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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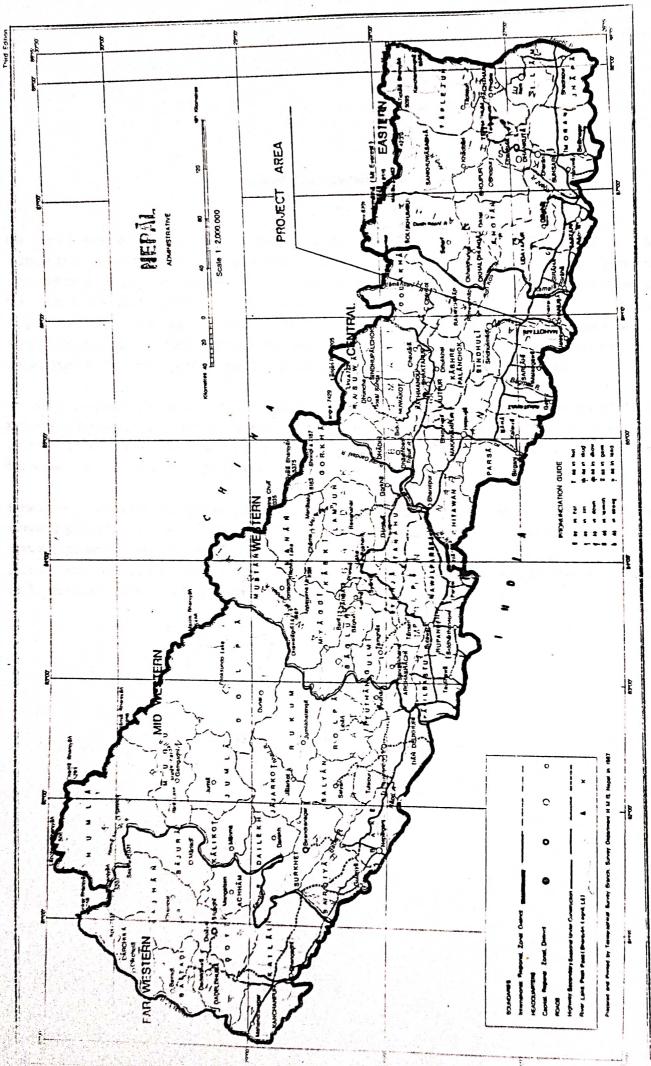


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ACKNOWLEDGMENT

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 nonirrigation purposes.

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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) <u>Data collection</u>: All relevant data including reports and maps were collected and reported.
- (b) <u>Data Interpretation</u>: 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) <u>Questionnaire and Forms</u>: 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) <u>Desk Study Report</u>: 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) <u>Data collection</u>: Field data were collected from various offices in the district as well as wards and project sites.
- (b) <u>Filling in of the Questionnaires</u>: The pre-prepared questionnaires were duly filled up in the field site and relevant data collected.

(c) <u>Interview</u>: 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) <u>Computerization of the Data</u>: All technical and statistical data were computerized.
- (b) <u>Up-dating the Desk Report</u>: 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) <u>Interpretation and Evaluation</u>: 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 sg. 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.

Mean temperature and absolute extreme in Janakpur station Latitude : 26^{0} 3' Longitude : 85^{0} 58'

Elevation: 90 m (MSI)

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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 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 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 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 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 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 3	983	21.5			8.4		13.2	32.8	18.0	33.3	22.5	35.7	25.4	33.1	25.6	33.0	54.9	31.9	24.0	31.2	22.8	29.3	17.6	24.2	10.7
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 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 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 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 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 3	584	22.3			10.8		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
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 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 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 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 3	582	23.6			9.8		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
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 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 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 3	986	2.34			10.7		14.9	34.4	20.4	33.1	21.8	35.9	26.5	32.8	26.3	33.4	56.6	31.9	24.8	30.4	20.7	29.4	16.5	23.1	11.7
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	786	23.0			10.9		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	2.92	11.9
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	os.	28.0			0.0		6.0	40.0	10.4	45.0	18.0	41.8	20.02	38.0	20.5	37.6	21.0	37.0	20.4	35.0	17.0	32.2	8.0	30.0	2.0
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	xtreme	19.7																							
778 to	uring	26.82	4.83	26.87	6.87	7 30.86	10.79	25.85	- 1	26.82	25.86	- 1	- 1	- 1	29.84	11.86	24.83	- 1	28.66	- 1	22.87	- 1	30.82	1.87	31.83
286	978 to																								
	786																								

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 m that graph to storage flat which a narrow world in the rivers 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	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 N	A N	A N	A N	A NA	A NA	A 1	AV	NA	NA	NA
1981	NA	NA	NA	NA	NA	NA	AN	ИА	NA	ИА	NA	AN

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.

THE CAME OF THE WAY OF

Table - 4

Population of DHANUSHA District

s.No.	Village / Town	Total	Total	Total
	Development	No of	No of	
	Committee you	House	Household	10.4
1	Andupatti	421	513	2772
2	Aurahi	583	721	4261
3	Bafai pun serbaca	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 Chamba	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
	The state of the s			

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		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 was kasa	916	1020	6195
78	Nauwakhore	555	625	3191
79	Nunpatti	459	534	2805
80	Pachaharwa	406	547	2692
81	Paterwa governo de la composición della composic	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 ochana	1134	1248	6964
88	Sapahi	916	1119	6000
89	Satosar	795	883	4869
90	Shantipur	638 of 15pm	686	3976
91	Singyahi Maidan	1165 ther	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	Totalpg	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 Pero	centage
1.	Agriculture/Forestry	80.5
2.	Community Service	13.9
	Commerce	2.9
	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 of agricultural land (Ha) based on LRMP is as shown below.

Unirrigated	Monsoon	Year Round	Total	Total	Overall
	Irrigated	Irrigated	Irrigated	Irrigable	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

4																	
	YEA	R		PADDY			MAIZE			MILLET			WHEAT			BARLE	Y
			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	21
			61110		86776				1920			16213		17024			
	1977	/78	55220	1679	92714	3140	1201	3771	2730	927	2531	15930	1306	20805	210	762	16
	1978	179	53720	1794	96374	3140	1401	4399	2730	927	2531	18000	1150	20700	200	800	16
	1979	/80	54840	1840	100906	2980	1255	3740	2730	927	2531	18000	1140	20520	200	850	17
	1980	/81	54800	1901	104175	3180	1601	5091	2730	930	2539	17940	1350	24219	870	494	4:
	1981	/82	57680	1700	98056	3180	1604	5101	2730	949	2591	15320	1150	17618	870	701	6
	1982	/83	44990	729	32798	3790	1802	6830	1150	696	800	24260	1190	28869	510	784	4
	1983	/84	58180	2171	126309	2510	2120	5321	1150	843	969	19770	1200	2372	510	804	4
	1984	/85	57000	1868	106476	2090	1713	3580	500	1000	500	18290	1370	2505	7 140	929	_ 1
	1985	/86	5283	2000	105660	3230	1997	6450	540	927	501	17450	1214	2118	4 510	804	4
	1986	/87	4912	0 1312	64445	3400	1750	5950	600	1000	600	1900	1300	2470	470	936	4
	1987	/88	5420	0 2012	109050	2510	1594	4001	700	900	630	1999	1370	2738	410	805	3
	1988	/89	5417	0 2211	119770	221	2068	4570	800	1025	820	2005	1650	3308	3 300	967	2
	1989	/90	5417	0 2211	119770	221	2068	4570	800	1025	820	2005	1650	3308	3 300	967	2
		-	5420									1999		2738	5 410	805	3
	1991	/92	5160	2002	102420	270	1889	5100	840	1000	840	1910	0 1628	3110	0 300	933	2
,																	

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			TOBACC	.0	st	JGARCAI	NE
ILAK	AREA	YIELD	PROD	AREA		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		1689	580	6000	3480	2560	672	1720	950	15000	14250
1983 /84	1780		710	600	6000	3600	2590	799	2069	1040	20000	20800
1984 /85	2240		1120	360	6500	2340	1260	849	1070	800	24000	19200
1985 /86	2250		1130	400	4875	1950	1480	372	551	800	20000	16000
1986 /87	2300		1171	650	4000	2600	1400	600	840	920	20000	18400
1987 /88	3500		2111	660	7591	5010	890	697	620	930	25000	23250
1988 /89	3220		2019	700	9000	6300	1270	803	1020	1200	28000	33600
1989 /90	3500		2111	660	7591	5010	890	697	620	930	25000	23250
1990 /91	3500		2111	660	7591	5010	890	697	620	930	25000	23250
1991 /92	3070		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.

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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.

<u>Dhanusha</u>

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
	75743	78106	77325	75930	76461
Pig	463	469		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 Exchange Counter Janakpur Inarwa

Nepal Bank Limited

Branch Office

Sub Branch Office

Janakpur

Janakpur Cigarette Factory Ltd.

Sabaila Khajuri Godar

Rastriya Banijya Bank

Branch Office

**

**

Janakpur

Mahendra Nagar

Jadukoha Pidari Chowk

Agriculture Development Bank

Supervision & Control Office
Branch Office
" "
Sub Branch Office
" "

Janakpur Janakpur Khajuri 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
- (1) 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:

<u>Temperature</u>:

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.

Nean temperature and absolute extreme in Janakpur station

Latitude : 26⁰43' Longitude : 85⁰58'

Elevation : 90 m (MSI)

Year Ma 1978 21 1979 24	Max Min						Ĺ							S. C.	ņ	igt -	21-					277	2
		Max	Min	Max	Min	Max	Min	Max	Min	Мах	Æ, r	Мах	Min	Мах	Min.	Мах	Æ,	Мах	Mín	Мах	Min	Мах	Min
	8 9 1				14.0	•	20.8	:		:	25.7	32.4	25.7	32.6	27.4	30.7	24.1	30.7	21.9	27.1	16.7	54.9	10.6
	24.0 8.8	3 24.8	3 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
							2	2		2 72	7 50	0 72	7 70	34.0	25.3	33.9		30.6	19.7	A. N	A.A	25.9	7.6
1981 24	24.5 7.4	27.4	8.2	31.2	12.4	. Y	21.1	33.7	21.6	35.6	25.6	33.0	26.0	33.3	25.4	N.A	24.9	A.N	20.7	A.A	14.5	A.A	10.2
							20.5	37.5	24.0	33.8	24.4	33.2	25.4	33.7	26.5	32.5			21.3	27.6	13.2	24.5	9.5
							18.0	33.3	22.5	35.7	25.4	33.1	25.6	33.0	54.9	31.9	24.0	31.2	22.8	29.3	17.6	24.2	10.7
							20.4	32.9	54.4	32.8	26.2	31.8	25.3	33.6	26.7	31.5			52.6	28.8	13.5	24.8	10.3
							21.5	34.3	23.7	34.2	23.9	31.5	23.5	32.8	24.7	31.4			20.4	28.3	13.6	25.2	9.8
							20.4	33.1	21.8	35.9	26.5	32.8	26.3	33.4	26.6	31.9			20.7	59.4	16.5	25.1	11.7
							20.1	35.9	22.9	34.9	21.5	31.4	21.1	31.6	24.5	31.8			55.6	29.5	16.3	26.2	11.9
Abs. 28	28.0 4.0	.0 31.0	0.0.0	38.6	6.0	40.0	10.4	45.0	18.0	41.8	20.0	38.0	20.5	37.6	21.0	37.0			17.0	32.2	8.0	30.0	2.0
age of																							
During 26	26.82 4.83 26.87 6.87 30.86 10.79 25.85	.83 26.	87 6.8	7 30.8	6 10.7	9 25.85	1.83	26.82	25.86	6.79	6.85	5.80	29.84	11.86	24.83	9.85	2 28.66	5 3.78	3 22.87	7.79	30.82	1.87	31.83
1978 to																							
1987																							

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 The late where he was because the description was made

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 is possetted in inter- is.

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	ero I	131.6	122.1	539	193	352.4	16	0	7
1988		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	mai	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	-	4		232	49	696	362	133	148	0	29
1982	NA				NA		NA	NA	NA R	NA	NA	NA
1981	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Bathemaka

dheratpur Bharaghlya

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	Total No of	Total	Total
4.5	Committee	Houses	Households	
1	Analysis and a second		700	4400
1	Anakar	571	700	4128
2	Aurahi	970	1137	5982
3	Bagada & Passangus	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
	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 agricultur	713	788	4330	
62	Sahasola		935	5109	
63	Sahodawa	713	831	4602	
64	Sandha ochor	527	618	3784	
65	Sarpallo	946	1225	7146	
66	Samsi	715	956	5116	
67	Sripur	1152	1476	7863	
68	Simardahi	1.1. (a. 1523 marcos)	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 S. No.	Pipra Programme Person	951	1143	6433	
 500 Sel (400 HZ) 18 10	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	en ele.	Percentage
1.	Agriculture/Fo	restry	89.5
2.	Community Serv	rice	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	१८५८ ३ हिस्		hnic			enta		(198	1 c	ensu	s)	
i.		Ma	itha	li		74	. 4			AREA		
2.70			pali			12	. 7					
1976 /17												
3.	50 6 3 7 6 0 6 6 7 7		ojpu			1						
1979 (6)			153107									
4.		Ma	gar			The same	3					
The state of the s		TOWN	Igar			J475	1455					
								6,00				
5.	5 1250	ot	hers	(3.6)	2 1/45	10	.2					
	100				10000							
1.1	- FR 511				167.							
99800 Jan	and Epiglic	1,890	15 120	12 Tu		757	F Williams	2 14	7 7	517.113	1.180	
Commercial assets				41.								

Anth I Aren in seminary Principalities in process for your states on Eq. (one become).

1781 792 46530 1157 11696 1285 1970 MAG 1165

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

	- g 1	11 41 3 6 4	in C., i.	F 2 (2)			91, 6 to		77						DAD! 5V	
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		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

YI	EAR		OILSE	ED		POTATO			TOBACC	0	st	JGARCAI	1E
		AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PROD	AREA	YIELD	PRO
1975	/76	200	0 500	1000	480	6498	3119	1220	826	1008	140	16000	2240
1976	/77	210	0 415	872	490	6498	3184	1230	826	1016	246	16000	393
1977	/78	377	0 499	1881	450	6444	2900	1400	829	1161	1190	16025	1907
1978	/79	370	0 600	2220	420	5000	2100	1250	696	870	1200	17000	2040
1979	/80	246	0 541	1331	420	5190	2180	1180	703	830	1150	17496	2012
1980	/81	188	0 590	1109	450	5000	2250	1100	727	800	1080	18000	1944
1981	/82	290	0 600	1740	500	5200	2600	1060	689	730	1000	20000	2000
1982	/83	82	0 402	330	920	6000	5520	1640	890	1460	870	22000	1914
1983	/84	85	0 729	620	460	6000	2760	1640	890	1460	960	20000	1920
1984	/85	141	0 603	850	600	5900	3540	1000	860	860	790	24000	1896
1985	/86	152	0 599	910	610	4803	2930	830	602	500	550	20000	1100
1986	/87	142	0 - 599	851	510	4000	2040	1650	552	911	620	22000	1364
1987	/88	140	0 557	780	630	7000	4410	1450	703	1019	700	25000	1750
1988	/89	154	0 597	919	630	9000	5670	1550	800	1240	1210	33000	3993
1989	/90	140	0 557	780	630	7000	4410	1450	703	1019	700	25000	1750
1990	/91	154	0 597	919	630	9000	5670	1550	800	1240	1210	33000	3993
1991	/92	112	0 500	560	650	12169	7910	1400	893	1250	1400	35000	4900

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	Year Round	Total	Total	Overall
	Irrigated	Irrigated	Irrigated	Irrigable	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 Sheep	33280 -	34355 -	37206 -	37040 -	37298 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

Sub-branch office

"" " 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
- (1) 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. <u>Underground Water</u>

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 <u>Luna Consultancy & Construction Co. (P) Ltd.</u>

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 subdivided 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 subdivided to la - 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 \leq 10 , 3b gentle slope $\underline{1-50}$, 3c - undulating $\underline{1-30}$, 3d slope, highly dissected 0-200, 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)

SOUTH COMMITTEE		Ī		Lane	e Syelem 3 -	HORT	
	Lund System 2		3.	34	34	10	•
Land System I		Ze rice teuce	uel sat fores or diverse i creesing	和实现	and a	13 A A A A A A A A A A A A A A A A A A A	及
Meshell	1	TAGES 1		Lica Tec	iame Janes		ww.6 6
Transport Transport SECOMMENT CONTRACTOR	Steament Tray and Trackly one Steament	Toques	ood Yanad	370-4311 Y	310-4844 1 144	Security	
und und				i asow sony isometrica isometrica	loss graphy	Topography limitetian	

TERA	REGION	Quaternary aftur	ium , Subtrapical				
Land System	Land form	Lana Unit	Dominant Sails	Dominant Slaces	Communi Testure	Seasonal Range of Depth to Water Table	Drainage
1		ia pr esent river channel	_	_		_	_
		lb sand and gravei bars	Ustorthents Psamments	<1°	Sency/ Cobbiy	0 -2m	subject to severe river flooding
		ic low terrace	Ustilluvents Fluvaquents	<1 0	Sandy	0 -2m	variable;subject to severe river flooding
	aena unti wan aren	2 higher terroca	Ustachrepte Hapiaquepte	4.•	Coomy	0 - 4m	variable: subject to accasional river flooding
2]	Recent Alluvial Pluin'Lower Pledmont"	2a depressional	Hapiaquepts	<1/20	Fine Loomy	0 - 2m	poor
**	bnoilizageb)	25 Intermediate	Haplaquepts-	! <1/20	Loamy	0 - 6 m	Imperfect
		2c intermediate	Haplaquepts Ustochreps	<i td="" °<=""><td>variable</td><td>dependent on position</td><td>variable;low areas subject to floading</td></i>	variable	dependent on position	variable;low areas subject to floading
2	ur.	24 high position	Hoofustoils Ustochreufs	∢I • po	Loony	1 - 10m	maderately well
3	Alluviot Fan Apron Complex "Upper Piedin xn" (erasional)	Ig very gentle slopes	Haptustalls Dystachrepts Ustochrepts	<1°	Loamy	1 -10m	liew vistoration
		16 gentie slopes	Haplustolls	1-5°	Loamy/ Bawdery	2-10m	rapid
		3s undulating	Haplustolls	1-3°	Loamy	2 -19m	weil
		M highly	Ustochyepts	0-200	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 <u>Topographical Survey Branch, Department of Survey</u>
 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 <u>Ministry of Agriculture</u>
 Agriculture Department as well as other offices laike the Department of Food and Agriculture marketing Services etc., were visited and relavant information collected.

8. <u>Water Resources</u>

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.

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puring the site visits, it was found that owners it was in buildings from them begins operated only to the survey as the year owner turbweils are operated only to the survey for one seesant training of landords are sultivated only for one seesant training to the survey of the one seesant training of the burners of the survey of the one seesant training of the burners of the survey of the operation of the operat

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.

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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:

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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 of 130 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 10 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 Dhahusha and Mahottari district are shown below.

Distribution of shallow tubewells in the project area.

DISTRICE	ADB/H	JADP	GWP	PVT.	
Dhanusha	92		_	4	92
Mahottari	95	-	-	1	96

Distribution of deep tubewells in the project area.

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

Comparative study of tubewells in Dhanusha District.

s.N	Source	Financing ADB/N	JICA	GWP	PVT	TOTAL
		(STW) 92	(DTW) 40			132
1.	Field study	92	40	_	-	13%
2.	Desk study	1.27	25	-	-	152

Comparative study of tubewells in Mahottari District.

S.N	Source	Financing	Agency			
		ADB/N	JICA	own	PVT	TOTAL
		(BTW)	(DTW)			
tens and the ten for the	er was the sea was the sea con an and t	N. 46 SE SE SE SE SE SE SE SE SE		10 for 20 an de	50 de 44 de 10 m	
1.	Field stud	ty 95	4	30	1	130
2.	Desk study	144	94	36	.000	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 updata 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	149		Chaitra 2049	2049				Baishakh 2050	2050		
DISTRICT	2	3	4	I	2	(4)	3	4	1	2	3	7	
DHANUSHA		2 VD(2 VDC per day s	tarting fr	starting from Janakpur	that	C (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	(Chico)					a company distribution to the contract of
MOHATTARI		2 VD	2 VDC per day s	tarting fr	starting from Jaleshwar	ıwar							

WORK SCHEDULE

	Remarks				
Months	Paush Magh Falgun Chaitra Baisakh Jestha Asadh 1234123412341234				
	Description of Work	Desk Study Work and Report Submission	Field Work and Field Work Reporting	Comparative Study of Field Data and Draft Reporting	Final Reporting
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ANNEX - A FIELD QUESTIONNAIRES

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

1.	Location	
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. Accessibility
- 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.

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4.	Tubewell Details	
4.1	Size (mm)	and the state of the form with the first the state of the
4.2	Depth (m)	
4.3	Discharge (lps)	
4.4	Type	: Shallow/Deep
4.5	Recharging Source	
4.6	Fluctuation of	
	Watertable	Kinadios politica de partir de la company de
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 Company	
	Man-hours/day	:
5.7	If Electricity	
	K.W.H./month	
5.8	If Diesel, L.P.H.	ıd :
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 Yield Prodn. Planting Harvesti
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8.5 Agricultural Inputs:

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

9. Name of Persons
Contacted:

10. Name of the Owner

11. Date of Installation:

12. Any other information related to groundwater:

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LOCATION MAP
(Showing Canal Alignment and Command Area)

ANNEX - B FIELD INVESTIGATION FORMAT

SAMPLE FORMAT FOR TUBEWELL DATA COLLECTION

PISTRICT:

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			Remarks		
	Costof	Instal-	lation	(N.Ra.)	
	Fin.nc.	341	Agencyl	Private	
		Elect.	KWH	+	
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	_		Operating Type H.P. Company (LP16, (KWH.		
Fump Details			H.P. C	-	
Fan			B Type		
-		Daily	Operati	Hour	
Operation		Copping (mt/ Operating	Crofi Intens ha.) Season	(S/W/YR)	
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Tubewell Details		Depth	. <u>E</u>	Y	
Tuker		Size	(mm)		
	L	***	ž		
Location			V.D.C.		
			Village		
Owner's Name			Name		
Owner		Fint	No. Name Nam		
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B: BIGHA E: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

NOTE

ANNEX - C SUMMARY OF TUBEWELLS IN DHANUSHA DISTRICT

*	NAME	טטא	1. Jennthur Negar Palika 2. Depura Rupatha 3. Bekchaura 4. Lazmipur Bayeba 1. Lazmipur Bayeba 2. Balha Kathal 5. Balha Kathal 6. Parmula 7. Balha Kathal 7. Balha Kathal 8. Khajuri Chanha 9. Paligana 9. Paligana 10. Santipur 11. Balha Sagara 11. Balha Sagara 12. Sashuwa Mahendra Nagar 13. Mahuwa 14. Mahuwa 15. Mahuwa 16. Balha Sagara 17. Balha Sagara 18. Saghuwa Mahendra Nagar 18. Saghuwa Mahendra Nagar 19. Bashipur 19	21
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 1 RUN = No. of tubewells in working condition.
 2 DAM = No. of tubewells in not working condition.
 3 FAIL = No. of tubewells un not working condition.
 4 U/C = Tubewells under construction.
 5 STW = No. of Shallow tubewells.
 5 STW = No. of Deep tubewells.
 6 DTW = No. of Deep tubewells.
 7 AJ = No. of Arteznial tubewells.
 9 T.CL = Total land commanded by tubewells in hactares.
 10 A.CL = Average and 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 Kaitha = 1 Higha = 77000 sft, = 0.67 Hn. (approximately).

ANNEX - D SUMMARY OF TUBEWELLS IN MAHOTTARY DISTRICT

HANK		1				17	NAME OF STREET		1				!		:				****				****	***	****	***		-		-	
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	Total	8	11	00		1 12	1 91	1 21	1 02	 <u> </u>	"	! ^!	130	1 8	-	10	18	12	7	=	1 =	1 2	1 %	1 5		1 -	2	2	17	X	1 0
	·	1	1	1	1					1		1		; 				•		-	i	! !	1	1	. 1	•	}			1	1

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 DIW = No. of Deep tubewells.

7 A/J = No. of Artezinal tubewells. 8 R/R = No. of Rower Pumps.

9 T.C.L. = Total land commanded by rubewells in hartares.

10 A.C.L. = Average land commanded by tubewells in hactares.

11 A.ln. = Average cropping intensity.

12 Av.O. = Average discharge per rubewell in litre per second.

ANNEX - E
DETAILED INFORMATION ON TUBEWELLS
(DHANUSHA DISTRICT)

TUBEWELL DATA COLLECTION

DISTRICT Dheaushe
VDC : Jenakpur Negar Pelika

PERSONS CONTACTE. Ram Praiap Sah Ram Krishan Yadav Ram Charitra Raut.

30,651.00 ing Agency/ Private Pinane ADB,N Company (LPH) (KWH) Fuel Expns. 1.5 Narayani Kirloskar Pump Details Type H.P Hours Operation Season (S/W/YR) Operating 410 Intens- (mt/ha.) ity (%) | 3.67 2.2 7.35 Crops and Yeilds Copping Crops Paddy Wheat Paddy Wheat Potato Paddy Wheat Potato Tubewell Details î, 203.2 Size (mm) Aunicipality V.D.C. Location anakpur Village Bazar Mujeliya Januman Nagar Owner's Name S. First Last N Name Name Raso Devi Raur JADP JADP

OTE:

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

DISTRICT Dhanusha VDC : Depura Rupaitha

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Kapil Dev Sab Jagdish Thakur Bashi

Owner's Name		Location		Tubewel	Tubewell Details			Сопп	Command Area		Crops and Yeilds	\$PI	Operat	lon	Pump	Pump Details	Fuel Expas.	rpas.		- -	
First Last Name Name	Village	V.D.C	No.	Size [mm)	Depth (B)	Dis- charge (lps)	TYPE	 	_ _ _	Crops	Coppin	Copping Intens- (mt/hs.) ity (%)	Operatin Season (S/W/YR	g Daily Operating	- 1 - 4	g Daily Distail Operating Type H.P. Company (LPH) (Dissel	Elect (KWH)		lation (NRs.)	Remarks
Kapil Sah	Depura	Depura Rupaitha	-	38.1	81	, r	Shallow	\$ 	3.00	Wheat		66 3.67 44 2.05	7 Year 5 Round	Artessa					ADB/N Jasskpur	11,586.00	
ıgdish Baski	Rupeithe			38.1	130			- 53	3.67	7 Paddy Wheat	5 73	3.67		•						12365.00	
										- ;											
										_ ·											

NOTE

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

PERSONS CONTACTED: Hira Yadav
Biadcahwar Sah

TUBEWELL DATA COLLECTION

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DISTRICT: Distains

Ouner's Name		Location		Tuben	Tubewell Details			Comman	Command Area	Crops	Crops and Yeilds		Operation		Pump	Pump Details	ti.	fact Expas.		-	,	
First Last	Village	vo.c.	Werd _	Ste _	Size Depth Dis- (mm) (m) cherr	Word Size Depth Dis- No. (mm) (m) choffs	TYPE	s _	B. K.D. Ha.	Crops	Crops Copping Crops Intens- (mUha.)	Copping Intens- (muba.) in (%)	Operating Daily Diesel Elect. Sanona Operating Type H.P. Company (LPH) (KWH) (3/W/YR) Hours	Daily Dieted Elect. ing Operatura Type H.P. Company (LPH) (KWH) Ageno Hoers Privat	Type	H	i fred	Herel E LPH) (6	Heet ing SWH) A		factal- Lation (N.R.)	Remarks
Hira Yadav	Bakchaura	Bokcheur Bakchaur 9 101,6 37 11	0	101.6	37	12	Shallow	12	1200	Shallow 18 12:00 Paddy	#		, '	10-12 CP 8 Bharas	8	8 Bh.m.		ιχ	Q .	ADBAN	45,409.35	
						1. 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 		Wheat	× -	77	Months						_			
Kambaelm Den			•	101.6	÷	- 12	•	91	1200	Paddy	+	3.82	•			8 Na	Narayani	<u>.</u>			48,557.65	
			-	-	_	_	_	_	-	Wheat	×	2.05	_		_	Klr	Kirlostar	-	-			
			- T	10.	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<u>.</u>		_	-	-	_	_	_		_					`		
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B. BIGHA E. EATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT NOTE

TUBEWELL DATA COLLECTION

DISTRUCT : Dassuchs VDC : Laxampur Bageba

PERSONS CONTACTED: Ram Dev Karmi
Canadra Dev Raut Karmi
Praup Nanyaa Mindaa
Ram Praud Yadav

Name VIII.55 VDC No. (ma) class Display Di	Owner's Name	_	Location		Tabene	Tabeavil Details			Command Area	d Area	Crop	Crops and Yoilds	ąp ą	Operation		Pump	Pump Details	Fuel Expus.	-	Figure	3	
Blagwadpar Lizamiper 1 331 945 4 Shallow 6 400 Peddy 66 307 Vent Afterna Antonia Anton	S. Flor Last No Name Name	Village	v.D.C	Ward No.	2 (E)		charge (1ps)	TYPE		' - ' -	: – –		- (mVha.)	Operating Season (S/W/YR)				 - '		ges cyl Iva le	lation (N.R.)	Remark
Lizamiper	Devi Karmini	Shagestiper	Laxampur Bageba		138	25	1 +	Shallow		=				· _	Artera				OA .	B/N akper i	10,244,00	
Example: 8 341 955 2 35 1233 Paddy 71 367 5 341 65 2 3 1 200 Paddy 56 3.67 Latampte]	Lexamps: Bageba	•		 	8	. •	•		- -		_	_		•			 			10,511.00	
Lazaniper 5 341 65 2 3 1 200 Peddy 66 221 Wheat 66 22 Bageba 4 34.1 93 2 3 1 2.00 Peddy 70 367 Wheat 70 367 Wheat 70 367	ai Doni Mishra	Eduarian		- * -	- 18 	95.5	- ~ -	•	_ x _	ี ส 		_		•	· 			 			11,029.00	
Lassaiges 4 34.1 45 1.5 3 200 Paulty 70 367	Yadav		Y" 100		- 2	\$	_ ~ _		- <u>-</u> -		= 7	_		•	· 			 			7,962.00	
381 93 2 3 1 2.00 Paddy 70 3.67	ji Yadev	Laxamiper Bageba			36.	3	ຼີ ສ					_		•				 		. بشر	9139.00	
	Manje Mishra			- - -	 - - - -	8 -				 	_	-	_	·				 			10,132.00	

PERSONS CONTACTE Ram Sebak Yadav Ram Bahadur Mager

Remarks

TUBEWELL DATA COLLECTION

DISTRICT Dhanusha VDC : Bharatpur

		****************	******	********	*********	********	***********		*******						***************************************	*****						
Owner's Name		Location		Tubew	Tubewell Details	_		Com	Command Area	To B	Crops and Yeilds	J Yeilds		Operation		Pua	Pump Details	Œ,	Fuel Expns.	ü	-	,000
S. First Last N. Name Name	1 Village	V.D.C. No. (mm) (m) Abarge B. K. Ha. Crops Intens. (mutha.)	,	War Size No. (mm)	Depth (m)	Dis- charge (lps)	13.PE	_ m _	. B	#. — . — .	Crops C	opping itens- (11 y (%)		Season S/W/Y	ng Daily Diesel Elect ing Operating Type H.P Cumpany (LPH) (KWH) Age	Type	HP	D Dang (1	iesel El LPH) (K)	lect in WH) A	acy/	Instal- lation (NRs.)
1 JADP	Blrendra Bazar	Bharatpur	17	355.67	5	n	Deep 45 30.00	β	\$ 			F 8 #	71 3.2 26 1.76 44 2.05	Year	10-12 VT 72 Fiat 3	ኔ	72 Fiat		~	Ä	- 1	
1 Jade	Bharatpur 			355.6/ 203.2		ន 		_ 22		_8.8 ~ 8.8 €	Paddy Wheat Maize	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3.08	.,	3-10		47 ISUZU	z	~			
				: # :						·		2	<u> </u>									

NOTE

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

DISTRICT Dhanusha VDC : Petnuka

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Jachuni Thakur Hajam Swarup Mahato Koiri Manabif Gotham

Mutha. Operating Daily	Owner's Name		Location		Tubewe	Tubewell Details	•		Соппа	Command Area		Crops and Yeilds	lds	Operation		Pump	Pump Details	Pue	Puel Expns.	- Figure	Cost of	
Patrucka Patrucka 7 101.6 15.5 18 Shallow 23 18.33 Paddy 65 3.67 6.10 10-12 CP 5 Narayani 1 1 1 1 1 1 1 1 1	-	Village	V.D.C	War No.	Size (mm)		Dis- charge	TYPE	_ eg _ _ m _	_	`			Operating Season (S/W/YR)	Daily Operating Hours	Typ.			sel Elect H) (KWH)		Instal- lation (N.Rs.)	Remarks
Basarjule	duni Hajam	Patmuta	Pamuka	1-	101.6	15.5		Shallow	n	18.3		ļ .		6-10 Months	10-12	ტ	S Nara		 	ADB/N khajuri	29,033.00	
Patcalla 1101.6 112 118 11200 Paddy 72 3.67	arup Koiri	Bagarjule			101.6	13	7.		_=_	- 14.0			3.67						 ໆ		26,530.40	
Patruka 1 101.6 13 12 17 11.33 Paddy 70 3.67 7 7 7 Wheat 47 2.2 8 Potato 23 8 8 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	anshif Gotham				101.6	12.5				120				•		·	· -,		ล		35,543.00	
6 101.6 13 10 16 10.67 Paddy 70 3.67	aksudan Goit	Pacouka			101.6	. E				_=									 13		27,200.0n	
	oti Sab	· None and and		- °	101.6	. E1	2									·	· -		ก		26.250.00	

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

Owner's Name		Location Tabewell Details		Tabewell	Tabewell Details		Command Area Chops and Yellds Operation Pump Details Fuel Expas.	Commis	Command Area	င်	Crops and Yeilds	911	0	Operation		Pamp	Pump Details		Puci Expas.				
	Village	Ward Ster Depth Dis	Ward No.	Ward Size Depth Dis- No. (mm) (m) charg	Size Depth Dis- (mm) (m) charge	Die-	TYPE	 	: - <u>M</u> -		S is	Copping Intens- (muha.) ity (%)	90 (*	Operating Scason (S/W/YR)	Daily Operating Type H.P. Company Hours	Typ.	H.P. –	yasque	Diesel (LPH)	Elect (EWH)		Cost of fastal- lation (N.Re.)	
Brank Roy	Balla Echal	Bahn Kahal		101.6	101.6 13 17	21	Shellow 18	2	! = !	1200 Paddy Wheat		3 x -	3.67 22 N	6-10 Months	10-12 CP 7 Narayani	e	L		ງ 		ADB/N Khajuri	28,763.00	
	1			101.6	2	·	·	_=	-	9.00 Paddy Wheat		37 -	367		\$-10		7 Ushs		<u>ت</u>	_ ` -	ADB/N Khajeri I	24,740.00	
American Electrical States of the States of	- Balba Kodul - Balba Kodul - Balba Kodul			101.6	2	_ <u>_</u>		_ =		9.33 Paddy Wheat		κ\$ 	3.67			_ e				_ ` -	ADB/N Khajeri	26,360.00	
									! :	-	7												

B. BIGHA E. KATHA D. DHURI HA HECTARE GWP. GROUND WATER PROJECT

PERSONS CONTACTED: Binderwar Mandal
Ram Charites Sab
Ram Blias Sab Serr

Owner's Name	_	Location		Tobeure	Tobewell Details				Command Area		Crops and Yellds	1	Operation		Pen	Pamp Details		Fuel Expus.	-			
32	Ville go			Size Depth (mm) (m)		obarge (dps)			W -	- Co		8] (mt/he.)	•	Daily Operating Hours	- Typ•	_ # _	Company	Diesel (LPH)	Elect in (KWH)	Flause. iag Ageney/ Private	Cost of lastal-	Remarks
Bladener Manual	Pining	Klayan .		9 101.6 12.5		=	Shallow	n	00'11	Wheat	2, 14	3.67	6-10 Months	10-12	b_	7 -	Narayani Kirloskar	- 51	1 7 2	ADB/N Khajari	29,999.00	
Plush			Ž.	101.6	15.5	<u> </u>		·	1700	Paddy Wheat	- 45	3.67						- <u>-</u> -			34,235.00	
155-7	_ *		· -	101.6	531	2			 	D Paddy Wheat	- = =	367			- · -			_ <u>_</u> _		 · .	34,343.00	
Rum Asin Pd. Sah			- 	101.6		- <u>*</u> -		_ ກ _	16.67	7 Paddy Wheat	- * 8	3.67			_·_			_ _			35,620.00	
Passai			1, 1	101.6	221 			- 81 		O Paddy Wheat	- 5 4	- 3.61 2.1			_ • _			_ <u>_</u> _			31,225.06	
Abot Kemr Make	•		- • - ·	101.6		2		_ n	1533	Paddy Wheat	- 6 &	3.67			_ ` _			_ Z			H130.00	
Shaker 84 Karti				101.6	531	- 21	•	 •	1200	Paddy Wheat	- 78 51	3.67			 						- 34,300,00 -	
															_		-				-	

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

NOTE

DISTRICT : Dhanniha

Owner's Name		Location		Tubewell Details				Command Area	Area	Crops	Ccops and Yellds		Operation		Pump	Pump Details	Pael Expas.	78.			_
No Name Name	- Village	V.D.C.	No.			Dis. (191)	TYPE	_ '24 _		Crops		(mVhs.)	Operating Season (S/W/YR)		Typ.	HP. Company	Diesel y (LPH)	Elest (KWH)		Cost of Jactal Jation (N Rs.)	. R.
1 Ram Charitra yadav	Phulgama	Phulgama				o	Shallow		808	Paddy Wheat Potato	¥ # 3	3.67 2.35 8.82	Ø-10 Months	01 *	e	S Bharat Shakti	2		ADB/M Nerayas	31,437.50	
2 Ram Prit Yadav	•			101.6					 -		% ± ₩	3.67		21-01		· -	ฏ			29,690,00	
3 Sout Dakter Hajom				101.6				 		Paddy Wheat Potato		3.67		1012		S Narayani Kirloskar I	ີ 		,	29,700.00	
Raj Cumar R. Yadav				101.6					8 	Paddy Wheat Potato	ድቱ X -	3.67		10-12		S Narayani Kirloskar	່າ			37,900.00	
S Bindeswaryndev			·	1016	ຼ	9	- ¯ · •	 	806	Paddy Wheat Potato	× + ×	3.67		10-12		S Narayani Kirloskar	ີ່ =			31.65.00	
6 Syry Narayaa Thakur				101.6	·			 	08	Paddy Wheat Potato	888	3.67		21-01		S Narayani Kirloskar	2			32,465.00	
7 Nedeni Yedev				8.			•			Paddy Wheat	£ \$	3.67 Y	Year A	Artesan						20,116.00	

Shyam Prasud Niraula Vijaya Mahara PERSONS CONTACTED:

TUBEWELL DATA COLLECTION

DISTRICT : Diaments VDC : Sagriper

Cont of Instal-Indon (N.R.) (LPH) Type H.P. Hose (S/W/YR) Month 119 (%) Paddy Wheat Potato (Ips) Deput Ē 2032 355.67 Lossitos VDC fagriper Opener's Name S. Flor Last No Name Name JADP MDF

B. BIGHA E. KATHA D. DHURI HA. HECTARB GWP. GROUND WATER PROJECT

SAMPLE FORMAT FOR TUBEWELL DATA COLLECTION

DISTRICT: Disseals
VDC: Randaiys

Owner's Name

S. First Last No Name Name

PERSONS CONTACTED:

Cast of Instal-lation (N.Ra.) Diesel (LPH) Pamp Details Operating Daily Operating Scason (S/W/YR) 3.52 2.2 8.82 1.91 202 203 7.35 1.91 Copping ity (%) Paddy Paddy charge (1 kg) Tabewell Details 707 5 Î VD.C Village

NOTE

B. BICHA E. EATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

Owner's Name	***************************************	Location Tabewell Details		Tabewell Dotails				Command Area	Area	Crops					Pump Details	betatls	Fuel Expas.	zpas.	Finence	Custof	
	Village	v.D.C	Ward	Size 0	Depth Dis-		TYPE	, _ , _	#	- * -		Copping Inten: (mulha.) in (%)	0 3			30.	-	- '	Agency/ Private	lattel (NRt.)	Remarks
Ras Yedov	Bashera Bela Banbera Bela		7	101.6	24.5	· · · ·	Shallow	2	8	Paddy Wheat Potato	R # 11	3.82	6-10 Months	3-10	b	7 Narayani Kirloskar	າ		ADB/N Narayan	37,890,00	
Z Kaner Yrdev			~ -	101.6	281	9			- 10.00	- 1	_ E3E	1 3.67	1. 		 	Sharat Shakii	<u>a</u>		ADB/N Nerayae	93,35.00	
- Carbai Yaday			₋ -	101.6	ล	we		22			- 3 3	<u> </u>				Sheret Shekti	 B		ADB/N Nerayae	35,945.00	
Bechan Yadav				101.6	2_	-	•				_ 1	70 3.67			Ī	Sherd Sherd			ADB/N Nersysa	31,300.00	
Lami Yada	* ·			101.6	2	a 			800		-436	30 7.35 1 3.67 1 3.67 1.35 1.35 1.35				· .	. – – – -			32.945.00	
1 March 2 Marc			54 N	¥ .	a																

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B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

	The second second		Inbewell Details			ડ	Command Area	2	Crops	Crops and Yeilds		Operation		4	Pump Details	4.	×	-	_		
Village		Ward No.	_			TYPE B.	: _ <u>M</u> _	_ ± _	Crops	Copping Intensity (%)	(BUAs.)	Operating Season (S/W/YR)	Daily Operating Hours		Type H.P.	Company	Diesel (LPH)	Elect ii	Figure. ing Ageneyi Private	Cost of lasted lasted lasted (N.Rs.)	Remark
Magiya	Yaga Bhumi		203.2	721	20 Deep	×	'	883	Paddy	885	308 L76	Year	10-12	F	4 _	Flat			Jica		
Dhan Pasi			355.6/	<u>8</u> 2	,	[%]		50.00	Paddy Wheat	- 883	1,25	· Ţ		2			"	"	 S I		
Kebur Kriti	•		203.2	<u>-</u>				 	Potato Paddy Wheat Maize	ង នស្ដុ	7.35 8.26 1.76 1.21		9	·キ	_k	: :		=	ฐ		
Dhera Pani		- [20°		- S	Molled		 	Paddy Wheat Malze	_ 3	3.23 1.76 2.05	•	\$ 10	₆		Narayani		₹	ADBAN Dhaikebar	30,170,00	
Dhun Paul	. 199	~ <u>*</u>	50.8	8 		- `		- § 	Paddy Wheat Potato	8 2 8	323 1.76 8.00			ზ		Nazyani			``	1 00.072,02	
										1 .											

BEBIGHA E EATHA D. DHURI HA HECTARE GWP. GROUND WATER PROJECT

NOTE

DISTRICT : Dhanusha VDC : Naktajbij

PERSONS CONTACTED: Upendra Yadav Ragbabendra Yadav

	Remarks		100 per 1 head			
	Cost of Instal- lation					
	Diesel Blect, ing In. LPH) (KWH) Agency/ In. Private In.	JICA	25			
	Elect (KWH)					
Fuel Prope	. , 🗅 🗀	i	~ ~ ~ ~			
Command Area Crops and Yeilds Operation Pump Details Final Front	Daily Operating Type H.P. Company	72 Fist	ISUZU			
Pump Details	_ H _	2	_ 2			
Pur	Type	5				
	Operating Daily Season Operating (S/W/YR) Hours	10-12	10-12			
Operation	Operating Season (S/W/YR)	6-10 Months	6-10 Months			
	Copping Intens. (muha.) ity (%)	3.52	3.52 1.91			
Crops and Yeilds		£ 6 2	- - - - - - - - - - - - - - - - - - -			
Crop	Crops	Paddy Wheat Potato	Paddy Wheat Potato		_	
Command Area	_ = _	36.00	36.67			
: 4		!				:
: ပိ	! _ = _	ا ک	~ ×			!
	TYPB B	Deep	·			
1 1	Depth Dis- (m) charge (lps)	134 35 Deep	£			
Tubewell Details	Size Depth Dis- (mm) (m) charg		13			
ion Tubewell Details	Size Depth Dis. (mm) (m) charge	2 355.6/	355.6		9 2 6	
	Z Z Z			_ </td <td></td> <td></td>		
Location	V.D.C	Naktajhij 				
	Village	Naktajkij Naktajkij				
- 1						
Owner's Name	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					
Owner's Name	Pirat Neme	Jade	₽ ₽			

OTE:

B. BIGHA R. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

DISTRICT : Dhanusha
VDC : Mahus

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Gyani Sab Teli Mahajan Sab Bandula Mahato Nuniya

(N.R.) 29,993.00 33,653.00 29,045.00 34,100.00 ADBAN khajori ADB/N Lhejori ADB/N thejori Fuel Expns. Сопрвпу Nacayani Kirloskar Hours Operation Season (S/W/YR) Operating Copping latens-ity (%) | Tubewell Details V.D.C Location Village Mabue Owner's Name First Last Name Name OM Prasad Sab Bandul Nuniya Gyani Teli Mehajen Sah

PERSONS CONTACTED: Sandey Khirhar Yaday
Baidharfath Goetman

TUBEWELL DATA COLLECTION

DISTRICT : Dhanusha VDC : Enarba

Ount's Name Location Tubewell Details		Location	•	Tubewe	Tubewell Details			Comman	nd Area	Crops	Command Area Crops and Yeilds		Operation		Pump	Command Area Crops and Yellds Operation Pump Details Fuel Expas.	Fuel Expas.	Finance	Cost	
First Last Village V.D.C. No. (mm) (m) charge	Village	V.D.C	War	Size (mm)	Size Depth Dis- (mm) (m) charge		TYPE	x -		Crops	Copping Intens- ity (%)	Copping lotens- (mt/ha.) ity (vo.)	Operating Sussim O (S,W/YR)	Daily Operating Flours	Type (TYPB Copping Operating Daily		Elect ing (KWH) Agency/ Private		Remarks
Sandevissav Phulbanya Bnarba 2 101.6 12.5 14	Phulbariya Enarba	Enarba	"	101.6	12.5	_	Shallo	1.5	14.00	14.00 Paddy	75 74	3.67	6-10 Months	6-5	ر ا ا	76 3.07 6-10 8-9 CP 7 Narayani 1.5 47 2.2 Months Kirloskar	21	100		
BaiJhanath Goetman	Enarbe			101.6	15.5	- 01	• 2		10.00	Paddy Wheat	_ ~ % ¤	382		10-12			. 21		31,508.00	
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B. BIGHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT NOTE

DISTRICT : Dhanushe VDC : Balha Saghara

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: Banarsi Sahu Pachuwa kabari

Remarks lastal-lation (N.Rs.) 28,763.00 27,760.00 26,403.00 23,630.00 Cost of ADB/N (KWH) Fuel Expas. (LPH) Diesel 1.5 1.5 1.5 Сопрва Kirloskar Narayani Pump Details Type H.P Operating Hours Daily Operation Operating Season (S/W/YR) Months 6-10 3.67 3.82 3.67 (mt/ha.) Crops and Yeilds Copping | ity (%) Paddy Wheat Paddy Wheat Wheat Paddy Wheat TYPE | Shallo charge (lps) 12 Ö Tubewell Details Depth Œ 125 101.6 101.6 101.6 9.101 Size ŝ Location V.D.C. Saghara Balba Village Segbera Balba Ram Aseswor Salbaita Ram Aseswor Das Owner's Name Name Pachuwa Kabari ĭ Banarsi Sabu Name First

NOTE

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

PERSONS CONTACTED:

Binderwar mandal Shyem if. Chandhari

TUBEWELL DATA COLLECTION

DISTRICT : Diseashs
VDC : Singushi Marsa

lation R (N.Ra.) 34,203.00 35,993.00 33,932.00 ing Agency/ Private ADB/N (KWH) Diesel Elect. fuel Expus. (LPH) 2 Operating Type H.P. Company Pump Details Daily Hours Season (S/W/YR) Operation Operating 6-10 Month 3.67 3.67 latens- (muba.) ity (%) | 3.67 Crops and Yeilds Wheat Paddy Paddy 2 Location Singrahi Singrebi Seeil Kemer Cheedbern 2 Semitra Cheedberi Owner's Name S. First Last No Name Name

B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT NOTE

DISTRICT: Descubs

TUBEWELL DATA COLLECTION

PERSONS CONTACTED:

Cost of Instal-Intion (N.Rs.) Ram Sebak Sharma Ran Chanden Yadev Chandeswar Lai Karn Ashok Sah Bilen Malah Nissara Company Japan Ageacy/ Faci Expas. Diesel (LPH) Operation Operating Season (S/W/YR) 367 367 235 735 lateas-ity (%) Coppies Crops and Yeilds Paddy Wheat Paddy Potsto Paddy Potato Paddy Inbewell Details Š Basehiye Owner's Name Fint Last MADE JADP ď

DISTRICT : Dhanusha VDC : Harihar Pur

Owner's Name

Nege Nege

S. First

PERSONS CONTACTED: Debendra bahadhur Hari Kishor Yadav Endra Dev Thakur

Location		Tuben	Tubewell Details	1		ု ႏ ပို	: 88	1 Area	Command Area Crops and Yeilds	and Yeild		Coortion Tubewell Details Command Area Crops and Yeilds Operation Pump Details		2	Pump Details	न
V.D.C. No.	N S	Size (mm)	Size Depth Dis- (mm) (m) charg	Depth Dis- (m) charge	TYPE	: _ ei _	: _ <u>u</u> _	_ ± _	Copping Ha. Crops Intens (muha.) ity (%)	Copping latens-	(mc/ha.)	Size Depth Dis- TYPE	Operating Daily	_1,7	_==_	
Maize 4 355.67 120 33 Deep 52 34.67 Paulty ut 203.2	-	355.6/	81	n	Deep Deep	18		34.67	33 Deep 52 34.67 Paddy Wheat	1 2 S. C.	34 3.58 38 1.91 30 1.76	Year 8-10 VT 72 Fial Round	8-10 VT 72 Fig.	5	4	1 E

Haribar

JADP

JADP

Remarks

Cast of Instal-Intion (N Rs.)

Agency/ Private

(KWH)

Company

Puel Expas. Diesel (LPH)

Pump Details

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

TUBEWELL DATA COLLECTION DISTRICT : Dhanusha VDC : Dhabauli

PERSONS CONTACTED: Yadubanshi Mandal Bhola Nath Das

3.23 1.91 8.82 2.05

2 2 2 2

Paddy Wheat Maize Paddy Wheat Potato

3.23 1.91 2.05

Owner's Name	_	Location		Tubev	Tubewell Details	ils ils		ပိ	Command Area		Crops and Yeilds	Yeilds		Operation			=	siis	Fuel Expas.	_		-		
First Last Name Name	Village	V.D.C.	War No.	Size (mm)		Depth Dis- (m) charge	TYPE	 _		Ha. Crops		Copping Intens- (mt/ha.) ity (%)	•	Operating Season (S/W/YR)	Daily Operating Type Hours	g Type	H. H	Н.Р Сошрапу 	Diesel (LPH)	Elect (KWH)	ing Agency/ Private	lation (N.Rs.)	Remarks	n
Yadubanshi Mandal	Dhabauli	Dhabauli	7	101.6	16	12	Shallo	. -	¦∺ ¦	12.00 Paddy Wheat		. × ×	3.67	6-10 Months	10-12	ម	\ <u> ~ </u>	Narayani Kirloskar	되 -		AUDIN	00،د٥٠, بعد		
Bhola Das				101.6	15.5		•	_z_	_ = 	10.00 Paddy Wheat	 چنج	~ × ×	3.67		8-10							30,933.00		
Kameshwore Mandal				101.6	_ <u>'</u> 2	<u> </u>	· _	_ 21 	_ = _ 	10.00 Paddy Wheat	- چ ج	~ % -	3.67		•			•	ີ ກ			30,570.00		
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B. BIGHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

Owner's Name Location Tubewell Details	-	Location		Tubewe	Tubewell Details	_		Command Area	nd Area	Cropi	Crops and Yeilds	2	Command Area Crops and Yeilds Operation			Pump Details		Fuel Expns.	-	Finance	Cost of	
First Last Name Name		Village V.D.C. No.	% - % -	Size (mm)	Size Depth Dis- (mm) (m) charge		_	_ eq _ _ 74 _ 1	_ ±	Crops	Copping Intens- ity (%)	Copping Intens- (mt/ha.) ity (%)	Opera Seas (S/W/		- Type	H.P.	ompany	Diesel		ing Agency, Private	Instal- lation (N.Rs.)	Remarks
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Jawahar Mandal			- ^ -	101.6	 				- S	Paddy Wheat	− æ ,8	3.67	· 	•	•		•	J			26.104.60	
Hariber Mandal	•	- - !		101.6	- 21	2		_ 22	10.00	Paddy Wheat	 \$\$ \$\$	3.67		· 				<u>ي</u>		•	26.830.00	
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B. BIGHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

COLLECTION

PERSONS CONTACTED. Ram Day Yadav
Ram Khalaban Yadav
Biserwar Yadav

TUBEWELL DATA COLLECTION

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-		Company		Tubewell Details	2000			Command Area Crops and Tellus	-	2	204 Tell43		Operation		2	rump Decous	=	Fuel Expas.				-
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BESCHA E. KATHA DE DHURI HA HECTARE GWR GROUND WATER PROJECT

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PERSONS CONTACTED. JADP
Shina Tapa

DISTRICT : Diseases
VDC : Salbawa Makeaira Nagar

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	g Daily Operating Type H.P. Company	22
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	Village	Mahaman
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Owner's Name	28	ğ
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NOTE

B BICHA K. KATHA D. DHURI HA HECTARE GWP. GROUND WATER PROJECT

DISTRICT : Descuibe VDC : Suspere

TUBEWELL DATA COLLECTION

PERSONS CONTACTED: JADP Mr. Rajendra Prasad Thabar

Tubewell Details Command Area Copp and Yellds Operation Pump Details Finate Cast of the Copp Cast of the Copp Cast of the Copp Cast of the Capp Cast of the Capp Cast of the Capp C	Owner's Name Location Tub	Last Village V.D.C. No. (um	Sourpur Sourpur 2 355.67
	bewell Details	bepth Dis- TY (ba) (ba)	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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(set ing WH) Agency Private JICA N		- H - HP	۶
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B. BIGHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

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Pump Details	- d-	DZOZOZI Lt
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Owner's Name		
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B. BIGHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

PERSONS CONTA RAJKishor Yadav Ram Bilas Sah

TUBEWELL DATA COLLECTION

DISTRICT Dhanusha VDC : Paudeshwar

Owner's Name		Owner's Name Location Tubewell Details Command Area Crops and Yellds Operation Pump Details Fuel Espais		Tubes	Tubewell Details	1111		Comme	Command Area	•	Crops and Yeilds	Yeilds		Operation		Pen	Pump Details		Fuel Expus.	118		Carro	
First Last Name Name	l Village	V.D.C.	War -	War Size Depth Dis- No. (mm) (m) charg	Depth (m)	War Size Depth Dis-	TYPE	_ m _	! =] = ! =] =		S = E	Crops lateus (mtha.)	che.)	Operating Daily Desel Elect Season Operating Type HP Company (LPH) (KWH (SAW/YR) Hours	Daily Operating Hours	Typ.	3_ 4H	ompany	H.P Company (LPH) (KWH Ageocy	Elect (KWH	ing Agency/ Private	Instal- Lation (N.R.)	Remarks
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NOTE.

B. BICHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

DISTRICT Diseashe VDC : Sega Madhulari

TUBEWELL DATA COLLECTION

PERSONS CONTA Makal Nadaf Tapai Yadav

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	Village	V.D.C.	N S	Size (mm)	Depth Dis- (m) charge (lps)		TYPE - B		_==_	_ sago _	Copping Intens- (mt/ha.) ity (%)	(mt/ha.)	Operating Season (S/W/YR)	Daily Operating Type Hours	_F_			Diesel Elect (LPH) (KWH		lation (N.R.)	Remarks
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apsi Yadav	•		 -	101.6	325	- - •	- ¹ -		- 8	Paddy Wheat	– ኤሄ	3.52			· -	- <u>~</u> -	-	<u>n</u>		45,657.00	
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B. BIGHA K. KATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT

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		Paddy Wheat Potato	88 3.82 • • • • • • • • • • • • • • • • • • •	. 16	the team and place or
22 - 34.01 P. 1		Paddy Wheat Potato	88 3.5 * 42 2.35 1 1 1 1 1 1 1 1 1	. 16	0. USB 200 USB 00
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B. BICHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

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TUBEWELL DATA COLLECTION

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DISTRIC	VDC

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Cotto	Interest (NRL)	33,356	32,655.00	,		
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Fuel Expns. Final	E	2	บิ			
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Pun	- g	ნ	·			
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Owner's Name Location Pubewell Details Command Area Crops and Yellds Operation Pump Details	First Last Village V.D.C.	Gulab Devi Mandal	Binda Ojbain		JA H	

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

DISTRICT: Descuba

TUBEWELL DATA COLLECTION

PERSONS CONTAC Donk Yadav

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Owner's Name		Location		The man in			1	• -		Coming	, -	Operating	Daily		_		l Elect	You	lettor.	Remark	
S First Last N Name Name	Village	l v.D.C	W Size	д (в В	Depth Dis- (m) charge (lns)		_ g _ _ n _	-	Crops	Intens- (ity (%)	(m)		Operating Type Hours	Type H.	H.P. Company	(LFB)	Uma) - 1	Private	(N.R.L.)		
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			6			Shallow		3.33	Maize Paddy Wheat	3 8 8		6-10 Months	8-10	_ ° _	 7 Nacayani Kirloskar			ADB'N Dhalkeha	2613000		
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NOTE:
B. BIGHA K. KATHA D. DHURI HA. HECTARE OWP. GROUND WATER PROJECT JADP. Janakpur Agriculture Development Project
B. BIGHA K. KATHA D. DHURI HA. HECTARE

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	lation Remarks (N.R.)	
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Fael Expas.	Diesel Elect ing (LPII) (KWH) Agency/	n
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Pump Details	_ _ _	\$
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Owner's Name Location Tubewell Details Command Area Crops and Yellds Operation Pump Details Fort Expass	First Last W Size Orpita Dis-	JADP Laliya E.jier Rames! 9 335 & 105 30 Deep 45 30.00 Paday 34 367 610 3-10 VT 47 15UZU 51 IICA Pointo 22 735 Months 22 735 Months 10 47 47 15UZU 51 IICA
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Owner's Name	, v	
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DISTRICT: Diagraphs
VDC: Debdibs

TUBEWELL DATA COLLECTION

PERSONS CONTACTE Subash Tatma

Owner's Name		Location		Tabewe	Tabewell Details	_		S	Commend Area		Crops and Yeilds	Yeilds		Operation		Pump Details	etails	PuelE	Fuel Expus.	- Fines	رة -	
S. First Last N. Name Name	Уплаве	VD.C	> 2 _] <u>.</u>	Dept _	Charge (1ps)	TYPE	! _ w _ _ oi _	¦ _ a _	_ 2 _	S a a	Copping Intens (1)	4 5 m	Operating Season (S/W/YR)			 Н.Р. Соправу		_		lattos (N.R.)	Remarks
Sabesh Tatma	Debdike	Debdiba		101.6	1 =	9	Shallow	n		MAN Pad	Paddy Wheat Potato	8 4 8	25 55 E	6-10 Month	8-10	e	7 Nerayani Kirloskar		 n	Namyaa I		
egubwor Masdal			_ *	101.6	_ n	2	ž.	_ n	- ⁻	10.00 Paddy Wheat Potato	Paddy Wheat Potato	5 2 8 - E 2 4	3.67 – 2.35 – 7.35 –			•			 n	· 	34,785.00	
Rasi Lal Yadav			_ ^	50.8	021			_ ~		3.33 Paddy Wheat	Paddy Wheat	8 3 	369 Y 221 R	Year	Arcess							
Ram Ratas Bherriast	,			97101	*		•	_ z		10.00 Pady Wheat	Pady Wheat potato	888	3.69	Acath:	812	 	8 Bharat Shakti		 n		55,060,00	
Sys Ram Yadav	,			101.6	- × -	=		_ z	- ⁻	10.00 Paddy Wheat Posato	Paddy Wheat Potato	\$ # ¥ 	3.69			·	Narayaa Kirloskar					
Prates Narayan Jha				101.6	 8				-	6.67 Paddy Wheat Potato	Paddy Wheat Potato	*	3.69		•		Shakii		 2	· 	36,765.00	

	Remarks		
3	Instal- Iation (N.Rs.)	31,065.00	52,205,60
Figans	ing Agency/ Private		
Fuel Expas.	Diesel Elect. ing (LPH) (KWH Agency/		
Puel	Dies Dies	1.25	- -, -
Pump Details	Daily Company Operating Type H.P. Company Hours	8-10 CP 5 Bharat	S Narayani Kirloskan
Pump	Typs	e	
Command Area Crops and Yell'ds Operation Pump Details Fuel Expns.	Daily Operating Hours		
Operation	Operating Season (S/W/YR)	6-10 Months	3.67 • 5 Norayani 1.5 2.2 Kirloskar 8.83
		3.67 22 7.35	
and Yell	Copping Intens- (mt/ ity (%)	80 3.67 40 22 33 7.35	8 ÷ £.
Command Area Crops and Yellds	Crops	10.00 Paddy Wheat Potato	12.00 Paddy 80 Wheat 45 Potato 35
J Ares	_ _	0.01	
Comman:	======================================	2	
	TYPB	Shallow	
_	Dia- charge (Ipa)	2	2
Tubewell Details	Depth (m)	15.5	8
Tubew	Size (mm)	101.6 15.5	0101
1 1	≥z_	i I	
Location	V.D.C.	Mukhiye Petti	
	l Village	Musarniya	
Owners Name Location Tubewell Details	First Last Name Name	Dayanaad Yadav Muserniya Mukhiya Patti 1 101.6 15.5 10	Ram Prit Sah

NOTE

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

DISTRICT: Dhanusha VDC: Ghorghas

TUBEWELL DATA COLLECTION

PERSONS CONTAC Phugan Raut

Owner's Name		Location		Tubew	Tubewell Details			Сомп	Command Area		Crops and Yeilds	\$ PI	Operation	a	Pun	Pump Details		Fuel Expos.		_	- Joseph	
First Last Name Name	Village	V.D.C	3 z _	Size (mm)	Depth Dis- (m) charge	Dis-	TYPE	Bi	_==	Copps	Copping Intens- ity (%)	- 10 - C	10 0	, 0		HP	Соправу	Diesel E	Elect ii	ing Agency/ Private	Instal- letion (N.Rs.)	Remarks
Jamunawati Devi	Ghorphes	Ghorghas		101.6	21.5	12	Shallow	====	1200		F 4 &	3.67	6-10 Months	8-10	២	ر ا م	Narayani Kirloskar	21 123		ADB/N Narayaa	34,785.00	
Makesh Jha	•			101.6					10.00	Paddy Wheat Potato	4. 4	3.67 3.221 3.8			·		Bharat Shakti			•	46,480.00	
Kusehswar Lai Kara	•			101.6	 				10.00	Paddy Wheat Potato	- 5, 2, 8	3.67 5 2.21 5 8.82		· 	·	~		ຶ່ງ			40,130.60	
jata Dhar Roy			 - *	50.8	128	25	•		3.33	Paddy Wheat	 8 &	5 3.67 5 2.36 1	Year Round	Artesan							12 199.00 	

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

TUBEWELL DATA CULLECTION

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DISTRICT	VDC
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	Remarks	
Cat of	Instal Istica (N.P.)	
		<u>s</u>
*	Elen.	
Fuel Expas.	CLPH)	**
Operation Pump Details	Daily Diesel Elect ing Operating Type HP Company (LPH) (KWH Agracy Hours) Hours	16-12 VT 72 Flat 3 JIGA
Pump Details	E .	и п
۵ .	acing Typ	4
ition	20 SF F F F F F F F F F F F F F F F F F F	<u></u>
Operation	Operating Season (S/W/TR)	Year Round
Command Area Crops and Yeilds Operation Pump Details Fuel Expas.	Copping Intens- (mt/ ity (%)	80 302 36 203 36 200 300 36 200 30 200 30 200 30 200 300 300 300 30
Crops a	Crept	Paduy Wheat Potato Maize
Command Area Crops	B. K. Ha. Crept	25 Jao
Comma		
	TYPE	Q
sils	Depth Dis (m) charge (lps)	χ
Tubewell Details	Size Depth Dis (mm) (m) chai	203.2
2		1.6
Owner's Name Location Tubewell Details	Village V.D.C.	Colar
	Village	
Owner's Name	First Last Name Name	JADP.
Owner	First	DACE

NOTE:

B. BICHA K. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

DISTRICT: Dhenmha VDC: Jhatiyahi

TUBEWELL DATA CULLECTION

PERSONS CONTAC Bipin Yadav

		the same and the same and the same open that you have the
	Remarks	
		the new age, and door new, and, door not never the new that had
Cottof	lastal- lanon (N.R.L.)	
i Financ-	*	5
_ E	Elect in (KWH A	<u> </u>
Fuel Expas		
Fuel E	Diesel (LPH)	
alia	H.P. Company	DZOZO
Pump Details	_ H _	
Pum	_ ft _	5
	Daily Operating Hours	1612
Operation	w 2	6-10 Months
) (mt/	3.52 2.235 3.832
Crops and Yeilds		% & g C C S =
Crops a	Crops	Paddy Wheat POtato
Area	_ 1 _	8
Command Area Crops and Yeilds	œ	2
	TYPE	Deep
	Dis- charge (lps)	a
Tubewell Details	Depth Dis	8
Tubewell Deta	Size I (mm)	203.2
1	Z _	1 + 2
Location	V.D.C.	Лавоульі
		1-1
	Village	Jaciyahi
Owner's Name	Last	
O	First Name	age

NOTE.

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

PERSONS CONTACT Mahabir mahato Suri

Remarks

Cast of finish-lation (N.Ks.)

TUBEWELL DATA COLLECTION

DISTRICT : Dhanusha VDC : Taishiyahi Jabdi

ADUSTN Sendy. Diesel Elect ii Fuel Expas. Daily | | Operating Type H.P Company Pump Details Operating Scason (3/W/YR) Operation 84 1.82 48 2.05 36 3.82 | Crops Intens. (mu Crops and Yeilds 11.to Paddy
Wheat Size Depth Dis. T (mm) (m) sherge | Tubewell Details Tulshiyahi Tulshiyahi Jabdi Jabdi Jabdi V.D.C. Location Mahabir mahato Suri Owner's Name S First Last N Name Name

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

DISTRUCT: Dhanusha VDC: Dhaltchar

TUBEWELL DATA COLLECTION

PERSONS CONTACT Rampi Nicaula

		and the same of th
	Remarks	
	lestal- latios (NRs.)	
-	rinanc- ing Agency/ Private	NO.
-		5
fad	Elect (KWH	
Fuel Expas.	Diesel (LPH)	o:
	. –	
12	НР Смраву	Ĕ
Pump Details	_ # _	£
Par	Type _	\$
	Daily Operating Type	8-10
Operation		
Operation	Operating Season (S/W/YR)	Year
1		
1 sp.	- (BC	98 38 38 1.76 1.76 1.76 1.76 1.76 1.76 1.76 1.76
and Ye	Copping Intens- (mU ity (%)	
Crops and Yeilds	Crops	Paddy Wheat Potato Maize
	Ę.	34.67
Command Area		
1 S	_ eg _	8
	TYPE	Deep
!		ž
1	Charge	, ⁶
Tubewell Details	Depth (m)	8
Tubew	Size (mm)	355 & 203.2
i	3 z _	W
Location	V.D.C.	Dhallebar
-		
	Village	Dalketer
	_ _ 5 _	
Owner's Name	j z	
C	Fibt	POY
	_ v z _	10 (10 to 10

DISTRICT : Dhanusha VDC : Tulsiyahi Nikas

Ouner's Name		Ouver: Name Location Tubewell Details	-	ubewell	Tubewell Details		Соппа	Command Area	Croi	Crops and Yellds				Pum	Pump Details	Details	Puel Expos.	96.	Pinance	Cast of	
First Last Village V.D.C.	Village		15 E _ ≥ Z	1 1 1 E	W Size Depth Dis- N (mm) (m) sherge	 TYPE	n n	_ 77 _ 12 _ 12 _	Crops	Cupping Jacos (md) (B)	Operating Scason (S/W/YK)		Турс	H T		Diesel (LPH)	Eleut. (KWH	Agency/ Private	factor factor (N.Ke.)	Remarks
Bindeshwor l'eli	Tulsiyahı	Tulstyahi (1915) 12 12 12 12 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	2		2	 Shallow	:	12.00	U Paddy Wheat Potato	/2 3.82 38 22 27 8.82	3.82	6-10 Months	71-01	3	~	Narayanı Kirloskar	2		AUB/N Naravani	03.970,00	
Sitaram Makto			3 101.6		- 251	 			O Paddy Wheat Potato	- 252	3.66 2.23 3.33				P		2		•	31.959 00	, se , secti pine co
Raudi Taakur			_ ²	101.6	- 28 	 			O Paddy Wheat Potato	- 538	3.69	•	,		-	Bharac	<u>χ</u>		•	30,765.00	
Janak Kishor Mahase	•		, 101 ¢	 •			œ	12.00	O Paddy Wheat Poteto	- : : - 6 3 8	222	•			_	Narayani Kirloskar	23		•	18,730 00	

NOTE.

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

DISTRICT : Dhanusha VDC : Nagrayan

TUBEWELL DATA COLLECTION

PERSONS CONTACT Binod Kumar Lat

	Remarks	
, jo 34	lation (N.Ra.)	
_ ქ _		
Financ-	Agency/ Private	nica -
_ iE		=
Fuel Expus.	-	
Fuel	Diesel (LPH)	2
	Сощрану	
e lib	_ Š _	Ē
Pump Details	- H.P	r
7.	- gi	S267 Paddy 86 367 6 10 8 10 VT 72 Fiat Wheat 50 205 Months Porato 18 3.62
	Daily Operating Hours	8 10
lion		
Operation	Operating Season (S/W/YR)	6 10 Months
	(mt/	3.67
and Yeilds	Copping latens- ity (%)	80 81
	Crops	Paddy Wheat Potato
Command Area	#_	25.69
Pasad	w	
์ :	_ m _	18
	TYPE	d O
	1 2 3	8
Details	Depth Dis- (m) charge	8
Tubewell Details		
.Tuber	V Size	355.67
1	3 Z _ 4 £	1 60
Lucation	V.D.C.	acto
1		arrenge N
. 15	Village	and or other states of the sta
-	= -	Z Z
ě	1	
Owner's Name	Na.	
3	N Pina	IVO
1	_vz_	

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

	Romerks	en e
Costol		3. saso co
-	Elect.	
Fuel Expns. Finsur-	Diesel Elect (LPH) (KWH	n
2	Company	16-12 CP 7 Natayan
Pump Details	_ # _	
- 1	- 80 q/T -	b
_	Daily Operatio Hours	
nd Are Crops and Yeilds Operation Pump Details	Operating Daily Diesel Elect. Season Operating Type HP Company (LPH) (KWH (S.W.YR) Hours	Months
_		
and Yeilds	Copping (mt' (Intens- ha) ity (%) (86 90 332 2 23 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Command Are Crops and Yeilds	Copp.	10:00 Paddy Wheat
nand Are	= =	Shallow 15
	_ 65 _	12
	TYPE	
=	Dis (153)	2
Tubewell Details	Size Depth Dis (mm) (m) cha	ä
Tubew	W Size Depth Dis N (mm) (m) charge	000 0000 0000 0000
	≥ z _	"
Location	VDC	Kanakpatti
	Village	Kaaskpatti 2 101.0
Owner's Name Location Tubewell Details	First Last Name Name	Oner Teil

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

NOTE

TUBEWELL DATA COLLECTION

DISTRICT Deanuses VDC : Machi Jhittaiya

PERSONS CONTAC Showit Goetman

Owner's Name		Location	Tut	Tubewell Details	etails		Соппа	Command Are		Crops and Yeilds	_	Operation	-	Pump	Pump Details	Fuel E	Fuel Expas	Figance	Cost of	
Last Name	Village	V.D.C	W Sizz N (mm)		Ocpth Dis- (m) charge (lps)	TYPE	_ = = _ ei _	_ ±	Crypa	Copping Intens- ity (%)) II)		Daily Operating Type Hours	Type	 НР Сощрапу 		Fleet (KWH	Agency! Private	Intra- Intiva (N.R.)	Remark
Shovit Goernan N	Machi Jhitkaiya	Machi Jhitk 8	\$ 101.6	52	12	Shallow	<u>ee</u>	1200	Paddy Wheat Potato	F # 3	3.52 2.2 8.82	6-10 Months	\$-10	e	7 Usha	່ ລ		ADB/N Khajuri	33,650.00	
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NAME AND SOUR OF																		· ·-		(end desp team to
							==													

NOTE

B. BIGHA K. KATHA D. DHUN HA HECTARE GWP. GROUND WATER PROJECT

ANNEX - F
DETAIL INFORMATION ON TUBEWELLS
(MAHOTTARY DISTRICT)

Mr. Madan Thabor Mr. Santhos Sab Mr. Ram Kalesh Thakur

PERSONS CONTACTED:

Village V.D.C. No. 1 N	Owner's Name	_	Location		Tubewell Details			J	Command Area	:	Cropt at	Crops and Yeilds		Operation		Pamp	Pump Details		Fuel Expas.	-			
	Last	Village	v.D.C.	S Z	_				_ ~ _	_		Copping Intensity (V)	(mVha.)	Operating Season (S/W/YR)	•	Type	H	-	-	Elect	Financing Agency/ Private	Cost of Isstallation (N.R.)	Remarks
Sari 10 1016 135 7 Shallow 13 86° Paddy 14 122 Months 15 6 barrel 110 1016 13 7 Shallow 13 86° Paddy 15 122 Months 10 1016 13 7 Shallow 13 867 Paddy 15 122 Months 10 1016 13 7 Shallow 13 867 Paddy 16 10 1016 13 7 Shallow 13 867 Paddy 16 10 1016 13 7 Shallow 13 867 Paddy 16 10 1016 13 1 1016 13 7 Shallow 13 867 Paddy 16 10 10 10 10 10 10 10 10 10 10 10 10 10		Jalenwar	Jalenwar Negar Palika	^					; ; ; ;	1200	Paddy Paddy Wheat	± 2 %	1.48			C.P.		irloskar	21		i	4	
Thaire 124 46 Deep 68 45.33 Paddy 59 6-10	Balur	Ssa		2	€	13.5	- ' s	wolle		'c ·	Paddy Wheat	; %	351		01 - *	o do	- 1	200	· ·	~	9	32,000,00	
Barr Sari 10 1016 18 7 Shallow 13 867 Paddy 50 354 6-10 CP 3 Bhart 125 ADB/N Sari 10 1016 18 7 Shallow 13 867 Paddy 70 3.69 6-10 CP 5 Bhart 125 ADB/N Sari 11 1016 19 7 Shallow 13 867 Paddy 50 6-10 CP 5 Bhart 125 ADB/N Sari 11 1016 19 7 Shallow 13 867 Paddy 50 6-10 CP 5 Bhart 125 ADB/N Sari 11 1016 19 7 Shallow 13 867 Paddy 50 6-10 CP 5 Bhart 125 ADB/N		l'harag-			254/	\$	å		 	45.33	Paddy Wheat	3 8	3.69	-	% _				7.00	^v _		4	
Sari 10 1016 18 7 Shallow 13 867 Paddy 79 369 6-10 C.P. 5 Bharrt 1.25 ADB/N Sari 11 1016 19 7 Shallow 13 867 Paddy 80 369 6-10 C.P. 5 Bharrt 1.25 ADB/N Sari 11 1016 19 7 Shallow 13 867 Paddy 40 369 6-10 C.P. 5 Bharrt 1.25 ADB/N Sari 11 1016 19 7 Shallow 13 867 Paddy 40 369 6-10 C.P. 5 Bharrt 1.25 ADB/N	rayan Bakur	- S		2 -	101.6	81	- ² -	- wolls	 	8.67	Paddy Wheat	8 3	1354 192	 6-10 Months		_ C.P	- s		1.25	_ ~ _	DB/N	31,340 GO	
Sari 11 1016 19 7 Shallow 13 867 Paddy 30 3.69 6-10 C.P. 5 Bharat 1.25 ADBIN Sari 11 101.6 19 7 Shallow 13 8.67 Paddy 40 3.69 6-10 C.P. 5 Bharat 1.25 ADBIN Sari 11 101.6 19 7 Shallow 13 8.67 Paddy 40 3.69 6-10 C.P. 5 Bharat 1.25 ADBIN Sari 11 101.6 Sari 125 ADBIN Sari 11 101.6 Sari 125 ADBIN Sari 125 ADBIN Sari 125 ADBIN Sari 11 101.6 Sari 125 ADBIN Sari 125	Pandey	Feb.			101.6	- 81	_ 'S			8.67	Paddy Wheat	6 2	3.69	6-10 Months		_ C	- g -		<u> </u>	_ ₹	DB/N	32,000,00	
Sari ** 11 101.6 19 7 Shallow 13 8.67 Paddy 40 3.69 6-10 C.P. 5 Bharat 1.23 ADB/N		San -		= -	101.6	61	- S	wolls		867	Paddy Wheat	8 3	369	6-10 Months		_ J	- ⁴		- 2 1	_	DB/N	31,920.00	
	ith Kumer	Se _		= = 	101.6	61	7 - 84.			8.67	Paddy Wheat	80	3.69	6-10 Months		_ g	- S -	 E	- 2 3	_ ₹ _	DB/N	32,000,60	

DISTRICT : Makeman VDC :: Sesaulta

	Remarks	
	Cost of	23,445.00
		Balba Balba
=		
Faci Expas.		
	Company	Arreas
Pump Details	Daily Operating Type H.P. Company Hours	
ď	ly i trip Typ	
a 0	S Open	
Operation	Operating Season (S/W/YR)	×
	(myka.)	88 27
A Yellas	Copping Operating Daily D Ha. Crops Integrally (mucha.) Season Operating Type HP. Company (%) (StW/YR) Hours	3.00 Yr 2.36 Yr
Crops and Yellds	Crops	
	_ ±	Wheat
	_ 4 _	
· **	TYPE	Shallow
H .	Charge (
Tabewell Details	Depth (m)	<u>a</u>
	Stre (m)	208
	Ward No.	•
Location	l voc	S.
1	Village	
Owner's Name	First Last Name Name	Campite Makes

B. BIGHA E. EATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

TUBEWELL DATA COLLECTION

DISTRICT: Makettari VDC: Serpello

PERSONS CONTACTED Mr. Rajendra Mahato Mr. Kiahori Rant

Owner's Name	4	Location		Tabearel	Tabewell Details			Command Area	Area	Crops	Crops and Yeilds		Operation		Poss	Pump Details	1	Fuel Expas.	_			
Name Name	Village	V.D.C.	X .	I g	De De	Charge (1ps)	TYPE	M _	<u> </u>	- ¹ -	Copping Intensity (%)	 m(he.) 	Operating Season (S/W/YR)			_ # _ 	ke s d H	_	Elect (KWH)	Figureing Agency/ Private	Cost of Installation (N.R.)	Remarks
Rajesdra Mahato	Sarpello	Sarpallo		101.6	8		wolleds	n -	8.67	Paddy	77 29	3.84	6-10 Months	3-10	e	8 8	Bharat Shakti	מ	1, 14	ADB/N Balba	33,925.00	
Kirbori Raut	Sarpello	Sarpallo		101.6	์ ล		* shallow	_ = _	- 867	Paddy	- E 23	3,84	or 10 Months	01-8	_ b	- ⁶	BEC	2		ADB/N Balba	M,375.00	
RamBilash Mahato Kari	Sarpello	 Sarpallo		101.6	. 81		wollade	_ = _ _ = _	- 933	Paddy Wheat	- S =	3.69	6-10 Months	01-8	_ 6	- ⁶	BEC	3		ADB/N Balba	30,915.00	

NOTE.
B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

DISTRICT: Makeman VDC:: Pana-Debar

PERSONS CONTACTED McManu Sah Teli McManu Sah Teli

Agency/ Private ADB/N Balba ADB,N (LPH) Pump Details Daily | Operating Type HP. Hours Operation Operating Season (S/W/YR) 3.69 221 10.33 369 Cupping | Intensity (m Crops and Yeilds Subswell Details Pars. Debar Parie-Owner's Name S. First Last No Name Name Santa Sab Teti 1 Manu Sab Tell

16,910,00

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

DISTRICT : Makeman VDC : Bedijn Baschami

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Mr.Bitts Sab San

Fael Expas. Daily Crops and Yeilds Inbewell Details

31,425.00 lated-lation (NRL) Ageaey/ Private ADB/N (EWH) Operating Operating Season (S/W/YR) (mt/ha.) Copping Intensity (%) charge (1 ps î Š Banchauri V.D.C. Village Badiya Owner's Name S. First Last No Name Name Bilts Sah Seri

B. BIGHA E. KATHA D. DHURI HA: HECTARE GWP; GROUND WATER PROJECT

NOTE

PERSONS CONTACTED Mr. Raghabar Paadit Kumbar Mr. Ramprit Yadav Mr. Diacub Roy Yadav

TUBEWELL DATA COLLECTION

DISTRICT :- Makettari VDC : Gaida Bhetper

	Remarks												
, ,	lariot lariot (NR.)	18.335.00	10,055,00	10,045.00	2335.00	18,610.00	18,835.00	18,750.00	18,135.00	13,210.00	10,865.00	18,135.00	13,815.00
	Agency	ADB/N Balba											
	,												
Paci Expas.	Diesel (LPH)												
_	Compeny												
Pump Details	- # -	 											
		:								·			
	0	Artessa	· 	· 	· 		· 	· 	· _	· 	· 	· 	·
Operation	Operating Seuton (S/W/YR)	Year	•	٠			•	·		•		•	
	(mVbs.)	3.84	3.84	3.84	3.69	3.84	3.69	3.84	3.69	3.69	3.69	3.89	22.2
nd Yeilds	Copping Intensity (%)	25 82	- s.s.	36	≈ 8 -	28 b	۶ ۵ -	κ 8	3 S	8 8	- % &	88	88
Crops and Yeilds		Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy
	± _	8,00	6,67	- 00°	 8 		6.67	 8	8	- 009	0.9	- 6.8	8
Command Area		;											
		. 12					_ = _	_ ^ _	- " -		- ^-	- ² -	
		9 Shallow		• -	-	• -							
4			101		100		101	107	107	100		- <u>101</u> -	
Tubewell Details	A 11	y	_ _ 	20.8	20.8		 		20.8	 	 - 136	 _ g	
Tubew		5 S08	- ື - ·	- ,		_ •	- ", -		- ₋ -			- 🖁 -	- "
	- ir	Gaidha Bherpar		•									•
					- [-							-	
	sa numa e	anno _	Brepar -		_ Break	- Bhetpur		- Gaidha		Bberpar -			
Owner's Name	S. Finn. Lan. No Name. Name.	Righter P. Combir	2 Rambhithan	Omes Roy Yedav	Garris Ray	Lei Bade Roy Yadav	Dashalya Rog	RejNaceyea Rent Barni		Kaliya Devi	10 Rej Kana Yadev J	11 Rejenden Roy Yadav	12. Ran P.L. Roy Yadav

NOTE
B. BIGHA E. KATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT

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NOTE:
B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

Cart of fastal-lation (N.Rs.)

13,665.00

TUBEWELL DATA COLLECTION

DISTRICT: Makettari VDC : Soarmei

Owner's Name		Location	**	Tabenel	bewell Details	21/240		Commo	ad Area	A Supplier,	Crops an	Command Area . Crops and Yellds		Operation	Operation	Pum	Pump Details		Foel Expus.			-
	VIIII	V.D.C. No. (18)	Ward -	48 (Î.)	rs Depth	Dis. (179)	20 Depta Dis- TYPE		B. K.D.		Crops	Copping latensity (mt/ (%)	ze Depia Die TYPB Copping	Operating Season (S/W/7R)	Operating Daily Diesel Elect ing Season Operating Type H.P. Company (LPH) (KWH) Agen (S/W/TR) Hourn Priva	Daily Operating Type Honer	H _ H _	Daily Operating Type H.P. Company Hours	Dissel (LPH)	Elect ing (KWH) A	ing Agency/ Private	
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B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT NOTE

TUBEWELL DATA COLLECTION

DISTRICT : Mehemmi VDC : Baskim

PERSONS CONTACTE Gaaga Mahatto
Sakdev Mahatto

				Tabenell Details	Late of		Semm3	Command Area		Crops and Lesson		Operation		Pump Details	-	Faci Expair.	-	-	Carto	
Bashirii 6 50.8 105 2 shallow 5 333 Paddy 60 3.69 Year Arressa Loharparti 8 50.8 105 3 5 333 Paddy 80 3.54 8 50.8 107 1.8 4 2.67 Paddy 75 3.69	Village	1 4	4 4 -	3 3 -		BATT	× có		Cop _	Copping Intens- ity (%)		Operating Season (S/W/YR)		Typ• H.P.	Сощрану	_		ag Ageneyl Private	lattal- lation (N.Rs.)	Remarks
**************************************	3	Barkitti - 1811 w	l s	¥ -	2	shallow		8 -	Paddy Wheat	88	369	Year	Arcos	9 (1 2		DB/N obserperti	18,975.00	
Milhorn. 6 508 107 1.8 4 2.67 Paddy 75 3.69		4.	- 3 -		_ 4			 333	Paddy Wheat	88	354	• £	•					at control	14,395.00	
			- ° -	<u> </u>	- 1 			797	Paddy Wheat	2 8	369	•	•				8 1		19.27.00	
	A CONTRACTOR OF THE PROPERTY O	., ,	VD.C.	VD.C. No.	Ward Size VD.C. No. (mm) Bashini 6 50.8 6 50.8	Ward Size Depta VD.C. No. (mm) (m) Bashini 6 30.8 105 8 50.8 107 6 50.8 107	VDC No. (mm) (m) abarge No. (m) abarge	VDC Ward Size Depth Dis- TYPE B. Absolute Common Commo	Ward Size Depta Dis- TYPE Nat Common Nature Natur	Ward Size Depta Dis- TYPE	Ward Size Depth Dis- TYPE	Ward Size Depth Discripted	VD.C. No. (am.) (m) dates	VDC No. (am) (m) slarge B K D Ha. Copping Operating	VD.C. No. (am.) (a) sharge B. K. D. Ht. Cope Intens. (at/ha.) Season Operating	Ward Size Depth Dis- TYPE	Ward Size Depis Di- TYPE	Ward Size Depta Dis- TYPE	Ward Size Depta Dis- TYPE	Ward Size Depta Dis- TYPE

NOTE.

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

DISTRICT : Mahottart VDC Dharampur

PERSONS CONTACTE Md.Majid Kabari Mr Mabeadra Yadav

Owner's Name		Location Therwell Denils Command Area Crops and Yeilds Operation Pump Details Foot Expan,		Tabewell Details	l Details			Command Area		Crops	Crops and Yeilds		Operation		Pamp	Pump Details		Fool Exper.			-		
Shri Lint Name Name	Village	VOC		Slze (mm)			1 PE	_ M _	<u></u>	Chep.	Copping Intense- iry (%)		TYPE Coppleg Operating Daily	Daily Operating Hours	Daily Destaing Type H.P.	- - 4	Daily Operating Type H.P. Company Hoers	Diesel (LPH)	Elect. (KWH)	Finance ing Agency/ Private	Cost of fastst-	Remarks	<u>-</u>
MEMojid Kohan Di	admunic Commission	Dhenapar 	*	50.8	64	-	shallow	:	a	Paddy Wheat Potato	8 \$ \$	60 3.69 - 40 221 20 7.38		Artena		Artern 15. 19 15.000 kg	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			ADB/N Luterptii	Year Arteria ADB/N 1437600		
, minimum, i				808	8	n	•			Paddy Wheat	_ 6 S	3.69	- - 	•							13,980.00		·
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B. BICHA E. CATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

DISTRICT : Makomari VDC : Eishan Nagar

TUBEWELL DATA COLLECTION

PERSONS CONTACTE MrJibacha Bachar

Fuel Expat. Cased
Diesel Elect
Daily Comp
Operating Daily

NOTE:

B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT JADP: Jabalput Agriculture Development Project

	Elect. ing larier Remarks (EWH) Agency Lidon Remarks (NRs) ;		Mahottare					_	1		-	_
Puel Expas.	Disust Ele (LPH) (F3)	5				 		_	-	-	_	_
Pump Details	Operating Daily Diesel Elect. finance. Season Operating Type H.P. Company (LPH) (EWH) Agen. (S.W.YR) Hore Pres.	V.T. 38	Pum (Japanese)			 			1 - 1 - 1		-	
Operation	Operating Dai Season Opera (S.W.YR) Hoe	:	Round		-		-	_		and an Elec-	-	_
				1 :07 00	3.			_	_		_	_
Crops and Yellds	Crops Inte	20,tm Paddy 87 3.69	Wheat	Meize		 -		_	-		_	- 24
Tubewell Details Command Area Crops and Yellds		30 1 20.00				 				- - -	<u>-</u> -	_
	Dis. 17PE charge (ipi)	20 Deep			7		-	_	_	-	_	_
	Size Depth (mm) (m)	254 139.48	1 1751			 		_	100	_	_	-
Owner's Name Location	First Last Ward Size Depth Dis- TYPE Name Name Village V.D.C. No. (mm) (m) charge B. K.D.	Aerhi 2				 		_	_	_	_	_
	- Village	Aurhi				 		_	_	_		
Owner's Name	S. First Last No Name Name	GWP										一一十九年 一八十二十八十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二

NOTE. B. BIGHA E. KATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT

DISTRICT: Makottari VDC: Gasshale

TUBEWELL DATA COLLECTION

PERSONS CONTACTE GWP

	_	Location		Tabewe	_			3	Command Area	•	Crops and Yeilds	Yeilds		Operation Pump Details Fuel Expas.		Pump	Pump Details		Fuel Expas.	_	-	John	
14 N	Viusge	VDC	Ward No.	Size (mm)	Depth (II)	Dis- charge (lps)	TYPE	_ = _ _ ei _	. — М — — — — — — — — — — — — — — — — — —	_ o _ -±	Crops	Crops latens (mula.) irg(%)		Operating Season (S/W/YR)	Daily Operating Hours	Type	H.P. –	Daily Operating Type H.P. Company Hours	Diesed (LPH)	Elect ing (EWH) Ages	isg Ageacy/ Private	lated lates (N.Re.)	Remarks
	Gambele	Ganshala	1	\$0.8	183.5	3	JEEP	105	; F	70.00 Pad		67 3.69		Year	10-12	V.T	. Z	10-12 V.T 38 Mitubini 5	- ~		GDP/N		_
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			_	_	_			_	_	¥	UZE	38	207	_	-	_	<u> </u>		_	_			
			_	_		_		_	_	0.00 Pad	Paddy	_	_	_	_	_	_		_	_		_	
			_	_	_	_		_	_	**	1686	_	_	_	_	_	_ _		_	_			-
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B: BIGHA K. KATHA D: DHUKI HA: HECTARE GWP: GROUND WATER PROJECT

PERSONS CONTACTE Supa Mirryan Yadav Mahan Sah Ram Dev Sah

		וווון ביינים ווחסיפאנון וויינים ווייני		Internal Details	Detail			Command Area	Area	Crops	Crops and Veilds		Operation		Pump	Pump Details	Fuel Expas.	_		_
S. Fint Last Ward	Village	VDC	2 × -	Size (mer)	Depth (m)	Size Depth Dis. TYPE (ma) (m) sharge		_ eq _	d _		Copping Intens- ity (%)	 (nube.)	Operating Season (S/W/YR)	Daily Operating Hours	Type H.P.	Type H.P. Company	Diesel (LPH)	Elect ing (KWH) Agency/	Cost of fastal-	Remarks
Satya Narayan Yadav	Sahunua.	Sahorwa	-	101.5	9	=	Shallow	: ন	. See	-	8.8 17	3.69	6-10 Months	÷	5_	7.5 Narayani Kirloskar	2	ADBIN	42230.00	
JADP			,	355.6/	0H	\$	o Deep	8	3.	Paddy	- 8. £.	37	Year	Artena				JICA		
Suriya Devi			·	101.6	36.5	ม	Shallow	ກ 	16.67	Paddy	3 8	3.69	7-10 Moaths	6.10		7 Bharac Sbakti		ADBIN	69,145,00	
Chedi Pd. Gareri				101.6	×	2		8	1333	Paddy	. k x	3.69	610 Mosths	01-4	 _ច	7 Bharat Shaku	- <u>1</u>	ADB/N Jaleswar	48.185.00	
Gulei Raut Bherikar	, 			1061.6	ጸ ጸ	2		я 	14.67	Paddy	8, 88	3.69	6-10 Mosths	8 -10	 _ წ	7 Bharat Shakti		ADBIN Jaleswar	14,120.00	
Sidheswar Yadav				101.6	ສ			8	1333	Paddy	\$ \$	3.69	%10 Months	\$-10 -	_	7 Bharat Shakti	271	ADB/N Jafeswar	14,340,00	

NOTE: 8. BIGHA E. EATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT

Owner's Name		Location Tabewell Deta		Tabewell Details	Details		U	Command Area	5	Crops	Crops and Yellds		Operation		Pump	Pump Details		Pael Expas.	_ '	Command Area Crops and Yellds Operation Pump Details Fart Exper.			_
	Village		7 × 2 _	Slre (mm)	Depth Dis- (m) sharg- l (ips)	b Die- T tharge (Pr)	TYPE	- d	_ ±	Creps	Copping Intens-		Operating Daily Diesel Elect. Figure 5 Season Operating Type II.P. Company (LPH) (EWH) Agest (SAW/R) Hours Press	Daily Operating Type ILP. Company Hours	T,7		Kweda	Diesel E (LPH) (E	Elect. ing (EWH) Agency/	À :	Cost of Instal- Instine (NRa.)	Remarks	
	Ram Nagar	Ram Nagar	^_	254	142.37	142.37 16 Deep 55	s - dei		34.67	Paddy	8 2	3.69	Year	8-10 V.T. 38 Minebisi	, i	38 Mitsablai		3 [GDP!N			
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4.2			•	•	148.55	8	_ = -	 	73.33	Paddy	े ८ ४	384		10-12	•							- u.	
					7.	-20	,	4		Maize	3 %	507								-			
	- Krana			355.64	808	ä	- ° -	8	43.33	Paddy	_ 28 :	354	•	•	•	14uza	-	•	_ 털	٠			
		*** 0.5**		7700				- "- 		Wheat	7 X	1.77			- -								
	-					-																	
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- 1		-																	1	-			

WIE

B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

Diesel Elect ing (LPH) (KWH) Agency/ Private PERSONS CONTACTED Ram Natha Mahato
Subodha Singh Dambar
Jog Kemar Mahato Paci Expas. Daily | | | Operating Type | HP. Company 41 Kirloskar India 38 Mitriedete 72 Fist Pamp Details Hours Operating Season (S/W/YR) Operation Year Copping | Intens (myhn.) ity (%) | 3.68 1.92 1.22 1.77 1.77 1.73 1.93 1.93 Crops and Yellds Crops Paddy Whese Maize Paddy Whese Paddy Whese 26.00 Command Area TUBEWELL DATA COLLECTION ·harge (lps) 104.3 118 Depth Tabewell Details î 152.4 Size (mm) 2 34 ź V.D.C. Hachiler Village Hathilet

DISTRICT : Makemini VDC : Hathilet

S. First Last No Name Name Owece's Name

GWP

Cost of Instal-Intion (N Rs.)

Flesse.

NOTE

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

DISTRICT: Mahoman VDC: Bhangha

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Bhols Sab

Cost of lastal-lance (N.Ra.) ing Agracy/ Private GWP/N Mahostari Elect (KWH) Fuel Espus. Diesel (LPH) Minabisi Type | H.P. Pump Details Daily | Operating Ty Hours | Operation Operating Season (S/W/YR) Copping | latens- (mtha.) iy(%) | 369 221 1.77 Crops and Yellds Crops Paddy charge | Depth Tabewell Dotails Size Š Location V.D.C. Village Bhangha Owner's Name S. First Last No Name Name 1 GWP

DISTRICT : Mahattari VDC Palapad Nagat Beesjela

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		Remarks															
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		FIE	_	_		_		_			-	•	-		****	-	~
The second secon		ing Ageney/ Private	GWPIN	horari													
		Diesel Elect ing (LPH) (KWH) Agencyi		×	-			-	**				-	-		***	th-s
	Fuel Expus.	# (. E (8)		•	-	-	_	-		_	_	-		<u></u>	_		-
	F	13) -		_		_	_	_	_	_			_	_	_	_	
	Looution Tabewell Details Command Area Crops and Vailds Operation Pump Details Finel Expas.	Daily Disset Elect. Operating Type H.P. Company (LPH) (KWH) Hours	trubisi														
	ctails	H.P. Compas	VT 38 Mituebini	-	-	-	-	-	-		-	-	-	-	-	-	_
	Pump Details		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	. 1	Daily perating Honer	2 01-8	_	-	-	-	_	-	-		-	-	-	-	-	-
6		9 5		_	_	_	_	_	_	_	_	_	_	_	_	_	_
No.	Operation	Operating Season (S/W/YR)	Year	Ross													
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13.5	1	_ (av	, F		_	_	_	_	_	_	_	_	_	_	_	_	
15 years	4 Yeilds	Copping intens. (muhn.) iry (%)	F	2	\$												
	Command Area Crops and Yeilds	3 e 8 e 9	100 66.67 Paddy 77 3.69 Year	Wheat	lotte	1	_	_	_			_	-	_	_	_	-
	Y.,	B. K. D. Ha. Crops	. 76.67 P	=	2	-	-	_	-	-	-	-	_	-	_	-	-
The same of the	A Pad	9,	:	J	_	_	-	_	_	-	_	_	_	_	_	_	-
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		TYPE	Deed	À		_	_	-		_		_	_		_	_	
		-10 (a)	×														
	e e e e e	Size Depth Dis- (mm) (m) charge (ps)	921	100	Towns .			1 12		N							
	Tabewell Details	Slze (mm)	503	-	-	. 24	-		-	-	<u>.</u>			_			
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	Location	3 ² _	! 	-		-		41					-	10		-	1
	Less 1	VDC	Parapad	Negrat	Baspela						7	100		1-1			Section of
		Village	1														1
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	Owner's Name											1000					1
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R. BIGHA E. KATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT NOTE

DISTRUCT: Mahomad VDC : Pipra

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Juster Charaltery

mer's Name	-	Location		Tabewell Details	Detalls		3	Command Area	2	Crops 22	Crops and Yeilds		Operation		Pen	Pump Details		Feed Exper		_	Control	441 6 4	-
]]]	Village	, vb.c	Werd .	- 1	a î	Dis- T) charge (Ips)	TYPE B.		#	S 84 85	Copping latent-	(=W=)	Operating Scason (S/W/YR)	Daily Operating Hours		표 -	Compasy	Diesel (LPH)	Beet (KWH)	ing Agencyi Primate	base (ARL)	- F	y alpha since which die
	Pipa	Pipa	12	254	a	ZS Deep	cb 37	: :	24.67	Paddy Wheat	8 3	ភ្ន	Year	Artesa						GWP:N		em #50	u tous from
ada N. Xisha	•	4.	_ ^ _	- 8	*	- sas -	Shallow 5	 	82	Aus Pa Paddy Wheat	222	F % 13	- 6-10 Months	- +	_ 6 _	-	NA	- n		ADBN	E Selve		me (com since
Hari Shaabor Milon				- s ox	_ e		-	 	333	Paddy Wheat	_ 88	188 127			· -		•	ີ ກ 		,	1 1150.00	es 100 200	nas par man
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8: BIGHA E. KATHA, D. DHURI HA, HECTARE, GWP. GROUND WATER PROJECT

Owner's Name		Location) 	Tubewell Detail	Details	-		Comme	Command Area	Š	Command Area Grops and Yellds	7	0	Operation		Pun	Pump Details	Operation Punp Details Fnet Expas.	Fael Expas.		Figure	Corrol	
Flor Line Nam Nime		V.D.C.	No.			Ole- charge	TYPB	_ M	- K	Crops	Copping intensering (%)	Copping Intent (muha.) Ity (%)	ن ي ي ي	Operating Season (S/W/YR)	Daily Operating Type Hours	Typ•		H.P. Company	Diesel (LPH)	Elect (KWH)		fastal- lation (N.R.)	Remarks
GWP	Methral	Madhani	-	354	132		Deep	×	; _	23.33 Paddy		,	3.69		Artensa					-	GWP/N		
				1254			y	4		Ans Pa		3 A	1.77	Kound		_							
emb				•	12821			-	. –	0.00 Paddy	_	_	_	_		_	- -		_	_			
				* * * * * * * * * * * * * * * * * * *		1997	*			When	_	×	PA	DAMAGED		· .				_			
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	Marchael S. C. P. St. Sander or Ph.	Strategicanstrugg 12 Strategic	Section 19	Charles in																			

B. BIGHA E. EATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

NOTE

TUBEWELL DATA COLLECTION

DISTRICT: Mahommi VDC: Belgachi

PERSONS CONTACTED Asil Stares

waer's Name		Location		Tabewell Detail	Details			Command Area	Area	Crops	Crops and Yeilds		Operation		2	Pump Details		Faci Expan		Financ-	Cato	
j1	Village	VD.C	Ward No.	Size	Depth (m)	obarge (Ips)	TYPE	- ei	_#_	Goops —	Copping latens- iy (%)	(mybe.)		o è =	1 Type	- -	Company	Dieset (LPH)	Elect (EWH)	ing Agency/ Private	lation (N.Ra.)	Remarks
×1.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4	Belgadi	Belgachi	6	808	121.9	, a	Deep	8 -	g _	Paddy Wheat	8 8 5	369	Year Round	8-10	Y	 	Mineskii			GWP;N Mahottari		
	**************************************			72	S)					8.4			71 73 41 74									
	V_ 5			8	; i		-,															
					**	1.0							-A)									
j.					-45 -00 S																	

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

Cast of Instal-Indon

N.145.00

29.460(4)

B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

NOTE

DISTRICT: Mahonani VDC: Hanamani

TUBEWELL DATA COLLECTION

PERSONS CONTACTED Ram Chandra Yadav Shatraghan Pd. Singh

	_	Location		Tabowell Details	1 Details			Command Area	4 Ares	Crops	Crops and Yeilds				Pump Octails		Paci Expas.			John	
S. First Lest No Name Name	Village	VD.C.	Ward No.	Size (mm)	Depth (m)	Dis- charge (lps)	TYPE	g _	<u> </u>		Copping Intenting (%)	Coping Crops Inten: (mVhs.) ity (%)	•	•	H	Type H.P. Compeny	Diesel (LPH)	Elect (EWH)	ing Agency/ Private	lause (N.R.)	Remarks
Rem Sunar Devi	Hansmad	Harismari	7	\$0.6	79	8	Shallow 6		8 -	4.00 Paddy Wheat	200	3.69	Year	Artensa	 				ADB/N Lobarpatti	10,525.00	
Shetraghen Pd. Singh	Ajgeba	•		50.8	8		 		 	l 13 Paddy Wheat	- 8 \$	- 3.54- 2.21	· ·		 					16255.00	
SmcSanmaye Devi Singh				\$0.8	7.				 	3.33. Paddy Wheat	- & \$	1.69 2.21			 					0000001	
Ram Dev Yadav			 -	50.8	8	7		. – –	333	_	1 70	3.69	_	_	 					13,895 (4)	
										Wheat	3	231			 						

NOTE: ------B: BIGHA E: KATHA D: DHURI HA: HECTARE GWP: GROUND WATER PROJECT

Cost of fastal-		1138040	16,399,(6)	14,775.00	14.756 00	
Financ- ing Agency/ Private		Lobarpatit	•			VA
Fuel Expns	Elect. ing (KWH) Ag Pr	_				
	Diesel (LPH) (
Pump Details	Company					
	Type					
	Daily Operating Type HP.	Artersa			•	
Operation	Operating Sesson (S/W/YR)	Year	,			
		-	3.69	* # # # # # # # # # # # # # # # # # # #	2369	
Crops and Yellds	Copping Intens (muha.) iy(%)	71 384	£ 8		. x x	
Crops	Crops	3 Shallow 7 1.67 Pauly	Paddy	Paddy Wheat	Paddy	
Command Area Grops and Yellds Operation		1.67	_ 83 _	10.4	69	
	- 4 - - 0 - = -	:				
			_ ~	_ `-		
	TYPE	Shallow	· 	· 	· -	
	Dir. charge (ir.)	^	· 			
		g _		- 32 		
	Size (mm)	\$0.8	\$0.8	50.3	. zog	
	Wah.	-	- ^ -			
Location	vbc	Mobedaiya	· .			
	Villege	Mebadaiya Mebadaiya Tapoapur Topoapur				
Owner's Name Location Tubewell Details	First Last Ward Size Depth Want Name Village V.D.C. No. (mm) (m)	Ram Sagarnath Yadav Mabadaiya Mahadaiya 4 308 32	Raycodra Sabani	Viswageth Yadev	Nami Mt. Katari	

B. BIGHA E. EATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT NOTE

· ····································		Location		Tabewell Details	Details			Command Area		- del	Crops and Tellas		Operation		Lamp Details				Pisses	Cost of	
New	vans.	VIII.ge V.D.C. No.	Ward .	Size Depth Dis- (mm) (m) sherge	Depth (m)		TYPE I	K _	· – –		Copping Intens: (mths.) ity (%)	(mW.)	Operating Season (SAW/YR)	Daily Operating Hours	- Typ•	- A H	Company	 	Agency	fastal fation (N.Rs.)	Remarks
GWP	Bisam-	Ramgopal- o 254/152 par	• -		1	82	dang -	,	30.00	Paddy	35 25	79. 12.7	Year	Artessa					Mahouan		
Ram Dov Mahato	Ramgopel- Fut	•	- " - - -	50.8	20	- " - "	Shallow		19	Paddy	17.	3.69	å ·					 ٠. ٠	ADB/N Lobarparii	17.395.00	
Predip Kumer Singh		To the second second	-	Sos –		2	• 10		333	Paddy	는 #	%; 77 77						 		13,005(0)	
Ram Ashis Mahato			- " - - " -	808	<u>s</u>	ຸກ	•]		- F	Paddy	88	3.69						 		00 506 L1	eni neli aus
Yogendra P.d. Makto			- * -	50.8	201	- 87	•			Paddy	\$ \$	3.69	•	•				 ~ ~		1818100	
Ram Chandra Roy Yadav		- Parameter	- - -	808	101	~ _		·	- E	Paddy	6 2	3.69 12.7						 		19,235,00	
Mahendra Yadav					<u>\$</u>	ີ ສ	•		267	Paddy Wheat	53	8. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		•				 	,	10,530.00	*** * * ***
Sm. Jegija Devi				 	8	2				Paddy	3 ≒	221						 		13,233.00	
The state of the s	Meta septimination in			 -						ja			\					 			

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B. BIGHA E. KATHA D. DHURJ HA. HECTARE GWP. GROUND WATER PROJECT

Owner's Name		Lucation Tabewell Details		Tabewell Details	Details			Comma	Command Area		Crops and Yellds		Operation		Fump Details	1				Piazae	Costol	,
S. First Last No Name Name	Village 1	Village V.D.C.	Ward No.	Size Depth (mm) (m)	Depth (B)	Olie.	TYPE	zz	- ± - 0 _		: .	(mUh4.)	Operating Season (S/W/YR)	Datty 1 Operating Hours	Type HP	;	Company	Diesel (LPH)	Elect (KWH)	Age Berry Private	lation (N.R.)	Remartis
GWP	Disa.	Ramgopal o		154/152	<u>इ</u>	8	Deep	\$.	8 2	Wheel	25.25	# II	Year	Arteran			-			SWP'N		
Ram Dev Maheto	l Ramgopal- pur	I Staple weeks	***	50.8	100	·	Shallow			67 Paddy Wheat		13.88				·				ADEM	17.3/15 00	
Pradip Comer Single			- " - 	88	70			~	-	3.33 Paddy Wheat	- ৪ ফু	3.69									13 0013 100	
Ram Athle Mahres	- 1	Total Services	•	20.8	3	ສ	•	~	 	3.33 Paddy Wheat	& & 	3.69	•						ALL YOU		CO 506 L1	
Yogada Pd. Makto			* 	20.8	102		mir E		-	267 Paddy Wheat		369		•							18184 (4)	
Ram Chandra Roy Yadav			-	20.8	101		• /		-	3.33 Paddy Wheat	5.3	23.69		•							19,235 00	
Mahendra Yadav		*C-1245	 	- - -	5				-	267 Paddy Wheat	2 3	3.63		•							10,530.09	
San. Jagiya Devi	and the second s	- 346		 #	8	3 _	·			3.33 Paddy Wheat		3.69									60.023.09	
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NOTE:
B. BIGHA K. KATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT

DISTRICT : Malvan VDC : Diamen

			-	10 84 be-	from bear tree	en va tos c		and test limit to				
***	Remarks		She its one									
,	Satisfy, (NRs.)	66.6	10,045 (4)	13,0950	12,240,00	12475.00	15,456,00	17,541.00	10,624.60	12.540.00	J. contrib	14380.00
	Agesey, Private	GWP;N Makottarr	ADB;N Bailte	ADB.N Leastpatt	ADB/N Lokarjami	ADBIN Loberpatti	ADB/N Balba	ADB:N Balba	ADB.N Balba	ADB/N Balbe	ADB.N Balba	ADB/N Balba
_	Elect (KWH)			_ `_	-			- `		-		
Poel Expes	Diesel (LPH)			~								
	Company											
ctails	# 	 										
Pump Details	, <u>.</u>											
	Daily Operating Hours	Artensa	Учен	Artessa	Artena	Апен	Апсия	Аленя	Arressa	Artena	Arcoss	
Operation	Operating Season (S/W/YR)	Year	Year	Year	Year	Year	Year	Year	Year	Year Round	Year	Year
	(mt/s.)	# 55 # 55	3.69	369	3069	381	3.69	3.69 3.51	3.69	3.69	\$ X	
Crops and Yeilds	Copping inten- iy (%)	8 8	3 8	_	_ 8 \$	- 25 25 - 25 25	۔ د د د	۲. A	5 ₺	 & \$. 55 05 55 05	 8.8
Crops	Cro p.	Paddy	Paddy	Paddy	Paddy	Paddy Wheat	Paddy	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat	Paddy Wheat
2	_ ±	30.00	6.67	- s.	- 8 -		333	3.33	761	133	5.42	333
Command Area	-2-	:		 								
3		\$	_ °=	_ ^ _	_ ~ _		_ `` -	_ `` _ ·	- ,	_ ` _ ·	- " -	
7	TYPE	Doep	Shallow	 Skallow 	Shellow	Shallow	Shallow	Shallou	Shallow	Shallow	Shallon	Shallow
	Oli- cherge (я	. r	_ n 		• 1 	្ឋ 					
Details	Depth (m)	182	101	8	2	23	<u> </u>	* 	 8	 6		
Tabewell Details	_	_	. Xo.3	50.8	208	20.8	20.8	20.8	38.	80.8	8. 	
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Location		Observa	Dhameer	Dhamara	Disease	Diamer	Dismin	Diesera	Dhamann I	Dhomann	Dharm	Diemen
		- rammarko	Adysaper 1	Dismers !		Obsess	Adyanpur	Dienin	Obsessor	Dhamm	- Dismen	Dienes
-]]	1	Goynni	18	Ebin	Yedey	Dim	Yadav	Desi
Owner's Name	Fin Let	awa Sawa	Chandenbroo	Ras Raus	M	SarDoulity	Ī,		Yagandin P.L.	Saclatetha 1	_ 8 _	ZarMeny
	EZ_	, o		-[-			• •	3 6 1	S. 19	.	_ = _	_=

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B. BICHA E. KATHA D. DHURI HA: HECTARE GWP. GROUND WATER PROJECT

Oaner's Name		Location		Tabewell Details	Details			Comme			Crops and Yeilds	71				Pump Details			Pa4.	-	-	
2. First Last	- Village	V.D.C.	Z &	Size (mm)	Depth (m)	Olis-		₇ _	:		Copping Crops Intens-							_		ing Agency/ Private	fattal- fation (NR.)	Remarks
Parauloma Math	Mathema Balba	Balba Balba 1 101.6 21.5 9	1	101.6	ล	-	Shallow			6.67 Paddy Wheat		67 3.09 53 2.21	9 10-6Months	bs 10-12Hourn	Centri	^ 	Narayaa Kirlosaker	ฎ		ADB/N Balba	31,337/00	
Radin	- , -		_ , _	101.6	18.5					1200 Paddy Wheat	Paddy 7	78 3.69 48 2.34	·	8-10Hours	·,		Narayan Kirlosaker	ฏ			36,948.27	
Guga Devi Kalbara	_'	-1-		20.8	103	"			-	6.00 Paddy Wheat		13 3.69	y Year	γ	-· -·						17.136.00	
Daths Ram Years			~	101.6	2	22		2	-	8.00 Paddy Wheat		75 3.84	4 10-6hours 1	10-12hown		" 	. BEC	ີ 2 			30,980.00	
SacDuthiyaR. Yadav				101.6	2	22	•	9	- "	3.12 Paddy Wheat		70 3.69 50 2.36	, 	•		•• 	Bharat Shakti	ਸ <u>ੂ</u>			38,847,000	
Januar India				101.6	z	ຼາ		 •	 	1224 Paddy Wheat 0.00 Paddy		80 3.69 50 2.36		•				<u>n</u>			38.680.00	

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B. BIGHA E. EATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

	Remarks		
Cost of	fastal- fation (N.Rs.)	41,040,00	00 586.711
i instal	Agescy/ Private	ADB/N Balba	
	Elsst. ing (KWH) Agency/ Private	< 48 _	
Paci Expas.	Diesel (LPH)	<u> </u>	23
Command Area. Crops and Yellds Operation Pump Details Feel Expas.	Daily Diesel Elect. isg lastal- Opereuleg Type H.P. Company (LPH) (KWH) Agency lation Remarks Hours Private (NRA.)	Bharat Shekti	Kirlotker
Pump Details	H. F.	27	
Pamp	Daily	₽ 	,
	Daily Operating Hours	01-8	
Operation	Operating Daily Season Operating Type (S/W/YR) Hours	6-10 Months	
	Copping Intens: (m/ha.) ity (%)	77 3.83	23.68
splis Fu	Copping Intent- ity (%)	71.	\$ ¢
Command Area Crops and Yelids	Crops	Paddy	Paddy
, les	_ M	10 1 6.67	
basma	- <u>a</u> -	; ==	
-			
	TYPB	Shallow	· ·
4	Olie. (ips)	-	2
Tabewell Details	Size Depth (mm) (m)	13	
Tabew	Size (mm)	101.6	9101
	Ward No.	• _	
Location	Fint Last Ward Size Depth Dis- TYPE Name Name Village V.D.C. No. (mm) (m) sharge	Ekdora Bela 6	
	Ville	- Etden	
W = 1 - 1 - 1			
Owner's Name Least Location Tabewell Details	First Last Name Name	Bisyr Maketo Erdera Erdera Bela 6 101,6 21,5 8 Shallow	Septor Dr.

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B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

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-	Cost of lastal lation Remarks (N.R.s.)		
	Cost of lasted lation (NRs.)	31,565.18	
	Figance ing Agency/ Private	Belea Selea	
500	150		
Fuel Expus	Dissel Cleat ing LEPH) (EW Agens	2	_
ııts	Сотраву	Sbakti	
Pump Decails	=	•	-
Pum	7.	8	_
	Daily Operading Hours	5 G CP 3 Bharac	
Operation	Operating Daily Dissel Cleek ing Season Operating Type HP Company (LPH) (EW Agency) (S.W.Y.R.) Hours Private	Abouts	-
	Copping O latens (mcha.)	30 369 53 221	
Command Area Crops and Yeilds	Crops Intens (mucha.)		
Crop	Crops	Wheat	
Area		8	
pueme	: - ₂ -		-
	: _ m _	2	
	TATE -	Shallow 12 6.00	-
-	Charge (1ps)	2	
Tubewell Details	(m)	37.5	_
Tubew	Sire Depth Dis- imm, (m) charge	9 101	
	ž Š		
Location	That Last War Size Depth Dis-	Ramerwar Mahato Hirduwa Gonarpur 9 1016 37.5 10	_
	Village	Rametwar Mahato Hirduwa	
Owner's Name	That Last Name Name	war Mahato	
Ŏ	Tilot Name	Ram	

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

DISTRICT Mahottari VDC : Bharolliya

TUBEWELL DATA COLLECTION

PERSONS CONTAC Suiley Sah

	Remarks	والمرابط المهاجي ويوافق والمراجع والمراجع والمراجع والمحاجم والمحاجم والمحاجم والمحاجم والمحاجم والمحاجم والمحاجم
- 3 - 3	lascal- lation (N.Rs.)	46,870,00
90601	Diesel Elect ing (LPH) (KW Agency)	Jaleanor Jaleanor
	Bect.	
Fuel Expns	Diesel E (LPH) (2
Pump Details	>.	Natayan
Pump Details	_ H _	2
Pump Details	- ¹ 2.	8
	Daily Operating Hours	8-10
Operation	Operating Season (S/W/YR)	6-10 Months
		8 ×
Crops and Yeilds	Copping latens- ity (%)	€ ≈
Crops	Crops	Wheat
Command Area	_ _	10.67
mman ;		
		! 2
		Shallow 16
Saile	Chan	19
Tubewell Details	Depth	36.5
Tube	Size (mm)	9.101.6
	ž ž	
Location	V.D.C	Bhatolliya
	Village	Bhatollys
Owner's Name	New	442
8	N Name	Salder Sah

Cost of larce larce grants

M.W.Co.

15,296.00

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Pael Expns. Finance	Agency Private 1	ADBAY Liberpart		OWFEA	NDB.N LObsepat	
Fac. Final	× 3.					1
Fact Esp	TONE	9				
2	HP Company (LPH) 18'N	Narayani Kish-dar				-
Die.	= 1					_
2	T	b				_
Pany Drails	Operating Type HP Company Hours	•	Atteira			_
Operation	Seusen (SW/CR)		Tree Round	•	•	
	(mt/bs.)	3.34 2.33	ន្តពុទ្ធ	ž 11	3.69	_
Crops and Yellfa	R Ha. Crops faters (muha.)	# \$	233	ទី ព	n \$ 	_
Crops	B. K. Ha. Crops	Paddy	Paddy Wheat potat	Faddy Wheat	Paddy Wheat	_
Command Area	Ė	\$.67	٤	38.67		
. pass	e;	:				-
; 0;	_= _	=_	_*	_ *	~	
***************************************	11.E	Shallow	2 • · · · /	- Dect	1.8 Shallow	
	4 5	9		15.5	2	
Tabewell Details	Depth Dis- (m) charge			·		
bewell	Size Depth	101.6	 • 0:		20.8	i je
4	r Stre	Z	- "		"	100
	** -	_				
Losanos	v.p.c.	Khanta				
	Villege	Ehents Pleast				10 10 10 10 10 10 10 10 10 10 10 10 10 1
Descriving the Commence of the	nt Lant	Karan Khausa Khausa 9 101.6 20 10	ances Yadav	1	Ram Sebak Chredha	

AOTE:
B. BIGHA E. KATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

DISTRICT Mahattari VDC : Floration

TUBEWELL DATA COLLECTION

PERSONS CONTACT GWP

Owner's Name		Location		Tubewell De	ell Deu	uili		Commen	Command Area	ပိ	Crops and Yeilds	-	Operation	i	Pan	Pump Details	-	Face Capes			
No Name Name	Village	VDC	3 ž	3 (1)	12.0	Die.	TYPE	: _ M _	_ _	- Crops	Copping Inten- ity (%)	(muba.)	Operating Season (S/W/YR)	Daily Operating Hours	- ski	- 4 - 1	Company	Diesel Blean	W Agency Private	Lation (N.R.)	Remarks
	Ebrahiya	Ebrahira	1	50.8	2085	2	***	:	18.0	Paddy Wheat	25.25	2 2 3	Year	Artess					GWP H.M.G.		
Bhots Yedev				9.101	3	=	Shallow	 8	1333	_		3.69	6-10 Months	7.8	_ e	_	Elricotar India	<u> </u>	ADB Jalesburg	46,720.00	
Bhadra Kant Mishra		•		97101	37	2	·	- <u></u>			- 4 - 4 - 3 - 3	7 361 3 221 0 443	•			້າ - ຄ	Bharat	<u>n</u>	ADB Jaleabason	H,000,00	
Kamis Kant Mirkra				101.6	- XX	<u> </u>	· 			Padds Wheat Potato	100 1 58.8 10 29.4	0 3.84 8 221 4 8.85			··	-ນ -ນ	Narayani	מ	ADB Jaleshwor	1950, to 1900 1	
Tapeawor Makato	Dectaba		°_	9701		= -	_ · -	_ ti _	_==	14.90 Paddy Wheat	ly 81.3	.s – 69 6 221	-	10-13	_ :	ے ا	•	מ		1 1,930.00	
Rom Tej Mishra	Alipani		^_		 21	≃ ., 				16.26 Paddy Wheat Politio		1. 54 5.21 54 2.21 20.8 10.33		01\$			Bharat Shakm	<u> </u>			3

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B. BIGHA E. KATHA D. DHUKI HA. HECTARE GWP. GROUND WATER PROJECT

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DISTRICT	VCK

S. Pirit Last.					Lubewell Details	=		Comman		do	Commend Area Crops and Tellas		Operation	_	F. 10.11F	Fump Derails			_	,		
-	Village	VDC	¥ 2 _	Size (mm)	Depth Dis- (m) charge	Size Depth Dis- IYPE (mm) (m) charge (fp)	IYPB	: - 22 _ - 21 _	±	Crops	B. K. Ha, Crops latens (muha.)		Operating Season (S/W/YR)	Daily Operating Hours	Type	Operating Daily Season Operating Type HP Company (SAW/VR) Houre		Diesel Elect. ing	ing Agencyi Private	Cost of lastal- latina in Rs i	Remarks	
	Sundarpur	Sundarpur Sundarpur S 254 1125 3 Deep		Z	112.5	3 Deep			11.33		(9) H		Year	Artesan		Year Artesan		***************************************	GWP			-
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B DIGITA E KATTA D. DITURI IIA HECTARE GWP. GROUND WATER PROJECT

DISTRUCT Mahotan
VDC : Sriper

TUBEWELL DATA COLLECTION

PERSONS CONTACT Sayam Macayaa Sab

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NOTE

B. BIGHA E. EATHA D. DHURI HA. HECTARE GWP. GROUND WATER PROJECT

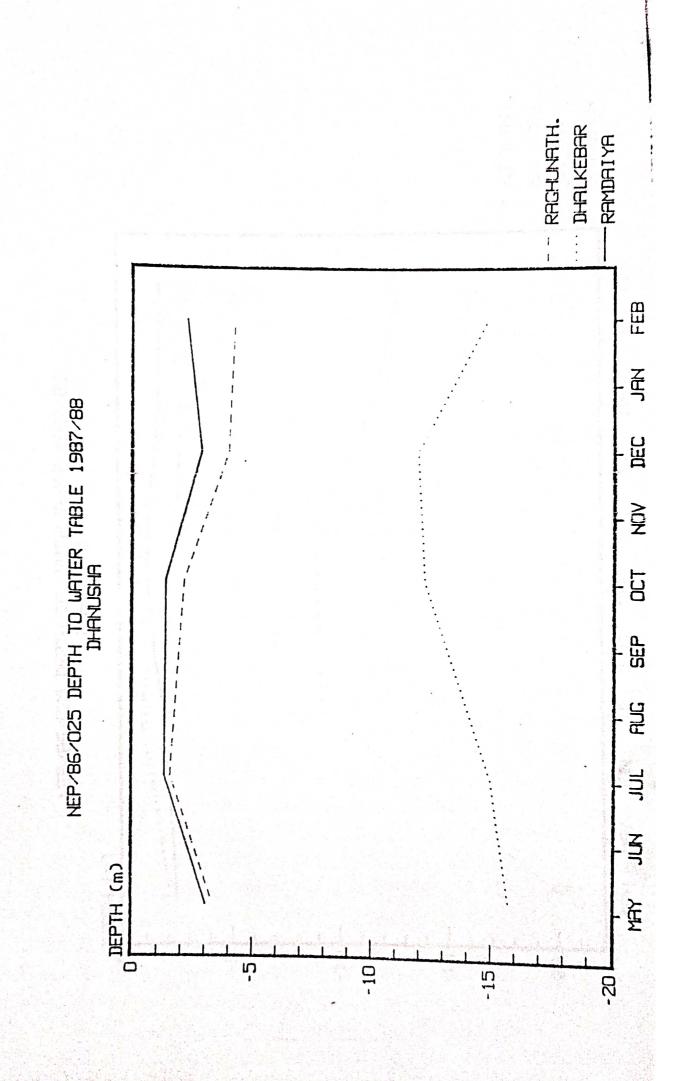
Owner's Name		Location		Tubew	Tubewell Details		1	Сошш	Command Area		Crops and Yellds	Yellds		Operation		Pump (Pump Oetails	Fuel Expns				
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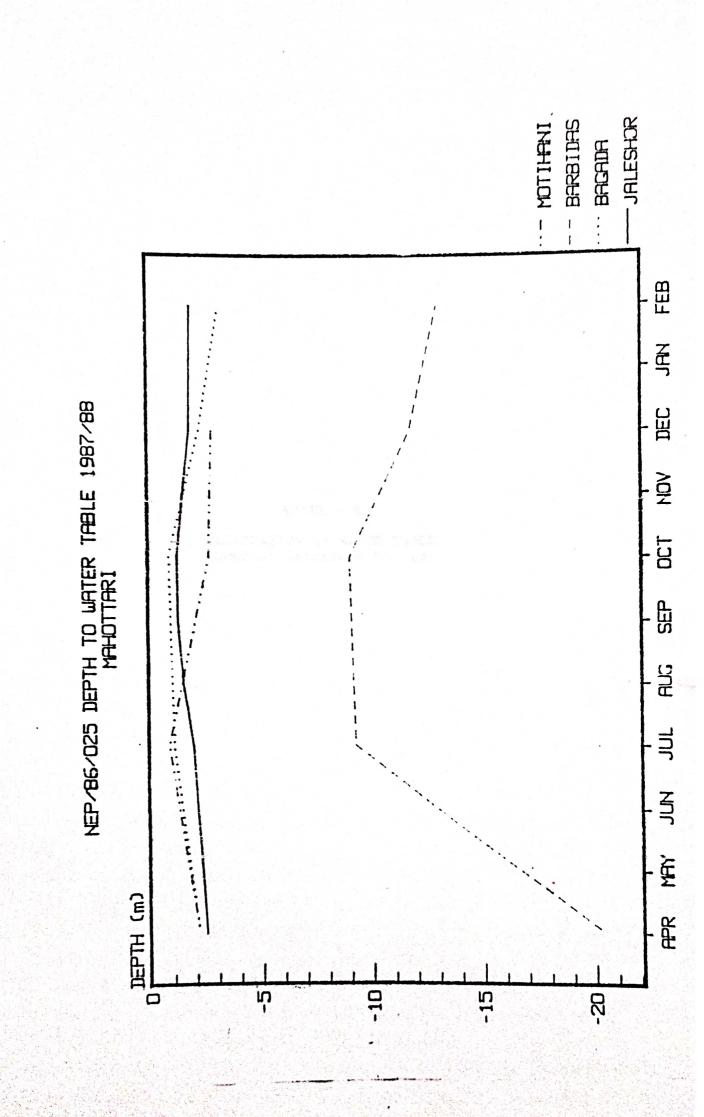
NOTE.

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

ANNEX - G

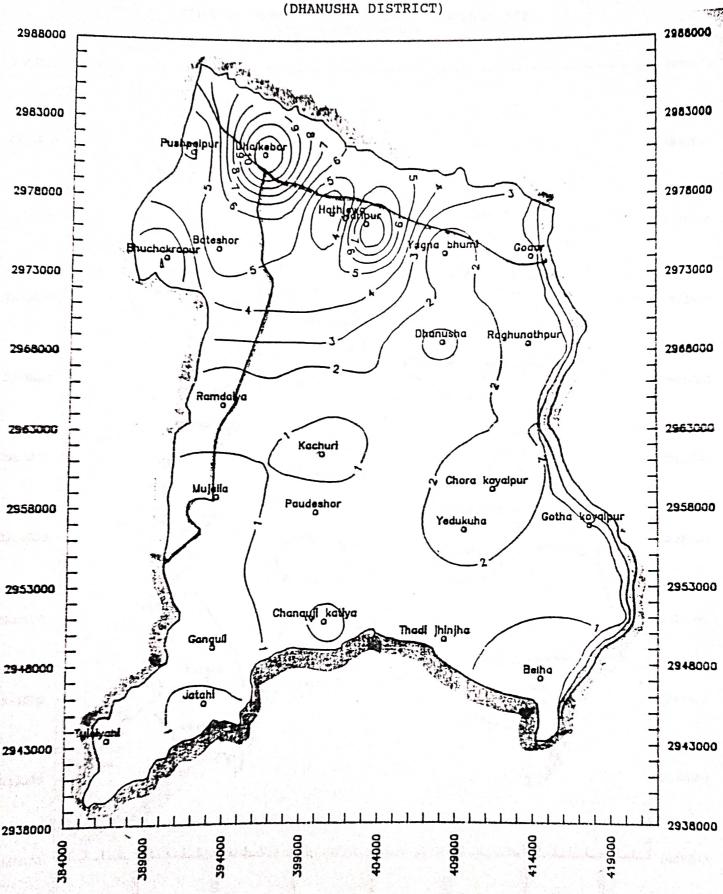
WATER TABLE DEPTH (Source: Reference No. 13)



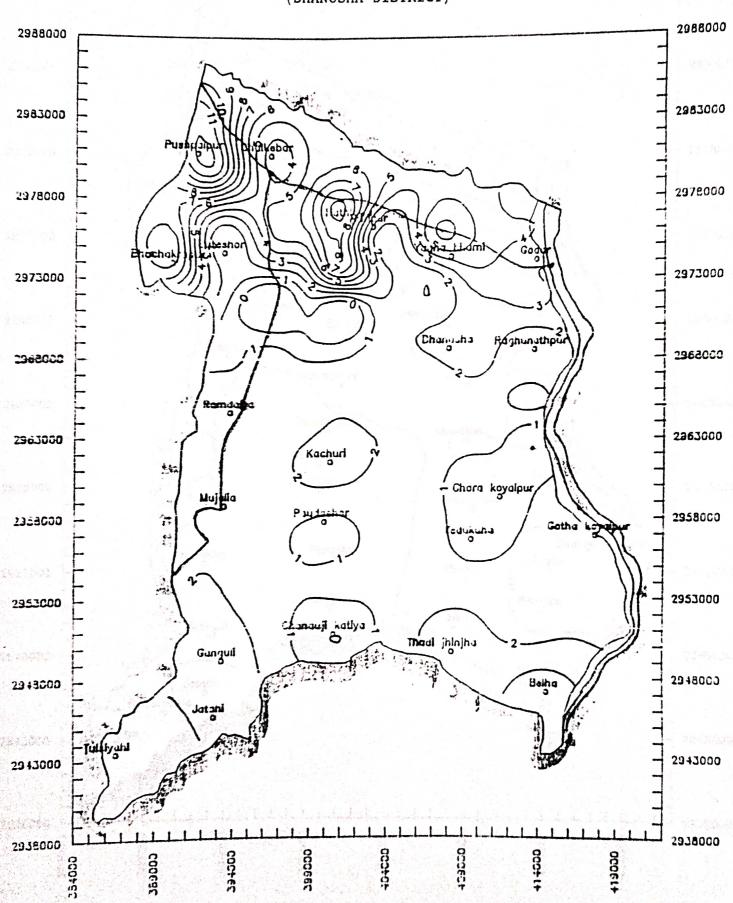


ANNEX - H

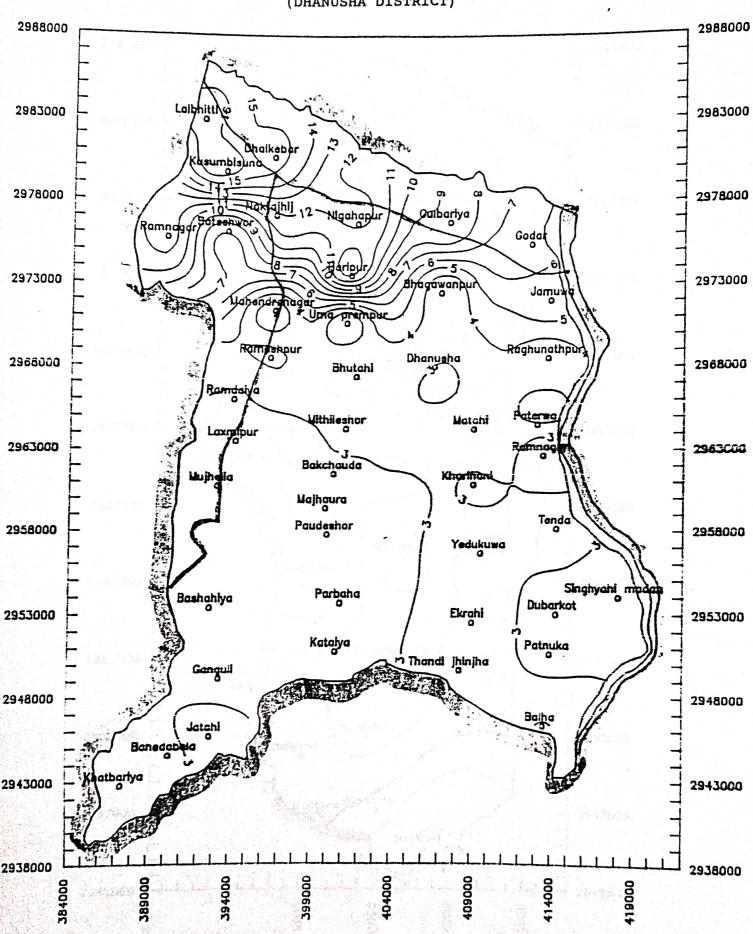
FLUCTUATION OF WATER TABLE (Source: Reference No. 13)



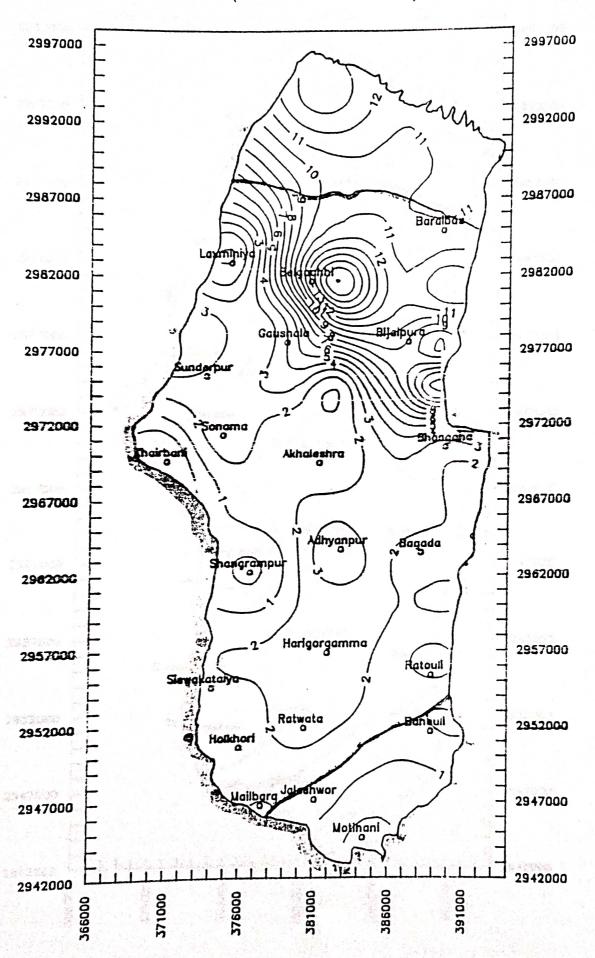
RISE OF WATER TABLE IN MAY - OCTOBER 1987 (DHANUSHA DISTRICT)

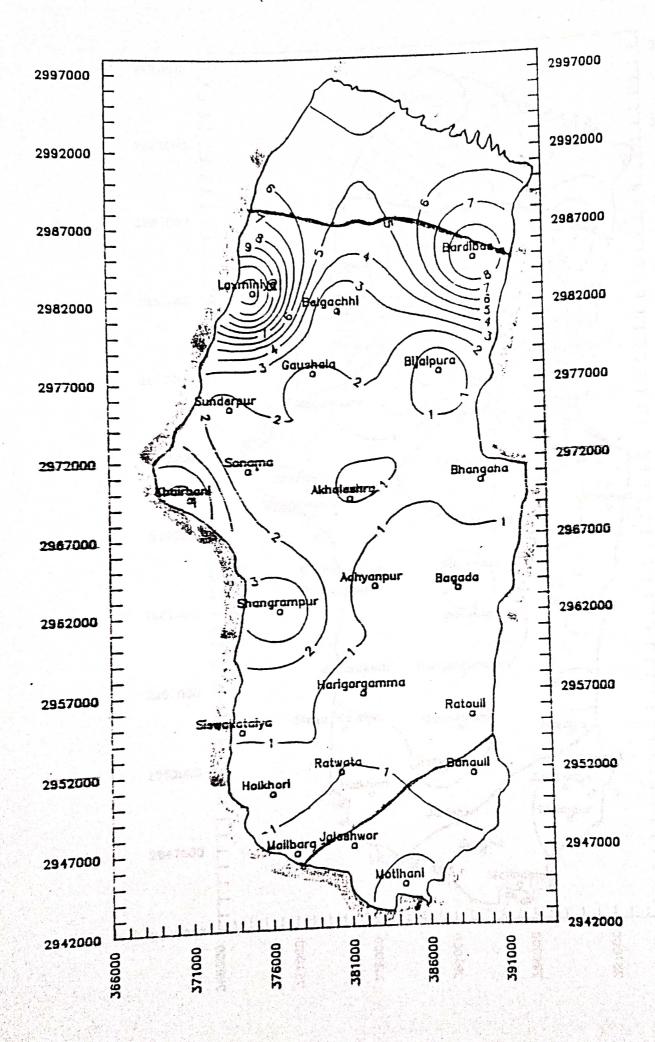


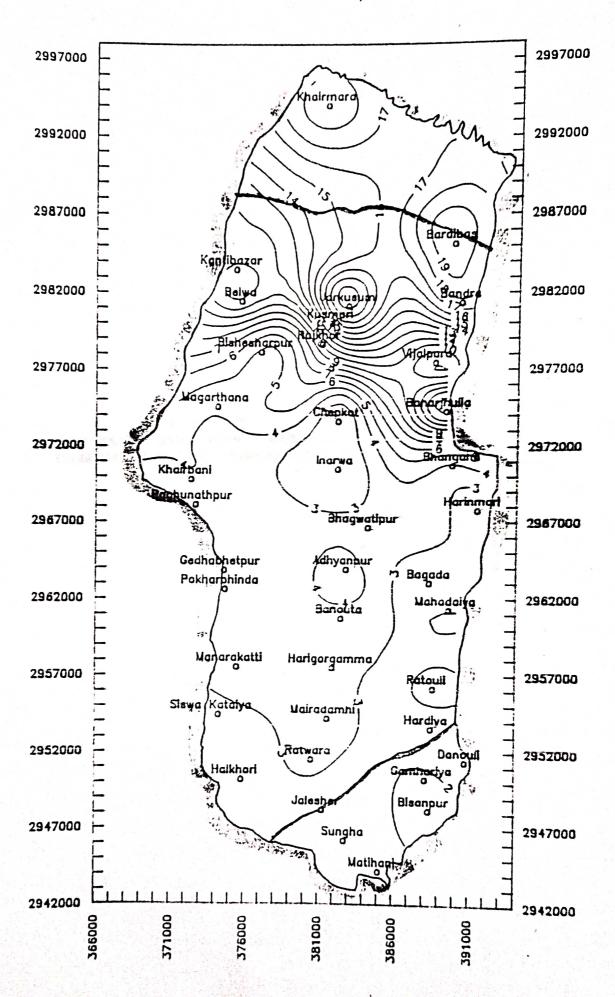
DEPTH TO WATER TABLE IN MAY 1988 (DHANUSHA DISTRICT)



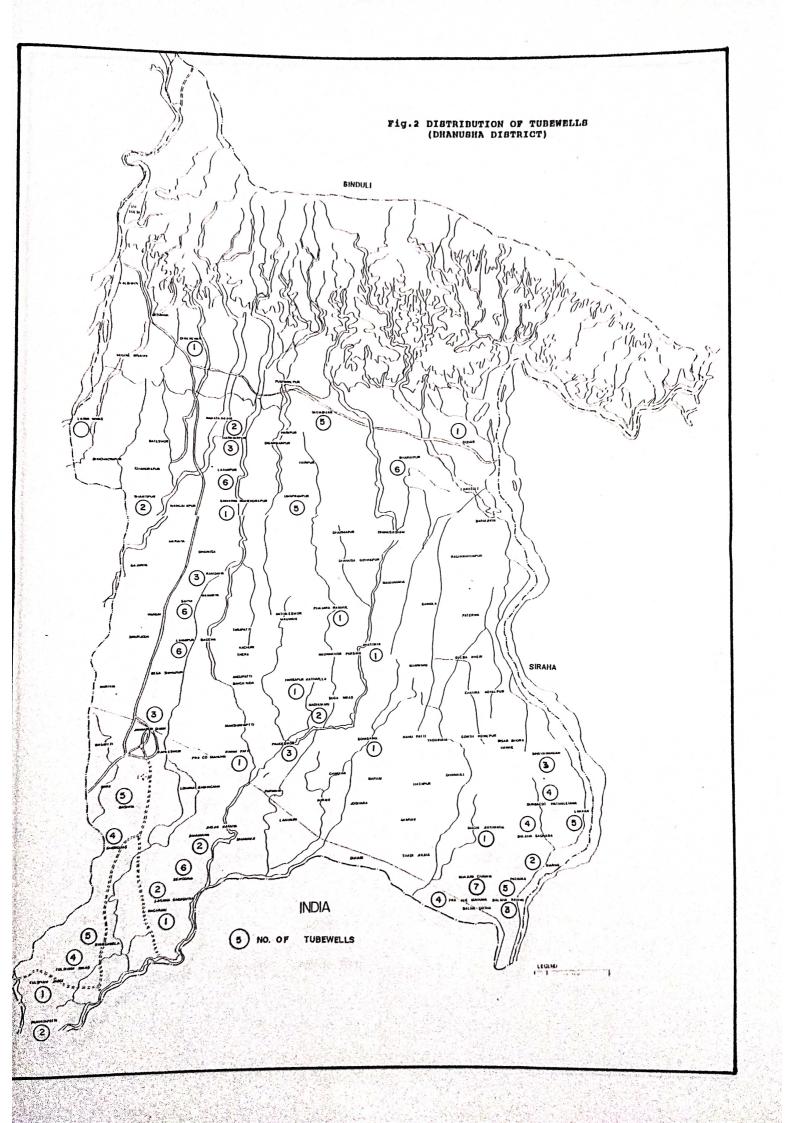
RISE OF WATER TABLE IN APRIL - OCTOBER 1987 (MAHOTTARI DISTRICT)

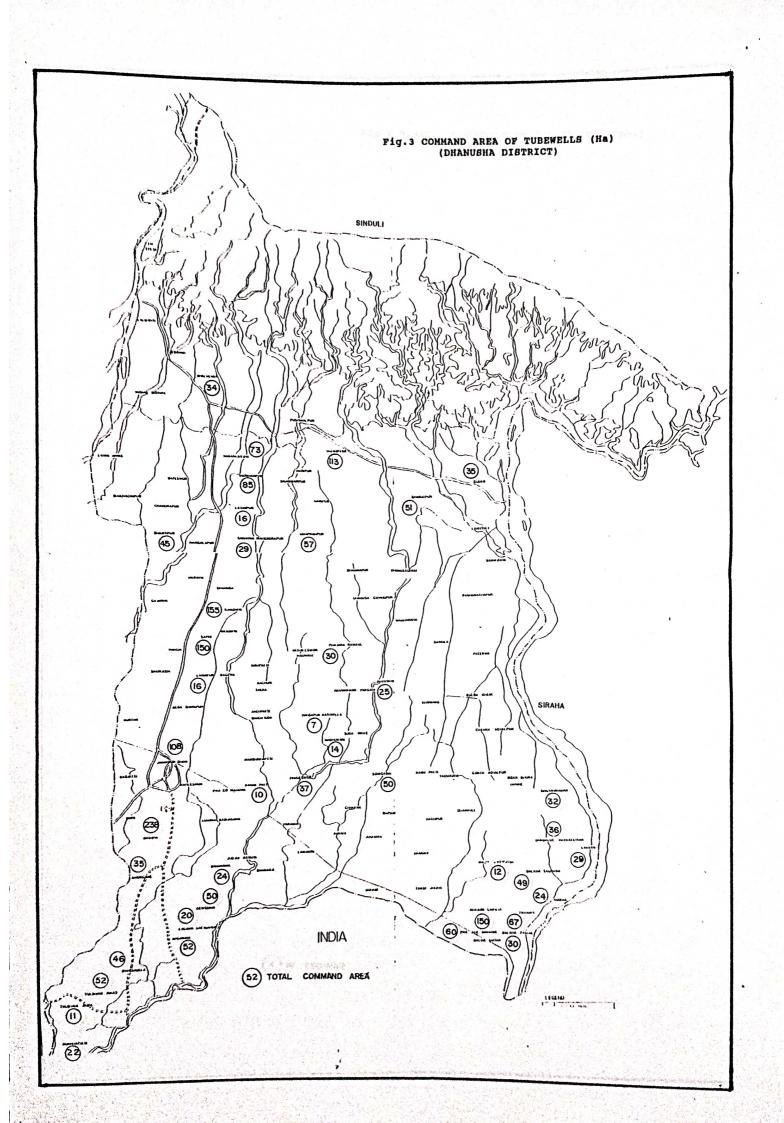


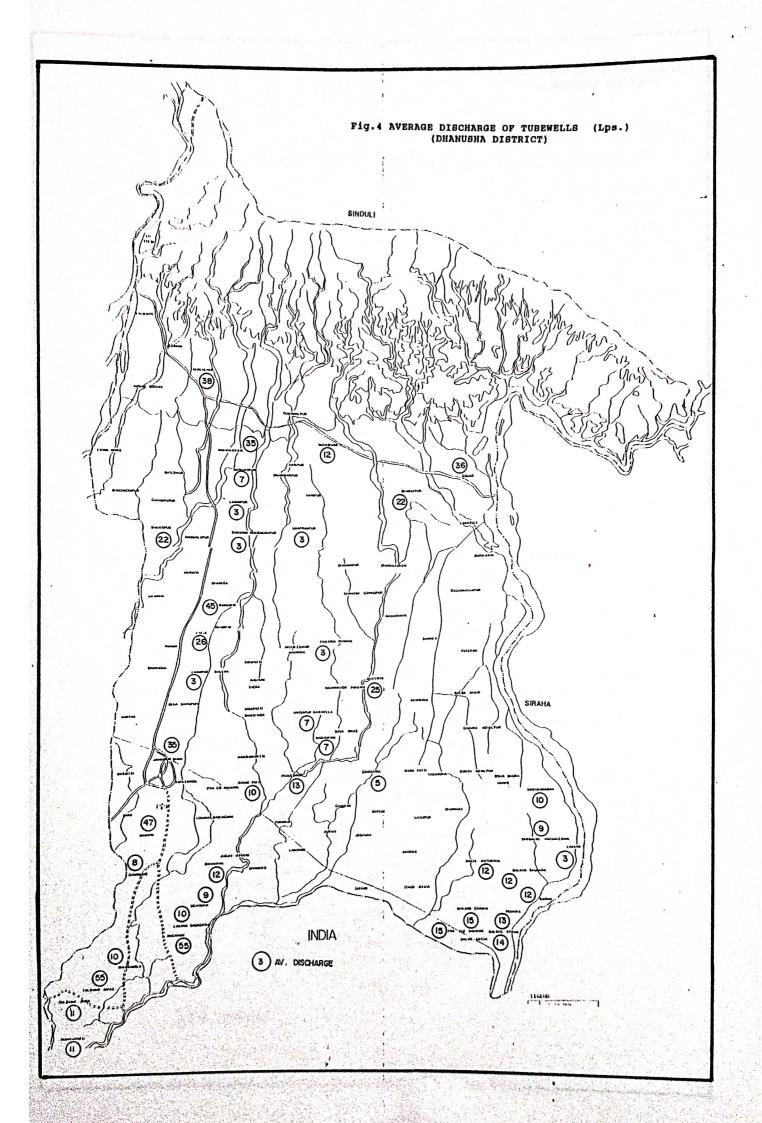


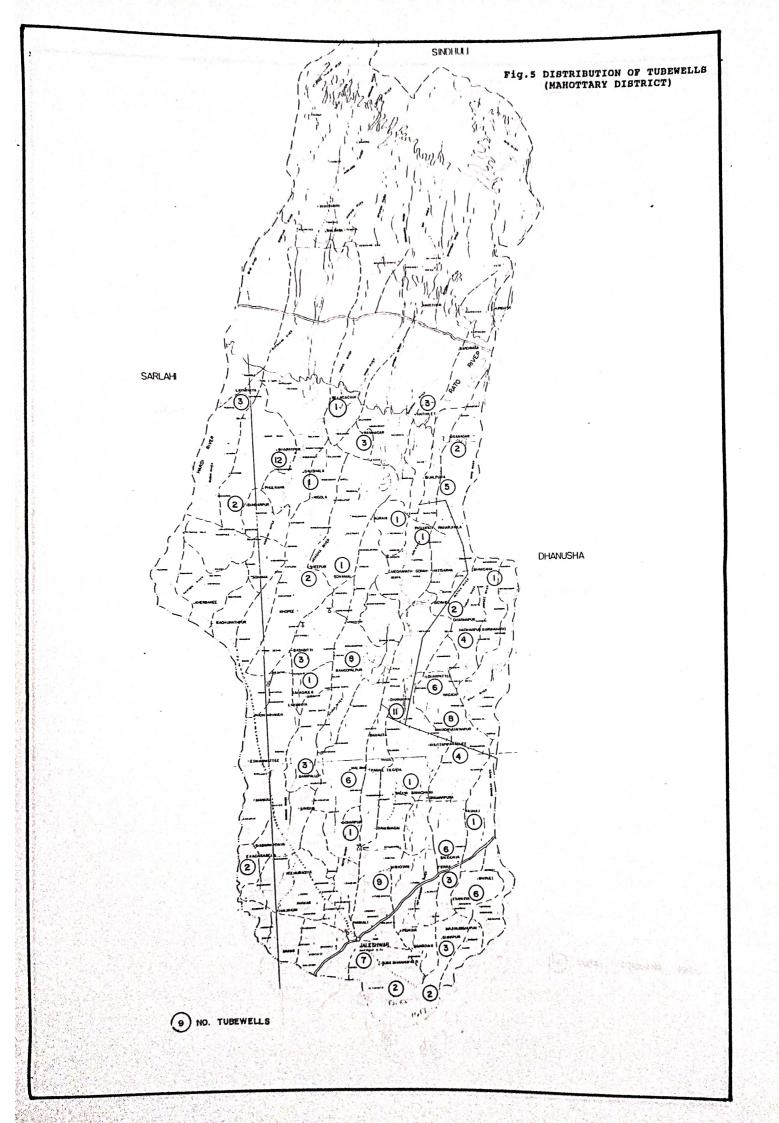


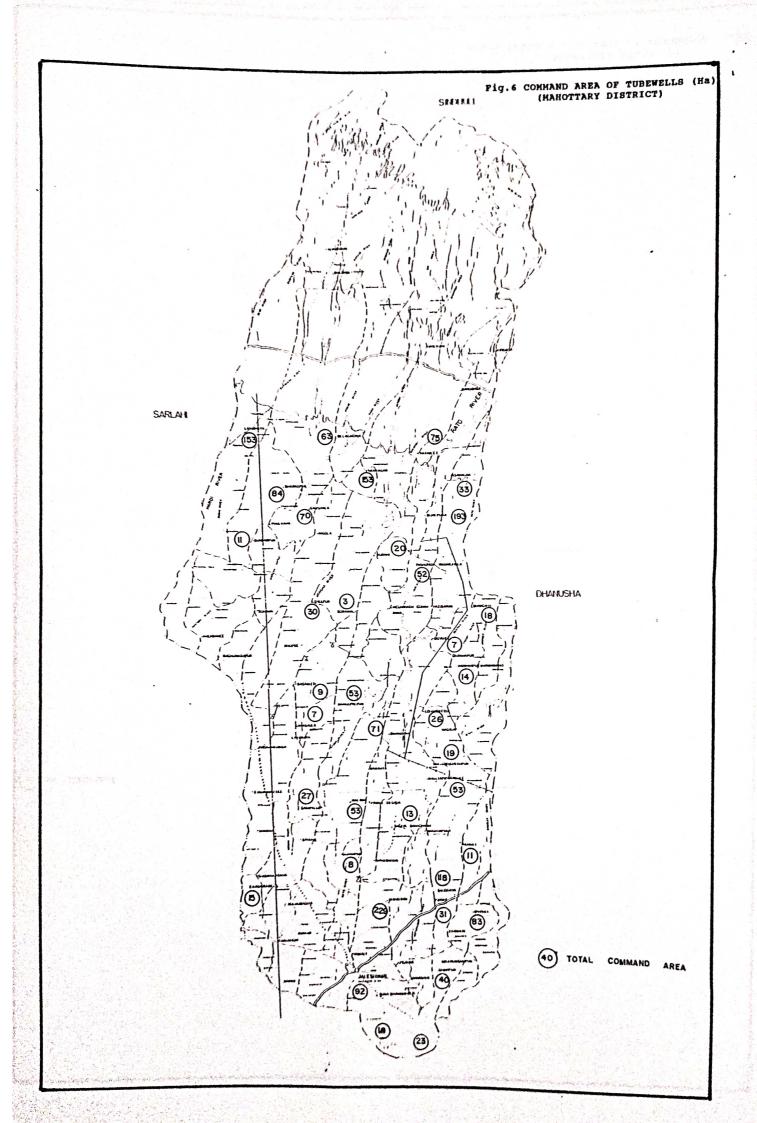
ANNEX - I DISTRICT MAPS WITH TUBEWELLS COMMAND AREA AND DISCHARGEINPUT











ANNEX - J
LETTERS AND RCOMENDATION



पण मंग्या-च नं. ८५०

कृषि विकास बैंक (हाप विकास में कार्रिक २०२४ प्रमुसार स्थापित)

हेलेक्स सं. २२६७ तार: कृषि बैङ्क २–११७४४ फोन नं.च २–११८०२–६

tr.

तया्ड०क उपलब्ध गराईसकी भारे।

महोदय,

नया बानेकर

काठमान्डी।

विषय:-

त्यस आयोगको पत्र संख्या ६८८।०५० मिति ०४८।६।६ पत्र आरा माग गरिसको प्रमुखा तथा महौत्ती जिल्लाको स्कालो दूवनैलको प्रगती विकरण यस पत्रसाथ संतम्म गार गठाईएको व्यहोरा जानकारिको लागी अनुरोध छ ।

क्री पूजी सरकार जलक्रीत नन्त्रालय जल तथा सनती जायीग विहेदरसार, काटमान्ही। मोथाधी:-क्री क्रुनी कन्सल्टेन्सी एण्ड कन्स्ट्यसन पाली

मबदाद

प्रिम वहादुर है फ) में. हैं.

श्री ५ को सरकार जलश्रोत मन्त्रालप

जल तथा शक्ति आयोग

को सचिवालय

सिहदरवार, काठमाडौं

नेपाल

मिति

2080101 5

विजय:-

रिवद्य :- तव्योक्त अपलब्द अस्टिपिने स्टेक्क्यआ |

क्षे . हामे विमाग .. इ.र. इ. अ. इ. , प्रक्री र

उपरोक्त विष्यमा यस आ.व. २०४१। ५० को कार्यक्र मना अड्डा महान्ति विल्लको Tuberell. Impertory. अध्यान कार्य रहेको र उपत अध्ययन कार्य सम्यम्न मनको लागि द्राम्प्रेयम् राम्प्रेम्प्रेम्प्रेम्प्रे को आवश्यकता अवकोले पत्र बाहरू इस्ते नियमानुसार सेब्बिक्निन्तित्वसीयस्त्र उपलब्ध मराई सहयोग गरि दिनु हुन अनुरोध सर्दे । 7. 7. m

> (केटार प्रकाश रिकास) बीरण्ड हाइही डीन्जीनयर

वोद्याचे:

थी तूना मन्तल्टेन्सी एन मन्द्रम्पन हे - प्रानी .

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श्री १ को सरकार जलश्रोत् मेन्त्रालय फोन नं. $\left(\begin{array}{c} 2-2985= & \text{कार्यकारिणी सिचव} \\ 2-2-858 \\ 2-29588 \end{array} \right)$

जल तथा शक्ति त्रायोग

को सचिवालय

सिहदरदार, काठमाडौँ नेपाल

मिति....

35561618

पन्न संस्था:- ८८५

्ट्रिक विषय:-इस्तिनी डाजरी

विष्य :- तथाद अपलब्द जारियन संबद्धा

भी स्मानिस जिसास मेतालय, शिप्तदान प्रतिस्थित

उपरोक्तः जिम्हासमा यस अग.व. २०४१। ४० छो का र्यंत्रः मना ७.तुक्तः (म्हान्दर जिल्लको रिष्ट्रेक्षण्यादी रिष्ट्रेक्षण्यादी प्रदेशको अध्ययन खार्यं सम्पन्त गर्नको लागि प्रिष्ट्रेक्षण्यादे के स्वादेशको छो अः वश्यकता भएको ले पत्र बाहक हम्ले नियमानुसार अस्माद्धेल ल्युक्सेक्ट्रेल् उपलब्ध मराई सहयोग मान जिल्लाको रिष्ट्रेता स्वादेश ।

वोव्याचा :

भी लूना बन्तरेन्स् तापा चन्द्रम्पत है. प्रान्ती.

(६६) र प्रकास रिजाल) ... वरिष्ठ हाङ्ड्रो डीन्जीनबर

BIAN UNITED STANDS



वी । को प्रकृति कृषि मन्त्रीहरी कृषि क्रिकास विभाग

कोत इं. २०१०४

कृषि विकास योजना नक्टाझिज

च॰ चं॰ १-८०८५ प॰ चं॰ १-८०८५ प्राप्त पवको प॰ सं॰ मिति १कि किसास को न जनसङ्ग् जनसङ्ग्

मितिर्०४६ | ६६ | २६

विषय।-- बाटा उपलब्ध गरास्तो वारे।

श्री कल तथा क्ली आयोग, हिंहदर्वार,काटमांडी ।

्रेडपरोक्त सम्बन्धमा त्यस वायोगको मिति २०४६।६।३ को पत्र अनुसार यस योजनो बाट सुः देखी हाल सम्म भएको हिप हर्व स्थालो ट्यूवेल को विवरण लुना बन्दलटेन्सी (प्रा.) ली. मार्कत पठाई विस्को व्यहोरा अनुरोध ह । ।

वीधार्ध

श्री हुना कन्यहटेन्सी (प्रा.) हि.

(काली वहादुर श्रेष्ठ)

बा । शु । दीच्या बतुत्व



प• त• :--



न्युः ठ तः ० नि ० स्वायंत्रव १८नम् ४ नु २ वित्ति २०५. ८ / १२/ ६०

मिर्म - जी जिस्सिंग स्टिक्स शास्त्रह /

२ ये वेल इन्नेन्ट्री अर्थम कार्य अन्तर गत रवरेर आ उनु अरूका भी जुना कान्सल रेन्सी मां क्षि का मिनियिन यस कार्यालय रहान्यीत का विकिन्न कार्यालयमा सम्मक रास्ति अमानित स्कलन कार्य गर्ने अस्मको वर्थ होरा समानित

गरिन्ह।

कि० मुख्य मियन्त्रक

तार। इपि केन फोन न० :-

कृषि विकास ब्रैंक

(कृषि विकास बंक ऐन २०२४ अनुसार स्थापित)

चनार्नः नम्बर:- १२१८

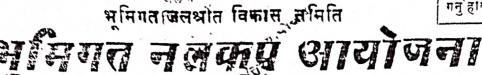
विषय:- अर्ग जरम् स्नेपान कि

2/99/2/

क्र कोन मे. २००४७

कृपया पत्नोत्तरमा प्राप्त पत्र सक्या र मिति उल्लेख गर्नुहोला।

्षी १को सरकार जलश्लोत मन्त्रालय पुष्टिचाई विश्वानाहरी गताजल्थात विकास सरि



महोत्तरी

प्राप्त पड संस्था ।— पड भन्या मृत्य, प्र. प्रा. मृत्य = ११६१०४६१०५० व ० नृष्ट

मिथि ... ०तिरां देवां वंद

विषय:- जो जस संग सम्बन्ध छ ।

यस भूमिगत न्छन्य आयोजना महोज्या द्वारा आ. थ. ०४०।०४१ देखी रात सम्म जडान गरिस्को डाय ट्युवकेंडरू को आवश्यक डाटारू ट्युवकेंड इन्मेन्द्री अध्ययन कार्य अन्तर्गत भटेर अग्रजन भस्का श्रा इना बन्सठटेन्सा (प्रा.) ठा. को प्रतिनिधि ठाई उपठव्य गराईस्को व्यक्ते अनुरोध छ ।

> जे ठ४८ 99199 प्रेम बहादा काको बायोजना प्रमुख

अर्

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