



**CENTRAL GROUND WATER BOARD
MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT
AND GANGA REJUVENATION
GOVERNMENT OF INDIA**

**GROUND WATER YEAR BOOK
OF
HARYANA STATE
(2022-23)**

**North Western Region
Chandigarh**

SEPTEMBER 2023

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2022-23**

Principal Contributors	
GROUND WATER DYNAMICS	Gargi Walia Scientist C (Hydrogeology)
HYDROMETEOROLOGY	Aditya Sharma, Scientist B (Hydrometeorology)

**North Western Region
Chandigarh
September 2023**

FOREWORD

Central Ground Water Board has been monitoring ground water levels and ground water quality of the country since 1968 to depict the spatial and temporal variation of ground water regime. The changes in water levels and quality are result of the development pattern of the ground water resources for irrigation and drinking water needs. Analyses of water level fluctuations are aimed at observing seasonal, annual and decadal variations. Therefore, the accurate monitoring of the ground water levels and its quality both in time and space are the main pre-requisites for assessment, scientific development and planning of this vital resource.

Central Ground Water Board, North Western Region, Chandigarh has established Ground Water Observation Wells (GOWW) in Haryana State for monitoring the water levels. As on 31.03.2022, there were 538 Ground Water Observation Wells which included 185 dug wells and 353 piezometers for monitoring unconfined, semi-confined & confined aquifers. These observation wells are being monitored four times a year in the months of Jan, June, August and November, being undertaken simultaneously throughout the country. This report presents the observations and findings for the period from June 2022 to January 2023.

Ms Gargi Walia, Scientist C has made concerted efforts to compile and analyse the data and prepare the report in the present form. The chapter on hydrometeorology has been compiled and contributed by Sh Aditya Sharma, Scientist B. Sh Suresh Gupta, Draftsman has contributed in preparation of the maps.

This report incorporates all the analytical data on ground water monitoring done in Haryana State and provides valuable information on prevailing ground water regime to the user agencies and other stakeholders as well.

**(Anurag Khanna)
Regional Director**

**GROUND WATER YEAR BOOK
HARYANA STATE
2022-23**

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GROUND WATER YEAR BOOK

HARYANA STATE

2022

1. INTRODUCTION

The State of Haryana is in North India with its capital at Chandigarh a landlocked state in northern India. The Haryana State is located between 27°39' to 30°35' N latitude and between 74°28' and 77°36' E longitude covering an area of 44,212 sq. km. The state is sub-divided into nine physiographic units and is drained by two major rivers Ghaggar and Yamuna. It was carved out of the former state of Punjab on 1 October 1966 on the basis of language distribution. The name Haryana is found in the works of the 12th century AD Apabhramsha writer Vibudh Shridhar (VS 1189–1230). It is bordered by Punjab and Himachal Pradesh to the north and by Rajasthan to the west and south. The river Yamuna defines its eastern border with Uttar Pradesh. Haryana surrounds the country's capital Delhi on three sides, forming the northern, western and southern borders of Delhi. Consequently, a large area of south Haryana is included in the National Capital Region for purposes of planning for development.

The state was home to prominent sites of the Indus Valley and Vedic Civilizations. Several decisive battles were also fought in the area, which shaped much of the history of India. These include the epic battle of Mahabharata at Kurukshetra mentioned in Hindu mythology (including the recital of the Bhagavad Gita by Lord Krishna), Banganga or the Bhishma Kund, a legend attached to this water tank says that, when Bhishma lay on his bed of arrows, he felt thirsty and asked for water. To fulfill his desire, Arjuna immediately shot an arrow into the ground and let loose a stream of gushing water. This is how the BhishmaKund is believed to come into existence and the three battles of Panipat. Haryana was administered as part of the Punjab province of British India, and was carved out on linguistic lines as India's 17th state in 1966. Haryana is now a leading contributor to the country's production of food grains and milk. Agriculture is the leading occupation for residents of the state with the flat arable land irrigated by submersible pumps and an extensive canal system. There are four irrigation systems in the state namely

1. Western Yamuna canal,

2. Bhakra canal,
3. Agra canal and
4. Ghaggar canal

Haryana contributed heavily to the Green Revolution that made India self-sufficient in food production in the 1960s.

1.1 Physiography

The altitude of Haryana varies between 700 and 3600 ft (200 meters to 1200 meters) above sea level. An area of 1,553 km² is covered by forest. Haryana has four main geographical features.

- The Yamuna-Ghaggar plain forming the largest part of the state
- The Shivalik Hills to the northeast
- Semi-desert sandy plain to the southwest
- The Aravalli Range in the south

1.2 Geohydrological Conditions

On the basis of Geohydrological conditions as well as groundwater movement and surface drainage pattern, the entire state is divided into the following basins:-

1. Yamuna basin; (a) Upper, (b) Lower
2. Ghaggar Basin; (a) Upper, (b) Lower
3. Inland Alluvial Basin (Chautang and others)
4. Krishnawati Basin
5. Sahibi Basin
6. Landoha Nala Basin
7. Kanti Sub Basin (LoharuSatnali area)

Ground water occurs both under confined and unconfined conditions in the alluvial formation whereas it is mostly under un-confined conditions in Siwaliks and piedmont deposits and semi-confined conditions in hard rocks.

1.3 Rivers of Haryana

The Yamuna flows along the state's eastern boundary while the ancient Sarasvati River is said to have flowed from Yamuna Nagar, but has now disappeared. Haryana's main seasonal river, the Ghaggar rises in the outer Himalayas, between the Yamuna and the Sutlej and enters the state near Pinjore in the Panchkula district. Passing through Ambala and Hissar, it reaches Bikaner in Rajasthan and runs for 460 km before disappearing into the deserts of Rajasthan. Important tributaries include the Chautang and Tangri. The seasonal Markanda River is a stream, which in ancient times was known as the Aruna. It originates from the lower Siwaliks Hills and enters Haryana west of Ambala. During monsoons, this stream swells into a raging torrent notorious for its devastating power. The surplus water is carried on to the Sanisar Lake where the Markanda joins the Sarasvati and later the Ghaggar. Shahbad Markanda town is situated on its bank. Mentioned in the epic Shatapatha Brahmana as the Drishadwati, the Sahibi River originates in the Jaipur district in Rajasthan. However, before seismic activities some 7,500 years ago in the Aravalli Hills, the river brought water from as far as the Ajmer district. Gathering volume from about a hundred tributaries in Rajasthan and the Mewat areas, it reaches voluminous proportions, forming a broad stream around Alwar and Patan. Further flowing via Rewari District and Dharuhera, it reaches Jhajjar then splits into two smaller streams, finally reaching the outskirts of Delhi and flowing into the Najafgarh Lake that flows into the Yamuna through the Najafgarh drain. Recently hardly any water flows in Sahibi as most of the water is impounded in small check dams upstream in the Alwar district of Rajasthan and the Masani barrage in Rewari district, built on this river on NH 8 (Delhi-Jaipur highway). Three other rivulets in and around the Mewat hills, the Indori, Dohan and Kasavati all flow from East to West.

2. HYDROMETEOROLOGY

2.1 CLIMATE:

The Climate of the Haryana State is subtropical, semi-arid to sub-humid, continental and monsoon type. The average rainfall varies from less than 300 mm in south-western parts to over 1000 mm in the hilly tracks of Shivalik hills. Entire Haryana State experiences four seasons in the

year namely cold season from November to March, hot season from April to June, southwest monsoon season from last week of June to mid of September and post monsoon season from September to beginning of November. During cold weather season, seasons of western disturbances affect the climate of the state and bring rainfall of light intensity.

2.2 TEMPERATURE:

Most of the year, the climate of the state is of a pronounced continental character, very hot in summer and markedly cold in winter. In between are the pleasant months of spring. Haryana is extremely hot in summer at around 45°C and mild in winter. The hottest months are May and June and the coldest are December and January. The hot weather season commences in the month of March and continues through April to June. In the month of May the diurnal range of temperature increases more and the day become hotter. During June the mean maximum temperature reaches as high as 45°C. January is the coldest month. The normal minimum temperature ranges from 3°C to 9°C. Temperature dips to freezing point during the month of December/January.

2.3 HUMIDITY:

The air over the entire state is dry during the greater part of the year. Humidity is high in the monsoon months. April and May are the driest months with relative humidity of about 30% in the morning and less than 20% in the afternoons.

2.4 WINDS:

Winds are generally light during the post monsoon and winter months. They strengthen during the summer and monsoon months. Except during the monsoon months, winds are predominantly from a westerly or northwesterly direction and tend to be more northerly in the afternoon. Easterly and southeasterly winds are more common in the monsoon months.

2.5 RAINFALL:

There are two seasons of rainfall in the state. The south-west monsoon season, the principal source of ground water sets in last week of June and withdraws towards end of September and contributes about 80% of annual average rainfall. Another period of rainfall is winter rain from December to March is about 20% of total rainfall which is mostly absorbed into the soil. More than 50% of the annual rainfall received in the four rainy months for June to September, only thereby leading to large variations on temporal scale. Rainfall is highly variable in time and space.

The Normal Rainfall for the State of Haryana is 558 mm, but it has great spatial variations. Rainfall Normals computed using rainfall records of 50 years (1951-2000) as per latest updates of IMD. The statistics is provided on 4 seasons i.e. Winter (Jan-Feb), Pre-Monsoon (Mar-May), Southwest (SW) Monsoon (Jun-Sep) and Post-Monsoon (Oct-Dec), and on annual basis.

2.5.1 SEASONAL & ANNUAL RAINFALL ANALYSIS:

- Normal Rainfall for the State of Haryana is 588 mm. Entire Haryana State received Actual Annual Rainfall of 681 mm in 2021 and 678 mm in 2022.
 - In SW monsoon season, the normal rainfall of entire State is 460 mm (82% of normal annual rainfall).
 - In 2021, during SW monsoon season, state received rainfall 564 mm and in 2022 during SW monsoon season, state received 501 mm rainfall.
- Seasonal rainfall and its percentage departure are given in Table (A) and their corresponding graphs are given as fig (a), fig (b), fig (c) & fig (d).

**Table (A): PERCENTAGE DEPARTURE IN SEASONAL RAINFALL (2021 & 2022)
FROM NORMAL:**

Year	Normal R/f (mm)	Actual R/f (mm) - 2021	Actual R/f (mm) - 2022	% Departure 2021 R/f From Normal	% Departure 2022 R/f From Normal
WINTER	36.46	28.83	100.24	-21	175
PRE-MONSOON	34.62	57.78	38.44	67	11
SW MONSOON	460.09	564.45	501.16	23	9
POST-MONSOON	26.84	30.73	38.82	14	45
ANNUAL	558.01	681.79	678.66	22	22

Fig (a): Seasonal Rainfall 2021 & 2022 and its departure from Normal Rainfall:

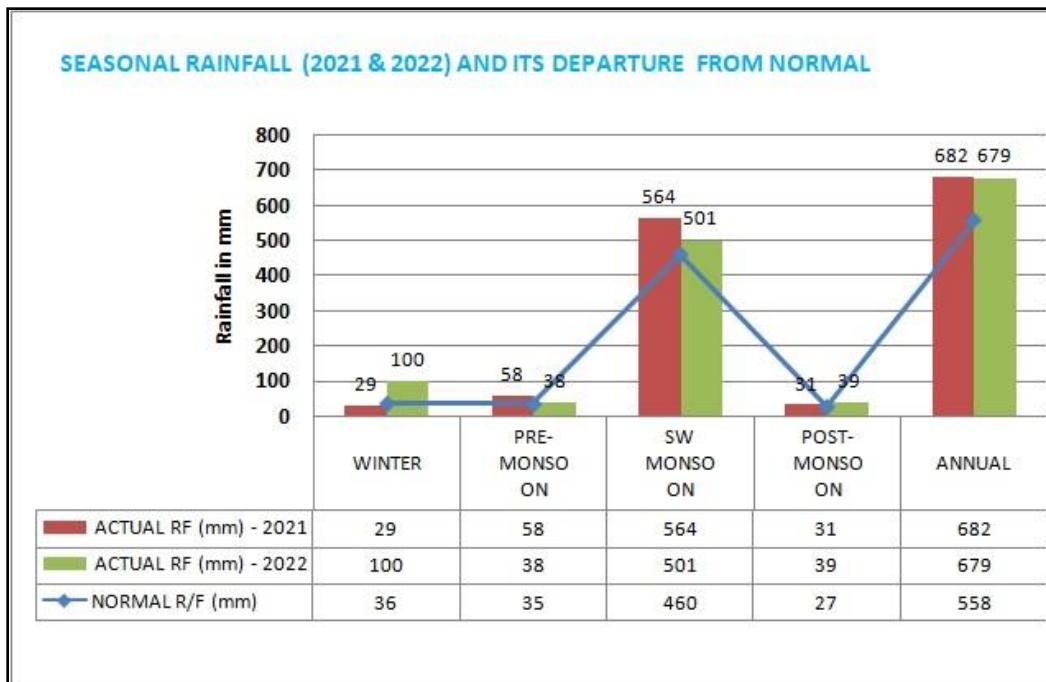


Fig (b): Percentage Deviation in Seasonal rainfall from normal rainfall (during 2021 & 2022):

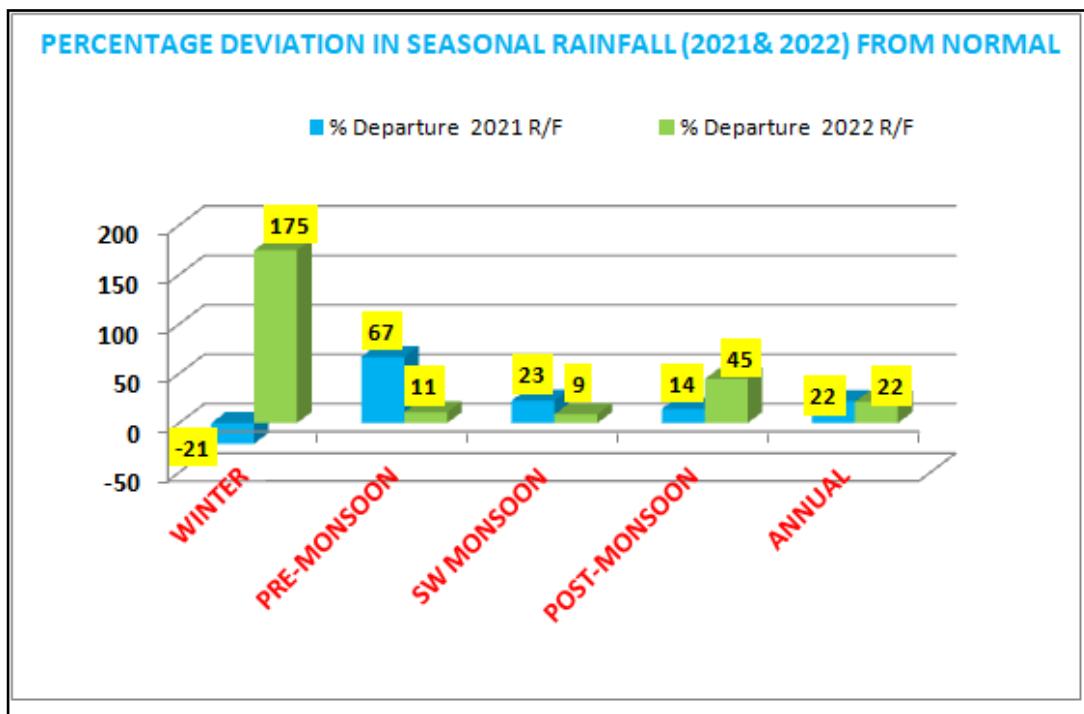


Table (B): South West Monsoon Rainfall & its deviation from normal

Month	NORMAL R/F (mm)	Observed Rainfall (mm)- 2021	Observed Rainfall (mm)- 2022	% Departure 2021	% Departure 2022
JUN	42.8	49.32	43.13	15	1
JUL	166.9	238.86	221.99	43	33
AUG	164.02	85.12	77.38	-48	-53
SEP	86.37	191.15	158.66	121	84
SW Mon	460.09	564.45	501.16	23	9

Fig (c): Observed & normal SW Monsoon rainfall 2021 & 2022

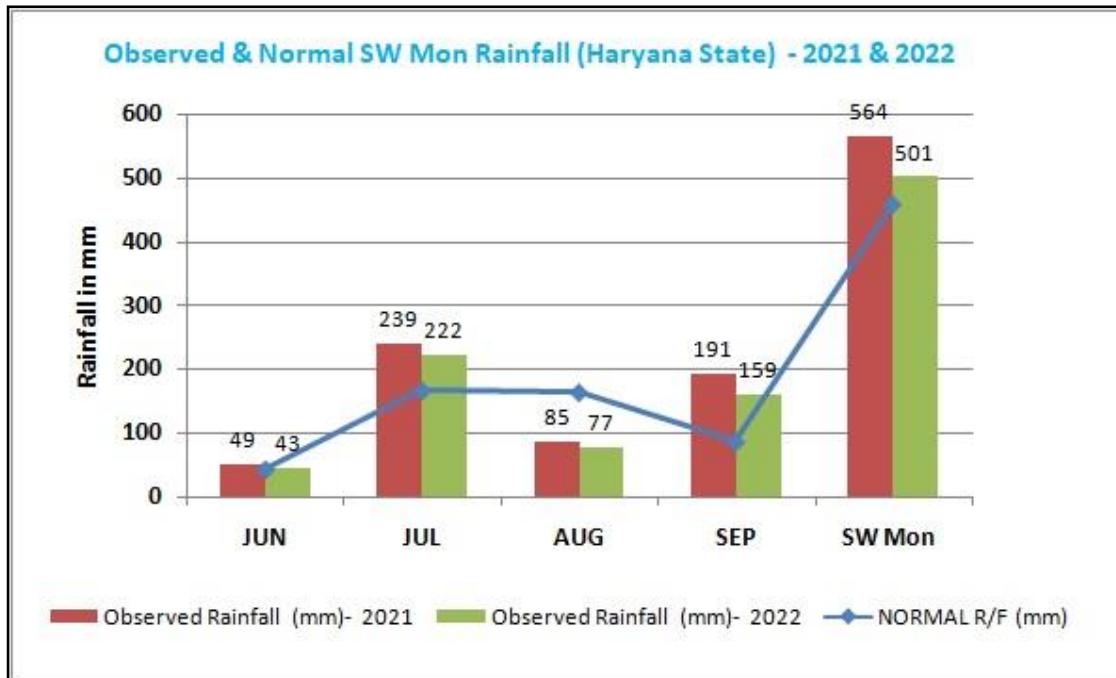
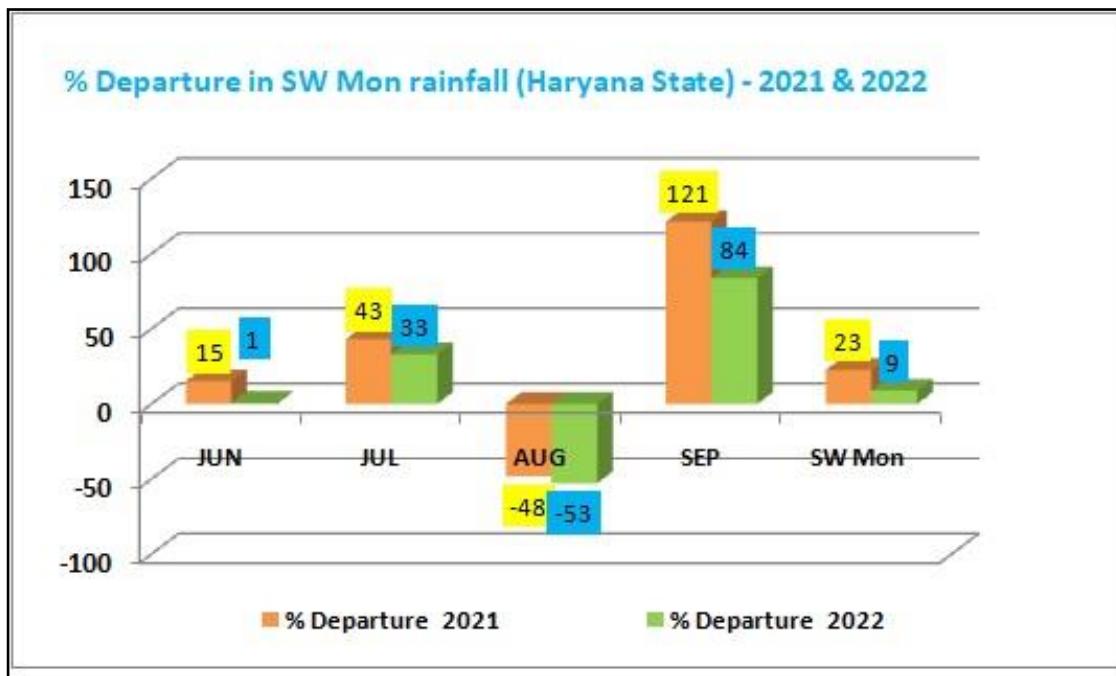


Fig (d): % departure in SW monsoon rainfall 2021 & 2022 from their corresponding normal



2.5.2 DISTRICT-WISE RAINFALL ANALYSIS OF HARYANA STATE:

- In 2022, Annual highest rainfall of 1373 mm was recorded at Panchkula District and the lowest rainfall of 431 mm at Sirsa District.
- In 2021, Annual highest rainfall of 1159 mm was recorded at Yamunanagar district of Haryana State and the lowest rainfall of 388 mm at Sirsa District.
- The lowest rainfall of (-12%) less than their corresponding normals of IMD are recorded at Ambala district and the highest rainfall of (73%) more than the IMD annual normal is recorded at Fatehabad district during 2022.
- The lowest rainfall of (-38%) less than their corresponding normals of IMD are recorded at Ambala district and the highest rainfall of (90%) more than the IMD annual normal is recorded at Jhajjar district during 2021.
- The Actual annual rainfall of 2022, when compared to normal rainfall, then it is observed that in only two districts namely Ambala (-12%) & Sonipat (-09%) deficient rainfall observed and in remaining districts rise in rainfall observed.

- The actual annual rainfall of 2022 compared to the rainfall of 2021, it is observed that out of all districts maximum rise in rainfall observed at Panchkula district which is (43%) more than the rainfall of 2021 and in remaining districts rise in rainfall as shows Ambala (23%), Fatehabad (09%), Kaithal (04%), Karnal (21%), Kurukshetra (37%), Mewat (05%), Panchkula (43%), Palwal (18%), Mewat (05%), Sirsa (11%), Yamunanagar (14%).
- The Actual annual rainfall of 2022, when compared to actual annual rainfall of 2021 , then it is observed that in 11 districts deficient rainfall observed i.e Bhiwani (-12%), Faridabad (-05%), Gurugram (-15%), Hisar (-03%), Jhajjar (-22%), Jind (-08%), Mahendragarh (-04%), Panipat (-10%), Rewari (-07%), Rohtak (-21%) & Sonipat (-34%).

Deviation in 2022 rainfall from 2021 annual rainfall and from normal Rainfall is given in table (D) given below and Isohyetal Map, rainfall pattern maps 2022 & 2021, comparison map between 2022 & 2021 and their corresponding graphs are given below as fig (e), fig (f), fig (g), fig (h), fig (i), fig (j) & fig (k).

Table (C): Deviation in 2022 rainfall from 2021 rainfall and Normal rainfall - Haryana

S. No	DISTRICT	RAINFALL (mm) - 2022	RAINFALL (mm) - 2021	PERCENTAGE DEVIATION FROM 2021	NORMAL RAINFALL (mm)	DEVIATION IN 2022 FROM NORMAL (%)
1	AMBALA	848.6	688.9	23	962.8	-12
2	BHIWANI	467.6	533.2	-12	427.5	9
3	FARIDABAD	581.2	610.6	-5	521.4	11
4	FATEHABAD	650.6	596.4	9	376.1	73
5	GURUGRAM	841.8	988.5	-15	583.2	44
6	HISAR	500.8	518	-3	415.4	21
7	JHAJJAR	728.2	929.4	-22	441.7	65
8	JIND	642	697.9	-8	529	21
9	KAITHAL	717.8	692.6	4	582.9	23
10	KARNAL	854.3	708	21	723.8	18
11	KURUKSHETRA	791.5	579.5	37	695.6	14
12	MAHENDRAGARH	684.1	714.9	-4	501.9	36
13	MEWAT	732.3	697.1	5	572	28
14	PALWAL	675.8	571.7	18	508.1	33
15	PANCHKULA	1,373.60	958.7	43	1,111.90	24
16	PANIPAT	624	696.6	-10	615.1	1
17	REWARI	834.8	901.2	-7	561.7	49
18	ROHTAK	676.4	859.6	-21	600.5	13
19	SIRSA	431.2	388.4	11	320.1	35
20	SONIPAT	569.8	857.7	-34	628.7	-9
21	YAMUNANAGAR	1,326.00	1159.2	14	1,108.70	20

Fig (e): Deviation in Actual Annual Rainfall of Haryana State (2021 V/S 2022)

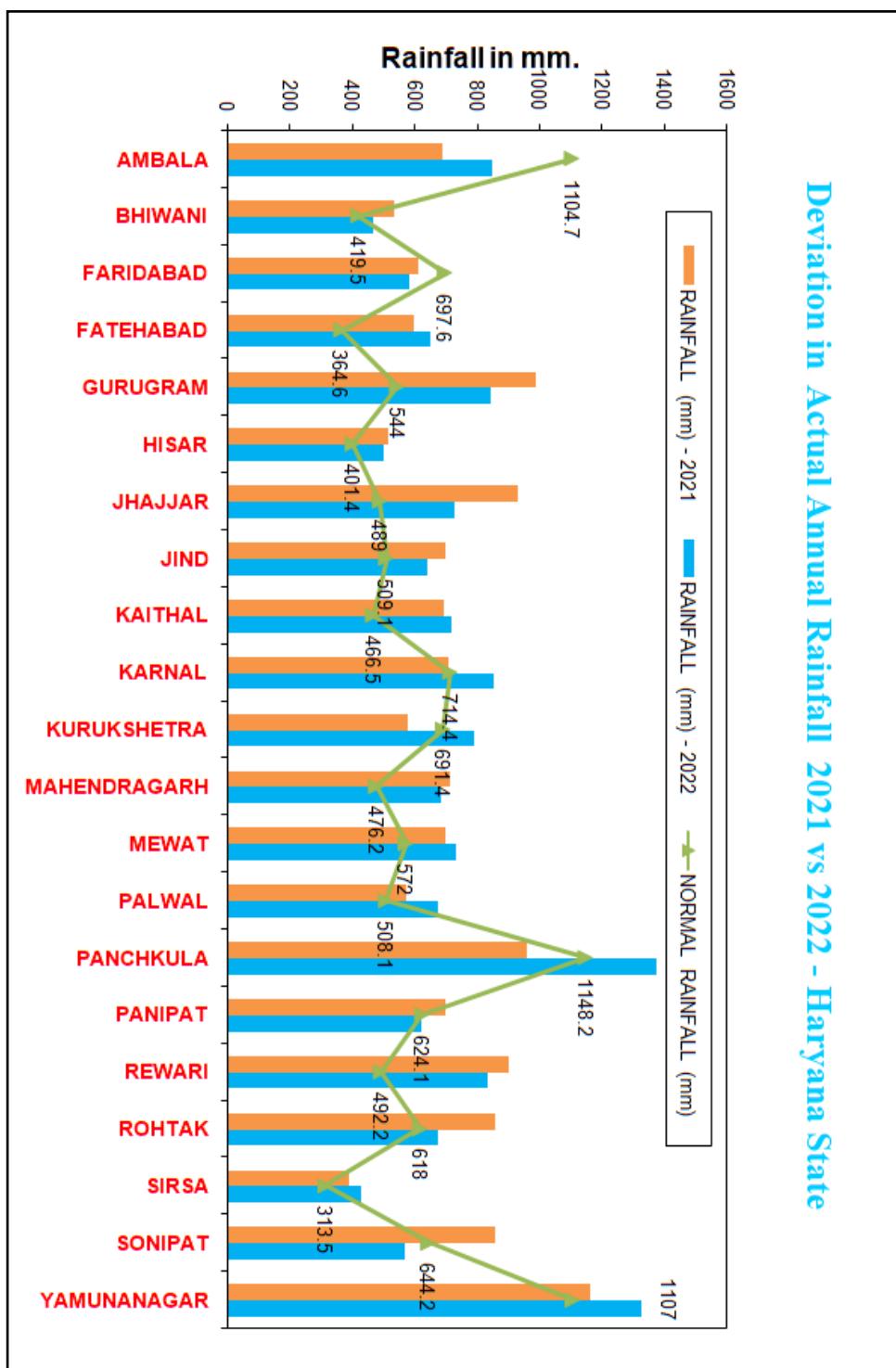


Fig (f): Percentage Deviation in 2022 Rainfall from 2021 :- Haryana State

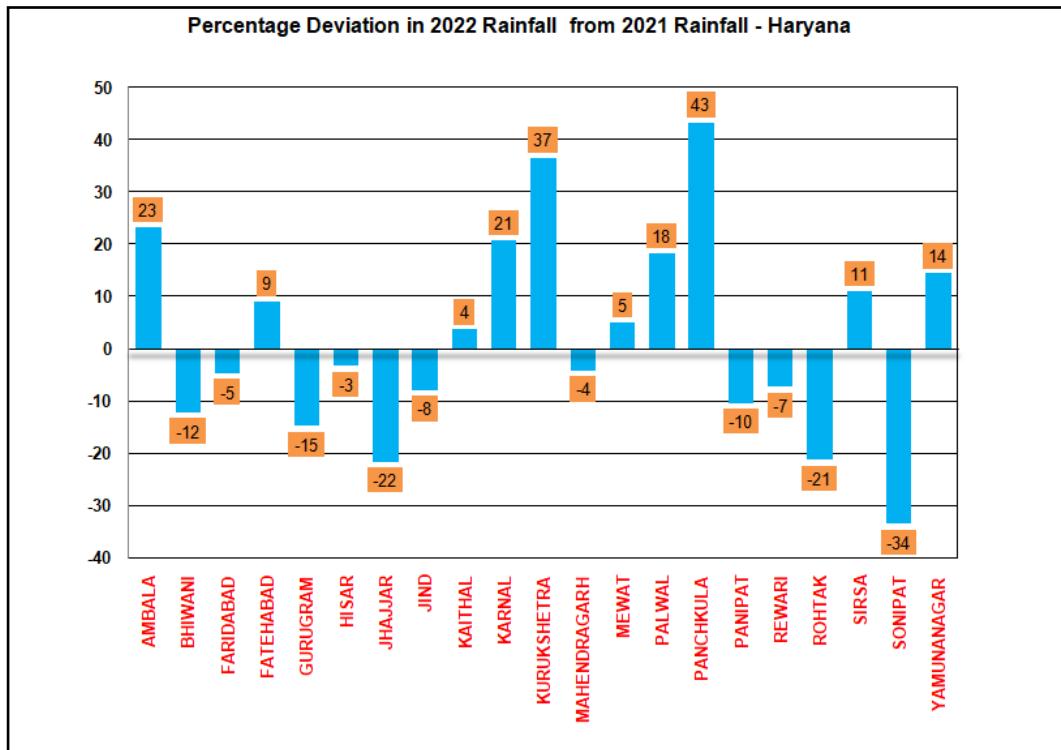


Fig (g): Deviation in 2022 Rainfall from Normal Rainfall of Haryana state:

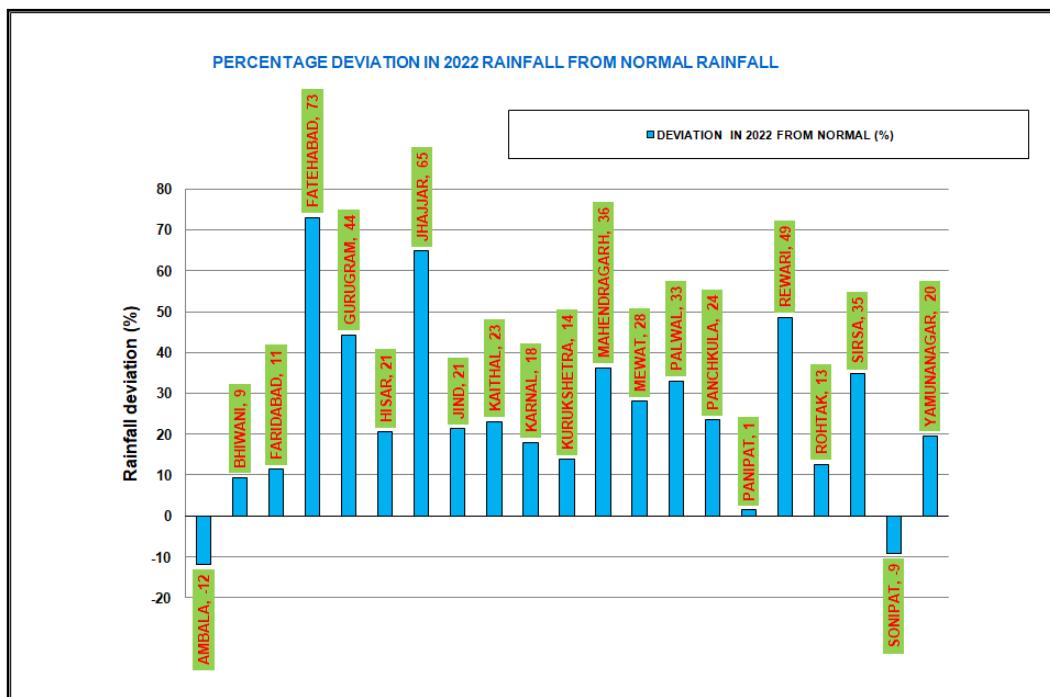


Fig (h): Isohyetal Normal Rainfall Map of Haryana State:

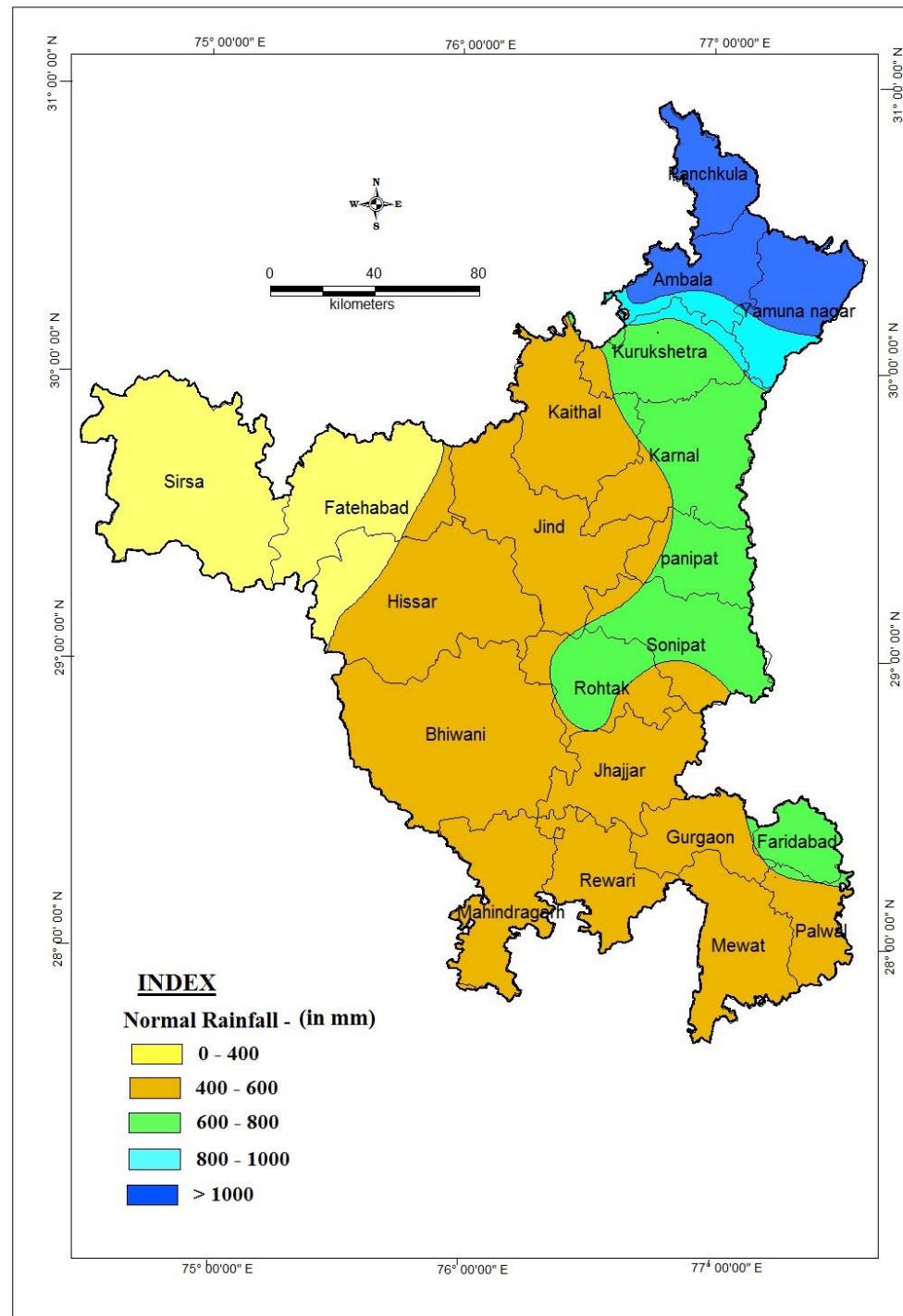


Fig (i): Actual Annual Rainfall Map of Haryana State – 2021

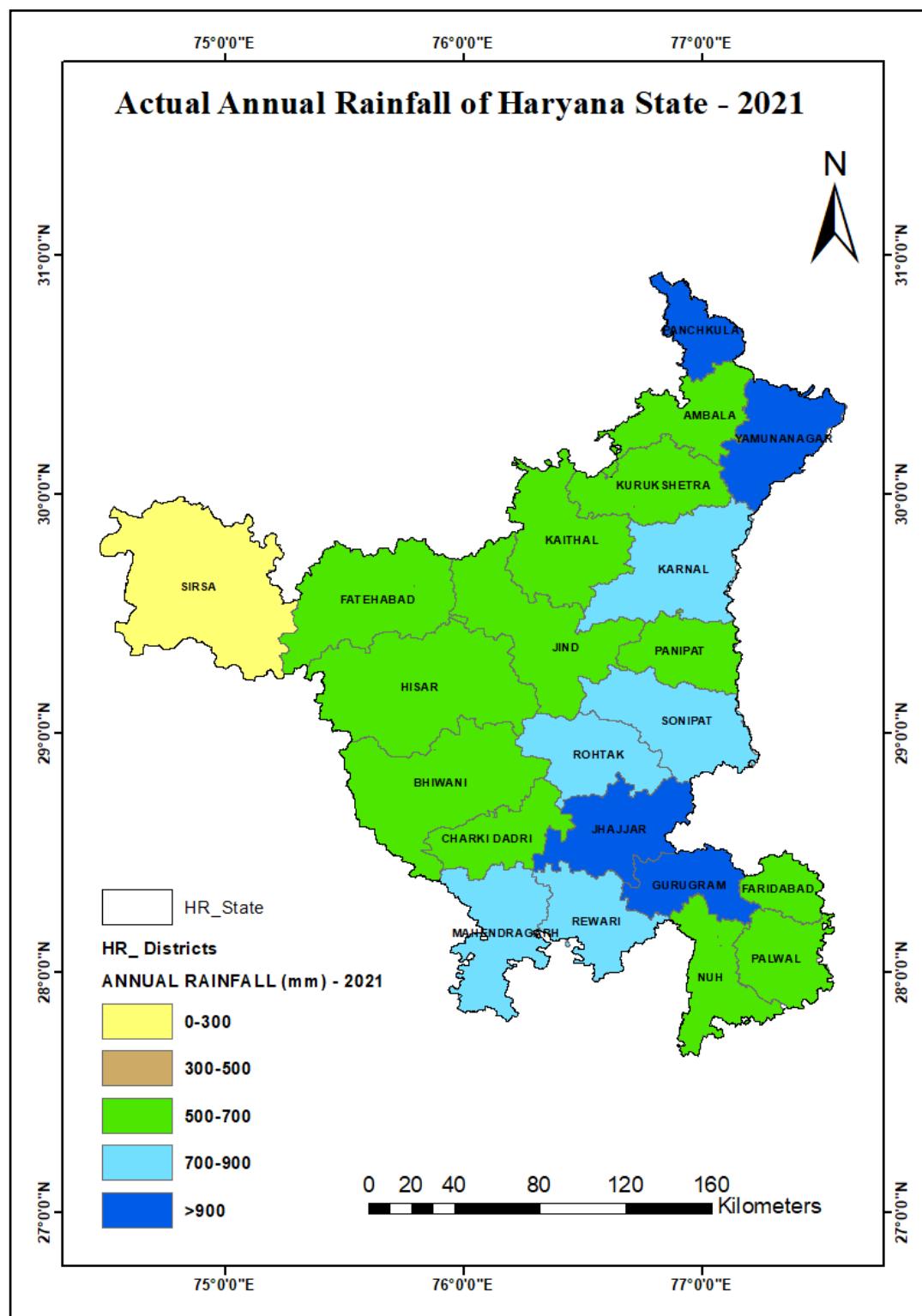


Fig (j): Actual Annual Rainfall Map of Haryana State – 2022

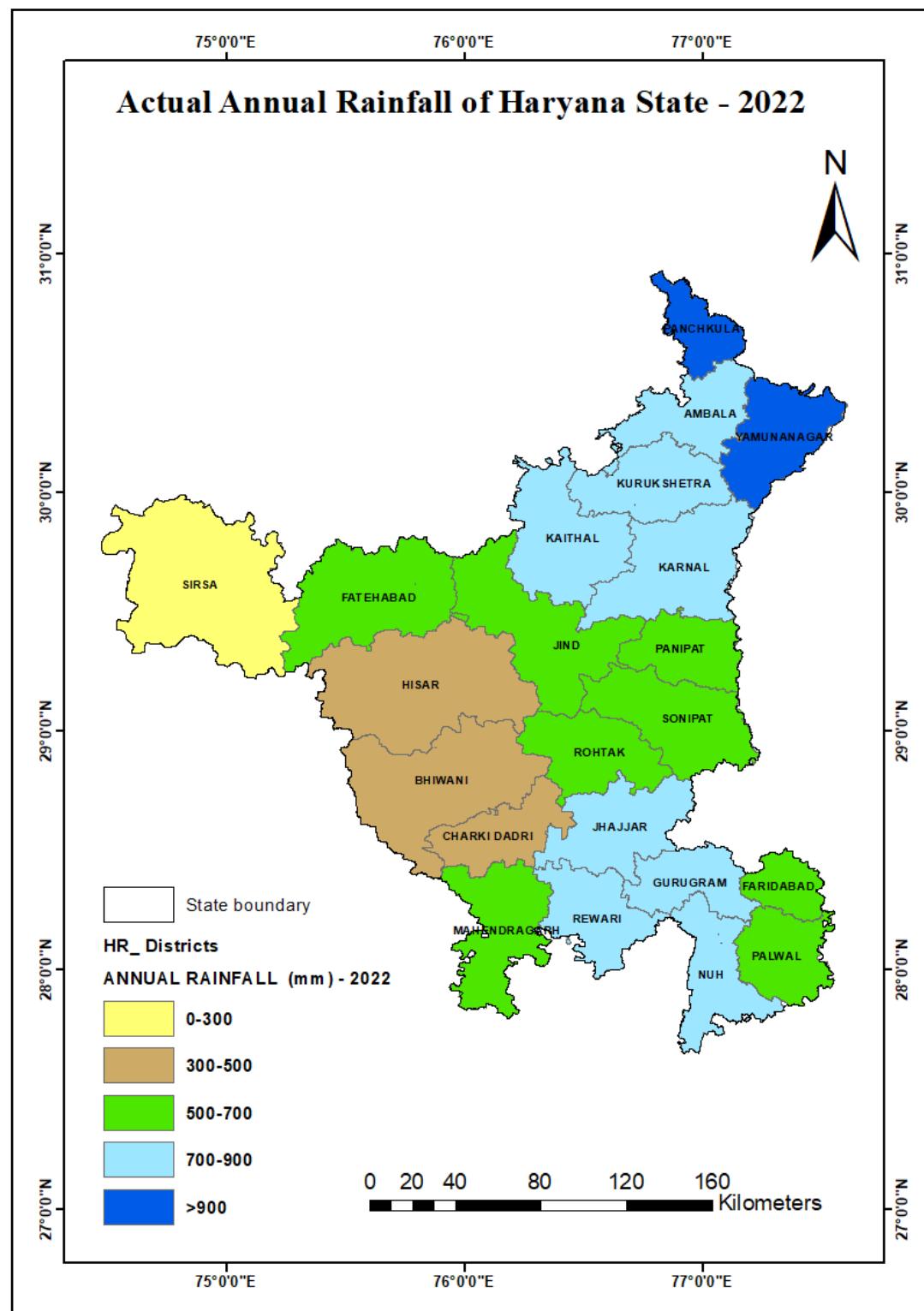
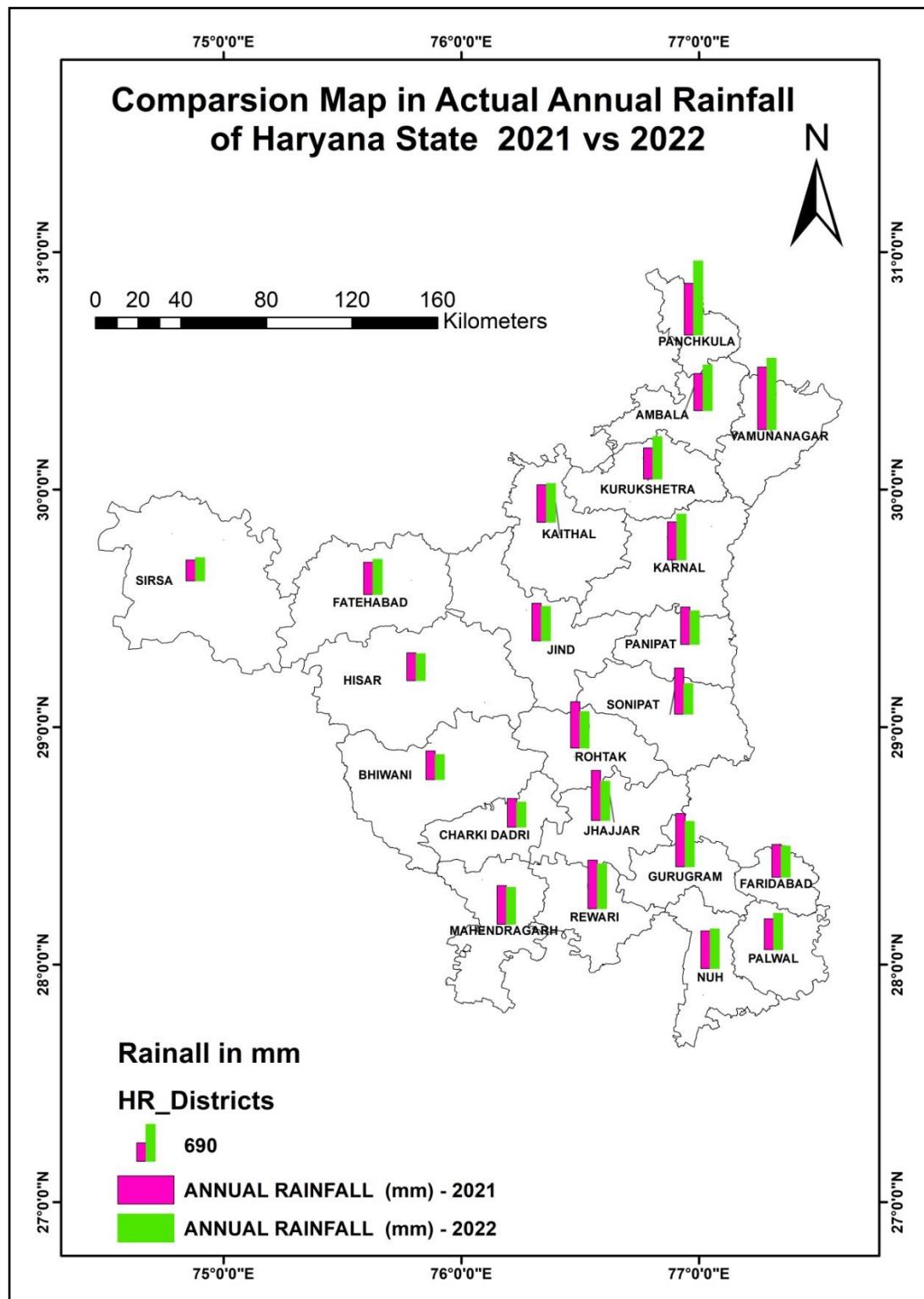


Fig (k): Comparison Map of Actual Annual Rainfall - Haryana State (2021 V/S 2022):



REFERENCE:

<https://indiawris.gov.in/wris/#/>,

[http://hydro.imd.gov.in/hydrometweb/\(S\(osdeiu45tfdt1vesfkqaypze\)\)/DistrictRaifall.aspx](http://hydro.imd.gov.in/hydrometweb/(S(osdeiu45tfdt1vesfkqaypze))/DistrictRaifall.aspx)

3.0 HYDROGEOLOGICAL SETUP

Three geological groups are represented in the state viz. Pre-Cambrian, Tertiary and Quaternary. The Quaternary group comprises of Alluvium which occupies 98% of the area of the state. The tertiary group is represented by the outermost zone of the Siwalik system composed mainly of sandstones, clay and boulders. The rocks of Pre-Cambrian age which form part of the Aravalli hill ranges are exposed in Gurgaon, Mewat and Faridabad districts and as small outcrops in other Southern districts. The thickness of alluvium deposits decreases from North to South. All the three major physiographic units viz. Peninsula, Extra-Peninsula and Indo-Gangetic areas, terminating in the hard rock formations of Delhi systems (Pre-Cambrian age) towards South, Siwaliks system (Tertiary age) in the North and in between the alluvial formations (Recent to sub recent age) are observed in the state. The general geological succession of the various units of the Peninsula and Indo-Gangetic plains traversing the Haryana state are given below (table-3.1).

Table 3.1 Generalized Stratigraphy of Haryana State (after GSI, 2012)

Age	Super Group	Group/Formations	Lithology
Quaternary		Older and Newer Alluvium and Aeolian Deposits	Grey and brown sand, silt, silt-clay, clay with calcrete, limestone and gypsum.
Tertiary	Siwalik Super Group	Upper Siwalik	Boulder conglomerate, sandstones, clay/ mudstone and pebble beds.
		Middle Siwalik	Sandstone with variegated clay/mudstone.
		Lower Siwalik	Sandstone, mudstone/ shale
		Sabathu	Fine-grained sandstone, clay and limestone.
Pre-Tertiary (?)		Tundapathar 'Series' Lower (Paleozoic Unconformity)	Stromalitic limestone, Tosham rhyolite, Granite (Erinpura), migmatite, ultramafic and pegmatite.
Proterozoic	Delhi Super Group	Ajabgarh Group (Divided into 5 Formations)	Quartzite and basic flows, mica-schist, carbonaceous phyllites and slates, calc-schist, dolomite, marble, calc-silicate, amphibolite, hornblende-schist, phyllite.
		Alwar Group	Quartzite, conglomerate, amphibolite, mica-schist and arkosic quartzite.

In the extra peninsular region (northern part of Panchkula district) Siwalik System (Upper Tertiary) and Sabathu Series (Lower Tertiary) are exposed. Sabathu comprises of greenish grey and red gypseous shales with thin bands of sand stones and limestone. Shales and limestone are richly fossiliferous. Siwaliks system comprises of mainly greywacke, sandstones, grits, clays, siltstones, conglomerates and pseudo-conglomerates. These are fluviatile deposits and are rich in mammalian fossils.

The area in Panchkula, Ambala & Yamunanagar is underlain by the 'Kandi, Sirowal and the Alluvium. The Kandi belt which forms the upper higher portions of the composite fan deposits is 2 to 4 kms wide running more or less parallel to the Shivalik foothills. The sediments comprise boulders, pebbles, gravel and sand with clays mixed in varying proportions. Sirowal belt and the adjoining Gangetic plain on the south of the Kandi belt are underlain by silt, fine to medium sand and clays. Gravel and pebbles also occur occasionally. The area in Gurgaon district is underlain by the rocks of Delhi system and by Quaternary alluvium. The Ajabgarh shales and quartzite form the basement in the western part of the area where the thickness of alluvium is very less. In Hissar and Bhiwani districts area is underlain by unconsolidated sediments of Quaternary age. The sediments comprise sand, silt clay and kankar. In Sonipat, Jind, Karnal and Kurukshetra districts the area is underlain by alluvium deposits of Quaternary age. Alluvium comprises clay, silt, sands of various grades, kankar, gravel and pebbles. The alluvium deposits are generally lenticular in shape. In Mohindergarh and part of Bhiwani districts the following geological succession is met. Recent to sub Recent- Alluvium and windblown sands etc, Post Delhi intrusive- Pegmatite, quartz veins, granites etc. Algonquian Delhi system-Ajabgarh Series Kushalgarh Limestone, Alwar Series. The alluvium in the area belonging to the Older Alluvium comprises of sand, silt, clay loam and kankar. Newer alluvium is mainly confined to the sides of the river natural water courses. The alluvium is the fresh water deposit of the Indo-Gangetic river system. The sub-aerial deposits are represented by the talus material on the hill slopes and windblown sands. Rohtak district is underlain by alluvium deposits of Quaternary age. The alluvium overlies the rocks of Algonquians system outcrops of which are seen outside the district. The alluvium consists of clay, silt and various grades of sand. Windblown sand occurring as sand dunes is often seen overlaying the alluvium in various parts of the district.

The unconsolidated alluvial sediments cover around 98% of the state while hard rock's cover just around 2% area of the state. Alluvial deposits are of older and newer types and consist chiefly of clay, silt and fine to medium sand. Other deposits are piedmont deposits, which are confined to a narrow zone, about 2 to 4 kms wide, between Siwalik Hills and alluvial plains. Sand-dunes are found in the districts of Bhiwani, Mohindergarh, Hissar and Sirsa Coarse sand, gravels and boulders are found to occur in piedmont areas and in the adjacent alluvial tracts. These deposits have developed in the north part of Ambala district. The thickness of alluvial sediments is more than 600 m. and along Yamunanagar-Karnal stretch it is reported to be more than 3000 m. However, the thickness of sediments progressively decreases towards Delhi and hard rock areas of Bhiwani, Gurgaon, Faridabad and Mahendergarh districts.

4.0 GROUND WATER REGIME MONITORING

Central Ground Water Board, North Western Region, Chandigarh has established Ground Water Observation Wells (G WOW) in Haryana State for monitoring the water levels. As on 31.03.2022, there were 538 Ground Water Observation Wells which included 185 dug wells and 353 piezometers for monitoring unconfined, semi- confined & confined aquifers.

The district wise Ground Water Observation Wells are shown in Figure 4.1, Figure 4.3 and detail is given in Table 4.1. The density of the observation wells being monitored in the state of Haryana is given in Table 4.2 and shown in Figure 4.2.

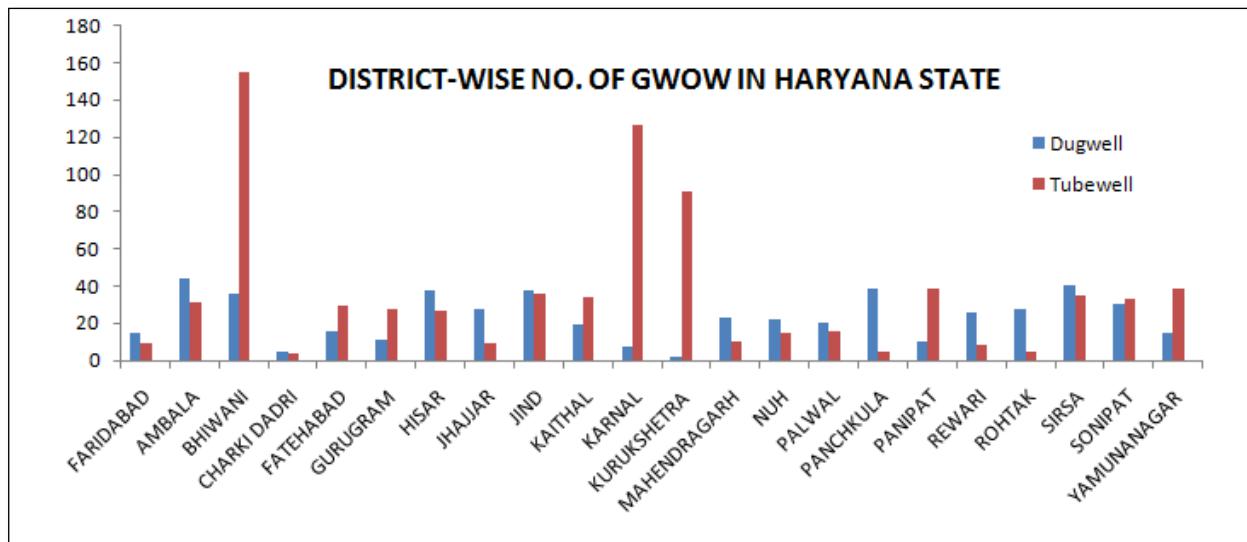


Fig 4.1: District Wise Number and type of Ground Water Observation Well

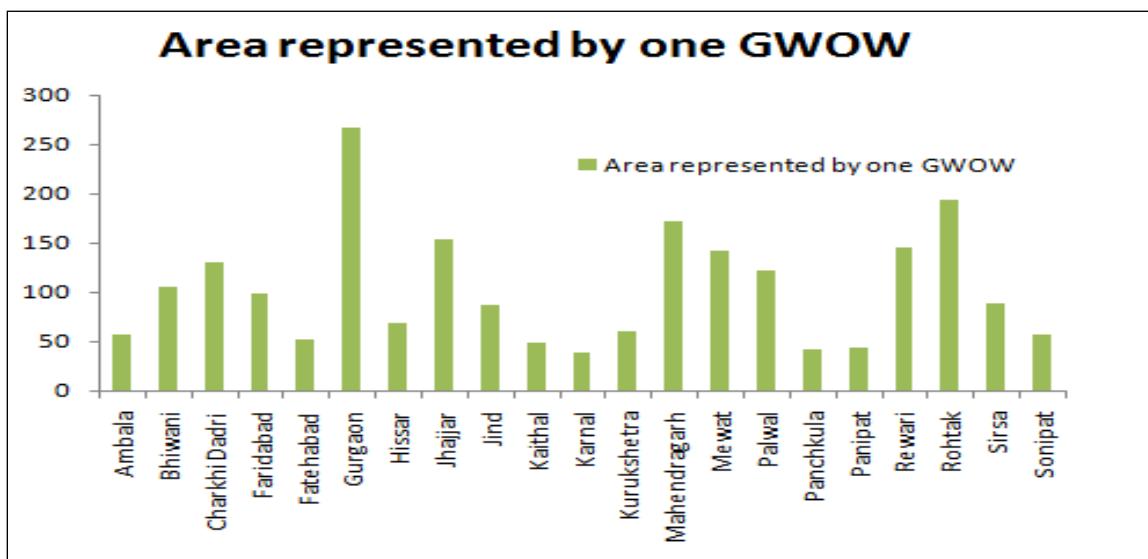


Fig 4.2: District Wise Area Represented By Single Ground Water Observation Well

Table 4.1 District wise ground water observation wells in Haryana State

S no.	DISTRICT	Total no. of GWOW (As per 31.03.2022)					
		Dug Well		Tubewell		Total	
		CGWB	State	CGWB	State	CGWB	State
1	AMBALA	10	34	16	15	26	49
2	BHIWANI	20	16	14	141	34	157
3	CHARKI DADRI	5	0	4	0	9	0
4	FARIDABAD	0	15	9	0	9	15
5	FATEHABAD	3	13	19	10	22	23
6	Gurugram	2	9	16	12	18	21
7	HISAR	18	20	24	3	42	23
8	JHAJJAR	12	16	2	7	14	23
9	JIND	7	31	20	16	27	47
10	KAITHAL	8	11	24	10	32	21
11	KARNAL	1	6	37	90	38	96
12	KURUKSHETRA	0	2	22	69	22	71
13	MAHENDRAGARH	5	18	2	8	7	26
14	NUH	7	15	9	6	16	21
15	PALWAL	3	17	16	0	19	17
16	PANCHKULA	21	18	4	1	25	19
17	PANIPAT	4	6	29	10	33	16
18	REWARI	5	21	6	2	11	23
19	ROHTAK	10	18	0	5	10	23
20	SIRSA	23	17	31	4	54	21
21	SONIPAT	13	17	25	8	38	25
22	YAMUNANAGAR	8	7	24	15	32	22
	Grand Total	185	327	353	432	538	759

Locations of monitoring wells of CGWB & State govt in Haryana state

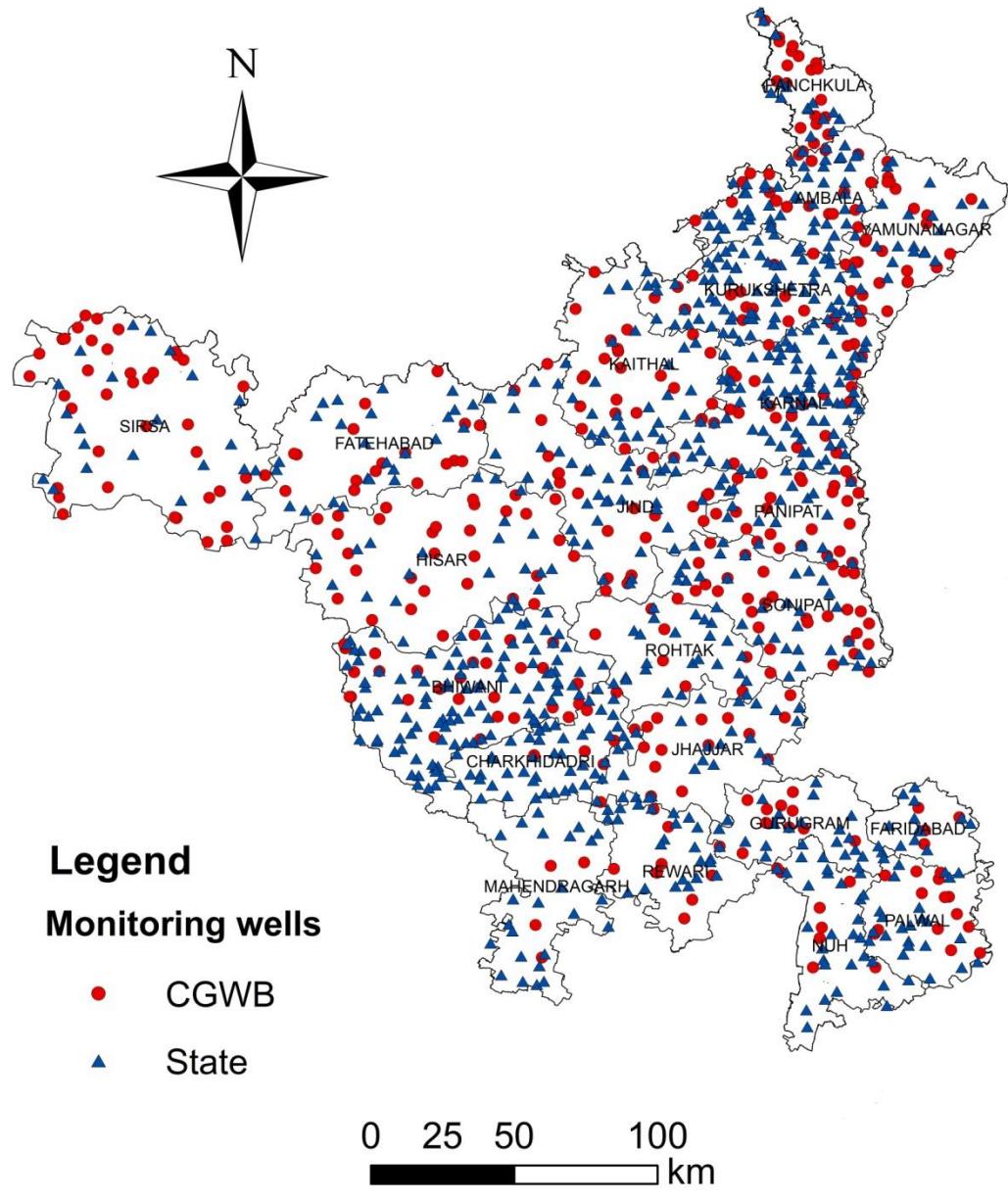


Fig 4.3: Location of Monitoring wells in Haryana State

Table 4.2 Density of ground water observation wells in Haryana State

S. No.	District	Area (Km2)	No. of GWOWs	Area represented by one GWOW
1	Ambala	1574	75	56
2	Bhiwani	3348	191	105
3	Charkhi Dadri	1430	9	130
4	Faridabad	782	24	98
5	Fatehabad	1215	45	51
6	Gurgaon	3983	39	266
7	Hissar	2702	65	69
8	Jhajjar	2317	37	154
9	Jind	2520	74	87
10	Kaithal	1530	53	49
11	Karnal	1900	134	38
12	Kurukshetra	1499	93	60
13	Mahendragarh	1367	33	171
14	Mewat	1834	37	141
15	Palwal	2538	36	121
16	Panchkula	898	44	41
17	Panipat	1268	49	44
18	Rewari	1595	34	145
19	Rohtak	1745	33	194
20	Sirsa	4277	75	89
21	Sonipat	2122	63	56
22.	Yamunanagar	1768	54	55
	Haryana State	44212	1297	82

5.0 BEHAVIOUR OF GROUND WATER LEVEL OF UNCONFINED AQUIFER

In order to assess the quantitative change in ground water resources, water levels as a routine were monitored four times June 2022, August 2022, November 2022 and January 2023 and compared with previous water level records to ascertain the change in ground water level scenario.

5.1 DEPTH TO WATER LEVEL

The behaviour of water level in all four seasons June 2022, August 2022, November 2022 and January 2023 along with maps is discussed in following paragraphs. The maximum and minimum water levels recorded in four seasons is given below Table 5.1.

Table 5.1 Range of depth to water levels during the period

Range	June 2022	August 2022	November 2022	January 2023
Minimum	0.65m bgl Baroda mor(Sonipat district)	0.04 m bgl Sohu (Hisar district)	0.04 m bgl Jhajjar (Jhajjar district)	0.09 m bgl Sohu (Hisar district)
Maximum	98.00 m bgl Kultajpur (Mahendragarh district)	88.92 m bgl Singhani-PZ (Bhiwani district)	97.00 m bgl Kultajpur (Mahendragarh district)	88.92 m bgl Singhani-PZ (Bhiwani district)

5.1.1 JUNE 2022

The behavioral pattern of water level in June 2022 along with depth to water level map (Fig.5.1) is discussed as follows:

The depth to water level during June 2022 varies from 0.65 m bgl at Baroda Mor DW in Sonipat district to 98.00 m bgl at Kultajpur in Mahendragarh District. Very shallow (0-2m) water levels conditions are observed in isolated patches in Rohtak, Jhajjar, Sonipat & Ambala districts. Around 17% wells and 1% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 16% wells and 16% area in Rohtak, Jhajjar, Bhiwani, Charkhi dadri, Hissar, Jind, Sonipat, Nuh, Sirsa, Fatehabad, Palwal, Panipat, Ambala & Panchkula districts. Moderate water levels (5-10m) occur in 18% wells covering 20% of area of the state in almost all the districts except Kurukshetra. Moderately deep water levels of 10-20m are observed in nearly 26% wells and 28% of the area falling in Panchkula, Ambala, Yamunanagar, Karnal, Sonipat, Panipat, Kaithal, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Rewari, Nuh, Palwal, Rohtak, Gurgaon and Faridabad districts. Deep water levels of (20-40m) have been recorded in 18% of wells and about 23% area in Kurukshetra, Kaithal, Karnal, Panipat, Panchkula, Ambala, Sonipat, Jind, Fatehabad, Sirsa, Bhiwani, Rewari, Charkhi Dadri,. Mahendragarh, Faridabad and Gurugram districts. Very Deep water levels (>40m) also occur in 5% of the wells and 12% area as isolated patches falling in Kurukshetra, Kaithal, Fatehabad, Sirsa, Bhiwani, Charkhi dadri, Rewari and Mahendragarh districts.

Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	46	17	482	1
2-5	42	16	6984	16
5-10	47	18	8695	20
10-20	70	26	12565	28
20-40	49	18	10352	23
>40	13	5	5134	12

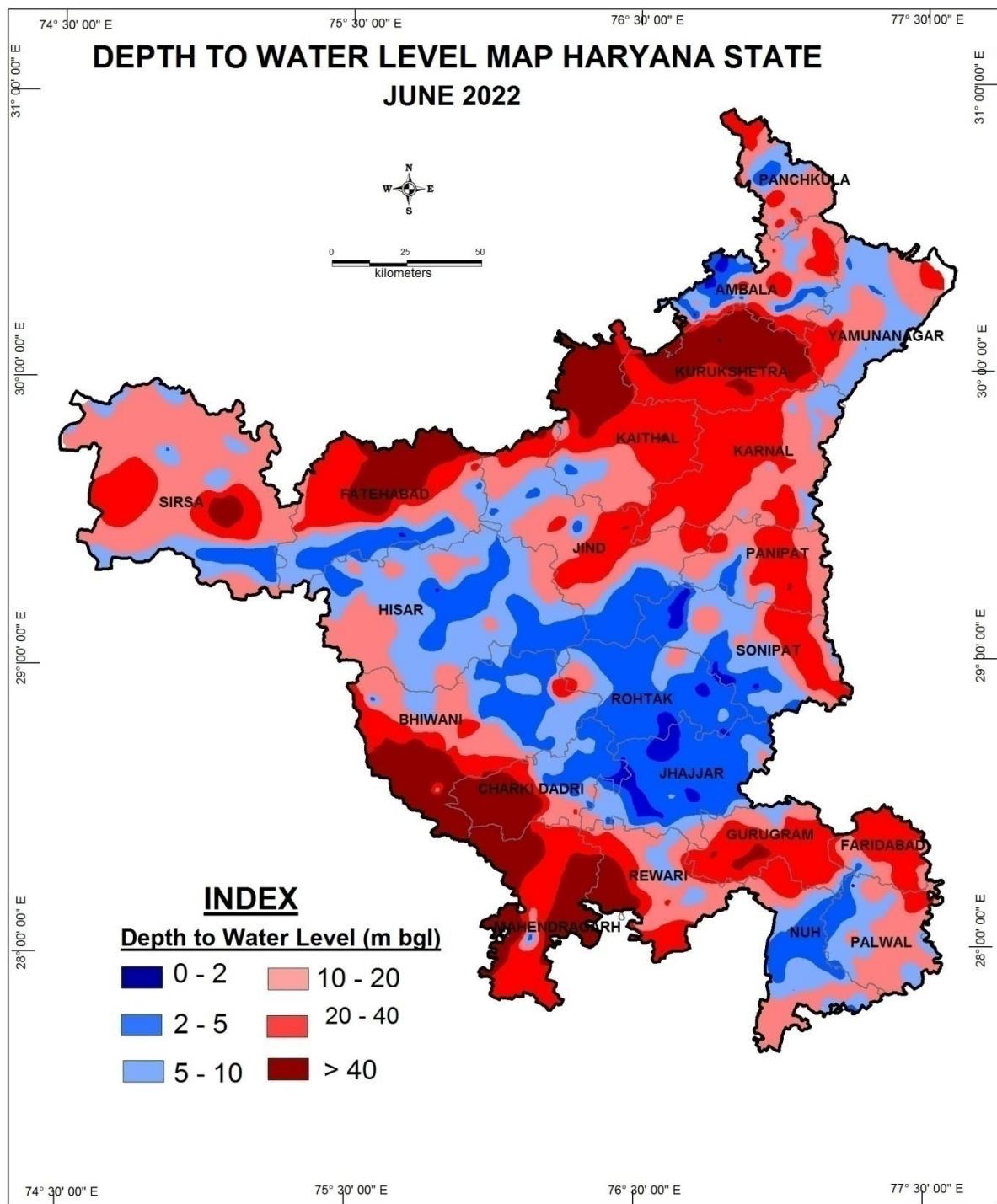


Figure 5.1 Depth to Water Level Map of Haryana State, June 2022

5.1.2 AUGUST 2022

The behavioral pattern of water level in August 2022 along with depth to water level map (Fig.5.2) is discussed below.

The depth to water level during August 2022 varies from 0.04 m bgl at Sohu in Hisar district to 88.92 m bgl at Singhani Pz in Bhiwani district. Very shallow (0-2m) water levels conditions are observed in small pockets in state majorly in Rohtak, Jhajjar, Hissar, Bhiwani & Sonipat districts. Around 4% wells and 8% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 19% wells and 17% area mainly in the central part and in few isolated patches in Sirsa, Yamunanagar, Ambala, Panchkula, Nuh, Palwal, Faridabad & Gurugram districts. Moderate water levels (5-10m) occur in 16% wells covering 20% of area of the state. Moderately deep water levels of 10-20m are observed in nearly 24% wells and 26% of the area falling in Ambala, Yamunanagar, Panchkula, Kaithal, Karnal, Sirsa, Sonipat, Panipat, Jind, Fatehabad, Hissar, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurgaon, Palwal and Faridabad districts. Deep water levels of 20-40m have been registered in 25% of wells and about 21% area reported from Kurukshetra, Kaithal, Karnal, Sonipat, Panipat Jind, Sirsa, Fatehabad, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Faridabad, Gurgaon, Yamunanagar & Ambala districts. Very Deep water levels (>40m) also occur in 10% of the wells and 8% area falling in Kaithal, Kurukshetra, Fatehabad, Sirsa, Bhiwani, Charkhi Dadri & Mahendragarh districts.

Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	44	4	3387	8
2-5	191	19	7549	17
5-10	160	16	8908	20
10-20	241	24	11450	26
20-40	251	25	9271	21
>40	99	10	3647	8

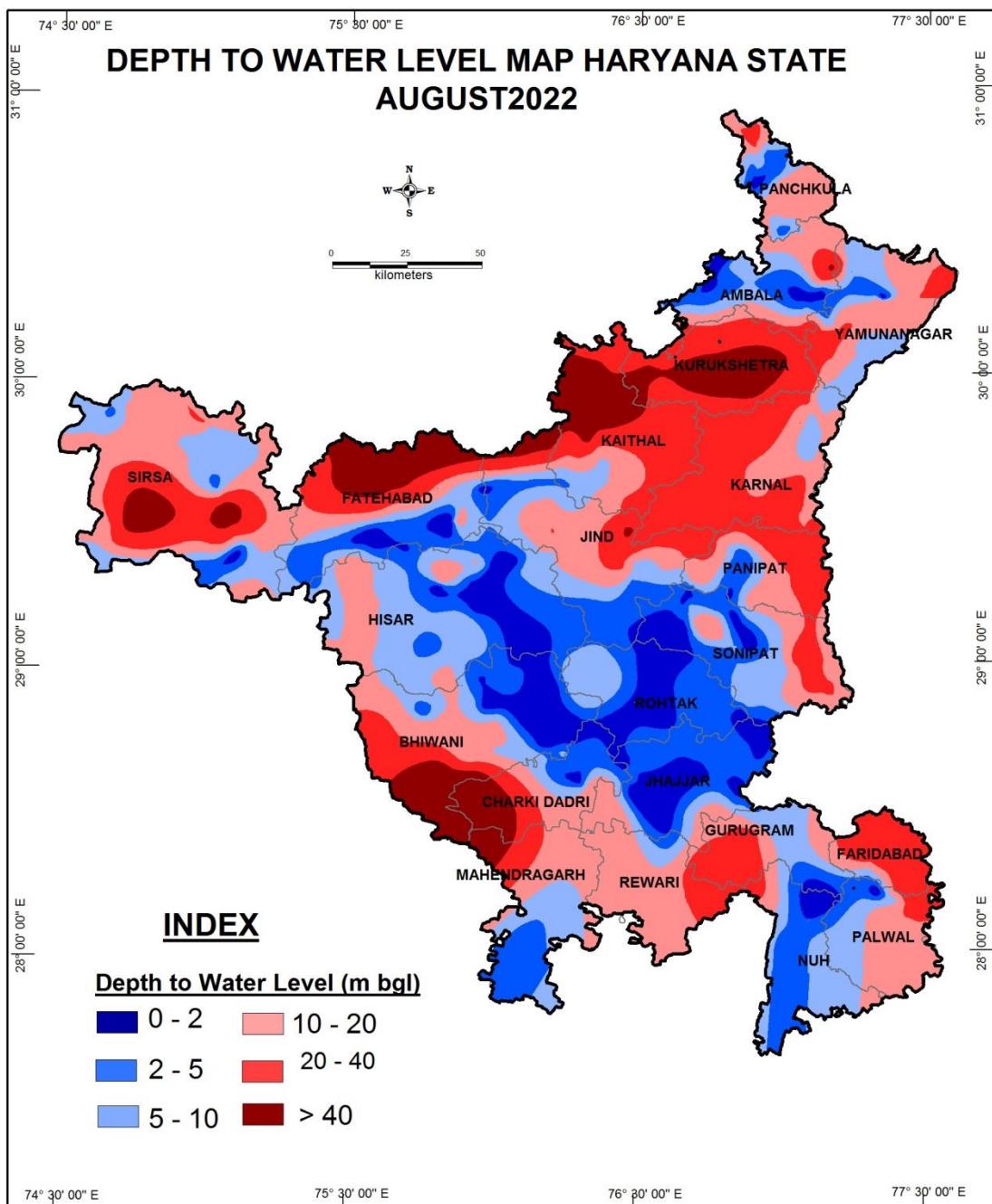


Figure 5.2 Depth to Water level Map Haryana State, August 2022

5.1.3 NOVEMBER 2022

The behavioral pattern of water level in November 2022 along with depth to water level map (Fig.5.3) is discussed below.

The depth to water level during November 2022 varies from 0.04 m bgl at Jhajjar in Jhajjar district to 97.00 m bgl at Kultajpur in Mahendragarh District. Very shallow (0-2m) water level conditions are observed in isolated patches in Jhajjar, Rohtak & Hissar districts. 10% wells and 6% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 18% wells and 15% area mainly in the Jhajjar, Rohtak, Hisar, Bhiwani & also in Nuh, Palwal, Jind, Sirsa, Fatehabad, Panchkula, Ambala & Yamunanagar districts. Moderate water levels (5-10m) occur in 14% wells covering 17% of area of the state. Moderately deep water levels of 10-20m are observed in nearly 22% wells and 27% of the area falling in Sirsa, Fatehabad, Kaithal, Karnal, Jind, Bhiwani, Rewari, Nuh, Palwal, Ambala, Yamunanagar, Panchkula, Sonipat & Panipat districts. Deep water levels of (20-40m) have been recorded in 25% of wells and about 23% area in Kurukshetra, Kaithal, Karnal, Sonipat, Panipat, Fatehabad, Sirsa, Gurugram, Faridabad, Bhiwani, Rewari, Mahendargarh, Ambala, Yamunanagar, districts. Very Deep water levels (>40m) also occur in 11% of the wells and 11% area as isolated patches falling in Kurukshetra, Kaithal, Fatehabad, Sirsa, Mahendargarh, Bhiwani, Charkhi Dadri districts.

Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	91	10	2504	6
2-5	176	18	6840	15
5-10	133	14	7596	17
10-20	207	22	12085	27
20-40	244	25	10197	23
>40	106	11	4990	11

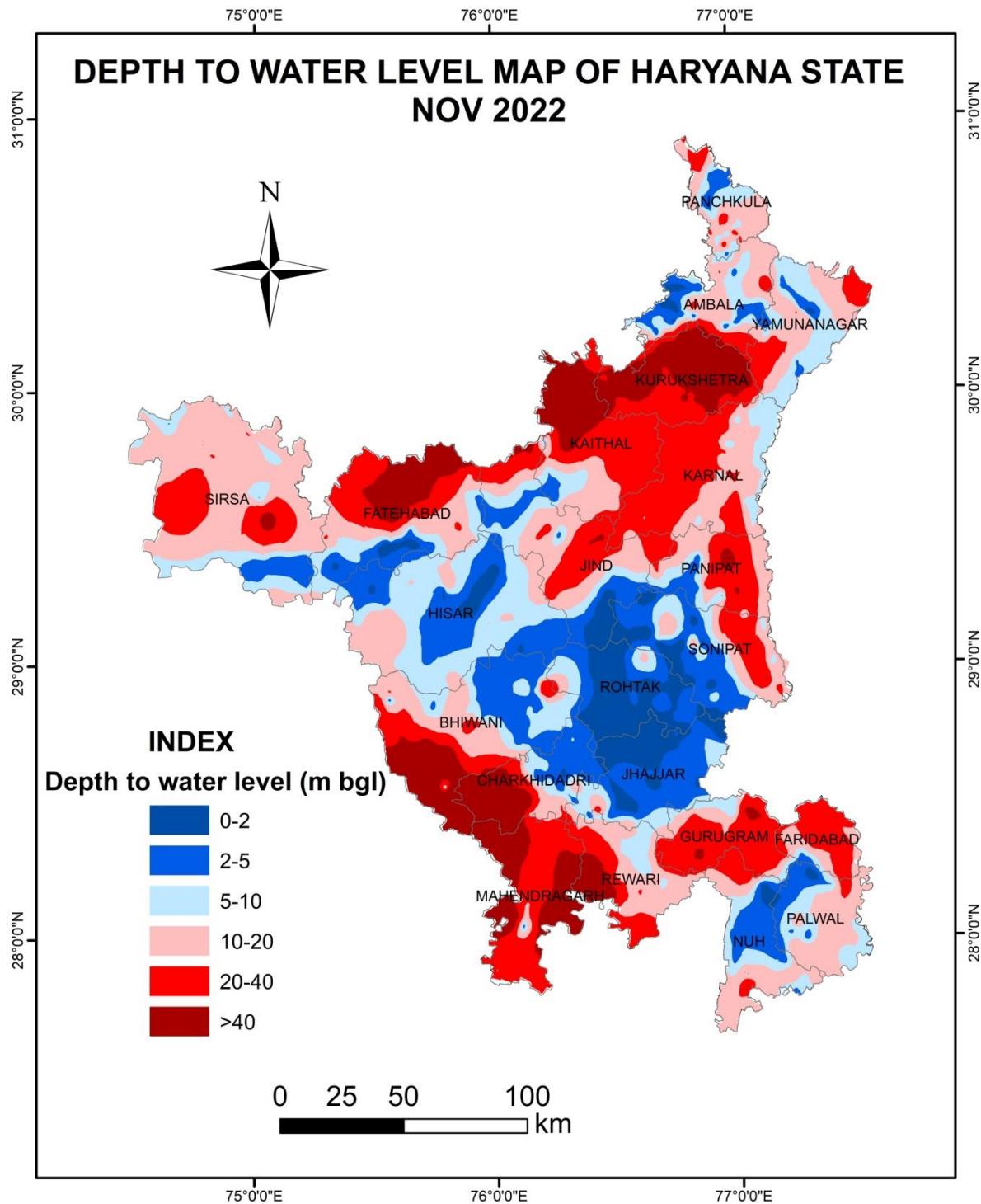


Figure 5.3 Depth to Water Level Map of Haryana State, November 2022

5.1.4 JANUARY 2023

The behavioral pattern of water level in January 2023 along with depth to water level map (Fig.5.4) is discussed below.

The depth to water level during January 2023 varies from 0.09 m bgl at Sohu in Hisar district to 88.92 m bgl at Singhani Pz in Bhiwani District. Very shallow (0-2m) water levels conditions are observed in isolated patches in Ambala, Fatehabad, Bhiwani, Hisar, Rohtak, Sonipat, Jind, Jhajjar, Nuh & Palwal districts. 14% wells and 6% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 19% wells and 16% area mainly in the central and south eastern part of the state and in few patches in Ambala, Yamunanagar, Panchkula, Fatehabad, Sirsa, Hisar, Bhiwani, Rohtak, Jhajjar, Sonipat, Jind, Nuh, Palwal & Gurgaon districts. Moderate water levels (5-10m) occur in 18% wells covering 18% of area of the state. Moderately deep water levels of 10-20m are observed in nearly 26% wells and 27% of the area falling in Panchkula, Ambala, Yamunanagar, Kaithal, Karnal, Sonipat, Panipat, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Rewari, Gurugram, Palwal, Mahendargarh, Nuh and Faridabad districts. Deep water levels of (20-40m) have been recorded in 17% of wells and about 24% area in Kurukshetra, Kaithal, Karnal, Panipat, Sonipat, Jind, Fatehabad, Sirsa, Bhiwani, Charkhi Dadri, Mahendargarh, Rewari, Faridabad and Gurgram districts. Very Deep water levels (>40m) also occur in 6% of the wells and 9% area as isolated patches falling in Kurukshetra, Kaithal, Fatehabad, Sirsa, Bhiwani, Charkhi Dadri, Rewari & Mahendargarh districts.

Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	38	14	2632	6
2-5	52	19	7109	16
5-10	51	18	8122	18
10-20	73	26	12030	27
20-40	47	17	10504	24
>40	16	6	3815	9

Depth to Water Level Map of Haryana State January 2023

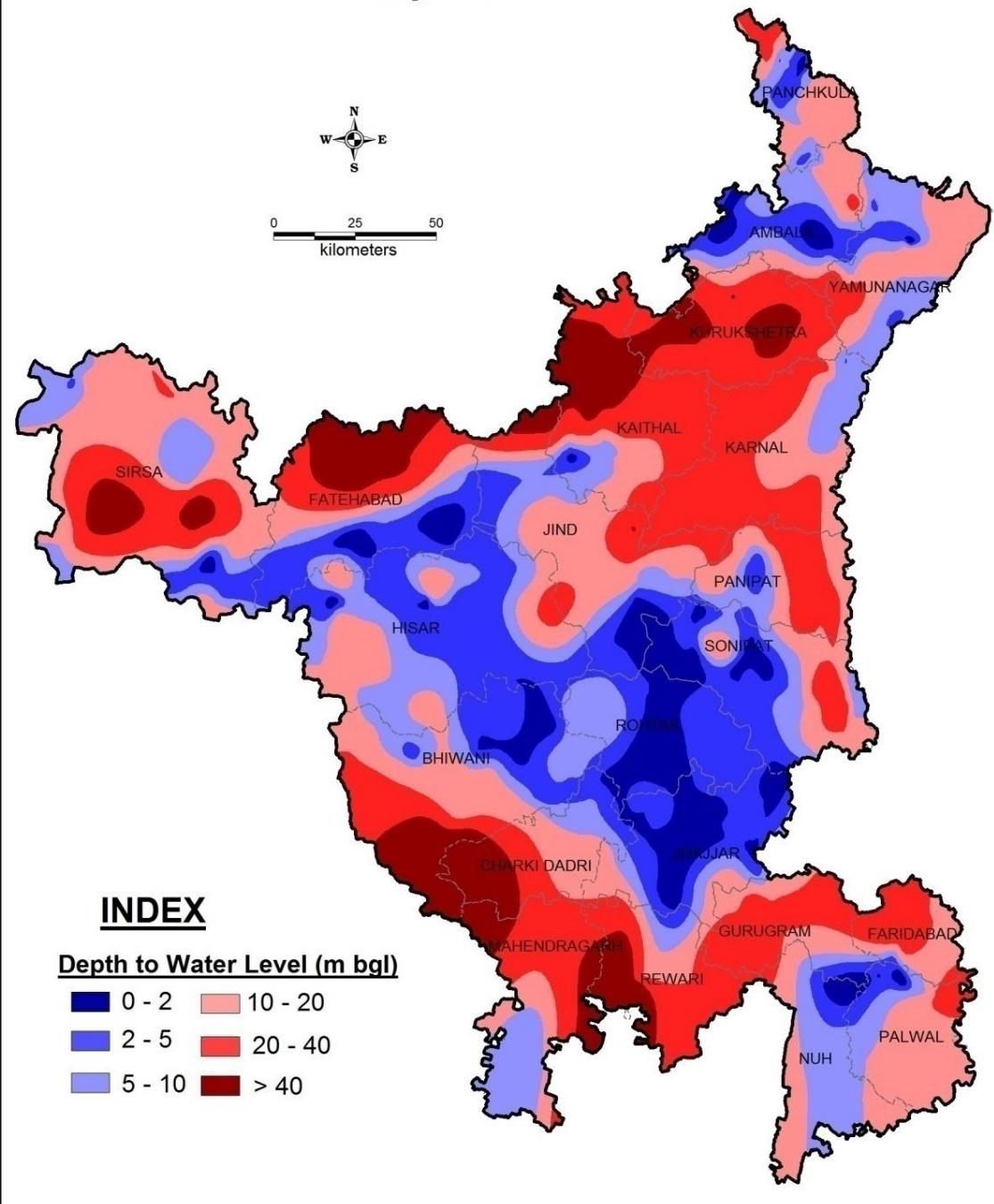


Figure 5.4 Depth to Water Level Map of Haryana State, January 2023

5.2 SEASONAL FLUCTUATIONS

The water level data of current month or monitoring period is compared with water level data of monitoring period and seasonal water level fluctuation is determined.

5.2.1 JUNE 2022 - AUGUST 2022

Water level data of August 2022 when compared with previous measurement data i.e. June 2022 is termed as seasonal water level fluctuations. The behavioral pattern of this seasonal fluctuation is discussed below. The map depicting seasonal water level fluctuations is shown in Fig.5.5.

The interpretation of seasonal fluctuations indicates a general decline in 38% of the wells monitored covering an area of 43% of the State. The water level decline in the range of 0-2m has been observed in 25% wells and 31% of the area in all the districts except the central districts-Rohtak and Hissar. Water level decline in range of 2-4m has been observed in 8% wells and 8% of the area in parts of Ambala, Panchkula, Yamunanagar, Kaithal, Kurukshetra, Karnal, Jind, Panipat, Sonipat, Bhiwani, Charkhi dadri, Mahendragarh, Rewari, Gurugram Fatehabad and Sirsa districts. Water level decline >4m is recorded in 8% wells and 4% of the area is isolated patches in Bhiwani, Charkhi dadri, Mahendragarh, Sirsa, Panipat, Karnal, and Ambala districts.

The water level Rise has been observed in 62% of the wells and 57% of the area of the state. The water level rise of 0-2m has been observed in 33% of wells and 38% of area rising in all the districts except Kurukshetra. The water level Rise of 2-4m has been observed in 20% of wells and 15% of area covering parts of Sirsa, Fatehabad, Hissar, Bhiwani, Charkhi Dadri and in isolated patches of Kaithal, Jind, Sonipat, Panipat, Jhajjar, Gurugram, Nuh, Palwal, Ambala, Yamunanagar and Panchkula districts. The water level rise of >4m is recorded in 9% wells and 3% of the area in Sirsa, Bhiwani, Kaithal, Palwal & Nuh districts. Summarised details of seasonal water level fluctuation are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4.0	13	8	1827	4
	2-4	18	8	3668	8
	0-2	59	25	13658	31

Rise	0-2	77	33	16920	38
	2-4	46	20	6684	15
	>4.0	22	9	1455	3

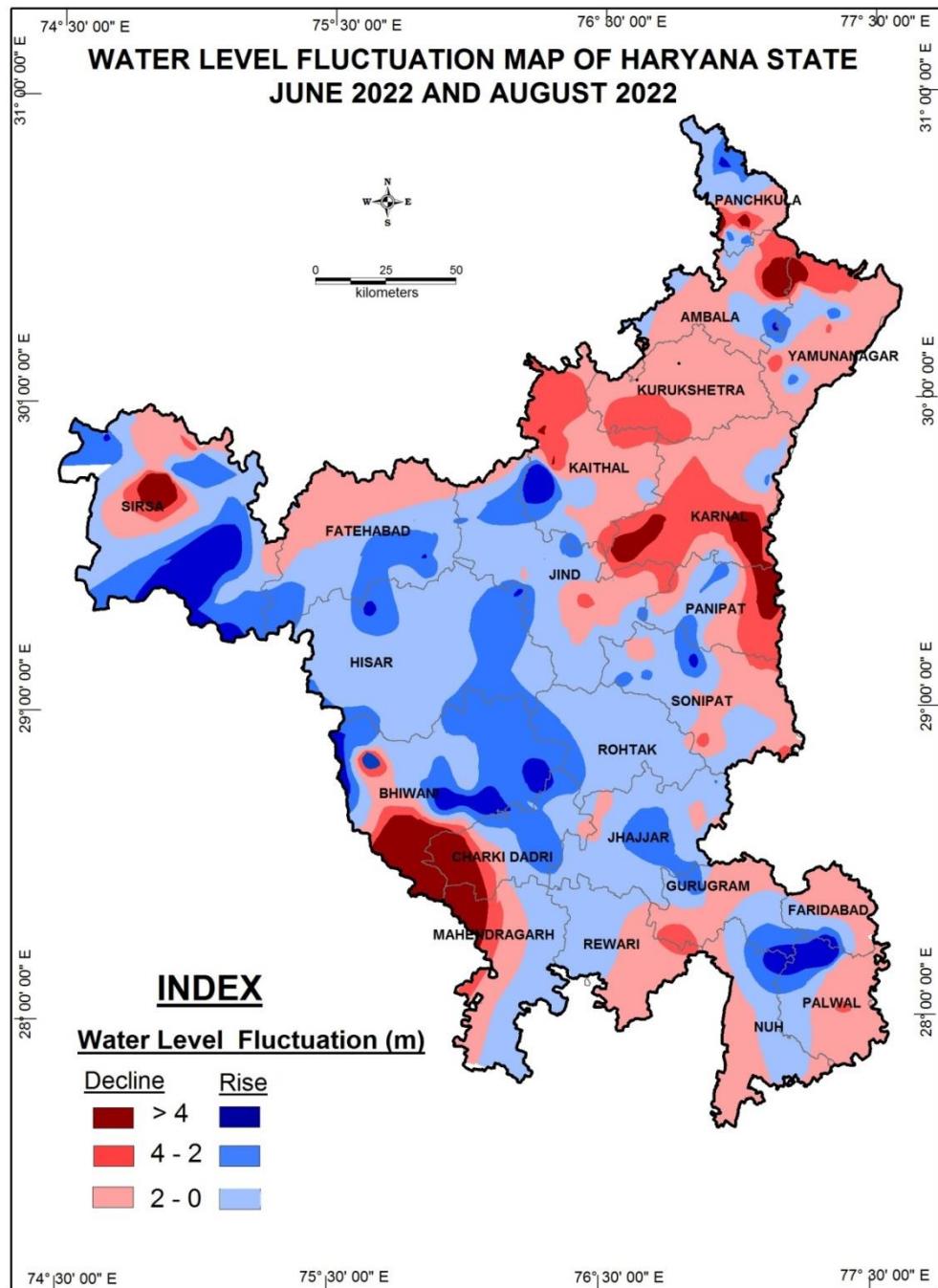


Figure 5.5 Water level Fluctuation Map Haryana State June 2022 and August 2022

5.2.2 JUNE 2022 - NOVEMBER 2022

Water level data of November 2022 when compared with previous measurement data i.e. June 2022 is termed as seasonal water level fluctuations. The behavioral pattern of this seasonal fluctuation is discussed below. The map depicting seasonal water level fluctuations is shown in Fig.5.6.

The interpretation of seasonal fluctuations indicates a general decline in 34% of the wells monitored covering an area of 31% of the State. The water level decline in the range of 0-2m has been observed in 30% wells and 28% of the state area, dominantly in Kurukshetra, Kaithal, Karnal, Jind, Panipat, and as isolated patches in Sonipat, Faridabad, Palwal, Bhiwani, Charkhi dadri, Mahendragarh, Rewari, Sirsa and Fatehabad districts. Water level decline in range of 2-4m has been observed in 3% wells and 2% of the area. Water level decline >4m is recorded in 1% wells and 1% of the area in the state in Rewari, Sirsa, Fatehabad & Panipat district.

The water level Rise has been observed in 66 % of the wells and 69% of the area of the state. The water level Rise of 0-2m has been observed in all the districts covdering 54% of wells and 60 % of area. The water level Rise of 2-4m has been observed in 8% of wells and 7% of area of the state. Water level rise >4m is recorded in 4% wells and 2% of the area in the state.

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4	9	1	228	1
	4--2	26	3	970	2
	2--0	267	30	12596	28
Rise	0--2	478	54	26399	60
	2--4	67	8	3036	7
	>4	32	4	983	2

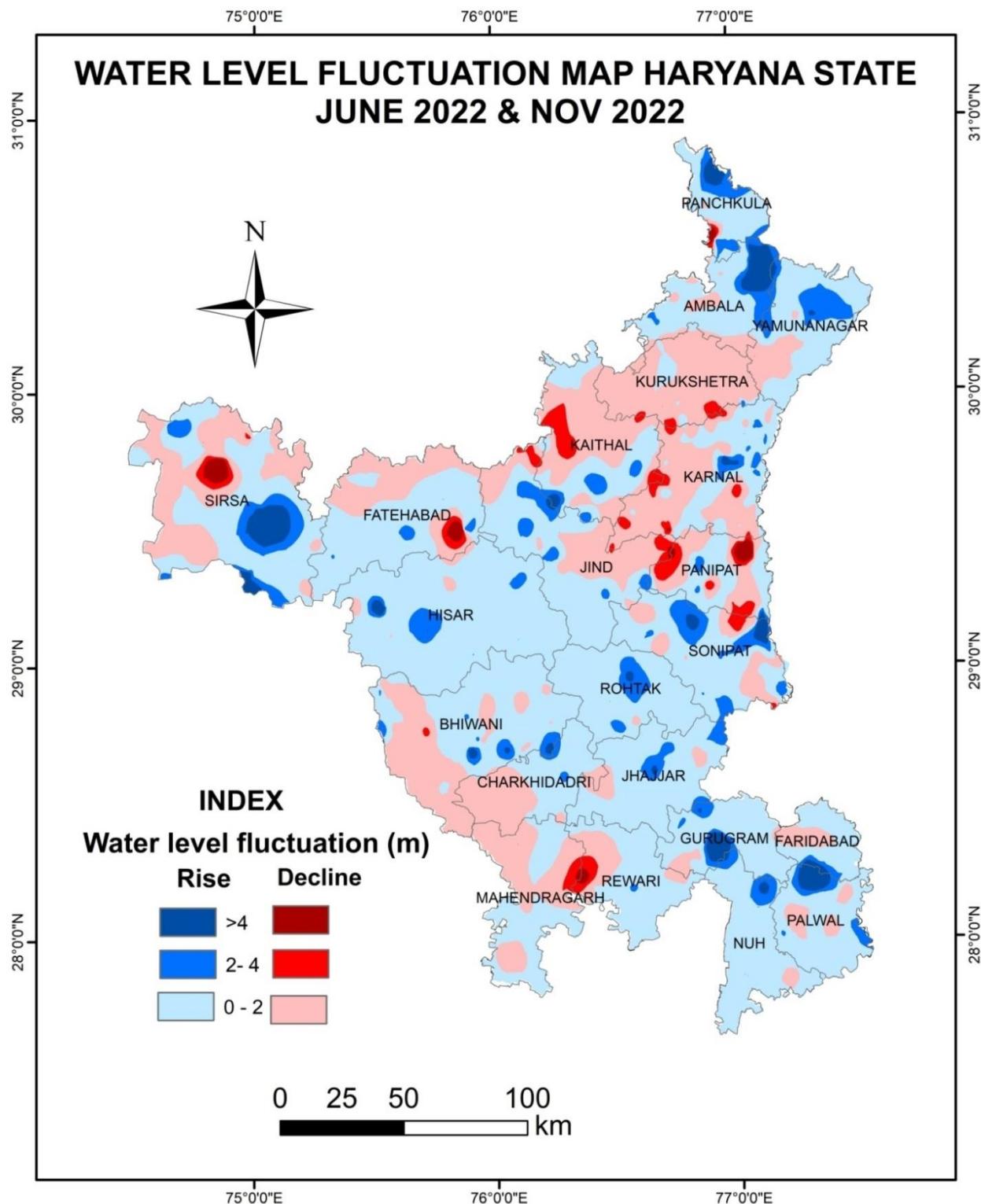


Figure 5.6 Seasonal Water Level Fluctuation Map of Haryana State (June 2022 vs November 2022)

5.2.3 JUNE 2022 - JANUARY 2023

Water level data of January 2023 when compared with previous measurement data i.e. June 2022 is termed as seasonal water level fluctuations. The behavioral pattern of this seasonal fluctuation is discussed below. The map depicting seasonal water level fluctuations is shown in Fig.5.7.

The interpretation of seasonal fluctuations indicates a general decline in 33% of the wells monitored covering an area of 34% of the State. The water level decline in the range of 0-2m has been observed in 23% wells and 24% of the state area, dominantly in Kurukshetra, Kaithal, Karnal, Fatehabad, Sirsa, Charkhi Dadri, Mahendargarh, Palwal and as isolated patches in Gurugram, Faridabad, Rewari, Rohtak, Jhajjar, Sonipat, Panipat, Jind, Hissar, Bhiwani, Panchkula, Yamunanagar & Ambala districts. Water level decline in range of 2-4m has been observed in 7% wells and 6% of the area covering isolated patches in Kaithal, Karnal, Jind, Hisar, Sirsa, Fatehabad, Bhiwani, Charkhi dadri & Mahendragarh districts. Water level decline >4m is recorded in 2% wells and 4% of the area in the state in Karnal, Sirsa, Hisar, Jind, Bhiwani, Charkhi dadri & Mahendragarh districts.

The water level rise has been observed in 67% of the wells and 66% of the area of the state. The water level rise of 0-2m has been observed in all the districts covdering 43% of wells and 49% of area. The water level rise of 2-4m has been observed in 16% of wells and 14% of area covering parts of Ambala, Panchkula, Yamunanagar, Kurukshetra, Karnal, Kaithal, Sirsa, Fatehabad, Jind, Bhiwani, Rohtak, Jhajjar, Gurugram, Faridabad, Nuh & Palwal districts. Water level rise >4m is recorded in 7% wells and 3% of the area in the state predominately in Ambala, Sirsa, Hisar, Bhiwani, Gurugram, Nuh & Palwal districts.

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km2	%Age
Decline	>4	6	2	1871	4
	4--2	17	7	2482	6
	2--0	58	23	10455	24
Rise	0--2	107	43	21776	49
	2--4	40	16	6188	14
	>4	18	7	1440	3

Water Level Fluctuation Map of Haryana State June 2022 and January 2023

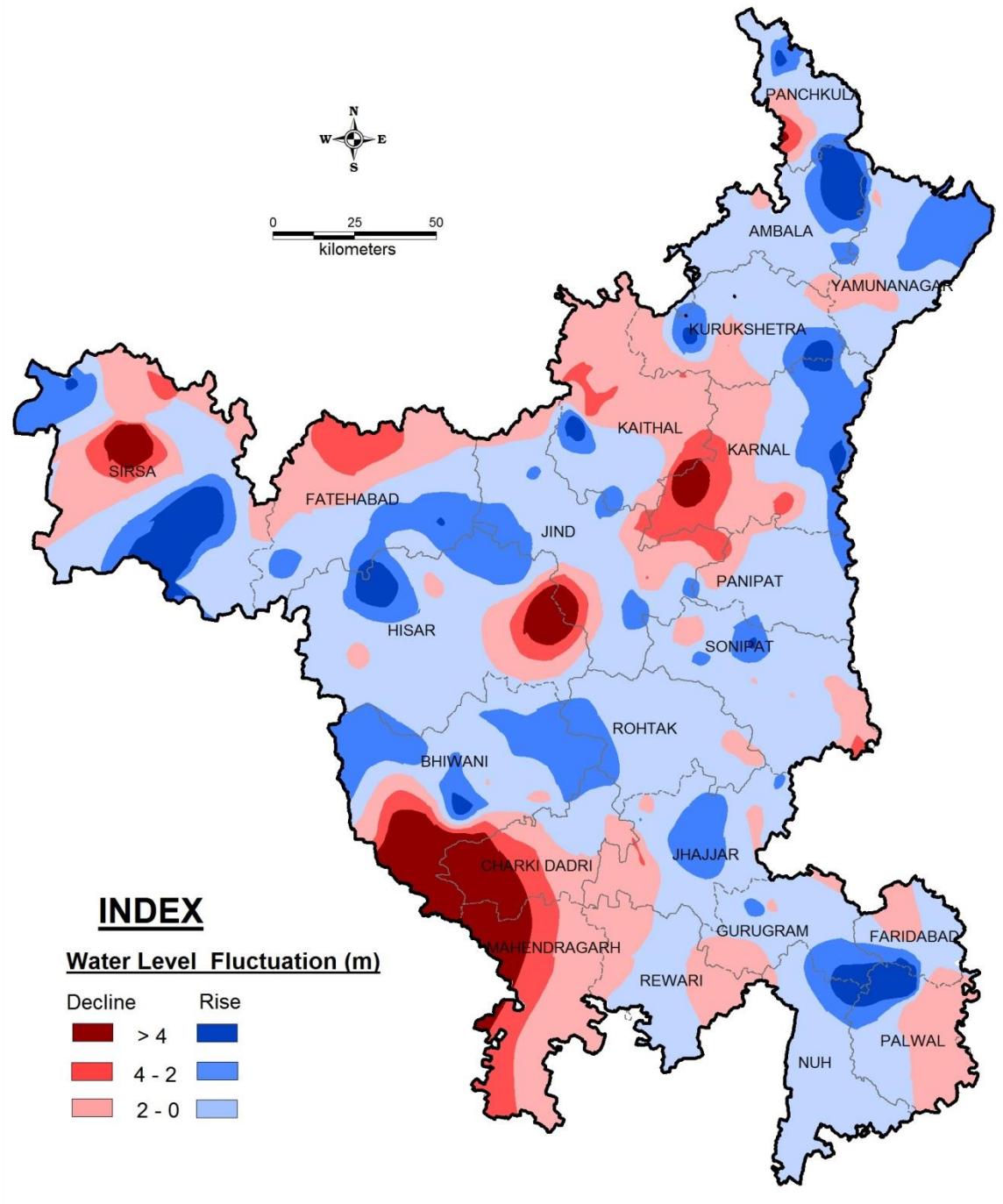


Figure 5.7 Seasonal Water Level Fluctuation Map of Haryana State (June 2022 vs January 2023)

5.3 ANNUAL WATER LEVEL FLUCTUATIONS

The water level data of current season (i.e.June2021) when compared with water level data of corresponding period of previous year (i.e. June2022) annual water level fluctuations is determined.

5.3.1 JUNE 2021 – JUNE 2022

In order to know the impact of rainfall and ground water withdrawal during last one year, annual water level fluctuations for period June 2021 and June 2022 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.5.8.

The interpretations of annual water level fluctuation depicts water level decline in about 49% of wells monitored and 51% of the area in parts of all districts of the state. Water level Decline (0-2m) has been recorded in 43% of wells and 46% of area. Water level decline (2-4m) has recorded in 4% of wells and 3% of area in isolated patches in Ambala, Panchhkula, Sirsa, Fatehabad, Kaithal, Gurugram, Faridabad, Palwal, Nuh, Bhiwani and Charkhi Dadri districts. Water level decline of more than 4m is observed in 2% of wells and 2% of area in isolated patches in Ambala, Kaithal, Sirsa, Palwal, Faridabad & Gurugram districts.

Water level rise has recorded in 51% of the wells and 49% of the area in parts of all districts of the state. Water level Rise (0-2m) has been recorded in 42% of the wells and 44% area. Water level Rise of 2-4m has been observed in small patches in 8% of wells and 4% of area. Water level Rise of more than 4m observed in 1% of wells and 1% of area in isolated patches in Yamunanagar, Ambala, Sirsa, Kurukshetra, Karnal, Kaithal, Sonipat, Panipat, Rewari & Bhiwani districts.

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4	15	2	812	2
	4-2	34	4	1336	3
	2-0	384	43	20402	46
Rise	0-2	367	42	19530	44
	2-4	70	8	1717	4
	>4	10	1	415	1

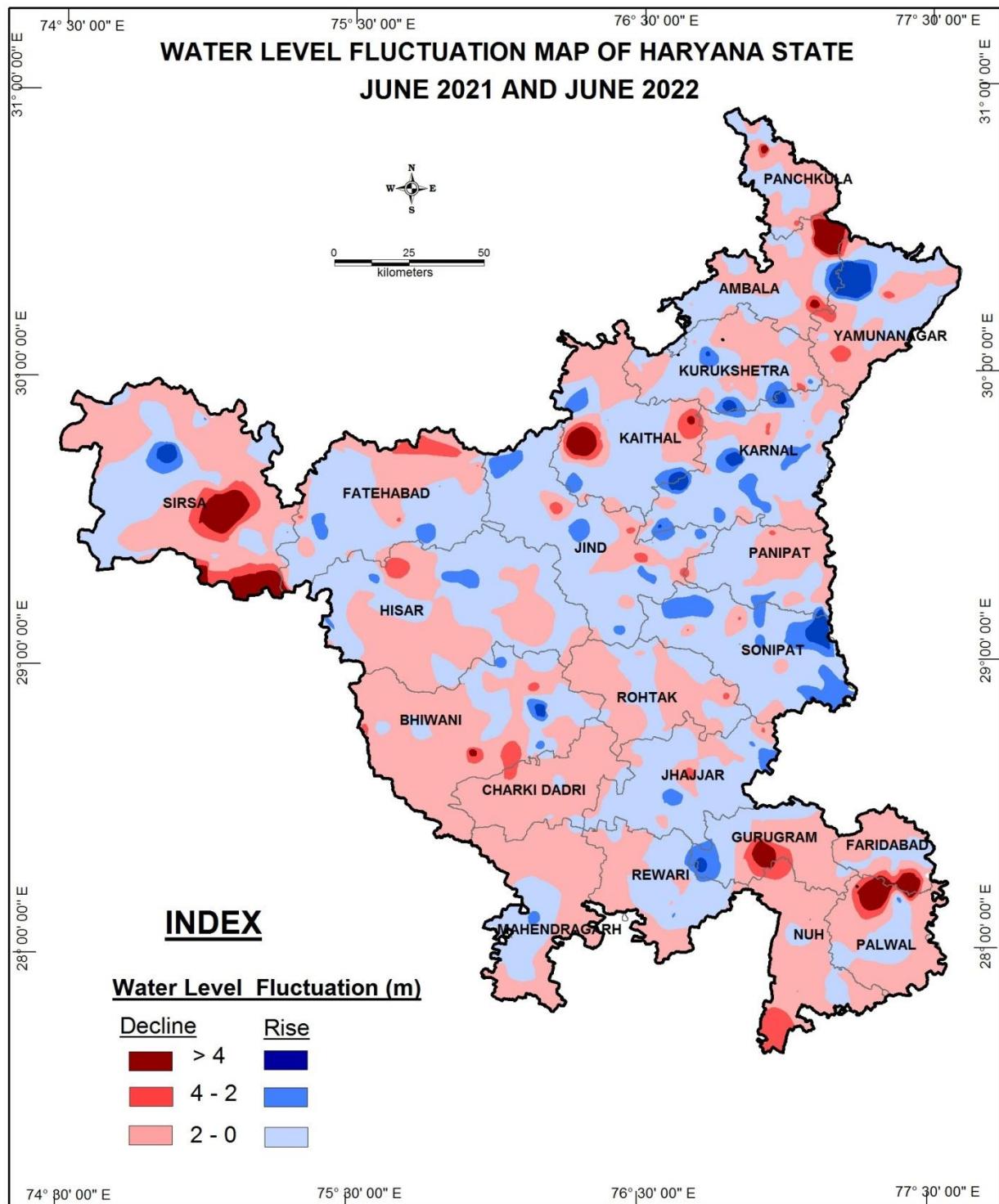


Figure 5.8 Annual Water Level Fluctuation Map of Haryana State, (June 2021 vs June 2022)

5.3.2 AUGUST 2021 – AUGUST 2022

In order to know the impact of rainfall and ground water withdrawal during last one year, annual water level fluctuations for period August 2021 and August 2022 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.5.9.

The interpretations of annual water level fluctuations depicts water level decline in about 16% of wells monitored and 21% of the area. Water level decline (0-2m) has been recorded in 10% of wells and 16% of area covering parts of Sirsa, Fatehabad, Kaithal, Karnal, Kurukshetra, Ambala, Yamunanagar, Panchkula, Panipat, Sonipat, Rohtak, Jhajjar, Jind and Palwal districts. Water level Decline (2-4m) has recorded in 4% of wells and 4% of area. Water level decline of more than 4m has recorded in 3% of wells and 1% of area as isolated patches in Kaithal, Karnal, Panipat & Sirsa during the period.

The water level rise has been recorded remaining 84% of the wells and 79% of the area. Water level Rise (0-2m) has been recorded in 45% of the wells and 49% area covering parts of all the districts. Water level Rise of 2-4m has been observed in small patches in 27% of wells and 25% of area of the state mainly in central districts and in patches of Panipat, Sonipat, Kurukshetra, Panchkula, Sirsa, Gurugram, Rewari, Faridabad, Palwal districts. Water level rise of more than 4m has been recorded in 12% of the wells and 5% area of the state in patches of Hissar, Bhiwani, Jind, Rohtak, Sirsa, Panchkula, Kurukshetra, Sonipat and Panipat districts. Summarised details of annual water level fluctuation are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Sq. Km.	%Age
Rise	>4	24	12	2334	5
	4-2	52	27	10976	25
	2-0	87	45	21734	49
Decline	>4	5	3	578	1
	4-2	7	4	1676	4
	2-0	20	10	6914	16

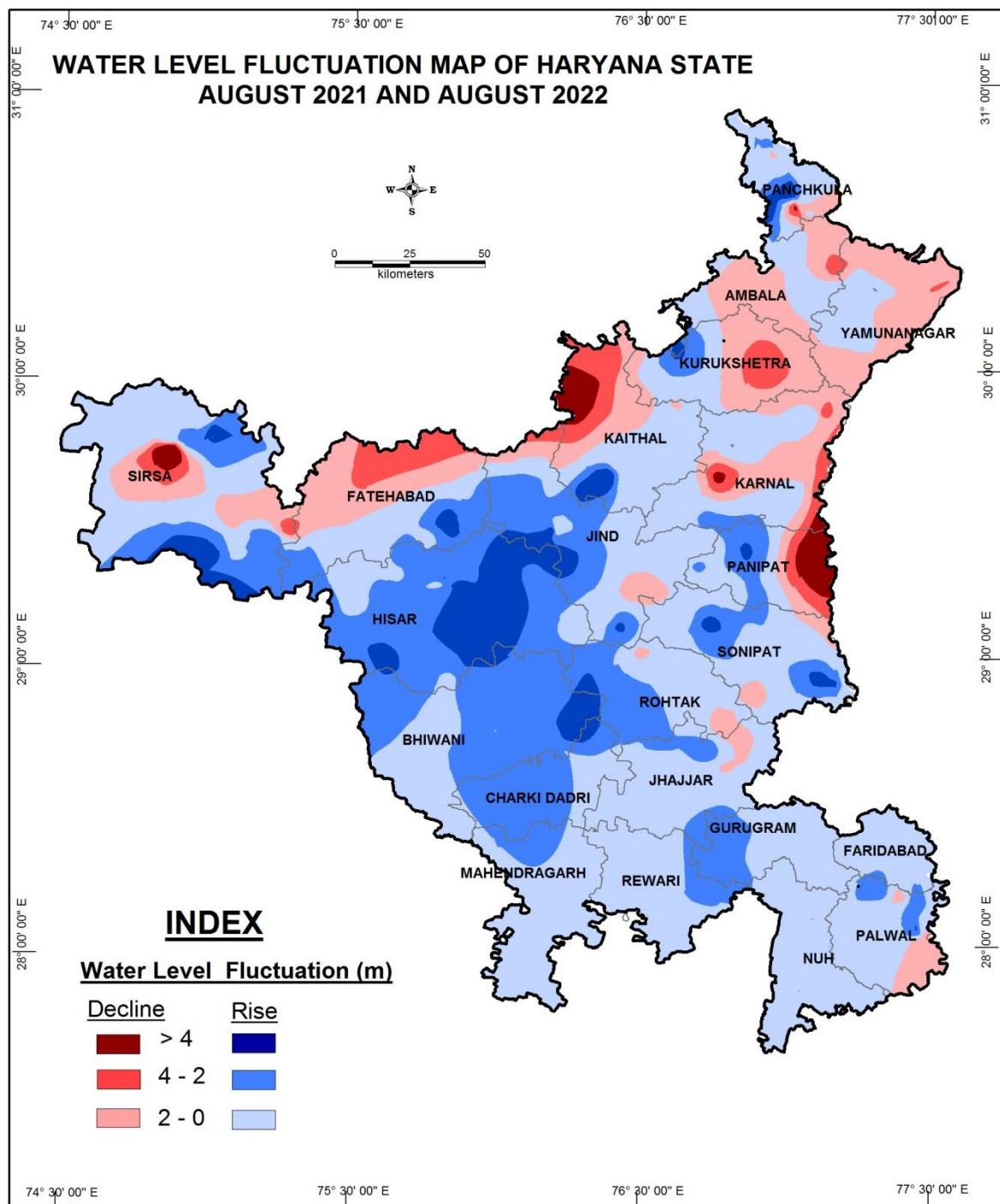


Figure 5.9 Water level Fluctuation Map Haryana State August 2021 and August 2022

5.3.3 NOVEMBER 2021– NOVEMBER 2022

In order to know the impact of rainfall and ground water withdrawal during last one year, annual water level fluctuations for period November 2021 and November 2022 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.5.10.

The interpretation of seasonal fluctuations indicates a general Decline in 46% of the wells monitored covering an area of 42% of the State. The water level decline in the range of 0-2m has been observed in 39% wells and 38% of the area of the state. Water level decline in range of 2-4m has been observed in 5% wells and 4% of the area of the state in isolated patches in Bhiwani, Charkhi dadri, Mahendragarh, Rewari, Palwal, Sirsa, Panipat districts. Water level decline >4m is recorded in 1% wells and 1% of the area is isolated patches in Sirsa, Fatehabad, Rewari, Panchkula districts.

The water level Rise has been observed in 54% of the wells and 58% of the area of the state. The water level Rise of 0-2m has been observed in 46% of wells and 54% of area rising in parts of all the districts. The water level rise of 2-4m has been observed in 6% of wells and 3% of area as isolated patches. The water level Rise of >4m is recorded in 2% wells and 1% of the area as isolated patch in Sonipat, Jind & Karnal districts. Summarised details of seasonal water level fluctuation are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4	10	1	380	1
	4--2	45	5	1590	4
	2--0	325	39	16799	38
Rise	0--2	386	46	23779	54
	2--4	51	6	1379	3
	>4	14	2	285	1

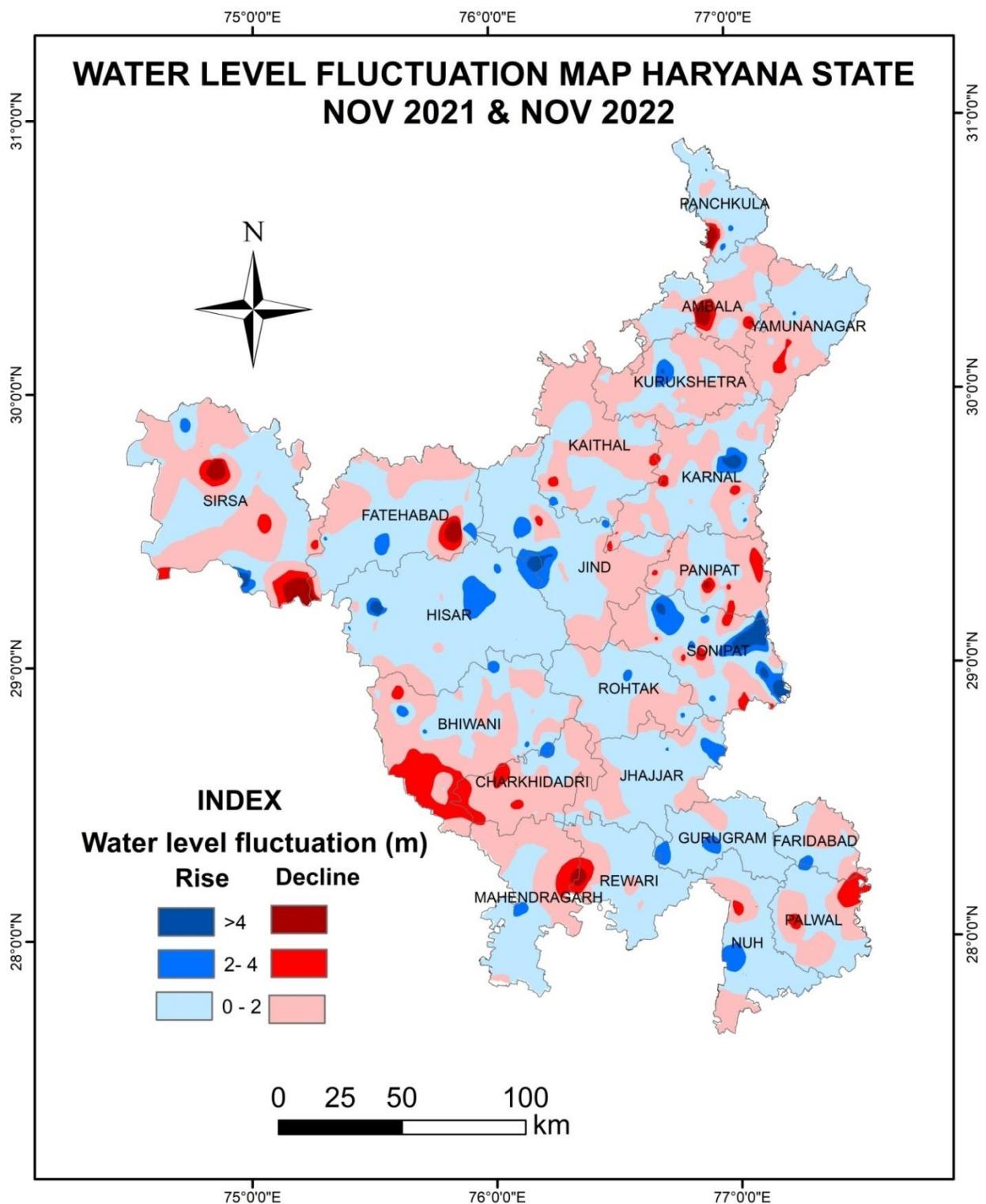


Figure 5.10 Annual Water Level Fluctuation Map of Haryana State, (November 2021 vs November 2022)

5.3.4 JANUARY 2022 - JANUARY 2023

In order to know the impact of rainfall and ground water withdrawal during last one year, annual water level fluctuations for period January 2022 and January 2023 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.5.11.

The interpretation of seasonal fluctuations indicates a general Decline in 51% of the wells monitored covering an area of 52% of the State. The water level decline in the range of 0-2m has been observed in 46% wells and 49% of the area covering parts all the districts. Water level decline in range of 2-4m has been observed in 4% wells and 2% of the area in isolated patches in Yamunanagar, Panipat, Bhiwani, Jhajjar & Palwal districts. Water level decline >4m is recorded in 2% wells and 1% of the area in isolated patches in Yamunanagar, Bhiwani, and Palwal districts.

The water level rise has been observed in 49% of the wells and 48% of the area of the state. The water level Rise of 0-2m has been observed in 42% of wells and 44% of area rising in all the districts. The water level Rise of 2-4m has been observed in 6% of wells and 3% of area as isolated patches in Fatehabad, Hisar, Sonipat, Nuh, Palwal, Bhiwani, Charkhi dadri, Mahendragarh, Gurugram, Panhkula, Ambala & Yamunanagar districts. The water level Rise of >4m is recorded in 2% wells and 1% of the area as isolated patch in Charkhi Dadri, Bhiwani, Panchkula & Gurugram district. Summarised details of seasonal water level fluctuation are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km2	%Age
Decline	>4	4	2	241	1
	4-2	9	4	897	2
	2-0	106	46	21443	49
Rise	0-2	97	42	19646	44
	2-4	13	6	1361	3
	>4	4	2	624	1

Water Level Fluctuation Map of Haryana State January 2022 and January 2023

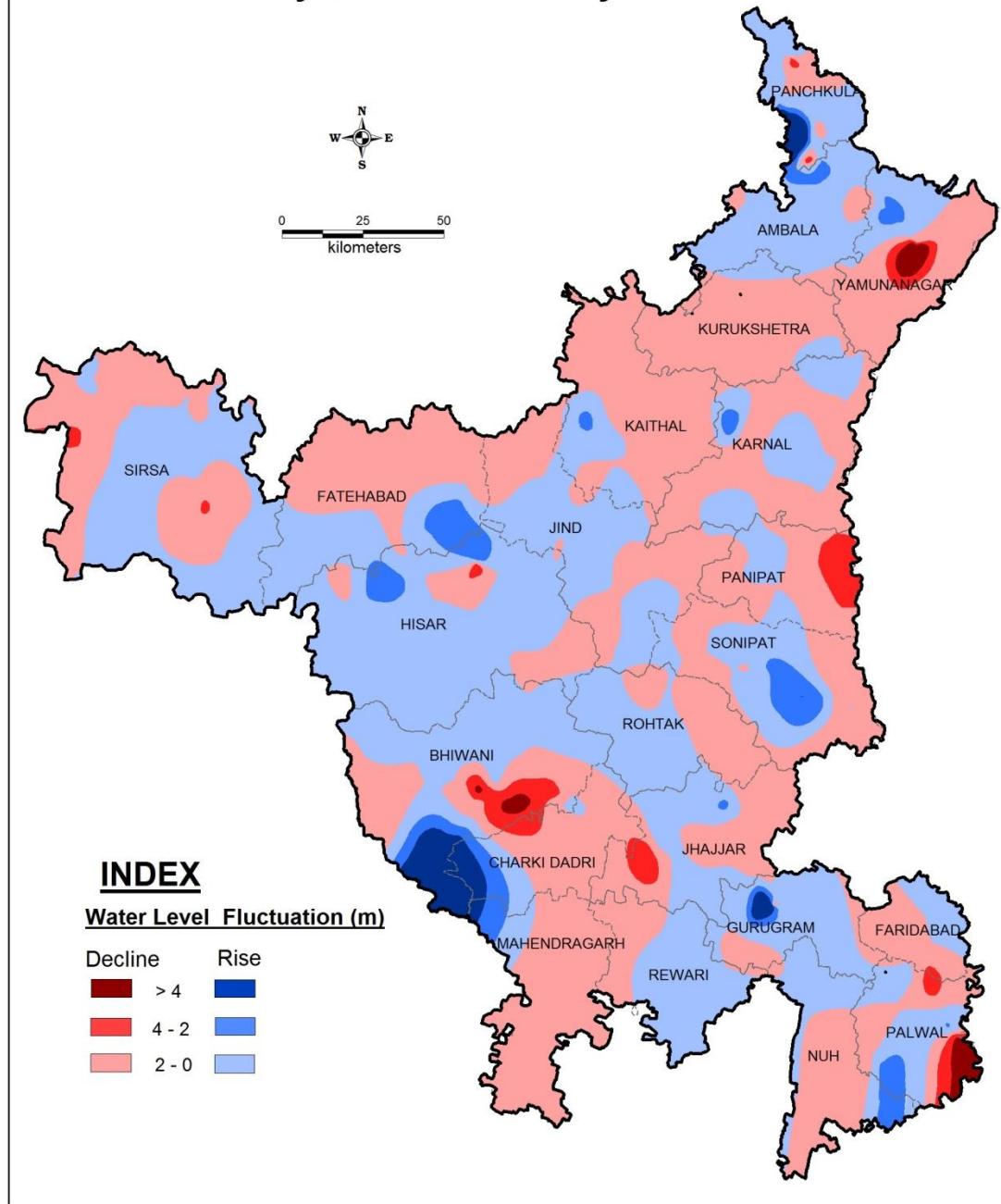


Figure 5.11 Annual Water Level Fluctuation Map of Haryana State (January 2022 vs January 2023)

5.4. DECADAL MEAN WATER LEVEL FLUCTUATION

To determine the changes in water level behaviour since last one decade have been observed using decadal mean data. Mean of Water level data of all ground water observation wells for past one decade, (June2011:2020) are computed and compared with the water level data of June2021.

5.4.1 JUNE (2012:2021) & JUNE 2022

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade (2012-2021) for each ground water observation well is computed and compared with the respective water level data of June 2022. The behaviour of water level over the period under reference is discussed in paragraph below along with Fig.5.12.

The interpretations of decadal mean fluctuations indicate water level decline in 65% of wells which covers about 55% area in parts of all districts of the State. Water level decline in the range of 0-2m has been reported from 39% of the wells covering 45% of area of the state. Water level decline between 2-4 m has been reported from 17% of wells covering 9% area of the state. Water level decline of more than 4m has been observed in 9% wells and 2% of the area of state in isolated patches in Sirsa, Kaithal, Kurukshetra, Ambala, Panchkula, Panipat, Faridabad, Palwal, Gurugram & Charkhi Dadri districts.

The water level rise has been observed in 35% of wells and 45% area in parts of all the districts. Water level rise in the range of 0-2m has been observed in 28% wells covering 38% area of the state. Water level rise between 2-4 m has been observed in small patches in 5% wells and 5% area of the state. Water level rise of more than 4m has been observed in 2% wells and 2% of the area of state. Summarised details of Decadal Mean water level fluctuation is given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4	84	9	765	2
	4--2	167	17	3979	9
	2--0	385	39	19690	45
Rise	0--2	273	28	16646	38
	2--4	52	5	2227	5

	>4	21	2	905	2
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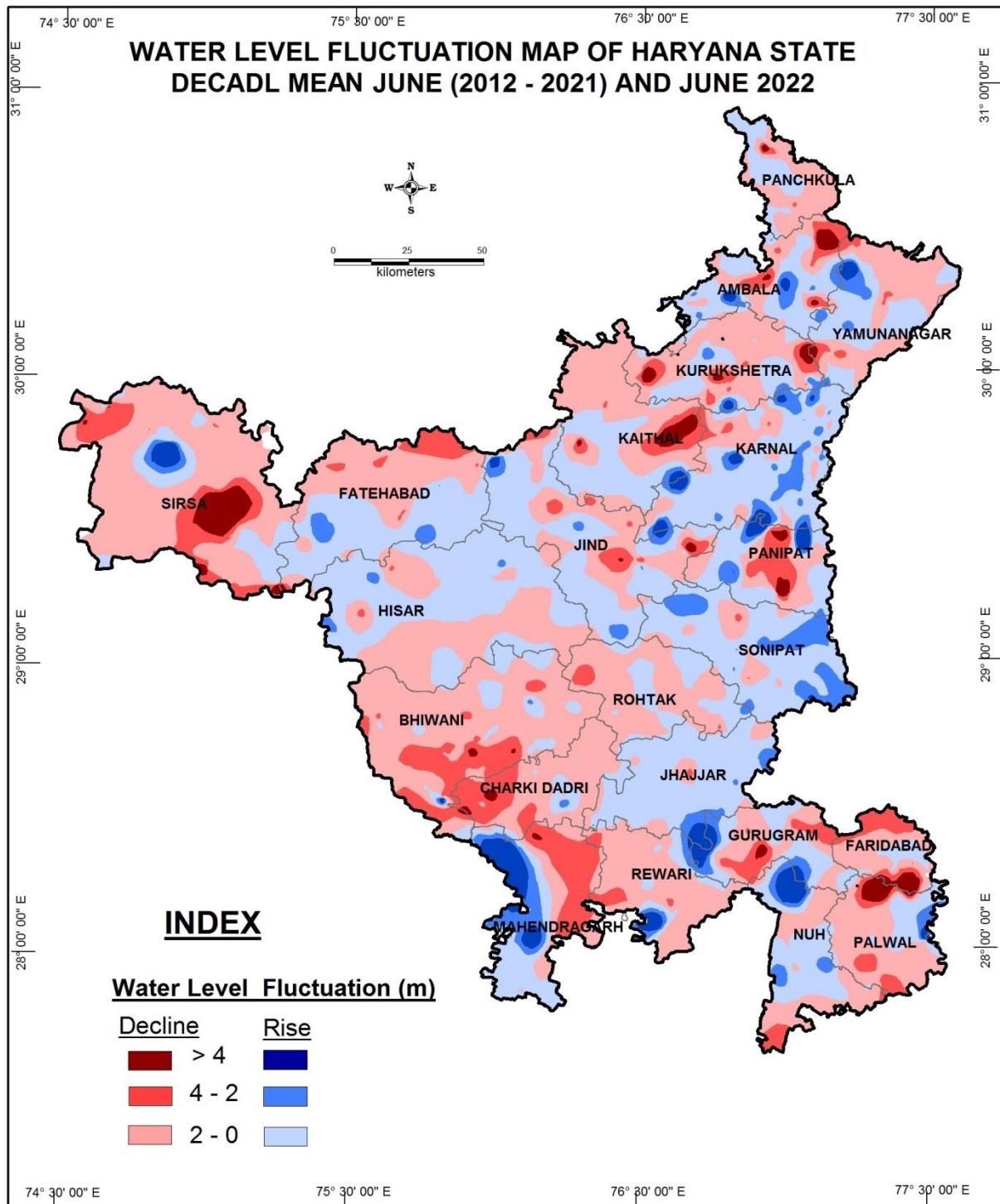


Figure 5.12 Decadal Water Level Fluctuation Map of Haryana State, (June 2012-2021 vs June 2022)

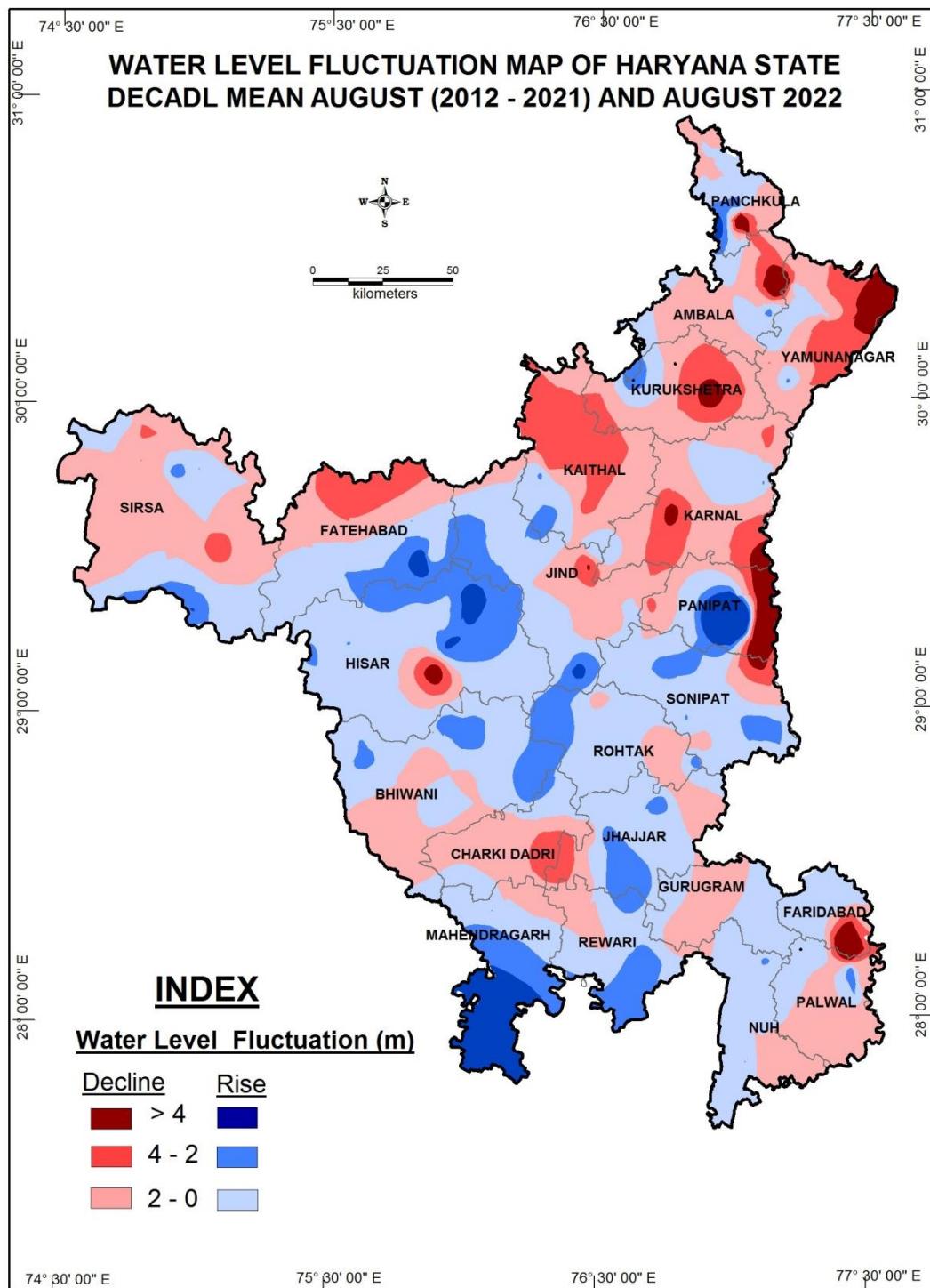
5.4.2 MEAN AUGUST (2012:2021) & AUGUST 2022

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade (2012-2021) for each ground water observation well is computed and compared with the respective water level data of August 2022. The behaviour of water level over the period under reference is discussed in paragraph below along with Fig.5.13.

The interpretations of decadal mean fluctuations indicate water level decline in 38% of wells monitored and about 45% area of the State covering all the districts. It is observed in Panchkula, Yamunanagar, Ambala, Kurukshetra, Kaithal, Karnal, Panipat, Sonipat, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Mewat, Gurgaon, Faridabad and Palwal districts. Water level decline in the range of 0-2m has been reported from 26% of the wells covering 34% of area. Water level decline between 2-4 m has been reported from 8% of wells covering 9% area of the state. Water level decline of more than 4m has been observed in 4% wells and 2% of the area of state.

The water level rise has been observed in 62% of wells and nearly 55% area in parts of all districts of state. Water level rise in the range of 0-2m has been observed in 43% wells covering 42% area of the state. Water level rise 2-4m has been observed small patches in small patches in 16% wells and 11% area of the state. Water level rise of more than 4m has been observed in 3% wells and 3% of the area of state. Summarised details of Decadal Mean water level fluctuation is given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4	10	4	889	2
	4-2	19	8	3995	9
	2-0	64	26	14966	34
Rise	0-2	106	43	18410	42
	2-4	39	16	4701	11
	>4	8	3	1251	3



**Figure 5.13 Water level Fluctuation Map Haryana State
Decadal Mean (2012-21) – August 2022**

5.4.3 Mean November (2012:2021) & November 2022

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade (2012-2021) for each ground water observation well is computed and compared with the respective water level data of November 2022. The behaviour of water level over the period under reference is discussed in paragraph below along with Fig.5.14.

The interpretations of decadal mean fluctuations so arrived at indicate general water level decline in 57% of wells and 55% area covering all districts of the State. Water level decline in the range of 0-2m has been reported from 35% of the wells covering 34% of area of the state. Water level decline between 2-4 m has been reported from 13% of wells covering 16% area of the state. Water level decline of more than 4m has been observed in 8% wells and 6% of the area of state falling in Kurukshetra, Kaithal, Panipat, Ambala, Sirsa, Fatehabad, Bhiwani, Charkhi dadri, Mahendragarh, Rewari, Gurugram & Faridabad districts.

The water level rise has been observed in 43% of wells and 45% area falling in Hissar, Rohtak, Jhajjar, Jind, Sonipat, Nuh, Yamunanagar, Panchkula districts. Water level rise in the range of 0-2m has been observed in 29% wells covering 36% area of the state. Water level rise of 2-4m has been observed in 10% wells and 7% area of the state. Water level rise of >4m has been observed in more than 4% wells and more than 1% area of the state as isolated patches. Summarised details of Decadal Mean water level fluctuation given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4	78	8	2553	6
	4--2	124	13	6627	15
	2--0	334	35	15080	34
Rise	0--2	279	29	16080	36
	2--4	96	10	3232	7
	>4	34	4	640	1

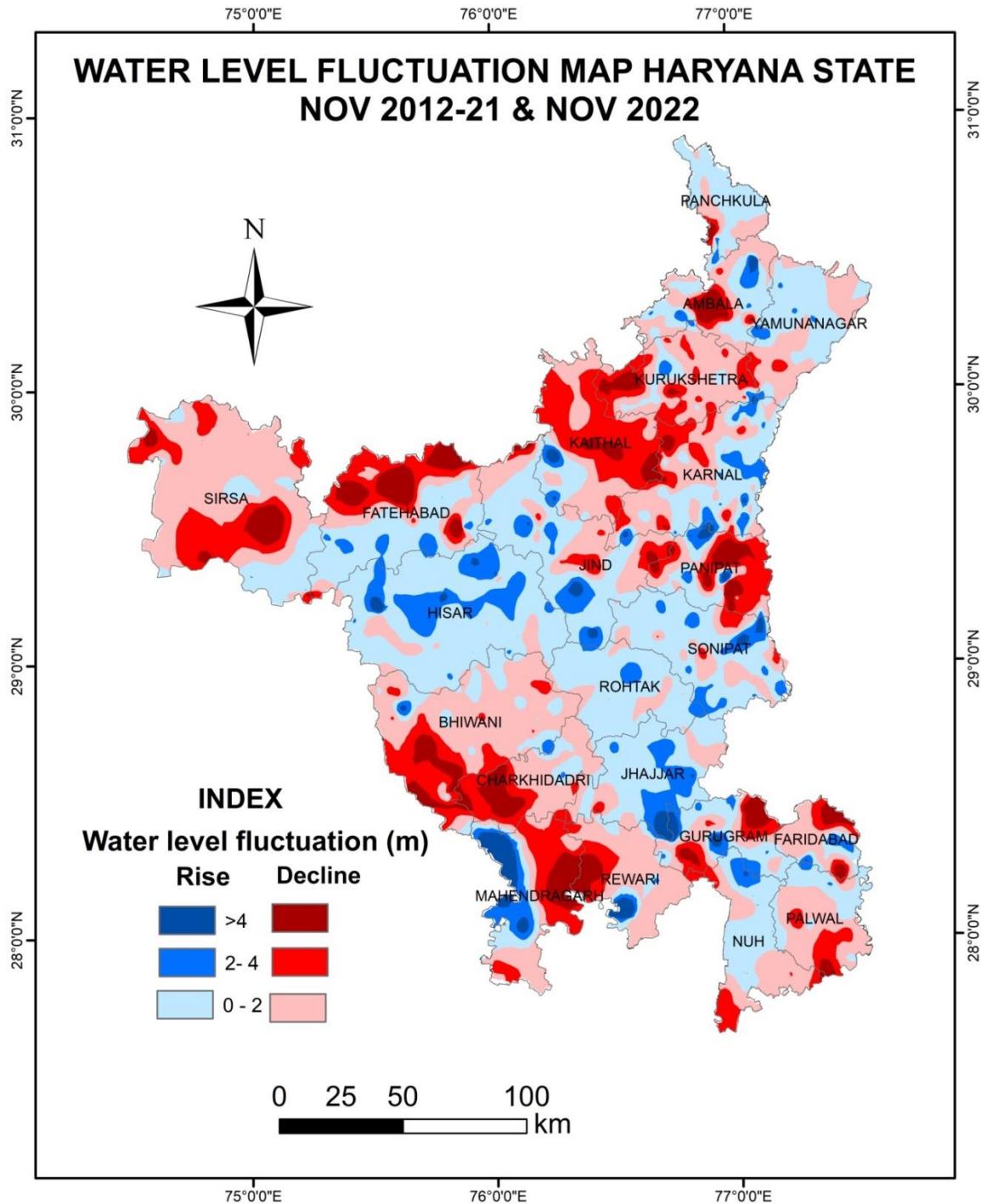


Figure 5.14 Decadal Water Level Fluctuation Map of Haryana State, Mean November (2012:2021) & November 2022

5.4.4 JANUARY (2013-2022) & JANUARY 2023

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade (2013-2022) for each ground water observation well is computed and compared with the respective water level data of January 2023. The behaviour of water level over the period under reference is discussed in paragraph below along with Fig.5.15.

The interpretations of decadal mean fluctuations so arrived at indicate general water level decline in 41% of wells and 41% area covering all Districts of the State. Water level decline in the range of 0-2m has been reported from 28% of the wells covering 28% of area of the state. Water level decline between 2-4 m has been reported from 11% of wells covering 9% area of the state. Water level decline of more than 4 m has been observed in 3% wells and 4% of the area of state falling in Kurukshetra, Fatehabad, Kaithal, Panipat, Karnal & Sirsa districts.

The water level rise has been observed in 59% of wells and 59% area falling in all the districts. Water level rise in the range of 0-2m has been observed in 44% wells covering 41% area of the state. Water level rise of 2-4m has been observed in 13% wells and 14% area of the state in parts of Panchkula, Ambala, Hisar, Fatehabad, Jind, Rohtak, Sonipat, Charkhi Dadri, Mahendragarh, Rewari, Nuh districts. Water level rise of >4m has been observed in more than 2% wells and 3% area of the state as isolated patches in Hisar, Fatehabad, Jhajjar, Charkhi dadri & Mahendargarh districts. Summarised details of Decadal Mean water level fluctuation given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered	
		No.	%Age	Km ²	%Age
Decline	>4	8	3	1578	4
	4--2	29	11	4145	9
	2--0	75	28	12571	28
Rise	0--2	118	44	18170	41
	2--4	34	13	6339	14
	>4	6	2	1409	3

Water Level Fluctuation Map of Haryana State Decadal Mean January (2013-2022) and January 2023

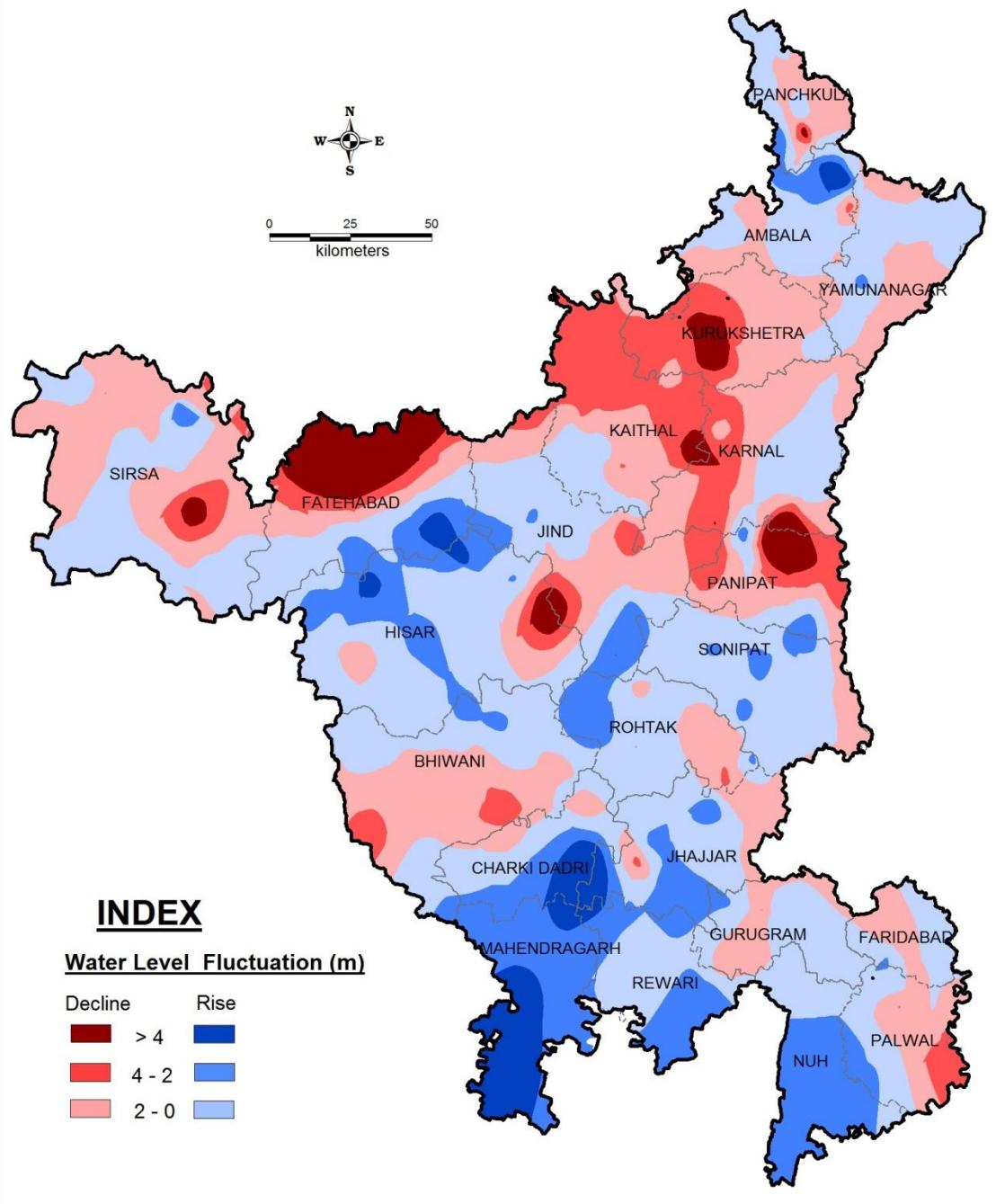


Figure 5.15 Decadal Water Level Fluctuation Map of Haryana State (January 2013-2022 vs January 2023)

6. Behaviour of water level of confined aquifer

6.1 JUNE 2022

The behavioral pattern of water level in June 2022 is discussed as follows:

The depth to water level during June 2022 varies from 2.00 m bgl at Khajuri jatti pz in Fatehabad district to 92.00 m bgl at Satnali in Mahendragarh District. Very shallow (0-2m) water levels conditions are observed in around 5% wells. Shallow water levels (2-5m) observed in 4% wells. Moderate water levels (5-10m) occur in 8% wells. Moderately deep water levels of 10-20m are observed in nearly 23% wells. Deep water levels of (20-40m) have been recorded in 30% of wells. Very Deep water levels (>40m) occur in 29% of the wells.

Depth to water level range	Wells monitored	
	No.	%age
0-2	6	5
2-5	5	4
5-10	10	8
10-20	27	23
20-40	36	30
>40	35	29

6.2 AUGUST 2022

The behavioral pattern of water level in August 2022 is discussed below.

The depth to water level during August 2022 varies from 1.61 m bgl at Khajuri jatti in Fatehabad district to 78.02 m bgl at Aharwan M in Fatehabad district. Very shallow (0-2m) water levels conditions are observed in around 6% wells which indicates water logging conditions. Shallow water levels (2-5m) observed in 3% wells. Moderate water levels (5-10m) occur in 6% wells. Moderately deep water levels of 10-20m are observed in nearly 24% wells. Deep water levels of 20-40m have been registered in 39% of wells. Very Deep water levels (>40m) also occur in 23% of the wells.

Depth to water level range	Wells monitored	
	No.	%age
0-2	4	6
2-5	2	3
5-10	4	6
10-20	17	24
20-40	27	39
>40	16	23

6.3 NOVEMBER 2022

The behavioral pattern of water level in November 2022 is discussed below.

The depth to water level during November 2022 varies from 1.31 m bgl at Sabapur S in Yamunanagar district to 92.30 m bgl at Satnali in Mahendragarh District. Very shallow (0-2m) water level conditions are observed in 3% wells which indicates water logging conditions. Shallow water levels (2-5m) observed in 5% wells. Moderate water levels (5-10m) occur in 8% wells. Moderately deep water levels of 10-20m are observed in nearly 25% wells. Deep water levels of (20-40m) have been recorded in 32% of wells s. Very Deep water levels (>40m) also occur in 27% of the wells.

Depth to water level range	Wells monitored	
	No.	%age
0-2	4	3
2-5	6	5
5-10	11	8
10-20	33	25
20-40	42	32
>40	36	27

6.4 JANUARY 2023

The behavioral pattern of water level in January 2023 is discussed as follows:

The depth to water level during June 2022 varies from 0.9 m bgl at Thurana in Hissar district to 67.61 m bgl at NH-IV- CHQ in Faridabad District. Very shallow (0-2m) water levels conditions are observed in around 2% wells. Shallow water levels (2-5m) observed in 5% wells. Moderate water levels (5-10m) occur in 12% wells. Moderately deep water levels of 10-20m are observed in nearly 24% wells. Deep water levels of (20-40m) have been recorded in 36% of wells. Very Deep water levels (>40m) occur in 21% of the wells.

Depth to water level range	Wells monitored	
	No.	%age
0-2	2	2
2-5	4	5
5-10	10	12
10-20	21	24
20-40	31	36
>40	18	21

7. Long term hydrographs

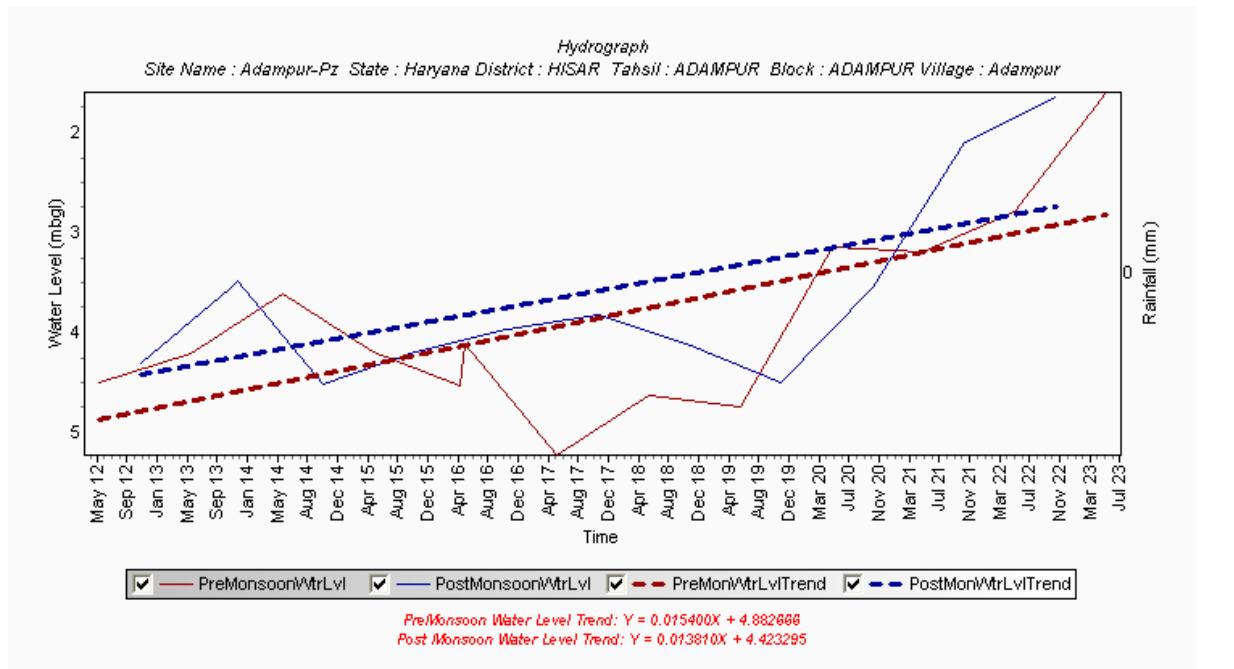


Figure 7.1 Site Adampur pz, District Hisar, Haryana

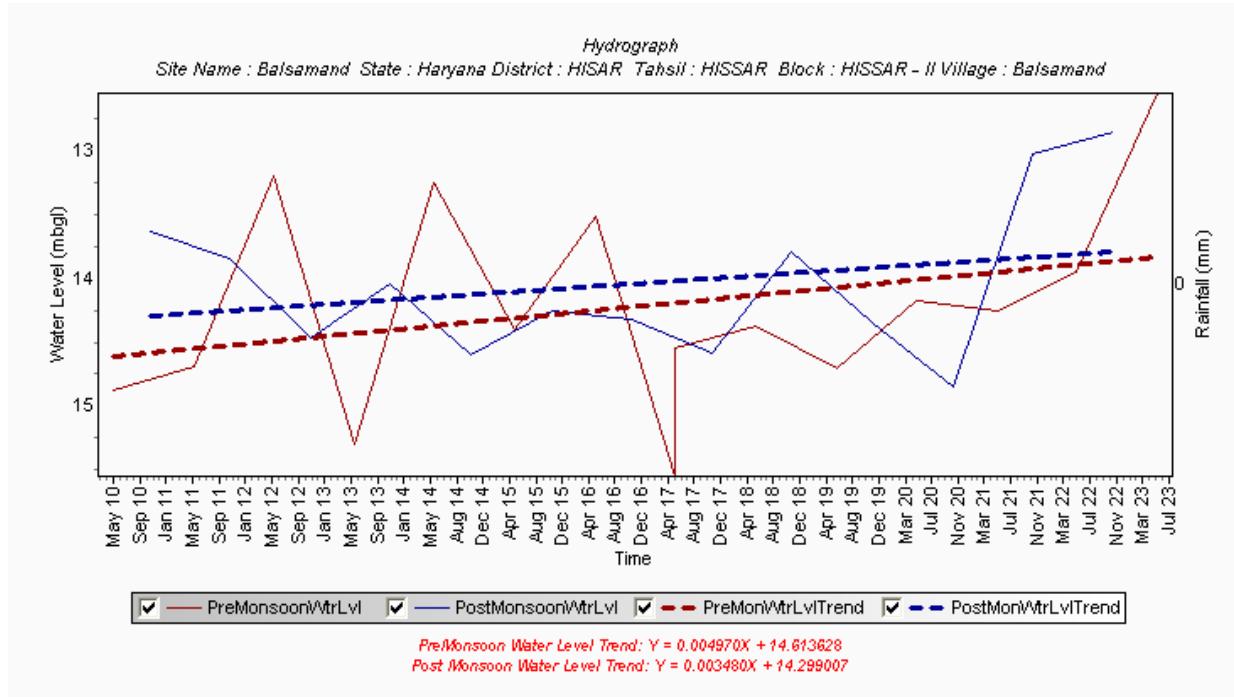


Figure 7.2 Site Balsamand, District Hisar, Haryana

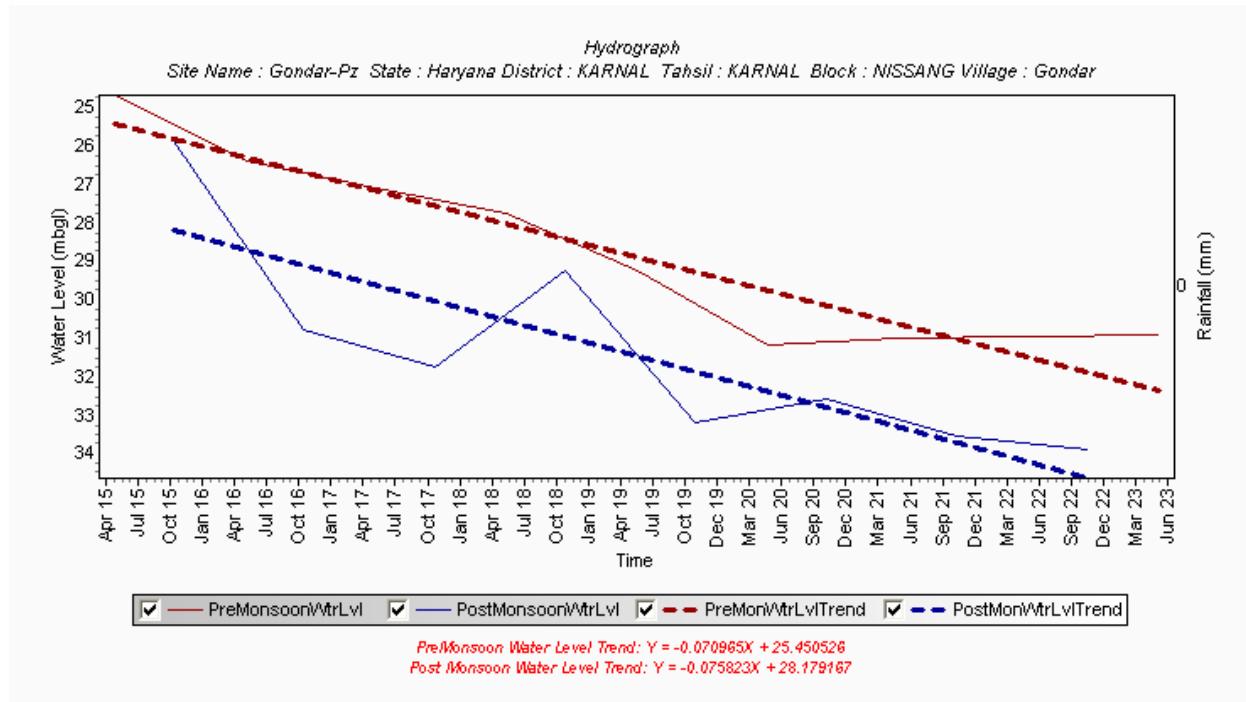


Figure 7.3 Site Gondar pz, District Karnal, Haryana

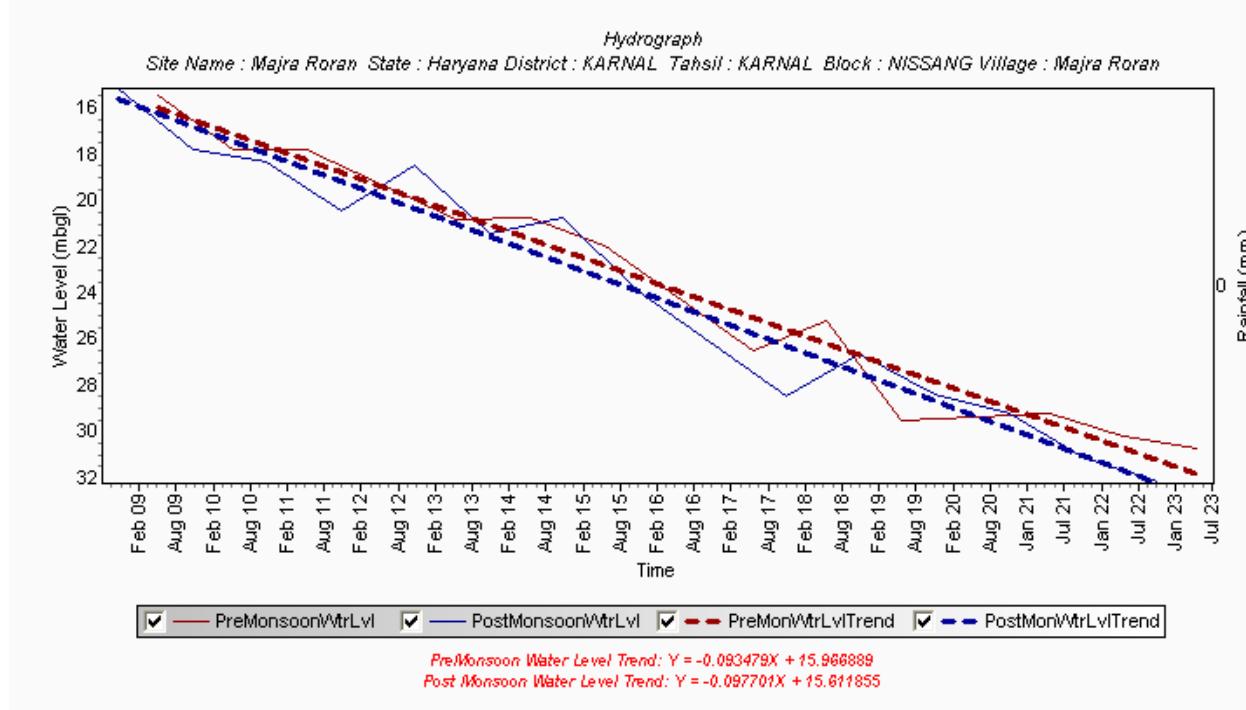


Figure 7.4 Site Majra roran, District Karnal, Haryana

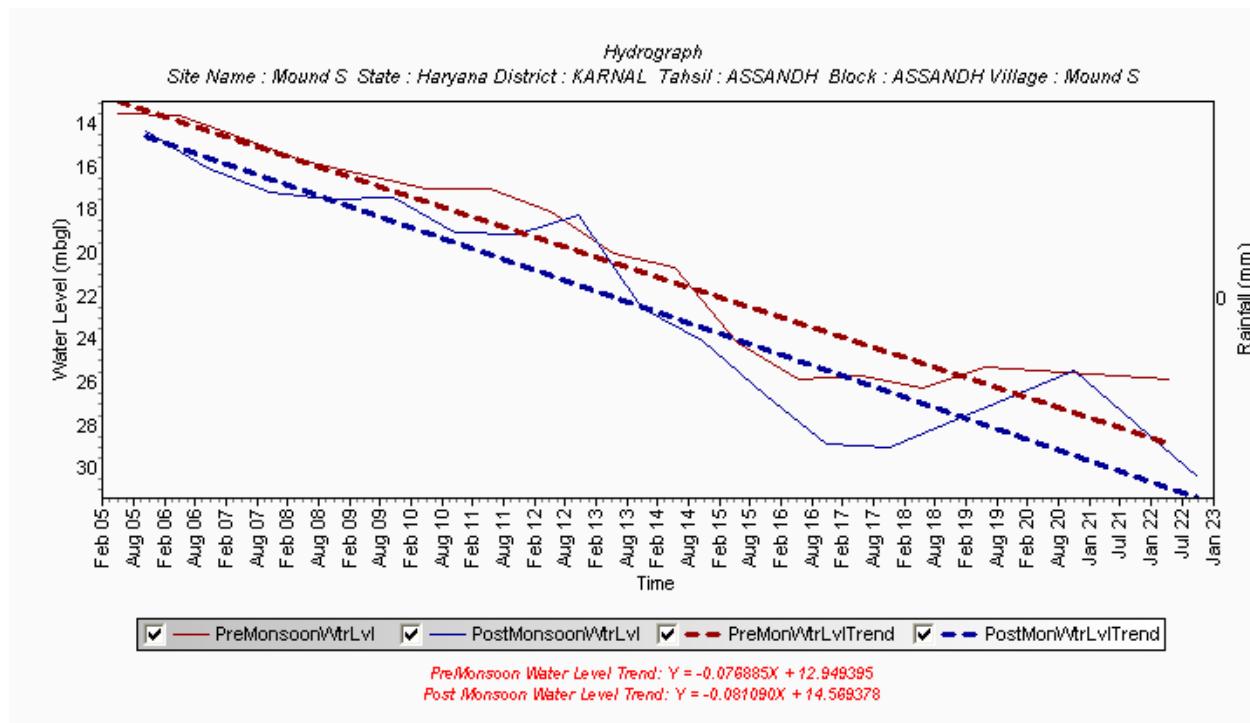


Figure 7.5 Site Mound S, District Karnal, Haryana

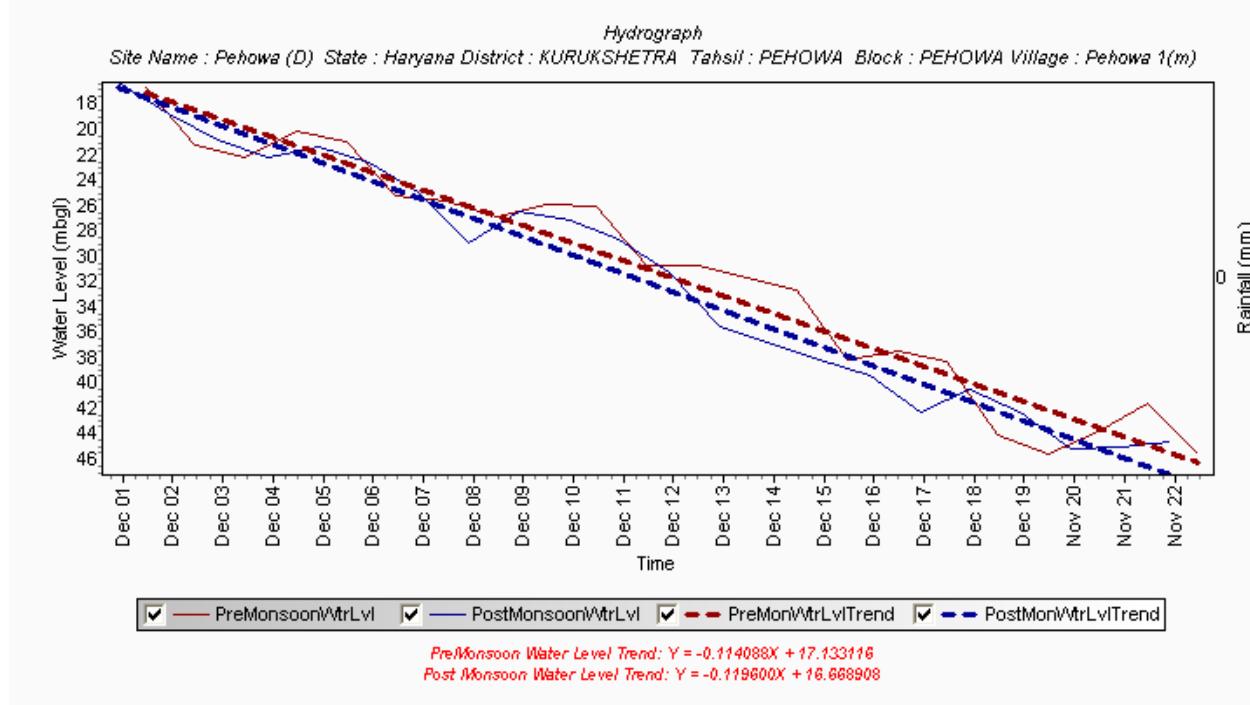


Figure 7.6 Pehowa D, District Kurukshetra, Haryana

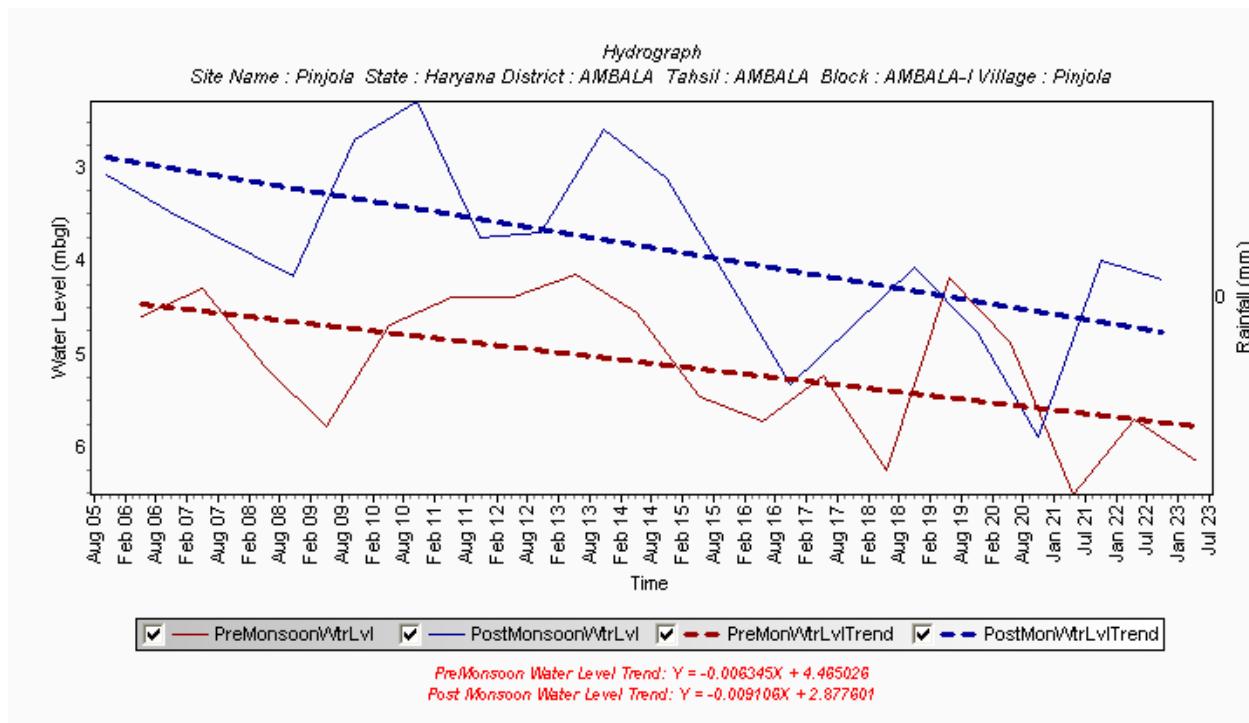


Figure 7.7 Site Pinjola, District Ambala, Haryana

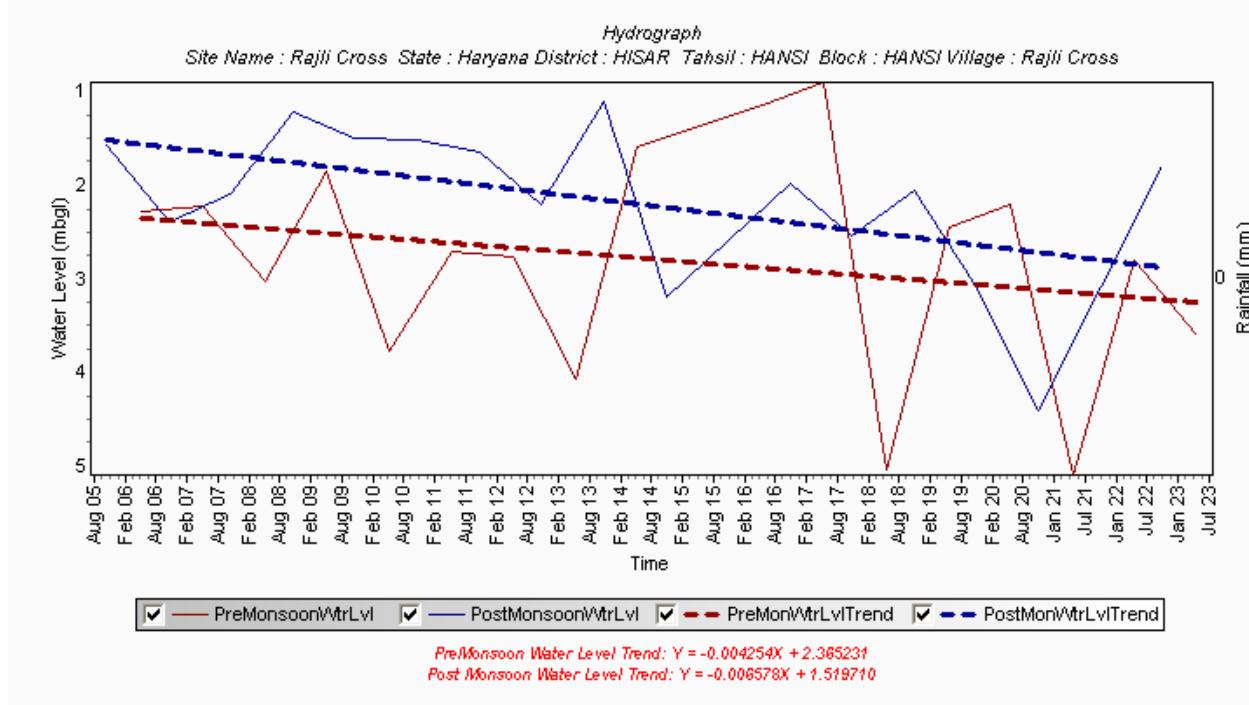


Figure 7.8 Site Rajli Cross, District Hisar, Haryana

Annexure-I

Water level data of unconfined aquifer

Sl No.	District	Location	2022/Jun	2022/Aug	2022/Nov	2023/Jan
1	AMBALA	Adhoya-Pz			34.00	
2	AMBALA	Ambala Cantt	1.77	1.27	1.05	1.35
3	AMBALA	Ambala Cantt-Pz	3.39		1.98	
4	AMBALA	Ambala City-DW	2.75		1.50	
5	AMBALA	Baknaur-DW	10.73		8.58	
6	AMBALA	Balana	1.23	1.65	1.12	0.89
7	AMBALA	Bara Garh-DW	5.90		4.50	
8	AMBALA	Barara-Pz	17.50		17.40	
9	AMBALA	Bari Bassi-DW	10.75		10.50	
10	AMBALA	Behbalpur-DW	2.37		1.27	
11	AMBALA	Bhurewala-Pz	10.28		8.78	
12	AMBALA	Bichali Dhamouli-Pz	7.00		5.50	
13	AMBALA	Binjal Pur-DW			3.57	
14	AMBALA	Boh-DW	3.40		2.70	
15	AMBALA	Budhha Khera-DW	6.85		5.40	
16	AMBALA	Bullana- DW	0.75		0.30	
17	AMBALA	Chhapra-DW			14.00	
18	AMBALA	Chotta Korwa-DW	10.85		10.20	
19	AMBALA	Churmastpur-DW	5.75		3.45	
20	AMBALA	Dhanaura	4.10	1.62	1.70	3.08
21	AMBALA	Dukheri-DW			11.12	
22	AMBALA	Gadauli-Pz-S	29.70	41.53	25.37	21.82
23	AMBALA	Jandheri Pz-S		37.18	43.52	43.72
24	AMBALA	Jansui-DW	1.40		1.30	
25	AMBALA	Jauli-DW	21.25		19.75	
26	AMBALA	Kajampur-DW	19.25			
27	AMBALA	Kakkar Majra-DW	12.00		11.75	
28	AMBALA	Kakru	1.62	1.13		1.05
29	AMBALA	Kalumazra-DW	2.90		1.75	
30	AMBALA	Kapoori At Saphera-PZ	18.60		19.00	
31	AMBALA	Khanahmadpur	6.93	2.43	2.23	3.12
32	AMBALA	Khanna Majra	3.95		3.30	
33	AMBALA	Khera Jattan-DW	10.75		9.55	
34	AMBALA	Mohra-DW	3.45		2.08	
35	AMBALA	Mulana	2.65	1.53	2.09	0.89

36	AMBALA	Nanhera-DW	23.25		24.25	
37	AMBALA	Naraingarh		15.79	15.16	0
38	AMBALA	Naraingarh-Pz	30.79		14.40	15.51
39	AMBALA	Nasirpur-Pz	2.30		2.91	
40	AMBALA	Nikuwana-DW	21.50		14.40	
41	AMBALA	Panjokhra	6.45	7.21	7.01	6.83
42	AMBALA	Patvi	20.80		21.00	
43	AMBALA	Pinjola	5.00	4.30	4.20	4.35
44	AMBALA	Saha-Pz	36.70			
45	AMBALA	Salehpur-DW	9.62		8.19	
46	AMBALA	Samru-Pz	11.70		11.10	
47	AMBALA	Shahpur-DW	4.62		3.17	
48	AMBALA	Shahzadpur	3.70		3.30	
49	AMBALA	Sohana-DW	3.77		2.52	
50	AMBALA	Tandwal-DW	2.70		1.30	
51	AMBALA	Tejan-DW	4.36		2.61	
52	AMBALA	Tharwa-DW	2.33		2.10	
53	AMBALA	Ugala S	35.50		35.90	
54	BHIWANI	Alak Pura-DW	3.90		3.40	
55	BHIWANI	Alampur-DW	11.30		11.00	
56	BHIWANI	Badala	5.70	0.28	2.10	2.3
57	BHIWANI	Badeshra-PZ	4.30		3.90	
58	BHIWANI	Baganwala-PZ	11.10		10.70	
59	BHIWANI	Bajina	13.50	13.62	13.63	13.57
60	BHIWANI	Baliyali-PZ	4.50		3.80	
61	BHIWANI	Bamla			7.21	7.53
62	BHIWANI	Baralu-PZ	79.50		79.80	
63	BHIWANI	Bardu Mugal-PZ	65.00		65.60	
64	BHIWANI	Barsi-PZ	5.70		5.30	
65	BHIWANI	Bawani Khera.-PZ	5.10		4.80	
66	BHIWANI	Bawani Khera-PZ	4.90	2.37	3.08	0
67	BHIWANI	Bhawani khera DW	5.40	3.29		3
68	BHIWANI	Bhera-PZ	11.70		12.00	
69	BHIWANI	Bhiwani	4.60		4.10	
70	BHIWANI	Bhutana-PZ	7.60			
71	BHIWANI	Bidhnoi-PZ	62.00		62.50	
72	BHIWANI	Bidhwan-DW	35.00		35.50	
73	BHIWANI	Biran--PZ	3.90		3.60	
74	BHIWANI	Bohal	4.60	2.05	3.10	2.6

75	BHIWANI	Budh Shelly-PZ	24.50		23.80	
76	BHIWANI	Busan-PZ	17.85		17.20	
77	BHIWANI	Chappar Rangar-PZ	10.40		9.90	
78	BHIWANI	Dadam-PZ	19.75		19.40	
79	BHIWANI	Dang-PZ			2.00	
80	BHIWANI	Devsar-PZ	3.90		3.60	
81	BHIWANI	Dhana Ladanpur-PZ	9.20		8.70	
82	BHIWANI	Dhanana	3.60	0.30	3.20	0.79
83	BHIWANI	Dhani Ramjas-PZ	13.00		13.50	
84	BHIWANI	Dhani Shelwal-PZ	24.60		24.20	
85	BHIWANI	Dhanimahu-PZ	17.20		17.50	
86	BHIWANI	Digawa-PZ	61.50		62.10	
87	BHIWANI	Dighawa Shyam--PZ	65.00		65.50	
88	BHIWANI	Dinod-PZ	4.40		4.10	
89	BHIWANI	Dulheri-PZ	26.80		26.20	
90	BHIWANI	Dwvrala-PZ	50.20		50.00	
91	BHIWANI	Garanpura-PZ			6.10	
92	BHIWANI	Gignow-PZ	67.00		67.40	
93	BHIWANI	Golagarh-PZ	31.75		31.50	
94	BHIWANI	Gopalwas-PZ	46.00		46.40	
95	BHIWANI	Gujrani-PZ	3.90		3.30	
96	BHIWANI	Gurera	19.60	15.49	15.40	15.5
97	BHIWANI	Gurera PZ	14.46		12.83	14.22
98	BHIWANI	Gurera-pz		15.18		0
99	BHIWANI	Haluwas	2.97	0.84	2.10	3.35
100	BHIWANI	Hetampur	18.20	12.22	10.87	12.27
101	BHIWANI	Indiwali-PZ	42.70		42.50	
102	BHIWANI	Isharwal	18.45	18.60	21.22	19.9
103	BHIWANI	Jamalpur-PZ	3.80		3.30	
104	BHIWANI	Jatai-PZ	3.70		3.40	
105	BHIWANI	Jhanwari-PZ	10.70		9.80	
106	BHIWANI	Jharwai-PZ	12.80		12.60	
107	BHIWANI	Jhully-PZ	8.20			
108	BHIWANI	Jhumpa	30.51	26.04	28.05	28.3
109	BHIWANI	Jhumpa Kalan	30.60	25.01	26.92	26.85
110	BHIWANI	Jita Kheri-PZ	5.10		4.30	
111	BHIWANI	Jitwanwas-DW	11.90		11.30	
112	BHIWANI	Juikalan Pz	35.50	35.63		36.65
113	BHIWANI	Jui-PZ	35.80		35.00	

114	BHIWANI	Kairu-PZ	17.40		17.10	
114	BHIWANI	Kairu-Pz	17.90			
115	BHIWANI	Kalinga-PZ	5.80		5.30	
116	BHIWANI	Kaluwas-PZ	6.40		5.70	
117	BHIWANI	Kasni kalan	51.50		51.80	
118	BHIWANI	Katwar-PZ	23.45		23.10	
119	BHIWANI	Khakari Sohan-PZ	10.95		10.40	
120	BHIWANI	Khanak-PZ	16.20		16.00	
121	BHIWANI	Khaparwas-PZ	38.70		38.50	
122	BHIWANI	Kharak Kalan-PZ			5.40	
123	BHIWANI	Khariawas-PZ	19.65		19.20	
124	BHIWANI	Khera-PZ	14.00		13.70	
125	BHIWANI	Kheri Dalautpura-PZ	4.10		3.70	
126	BHIWANI	Kikral-PZ	20.40		21.00	
127	BHIWANI	Kural-PZ	42.50		43.20	
128	BHIWANI	Lachhmanpur	12.50	10.04	9.78	10.26
129	BHIWANI	Lalawas-PZ	26.90		26.50	
130	BHIWANI	Leghan Hetwan-PZ	14.10		13.80	
131	BHIWANI	Lohani	14.80	8.68	10.18	14.5
132	BHIWANI	Mandhana-PZ	7.75			
133	BHIWANI	Mandhan-PZ			7.40	
134	BHIWANI	Manhairu	7.10	5.20	2.22	5.37
135	BHIWANI	Matani-PZ	32.80		33.00	
136	BHIWANI	Mauhala	12.10	18.74		0
137	BHIWANI	Miran		3.32	3.60	5.4
138	BHIWANI	Miran abd	5.70	3.94		0
139	BHIWANI	Miran-Pz	5.30		5.00	2.3
140	BHIWANI	Mitathal-PZ	4.10		3.60	
141	BHIWANI	Mithi-PZ	42.00		42.50	
142	BHIWANI	Mohila-PZ			19.90	
143	BHIWANI	Morka-PZ	39.20		40.00	
144	BHIWANI	Mundhal Kalan-PZ	2.80		2.60	
145	BHIWANI	Nakipur-PZ	75.00		75.40	
146	BHIWANI	Naloi-PZ	16.40		16.80	
147	BHIWANI	Naraungabad-PZ	7.20		7.30	
148	BHIWANI	Nathuwas-PZ	7.40		6.70	
149	BHIWANI	Nigana Kalan-PZ	21.65		20.80	
150	BHIWANI	Nigana Khurd-PZ	22.10		21.60	
151	BHIWANI	Nimriwali-PZ	4.30		4.40	

152	BHIWANI	Ninan-PZ	8.10		7.50	
153	BHIWANI	Noon Sar-PZ	59.50		59.90	
154	BHIWANI	Pataudi Khurd	14.80	13.68	13.75	13.65
155	BHIWANI	Patwan-PZ	62.50		63.10	
156	BHIWANI	Pehladgarh-DW	6.60		6.10	
157	BHIWANI	Phokarwas-PZ	35.25		35.00	
158	BHIWANI	Prem Nagar-PZ	2.00		2.80	
159	BHIWANI	Pur-PZ	5.40		4.90	
160	BHIWANI	Rajgarh-PZ	4.50		4.20	
161	BHIWANI	Ratera-PZ	9.90		9.10	
162	BHIWANI	Rewari-PZ	6.40		5.60	
163	BHIWANI	Riwasa-DW	4.50		4.90	
164	BHIWANI	Runhat-DW	4.40		3.90	
165	BHIWANI	Rupgarh-PZ	12.40		12.80	
166	BHIWANI	Sagban	1.96	0.89	3.90	1.72
167	BHIWANI	Sangwan	4.40			
168	BHIWANI	Singhani-pz	70.00	88.92	70.40	88.92
169	BHIWANI	Sirsa-DW	9.70		9.20	
170	BHIWANI	Siwach-PZ	41.40		42.00	
171	BHIWANI	Siwani	14.30	10.79	15.55	10.95
172	BHIWANI	Sui	3.70	0.80	3.40	1.5
173	BHIWANI	Sungarpur	15.30	11.29	12.61	12.71
174	BHIWANI	Talu-PZ	4.40		4.10	
175	BHIWANI	Talwani-PZ	25.60		26.00	
176	BHIWANI	Thillor-PZ	14.25		13.80	
177	BHIWANI	Tigrana Gp			8.50	0
178	BHIWANI	Tigrana-DW	3.90		3.40	
179	BHIWANI	Tosham	6.70	4.45	4.26	4.4
180	BHIWANI	Tosham-Pz	6.20	5.71	5.54	5.7
181	CHARKHI DADRI	Achina-PZ			2.98	
182	CHARKHI DADRI	Adampur	15.50			
183	CHARKHI DADRI	Atela-PZ	26.58		26.90	
184	CHARKHI DADRI	Badesara-PZ	76.67		77.60	
185	CHARKHI DADRI	Badhra-Pz	72.00		72.50	
186	CHARKHI DADRI	Badhwana-PZ	12.98		12.73	
187	CHARKHI DADRI	Baundkalan	3.99	1.05	2.11	1.71
188	CHARKHI DADRI	Bigowa-PZ	1.92		1.51	
189	CHARKHI DADRI	Bijna-PZ	17.64		17.12	
190	CHARKHI DADRI	Birhi Kalan-PZ	3.50		2.80	

191	CHARKHI DADRI	Bound-PZ	3.07		2.80	
192	CHARKHI DADRI	Chandawas-PZ	71.90		72.55	
193	CHARKHI DADRI	Changeroad-PZ	14.19		14.00	
194	CHARKHI DADRI	Chirya	18.65		18.85	
195	CHARKHI DADRI	Dadri	3.99	1.26	1.34	0
196	CHARKHI DADRI	Dadri-Pz	2.81			
197	CHARKHI DADRI	Dudhwa-PZ	13.72		12.97	
198	CHARKHI DADRI	Dudiwala-PZ	39.14		39.74	
199	CHARKHI DADRI	Ghasola-PZ	4.31		4.17	
200	CHARKHI DADRI	Gopalwas-PZ	90.13		91.06	
201	CHARKHI DADRI	Gopi	72.65		73.54	
202	CHARKHI DADRI	Hui-PZ	63.00		63.80	
203	CHARKHI DADRI	Imlota	0.85	2.52	1.98	3.03
204	CHARKHI DADRI	Jhinjar-PZ	3.53		3.00	
205	CHARKHI DADRI	Kadma-PZ	81.72		82.15	
206	CHARKHI DADRI	Kakroli Hatti-PZ	72.62		73.15	
207	CHARKHI DADRI	Kakroli Hukmi1	70.02		70.95	
208	CHARKHI DADRI	Kakroli Sardh-PZ	64.90		65.50	
209	CHARKHI DADRI	Kanheti-DW	3.62		3.38	
210	CHARKHI DADRI	Kapoori-PZ	5.38		4.83	
211	CHARKHI DADRI	Kari Adu-DW	67.92		68.25	
212	CHARKHI DADRI	Kari Mod-PZ	72.00		72.78	
213	CHARKHI DADRI	Kari Pura-PZ	68.95			
214	CHARKHI DADRI	Kheri Bura-PZ	3.70			
215	CHARKHI DADRI	Makrana-PZ	20.61		20.48	
216	CHARKHI DADRI	Mandoli-PZ	9.71		9.52	
217	CHARKHI DADRI	Mehrana		18.53	18.25	12.15
218	CHARKHI DADRI	Mirch-PZ	3.38		2.82	
219	CHARKHI DADRI	Misri-PZ	3.68		3.05	
220	CHARKHI DADRI	Nandha-PZ	82.00		82.70	
221	CHARKHI DADRI	Paintawas-PZ	6.21		5.84	
222	CHARKHI DADRI	Patuwas-PZ	13.35		12.98	
223	CHARKHI DADRI	Pichopa Kalan-PZ	94.14			
224	CHARKHI DADRI	Ranila-PZ	4.32		3.62	
225	CHARKHI DADRI	Sanjarwas-PZ	5.64		5.15	
226	CHARKHI DADRI	Sankrod-PZ	4.42		3.57	
227	CHARKHI DADRI	Sanwar	5.82	4.08	4.60	5.35
228	CHARKHI DADRI	Sarangpur-PZ	24.48		24.29	
229	CHARKHI DADRI	Saroop Garh-PZ	1.52		1.50	

230	CHARKHI DADRI	Todi-PZ	77.11		78.26	
231	CHARKHI DADRI	Unn-DW	3.84		3.28	
232	FARIDABAD	Alampur-DW	23.28		22.85	
233	FARIDABAD	Anangpur-DW	22.00		21.60	
234	FARIDABAD	Ballabgharh	29.39	29.80	29.75	30.3
235	FARIDABAD	Bhopani	27.30		26.95	
236	FARIDABAD	Chandpur	20.95		20.45	
237	FARIDABAD	Chhainsa	18.40		17.60	
238	FARIDABAD	Dayalpur	21.30		20.65	
239	FARIDABAD	Imammudinpur Ew		22.20		0
240	FARIDABAD	Immamudipur			20.10	0
241	FARIDABAD	Kabulpur	20.56	21.70	19.05	18.76
242	FARIDABAD	Manjhawali-DW	16.15		15.70	
243	FARIDABAD	Paota	17.65		17.95	
244	FARIDABAD	Sakrana-DW	4.00		3.80	
245	FARIDABAD	Samaipur-DW	3.25		3.20	
246	FARIDABAD	Sanped-DW	12.85		12.30	
247	FARIDABAD	Shahjahanpur-DW	26.10		25.70	
248	FARIDABAD	Sikri	7.30	5.12	2.53	3.9
249	FARIDABAD	Sotai	19.10		18.50	
250	FARIDABAD	Tigaon-Pz	26.85		27.00	
251	FATEHABAD	Alalwas-Pz	36.20		35.80	
252	FATEHABAD	Badopal	2.00	0.35	0.11	0.31
253	FATEHABAD	Bhattukalan-Pz	2.00		1.25	
254	FATEHABAD	Bhuna	17.90		17.85	
255	FATEHABAD	Bhuthan Kalan- Pz	59.40		59.00	
256	FATEHABAD	Bodiwali-DW	22.95		21.50	
257	FATEHABAD	Bosti-DW	18.00		17.90	
258	FATEHABAD	Chindhar-DW	4.87		4.57	
259	FATEHABAD	Daryapur	33.20			
260	FATEHABAD	Dayar1	9.53		9.14	
261	FATEHABAD	Dhangar-DW	12.19		11.28	
262	FATEHABAD	Dhingsara	7.70		7.62	
263	FATEHABAD	Fathepuri-DW	23.50		23.00	
264	FATEHABAD	Gorakhpur-DW	1.68		1.08	
265	FATEHABAD	Hukmawali-Pz	25.80		25.05	
266	FATEHABAD	Jandli Kalan	7.84	4.55	4.02	5.1
267	FATEHABAD	Kajal Heri-DW	3.40		2.43	
268	FATEHABAD	Kanhari-Pz	22.86		21.95	

269	FATEHABAD	Khara Kheri-DW	1.00		0.50	
270	FATEHABAD	Lahrian	41.70		41.20	
271	FATEHABAD	Machiwali-DW	5.38			
272	FATEHABAD	Mehu Wala Pz	5.53	3.15	3.38	3.1
273	FATEHABAD	Munshiwali-Pz	59.14		59.45	
274	FATEHABAD	Nagpur- Pz			39.63	
275	FATEHABAD	Nahla	3.91	3.43	3.21	3.41
276	FATEHABAD	Nangla-DW			9.14	
277	FATEHABAD	Nangla-Pz-S	9.00	7.90	7.07	7.8
278	FATEHABAD	Nikuwana-Pz	43.59		44.20	
279	FATEHABAD	Pilimudari	7.31		6.09	
280	FATEHABAD	Ratia -Pz	54.30	56.08	56.50	57.1
281	FATEHABAD	Ratta Khera-Pz	42.70		42.68	
282	FATEHABAD	Samain	3.74	1.69	3.64	2.69
283	FATEHABAD	Shekhpur Daroli-DW	4.92		3.96	
284	FATEHABAD	Suniyana	13.23		13.10	
285	FATEHABAD	Tohana	18.50		18.00	18.4
286	GURGAON	Badsahapur Ew	28.60		28.10	
287	GURGAON	Bandhwari	25.80			
288	GURGAON	Bhondsi Ew	31.60		31.70	
289	GURGAON	Bhora Kalan-Pz	44.75		45.00	
290	GURGAON	Bilaspur-Pz	28.10		26.80	
291	GURGAON	Budehra-DW	6.60		5.65	
292	GURGAON	Chandu		5.46		0
293	GURGAON	Daultabad-Pz	7.90		6.85	
294	GURGAON	Farrukh Nagar-Pz	22.80		21.45	
295	GURGAON	Fazilpur Badli-Pz	31.58	28.63		28.6
296	GURGAON	Gangola-DW	4.25		4.00	
297	GURGAON	Gudhana-Pz			31.85	
298	GURGAON	Gurgaon Pz			47.60	
299	GURGAON	Haila Mandi	33.95		34.20	
300	GURGAON	Harchandpur Pz	26.40		25.65	
301	GURGAON	Jamalpur	33.40		33.30	
302	GURGAON	Jaraon Pz	14.20			
303	GURGAON	Jhandu Sarai-Pz	27.20			
304	GURGAON	Kadipur	29.85		29.35	
305	GURGAON	Kasan	44.60		30.20	0
306	GURGAON	Khera Khurrampur-Pz	19.36	17.40	17.17	17.65
307	GURGAON	Kherla	35.60		34.95	

308	GURGAON	Lokra-Pz	36.30	39.10	37.65	37.4
309	GURGAON	Meoka-Pz	21.96		21.70	21.6
310	GURGAON	Mouzabad	36.40		35.65	
311	GURGAON	Mubarakpur	14.54	10.84	10.17	0
312	GURGAON	Pataudi-Pz	41.65		40.35	
313	GURGAON	Sadhrana-Pz	20.40		18.50	
314	GURGAON	Shikohpur	39.54		38.95	
315	GURGAON	Sidrawali-Pz	35.45		34.30	
316	GURGAON	Sohna	31.30		30.40	
317	GURGAON	Wazirpur-Pz	22.03	22.80	21.87	23.2
318	HISAR	Adampur-Pz	2.80		1.65	0.98
319	HISAR	Agroha abd			10.35	
320	HISAR	Agroha-Pz	11.10	6.65		3.5
321	HISAR	Alipur		9.00		0
322	HISAR	Alipur1			2.64	0
323	HISAR	Badchappar	2.55			
324	HISAR	Balawas1	11.90	11.74	11.60	11.45
325	HISAR	Balsamand	13.95	13.64	12.86	12.9
326	HISAR	Balsamand-Pz	15.20	14.85		15.2
327	HISAR	Banbhauri-Pz	6.46			
328	HISAR	Barwala abd	11.31			
329	HISAR	Barwala S	3.95			
330	HISAR	Barwala1		10.31		9.21
331	HISAR	Barwala-Pz	6.10	5.02	4.50	3.3
332	HISAR	Bas	3.72			
333	HISAR	Basra	17.65	17.03	6.05	16.9
334	HISAR	Behbalpur-Pz	3.00	1.35	1.55	1.6
335	HISAR	Bhana-DW	3.40		2.43	
336	HISAR	Bhotal Jattan-DW	3.50		2.13	
337	HISAR	Bithmara-DW	10.40		10.15	
338	HISAR	Chanaut	2.60	1.25	1.00	2.21
339	HISAR	Chann-DW	7.60		6.95	
340	HISAR	Chaudhriwali	14.93		14.02	
341	HISAR	Chawdhariwas	10.57	8.48	8.88	8.68
342	HISAR	Datta-DW	5.46		3.85	
343	HISAR	Deva-DW	6.70		5.48	
344	HISAR	Dhand-DW	4.00		2.74	
345	HISAR	Dhansu	4.10		2.41	2.46
346	HISAR	Dobi-DW			15.00	
347	HISAR	Durjanpur-Pz	7.45		6.40	

348	HISAR	Gain Pura		-0.54	1.78	2.5
349	HISAR	Ghaibipur	6.95		5.35	
350	HISAR	Ghursal-Pz	7.20	6.53	6.50	6.6
351	HISAR	Gurana	2.00		0.65	
352	HISAR	Hansi S	6.70			
353	HISAR	Hissar	6.55	6.52		0
354	HISAR	Hissar-Pz	7.40		3.34	0
355	HISAR	Jaga Bara-DW	11.25		10.06	
356	HISAR	Juglan	1.70		1.60	
357	HISAR	Kabrer	20.00		19.05	
358	HISAR	Kaliravan	6.46			
359	HISAR	Kanoh-Pz	10.20		9.90	
360	HISAR	Khanda Kheri-Pz	7.62		6.09	
361	HISAR	Kharakpunia	2.40		1.05	
362	HISAR	Kherijalab	8.60	5.58	6.05	0
363	HISAR	Kherijalab-Pz	8.40		7.90	5.9
364	HISAR	Khotkalan	13.60	9.23	11.63	12.48
365	HISAR	Kirori	13.55	13.35	14.05	14.15
366	HISAR	Kirtan	11.50	10.73	9.64	10.55
367	HISAR	Ladwi-DW	4.57		3.65	
368	HISAR	Litani-DW	5.00		3.05	
369	HISAR	Mangali-Pz	5.90		4.24	0
370	HISAR	Mehanda-DW	4.15		2.60	
371	HISAR	Mirka	3.50	2.83	3.06	0
372	HISAR	Moda Khera-DW			4.26	
373	HISAR	Narnaud S	16.35		16.41	16.95
374	HISAR	Pali-DW			10.06	
375	HISAR	Petwar-DW	7.20		6.00	
376	HISAR	Rajli Cross	2.80	1.82	1.80	2.2
377	HISAR	Rajthal1	15.10		14.63	23.49
378	HISAR	Samani	4.39	1.86		2.64
379	HISAR	Sohu	4.25	0.04		0.09
380	HISAR	Sorkhi-Pz		1.35	1.88	2
381	HISAR	Talwani Badshahpur-DW			5.95	
382	HISAR	Talwani Rana-DW			4.26	
383	HISAR	Thurana-DW	3.65			
384	HISAR	Uklana	13.50		10.75	
385	HISAR	Uklana Mandi-Pz	14.20	12.32	21.85	0
386	HISAR	Umra	7.50		5.48	0
387	JHAJJAR	Asanda-DW	3.19		2.05	
388	JHAJJAR	BabraDW	2.17		0.74	

389	JHAJJAR	Badli	3.50		3.01	
390	JHAJJAR	Bagoa	1.92	1.47	1.70	1.75
391	JHAJJAR	Bahadurgarh	11.00		10.00	
392	JHAJJAR	Bamroli- DW	4.46			
393	JHAJJAR	Beri	1.00		1.02	
394	JHAJJAR	Bhurawas-Pz	1.55			
395	JHAJJAR	Chamanpura	2.00		1.00	0
396	JHAJJAR	Chhara	4.15	2.36	1.61	1.31
397	JHAJJAR	Chuchakwas	3.20	1.71	2.56	1.91
398	JHAJJAR	Dehkora-DW	2.00		2.00	
399	JHAJJAR	Dighal	1.99		0.69	
400	JHAJJAR	Dubhaldhan	2.23	2.70	1.13	2.6
401	JHAJJAR	Dulhera	3.68	2.69	2.09	2.69
402	JHAJJAR	Gabhana	1.54	1.30	0.97	1.65
403	JHAJJAR	Goria-DW	2.15		1.78	
404	JHAJJAR	Hasanpur	5.20		3.75	
405	JHAJJAR	Jakhoda-DW	7.00		5.00	
406	JHAJJAR	Jhajjar	5.00	1.24	0.04	1.04
407	JHAJJAR	Jhajjar1			2.30	0
408	JHAJJAR	Jharli	9.35		9.07	
409	JHAJJAR	Kaliawas- DW	1.90		2.23	
410	JHAJJAR	Kamalgarh-DW	4.80		3.00	
411	JHAJJAR	Kheri Asra DW	4.00		3.00	
412	JHAJJAR	Kherka Gujjar- DW	4.00		2.00	
413	JHAJJAR	Kulasi	3.10	1.03	1.01	0.8
414	JHAJJAR	Lakeria- DW	3.30		0.10	
415	JHAJJAR	Lohari- Pz	13.00		11.00	
416	JHAJJAR	Majra Deswal	2.70			0.49
417	JHAJJAR	Matanhail-Pz	1.60		0.94	
418	JHAJJAR	Mudsa	1.64	0.35	1.75	3.75
419	JHAJJAR	Salhawas- Pz	2.85		2.76	0
420	JHAJJAR	Sankol	2.31	3.16	3.29	3.01
421	JHAJJAR	Silana-DW	1.58			
422	JHAJJAR	Subnah	1.84	0.95	0.69	0.91
423	JHAJJAR	Yaqubpur	3.61		2.93	
424	JIND	Alewa	43.00	41.30	42.77	0
425	JIND	Alewa Pz	38.35		40.37	40.37
426	JIND	Anta-Pz	20.70		22.68	
427	JIND	ATI Krishna1(s)			20.18	0
428	JIND	Baroda	17.40	18.38	17.89	17.28
429	JIND	Bhambewa-DW	3.54		3.72	

430	JIND	Bhana Barahman-DW	7.70		5.90	
431	JIND	Bhongra-Dw	18.34		16.48	
432	JIND	Bhuslana-Pz	19.60	23.20	24.95	22.5
433	JIND	Bibipur-OW	16.80		15.90	
434	JIND	Brahmanwas	2.65	0.67	1.78	1.11
435	JIND	Chhabri	4.08	3.91	1.63	1.2
436	JIND	Danaudakalan	5.63		5.60	
437	JIND	Danoda Khurd-Pz	4.48		2.90	
438	JIND	Dhandauli Pz	50.27	51.30	53.07	52.11
439	JIND	Dhigana-DW	2.00		0.90	
440	JIND	Dorana Pz	27.25	29.70	28.46	29.5
441	JIND	Ganda Khera-DW	17.92			
442	JIND	Gangoli-DW	2.10		2.40	
443	JIND	Ghaso	14.20	13.90	11.20	12.75
444	JIND	Gurusar-DW	12.30		10.50	
445	JIND	Hasanpur-Pz	38.95		40.74	
446	JIND	Igra	13.50		13.15	
447	JIND	Jamni-DW	11.22		12.86	
448	JIND	Jhamula	3.32	3.17	2.23	2.17
449	JIND	Jhanj Kalan	19.67		20.45	
450	JIND	Jind-Pz	26.80		26.30	
451	JIND	Julana Pz	2.80	3.60		3
452	JIND	Julana-DW	3.09		3.27	0
453	JIND	Kakrod-DW	13.80			
454	JIND	Kalwan	3.80			
455	JIND	Kalwan-Pz	27.28		28.88	
456	JIND	Kandela-Pz	35.90		36.30	
457	JIND	Karela-DW	2.50		2.00	
458	JIND	Karsindh-Dw	24.30		22.35	
459	JIND	Karsola-DW	2.70		1.60	
460	JIND	Kharwal	15.20			
461	JIND	Khatkaran	16.55	15.20	12.55	15.22
462	JIND	Koel-DW	26.16		29.25	
463	JIND	Korar	13.61			
464	JIND	Lajwana Kalan	2.60		1.60	
465	JIND	Lochap Pz	19.75	22.36	21.14	17.93
466	JIND	Ludhana	1.68			
467	JIND	Mandi Kalan-DW	17.63		16.10	
468	JIND	Mohal Khera Pz	7.58	4.54	4.50	5.42
469	JIND	Narwana S	4.00		3.50	
470	JIND	Pillukhera	4.98	6.75	5.53	7.08

471	JIND	Pillukhera-Pz	11.30			
472	JIND	Pipaltha-Pz	35.42		37.35	
473	JIND	Pokerikheri-Pz			26.00	
474	JIND	Rajpura-Pz	23.30			
475	JIND	Rasidan Pz	33.12		34.70	
476	JIND	Ratta Khera-DW	16.97			
477	JIND	Rojhala-Pz-S	13.43	13.58	13.62	12.58
478	JIND	Safidon (s)	20.96	21.18	21.72	0
479	JIND	Sahanpur-Pz	21.24		24.23	
480	JIND	Sanchakhera	5.40		3.90	
481	JIND	Tarkha-DW	15.52		15.25	
482	JIND	Uchana	20.30	19.00	20.50	18.3
483	JIND	Uchana Pz	21.60	21.62		19.65
484	KAITHAL	Balbehra-Pz	43.48		38.29	0
485	KAITHAL	Balu-Pz-S	7.79	8.12	6.75	6.9
486	KAITHAL	Barsana-Pz	32.00		32.10	
487	KAITHAL	Bhana-Pz	19.65		19.06	18.6
488	KAITHAL	Chika-Pz	48.25		47.75	
489	KAITHAL	Dhandh-Pz	35.95		37.05	
490	KAITHAL	Dhons-Pz	32.50			
491	KAITHAL	Guhna	34.10	25.60		27.18
492	KAITHAL	Guhna-Pz	21.40		22.63	0
493	KAITHAL	Harigarh Kingan-Pz	40.83		41.27	
494	KAITHAL	Jajanpur-Pz-S	33.70	37.18	36.70	35.77
495	KAITHAL	Jakhauli-Pz		16.23	15.48	14.9
496	KAITHAL	Kaithal S	31.71		32.30	
497	KAITHAL	Kalayat	3.08		4.19	1.45
498	KAITHAL	Kalayat S	6.00			
499	KAITHAL	Kalesar-DW	16.55		15.52	
500	KAITHAL	Kamalpur-DW	14.00		14.72	
501	KAITHAL	Kathana-Pz	18.25	15.57	15.47	15.34
502	KAITHAL	Kaul-Pz	32.40	33.86	34.12	33.7
503	KAITHAL	Kelaram	9.21	8.28	6.74	7.75
504	KAITHAL	Khanpur-Pz	40.90			43.02
505	KAITHAL	Kheri Lamba-DW	5.55		5.02	
506	KAITHAL	Kheri Raowali-DW	16.00		16.10	
507	KAITHAL	Mataur	6.95	5.19	2.66	6.65
508	KAITHAL	Mundri	24.20		25.30	
509	KAITHAL	Padla 1(s)	43.13	47.35	47.06	45.92
510	KAITHAL	Peoda_Pz	16.68		16.20	
511	KAITHAL	Pundri(s)	40.55			

512	KAITHAL	Rajaund-Pz	16.25		18.04	
513	KAITHAL	Rasulpur Ghamri-Pz	44.20	48.34	47.80	46.3
514	KAITHAL	Serdha-DW	19.88			
515	KAITHAL	Shimla		4.73	4.23	4.76
516	KAITHAL	Sirsal-Pz	30.73	29.95	34.62	33.98
517	KAITHAL	Siwan-Pz	46.07	49.00		47.76
518	KAITHAL	Siwan-Pz-New	47.85	49.00	48.07	0
519	KAITHAL	Solu Majra-Pz	36.00		37.27	
520	KAITHAL	Songal			19.57	17.47
521	KAITHAL	Songri-DW	15.50		16.70	
522	KARNAL	Alipur-PZ	34.22		35.55	
523	KARNAL	Amin S	34.95	36.90	36.65	35.68
524	KARNAL	Amupur Chakda			33.89	31.43
525	KARNAL	Amupur-PZ	30.10		30.12	
526	KARNAL	Anchla-Pz	12.50		12.40	
527	KARNAL	Andhera-PZ			11.05	
528	KARNAL	Anjanthali-Pz	27.17		25.87	
529	KARNAL	Ardana-PZ	17.60		18.30	
530	KARNAL	Assandh-Pz	19.85		20.95	
531	KARNAL	Badson- PZ	31.15		34.25	
532	KARNAL	Bahri-PZ	30.90		31.05	
533	KARNAL	Balla- Pz	20.01		19.65	
534	KARNAL	Balu-PZ	20.50		30.30	
535	KARNAL	Bansa-PZ			24.93	
536	KARNAL	Baragaon-Pz	16.15		15.90	
537	KARNAL	Barani Khera-PZ	34.23			
538	KARNAL	Barthal-PZ	31.90		31.52	
539	KARNAL	Bastali-PZ	30.60		30.24	
540	KARNAL	Beholpur-PZ	29.65		29.62	
541	KARNAL	Biana-PZ	9.42		9.10	
542	KARNAL	Bijna-PZ	15.45		15.75	
543	KARNAL	Brass-Pz	31.25		32.45	
544	KARNAL	Budanpur-Pz	7.94		7.14	
545	KARNAL	Chakda-PZ	29.60		29.82	
546	KARNAL	Chandsamand-PZ	8.80		8.45	
547	KARNAL	Chaura-PZ	20.00			
548	KARNAL	Chirao-PZ			21.95	
549	KARNAL	Chochra-PZ	19.95		31.10	29.2
550	KARNAL	Choor Karsa-PZ	29.50	33.70	34.54	34.04
551	KARNAL	Chorkharsa-Pz	30.90		30.65	
552	KARNAL	Dabarthala-PZ	27.93		27.90	

553	KARNAL	Dachar-PZ	30.95		29.95	
554	KARNAL	Dadupur-PZ	20.50		22.00	
555	KARNAL	Darar			18.03	
556	KARNAL	Dhanaura--PZ	8.20		7.10	
557	KARNAL	Dhomsi(shallow)			25.65	24.4
558	KARNAL	Domsi D		27.73		0
559	KARNAL	Faridpur-Pz			24.77	
560	KARNAL	Gagsina-PZ	10.20		10.50	
561	KARNAL	Gangateri-Pz	28.20		29.70	
562	KARNAL	Garhi Khajur S		19.36	13.20	0
563	KARNAL	Gharaunda-Pz	32.80		32.92	
564	KARNAL	Gholpura-PZ	28.85		28.55	
565	KARNAL	Gogripur-PZ	8.95		8.45	
566	KARNAL	Gohida -PZ	28.90		30.18	
567	KARNAL	Goli-PZ	15.75		14.60	
568	KARNAL	Gondar-Pz			33.90	32.34
569	KARNAL	Gondhar	30.50	34.50	30.80	0
570	KARNAL	Gudha-PZ	9.90		9.35	
571	KARNAL	Indri	11.95		12.65	0.96
572	KARNAL	Islam Nagar-Pz-S	10.46	11.84	7.66	6.83
573	KARNAL	Jainpur-PZ	8.00		7.15	
574	KARNAL	Jaisinghpura	18.55		19.70	
575	KARNAL	Jalmana PZ	28.30	31.52	31.48	0
576	KARNAL	Janesron--PZ			16.25	
577	KARNAL	Jani-PZ	12.30		11.15	
578	KARNAL	Jaroli Khurd-Pz	9.15	6.72	5.22	5.68
579	KARNAL	Jhanjari-Pz			14.68	
580	KARNAL	Jundla1	21.65			
581	KARNAL	Kachhwa Pz	21.80		23.60	
582	KARNAL	Kalampura-PZ	22.20		22.95	
583	KARNAL	Kalheri-PZ	32.30		32.28	
584	KARNAL	Kalri Jagir S	5.73	6.47	4.82	4.9
585	KARNAL	Kalsi	29.85		28.04	
586	KARNAL	Kalsora-PZ	10.30		8.35	
587	KARNAL	Kambopura-PZ	19.15			
588	KARNAL	Khanpur-PZ	18.10		17.05	43.02
589	KARNAL	KheriNaru-Pz-S	14.05	17.00		12.3
590	KARNAL	Khizrabad-PZ	29.90		29.65	
591	KARNAL	Kohnd S	33.75		33.95	
592	KARNAL	Kurlan-Pz	24.95		25.85	
593	KARNAL	Kutail S	24.54	31.85	25.82	24.07

594	KARNAL	Majra Roran	30.18	31.45	32.17	31.18
595	KARNAL	Makhala			6.70	
596	KARNAL	Manak Majra-Pz	27.83		28.89	
597	KARNAL	Manjura-PZ	26.20			
598	KARNAL	Mehmadpur-Pz	14.55			
599	KARNAL	Mormazra-PZ	18.70		19.60	
600	KARNAL	Mound S	25.81	31.11	30.40	28.55
601	KARNAL	Munak	9.53		8.66	
602	KARNAL	Mundh-dw	27.59		29.34	
603	KARNAL	Mundi Garhi--PZ	7.65		7.80	
604	KARNAL	Musepur-PZ	6.10		6.90	
605	KARNAL	Mustafabad-PZ	8.20		5.45	11.19
606	KARNAL	Nabipur-PZ	9.70		8.70	
607	KARNAL	Nalipur-Pz			11.78	
608	KARNAL	Nalvi Kalan-Pz	15.62	16.66		10.8
609	KARNAL	Nanhera	9.18	9.43	7.02	6.9
610	KARNAL	Naru Kheri-PZ	21.65		21.00	
611	KARNAL	Nasirpur-Pz			8.83	
612	KARNAL	Nilokheri-Pz	24.40		24.10	
613	KARNAL	Nisang-Pz	34.20			
614	KARNAL	Paccakhera-dw	27.35		27.50	
615	KARNAL	Padhana-DW	24.80		26.75	
616	KARNAL	Phurlak S	22.40			25.7
617	KARNAL	Phusgarh-Pz	20.23		20.13	
618	KARNAL	Popra-PZ	28.85		31.10	
619	KARNAL	Pundrak-PZ	23.00		20.48	
620	KARNAL	Rambha-Pz			7.11	
621	KARNAL	Randauli-Pz	11.10	10.70	8.78	8.89
622	KARNAL	Ranwar-Pz	16.40		19.58	
623	KARNAL	Rasin-PZ	18.30		18.50	
624	KARNAL	Rattak-Pz	26.60		28.00	
625	KARNAL	Rindal-PZ	13.80		11.58	
626	KARNAL	Risalwa-PZ	23.70		25.40	
627	KARNAL	Sadarpur-PZ	8.83		9.20	
628	KARNAL	Sagga-Pz	28.72		28.98	
629	KARNAL	Salwan-B	22.65	25.80	28.09	24.2
630	KARNAL	Sambli-Pz-M	28.26	31.10	30.17	29.53
631	KARNAL	Sambli-Pz-S	28.35	30.10	30.39	29.53
632	KARNAL	Samora1	9.35		7.51	
633	KARNAL	Subri-PZ			16.88	
634	KARNAL	Taprana-PZ	19.10		14.58	

635	KARNAL	Taraori-Pz	23.87		24.00	
636	KARNAL	Udana-Pz	34.80		35.55	
637	KARNAL	Uplani-PZ			29.40	
638	KURUKSHETRA	Adhoya-Pz	40.67		42.55	
639	KURUKSHETRA	Ajrawer-PZ	44.90		45.37	
640	KURUKSHETRA	Babain-PZ	43.90		44.26	
641	KURUKSHETRA	Badarpur-PZ	16.47		16.00	
642	KURUKSHETRA	Bakali-PZ	43.95		45.12	
643	KURUKSHETRA	Bapda-PZ	35.35		36.62	
644	KURUKSHETRA	Barhan-PZ	42.40		43.53	
645	KURUKSHETRA	Barna-PZ	32.90		34.13	
646	KURUKSHETRA	Baronda-Pz	24.80		20.84	19.13
647	KURUKSHETRA	Barshami-PZ	35.00		36.58	
648	KURUKSHETRA	Batheri-PZ			38.00	
649	KURUKSHETRA	Berthala S	42.99		43.97	
650	KURUKSHETRA	Bhore Saidan S	33.35		34.83	
651	KURUKSHETRA	Bodhni (s)			43.76	43.3
652	KURUKSHETRA	Budha-PZ	25.58		26.32	
653	KURUKSHETRA	Busthala-PZ	41.16		39.60	
654	KURUKSHETRA	Chanalheri-PZ	42.90		43.70	
655	KURUKSHETRA	Chhapra-Pz	41.35		42.10	
656	KURUKSHETRA	Dhir Pur-PZ	45.00		45.73	
657	KURUKSHETRA	Dhurala-PZ	40.90		41.90	
658	KURUKSHETRA	Diwana-PZ	37.50		39.20	
659	KURUKSHETRA	Garhi Roran-PZ	32.45		34.07	
660	KURUKSHETRA	Ghararsi-PZ	34.00		35.80	
661	KURUKSHETRA	Gobind Garh-PZ	29.10		30.35	
662	KURUKSHETRA	Gol Pura-PZ	50.95		52.10	
663	KURUKSHETRA	Gumthala Garhu-PZ	37.10		37.50	
664	KURUKSHETRA	Hathira-PZ	28.97		32.90	29.5
665	KURUKSHETRA	Helwa-PZ	38.85		40.60	
666	KURUKSHETRA	Ishaque S	38.84	40.60	40.07	40.63
667	KURUKSHETRA	Ismailpur-PZ	43.50			
668	KURUKSHETRA	Ismilabad-St-Pz	43.74		45.31	
669	KURUKSHETRA	Jalbehra-PZ	45.04		46.10	
670	KURUKSHETRA	Jhansa-PZ	44.61			
671	KURUKSHETRA	Jogna Khera			38.67	0
672	KURUKSHETRA	Jogna Khera-Pz	37.44		39.00	37.3
673	KURUKSHETRA	Kalsani-PZ	52.16		52.38	
674	KURUKSHETRA	Karaha Sahib-PZ	39.22		40.75	
675	KURUKSHETRA	Kaulapur S		46.45		0

676	KURUKSHETRA	Kheri Ran Nagar-PZ			37.50	
677	KURUKSHETRA	Kirmach-St-Pz	31.18		30.00	
678	KURUKSHETRA	Lakhmari-PZ	43.02		43.99	
679	KURUKSHETRA	Landi-PZ	53.71		54.08	
680	KURUKSHETRA	Lohar Majra-PZ	33.73		35.53	
681	KURUKSHETRA	Lohara-Pz	39.60		41.59	
682	KURUKSHETRA	Lukhi-Pz	38.52		40.14	
683	KURUKSHETRA	Mangana-PZ	39.72		41.60	
684	KURUKSHETRA	Mangoli Jattan-PZ	39.75		40.62	
685	KURUKSHETRA	Mirzapur-PZ	34.67		36.33	
686	KURUKSHETRA	Mohri-Pz	31.51		30.46	
687	KURUKSHETRA	Morthala-PZ	42.85		42.95	
688	KURUKSHETRA	Murtzapur-Pz	36.60		38.40	38.66
689	KURUKSHETRA	Naisi-Pz	44.48		45.42	
690	KURUKSHETRA	Padlu-PZ	47.92		49.08	
691	KURUKSHETRA	Ram Sharan Majra-Pz	39.67		40.62	
692	KURUKSHETRA	Rao Garh-PZ	31.80		31.18	
693	KURUKSHETRA	Ratgal-Pz	39.31		40.74	
694	KURUKSHETRA	Rawa-PZ	46.63		47.22	
695	KURUKSHETRA	Rohit-PZ	44.80			
696	KURUKSHETRA	SandholaPZ	37.70		38.90	
697	KURUKSHETRA	Sarai Sukhi-PZ	45.00		46.81	
698	KURUKSHETRA	Sarsa-PZ	36.20		38.00	
699	KURUKSHETRA	Shanti Nagar-PZ	46.18		46.47	
700	KURUKSHETRA	Sirsala-Pz	39.28		40.61	
701	KURUKSHETRA	Sunarain Dhanani-PZ	44.03		44.68	
702	KURUKSHETRA	Sunder Pur-PZ	40.90		42.52	
703	KURUKSHETRA	Surmi-PZ	39.92		39.85	
704	KURUKSHETRA	Tangore-Pz	44.99		45.89	
705	KURUKSHETRA	Tatka-PZ	39.46		40.86	
706	KURUKSHETRA	Teokar-PZ	41.10		42.50	
707	KURUKSHETRA	Teora-PZ	46.05		46.85	
708	KURUKSHETRA	Thol-PZ	46.10		45.47	
709	KURUKSHETRA	Tigri-PZ	48.58		49.05	
710	KURUKSHETRA	Umri-Pz	39.50		42.28	0
711	KURUKSHETRA	Urnai-PZ	45.40		47.00	40.43
712	KURUKSHETRA	Yara-PZ	47.18		47.35	
713	MAHENDRAGARH	Atali-DW			29.40	
714	MAHENDRAGARH	Barda-DW	61.50		62.00	
715	MAHENDRAGARH	Basirpur	24.70		24.50	
716	MAHENDRAGARH	Bayal	21.60		21.20	

717	MAHENDRAGARH	Berundla-DW	32.40		34.25	
718	MAHENDRAGARH	Bhojwas-DW	39.70		39.20	
719	MAHENDRAGARH	Chelawas-DW	42.60		43.10	
720	MAHENDRAGARH	Dhancholi-DW			35.00	
721	MAHENDRAGARH	Faizabad-DW	17.80		17.90	
722	MAHENDRAGARH	Kalba-DW	30.20		29.90	
723	MAHENDRAGARH	Kaninakhas1			28.75	
724	MAHENDRAGARH	Kheri-Pz			59.60	
725	MAHENDRAGARH	Khodana-DW	44.00		44.50	
726	MAHENDRAGARH	Kultajpur-DW	98.00		97.00	
727	MAHENDRAGARH	Narnaul	3.74	3.49	3.27	5.17
728	MAHENDRAGARH	Pachnota-DW	19.85		19.65	
729	MAHENDRAGARH	Pali-Pz			39.50	
730	MAHENDRAGARH	Pathera-DW			32.80	
731	MAHENDRAGARH	Said Alipur-DW	36.15		35.80	
732	MAHENDRAGARH	Shelang-DW	39.00		38.50	
733	MAHENDRAGARH	Tazpur-Pz	73.00		72.50	
734	MEWAT	Agaon-Pz	16.80		16.20	
735	MEWAT	Akaira	3.85		3.10	
736	MEWAT	Aminabad-DW	4.10		4.00	
737	MEWAT	Bhadas-DW	6.00		5.65	
738	MEWAT	Firozepur Jhirka			14.95	
739	MEWAT	Gulaltha	2.55		2.30	
740	MEWAT	Indri	3.40	0.91	0.49	0.96
741	MEWAT	Malab	3.70	4.03	2.87	0
742	MEWAT	Nagina	4.00		3.95	
743	MEWAT	Naharika-Pz			23.55	
744	MEWAT	Nuh	5.55		5.05	
745	MEWAT	Pipaka-Shashola	27.10		26.50	
746	MEWAT	Punhana	14.90			
747	MEWAT	Punhana-Pz	14.40		14.75	
748	MEWAT	Rathiwas	18.10		17.85	
749	MEWAT	Sarauli-DW	2.21		2.10	
750	MEWAT	Sikarwa	4.70			
751	PALWAL	Achheja	3.44			
752	PALWAL	Badraun	7.95	9.16	4.85	9.33
753	PALWAL	Baghaura	14.65	0.70	0.62	0.5
754	PALWAL	Bahin-DW	11.65		11.50	
755	PALWAL	Bamnikhera			12.45	
756	PALWAL	Banchari-DW	11.40		9.55	
757	PALWAL	Barauli-Pz	13.55	14.40	12.20	14.4

758	PALWAL	Bazida Pahar-DW	6.40		4.95	
759	PALWAL	Bhiduki-DW	6.30		5.50	
760	PALWAL	Bibipur-DW			3.75	
761	PALWAL	Chhaensa-DW	2.50		2.15	
762	PALWAL	Dighaut	12.07	14.40	12.95	0
763	PALWAL	Gulawad-DW	14.20		13.25	
764	PALWAL	Hasan pur			18.92	17.03
765	PALWAL	Hathin	11.20		13.25	
766	PALWAL	Hodel1	17.10		16.70	
767	PALWAL	Jawan- Pz	30.40	30.20	28.33	0
768	PALWAL	Mandkola	2.40		2.10	
769	PALWAL	Manpur Suhalia-DW	11.50			
770	PALWAL	Nangal Jat-DW	10.60		10.20	
771	PALWAL	Palwal	6.54			
772	PALWAL	Palwal-Pz	10.65	10.81	10.40	11.14
773	PALWAL	Pehladpur-Pz	8.45	7.27	6.07	7.27
774	PALWAL	Pelak-Pz	21.67	22.87	22.80	22.87
775	PALWAL	Phulwari-DW	13.05		12.65	
776	PALWAL	Pirgarhi- Pz	11.60	12.66	8.95	12.66
777	PALWAL	Sarai-DW	14.20		14.00	
778	PANCHKULA	Abdullapur	12.70		4.63	4.72
779	PANCHKULA	Bahoriyan-Dw	9.23	3.45	2.90	5.57
780	PANCHKULA	Barwala-Pz	12.25	17.60	20.50	3.3
781	PANCHKULA	Batour	9.40	6.65	5.54	0
782	PANCHKULA	Bunga At Dabkhori-DW	37.35			
783	PANCHKULA	Chandi Mandir-DW	8.85	6.63	6.27	6.51
784	PANCHKULA	Devnagar(Panchkula)	9.28		8.65	8.83
785	PANCHKULA	Dhakwala-Dw	2.24	1.96		2.02
786	PANCHKULA	Dharampur	13.36	10.42	7.80	9.41
787	PANCHKULA	Garriran			32.25	0
788	PANCHKULA	Garriran-DW	32.95	32.10	32.10	32.45
789	PANCHKULA	Golpura-DW	4.52	3.31	3.46	3.88
790	PANCHKULA	Hangola	8.50	5.18	4.85	5.07
791	PANCHKULA	Jaspur-Pz	16.70			
792	PANCHKULA	Jaswant Garh-DW	6.60		5.10	
793	PANCHKULA	Kakar Majra	12.10	12.26	11.78	10.12
794	PANCHKULA	Khera	29.17	28.26	27.82	27.56
795	PANCHKULA	Kheri-DW	9.72		8.22	
796	PANCHKULA	Kiratpur-DW	38.54		37.51	
797	PANCHKULA	Kona		9.20		0
798	PANCHKULA	Kundi-DW	20.65		19.60	

799	PANCHKULA	Maranwala	20.75		19.70	
800	PANCHKULA	Mauli-DW	27.10		24.90	0
801	PANCHKULA	Mehranwali		16.73		0
802	PANCHKULA	Nadha-DW	2.35	1.41	2.77	3.07
803	PANCHKULA	Parwala	17.52	16.80	16.77	16.85
804	PANCHKULA	Patwi	11.12	10.93	9.07	9.7
805	PANCHKULA	Piare Wala-DW	27.03		25.83	
806	PANCHKULA	Raipur Rani-Pz	22.70		22.65	
807	PANCHKULA	Raipuranni	9.50	16.50	8.22	10.98
808	PANCHKULA	Ram Nagar-DW	17.75		17.95	
809	PANCHKULA	Ramgarh-DW	15.98		14.63	
810	PANCHKULA	Rampur-DW	9.09		7.59	
811	PANCHKULA	Rattewali-DW			29.30	
812	PANCHKULA	Rehna-DW	17.23		15.78	
813	PANCHKULA	Shahjahan Pur-DW	22.71		21.66	
814	PANCHKULA	Shahpur-DW	21.35		20.50	
815	PANCHKULA	Thapli-Dw	7.45	5.00	5.03	6.81
816	PANIPAT	Babail Pz S	10.85		26.00	0
817	PANIPAT	Baholi-Pz	14.10		14.39	
818	PANIPAT	Bandh-Dw	5.80		4.50	
819	PANIPAT	Baupur	3.65		3.60	
820	PANIPAT	Bhallour Pz	15.08			
821	PANIPAT	Brahman Majra-Dw	12.55		10.80	
822	PANIPAT	Dadola-Pz	37.58		37.97	
823	PANIPAT	Dakadla S	25.09	27.97	27.70	0
824	PANIPAT	Dharamgarh S	17.94		19.18	18.1
825	PANIPAT	Diwana			36.55	
826	PANIPAT	Dumiana-Dw			5.80	
827	PANIPAT	Garhi Chhaju		34.60	34.00	32.67
828	PANIPAT	Hathwala-Pz	13.57		13.38	
829	PANIPAT	Israna Pz	6.80		4.43	5.28
830	PANIPAT	Kaith-Dw	4.15		3.30	
831	PANIPAT	Karhansh Pz	41.08		41.44	
832	PANIPAT	Khalilia Manjran			4.05	0
833	PANIPAT	Khandra	13.40		14.41	
834	PANIPAT	Khelalla Pehl S		13.42	38.49	0
835	PANIPAT	Kiwana	37.00		39.08	
836	PANIPAT	Lohari (s)	4.11		1.82	2.37
837	PANIPAT	Mehmadpur	31.05	28.39	29.50	29.86
838	PANIPAT	Mohali		31.98	31.26	28.95
839	PANIPAT	Nara	24.00			

840	PANIPAT	Nariana-PZ	26.95		27.18	
841	PANIPAT	Naultha	25.00		28.55	
842	PANIPAT	Nizampur	34.40		34.65	
843	PANIPAT	Panipat-Pz			46.95	
844	PANIPAT	Puther Pz	10.90	11.76	10.78	9.95
845	PANIPAT	Samalkha-Pz	36.48		37.81	
846	PANIPAT	Sanauli Khurd-Pz	17.42	22.28	17.00	15.52
847	PANIPAT	Shahpur	5.00	1.77	2.40	0
848	PANIPAT	Sink	10.10	6.70	6.14	6.28
849	PANIPAT	Untilya	5.20	3.15	2.45	3.37
850	PANIPAT	Urlana Kalan	17.55	18.21	20.66	17.98
851	REWARI	Bahu	13.96		13.81	
852	REWARI	Balawas	11.31		11.21	
853	REWARI	Bawal DW	22.98		22.33	
854	REWARI	Bawal Pz	29.60		29.60	
855	REWARI	Berli Khurd-DW	18.34		18.44	
856	REWARI	Bhakli-DW	11.80		11.70	
857	REWARI	Bharangi-DW	20.00		19.80	
858	REWARI	Garhi-DW	19.30		19.20	
859	REWARI	Gurkawas-DW	7.55		7.40	
860	REWARI	Hansaka-DW	7.40		7.20	
861	REWARI	Harinagar-DW	17.40		14.95	
862	REWARI	Jatuwas-DW	21.90		21.75	
863	REWARI	Karnawas	11.70		11.60	
864	REWARI	Khera Bahu-DW	24.73		24.58	
865	REWARI	Khol	64.70		64.60	64.7
866	REWARI	Kosli	18.20			
867	REWARI	Kumbhawas-DW	18.00			
868	REWARI	Mandola-Pz	72.60		77.95	0
869	REWARI	Massani		21.10	21.00	21.38
870	REWARI	Mubarikpur-DW	20.30		20.15	
871	REWARI	Nahar			25.00	
872	REWARI	Nangal Mundi-DW	18.00		17.80	
873	REWARI	Palhawas-DW			6.00	
874	REWARI	Pali-Pz	54.25		54.05	
875	REWARI	Ranthal-DW	9.05		8.90	
876	REWARI	Rewari-Pz	16.60		16.45	
877	REWARI	Rholiawas-Pz	12.66	12.46	12.10	12.07
878	REWARI	Rohrai-DW	6.94		6.74	
879	REWARI	Shadipur-DW	10.11		10.01	
880	REWARI	Sudharana-DW	8.20		7.87	

881	ROHTAK	Ajaib-DW	2.45		1.06	
882	ROHTAK	Assan-DW	3.05		1.36	
883	ROHTAK	Atail-DW	3.57		1.91	
884	ROHTAK	Baland	1.17		1.85	0
885	ROHTAK	Baliana-DW	3.33		2.51	
886	ROHTAK	Bhal Anandpur	1.99	1.49	1.14	1.04
887	ROHTAK	Bhalaut	0.88			
888	ROHTAK	Bharain-DW	2.00		1.00	
889	ROHTAK	Giji-DW	6.00		4.00	
890	ROHTAK	Hassangarh	2.85	1.58	1.74	3.28
891	ROHTAK	Kalanaur	2.77		0.79	
892	ROHTAK	Kanheli-DW	2.97		1.54	
893	ROHTAK	Kansala	4.00	3.88	2.78	4.27
894	ROHTAK	Kharawar	5.00		4.00	
895	ROHTAK	Kherari-DW	2.09		0.59	
896	ROHTAK	Kiloi-DW	2.10		1.88	
897	ROHTAK	Lahli-DW	3.30		0.40	
898	ROHTAK	Lakhan Majara	3.20	2.00	1.60	2.16
899	ROHTAK	Lakhan Majra Pz	0.91			
900	ROHTAK	Madina	4.63			
901	ROHTAK	Mahem		9.75	8.69	9.35
902	ROHTAK	Mahem1	12.00		11.00	
903	ROHTAK	Makhrauli Khurd	2.28		0.18	
904	ROHTAK	Meham	16.50			
905	ROHTAK	Muradpur Tekna-DW	2.50		0.82	
906	ROHTAK	Nandal-DW	2.21		0.84	
907	ROHTAK	Nidhana	2.60			
908	ROHTAK	Ritoli-DW	1.80		0.60	
909	ROHTAK	Rohtak	4.69		2.27	
910	ROHTAK	Samargopalpur	2.28	1.47	0.40	1.69
911	ROHTAK	Sampla	4.58	2.73		3.83
912	ROHTAK	Sampla-Pz	1.48		0.83	0
913	ROHTAK	Sanghi-DW	12.90		12.00	
914	ROHTAK	Sundana-DW	3.04		0.76	
915	ROHTAK	Tiloli-DW	6.88		2.20	
916	SIRSA	Ali Mohammad	28.00			
917	SIRSA	Alikan	14.20		12.80	
918	SIRSA	Berwalakhurd	10.71			
919	SIRSA	Bharu Khera-DW			9.80	
920	SIRSA	Bhuratwala-Pz	13.50			
921	SIRSA	Chaharwala	4.70		5.20	

922	SIRSA	Chilkani Dhab	8.50		9.00	
923	SIRSA	Chormar	18.00	18.92	19.00	18.82
924	SIRSA	Chotala-Pz	12.80		12.50	
925	SIRSA	Dabwali Dw	10.55	10.43		10.55
926	SIRSA	Dabwali -Pz S	11.50		11.01	0
927	SIRSA	Darba Kalan-Pz	2.30	1.18	2.11	1.3
928	SIRSA	Dholpalia-DW	10.00		10.20	
929	SIRSA	Ding	16.00	17.54	16.89	17.14
930	SIRSA	Ganga			15.50	
931	SIRSA	Ghushiana	16.30	11.70	13.34	14.3
932	SIRSA	Goriwala-Pz	18.50	17.32	17.45	17.61
933	SIRSA	Gudia Khera-DW	2.60		2.43	
934	SIRSA	Hasu	18.20		18.50	
935	SIRSA	Jagiwala-DW	14.30		14.50	
936	SIRSA	Jamal	10.73	2.38	3.61	2.93
937	SIRSA	Jamal- Pz	5.00	2.51	2.72	4
938	SIRSA	Kairanwali-DW	3.04		2.70	
939	SIRSA	Kalanwali Mandi-Pz	11.90			9.95
940	SIRSA	Kaluwana	12.42	12.12	13.10	12.72
941	SIRSA	Karamsana	7.57	5.15	7.67	7.65
942	SIRSA	Kash Ram Dhab		9.97	10.82	9.82
943	SIRSA	Khuiyan	17.50	18.14	18.02	18
944	SIRSA	Kurangwali	7.50		8.30	
945	SIRSA	Lohgarh	8.50		8.60	
946	SIRSA	Makhu Shorani	2.95			
947	SIRSA	Mammer Khera-Pz	20.50	21.35	21.60	21.7
948	SIRSA	Manjiyana		17.69	18.09	17.78
949	SIRSA	Mastian	18.50		15.51	15.4
950	SIRSA	Mithri	17.90	20.29	20.62	20.55
951	SIRSA	Nuhian Wali	4.80	15.80	15.58	15.5
952	SIRSA	Odhan Pz	15.80		16.10	
953	SIRSA	Panniwala Mota	11.90	8.00	10.38	11.21
954	SIRSA	Peer Khera-DW	12.50		12.10	
955	SIRSA	Phaggū-Pz	5.20	4.70	4.79	5.05
956	SIRSA	Rori -DW	11.70	10.15	13.07	12.03
957	SIRSA	Sadewala	28.50		28.02	
958	SIRSA	Sainpal-Pz	38.50		38.40	
959	SIRSA	Saktakhera	8.80	3.86	4.57	3.66
960	SIRSA	Saktakhera-E1W	11.40	11.60	11.64	11.7
961	SIRSA	Saktakhera-EW	4.66	4.85	4.62	4.5
962	SIRSA	Salemkhera			20.70	

963	SIRSA	Shergarh-DW	7.89	7.61	7.25	7.59
964	SIRSA	Sherpura	16.00	14.82	15.06	14.9
965	SIRSA	Sirsa-Pz	59.26	48.92	49.16	49.5
966	SIRSA	Sri Jiwan Nagar-B		49.00		49
967	SIRSA	Sukhchain-DW	10.80			
968	SIRSA	Taruwana	11.94	8.63	10.03	10.37
969	SIRSA	Tejakhera	13.20	9.80	13.80	7.6
970	SIRSA	Thiraj	12.70		12.80	
971	SIRSA	Tigri-DW	8.80		8.90	
972	SONIPAT	Ahmadpur Majra-DW	7.98		7.12	
973	SONIPAT	Ahulana	3.98	1.37	1.27	1.25
974	SONIPAT	Anandpur-Jarot-DW	4.85		3.93	
975	SONIPAT	Anwali-Pz	1.89		0.06	
976	SONIPAT	Bagru-DW	5.00		3.00	
977	SONIPAT	Banwasa-DW	2.86		2.55	
978	SONIPAT	Barauli	9.45	10.11	10.00	9.55
979	SONIPAT	Baroda Mor-DW	0.65			
980	SONIPAT	Barona-DW	2.10		0.93	
981	SONIPAT	Barswani- DW	5.50	6.40	5.00	5.55
982	SONIPAT	Barwasni Pz (s)	9.23	7.18	8.15	8.27
983	SONIPAT	Bega Pz	9.90		8.28	0
984	SONIPAT	Bhainswal	3.55	2.47	3.80	2.75
985	SONIPAT	Bhogipur		11.35	14.86	12.54
986	SONIPAT	Bhunderi	3.07	1.35	1.12	1.52
987	SONIPAT	Bichpuri1		5.38		0
988	SONIPAT	Bidhlan-DW	4.82		3.59	
989	SONIPAT	Bohela		0.50	1.37	0.8
990	SONIPAT	Butana	1.00	2.16	3.01	2.51
991	SONIPAT	Chhapra-DW	3.00		2.00	
992	SONIPAT	Chirana		2.63		0
993	SONIPAT	Chitana-DW	5.30		3.00	
994	SONIPAT	Datauli-Pz	25.92		27.40	
995	SONIPAT	Farmana	5.74	4.97	4.60	4.3
996	SONIPAT	Ganaur-Pz	32.16		34.74	
997	SONIPAT	Gangana-DW			1.38	
998	SONIPAT	Garhwal	2.00			
999	SONIPAT	Gohana Pz	17.86	17.69	17.25	16.54
1,000	SONIPAT	Gorar-DW	1.00		1.00	
1,001	SONIPAT	Jagsi	1.18	1.13	0.25	0.95
1,002	SONIPAT	Janti Khurd-Pz	12.13	15.30	14.60	15.1
1,003	SONIPAT	Jhakauli- Pz	20.70	21.31	19.07	0

1,004	SONIPAT	Juan-DW	10.00			
1,005	SONIPAT	Kathura	2.57	0.21	1.00	0
1,006	SONIPAT	Kathura Pz	3.02		1.44	1.11
1,007	SONIPAT	Khanda-DW	1.33		0.33	
1,008	SONIPAT	Khanpur Kalan-Pz	5.90	1.16	0.90	1.45
1,009	SONIPAT	Kharkhauda	9.00		7.00	
1,010	SONIPAT	KheoraPz	27.30		26.00	28.88
1,011	SONIPAT	Kheri Gujjar-Pz	31.00		33.05	
1,012	SONIPAT	Ladpur-Pz	8.22		9.31	
1,013	SONIPAT	Larsauli-Pz	32.00		28.00	
1,014	SONIPAT	Lath	2.05		0.40	0.85
1,015	SONIPAT	Machhri	5.95		6.00	
1,016	SONIPAT	Mahara	8.00		9.76	0
1,017	SONIPAT	Mattand-DW	5.61			
1,018	SONIPAT	Mohana Pzm	5.00			
1,019	SONIPAT	Mundlana DW	9.00		8.00	
1,020	SONIPAT	Mundlana- Pz	9.00		2.80	0
1,021	SONIPAT	Murthal-Pz	33.10	34.60	33.82	33.22
1,022	SONIPAT	Nahri	4.75		4.15	0
1,023	SONIPAT	Nizaimpur	3.54		2.06	
1,024	SONIPAT	Palra		10.37	5.40	5.86
1,025	SONIPAT	Pinana	4.95	5.27	4.26	5.07
1,026	SONIPAT	Pipli-DW	6.16		3.45	
1,027	SONIPAT	Pugthala-Pz	9.00		7.00	
1,028	SONIPAT	Purkhas-Pz	21.00		19.00	
1,029	SONIPAT	Rai(Bahalgarh)	26.47		28.17	0
1,030	SONIPAT	Rai-Bahalgarh-Pz	27.77	27.12	28.03	26.95
1,031	SONIPAT	Rasoi Pz	18.80	19.13	19.04	18.76
1,032	SONIPAT	Rathdhana-Pz	24.00		21.00	
1,033	SONIPAT	Rohat	4.00		2.00	
1,034	SONIPAT	Rukhi-Pz			0.78	
1,035	SONIPAT	Safibabad-Pz	7.48		8.01	
1,036	SONIPAT	Sisnah	4.72	7.50	2.67	4.02
1,037	SONIPAT	Tihar Malikpur-DW	5.29		4.63	
1,038	YAMUNANAGAR	Antawa-Pz	32.15		33.00	
1,039	YAMUNANAGAR	Bari Kanari-Pz	27.65		27.15	
1,040	YAMUNANAGAR	Bhambauli-1 (s)	19.42	21.02	20.61	19.86
1,041	YAMUNANAGAR	Bilaspur DW	3.80	3.30	2.06	3.25
1,042	YAMUNANAGAR	Bilaspur1	4.80		3.20	
1,043	YAMUNANAGAR	Chamrori-Pz	23.95		25.30	
1,044	YAMUNANAGAR	Chhachhrauli	6.73		5.58	

1,045	YAMUNANAGAR	Chhachrauli S	16.70	18.90	13.87	13.33
1,046	YAMUNANAGAR	Choli	4.85	0.99	0.29	0.89
1,047	YAMUNANAGAR	Damla-Pz	12.65		13.95	
1,048	YAMUNANAGAR	Dhalaur-DW			15.57	
1,049	YAMUNANAGAR	Dhaurang S	19.92	17.02		0
1,050	YAMUNANAGAR	Fatehpur-Pz	14.05		13.80	
1,051	YAMUNANAGAR	Harewa-DW	7.86		6.46	
1,052	YAMUNANAGAR	Jagadhri-Pz	18.45		18.63	
1,053	YAMUNANAGAR	Jhiwarheri S	33.08	34.74	34.47	34.6
1,054	YAMUNANAGAR	Kail-Pz	19.60		19.90	
1,055	YAMUNANAGAR	Khizrabad	18.38	20.22	15.84	15.67
1,056	YAMUNANAGAR	Mandebri-Pz	19.75		20.00	
1,057	YAMUNANAGAR	Masana Jattan-Pz	29.48	33.26	31.40	30.05
1,058	YAMUNANAGAR	Mustafabad DW	7.70	5.27	4.18	5.93
1,059	YAMUNANAGAR	Mustafabad-Pz	9.85		8.35	11.19
1,060	YAMUNANAGAR	Nagal Patti-DW	26.73		25.88	
1,061	YAMUNANAGAR	Naggal-S	5.22	5.85	4.70	4.87
1,062	YAMUNANAGAR	Radaur S	15.97	16.76	14.86	14.46
1,063	YAMUNANAGAR	Rasulpur		9.23	7.47	0
1,064	YAMUNANAGAR	Rasulpur DW	9.33			8.23
1,065	YAMUNANAGAR	Sabri	5.98	5.10	4.55	5.62
1,066	YAMUNANAGAR	Sadhaura	3.68		3.51	0
1,067	YAMUNANAGAR	Sadhaura DW	3.05	7.96		4.82
1,068	YAMUNANAGAR	Sadhaura S	4.41	4.92	3.45	3.66
1,069	YAMUNANAGAR	Salehpur-DW	9.58		8.08	
1,070	YAMUNANAGAR	Shadipur	4.81	5.50	4.14	5.37
1,071	YAMUNANAGAR	Tala Kaur S	6.95		5.45	
1,072	YAMUNANAGAR	Tehi-Pz	20.01		20.41	

Annexure-II

Water level data of confined/ semi-confined aquifer

Sl No.	District	Location	2022/Jun	2022/Aug	2022/Nov	2023/Jan
1	AMBALA	Ambala Harding	10.62	14.06	12.65	11.6
2	AMBALA	Gadauli-Pz-D	42.12	52.25	44.71	40.62
3	AMBALA	Gadauli-Pz-M	43.78	58.22	41.24	
4	AMBALA	Jandheri Pz-D		38.18	44.06	42.87
5	AMBALA	Jandheri Pz-M		37.90	43.68	43.14
6	AMBALA	Khojkipur	3.20		2.40	
7	AMBALA	Nagal (D)	41.60	57.44	45.68	44.13
8	AMBALA	Nagal (M)		53.99	45.72	44.89
9	AMBALA	Saha M	72.70			
10	AMBALA	Uplana D	32.13	39.98	34.60	30.48
11	BHIWANI	Behl	75.50		76.00	
12	BHIWANI	Bhiwani1	3.10		2.80	
13	BHIWANI	Budhera	71.00		71.50	
14	BHIWANI	Kaloud			28.00	
15	BHIWANI	Loharu-pz	77.00		77.30	
16	BHIWANI	Motipura	23.70		24.00	
17	BHIWANI	Pataudi Kalan PZM	18.80		17.90	
18	BHIWANI	Rodha	17.30		16.90	
19	BHIWANI	Siwani1			13.50	
20	CHARKHI DADRI	Mandola	10.69		10.16	
21	FARIDABAD	Chirsi-Ew	17.78		17.30	
22	FARIDABAD	Dhauj	20.50		19.45	
23	FARIDABAD	Dodasia-i	15.10		14.33	
24	FARIDABAD	Faridabad	26.10		25.15	
25	FARIDABAD	NH-IV- CHQ	67.73			67.61
26	FARIDABAD	Pali(shallow)			28.10	
27	FATEHABAD	Aharwan M	70.00	78.02	70.10	
28	FATEHABAD	Ayalki 1(m)	64.93		64.02	
29	FATEHABAD	Bhuna S			17.45	
30	FATEHABAD	Fatehabad S			53.35	
31	FATEHABAD	Khajuri Jatti-Pz	2.00	1.61	3.65	1.3
32	FATEHABAD	Nangla-Pz-D	14.10	14.21	14.74	14.6
33	FATEHABAD	Nangla-Pz-M	13.20	13.45	10.48	10.4
34	FATEHABAD	Talwara D		48.85	49.47	46.8
35	FATEHABAD	Talwara S		49.02	48.11	46.7

36	GURGAON	Chandu2	6.45		5.00	5.33
37	FARIDABAD	Manesar-Pz	38.70	33.70	38.95	40.37
38	GURGAON	Rajpura1	29.60		29.35	
39	HISAR	Hissar1	5.85		5.47	6.78
40	HISAR	Madha	11.90		10.67	
41	HISAR	Mayar	7.90		6.10	
42	HISAR	Thurana	2.00		2.43	
43	JHAJJAR	Salawas	3.01			2.59
44	JIND	ATI Krishna2(m)			20.78	
45	JIND	Paoli	1.60		0.60	
46	JIND	Rojhala-Pz-D	17.03	18.75	19.72	16.14
47	JIND	Rojhala-Pz-M	13.70	14.65	14.72	12.83
48	JIND	Safidon (medium)			21.26	
49	JIND	Ujhana	13.60		13.25	
50	KAITHAL	Balbahera pz	36.88	39.97	43.69	38.49
51	KAITHAL	Balu-Pz-D	25.22	49.22	35.08	25.59
52	KAITHAL	Balu-Pz-M	13.17	25.22	13.12	12.45
53	KAITHAL	Bhagal	38.73		39.11	
54	KAITHAL	Guhna pz	28.95			22.99
55	KAITHAL	Gulha 1(m)	47.30		47.98	
56	KAITHAL	Jajanpur-Pz-D	34.05	38.18	37.55	36.57
57	KAITHAL	Jajanpur-Pz-M	37.90	37.90	36.66	35.86
58	KAITHAL	Khanpur		45.03		
59	KAITHAL	Khanpur Ew D	41.00			42.6
60	KAITHAL	Majri-Pz-D	50.00	57.37	52.64	52.87
61	KAITHAL	Pundri (deep)			32.00	
62	KAITHAL	Rasulpur pz	46.20		47.80	
63	KARNAL	Balhera-m	14.12	16.31	14.61	13.3
64	KARNAL	Chorpur 1(d)		10.10	8.34	8.2
65	KARNAL	Garhi Khajur M		23.07	15.30	
66	KARNAL	Islam Nagar-Pz-D	8.76	10.36	9.04	8.52
67	KARNAL	Islam Nagar-Pz-M	8.53	9.80	7.20	6.95
68	KARNAL	Jundla(shallow)	22.85	26.17	25.70	22.48
69	KARNAL	Karnal D	23.20	17.78	14.56	13.25
70	KARNAL	KheriNaru-Pz-D	14.75	16.90	15.77	15.1
71	KARNAL	KheriNaru-Pz-M	14.13	16.95	13.62	12.54
72	KARNAL	Kutail M	25.50	29.96	25.85	23.81
73	KARNAL	Mound M	26.11	31.12		
74	KARNAL	Mundh (m)			30.67	28.78

75	KARNAL	Newal 1(m)	17.80		14.98	
76	KARNAL	Phurlak M	24.24	27.60	26.70	23.56
77	KARNAL	Sekhpura 1(m)	18.23			17.4
78	KARNAL	Shekhpur 2(d)	26.15		26.45	
79	KARNAL	Shekhpura		23.65	18.07	
80	KURUKSHETRA	Ajrana Kalan S	45.80		47.72	
81	KURUKSHETRA	Bodhni (m)	40.94	43.57	44.70	43.86
82	KURUKSHETRA	Dabkheri	34.83		36.80	
83	KURUKSHETRA	Hatira (m)		34.00	32.25	
84	KURUKSHETRA	Kaulapur D			45.76	42.15
85	KURUKSHETRA	Khan Pur Jattan S Pz.	42.60			
86	KURUKSHETRA	Khanpur Jattan D-Pz.	46.97			
87	KURUKSHETRA	Malikpur(shallow)	45.35		46.08	
88	KURUKSHETRA	Mathana 1(m)			39.17	
89	KURUKSHETRA	Mathana 2(d)	36.32	40.74	39.68	37.85
90	KURUKSHETRA	Pehowa (D)	41.63	46.42	44.65	43.12
91	KURUKSHETRA	Pehowa 2(m)	45.32	45.20	44.85	43.53
92	KURUKSHETRA	Pipli	41.73		43.53	
93	KURUKSHETRA	Ramnagar	44.44		45.36	
94	KURUKSHETRA	Shahbad 1(d)	49.90		50.30	
95	KURUKSHETRA	Thana (m)	40.81		40.10	
96	MAHENDRAGARH	Akoda	61.00		60.50	
97	MAHENDRAGARH	Ateli1			80.10	
98	MAHENDRAGARH	Dalanwas	71.50			
99	MAHENDRAGARH	Meghot	23.50		22.80	
100	MAHENDRAGARH	Nagal Kalial-i	56.35		55.85	
101	MAHENDRAGARH	Nangal Chaudhary	67.00		66.50	
102	MAHENDRAGARH	Raghunathpura	31.00		27.70	
103	MAHENDRAGARH	Satnali1	92.00		92.30	
104	MEWAT	Ferozepurzhirka	15.80		15.85	
105	PALWAL	Gharraut	19.50		17.45	
106	PALWAL	Jaindpur Borehole		15.06		
107	PALWAL	Kondal	6.00		5.70	
108	PALWAL	Pirthla	6.35		5.50	
109	PALWAL	Utawar	13.50		12.75	
110	PANCHKULA	Nandpur	1.22	0.55	0.86	
111	PANIPAT	Babail M-Pz	29.15	32.46	30.20	
112	PANIPAT	Namunda		23.16	28.74	29.6
113	PANIPAT	Naulatha		36.03	36.26	37.78

114	PANIPAT	Pathargarh		11.78	9.18	8.92
115	PANIPAT	Patti Kalyana	33.70	37.02	37.50	
116	PANIPAT	Patti Kalyana M	33.95	33.47	37.70	36.79
117	PANIPAT	Rakshera	17.55	16.53	16.19	15.7
118	PANIPAT	Sewah	51.13		49.65	
119	REWARI	Jatusana1	26.50		26.40	
120	REWARI	Jhabwa	35.50		35.80	
121	REWARI	Piragpura	57.65		58.00	
122	SIRSA	Darbakan Ew D		11.66		
123	SIRSA	Darbakan Ew S	11.52	11.66	11.78	12
124	SIRSA	Dhudianwali1(s)	38.00		38.20	
125	SIRSA	Ellenabed	25.50		26.00	
126	SIRSA	Farwai Kalan Ongc	29.50			
127	SIRSA	Najadiala Kalan	43.20			
128	SIRSA	Phulka	56.00			
129	SIRSA	Sahuwala1	13.80		12.40	
130	SIRSA	Tejakhra	7.66			
131	SONIPAT	Barwasni Pz (d)	10.55	9.19	9.03	9.26
132	SONIPAT	Bhakhpur		38.33	37.75	37.2
133	SONIPAT	Isapurkheri	1.69			
134	SONIPAT	Kheaora		29.15	29.44	
135	SONIPAT	Kundli 1(s)	24.79		24.06	
136	SONIPAT	Manoli		9.40		
137	YAMUNANAGAR	Bhambauli-2 (d)	22.82	25.43	24.28	23.22
138	YAMUNANAGAR	Dhaurang M	16.03			
139	YAMUNANAGAR	Dhaurang(deep)		22.34	19.15	18.57
140	YAMUNANAGAR	Dhaurang(shallow)			14.95	14.66
141	YAMUNANAGAR	Jhiwarheri M	34.67	41.26	35.90	33.85
142	YAMUNANAGAR	Kotla D	16.45		17.95	
143	YAMUNANAGAR	Mustafabad(shallow)		10.57	10.36	11.19
144	YAMUNANAGAR	Naggal M	6.98	7.68	6.25	6.2
145	YAMUNANAGAR	Sabapur-Pz-M	4.54	4.24	2.14	2.74
146	YAMUNANAGAR	Sabapur-Pz-S	3.59	3.12	1.31	3.79
147	YAMUNANAGAR	Sadhaura M	45.75	55.85	42.28	38.85
148	YAMUNANAGAR	Sadura	28.86	32.21	29.23	26.77
149	YAMUNANAGAR	Shahbpura-Ppz	30.78	35.38	32.23	29.83
150	YAMUNANAGAR	Shahbpura-Pz	29.98	34.36	31.20	30.85
151	YAMUNANAGAR	Shahjadpur	6.33		5.63	