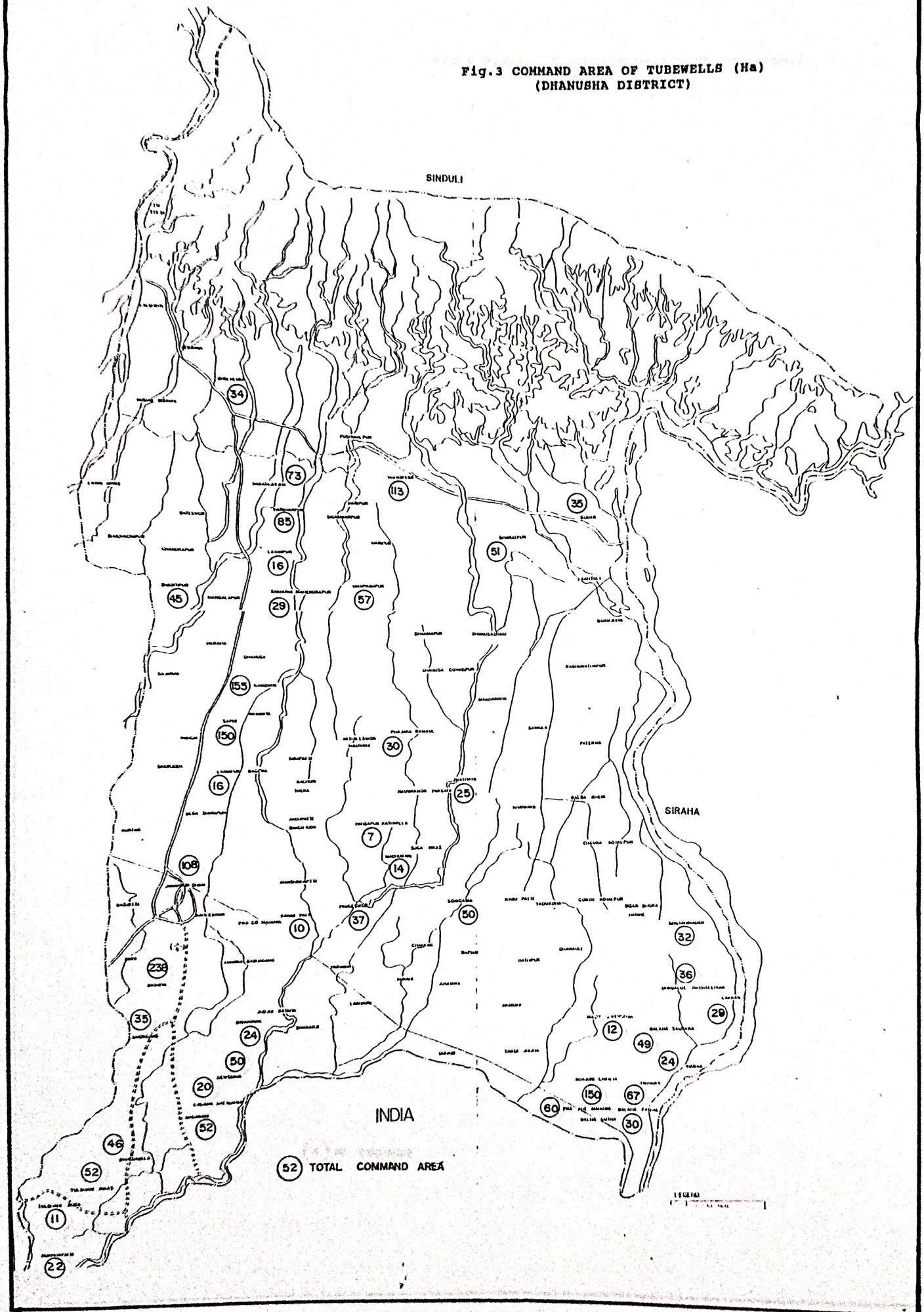
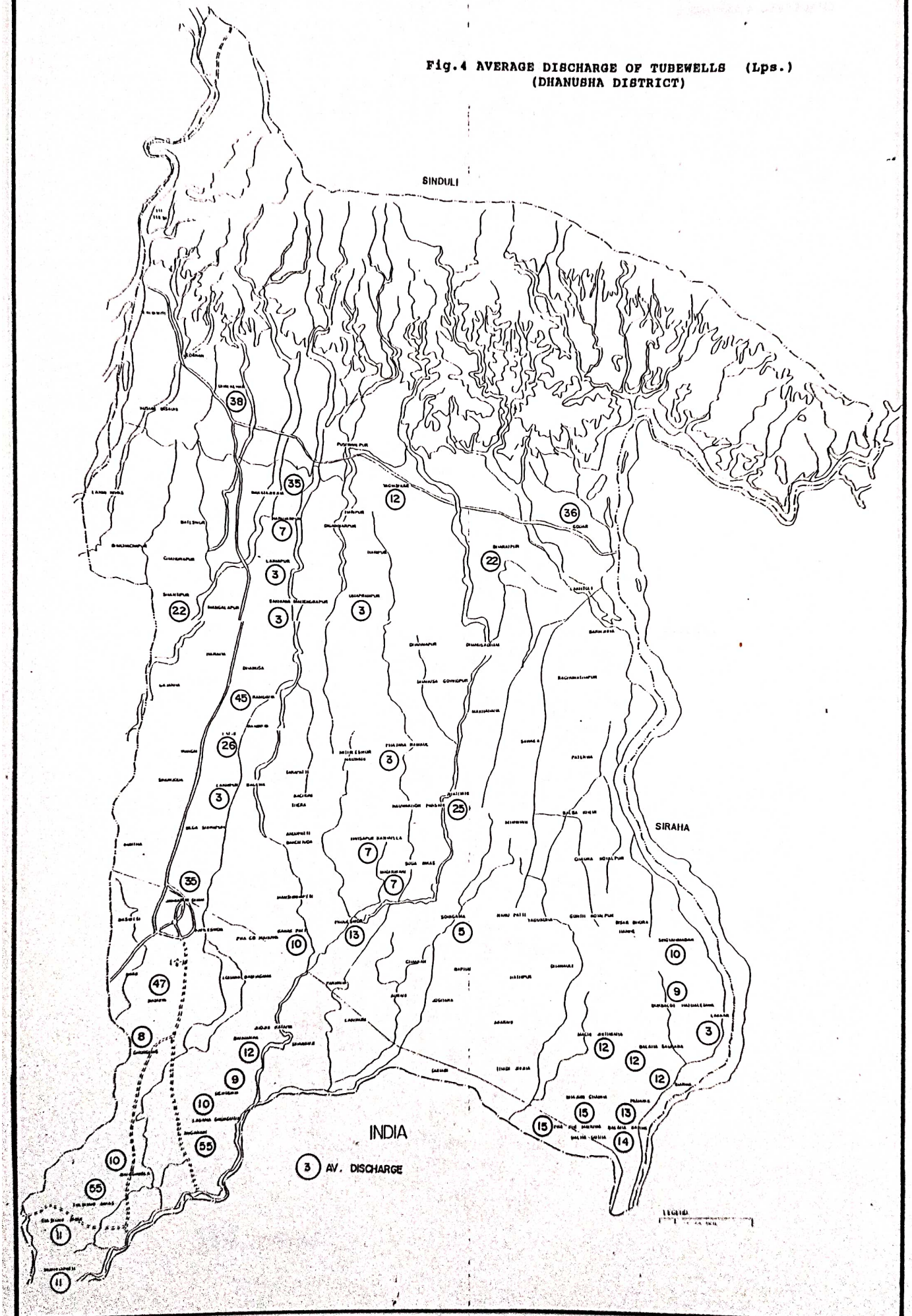


Fig.4 AVERAGE DISCHARGE OF TUBEWELLS (Lps.)
(DHANUSHA DISTRICT)



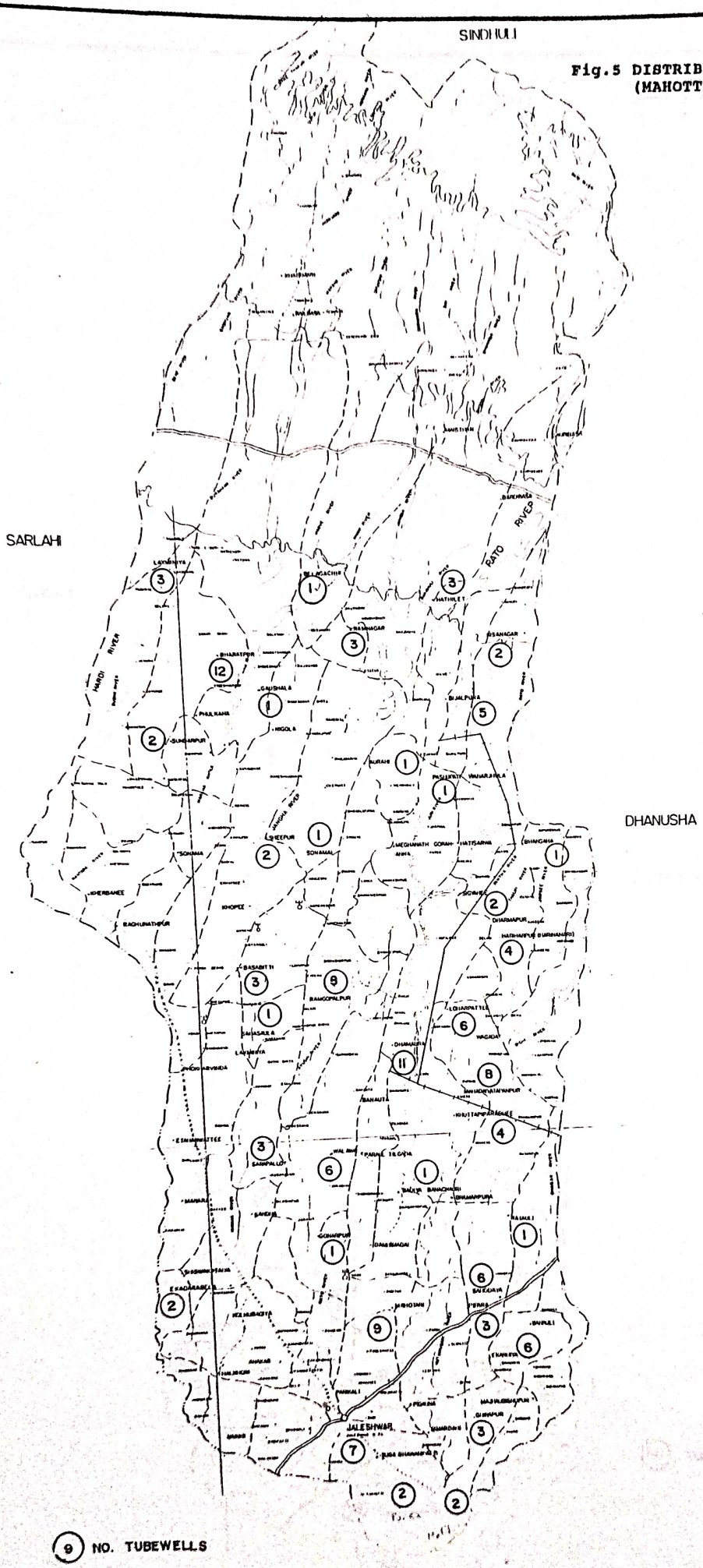


Fig.5 DISTRIBUTION OF TUBEWELLS (MAHOTTARY DISTRICT)

Fig.6 COMMAND AREA OF TUBEWELLS (Ha)
(MAHOTTARY DISTRICT)

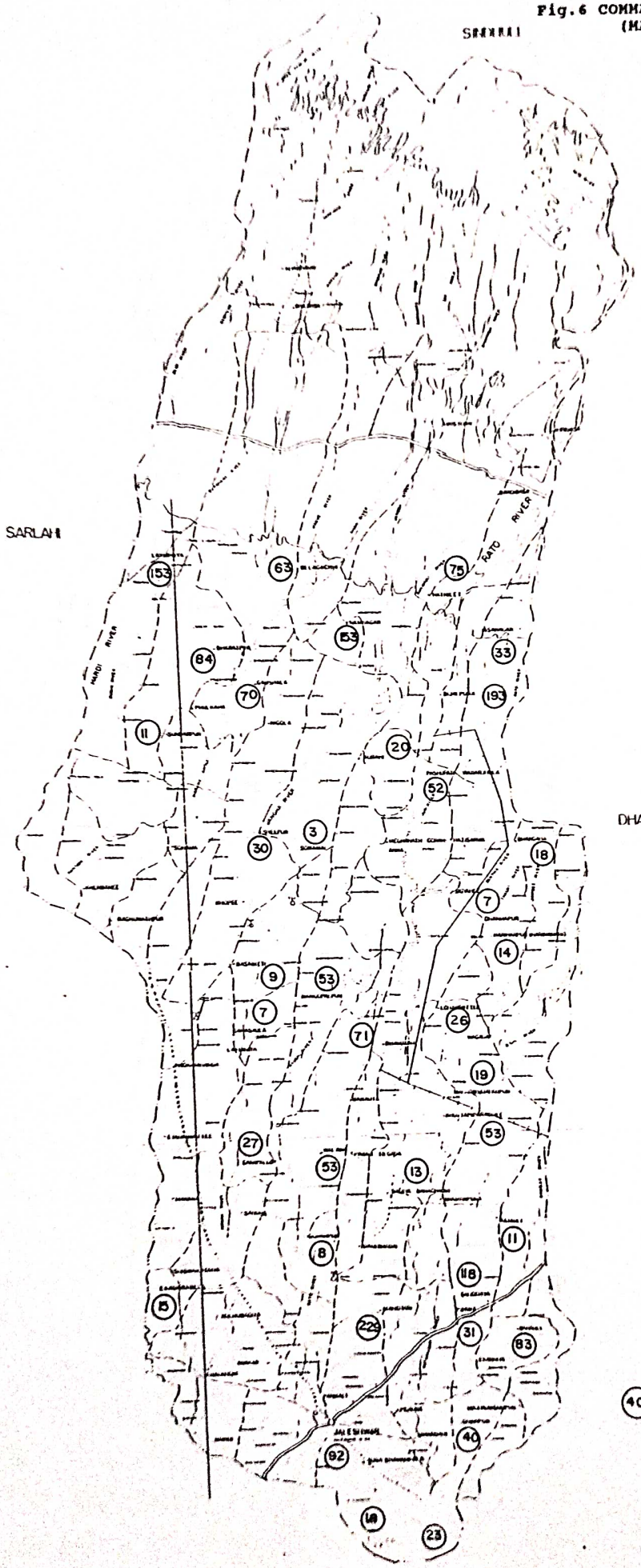
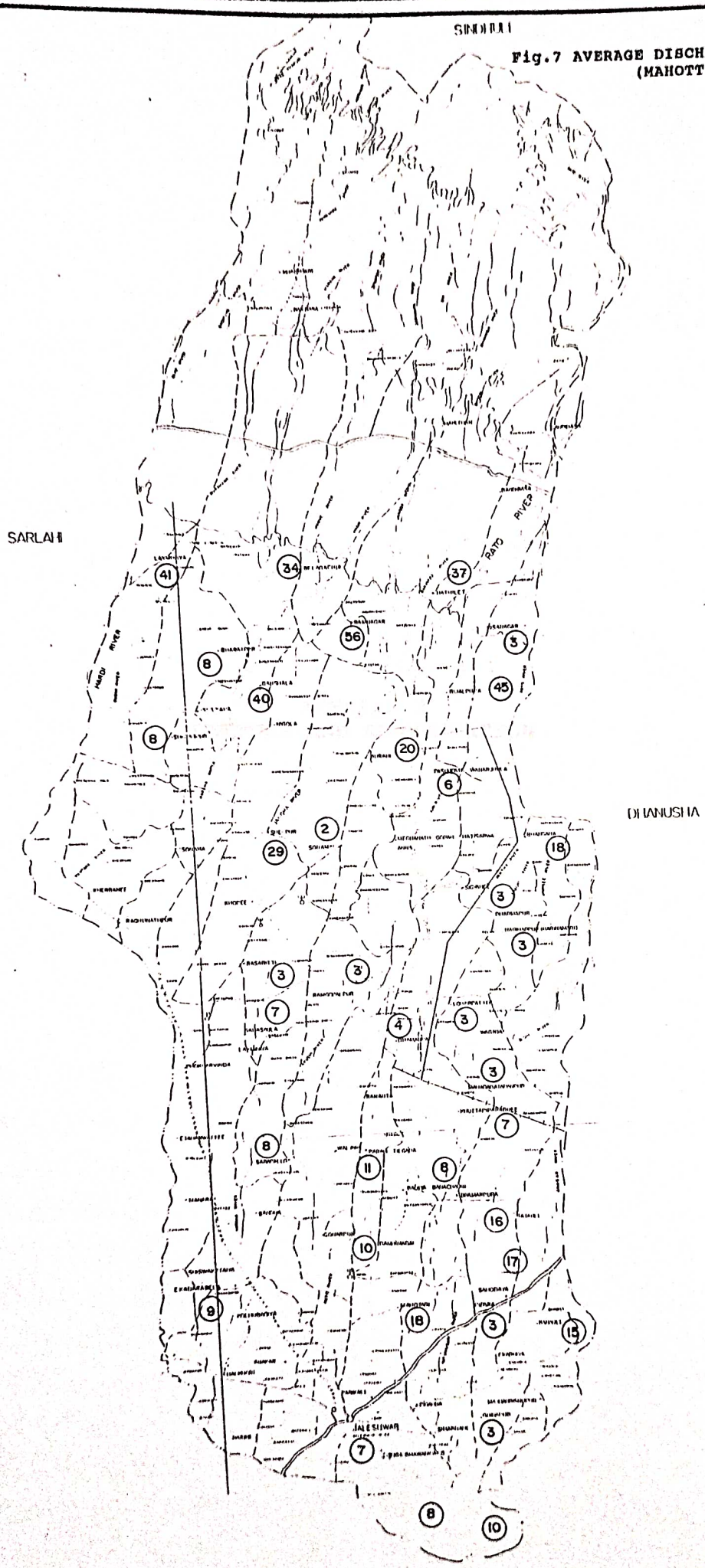


Fig.7 AVERAGE DISCHARGE OF TUBEWELLS (Lps.
(MAHOTTARY DISTRICT)



10 AV. DISCHARGE

ANNEX - J
LETTERS AND RCOMENDATION

कृषि विकास बैंक

(कृषि विकास बैंक ऐन, २०२४ अनुसार स्थापित)

टेलेक्स नं. २२१७
तार: कृषि बैंक
फोन नं.- २-११७४४
२-११८०२-६

पत्र संख्या:-
च नं. ४६१

२०७६

मुख्य कार्यालय
काठमाण्डौ
दिनाङ्क- २०४६।६।१३ गते

विषय:- तथ्यांक उपलब्ध गराईएको बारे ।

महोदय,

त्यस आयोगको पत्र संख्या ६८८।०४६।०५० मिति ०४६।६।६ को द्वारा माग गरिएको सूचना तथा महोत्तरी जिल्लाको स्काली ट्यूबेलको प्रगति विवरण यसै पत्रसाथ संलग्न गरि पठाईएको व्यहोरा जानकारिको लागी अनुरोध छ ।

श्री ५ को सरकार
जलस्रोत मन्त्रालय
जल तथा सक्ती आयोग
सिंहदरबार, काठमाण्डौ ।

भवदीय

(प्रेम बहादुर श्रेष्ठ)
मे. ई.

बोधार्थ:-

श्री छुनो कन्सल्टेन्सी एण्ड कन्स्ट्रक्सन प्रा.लि.
नया बानेश्वर
काठमाण्डौ ।

श्री ५ को सरकार
जलश्रोत मन्त्रालय

फोन नं. २-२७६६८ कार्यकारिणी सचिव
२-२८६६६
२-२७६६६

जल तथा शक्ति आयोग

को
सचिवालय

सिंहदरबार, काठमाडौं
नेपाल

पत्र संख्या:- ८०(६)/०२०।४८

मिति..... ....
२०४९।१।६

विषय:-

विषय :- तथ्यांक उपलब्ध गरिदिने बेहोरा।

श्री .हाम्रो विभाग...
..हरिहरभवन, पुलचोक
.. .. ।

उपरोक्त विषयमा यस आ.व. २०४९।५० को कार्यक्रममा अनुसार महालक्ष्मी ... जिल्लाको Tubewell Inventory अध्ययन कार्य रहेको र उक्त अध्ययन कार्य सञ्चालन गर्नको लागि Groundwater Irrigation क्षेत्रको तथ्यांक को आवश्यकता भएकोले पत्र आफ्नो हाते नियमानुसार सम्बन्धित तथ्यांक... उपलब्ध गराई सहयोग गरि दिनु हुन अनुरोध गर्दछु ।

(केदार प्रकाश रिजाल)
कनिष्ठ ईञ्जिनियर

बोधार्थ:
श्री नुवा कन्सल्टेन्सी एण्ड कन्स्ट्रक्सन के.प्रा.लि.
नया बानेश्वर

श्री निर्देशक ज्यू (लागी)
उपरोक्त बमोजिम अनुरोध छ ।
उपलब्ध गराइदिनु हुन हुकुम भएको ।
[illegible]

SADP, Dhanusha को
प्राप्त हुन आयोग अनुरोध गरिएको छ
२/१९

श्री ५ को सरकार
जलश्रोत मन्त्रालय

फोन नं. २-२७९६८ कार्यकारिणी सचिव
२-२८९६६
२-२७६९९

जल तथा शक्ति आयोग

को

सचिवालय

सिंहदरबार, काठमाडौं
नेपाल

पत्र संख्या:-

मिति.....

२०४१।१।६

विषय:-

श्री स्थानिय विकास मन्त्रालय,
सदर पुर्तिको ।

उपरोक्त विषयमा यस आ.व. २०४१।४० को कार्यक्रममा पर्नुका महानगर ... जिल्लाको Tubewell Inventory Study अध्ययन कार्य गरेको र उक्त अध्ययन कार्य सम्पन्न गर्नको लागि Groundwater Irigation सँकलित तथ्यांक को आवश्यकता भएकोले पत्र व्यहोरा हुने नियमानुसार सँकलित तथ्यांकहरु उपलब्ध गराई सहयोग गरि दिनु हुन अनुरोध गर्दछु ।

(केदार प्रकाश शिखाल)
कार्यवाह हाइड्रो इन्जिनियर

बोधार्थ :

श्री लुना कन्सल्टेन्सी तथा कन्सल्टेन्ट म.प.पै.

लगा नोटेछन् ।

श्री ५ को सरकार
कृषि मन्त्रालय
कृषि विकास विभाग

फोन नं. २०१०४

कृषि विकास योजना नक्टाझिज

च० नं०।-५०४५
प० सं०।- ४९१५०
प्राप्त पत्रको प० सं० मिति।-

मिति २०४६।६६।२६

विषय।--डाटा उपलब्ध गराइको बारे ।

श्री जल तथा शक्ती आयोग,
सिंहदरबार,काठमाडौं ।

उपरोक्त सम्बन्धमा त्यस आयोगको मिति २०४६।६।३ को पत्र अनुसार यस योजनाबाट हुन वेसी हाल सम्म भएको डिप एवं स्याली ट्यूबेल को विवरण लुना कन्सलटेन्सी(प्रा.)लि.मार्फत पठाई दिनको व्यहोरा अनुरोध छ ।

बोधार्थ

श्री लुना कन्सलटेन्सी (प्रा.) लि.

(काली बहादुर क्षेत्री)
का० मु० योजना अधिकृत

कृषि विकास बैंक

(कृषि विकास बैंक ऐन, २०४८ द्वारा स्थापित)

प० सं० :–

च० नं० :–

क्षु० ए० लि० कार्यालय
..... जनकपुर .....
मिति २०७३/१२/१ ई०

विषय :– जी जानकारी सम्बन्धी रहेको ।

ट्युवेल इन्भेन्ट्री अध्ययन कार्य अन्तरगत रहेर आउनु भएका श्री लुना कन्सलटेन्सी प्रा० लि० का प्रतिनिधिले यस कार्यालय र अन्तर्गत का विभिन्न कार्यालयहरुमा सम्पर्क राखि डाटा संकलन कार्य गर्नु भएको व्यहोरा जानकारी गराईन्छ ।

लि० मुख्य नियन्त्रक

तार : कृषि बैंक
फोन नं० :-

कृषि विकास बैंक

(कृषि विकास बैंक ऐन २०२४ अनुसार स्थापित)

पत्र संख्या :-
चलानी नम्बर :- ९९१८

अर्घा कार्यालय
अर्घाखाँची
मिति:- ०४८/११/१०

कृषि विकास बैंक शाखा कार्यालय, अर्घाखाँची

विषय:- [illegible] सम्बन्धमा ।

मिति ०४८।०८।२० को पत्रमा [illegible]
[illegible] कार्यालय [illegible]
तथा अन्य [illegible] लाई [illegible]
अध्ययन कार्य [illegible] श्री [illegible] (प्रा.) लि. [illegible]
[illegible] आवश्यक अध्ययन कार्य पूरा [illegible]
का [illegible] अनुरोध गरेका छौं ।

निवेदक

([illegible] कुमार [illegible])
नि. शाखा-प्रबन्धक

नेपाल सरकार
जलस्रोत मन्त्रालय
सिंचाई विभाग
भूमिगतजलस्रोत विकास समिति

फोन नं. २००४७

कृपया पत्रोत्तरमा प्राप्त पत्र संख्या र मिति उल्लेख गर्नु होला ।

भूमिगत नलकूप आयोजना

महोत्तरी

प्राप्त पत्र संख्या :—

पत्र संख्या यो. व. प्र. का. नं. :— ९१६।०४६।०५० ब० नं० २५८

मिति ...०४८।०९।१९...

विषय:— जो जस सँग सम्बन्ध छ ।

यस भूमिगत नलकूप आयोजना महोत्तरी द्वारा आ. व. ०४०।०४१ देखी लाल सम्म जडान गरिएको डाप ट्युवेलहरू को आवश्यक डाटाहरू ट्युवेल इन्भेन्ट्री अध्ययन कार्य अन्तर्गत संकलन गराउनु भएका श्री हुना क्वसल्टेन्सी (प्रा.) लि. को प्रतिनिधि लाई उपलब्ध गराईदिनु हुने अनुरोध छ ।

०४८।११।१९

प्रेम बहादुर कार्की
आयोजना प्रमुख