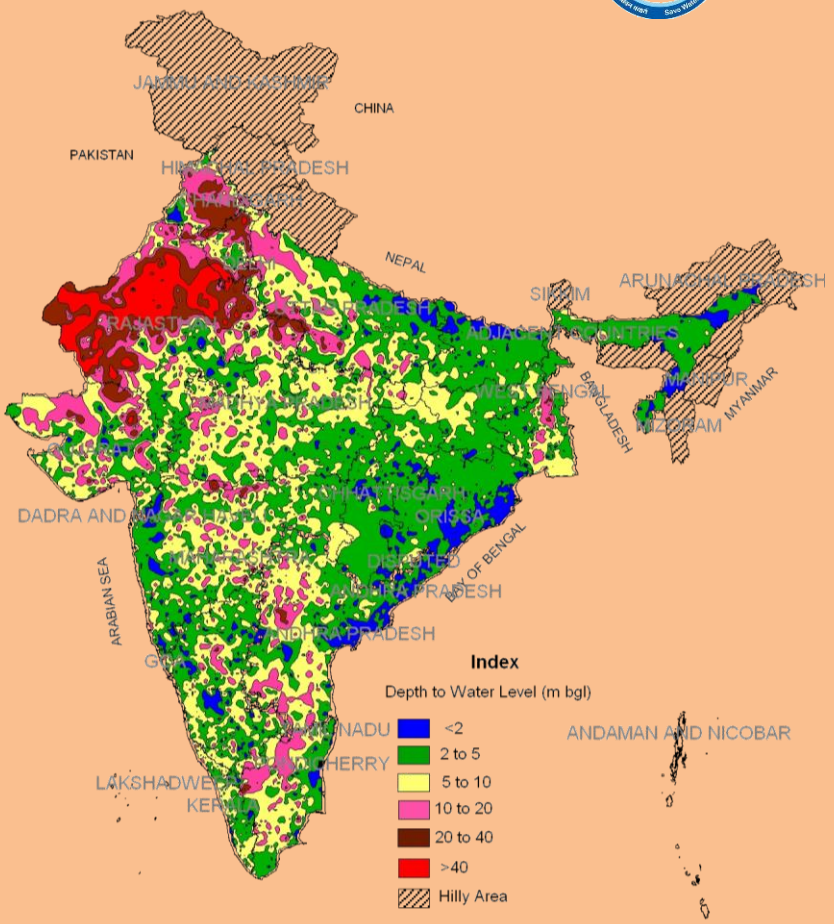
GROUND WATER SCENARIO IN INDIA

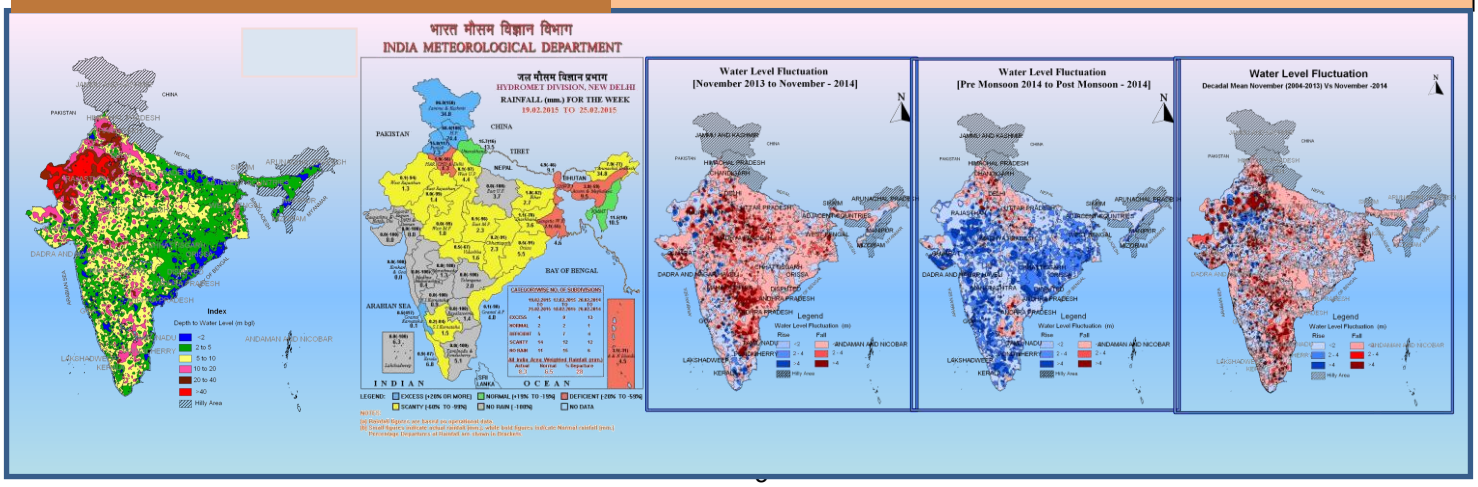
NOVEMBER, 2014

CENTRAL GROUND WATER BOARD

MINISTRY OF WATER RESOURCES

GOVT OF INDIA





GROUND WATER LEVEL SCENARIO IN INDIA
(NOVEMBER - 2014)

1.0 Introduction

Ground water regime monitoring is one of the key activities of CGWB to generate information on ground water level/ quality through representative sampling. The primary objective of establishing the ground water monitoring network stations is to record the response of ground water regime to the natural and anthropogenic stresses of recharge and discharge parameters with reference to geology, climate, physiography, land use pattern and hydrologic characteristics.

Ground water levels are being monitored throughout the Country four times in a year by Central Ground Water Board through a network of **20698** monitoring wells during the months of January, Premonsoon (March/April/ May), August and November.

The ground water regime monitoring was started in the year 1969 by Central Ground Water Board. At present CGWB has a network of 20698 ground water observation wells, out of which 14674 observation wells are dugwells and 6024 are piezometers. The water level / piezometric head data collected from these observations were entered into the National database and are analysed for obtaining background information of ground water regime and changes on regional scale. The Groundwater level data has been collected from all the states except for Mizoram & Sikkim and UT of Lakshadweep where water level monitoring is not being carried out.

Water level data of November 2014 has been analysed to illustrate spatial distribution of water level and its categorization under different ranges. The November data has been compared with the previous year November data (annual fluctuation), with Premonsoon data (Seasonal Fluctuation) and mean of last 10 years November monitoring data (decadal fluctuation); the analytical results are represented through tables and maps along with suitable explanations. Database thus generated forms the basis for planning the ground water development and management programme. This data is also used for assessment of ground water resources and establishing changes in the regime consequent to various development and management activities.

2.0 Rainfall Pattern

Water level / Piezometric heads are resultant of all input/ output from the aquifer. Apart from draft of ground water for various purposes, quantum of rainfall and its component being recharged to the ground water is major controlling factor of the depth to water levels and it's annual, seasonal or decadal fluctuations. Thus, study of rainfall pattern is very important for understanding spatial and temporal variations in water levels. As per the Climatic bulletins of IMD for monsoon period of 2014, the rainfall pattern has been studied and discussed below.

For the country as a whole, cumulative rainfall during the year's monsoon has been 12% below the Long Period Average (LPA).

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	777.5	886.9	-12%
Northwest India	483.1	615.0	-21%
Central India	879.7	974.2	-10%
South Peninsula	665.4	715.7	-7%
East & northeast India	1267.7	1437.8	-12%

Out of 36 meteorological subdivisions, the rainfall has been excess over 1, normal over 23, deficient over 12 sub-divisions and no sub-division under scanty rainfall. Haryana, Chandigarh & Delhi, Punjab and West Uttar Pradesh received deficient rainfall by more the 50% of LPA. In area-wise distribution, 3% area of the country received excess, 67% normal and remaining 30% area received deficient rainfall.

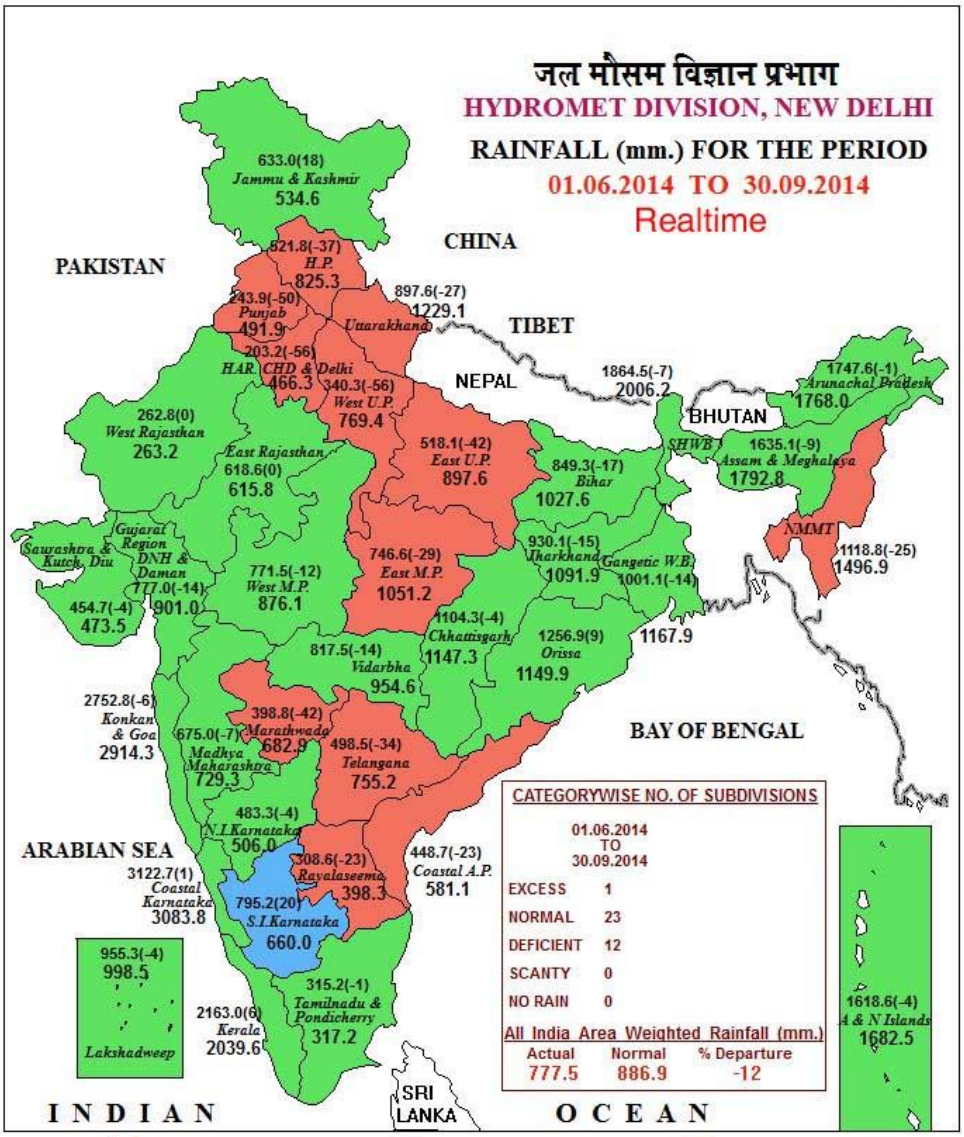
Main Features of Southwest Monsoon, 2014

- Southwest monsoon set in over Kerala on 6 June 2014, as against forecast date of 5 June ± 4 days

- Observed rainfall for the country as a whole during the month of July & November was 90% & 91% of the LPA against the forecast of 93%± 9% & 96%±9% of LPA respectively

- The seasonal rainfall for the country as a whole has been 88% of the LPA as against updated Long Range Forecast of 87%± 4% of LPA.

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT



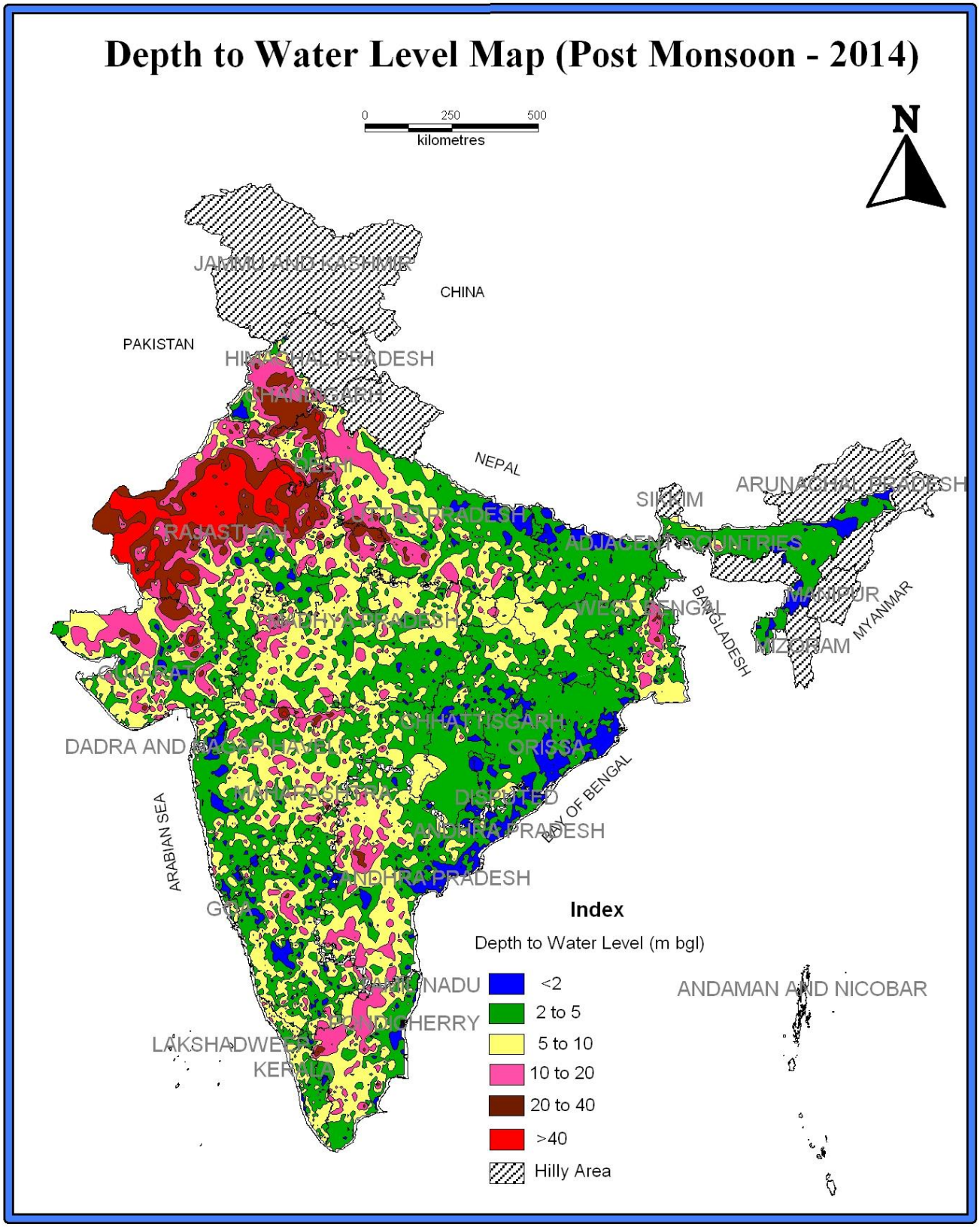
LEGEND: EXCESS (+20% OR MORE) | NORMAL (+19% TO -19%) | DEFICIENT (-20% TO -59%) | SCANTY (-60% TO -99%) | NO RAIN (-100%) | NO DATA

NOTES:

(a) Rainfall figures are based on operational data.
(b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

Source: www.imd.gov.in

Plate-II



Source: National Data Centre, CGWB, Faridabad

3.0 Ground Water Level Scenario in India

3.1 Ground Water Level Scenario - November 2014

The ground water level data for November 2014 indicate that out of the total 14904 wells analysed, 2941 (20 %) wells are showing water level less than 2 m bgl (metres below ground level), 5765 (39%) wells are showing water level in the depth range of 2-5 m bgl, 3824 (26 %) wells are showing water level in the depth range of 5-10 m bgl, 1689 (11%) wells are showing water level in the depth range of 10-20 m bgl, 489 (3%) wells are showing water level in the depth range of 20-40 m bgl and the remaining 195 (1 %) wells are showing water level more than 40 m bgl. The distribution of number of wells under different depth ranges is presented in the histogram (**Fig-1**) and statistical distribution is given in **Annexure-I**. The maximum depth to water level of 115.08 m bgl is observed in Rajasthan whereas the minimum is less than 1 m bgl.

The depth to water level map of November 2014 (**Plate II**) for the country indicates that in general depth to water level ranges from 2 to 10 m bgl as observed at about more than 70% of the monitoring stations. Sub-Himalayan area, north of river Ganges, Uttar Pradesh, Bihar, Odisha, Chhatishgarh, Assam, Andhra Pradesh, Maharashtra, and Tripura generally the depth to water level varies from 2-5 meter below ground level. Shallow water level of less than 2 m bgl is observed in the states of Assam, Andhra Pradesh, Chhatishgarh, Himachal Pradesh, Maharashtra, Odisha, Tripura and Uttar Pradesh and also in isolated pockets in Madhya Pradesh, Gujarat and Tamil Nadu. In the states of Madhya Pradesh, Jharkhand, Maharashtra, Karnataka, Tamil Nadu, Telangana, Kerala and West Bengal water level generally varies from 5 to 10 m bgl with small patches showing depth to water level between 2 to 5 m bgl.

In major parts of north-western states depth to water level generally ranges from 10-40 m bgl. In the western parts of the country deeper water level is recorded in the depth range of 20-40 m bgl and more than 40 m bgl. In some parts of Haryana, and Delhi and almost major parts of Rajasthan, water level of more than 40 m bgl is recorded. Along the eastern & western coast water level is generally upto 10 mbgl. Central part of West Bengal recorded water level in the range of 5-20 m bgl. In Central India water level generally varies between 5 m bgl to 10 m bgl, except in isolated pockets where water level more than 10 m bgl has been observed. The peninsular part of country generally recorded a water level in the range of 5 to 20 m bgl depth range.

Fig 1

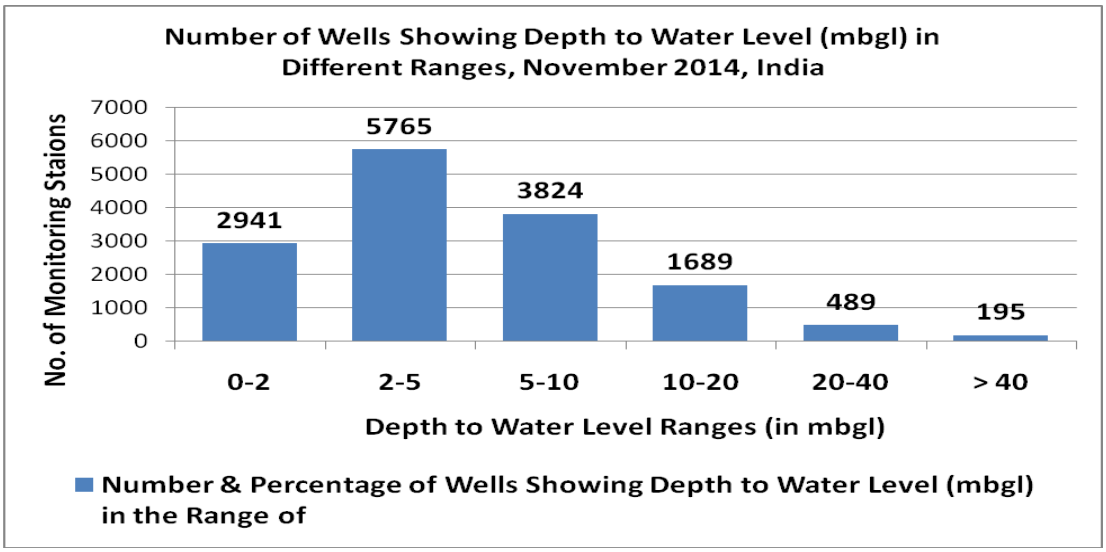
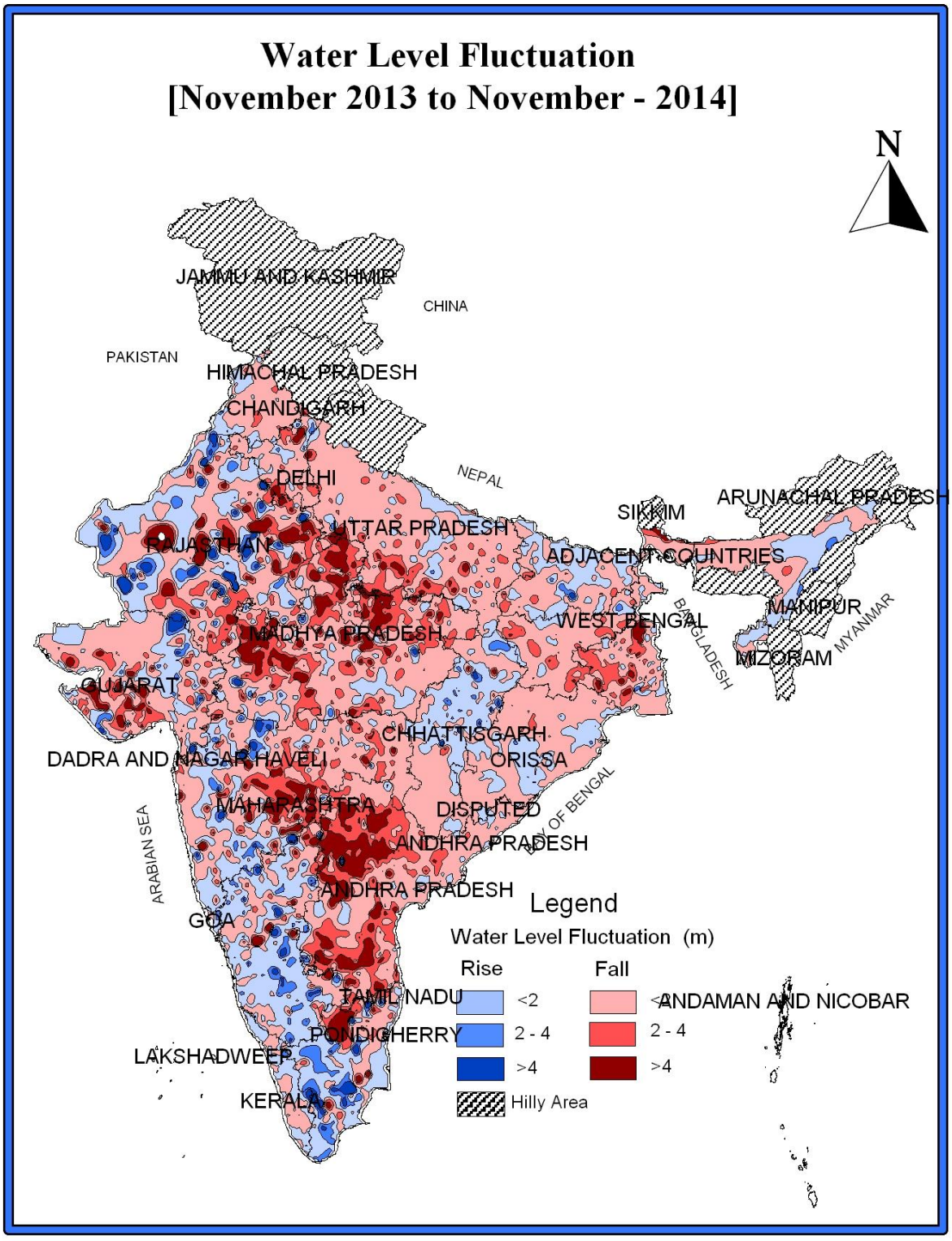


Plate III



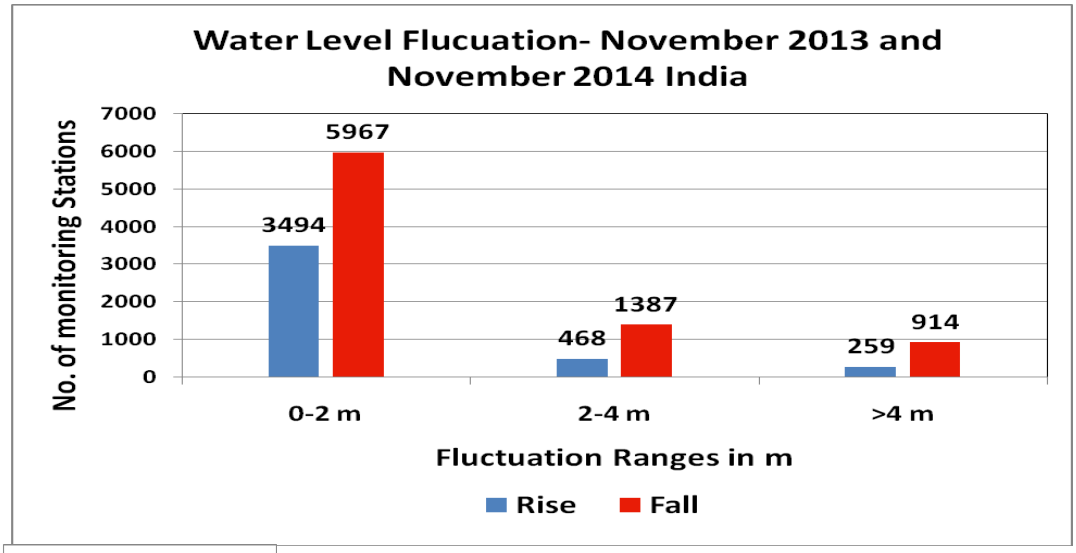
Source: National Data Centre, CGWB, Faridabad

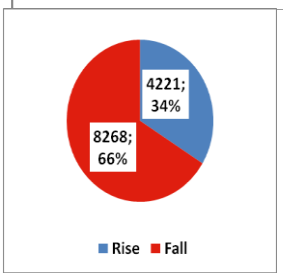
3.2 Water Level Fluctuation (November 2013 to November 2014)

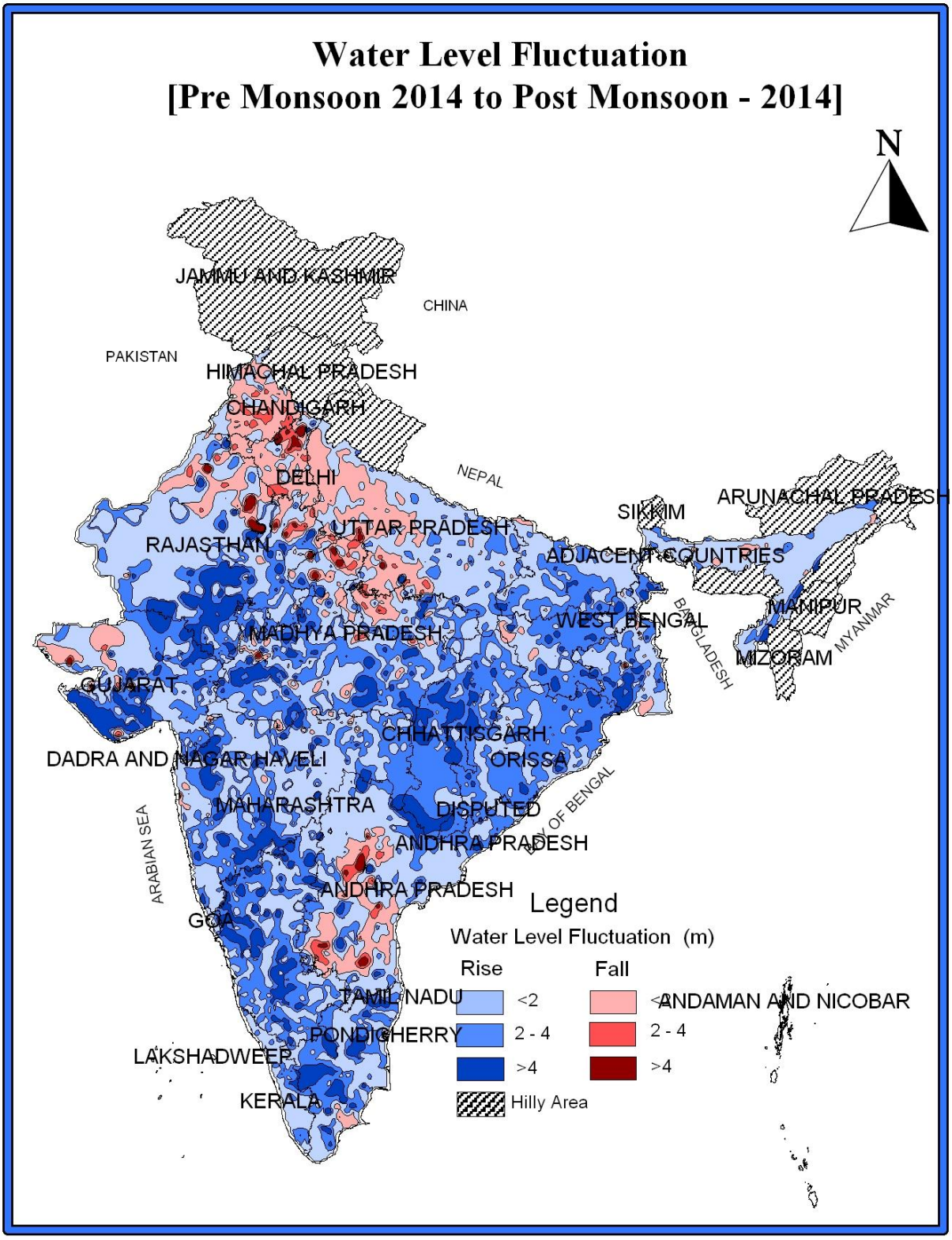
The water level fluctuation of **November 2013 to November 2014** shows that out of 12682 wells analysed, 4221(33%) are showing rise and 8268 (65%) are showing fall in water level. Remaining 193 (2%) stations analysed do not show any change in water level. About 28% wells are showing rise in the water level in the range of less than 2 m. About 4% wells are showing rise in water level in 2-4 m range and 2 % wells showing rise in water level more than 4 m range. About 65% wells are showing decline in water level, out of which 47% wells are showing decline in water level in less than 2 m range. About 11 % wells are showing decline in water level in 2-4 m range. About 7% wells are showing decline in water level more than 4 m range (**Fig-2** and **Annexure-II**). Majority of the wells showing rise/decline falls in the range of 0-2 m.

A comparison of depth to water level of November 2014 to November 2013 is presented in the form of water level fluctuation map (**Plate III**) reveals that in general, there is fall in water level in almost the entire country, except in few states such as Assam, Bihar, Chhatishgarh, Karnataka, Kerala,Tamil Nadu. Fall is mostly in the range of 0-2 m, although fall in the range of more than 2 m is also prevalent in all the states in small patches.

Fig 2





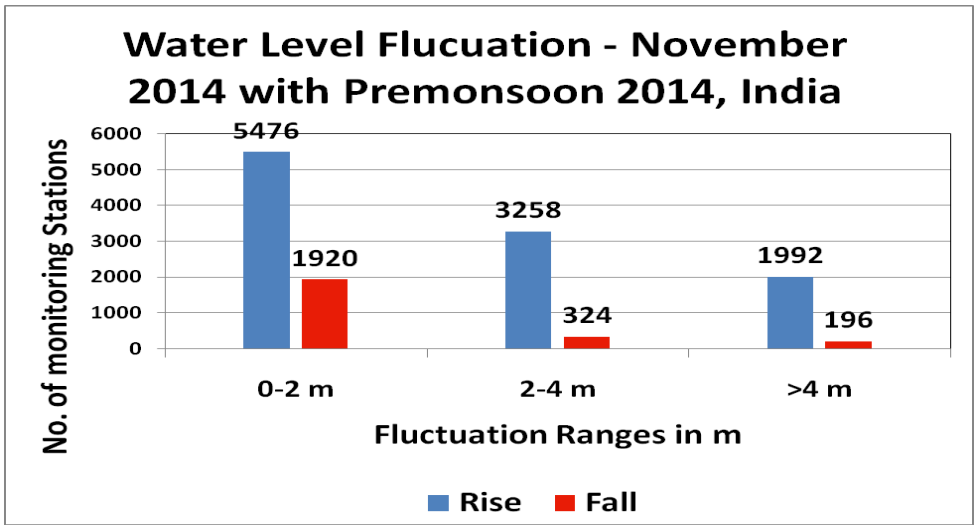

Water Level Fluctuation
[Pre Monsoon 2014 to Post Monsoon - 2014]
N
JAMMU AND KASHMIR
CHINA
PAKISTAN
HIMACHAL PRADESH
CHANDIGARH
DELHI
NEPAL
SIKKIM
ARUNACHAL PRADESH
UTTAR PRADESH
RAJASTHAN
ADJACENT COUNTRIES
WEST BENGAL
BANGLADESH
MANIPUR
MYANMAR
MIZORAM
MADHYA PRADESH
GUJARAT
CHHATTISGARH
DADRA AND NAGAR HAVELI
ORISSA
MAHARASHTRA
DISPUTED
BAY OF BENGAL
ARABIAN SEA
ANDHRA PRADESH
ANDHRA PRADESH
GOA
Legend
Water Level Fluctuation (m)
Rise
Fall
TAMIL NADU
<2
<2
ANDAMAN AND NICOBAR
PONDICHERRY
2 - 4
2 - 4
LAKSHADWEEP
>4
>4
KERALA
Hilly Area

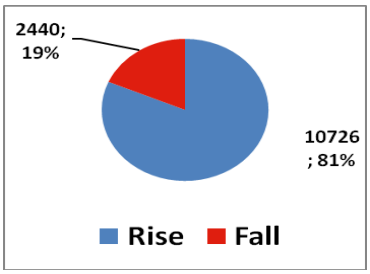
3.3 Water Level Fluctuation (November 2014 to Premonsoon 2014)

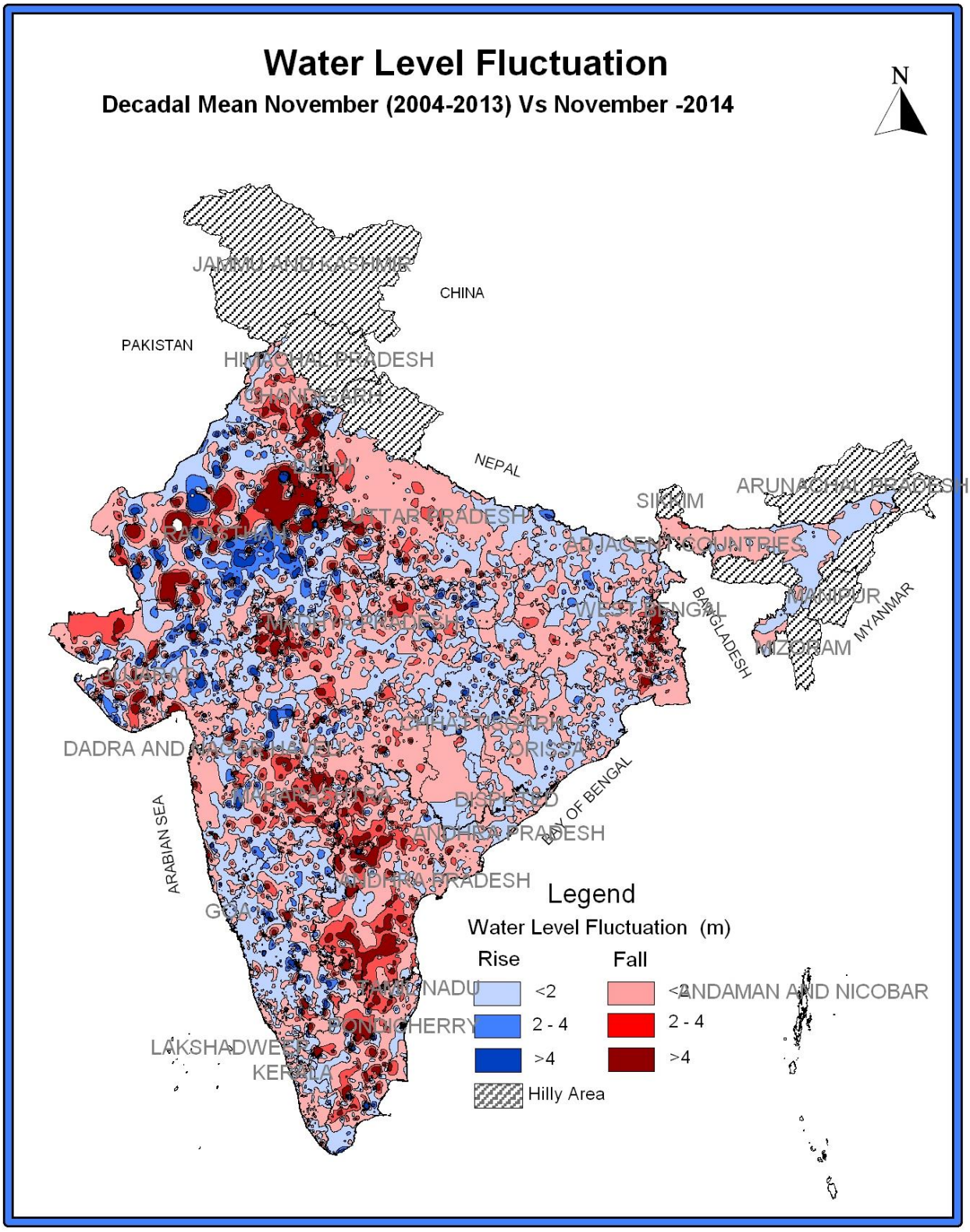
A comparison of depth to water level of November 2014 with Premonsoon 2014 indicates that about 80% of wells are showing rise in water levels, out of which 41% wells are showing rise of less than 2 m range. About 24% wells are showing rise in water level in the range of 2-4 m and another 15 % wells are showing rise in water in range of more than 4 m. Only 18 % wells are showing decline in water level, out of which 14 % wells are showing decline in water in the range of 0-2 m. Rise in water level is prominent in all the states of the country except in few states such as Chandigarh, Delhi, Haryana and Punjab. (**Fig-3 and Annexure-IV**). Rise in water level of more than 4 m is prominent in the states of Chhatishgarh, Gujarat, Karnataka, Madhya Pradesh, Pondicherry, Rajasthan and Tamil Nadu.

A comparison of depth to water level of November 2014 with Premonsoon 2014 is presented in the form of water level fluctuation map (**Plate III**) reveals that in general, there is rise in water level in almost the entire country, except in few states such as Chandigarh, Delhi, Haryana and Punjab. Fall is mostly in the range of 0-2 m.

Fig 3







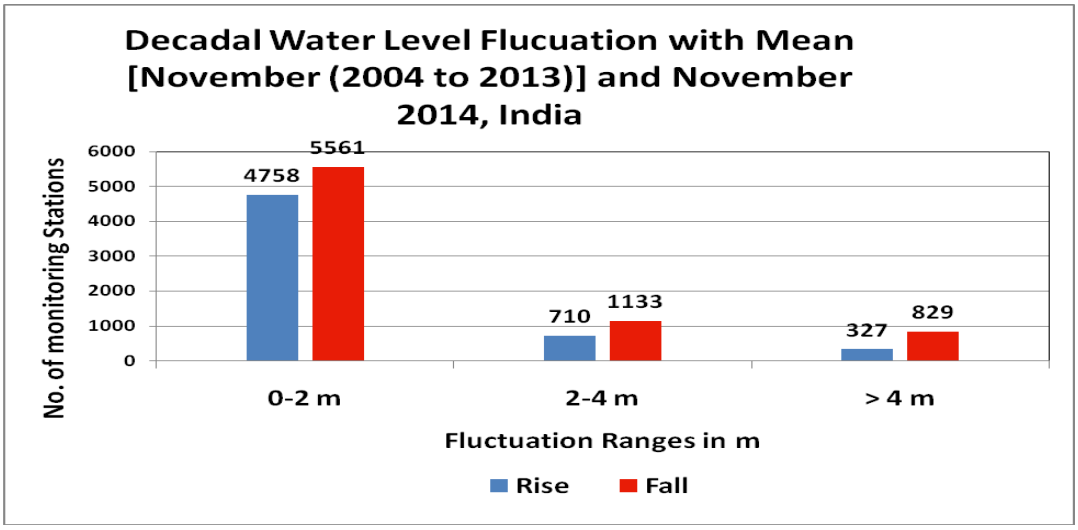
Source: National Data Centre, CGWB, Faridabad

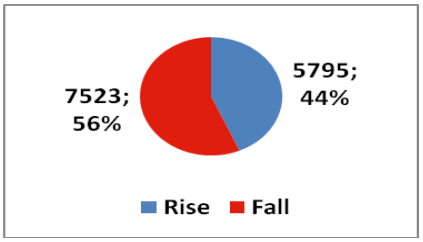
3.4 Water Level Fluctuation (November– 2014 with Mean of November (2004 - 2013)

A comparison of depth to water level of November 2014 with decadal mean of November (2004-2013) indicate that 5795 (about 43%) of wells are showing rise in water level, out of which 36% wells are showing rise of less than 2 m (**Annexure-IV**). About 5% wells are showing rise in water level in the range of 2-4 m and about 2% wells are showing rise in water level in the range of more than 4 m. 7523 (about 56%) wells are showing decline in water level, out of which 42% wells are showing decline in water in the range of 0-2 m. 9% wells are showing decline in water level in 2-4 m range and remaining 6% are in the range of more than 4 m. Decline in water level of more than 4 m is mostly prominent in the states of Andhra Pradesh, Delhi, Gujarat, Haryana, , Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Telangana ,Tamil Nadu and Uttarakhand. Rise in water level of more than 4 m is observed mostly in the states of Gujarat, Himachal Pradesh and Rajasthan. Remaining 32 (1%) stations analysed do not show any change in water level.

The decadal water level fluctuation map of India for November, 2014 with the mean of November (2004-2013) is shown in **Plate-V** and frequency distribution of fluctuation ranges is shown in **Fig. 4.** As observed in Plate-IV maximum fall is observed in and around parts of Punjab, Rajasthan, Gujarat, Karnataka, Uttar Pradesh, Assam and Tamil Nadu. A rise in water level is observed in almost all parts of the country but occurs sporadically.

Fig 4





4.0 State-wise scenario of ground water level and comparison with previous year water level as well as change with respect to decadal average has been discussed in the following section.

4.01 Andaman & Nicobar Islands

Depth to Water Level – November 2014

In general depth to water level scenario in the UT of Andaman & Nicobar Islands depicted a water level in the range of 0 to 5 m bgl with about 100 % of the wells monitored falling in this range. Around 74% monitoring stations recorded water level between 0-2 m bgl. Another 26 % wells recorded water level between 2-5 m bgl,

Water Level Fluctuation (November 2014 to November 2013)

Water level data of November 2014 was compared to November 2013 and the analysis shows that in general there is fall in water level in the UT. About 73 % of the wells analysed are showing fall in the water level. Out of this, 63 % wells have shown a fall in 0-2 m range. 10% wells show fall in 2-4 m range. 26 % wells show rise in water level, out of which 24 % shows rise in 0-2 m range.

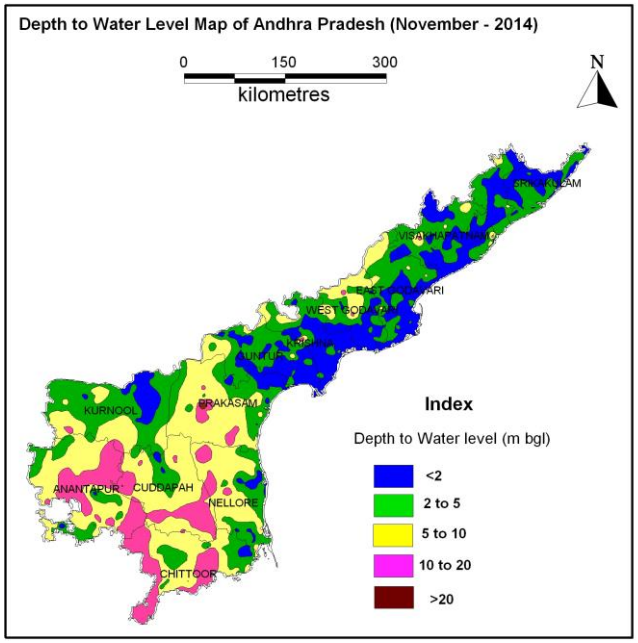
Water Level Fluctuation (Premonsoon 2014 to November 2014)

Water level of November 2014 when compared to that of Premonsoon 2014 shows that there is predominantly rise in water level in the entire island. About 97 % of the wells analysed show a rise in water level. Out of this, 77 % of the wells showing rise in water level in less than 2 m range and 16% wells show rise in 2-4 m range. Only 3% wells analysed have shown fall in water level, all in the range of 0-2 m.

4.02 Andhra Pradesh

Depth to Water Level – November 2014

In the state of Andhra Pradesh very shallow water level ranging between 0-5 m bgl was observed in more than 70% of the wells monitored. Shallow water level range is observed along the coastal tract, northeastern parts of the state. The depth to water level between 5-10 meters has been observed in 19 % wells mainly in the southern, central and western parts of the state. Depth to water level ranging between 10-20 meters has been



observed in 7% wells mainly in the southern parts. Water level of more than 20 m bgl has been observed in less than 1% well. The depth to water level in the state ranges upto 27.85 m bgl (in Ranga Reddy district).

Water Level Fluctuation (November 2014 to November 2013)

Water level data of November 2014 was compared to November 2013 and the analysis shows that about 78% of the wells analysed are showing fall in water level and only 20% wells are showing rise in water level. 2% wells show no change in water level. Out of this 20% rise, 19% wells have shown a rise in 0-2 m range. About 56% of the wells show fall in 0-2 m range. Maximum rise in water level has been recorded as 6.20 m and maximum fall in water level has been recorded as 17.99 m in the State.

Fluctuation - November 2014 to Premonsoon 2014

Water level data of November 2014 was compared to Premonsoon 2014 and the analysis shows that about 74% of the wells analysed are showing rise in the water level and 22% wells are showing fall in water level. 5 % wells show no change in water level. Out of this, 49% wells have shown a rise in 0-2 m range,18% of the wells have shown rise in the range of 2-4 m and another 7% of the wells show rise in the range of >4m. About 18% of the wells show fall in 0-2 m range. Maximum rise in water level has been recorded as 14.22 m and maximum fall in water level has been recorded as 6.60 m in the State.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004- 2013) to assess the rise/fall in water level during current year with respect to long term average of the corresponding period. About 30 % of analysed wells have shown a rise in water level. Out of this 28% of the wells have shown rise in the range of 0 to 2 m. About 70% wells have shown a fall in water level, out of which 48% wells have shown fall in the range of 0 to 2 m and 14 % wells have shown fall in 2- 4 m and 8% wells shows fall of more than 4 m.

4.03 Arunachal Pradesh

Depth to Water Level – November 2014

In general depth to water level scenario in the state depicted water level in the range of 2 to 10 m bgl at about more than 80 % of the wells monitored.

Water Level Fluctuation (November 2014 to November 2013)

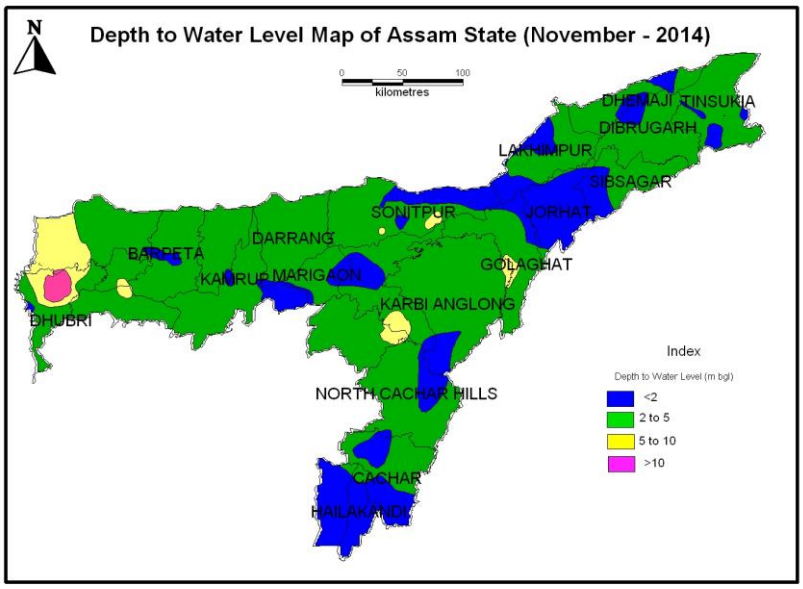
Water level of November 2014 when compared to that of November 2013 shows that there is dominantly rise in water level in the entire state. About 71 % of the wells analysed show a rise in water level and all the wells fall in 0-2 m range. 29% wells show decline in water level and all the wells lies in 0-2 m range.

Water Level Fluctuation (Premonsoon 2014 to November 2014)

Water level of November 2014 when compared to that of Premonsoon 2014 shows that there is dominantly rise in water level in the entire state. About 73 % of the wells analysed show a rise in water level and 27% shows fall. 45% wells show rise in 0-2 m range, 18% shows rise in 2-4 m range. All the wells in the decline category falls in 0-2 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004-2013) and it is observed that 75% of the wells analysed show rise in water level whereas only 17% shows fall in water level Both rise and decline are in the range of 0-2 m.



4.04 Assam

Depth to Water Level-November 2014

In general depth to water level scenario in the state depicted a water level in the range of 0 to 5 m bgl at almost 90 % of the wells monitored. About 6 % wells recorded water level between 5-10 m bgl and only 1% wells show water level between 10-20 m bgl.

A shallow water level within 2 m bgl is recorded in districts such as Hailakandi, Cachar, N C Hills, Marigaon, Sonitpur, Lakhimpur and almost whole of Jorhat district. The maximum depth to water level has been recorded as 16.09 m bgl in Karbi Anglong district.

Water Level Fluctuation (November 2014 to November 2013)

Water level of November 2014 when compared to that of November 2014 shows that there is both rise and fall in water level in the state. About 40 % of the wells analysed show a rise in water level. Out of this, 37 % of the wells showing rise in water level in less than 2 m range. A rise of 2-4 m is observed in 2 % of the wells analyzed. About 57 % of wells analysed have shown fall in water level where 55 % of the wells shows fall in the range of 0-2 m.

Water Level Fluctuation (Premonsoon 2014 to November 2014)

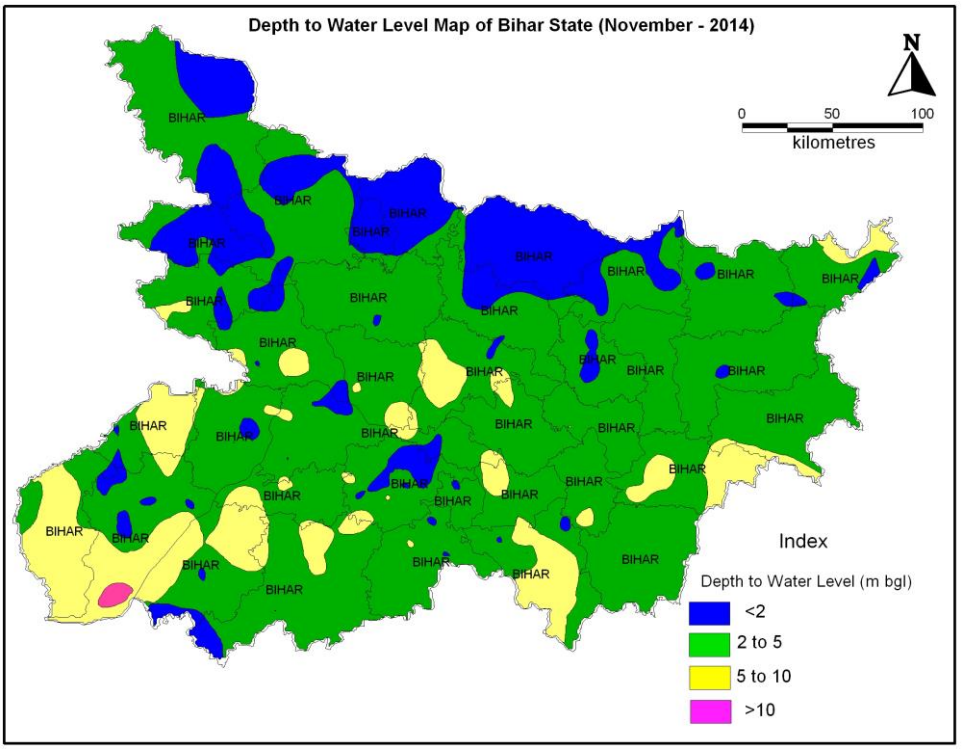
Water level of November 2014 when compared to that of Premonsoon 2014 shows that there is predominantly rise in water level in the state. About 87 % of the wells analysed show a rise in water level. Out of this, 68 % of the wells showing rise in water level in less than 2 m range. A rise of 2-4 m is observed in 15 % of the wells analyzed and 4% wells show rise of more than 4m. About 13 % of wells analysed have shown fall in water level and all wells in 0-2 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004-2013) and it is observed that out of 171 wells analyzed 43 % show a rise in water level whereas 57% show a fall in water level. 41% wells show rise in the range of 0-2 m and all the 57% wells show fall in the range of 0-2 m.

4.05 Bihar

Depth to Water Level – November 2014



During November 2014 water level measurement, a total of 388 wells have been monitored. About 24 % of the wells are showing water level in the range 0-2 m bgl. 60 % of the wells are showing water level in the range 2-5 m bgl and 15 % of the wells analysed are showing water level in the range of 5-10 m bgl. Less than 1% of the wells are showing water level in the range 10-20 m bgl. The maximum depth to water level has been recorded as 12.06 m bgl in Jamui district.

Water Level Fluctuation (November 2014 to November 2013)

Water level data of November 2014 was compared to November 2013 and the analysis shows that in general there is both rise and fall in water level in the state. About 47 % of the wells analysed are showing rise in the water level. Out of this, 40 % wells have shown a rise in 0-2 m range. 53% wells shows fall in water level, out of which about 46 % of the wells analysed are showing fall in the water level mostly in the range of 0 -2 m. Maximum rise in water level has been recorded as 6.78 m and maximum fall in water level has been recorded as 6.48 m in the state.

Water Level Fluctuation (Premonsoon 2014 to November 2014)

Water level of November 2014 when compared to that of Premonsoon 2014 shows that there is predominantly rise in water level in the entire state. About 92% of the wells analysed show a rise in water level. Out of this, 50 % of the wells showing rise in water level in less than 2 m range. A

rise of 2-4 m is observed in 31 % of the wells analyzed and 10% wells show rise of more than 4 m. About 8 % of wells analysed have shown fall in water level.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004 to 2013) and it indicates that out of 379 wells analyzed 57% wells show a rise in water level whereas 43% show a fall in water level. Out of 57 % rise, about 51% wells show rise in the range of 0-2 m bgl, whereas, out of 43 % fall, 38% wells show fall in 0-2 m range.

4.06 Chandigarh

Depth to Water Level – November 2014

In general depth to water level scenario in the UT of Chandigarh depicted a water level in the range of 2 to 40 m bgl with about 95 % of the wells monitored falling in this range. Around 21% monitoring stations recorded water level between 2-5 m bgl. Another 21 % wells recorded water level between 5-10 m bgl, 36% wells show water level between 10-20 m bgl and 21% falls in the range of 20-40m. No wells show water level in more than 40 m range. The maximum depth to water level has been recorded as 38.97 m bgl.

Water Level Fluctuation (November 2014 to November 2013)

Water level data of November 2014 was compared to November 2013 and the analysis shows that in general there is fall in water level in the UT. About 86 % of the wells analysed are showing fall in the water level. Out of this, 79 % wells have shown a fall in 0-2 m range. 14% wells shows rise in water level, out of which all the wells analysed shows rise in 0 -2 m range.

Water Level Fluctuation (Premonsoon 2014 to November 2014)

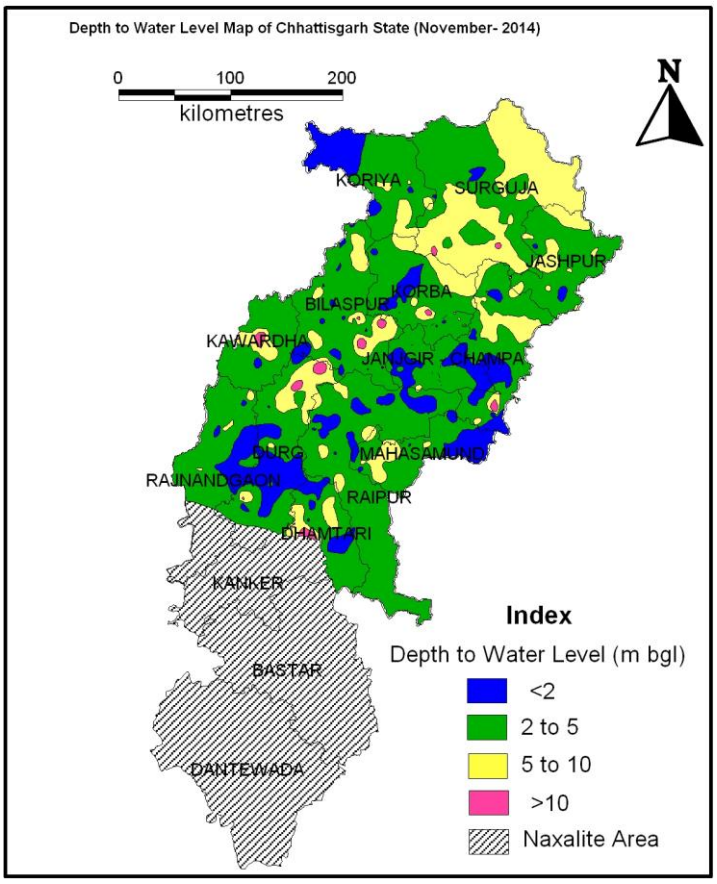
Water level of November 2014 when compared to that of Premonsoon 2014 shows that there is predominantly fall in water level. About 79 % of the wells analysed show a fall in water level. Out of this, 64 % of the wells showing fall in water level in less than 2 m range and 14% wells show fall in 2-4 m range. About 21% of wells analysed have shown rise in water level, out of which 7% shows rise in the range of 0-2 m. A rise of more than 4 m is observed in 14% wells.

Fluctuation- November 2014 to November Decadal mean (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004-2013) and it shows that there is predominantly fall in water level in the UT. Only 7 % of the wells analysed show rise in water level and 93% shows decline in water level. Out of 93 % in the fall category, 86% wells fall in the 0-2 m range.

4.07 Chhattisgarh

Depth to Water Level – November 2014



During November 2014, water level measurement, a total of 620 wells has been monitored. About 25% of the wells monitored show water level in the range of 0-2 m bgl, 33 % wells shows water level in 2-5 m bgl and about 54 % wells falls under the category of 5- 10 m bgl. About 17% wells show water levels in the range of 5-10 m bgl and 4% wells show water level more than 10 m bgl. The maximum water level measured is 19.70 m bgl in Dhamtari District.

Water Level Fluctuation (November 2014 to November 2013)

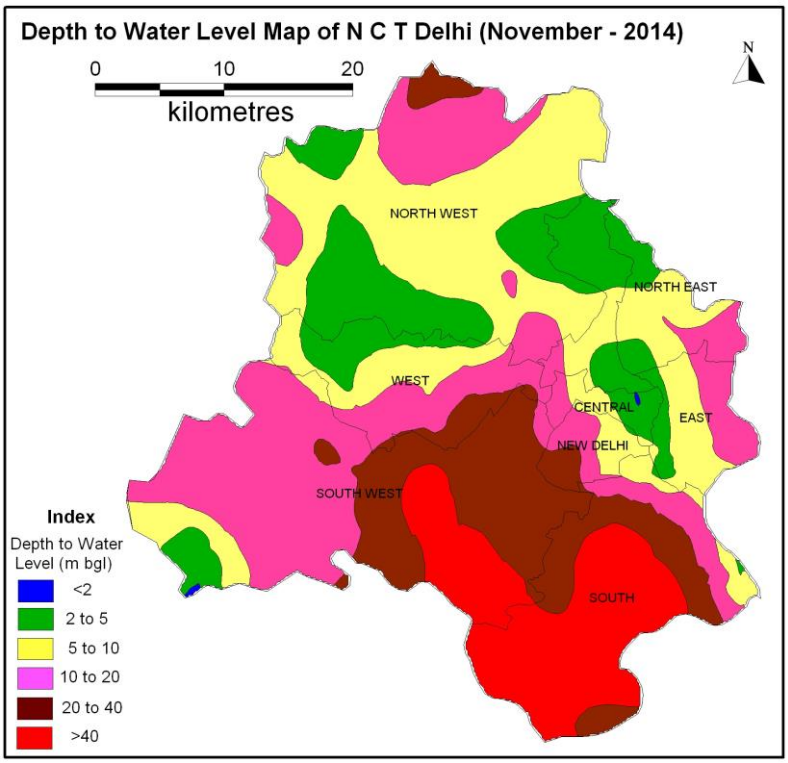
Water level data of November 2014 was compared to November 2013 and the analysis shows that in general there is rise in water level in the state. About 68 % of the wells analysed are showing rise in the water level. Out of this, 57 % wells have shown a rise in 0-2 m range. 31% wells shows fall in water level, out of which about 26 % of the wells analysed are showing fall in the water level mostly in the range of 0-2 m.

Water Level Fluctuation (Premonsoon 2014 to November 2014)

Water level of November 2014 when compared to that of Premonsoon 2014 shows that there is rise in water level in the entire state. About 95 % of the wells analysed show a rise in water level. Out of this, 28 % of the wells showing rise in water level in less than 2 m range. A rise of 2- 4 m is observed in 33 % wells. A rise of more than 4 m is observed in 35 % wells. 4 % wells show decline in water level.

Fluctuation - November 2014 to November Decadal mean (2004-13)

When compared the decadal mean water level (November 2004 to 2013) with November 2014, about 64 % of observation wells are showing a rise in water level. Out of the 64% wells, 55 % of the wells are showing a rise upto 2 m. Fall of water level as compared to the decadal mean is observed in 36 % of the monitored wells. Almost 31% of the monitored wells are showing a fall in the range of 0-2 m.



4.08 Delhi

Depth to Water Level – November 2014

The depth to water level recorded in the state of Delhi during November 2014 ranges from 1.82 m bgl (NW District) to 63.63 m bgl (SW District). It is observed that only 3% of the wells have shown water level in the range of 0-2 m bgl. About 23 % of the wells analysed have shown water level in the range of 2-5 m bgl, about 26% of the wells have shown water level in the range of 5-10 m bgl and 24 % wells show water level in the range of 10-20 m bgl. Deeper water level in the range of 20-40 m bgl and more than 40 m bgl are shown by 16% & 9% of the wells analysed respectively. It is observed that Southern parts of Delhi show deeper water levels of more than 20 m bgl.

Water Level Fluctuation (November 2014 to November 2013)

Water level of November 2014 when compared to water level of November 2013 in the state indicates there is fall in water level in the entire state. Only about 8 % of the wells analysed have recorded a rise in water level, out of which 5 % of analysed wells have recorded a rise in the range of 0 to 2 m. About 92% of the wells have shown fall in water level, out of which 68% fall in the range of 0 to 2 m, 19% falls in the category of 2-4 m and 4 % in more than 4m range.

Water Level Fluctuation (Premonsoon 2014 to November 2014)

Water level of November, 2014 when compared to water level of Premonsoon 2014 in the state indicates that only about 19 % of the wells analysed have recorded a rise in water level, out of which 18 % of analysed wells have recorded a rise in the range of 0 to 2 m. About 81% of the wells have shown fall in water level, out of which 75 % fall in the range of 0 to 2 m.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation analyses of water level during November 2014, when compared with the Decadal mean (November 2004-2013) indicate that in general there is fall in water level. Only 18 % of analysed wells have shown rise in water level. Out of this, 17 % of the wells have shown rise in the range of 0-2 m. About 82% wells have shown a decline in water level. Out of this 49 % of the wells have shown decline in water level in the range of 0-2 m, 18% of the wells have shown decline in water level in the range of 2-4 m, 15 % of the wells have shown decline in water level in the range of more than 4 m.

4.09 Goa

Depth to Water Level - November 2014

The depth to water level recorded in the state of Goa during November 2014 ranges from 0.13 m bgl to 16.56 m bgl in North Goa. It is observed that out of 44 monitored wells, 30 % wells show less than 2 m bgl water level, another 46% wells show 2 to 5 m bgl water level, 16% wells show 5 to 10 m bgl water level and 9 % wells show 10 to 20 m bgl water level.

Water Level Fluctuation (November 2014 to November 2013)

Water level of November 2014 when compared to water level of November 2013 in the state indicates that about 71 % of the wells analysed have recorded a rise in water level, out of which 58 % of analysed wells have recorded a rise in the range of 0 to 2 m. About 26 % of the wells have shown fall in water level, out of which 24% fall in the range of 0 to 2 m.

Water Level Fluctuation (Premonsoon 2014 to November 2014)

Water level of November 2014 when compared to water level of Premonsoon 2014 in the state indicates rise in water level in the state. About 84 % of the wells analysed have recorded a rise in water level, out of which 42 % of the analysed wells have recorded a rise in the range of 0 to 2 m, 28 % in 2-4 m and 14% in more than 4 m range.16 % wells shows fall in water level and all the wells falls in 0-2 m range.

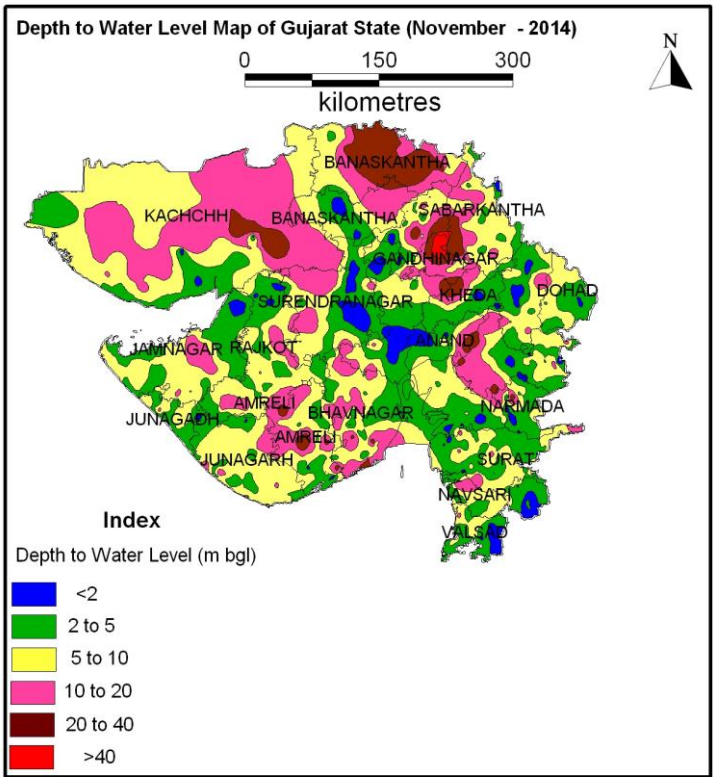
Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014 when compared with the Decadal means (November 2004-2013) indicates rise in water level in the state. About 80% of analysed wells have shown a rise in water level. Out of this 68 % of the wells have shown rise in the range of 0 to 2 m. About 20 % wells have shown a decline in water level and all the wells fall in the range of 0-2 m.

4.10 Gujarat

Depth to Water Level - November 2014

The depth to water level recorded in the state of Gujarat during November 2014 ranges up to 57.65 m bgl in Banaskantha district. The depth to water level for 13 % of the wells analysed have shown water level in the range of 0-2 m bgl, 35 % of the wells have shown water level in the range of 2-5 m bgl. About 31 % of the wells analysed have shown water level in the range of 5-10 m bgl and 15 % of the wells have shown water level in the range of 10-20 m bgl. Deeper water level in the range of 20-40 m bgl and more than 40 m bgl are shown by about 5% of the wells analysed.



Water Level Fluctuation (November 2014 to November 2013)

Water level data of November 2014 when compared to November 2013 shows that in general there is fall in water level in the state. About 33 % of the wells analysed shows rise in the water level. Out of this, 24% wells have shown a rise in the range of 0-2 m. About 5% of the wells have shown rise in 2- 4 m range and about 3 % wells have shown rise in water in more than 4 m. About 67 % of the total wells have shown a fall in water level, out of which 44% wells have shown a fall in 0-2 m range. 1% of the wells show no change in water levels.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

Water level data of November 2014 when compared to Premonsoon 2014 shows that in general there is rise in water level in the entire state. About 86 % of the wells analysed show rise in water level. Out of this, 33% wells have shown a rise in the range of 0-2 m. About 26% of the wells have shown rise in 2-4 m range and about 27 % wells have shown rise in water in more than 4 m. Only 13% of the total wells have shown a fall in water level, out of which 8% wells have shown a fall in 0-2 m range. 1% of the wells show no change in water level.

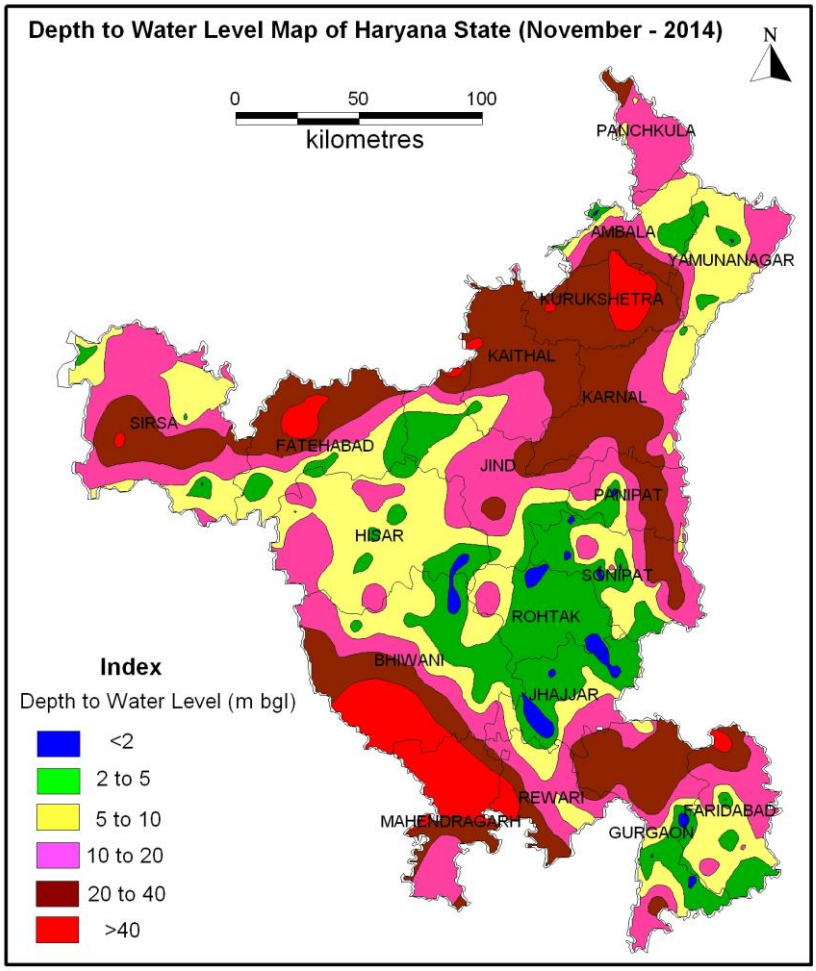
Fluctuation - November 2014 to Decadal mean November (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004 to 2013) to assess the rise/fall in water level of this year with respect to long term average of the corresponding period. 53% of monitoring wells shows rise in water level and 47 % wells are showing fall in water level. About 37% of wells show rise in 0-2 m range, 10% wells shows rise in the 2-4 m range and 5% wells are showing rise in the range of more than 4 m. 33 % of the wells have shown fall in water level in the range of 0-2 m.

4.11 Haryana

Depth to Water Level - November 2014

During November 2014, the depth to water level in the state of Haryana varies from 0.02 to 75.72 mbgl in Bhiwani district. In Haryana, water level generally varies in the range of 2-40 m bgl in which maximum wells falls. About 7% of wells monitored have reported water level up to 2 m bgl. About 20% of the wells monitored falls within the range of 2-5 m bgl. Another 23 % of the wells monitored falls within the range of 5-10 m bgl. Moderately deep water level i.e. 10-20 m bgl occurs in major parts of the State, observed in almost 27% of the monitored wells. Deep water level i.e. 20-40 m bgl is observed in 18% of the monitored wells. Very deep water levels more than 40 m bgl are also observed in almost 4% of the monitored wells. Deeper water levels of more than 20 m bgl are observed mostly along the northern and southern boundaries of Haryana.



Water Level Fluctuation (November 2014 to November 2013)

The water level data of November 2014 when compared with November 2013 indicates that there is rise in water level in about only 27 % of the wells monitored, out of which 22 % of the wells monitored show rise in the range between 0-2 m. Decline in water level has been recorded in 73 % of the wells. Fall in range of 0-2 m has been recorded in 55 % wells. Rise and fall is mainly restricted to 0-2 m.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in only about 36 % of the wells monitored, out of which 32 % of the wells monitored show rise in the range between 0-2 m. Decline in water level has been recorded in 63% of the wells. Fall in range of 0-2 m has been recorded in 47 % wells. Rise and fall is mainly restricted to 0-2 m.

Fluctuation - November 2014 to November Decadal Mean (2004-13)

The fluctuation of water level during November 2014 when compared with the average water level of past decade (Decadal mean November 2004-2013) indicates in general there is decline in water level in the entire state. About 34% of monitored wells have shown rise in water level. The rise of 0-2 m has been observed in about 28 % of the wells analysed. About 66% of wells analysed have shown fall in water level. Fall in the range of 0-2 m has been recorded in 43% of monitored wells.

4.12 Himachal Pradesh

Depth to Water Level - November 2014

The depth to water level in the state of Himachal Pradesh during November 2014 varies from 0.21 m bgl in Kullu district to 27.95 m bgl in Una district. About 60% of the wells show water level of less than 5 m bgl. Out of these almost 25 % of the wells are showing water level in the range of 0-2 m bgl, another 36 % of the wells show water level in the range of 2-5 m bgl. About 18% of the wells are showing water level in the range of 5 -10 m bgl while 17% of the wells are showing water level in the range of 10-20 m bgl. Deep water levels of more than 20 m are observed only at 4 % monitoring stations.

Water Level Fluctuation (November 2014 to November 2013)

Water level data of November 2014 compared to November 2013 shows that there is mostly fall in water level in entire state. About 74% of the wells analysed shows fall in the water level. Out of this 60% wells have shown a fall in 0-2 m range, about 11 % of the wells have shown fall in 2- 4 m range and about 4 % wells has shown fall in water level of more than 4 m. About 25 % of the total wells have shown a rise in water level and almost all the wells shows rise in the range of 0-2 m (16%). About 1% wells shows no change in water level.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in about 61 % of the wells monitored, out of which 49 % of the wells monitored show rise in the range between 0-2 m. Decline in water level has been recorded in 39% of the wells. Fall in range of 0-2 m has been recorded in 35 % wells.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004 to 2013) to assess the rise/fall in water level of this year with respect to long term average of the corresponding period. About 43% of monitoring wells show rise in water level and rest 57% wells show fall in water level. Out of 43 % wells in the rise category, about 38 % of the

monitored wells show rise in the 0-2 m range and 5% wells showing rise in more than 4 m range. 57 % of the wells have shown decline in water level, out of which 48% falls in the range of 0-2 m.

4.13 Jammu & Kashmir

Depth to Water Level - November 2014

It is observed that out of the total 233 wells monitored, water level mainly varies from 0-10 m bgl in which more than 90% of the wells fall. About 30 % wells have less than 2 m bgl water level, mainly in outer plain areas. About 49% of the wells analysed have shown water level in the range of 2-5 m bgl. About 13% wells have shown water level in the range of 5-10 m bgl. About 6% wells have 10 to 20 m bgl water level and the remaining 3% wells have more than 20 m bgl water level. The depth to water level recorded in the state ranges from ground level to 32.10 m bgl in Jammu district.

Water Level Fluctuation (November 2014 to November 2013)

Water level of November 2014 when compared with water level of November 2013 in the state indicates that there is both rise and fall in water level. 41% of the wells analysed have recorded a rise in water level, out of which 38% of analysed wells have recorded a rise in the range of 0 to 2 m. 57% wells show decline in water level, out of which 54% of the wells have shown fall in water level mostly in 0-2 m range. 2 % wells show no change.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in about 75 % of the wells monitored, out of which 60 % of the wells monitored show rise in the range between 0-2 m. Decline in water level has been recorded in 24% of the wells, out of which 21% shows decline in 0-2 m range. Rise and decline of water level in mainly restricted upto 2 m.

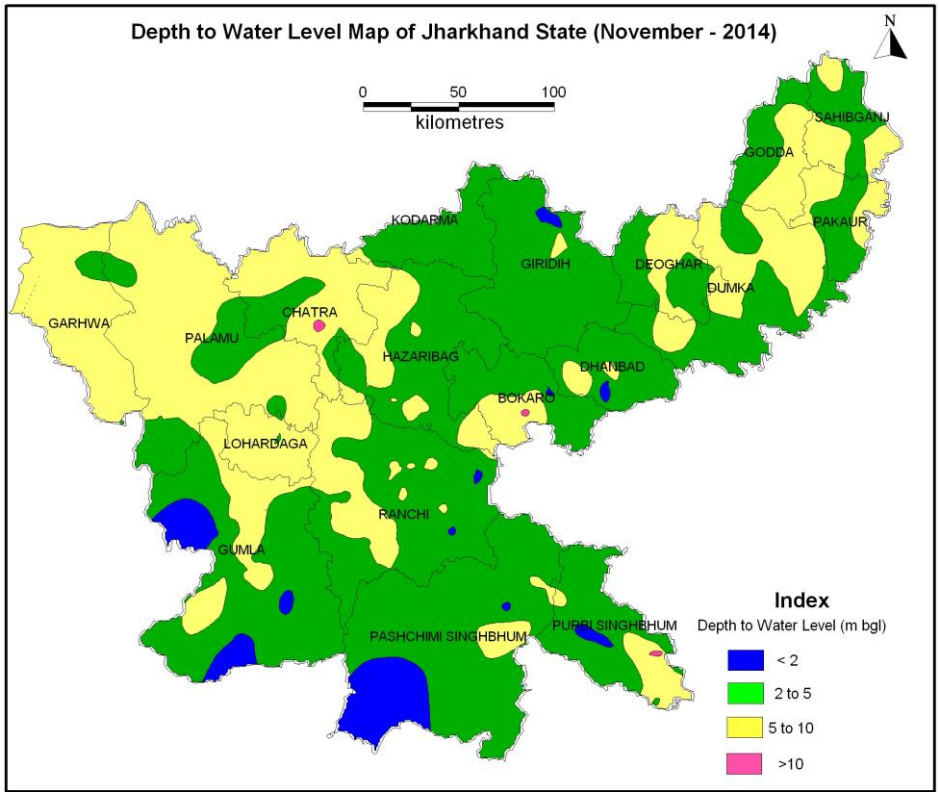
Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation analyses of water level of November 2014 with the decadal mean (November 2004-2013) indicates that there is rise in water level in the state and about 67% of analysed wells have shown a rise in water level. Out of this 61% of the wells have shown rise in the range of 0 to 2 m. About 33% wells have shown a decline in water level, out of which 32% of the wells have shown fall in the range of 0 to 2 m.

4.14 Jharkhand

Depth to Water Level - November 2014

Water Level in the state varies generally in the range of 2-10 m bgl. Out of the total 243 wells analysed, only about 7% of wells have shown depth to water level in the range of 0 to 2 m. Water level in about 54 % of the wells was found between 2 to 5 m bgl and about 38% of the wells analysed are showing water level in the range of 5-10 m bgl. Deeper water levels of 10-20 m are observed in about 2 % wells. The water level ranges from 0.80 m bgl in Gumla district to 15.03 m bgl in Purbi Singhbhum District.



Water Level Fluctuation (November 2014 to November 2013)

In the state of Jharkhand there is fall in water level in November 2014 as compared to November 2013. About 87 % of the wells analysed shows fall in the water level. Out of this 61% wells have shown a fall in 0-2 m range. About 22% of the wells have shown fall in 2-4 m range and 5% of the wells have shown fall in water level of more than 4 m. Only 12% of the wells analysed show rise in water level, out of which 10% show fall in the range of 0-2 m.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in the entire state and 91 % of the wells monitored shows rise, out of which 37 % of the wells monitored show rise in the range of 0-2 m, another 37 % in the range of 2-4 m and 17% in the range of more than 4 m. Decline in water level has been recorded in only 9% of the wells, out of which 7% shows decline in 0-2 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

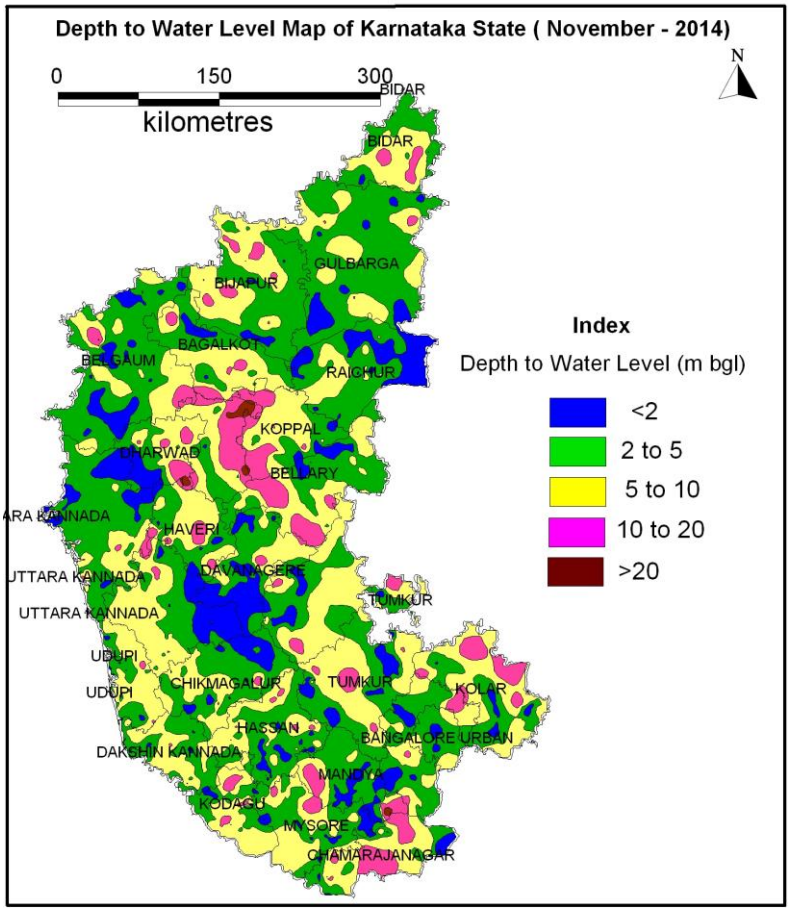
The water level data of November 2014 has been compared with decadal mean (November 2004- 2013 to assess the rise/fall in water level during current year with respect to long term average of the corresponding period. About 32% of analysed wells have shown a rise in water level. Out of this 28% of the wells have shown rise in the range of 0 to 2 m, 4% wells have

shown rise in the range of 2 to 4 m. About 68% wells have shown a fall in water level, out of which 55% wells have shown fall in the range of 0 to 2 m.

4.15 Karnataka

Depth to Water Level-November 2014

The analysis of 1387 wells show that 26% wells have less than 2 m bgl water level, 37% wells show 2 to 5 m bgl water level and 27% wells show 5 to 10 mbgl water level. Moderately deep water level of 10 to 20 m bgl is seen in 10% wells and more than 20 m bgl is observed in less than 1% wells.



The depth to water level recorded in the state during November 2014 ranges from 0.05 m bgl to 29.80 m bgl in Dharwad District.

Water Level Fluctuation – November 2014 to November 2013

Water level data of November 2014 was compared to November 2013 and the analysis shows that there is rise in water level in about 57% of the wells and fall in about 38% of the wells. About 4% of wells have shown no change in water level. 45% wells have shown a rise in 0-2 m range, 8% of the wells have shown a rise in 2-4 m range and 5% wells show a rise of more than 4 m range. 31% wells have shown a fall in the range of 0 - 2 m. Maximum rise in water level has been recorded as 12.45 m and maximum fall in water level has been recorded as 21.87 m in the State.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

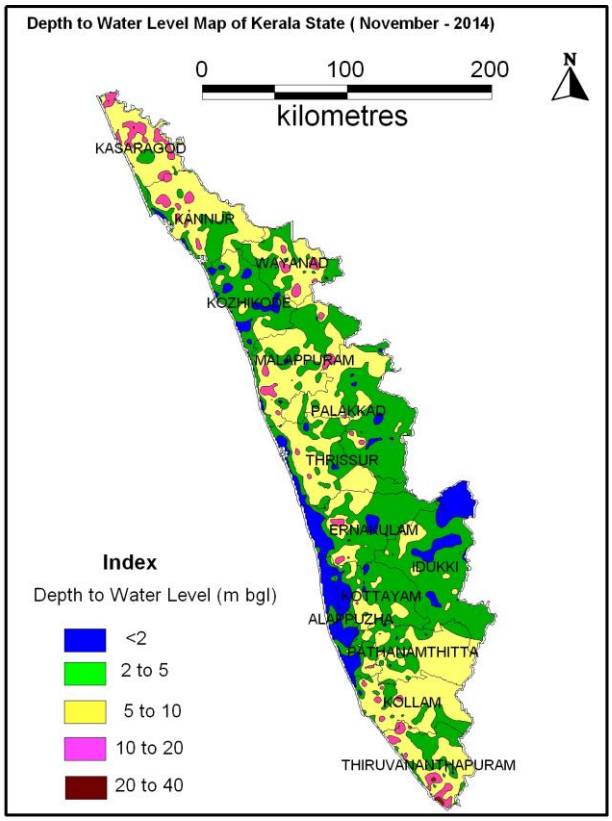
The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in the entire state and 88 % of the wells monitored show rise, out of which 38 % of the wells monitored show rise in the range of 0-2 m, 27% in 2-4 m and 23 % in more than 4 m. Decline in water level has been recorded in only 7% of the wells, out of which 6% shows decline in 0-2 m range. 4% wells show no change in water level.

Fluctuation – November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014 when compared with the average water levels of past decade (Decadal mean November 2004 -2013) indicates that about 60% of the wells analysed show a rise in water level and 39% wells show fall. 1% well shows no change. A

rise of 0-2 m is recorded in 48% of analysed wells. A rise in the range of 2-4 m and more than 4 m is recorded in 8 % & 4 % of wells for each range respectively. In the fall category, a fall of 0-2 m is prominent and is recorded in 30% of analysed wells.

4.16 Kerala



Depth to Water Level - November 2014

During November 2014, it is observed that in the state of Kerala, 19% of the wells have less than 2 m bgl water level, mainly in coastal areas. About 33% of the wells analysed have shown water level in the range of 2-5 m bgl and 38% wells have shown water level in the range of 5-10 m bgl, 9% wells have shown 10 to 20 m bgl water level. Less than 1% well show water level in 20-40 m bgl.

The depth to water level recorded in the state of Kerala during November 2014 ranges from ground level to 56.50 m bgl (Thiruvananthapuram District).

Water Level Fluctuation-November 2014 to November 2013

Water level data of November 2014 was compared to November 2013 and the analysis shows that there is both rise and fall in water level in the state. About 52% of the wells show rise in water level and 46 % wells show decline. 2% of the well shows no change in water level. 49% wells have shown a rise in 0-2 m range. Out of 46 % wells showing fall, 42% shows fall in 0-2 m range. Maximum rise in water level has been recorded as 7.50 m and maximum fall in water level has been recorded as 25.63 m in the State.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in the entire state and 89 % of the wells monitored shows rise, out of which 54% of the wells monitored show rise in the range of 0-2 m, another 26% in the range of 2-4 m and 9% in more than 4 m range. Decline in water level has been recorded in only 11% of the wells, out of which 9% shows decline in 0-2 m range.

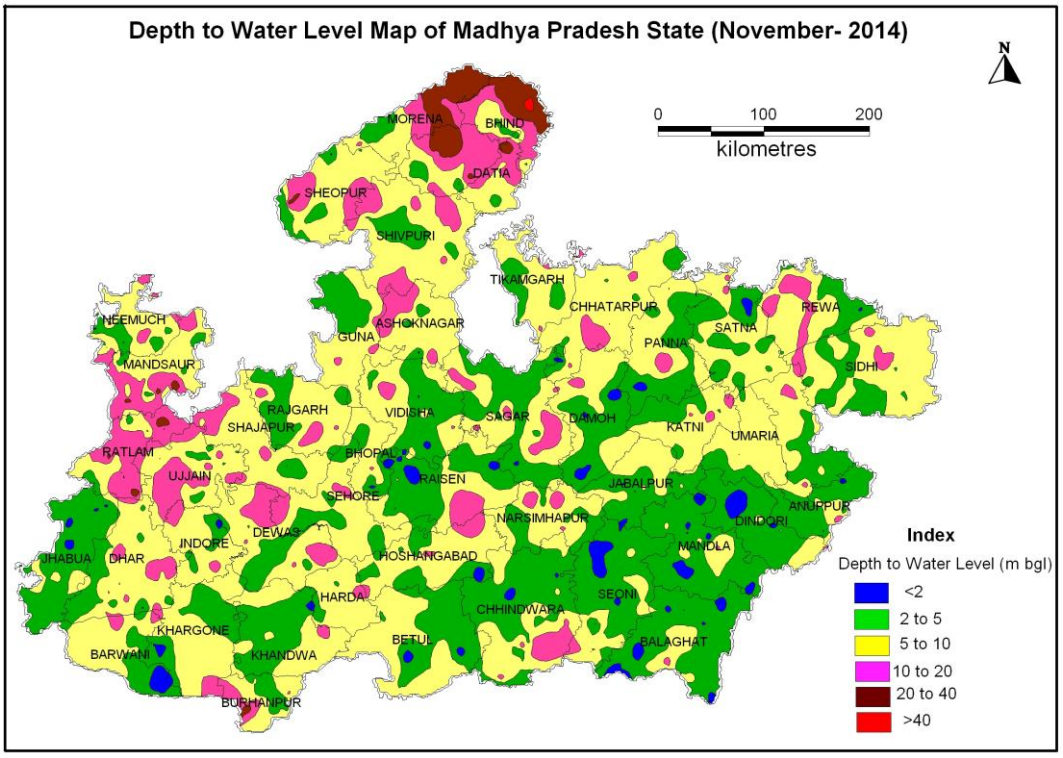
Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014 when compared with the decadal mean (November 2004 -2013) indicates that there is both rise and fall in water level in the state. About 43% of analysed wells have shown a rise in water level, of which 40% of the wells rise in the

range of 0 to 2 m. About 57% wells have shown a fall in water level out of which 53% wells shows fall in the range of 0-2 m. Rise and fall is mainly restricted to 0-2 m only.

4.17 Madhya Pradesh

Depth to Water Level - November 2014



The depth to water level during November 2014 in Madhya Pradesh varies from 0.21 to 49.00 m bgl in Mandsaur district. In general the depth to water level ranges from less than 2 m to 20 m bgl in most parts of Madhya Pradesh. About 8 % monitoring wells are showing water level in 0-2 m bgl range. About 37 % of monitoring wells are showing water level in 2-5 m bgl range. Depth to water level ranging between 5-10 m bgl was observed in 38% wells and about 15% wells show water level ranging more than 10 m bgl located mostly in pockets in the entire state. Water levels of more than 20 m bgl are observed at 3% wells in northernmost parts of the state in Bundelkhand region.

Water Level Fluctuation - November 2014 to November 2013

Water level data of November 2014 was compared to November 2013 and the analysis shows that there is fall in water level in about 81% of the wells and rise in about 17% of the wells. 2% well shows no change in water level. 14% wells have shown a rise in 0-2 m range. About 44% wells show fall in the range of 0-2 m

Water Level Fluctuation (November 2014 to Premonsoon 2014)

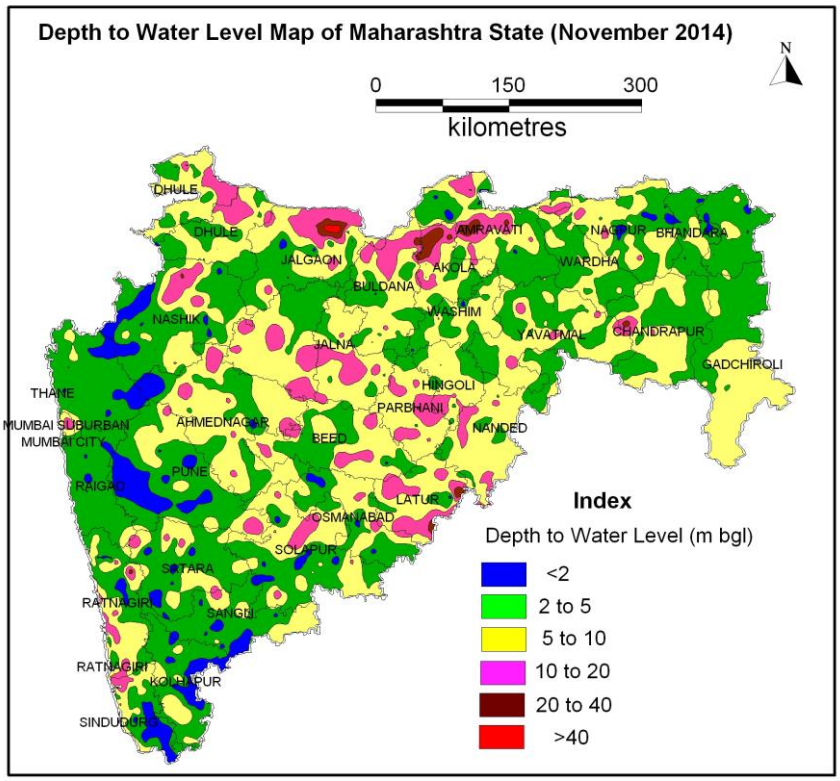
The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in most parts of the state and 79 % of the wells monitored shows rise, out of which 33% of the wells monitored show rise in the range of 0-2 m, another 25% in the range of 2-4 m and 20% in more than 4 m range. Decline in water level has been recorded in 19% of the wells, out of which 14% shows decline in 0-2 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014 when compared with the Decadal mean (November 2004 -2013) indicates that about 42% of analysed wells have shown a rise in water level, of which 33% of the wells show rise in the range of 0 to 2 m. About 7% wells have shown a rise in water level in the range of 2-4 m and 2% wells have shown a rise in water level in the range of more than 4 m. About 58% wells have shown a decline in water level, out of which 39% falls in the range of 0-2 m.

4.18 Maharashtra

Depth to Water Level - November 2014



During November 2014, in the state of Maharashtra, water level less than 2 m bgl are observed in about 13% wells. Depth to water level of 2 to 5 m bgl is observed in maximum number of wells, in about 44%. About 31% of the wells analysed shows water level in the range of 5-10 m bgl whereas about 11% of the wells analysed shows water level in the range of 10-20 m bgl and only 2% of the wells analysed show water level in the range of 20-40 m bgl or more. The depth to water level during November 2014 in the state varies from 0.05 m bgl to 56.00 m bgl.

Water Level Fluctuation-November 2014 to November 2013

Water level data of November 2014 was compared to November 2013 and the analysis shows that there is rise in water level in about 28% of the wells and fall in about 70% of the wells. 2% wells show no change. 22% wells have shown a rise in the range of 0-2 m, about 4% of the wells have shown rise in the range of 2-4 m and 3% wells show rise of more than 4 m. 46% of the wells have shown fall in 0-2 m range.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in the entire state and 82% of the wells monitored shows rise, out of which 39% of the wells monitored show rise in the range of 0-2 m, 26% in the range of 2-4 m and 17% in more than 4 m range. Rest 17% wells show decline in water level, mostly in 0-2 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuations of water level during November 2014 when compared with the Decadal mean (November 2004-2013) show that about 38% of analysed wells have shown a rise in water level, out of which, 30% of the wells show rise in the range of 0 to 2 m and 6% wells have shown rise in the range of 2-4 m. About 62% wells have shown a decline in water level, 44% of which fall in the range of 0-2 m.

4.19 Meghalaya

Depth to Water Level – November 2014

In general depth to water level scenario in the state depicted a water level in the range of 0 to 10 m bgl. About 43% monitoring stations recorded water level within 2 m bgl and another 43% wells recorded water level between 2-5 m bgl. 14 % wells shows water level in 5-10m bgl. Water level varies from 0.40 to 6.35 m bgl.

Fluctuation - November 2014 to November 2013

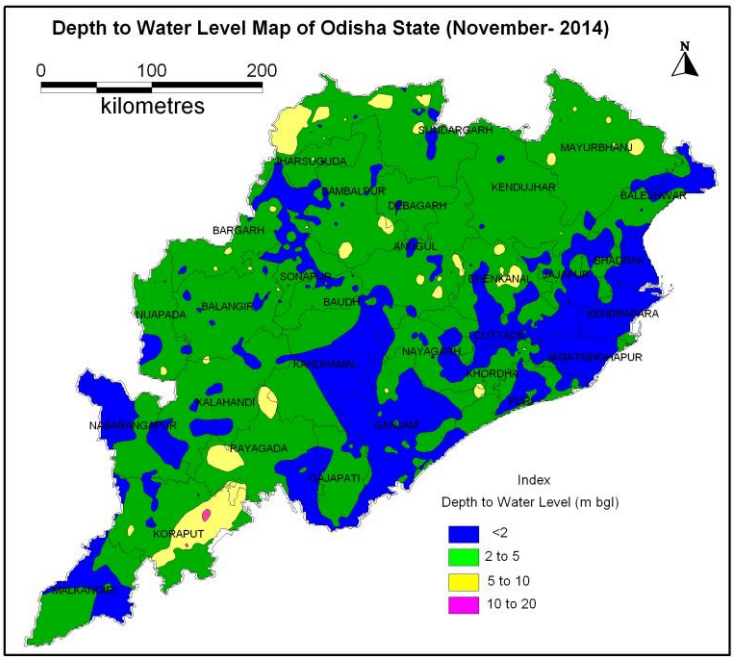
Water level data of November 2014 was compared to November 2013 and the analysis shows that in general there is fall in water level in the state. About 57 % of the wells analysed are showing fall in the water level and 29% wells are showing rise in water level. 14% wells show no change. Out of 57% wells showing fall, 43% wells lies in the range of 0-2 m. Out of 29% wells showing rise, all wells have shown rise in 0-2 m range.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

Water level data of November 2014 was compared to Premonsoon 2013 and the analysis shows that all the wells (100%) show rise in water level in 0-2 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuations of water level during November 2014 when compared with the Decadal mean (November 2004-2013) show that about 50% of analysed wells have shown a rise in water level, and 50% wells show fall. Out of 50% of the wells showing rise, all the wells falls in the range of 0 to 2 m. About 36% wells have shown a decline in water level in the range of 0-2 m.



4.20 Odisha

Depth to Water Level - November 2014

During November 2014, it is observed that in 43% of the wells, water level ranges in 0-2 m bgl. About 50% of the wells analysed have shown water level in the range of 2-5 m bgl. Only 7% of monitoring stations show depth to water level range of 5-10 m bgl. The depth to water level recorded in the state of Odisha during November 2014 ranges from 0.14 to 11.50 m bgl in Mayurbhanj district.

Water Level Fluctuation-November 2014 to November 2013

Water level data of November 2014 was compared with that of November 2013. The analysis shows that there is fall in water level in the state. About 70% of the wells shows fall in water level, out of which about 67% wells have shown a fall in 0-2 m range. 28 % wells show rise in water level, out of which 26 % is in 0-2 m range. 2% stations show no change.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in the entire state and 95% of the wells monitored shows rise, out of which 41% of the wells monitored show rise in the range of 0-2 m, 43% in the range of 2-4 m. Decline in water level has been recorded in only 5% of the well and all the wells lies in 0-2 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014 when compared with the Decadal mean (November 2004-2013) indicates that there is both rise and fall in water level in the state. About 47% of analysed wells have shown a rise in water level and 52% wells have shown a fall in water level. 1 % well shows no change in water level. Out of the wells showing rise, 43% is in the category of 0-2 m and similarly in the decline category 49 % wells lies in the 0-2 m range.

4.21 Pondicherry

Depth to Water Level – November 2014

During November 2014, a total of 4 wells have been monitored. All the wells show water level upto 10 m bgl.

Water Level Fluctuation (November 2014 to November 2013)

Water level of Pre Monsoon 2013 is compared to November 2014 and the analysis shows that 50 % of the observation wells are showing rise in water level in the range of 0-2 m and 50% of the wells show fall in water level, 25 % in the range of 0-2 m and another 25 % in the range of 2-4 m.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in 50% of the wells monitored, out of which 25% wells monitored show

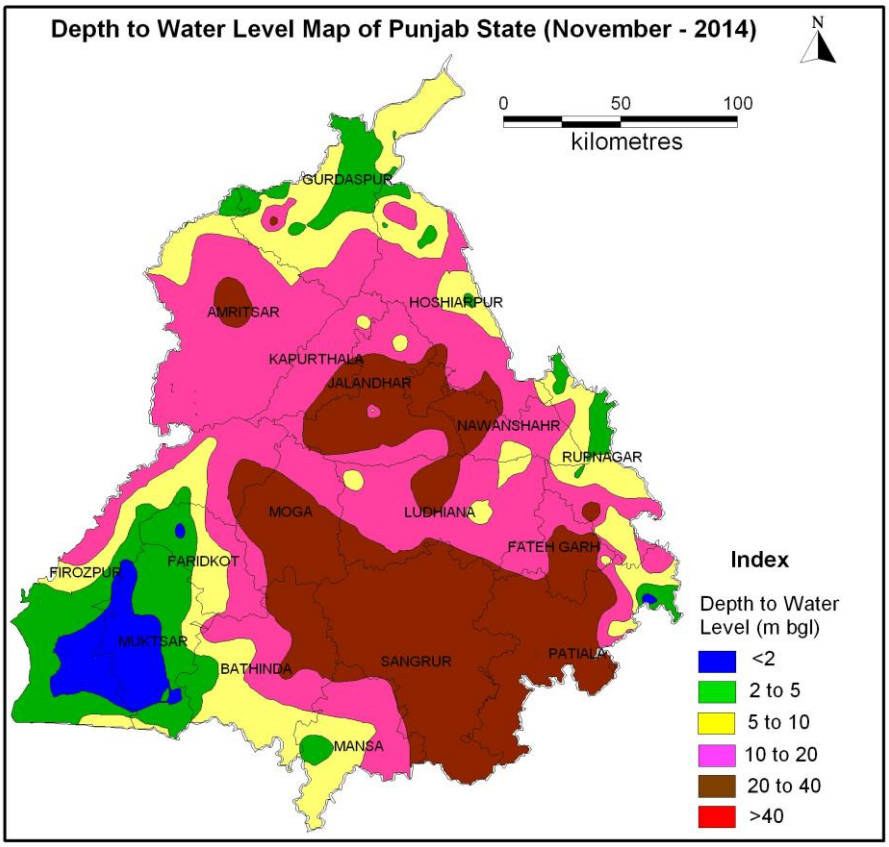
rise in the range of 0-2 m another 25 % in more than 4 m range. Decline in water level has been recorded in 50% of the wells and all the wells lies in the range of 0-2 m.

Fluctuation - November 2014 to November Decadal mean (2004-13)

When compared the decadal mean water level (November 2004 to 2013) with November 2014, 50% of observation wells are showing rise in water level whereas 50% wells show fall in water level.

4.22 Punjab

Depth to Water Level - November 2014



During November 2014, in Punjab, it is observed that in only 6% of the wells, water level ranges in 0-2 m depth range. About 18% of the wells analysed have shown water level in the range of 2-5 m bgl; 21% fall in the range of 5-10 m bgl and a majority of wells i.e. 30% of the wells show water levels in the range of 10-20 m bgl. 25 % wells have shown water level in the range of 20-40 m bgl. Deeper water level is mostly recorded in districts of Moga, Sangrur, Patiala, Jalandhar. The depth to water level recorded in the state during November 2014 ranges from ground level to 37.90 m bgl.

Water Level Fluctuation - November 2014 to November 2013

The comparison of water level data of November 2014 and November 2013 shows that there is rise in water level in only 29% of the wells and fall in about 71% of the wells. Out of all the wells showing rise, about 28% wells have shown a rise in 0-2 m range. About 62% of the wells show fall in 0-2 m range. Maximum rise in water level has been recorded as 10.23 m and maximum fall in water level has been recorded as 7.10 m in the State.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The water level data of November 2014 when compared with Premonsoon 2014 indicates that there is rise in water level in 34% of the wells monitored, out of which 32 % of the wells

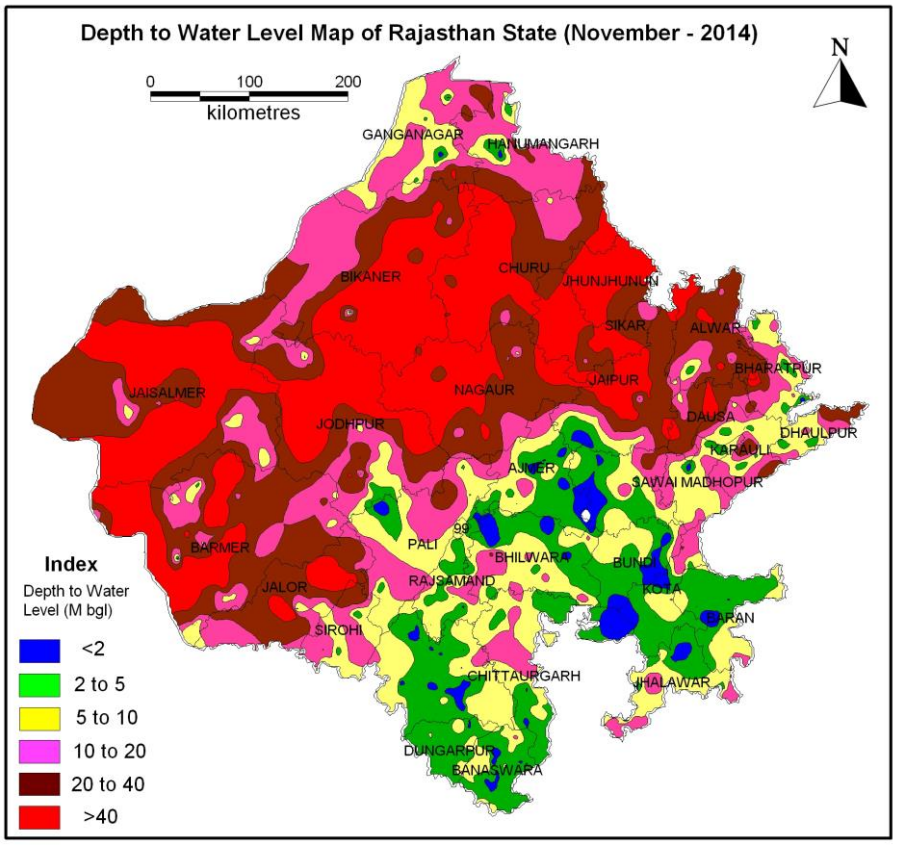
monitored show rise in the range of 0-2 m. Decline in water level has been recorded in 65% of the wells, out of which 46 % falls in the range of 0-2 m and 16% in 2-4 m range.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014 with respect to average water level of past decade (Decadal mean November 2004-2013) indicates decline in water level in major parts of Punjab State. About 30% of the wells have shown rise, of which 27% wells show water level rise in the range of 0-2 m, 3% of wells reported rise between 2 and 4 m. Fall in water level is observed in 69% of the wells. Out of this, 45% of the wells analysed is showing fall in the range of 0-2 m, 12% of the wells showing fall of 2-4 m and 12% falls in more than 4 m range.

4.23 Rajasthan

Depth to Water Level - November 2014



During November 2014, it is observed that only 9% wells in Rajasthan have shown water level in the range of 0-2 m bgl, 18% of the wells have shown water level in the range of 2-5 m bgl. About 21% of the wells analysed have shown water level in the range of 5-10 m bgl, 18% of the wells have shown water level in the range of 10-20 m bgl. Deeper water level in the range of 20-40 m bgl is observed at 17% of the wells analysed and water level more than 40 m bgl is observed at 18% of the wells analysed. Thus 53% of the wells show depth to water level in the range of 10 to more than 40 m bgl. Shallow water levels are recorded in the southwestern parts of the state.

Water Level Fluctuation (November 2014 to November 2013)

Comparison of water level of November 2014 and November 2013 in the state indicates that about 36 % of the wells analysed have recorded a rise in water level, out of which 26% of analysed wells have recorded a rise in the range of 0 to 2 m, 5% of analysed wells have shown rise in the range of 2 to 4 m and 6% of the wells have shown rise more than 4 m. 61% of the wells have shown fall in water level, out of this, 37% have recorded fall in the range of 0 to 2 m. 3% wells show no change in water level.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

Comparison of water level of November 2014 and Premonsoon 2014 in the state indicates that about 71% of the wells analysed have recorded a rise in water level, out of which 34% of analysed wells have recorded a rise in the range of 0 to 2 m, 15% of analysed wells have shown rise in the range of 2 to 4 m and 22% of the wells have shown rise in more than 4 m range. Only 26% of the wells have shown fall in water level, out of this, 18% have recorded fall in the range of 0 to 2 m. 3 % wells show no change in water level.

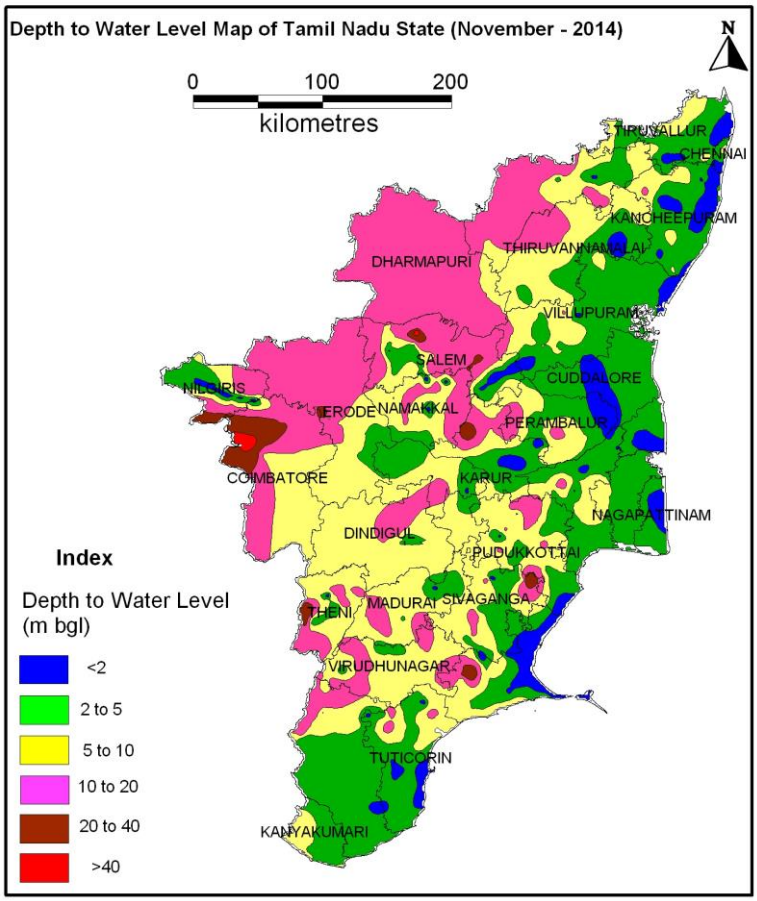
Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014 with respect to Decadal mean (November 2004 -2013) indicates that there is rise in water level in about 58% of analysed wells. Out of this, 32% of the wells have shown rise in the range of 0-2 m, 14% of analysed wells have shown rise in the range of 2-4 m and another 11% of the wells have shown rise of more than 4 m. About 42 % of the wells have shown a fall in water level. Out of this 19% of the wells have shown fall in the range of 0-2 m while 8% of the wells have shown fall in the range of 2-4 m and 16% of wells analysed have shown fall of more than 4 m.

4.24 Tamil Nadu

Depth to Water Level - November 2014

The depth to water level during November 2014 varies from 0.01 to 55.18 m bgl. It is observed that about 18% wells show water level in the range of 0-2 m bgl, 34 % of the wells have shown water level in the range of 2-5 m bgl. About 28% of the wells analysed have shown water level in the range of 5-10 m bgl, 18% of the wells have shown water level in the range of 10-20 m bgl. Deeper water level in the range of 20-40 m bgl is shown by only 2% of the wells analysed and water level more than 40 m bgl is shown by less than 1% of the wells analysed. Along the coastal areas water level varies from 2 to 5 m bgl, whereas towards west the water deepens to 10 m bgl or more.



Water Level Fluctuation (November 2014 to November 2013)

Water level of November 2014 when compared to water level of November 2013 in the state indicated that there is rise as well as fall in water level in the entire state. About 59% of the wells analysed have recorded a rise in water level, out of which 38% of analysed wells have recorded a rise in the range of 0 to 2 m, 11% of analysed wells have shown rise in the range of 2 to 4 m and 9% of the wells have shown rise of more than 4 m. About 40% of the wells have shown fall in water level, out of this 27% of wells have recorded fall in the range of 0 to 2 m and 9% have shown fall in the range of more than 2 m. 1% wells have shown no change in water level.

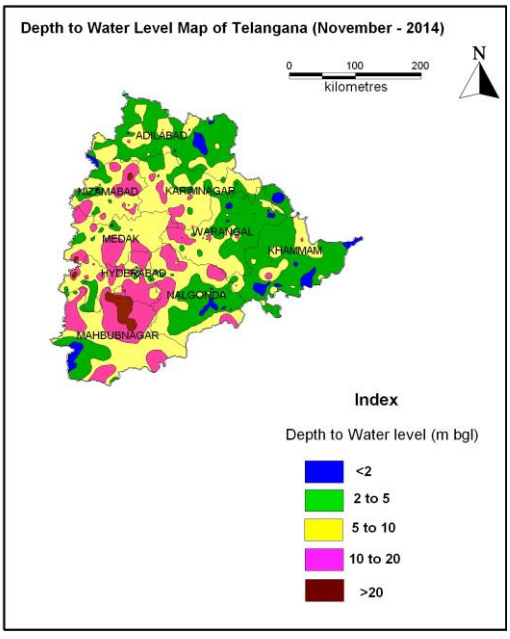
Water Level Fluctuation (November 2014 to Premonsoon 2014)

Comparison of water level of November 2014 and Premonsoon 2014 in the state indicates that there is rise in water level in the state. About 84% of the wells analysed have recorded a rise in water level, out of which 39% of analysed wells have recorded a rise in the range of 0 to 2 m, 25% of analysed wells have shown rise in the range of 2 to 4 m and another 21% of the wells have shown rise more than 4 m. About 15% of the wells have shown fall in water level, out of this, 12% have recorded fall in the range of 0 to 2 m. 1% well show no change in water level.

Fluctuation – November 2014 to November Decadal mean (2004-13)

The water level during November 2014 when compared with the Decadal mean (November 2004 -2013) indicates that there is in general fall in water level in the entire state. About 61% of analysed wells have shown decline in water level. Out of this, 37% of the wells have shown decline in the range of 0-2 m, 12% of analysed wells have shown fall in the range of 2 - 4 m and 12% of the wells have shown fall of more than 4 m. About 39% of the wells have shown a rise in water level, out of which 30% of the wells have shown rise in the range of 0-2 m.

4.25 Telangana



Depth to Water Level – November 2014

Depth to water level in Telangana ranges from ground level to 45.01 m bgl. In general depth to water level scenario in the state depicted a water level in the range of 2 to 20 m bgl. About 10% monitoring stations recorded water level within 2 m bgl and around 30 % wells recorded water level between 2-5 m bgl. About 38% wells recorded water level between 5-10 m bgl whereas 19% wells recorded water level between 10-20 m bgl. Only 3% show water level more than 20 m bgl. Water levels of more than 10 m bgl are observed in the western parts of the state whereas water levels of less than 2 m bgl are seen in small patches only.

Water Level Fluctuation (November 2014 to November 2013)

Water level of Pre Monsoon 2013 when compared to that of November 2014 shows that there is dominantly fall in water level in the state. About 92% of the wells analysed have recorded a fall in water level, out of which 32% of analysed wells have recorded a fall in the range of 0 to 2 m, 25% of analysed wells have shown fall in the range of 2 to 4 m and 34% of the wells have shown fall of more than 4 m. About 8% of the wells have shown rise in water level, out of this 6% of wells have recorded rise in the range of 0 to 2 m.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

Comparison of water level of November 2014 and Premonsoon 2014 in the state indicates that there is rise in water level in the state. About 59% of the wells analysed have recorded a rise in water level, out of which 39% of analysed wells have recorded a rise in the range of 0 to 2 m, 15% of analysed wells have shown rise in the range of 2 to 4 m and another 5% of the wells have shown rise more than 4 m. About 39% of the wells have shown fall in water level, out of this, 28% have recorded fall in the range of 0 to 2 m. 3% well show no change in water level.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The water level during November 2014 when compared with the Decadal mean (November 2004 -2013) indicates that there is in general fall in water level in the entire state. About 80% of analysed wells have shown decline in water level. Out of this, 40% of the wells have shown decline in the range of 0-2 m, 22% of analysed wells have shown fall in the range of 2 - 4 m and 19% of the wells have shown fall of more than 4 m. Remaining 20% of the wells have shown a rise in water level, out of which 16% of the wells have shown rise in the range of 0-2 m.

4.26 Tripura

Depth to Water Level – November 2014

In general depth to water level scenario in the state depicted a water level in the range of 0 to 10 m bgl at all the 100 % wells monitored. Around 29% monitoring stations recorded water level within 2 m bgl and around 64 % wells recorded water level between 2-5 m bgl. Only 7 % wells recorded water level between 5-10 m bgl.

Water Level Fluctuation (November 2014 to November 2013)

Comparison of water level of November 2014 with November 2013 shows that there is fall in water level at 62 % of the wells analysed out of which, all the wells show rise in 0-2 m range. 38% wells show rise in water level and all shows 0-2 m rise.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

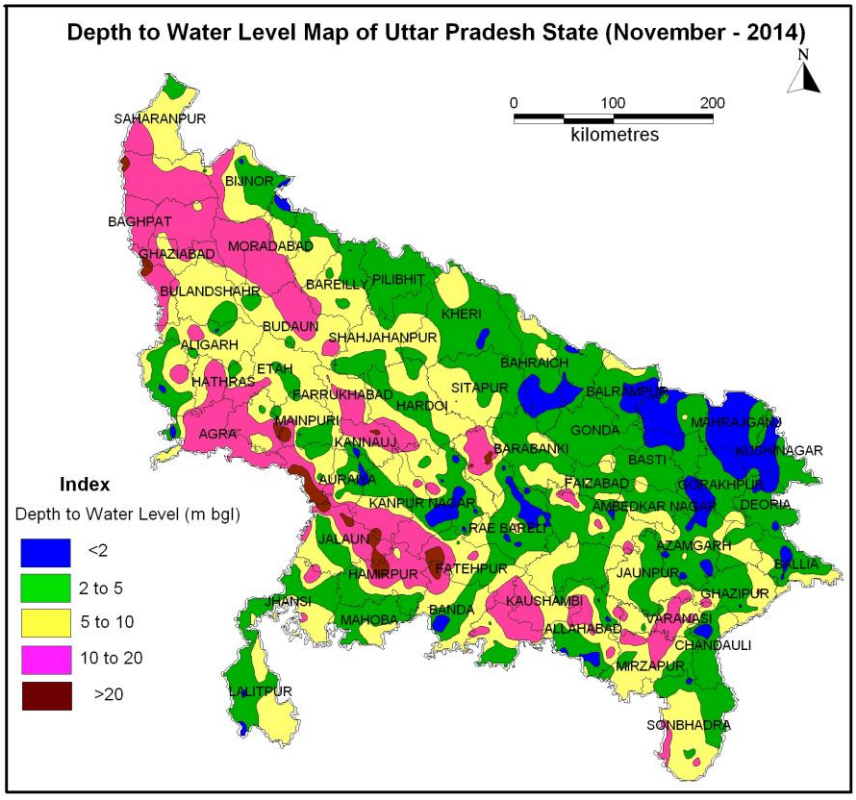
The comparison of November 2014 water level with Premonsoon 2014 reveals that rise in water level is observed in the entire state with all the wells , 100% show rise in water level, out of which 75% is in the range of 0-2 m.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The water level data of November 2014 has been compared with decadal mean (November 2004-2013) and it is observed that out of 27 wells analyzed 41% show a rise in water level where as 59% show a fall in water level. Both rise and fall is in the range of 0-2 m.

4.27 Uttar Pradesh

Depth to Water Level - November - 2014



During November 2014, in Uttar Pradesh shallow water level ranging between 0 and 2 m bgl were observed at only 9% of the wells monitored mostly seen as small patches. Water level ranging between 2 and 5 m bgl was observed at 40% of wells, covering the entire eastern, central and northern part of the state. The depth to water level between 5 and 10 m bgl has been observed in 28 % wells and depth to water level between 10 and 20 meters is observed at 17% of wells. Deeper water levels of more than 20 m bgl are observed at 3% stations and occur as patches along western boundary of the state. The depth to water level in the state ranges upto 36.05 m bgl in Etawah district.

Water Level Fluctuation (November 2014 to November 2013)

Water levels of November 2014 when compared to water level of November 2013 in the state indicates that the entire state shows a fall. About 77% wells show fall in water level, out of which 60% wells have recorded a fall in the range of 0 to 2 m, 13% of analysed wells have shown fall in the range of 2 to 4 m and 4% wells have shown fall of more than 4 m. About 23% of the wells have shown rise in water level, out of which 21% have shown rise in the range of 0-2 m.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

The comparison of November 2014 water level with Premonsoon 2014 reveals that rise in water level is observed in almost 64% of the wells analysed and fall is observed at 35% wells. The rise in water level in the range of 0-2 m has been observed in 46% wells, 16% shows 2-4 m rise. The fall in water level in the range of 0-2 m has been observed at 33 % wells. 1% shows no change in water level.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The fluctuation of water level during November 2014, when compared with the Decadal mean (November 2004-2013), indicates that there is in general fall in water level in the state. About 66% of analysed wells have shown fall in water level. Out of this 54% of the wells have shown fall in the range of 0-2 m, 10% of analysed wells have shown fall in the range of 2 - 4 m and 3% of the wells have shown fall more than 4 m. About 34% of the wells have shown a rise in water level. Out of this 31% of the wells have shown rise in the range of 0-2 m

4.28 Uttarakhand

Depth to Water Level - November 2014

Uttarakhand state is mainly covered by hilly/ mountainous areas. About 85% of the area is hilly and has no appreciable ground water potential whereas about 15% of the state is plain where ground water is developed. Depth to water level in the range of 0-2 m is observed in 9 % wells, 2-5 m bgl in 40% of the wells analysed, 35% of the wells show water level in the range of 5-10 m bgl and 16% in the range of 10-20 m bgl.

Water Level Fluctuation (November 2014 to November 2013)

The comparison of November 2014 water level with November 2013 reveals that rise in water level is observed in only 35% of the wells analysed and fall is observed at 65% wells. The rise in water level in the range of 0-2 m has been observed in all the wells. The fall in water level in the range of 0-2 m has been observed for 48 % of wells and for 2-4 m fall it is observed at 10% wells.

Water Level Fluctuation (November 2014 to Premonsoon 2014)

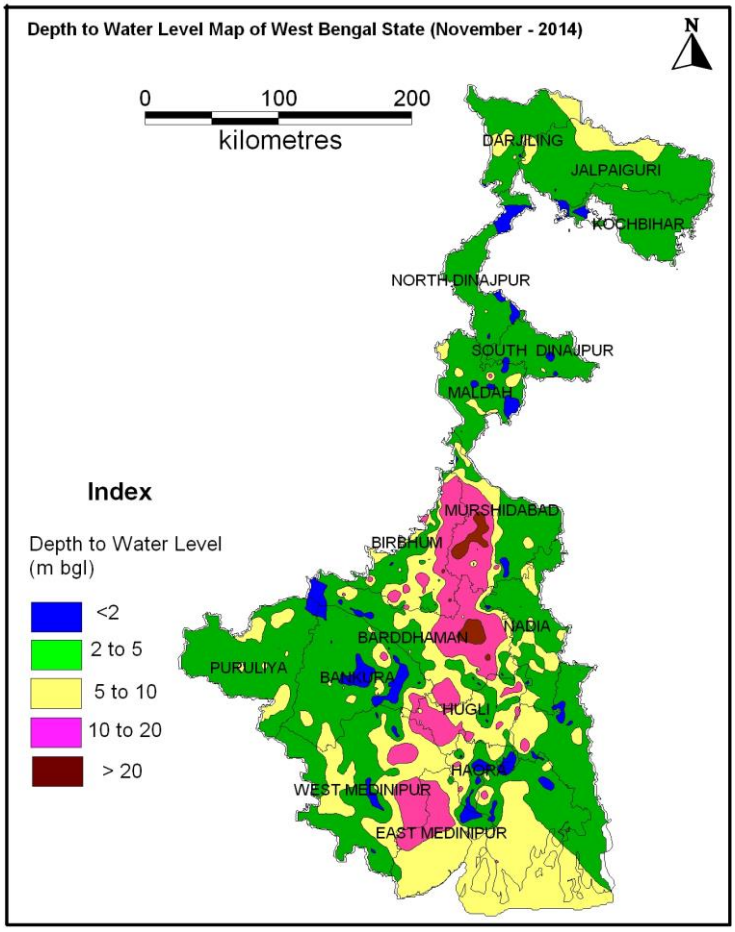
The comparison of November 2014 water level with Premonsoon 2014 reveals that rise in water level is observed in almost whole of the state, in 86% of the wells analysed and fall is observed at only 14% wells. The rise in water level in the range of 0-2 m has been observed in 52% wells, 31% shows 2-4 m rise. The fall in water level in the range of 0-2 m has been observed at all the 14 % wells.

Fluctuation - November 2014 to November Decadal mean (2004-13)

The comparison of November 2014 water level with decadal mean of (November 2004 -2013) reveals that about only 27% of the analysed wells have shown rise in water level. Out of this, rise in water level in the range of 0-2 m has been observed at 24% of wells. About 73% of the analysed wells have shown decline in water level and out of these 55% wells fall in the range of 0-2 m.

4.29 West Bengal

Depth to Water Level – November 2014



During November, 2014, depth to water level varies in the range of 0-2 m bgl at 15% of wells analysed, 2-5 m bgl at 48 % of wells analysed, 5-10 m bgl at 21% of wells analysed and 10-20 m bgl at 14% of wells analysed. Only 2 % wells are showing water level of more than 20 m bgl. In general water level varies from ground level to 31 m bgl. Areas showing water levels of more than 10 m bgl are observed mainly in the central parts of the state. In the northern part of the state water level varies from 2 to 5 mbgl.

Water Level Fluctuation-November 2014 to November 2013

Water level data of November 2014 was compared to November 2013 and the analysis shows that there is predominantly fall in water level in the state. About 83% of the wells show fall and only 17% wells show rise. Out of 83 % wells showing decline, 60% wells have shown a fall in the range of 0-2 m, 13% of the wells have shown fall in range of 2-4 m and 9% in more than 4 m range. 17% wells show rise in water level, out of which14% lies in 0-2 m range.

Water Level Fluctuation – November 2014 to Premonsoon 2014

Water level data of November 2014 was compared to Premonsoon 2014 and the analysis shows that there is rise in water level in the entire state. About 90% of the wells shows rise and only 10% wells shows fall in water level. 45% wells have shown a rise in the range of 0-2 m , 28% of the wells have shown rise in the range of 2-4 m whereas 17% wells show rise in the range of more than 4 m.

Fluctuation - November 2014 to November Decadal mean (2004-13)

When compared the decadal mean water level (November 2004 to 2013) with water level of November 2014, there is predominantly fall in water level in the state. About 73% of the analysed wells have shown decline in water level. Out of this, decline in the range of 0-2 m has been observed at 55% of wells. About 27% of the analysed wells have shown rise in water level, out of which 24% shows rise in the range of 0-2 m. This indicates rise and fall in water level is restricted to 0-2 m range.

Annexure-I

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of November-2014

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of November, 2014

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (mbgl)		Number & Percentage of Wells Showing Depth to Water Level (mbgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
1	Andaman & Nicobar Island	103	0.1	4.54	76	73.79	27	26.21	0	0.00	0	0.00	0	0.00	0	0.00
2	Andhra Pradesh	801	0.00	27.85	322	40.20	272	33.96	152	18.98	53	6.62	2	0.25	0	0.00
3	Arunachal Pradesh	12	1.35	6.53	2	16.67	7	58.33	3	25.00	0	0.00	0	0.00	0	0.00
4	Assam	171	0.04	16.09	54	31.58	104	60.82	11	6.43	2	1.17	0	0.00	0	0.00
5	Bihar	388	0.39	12.06	95	24.48	231	59.54	59	15.21	3	0.77	0	0.00	0	0.00
6	Chandigarh	14	2.79	38.97	0	0.00	3	21.43	3	21.43	5	35.71	3	21.43	0	0.00
7	Chhattisgarh	620	0.18	19.70	155	25.00	332	53.55	108	17.42	25	4.03	0	0.00	0	0.00
8	Dadra & Nagar Haveli	12	1.80	8.90	1	8.33	7	58.33	4	33.33	0	0.00	0	0.00	0	0.00
9	Daman & Diu	8	1.92	6.60	1	12.50	5	62.50	2	25.00	0	0.00	0	0.00	0	0.00
10	Delhi	116	1.82	63.63	3	2.59	27	23.28	30	25.86	28	24.14	18	15.52	10	8.62
11	Goa	44	0.13	16.56	13	29.55	20	45.45	7	15.91	4	9.09	0	0.00	0	0.00
12	Gujarat	773	0.03	57.65	97	12.55	273	35.32	242	31.31	119	15.39	40	5.17	2	0.26
13	Haryana	347	0.02	75.72	25	7.20	71	20.46	80	23.05	95	27.38	61	17.58	15	4.32
14	Himachal Pradesh	89	0.21	27.95	22	24.72	32	35.96	16	17.98	15	16.85	4	4.49	0	0.00
15	Jammu & Kashmir	233	0.00	32.10	70	30.04	113	48.50	30	12.88	14	6.01	6	2.58	0	0.00
16	Jharkhand	243	0.80	15.03	16	6.58	130	53.50	93	38.27	4	1.65	0	0.00	0	0.00
17	Karnataka	1387	0.05	29.80	357	25.74	512	36.91	375	27.04	136	9.81	7	0.50	0	0.00
18	Kerala	1320	0.00	56.50	252	19.09	439	33.26	508	38.48	113	8.56	7	0.53	1	0.08
19	Madhya Pradesh	1341	0.21	49.00	103	7.68	494	36.84	507	37.81	200	14.91	35	2.61	1	0.07
20	Maharashtra	1480	0.05	56.00	192	12.97	644	43.51	456	30.81	162	10.95	24	1.62	2	0.14
21	Meghalaya	14	0.40	6.35	6	42.86	6	42.86	2	14.29	0	0.00	0	0.00	0	0.00
22	Nagaland	10	0.85	16.75	4	40.00	5	50.00	0	0.00	1	10.00	0	0.00	0	0.00
23	Orissa	1344	0.14	11.50	573	42.63	677	50.37	92	6.85	2	0.15	0	0.00	0	0.00
24	Pondicherry	4	0.45	5.24	2	50.00	1	25.00	1	25.00	0	0.00	0	0.00	0	0.00
25	Punjab	248	0.00	37.90	14	5.65	45	18.15	51	20.56	75	30.24	63	25.40	0	0.00

26	**Rajasthan**	897	0.00	115.08	77	8.58	163	18.17	184	20.51	163	18.17	149	16.61	161	17.95
27	**Tamil Nadu**	458	0.01	55.18	84	18.34	154	33.62	127	27.73	81	17.69	10	2.18	2	0.44
28	**Telangana**	577	0.00	45.01	57	9.88	172	29.81	222	38.47	110	19.06	15	2.60	1	0.17
29	**Tripura**	28	0.76	5.61	8	28.57	18	64.29	2	7.14	0	0.00	0	0.00	0	0.00
30	**Uttar Pradesh**	839	0.45	36.05	118	14.06	316	37.66	236	28.13	141	16.81	28	3.34	0	0.00
31	**Uttaranchal**	43	0.83	18.15	4	9.30	17	39.53	15	34.88	7	16.28	0	0.00	0	0.00
32	**West Bengal**	940	0.17	30.60	138	14.68	448	47.66	206	21.91	131	13.94	17	1.81	0	0.00
Total		**14904**			**2941**	**19.73**	**5765**	**38.68**	**3824**	**25.66**	**1689**	**11.33**	**489**	**3.28**	**195**	**1.31**

Annexure-II

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from November 2014 to November 2013

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from November 2014 to November 2013																								
S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall							Total				Wells showing no change
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m			Rise		Fall		
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	
1	Andaman & Nicobar Islands	84	0.05	2.77	0.01	2.53	20	23.81	2	2.38	0	0.00	53	63.10	8	9.52	0	0.00	22	26	61	73	1	1
2	Andhra Pradesh	604	0.01	6.20	0.01	17.99	113	18.71	4	0.66	2	0.33	340	56.29	81	13.41	52	8.61	119	20	473	78	12	2
3	Arunachal Pradesh	7	0.04	0.87	0.40	0.71	5	71.43	0	0.00	0	0.00	2	28.57	0	0.00	0	0.00	5	71	2	29	0	0
4	Assam	138	0.02	4.16	0.01	3.96	51	36.96	3	2.17	1	0.72	76	55.07	3	2.17	0	0.00	55	40	79	57	4	3
5	Bihar	352	0.01	6.78	0.01	6.48	142	40.34	16	4.55	6	1.70	162	46.02	22	6.25	4	1.14	164	47	188	53	0	0
6	Chandigarh	14	0.03	0.11	0.07	3.05	2	14.29	0	0.00	0	0.00	11	78.57	1	7.14	0	0.00	2	14	12	86	0	0
7	Chhattisgarh	600	0.01	16.30	0.01	10.28	341	56.83	51	8.50	18	3.00	157	26.17	18	3.00	10	1.67	410	68	185	31	5	1
8	Dadra & Nagar Haveli	6			1.06	2.49	0	0.00	0	0.00	0	0.00	4	66.67	2	33.33	0	0.00	0	0	6	100	0	0
9	Daman & Diu	6			0.29	2.91	0	0.00	0	0.00	0	0.00	4	66.67	2	33.33	0	0.00	0	0	6	100	0	0
10	Delhi	114	0.03	2.36	0.02	5.21	6	5.26	3	2.63	0	0.00	78	68.42	22	19.30	5	4.39	9	8	105	92	0	0
11	Goa	38	0.05	5.64	0.01	2.37	22	57.89	2	5.26	3	7.89	9	23.68	1	2.63	0	0.00	27	71	10	26	1	3
12	Gujarat	704	0.01	10.79	0.01	14.73	172	24.43	36	5.11	21	2.98	310	44.03	85	12.07	75	10.65	229	33	470	67	5	1
13	Haryana	313	0.01	9.39	0.01	14.30	69	22.04	9	2.88	6	1.92	173	55.27	43	13.74	12	3.83	84	27	228	73	1	0
14	Himachal Pradesh	85	0.01	6.48	0.02	7.27	20	23.53	0	0.00	1	1.18	51	60.00	9	10.59	3	3.53	21	25	63	74	1	1
15	Jammu & Kashmir	221	0.02	4.47	0.01	4.54	85	38.46	4	1.81	2	0.90	120	54.30	4	1.81	2	0.90	91	41	126	57	4	2
16	Jharkhand	220	0.03	3.43	0.04	11.61	21	9.55	6	2.73	0	0.00	134	60.91	48	21.82	10	4.55	27	12	192	87	1	0
17	Karnataka	1167	0.01	12.45	0.01	21.87	519	44.47	99	8.48	53	4.54	364	31.19	52	4.46	33	2.83	671	57	449	38	47	4
18	Kerala	915	0.01	7.50	0.01	25.63	450	49.18	19	2.08	8	0.87	383	41.86	32	3.50	8	0.87	477	52	423	46	15	2
19	Madhya Pradesh	1178	0.01	8.99	0.01	32.89	160	13.58	33	2.80	10	0.85	519	44.06	244	20.71	194	16.47	203	17	957	81	18	2

20	**Maharashtra**	1267	0.03	14.11	0.04	25.30	275	21.70	49	3.87	30	2.37	586	46.25	194	15.31	111	8.76	354	28	891	70	22	2
21	**Meghalaya**	7	0.25	0.62	0.13	2.86	2	28.57	0	0.00	0	0.00	3	42.86	1	14.29	0	0.00	2	29	4	57	1	14
22	**Nagaland**	2	1.55	5.05			1	50.00	0	0.00	1	50.00	0	0.00	0	0.00	0	0.00	2	100	0	0	0	0
23	**Orissa**	1111	0.02	4.85	0.01	5.4	287	25.83	21	1.89	2	0.18	741	66.70	38	3.42	1	0.09	310	28	780	70	21	2
24	**Pondicherry**	4	0.92	1.67	0.35	2.64	2	50.00	0	0.00	0	0.00	1	25.00	1	25.00	0	0.00	2	50	2	50	0	0
25	**Punjab**	221	0.01	10.23	0.03	7.10	61	27.60	1	0.45	2	0.90	137	61.99	17	7.69	3	1.36	64	29	157	71	0	0
26	**Rajasthan**	753	0.01	69.00	0.01	31.90	192	25.50	34	4.52	45	5.98	278	36.92	87	11.55	97	12.88	271	36	462	61	20	3
27	**Tamil Nadu**	378	0.01	39.30	0.02	17.18	145	38.36	42	11.11	35	9.26	101	26.72	34	8.99	18	4.76	222	59	153	40	3	1
28	**Telangana**	478	0.07	10.07	0.01	15.87	28	5.86	6	1.26	3	0.63	154	32.22	121	25.31	164	34.31	37	8	439	92	2	0
29	**Tripura**	26	0.09	1.96	0.02	0.89	10	38.46	0	0.00	0	0.00	16	61.54	0	0.00	0	0.00	10	38	16	62	0	0
30	**Uttar Pradesh**	753	0.02	5.27	0.01	13.32	161	21.38	8	1.06	1	0.13	450	59.76	100	13.28	27	3.59	170	23	577	77	6	1
31	**Uttaranchal**	31	0.03	1.94	0.04	6.61	11	35.48	0	0.00	0	0.00	15	48.39	3	9.68	2	6.45	11	35	20	65	0	0
32	**West Bengal**	885	0.02	12.66	0.01	26.55	121	13.67	20	2.26	9	1.02	535	60.45	114	12.88	83	9.38	150	17	732	83	3	0
TOTAL		**12682**					**3494**	**28**	**468**	**3.69**	**259**	**2.04**	**5967**	**47.05**	**1387**	**10.94**	**914**	**7.21**	**4221**	**33**	**8268**	**65**	**193**	**2**

Annexure-III

State –wise Fluctuation &Frequency distribution of Different Ranges from Pre Monsoon 2014 to November 2014

State-wise Seasonal Fluctuation & Frequency Distribution of Different Ranges from Pre Monsoon 2014 to November 2014

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total				Wells showing no change	
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall			
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andaman & Nicobar Islands	101	0.09	9.70	0.30	1.40	78	77.00	16	16.00	4	4.00	3	3.00	0	0.00	0	0.00	98	97.00	3	3.00	0	0
2	Andhra Pradesh	706	0.02	14.22	0.01	6.60	344	49.00	126	18.00	49	7.00	129	18.00	13	2.00	11	2.00	519	74.00	153	22.00	34	5
3	Arunachal Pradesh	11	0.04	4.56	0.15	1.38	5	45.00	2	18.00	1	9.00	3	27.00	0	0.00	0	0.00	8	73.00	3	27.00	0	0
4	Assam	136	0.02	6.31	0.09	3.90	92	68.00	20	15.00	6	4.00	16	12.00	2	1.00	0	0.00	118	87.00	18	13.00	0	0
5	Bihar	353	0.03	6.64	0.09	1.81	178	50.00	110	31.00	37	10.00	27	8.00	0	0.00	0	0.00	325	92.00	27	8.00	1	0
6	Chandigarh	14	0.13	5.44	0.10	3.85	1	7.00	0	0.00	2	14.00	9	64.00	2	14.00	0	0.00	3	21.00	11	79.00	0	0
7	Chhattisgarh	484	0.05	14.87	0.01	1.80	134	28.00	159	33.00	169	35.00	19	4.00	0	0.00	0	0.00	462	95.00	19	4.00	3	1
8	Dadra & Nagar Haveli	10	0.91	6.51	0.25	0.40	3	30.00	1	10.00	3	30.00	3	30.00	0	0.00	0	0.00	7	70.00	3	30.00	0	0
9	Daman & Diu	8	0.29	4.69	0.00	0.63	5	63.00	1	13.00	1	13.00	1	13.00	0	0.00	0	0.00	7	88.00	1	13.00	0	0
10	Delhi	114	0.03	3.02	0.02	4.53	20	18.00	2	2.00	0	0.00	85	75.00	4	4.00	3	3.00	22	19.00	92	81.00	0	0
11	Goa	43	0.04	13.89	0.34	1.94	18	42.00	12	28.00	6	14.00	7	16.00	0	0.00	0	0.00	36	84.00	7	16.00	0	0
12	Gujarat	723	0.01	21.95	0.02	8.26	236	33.00	190	26.00	194	27.00	60	8.00	16	2.00	17	2.00	620	86.00	93	13.00	10	1
13	Haryana	288	0.01	11.37	0.01	33.42	93	32.00	3	1.00	7	2.00	136	47.00	32	11.00	14	5.00	103	36.00	182	63.00	3	1
14	Himachal Pradesh	88	0.02	6.88	0.01	10.48	43	49.00	8	9.00	3	3.00	31	35.00	2	2.00	1	1.00	54	61.00	34	39.00	0	0

15	**Jammu & Kashmir**	230	0.01	12.48	0.01	6.03	138	60.00	21	9.00	13	6.00	48	21.00	6	3.00	2	1.00	172	75.00	56	24.00	2	1
16	**Jharkhand**	223	0.07	8.85	0.03	3.83	82	37.00	83	37.00	39	17.00	15	7.00	4	2.00	0	0.00	204	91.00	19	9.00	0	0
17	**Karnataka**	1335	0.02	26.79	0.01	19.68	507	38.00	360	27.00	312	23.00	75	6.00	13	1.00	10	1.00	1179	88.00	98	7.00	58	4
18	**Kerala**	1094	0.01	15.16	0.01	7.70	587	54.00	288	26.00	94	9.00	102	9.00	18	2.00	5	0.00	969	89.00	125	11.00	0	0
19	**Madhya Pradesh**	1299	0.02	27.04	0.01	17.06	435	33.00	327	25.00	262	20.00	176	14.00	44	3.00	33	3.00	1024	79.00	253	19.00	22	2
20	**Maharashtra**	1274	0.01	25.20	0.05	13.80	501	39.00	330	26.00	214	17.00	154	12.00	37	3.00	28	2.00	1045	82.00	219	17.00	10	1
21	**Meghalaya**	10	0.20	1.59			10	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10	100.00	0	0.00	0	0
22	**Nagaland**	6	0.55	6.10	0.50	0.80	1	17.00	2	33.00	1	17.00	2	33.00	0	0.00	0	0.00	4	67.00	2	33.00	0	0
23	**Orissa**	1256	0.02	9.06	0.03	1.85	512	41.00	536	43.00	146	12.00	59	5.00	0	0.00	0	0.00	1194	95.00	59	5.00	3	0
24	**Pondicherry**	4	1.22	4.57	0.08	1.80	1	25.00	0	0.00	1	25.00	2	50.00	0	0.00	0	0.00	2	50.00	2	50.00	0	0
25	**Punjab**	226	0.03	4.18	0.02	8.89	73	32.00	2	1.00	2	1.00	105	46.00	37	16.00	5	2.00	77	34.00	147	65.00	2	1
26	**Rajasthan**	747	0.02	21.33	0.01	24.04	252	34.00	110	15.00	168	22.00	135	18.00	26	3.00	31	4.00	530	71.00	192	26.00	25	3
27	**Tamil Nadu**	371	0.05	14.00	0.04	7.61	144	39.00	91	25.00	77	21.00	43	12.00	7	2.00	6	2.00	312	84.00	56	15.00	3	1
28	**Telangana**	521	0.01	21.00	0.01	11.48	204	39.00	77	15.00	24	5.00	145	28.00	40	8.00	16	3.00	305	59.00	201	39.00	15	3
29	**Tripura**	16	0.08	5.75			12	75.00	3	19.00	1	6.00	0	0.00	0	0.00	0	0.00	16	100.00	0	0.00	0	0
30	**Uttar Pradesh**	792	0.01	11.58	0.01	11.57	367	46.00	127	16.00	13	2.00	261	33.00	13	2.00	7	1.00	507	64.00	281	35.00	4	1
31	**Uttaranchal**	29	0.22	5.57	0.55	1.68	15	52.00	9	31.00	1	3.00	4	14.00	0	0.00	0	0.00	25	86.00	4	14.00	0	0
32	**West Bengal**	851	0.04	16.45	0.05	13.35	385	45.00	242	28.00	142	17.00	65	8.00	8	1.00	7	1.00	769	90.00	80	9.00	2	0
Total		**13363**					**5476**	**41.00**	**3258**	**24.00**	**1992**	**15.00**	**1920**	**14.00**	**324**	**2.00**	**196**	**1.00**	**10726**	**80.00**	**2440**	**18.00**	**197**	**1**

Annexure-IV

State-wise Fluctuation & Frequency Distribution of Different Ranges from November 2014 to Decadal Mean [November(2004 to 2013)]

State-wise Decadal Water Level Fluctuation With Mean [November(2004 to 2013)] and November 2014

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Rise		Fall		Wells showing no change	
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m							
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andhra Pradesh	618	0	4.2	0	15.52	172	27.8	10	1.6	2	0.3	294	47.6	87	14.1	51	8.3	184	30	432	70	2	0
2	Arunachal Pradesh	12	0.07	1.15	0	0.66	9	75.0	0	0.0	0	0.0	2	16.7	0	0.0	0	0.0	9	75	2	17	1	8
3	Assam	171	0	3.67	0	1.8	70	40.9	3	1.8	0	0.0	98	57.3	0	0.0	0	0.0	73	43	98	57	0	0
4	Bihar	379	0.01	5.99	0.01	6.48	193	50.9	17	4.5	6	1.6	144	38.0	17	4.5	2	0.5	216	57	163	43	0	0
5	Chandigarh	14	2.47	2.47	0.12	3.51	0	0.0	1	7.1	0	0.0	12	85.7	1	7.1	0	0.0	1	7	13	93	0	0
6	Chhattisgarh	613	0	17.36	0.01	10.28	334	54.5	43	7.0	16	2.6	190	31.0	20	3.3	8	1.3	393	64	218	36	2	0
7	Dadra & Nagar Haveli	6			0.41	4.06	0	0.0	0	0.0	0	0.0	5	83.3	0	0.0	1	16.7	0	0	6	100	0	0
8	Daman & Diu	8	0.21	0.87	0.44	2.71	2	25.0	0	0.0	0	0.0	4	50.0	2	25.0	0	0.0	2	25	6	75	0	0
9	Delhi	116	0.11	3.13	0.03	9.82	20	17.2	1	0.9	0	0.0	57	49.1	21	18.1	17	14.7	21	18	95	82	0	0
10	Goa	44	0.07	9.63	0	1.1	30	68.2	3	6.8	2	4.5	9	20.5	0	0.0	0	0.0	35	80	9	20	0	0
11	Gujarat	754	0	12.44	0	17.68	278	36.9	77	10.2	41	5.4	249	33.0	55	7.3	53	7.0	396	53	357	47	1	0
12	Haryana	334	0.01	9.76	0.01	23.92	94	28.1	9	2.7	9	2.7	142	42.5	44	13.2	36	10.8	112	34	222	66	0	0
13	Himachal Pradesh	87	0.01	8.9	0.01	3.61	33	37.9	0	0.0	4	4.6	42	48.3	8	9.2	0	0.0	37	43	50	57	0	0
14	Jammu & Kashmir	222	0.01	4.96	0	2.97	136	61.3	10	4.5	2	0.9	71	32.0	3	1.4	0	0.0	148	67	74	33	0	0
15	Jharkhand	233	0	2.96	0.03	5.44	65	27.9	9	3.9	0	0.0	127	54.5	28	12.0	3	1.3	74	32	158	68	1	0
16	Karnataka	1212	0	10.58	0	19.91	581	47.9	96	7.9	50	4.1	354	29.2	76	6.3	48	4.0	727	60	478	39	7	1
17	Kerala	952	0	7.5	0.01	29.71	382	40.1	19	2.0	8	0.8	508	53.4	27	2.8	6	0.6	409	43	541	57	2	0
18	Madhya Pradesh	1220	0.01	9.64	0	32.89	404	33.1	84	6.9	27	2.2	471	38.6	140	11.5	93	7.6	515	42	704	58	1	0
19	Maharashtra	1379	0	15.98	0.01	17	415	30.1	76	5.5	33	2.4	611	44.3	145	10.5	96	7.0	524	38	852	62	3	0
20	Meghalaya	14	0.02	1.11	0.08	2.22	7	50.0	0	0.0	0	0.0	5	35.7	2	14.3	0	0.0	7	50	7	50	0	0
21	Odhisha	1138	0	4.93	0	5.4	494	43.4	36	3.2	3	0.3	561	49.3	33	2.9	1	0.1	533	47	595	52	10	1
22	Pondicherry	4	0.84	3.52	1.13	2.33	1	25.0	1	25.0	0	0.0	1	25.0	1	25.0	0	0.0	2	50	2	50	0	0

23	**Punjab**	234	0.01	3.87	0.01	9.67	64	27.4	7	3.0	0	0.0	106	45.3	28	12.0	28	12.0	71	30	162	69	1	0
24	**Rajasthan**	843	0	68.34	0	49.59	273	32.4	120	14.2	94	11.2	158	18.7	67	7.9	131	15.5	487	58	356	42	0	0
25	**Tamil Nadu**	445	0	17.03	0.01	41.89	134	30.1	25	5.6	15	3.4	163	36.6	55	12.4	53	11.9	174	39	271	61	0	0
26	**Telangana**	498	0.01	11.7	0.01	14.8	81	16.3	14	2.8	4	0.8	196	39.4	111	22.3	92	18.5	99	20	399	80	0	0
27	**Tripura**	27	0.12	1.2	0	1.84	11	40.7	0	0.0	0	0.0	16	59.3	0	0.0	0	0.0	11	41	16	59	0	0
28	**Uttar Pradesh**	803	0	5.76	0.01	9.93	247	30.8	21	2.6	5	0.6	432	53.8	77	9.6	21	2.6	273	34	530	66	0	0
29	**Uttarakhand**	43	0.04	3.85	0.01	4.64	9	20.9	2	4.7	0	0.0	26	60.5	4	9.3	2	4.7	11	26	32	74	0	0
30	**West Bengal**	927	0.01	12.66	0.01	26.55	219	23.6	26	2.8	6	0.6	507	54.7	81	8.7	87	9.4	251	27	675	73	1	0
Total		**13350**					**4758**	**35.6**	**710**	**5.3**	**327**	**2.4**	**5561**	**41.7**	**1133**	**8.5**	**829**	**6.2**	**5795**	**43**	**7523**	**56**	**32**	**1.00**


जल संरक्षण वर्ष 2013 Water Conservation Year
जल बचायें - जीवन बचायें
Save Water - Save Life