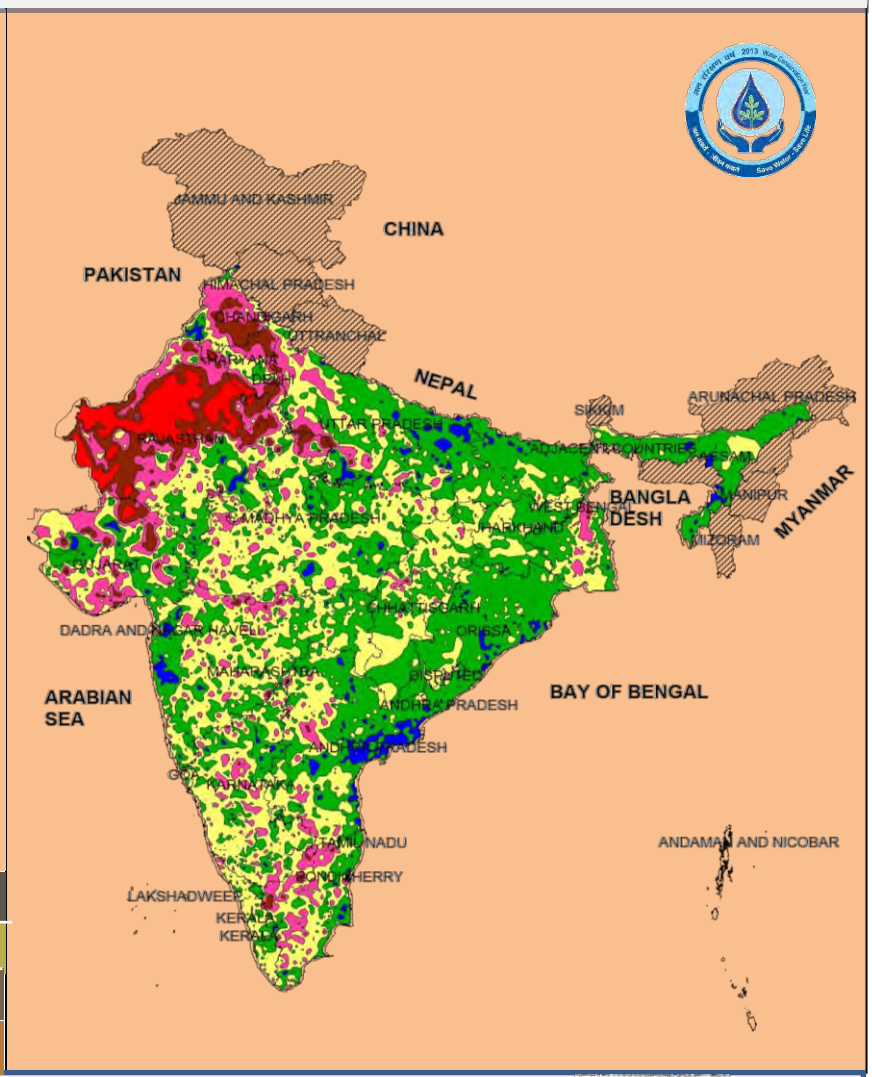
GROUND WATER SCENARIO IN INDIA

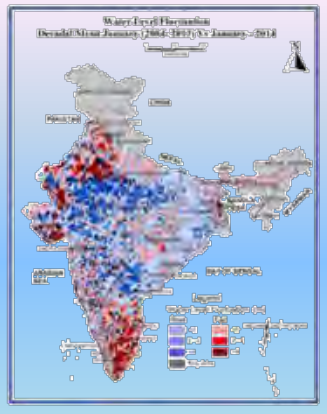
JANUARY, 2014

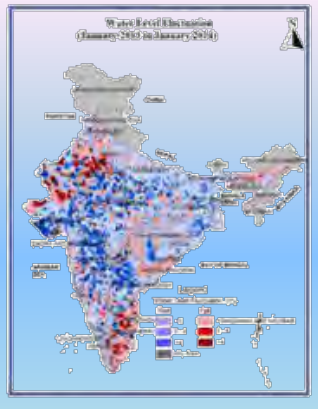
CENTRAL GROUND WATER BOARD

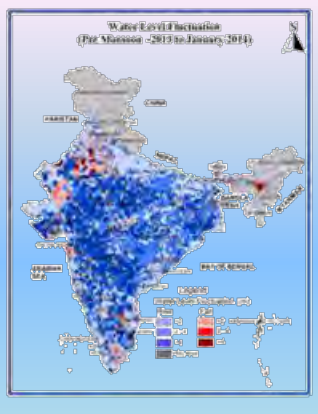
MINISTRY OF WATER RESOURCES

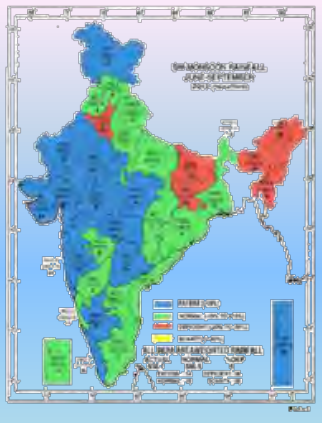
GOVT OF INDIA











GROUND WATER LEVEL SCENARIO IN INDIA
(JANUARY - 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 four times a year during Pre Monsoon (March/April/May), August, November and January. 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, During January 2014, 14391 observation wells have been monitored and analysed. An increase of 3000 observation wells as compared to observation wells analysed during January 2013 has been achieved which is part of an initiative of CGWB to expand the monitoring network in the entire country. The water level / piezometric heads data collected from these observations are entered into the National database and are analysed for obtaining background information of ground water regime changes on regional scale during the month of January, 2014. 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. The groundwater level data for Andaman and Nicobar could not be included in present analysis due to incomplete validation. The detailed ground water scenario in respect of Nagaland, Manipur, Dadra & Nagar Haveli and Pondicherry are not included in the report.

Water level data of January, 2014 has been analysed to illustrate spatial distribution of water level and its categorization under different ranges. The January data has been compared with the previous year January data (annual fluctuation) and also with Premonsoon of 2013 data (seasonal fluctuation) and mean of last 10 years January 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 / Pz 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 2013, the rainfall pattern has been studied and discussed in the following sections.

The actual rainfall for 2013 SW monsoon season received over the entire country as a

well as over four broad geographical regions are given in the table below along with respective long period average (LPA) values. The rainfall during the 4 monsoon months and the second half of the monsoon season (August + September) over the country as whole are also given.

Season (June to September) rainfall			
Region	**LPA (mm)**	**Actual Rainfall for 2013 SW Monsoon Season**	
		Rainfall (mm)	**Rainfall (% of LPA)**
All India	886.9	936.7	106
Northwest India	615.0	671.8	109
Central India	974.2	1195.3	123
Northeast India	1437.8	1037.9	72
South Peninsula	715.7	825.6	115
Monthly & second half of the monsoon season rainfall over the country as a whole (All India)			
Month	**LPA (mm)**	**Actual Rainfall for 2013 SW Monsoon Season**	
		Rainfall (mm)	**Rainfall (% of LPA)**
June	163.5	216.3	132
July	288.9	307.5	106
August	261.0	257.0	98
September	173.5	149.5	86
August + September	434.5	406.5	94

As seen in the table above, the season rainfall over the country as whole and that over three of the four geographical regions of the country (except over northeast India) were more than the respective LPAs. The season rainfall over northeast India was less than its LPA. Month wise, the rainfall over the country as a whole during the first two months (June and July) were above its LPA values. On the other hand, the monthly rainfall during the last two months (August and September) of the monsoon season was less than respective LPA values.

The season rainfall from 1st June to 30 September 2013 was excess in 14 subdivisions, which constitutes 48% of the total area of the country, normal in 16 meteorological subdivisions (38% of the total area of the country) and deficient in 6 meteorological subdivisions (14% the total area of the country).

In June, except for 3 subdivisions from extreme northeast India (Arunachal Pradesh, Assam and Meghalaya, and Nagaland, Manipur Mizoram & Tripura), which received deficient rainfall, all the other subdivisions (33 out of 36) received excess (25 subdivisions) or normal (8

subdivisions) rainfall. In July, 10 subdivisions from northern, eastern and northeastern parts of the country and one in the extreme southeast (Tamil Nadu and Pondicherry) received deficient rainfall. Out of the 25 remaining subdivisions, 12 subdivisions received normal and 13 subdivisions, majority of which are from central India and along the west coast, received excess rainfall. In August, rainfall activity weakened compared to the first two months but was close to normal. During August, 8 subdivisions received excess rainfall, 18 subdivisions received normal rainfall and remaining 10 subdivisions received deficient rainfall. The excess subdivisions were Jammu &Kahsmir, Punjab, west and east Rajasthan, west and east Madhya Pradesh, Gangetic West Bengal and Tamil Nadu. The deficient subdivisions were 3 of the 4 subdivisions of Maharashtra (except Vidarbha), north interior Karnataka, Lakshadweep, Odisha, Bihar, and 3 subdivisions from extreme northeast India.

In September, the rainfall activity reduced further and 17 subdivisions from north, east, northeast and central India received deficient or scantly rainfall. The 4 scantly subdivisions were Punjab, west and east Uttar Pradesh and east Madhya Pradesh. Out of the remaining 19 subdivisions, 9 subdivisions were excess and 10 subdivisions were normal. The excess subdivisions were, west Rajasthan, 2 subdivisions of Gujarat, Madhya Maharashtra, 3 subdivisions of Karnataka, Kerala and Rayalaseema.

From the monthly distribution, it can be clearly seen that during most part of the season, the 3 subdivisions from the extreme northeast received deficient rainfall. On the other hand, most of the subdivisions from the central India and neighboring northwest India and south Peninsula received excess rainfall during the first 3 months of the season. However no subdivisions experienced scantly rainfall during first 3 months of the season. Only in September that 4 subdivisions received scantly rainfall. Overall, there was noticeable disparity in the spatial distribution of the rainfall with below normal or deficient rainfall over east and northeast India and above normal or excess rainfall over most of the other regions.

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

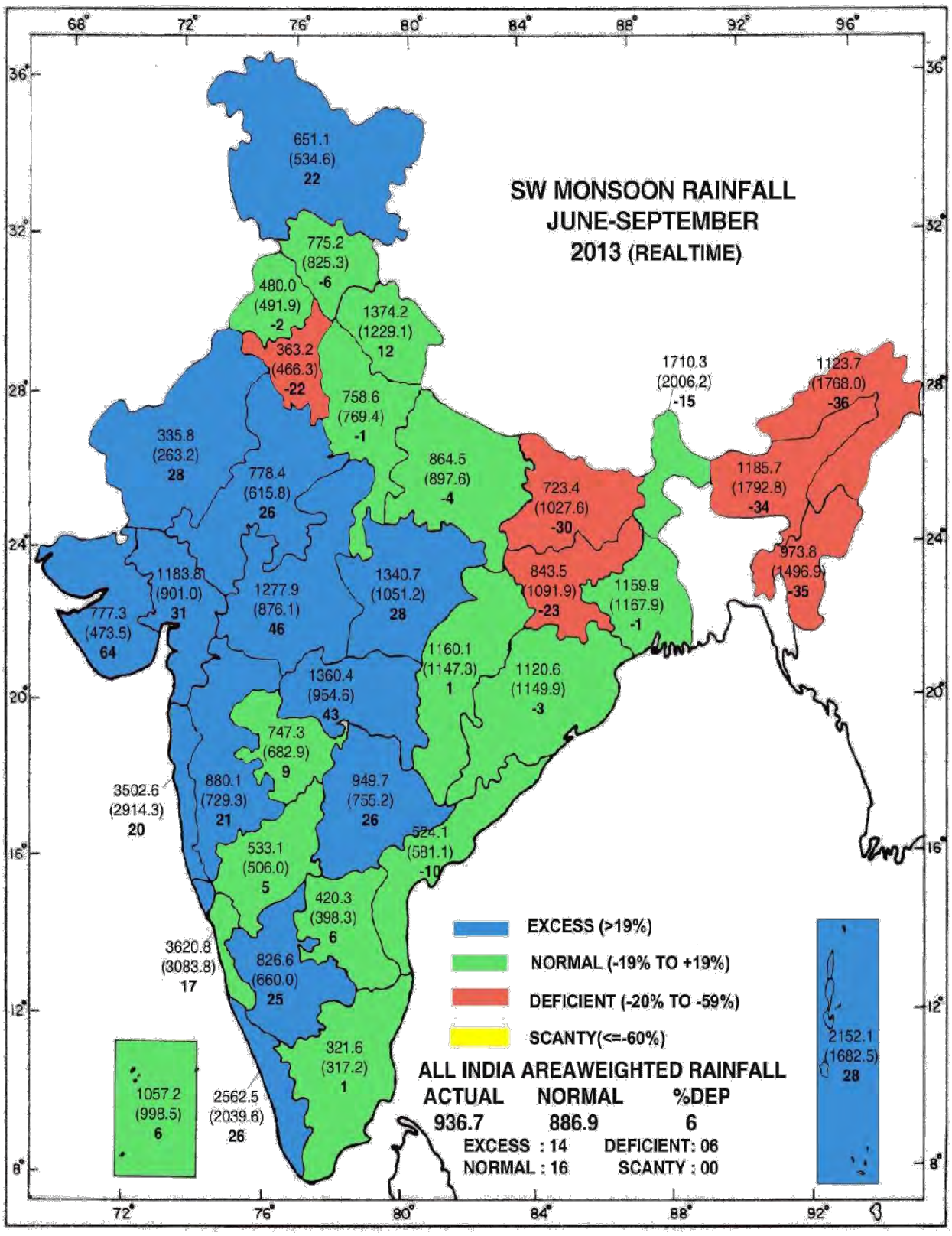
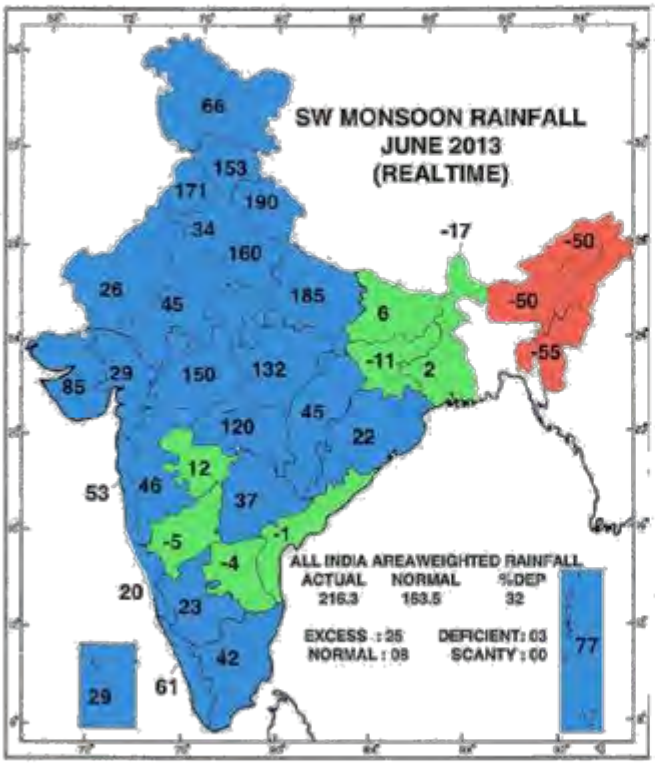
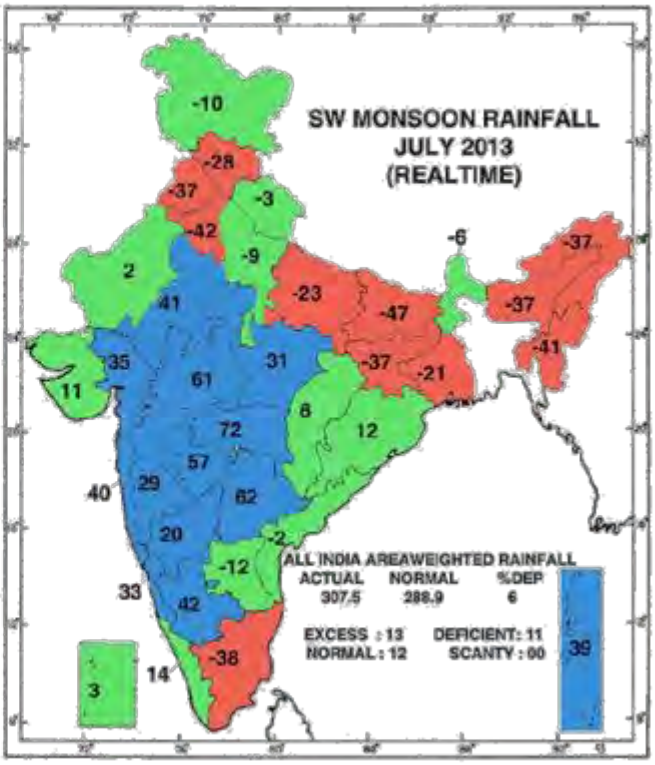


Plate I

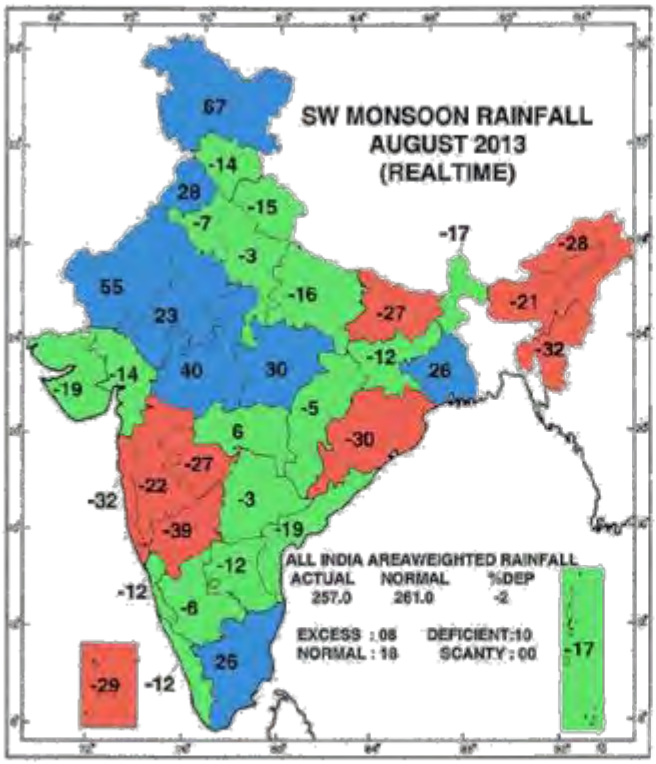
भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT



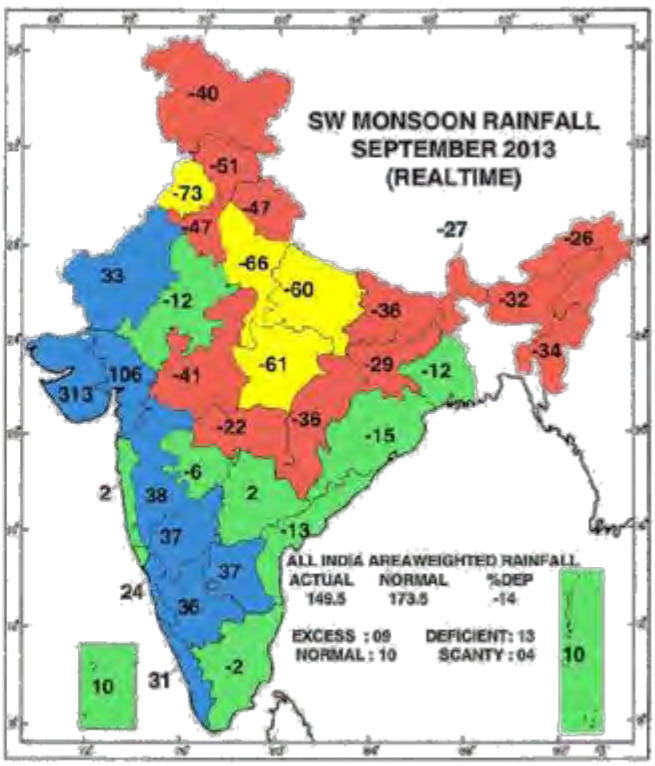
भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

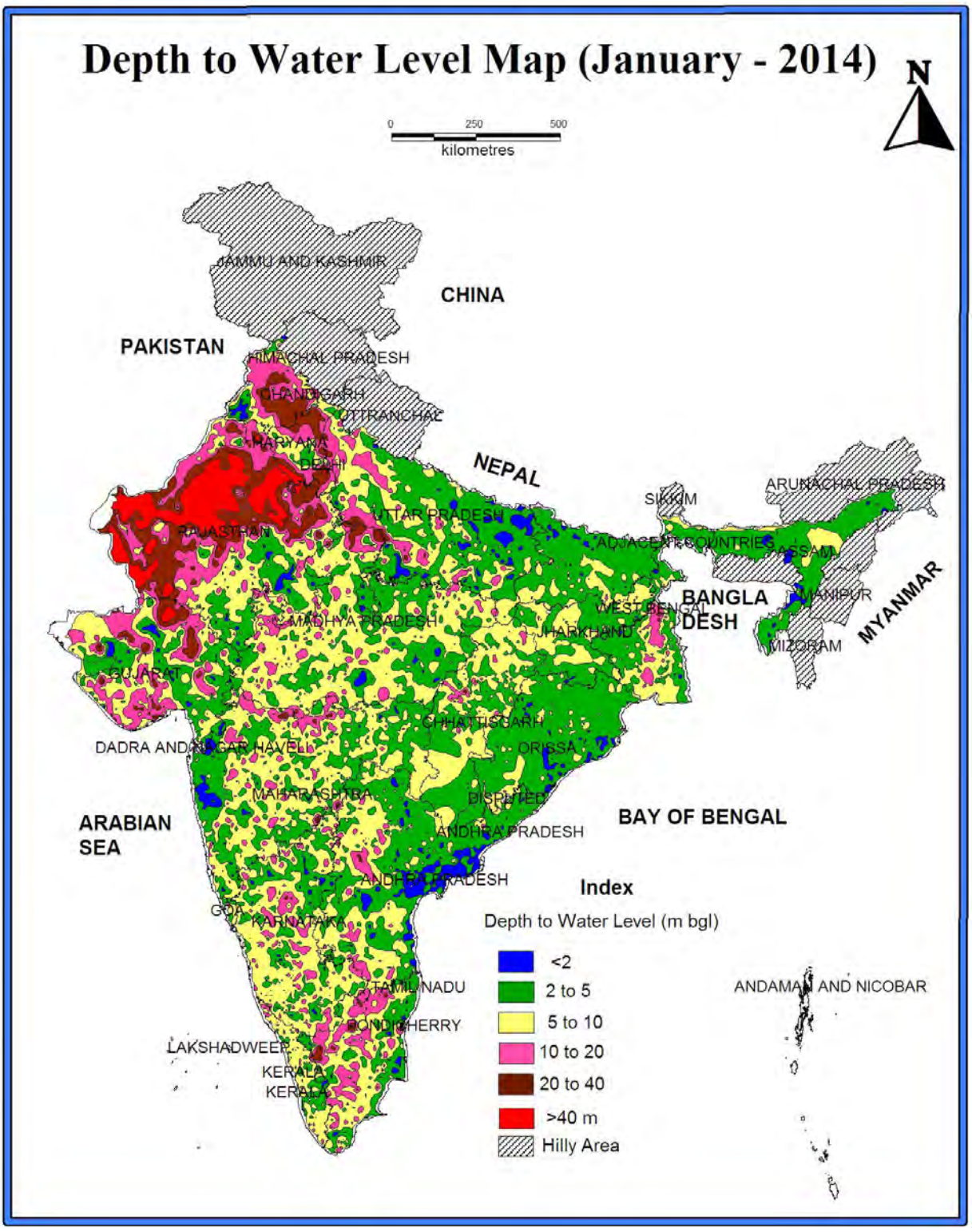


EXCESS (>19%) ; DEFICIENT (-20% TO -59%) ; NORMAL (-19% TO +19%)

SCANTY(<=-60%)

Plate II

Plate-III


Depth to Water Level Map (January - 2014)
N
0
250
500
kilometres
JAMMU AND KASHMIR
CHINA
PAKISTAN
HIMACHAL PRADESH
CHANDIGARH
UTTRANCHAL
HARYANA
DELHI
NEPAL
SIKKIM
ARUNACHAL PRADESH
UTTAR PRADESH
RAJASTHAN
ADJACENT COUNTRIES
ASSAM
BANGLA DESH
MANIPUR
WEST BENGAL
MADHYA PRADESH
JHARKHAND
MYANMAR
MIZORAM
GUJARAT
CHHATTISGARH
DADRA AND NAGAR HAVELI
ORISSA
MAHARASHTRA
DISPUTED
ARABIAN SEA
BAY OF BENGAL
ANDHRA PRADESH
ANDHRA PRADESH
Index
GOA
KARNATAKA
Depth to Water Level (m bgl)
<2
2 to 5
5 to 10
10 to 20
20 to 40
>40 m
Hilly Area
TAMIL NADU
ANDAMAN AND NICOBAR
PONDICHERRY
LAKSHADWEEP
KERALA
KERALA

3.0 Ground Water Level Scenario in India

3.1 Ground Water Level Scenario-January 2014

The ground water level data for January 2014 indicate that out of the total 14391 wells analysed, 1840 (13 %) wells are showing water level less than 2 m bgl, 5839 (41%) wells are showing water level in the depth range of 2-5 m bgl, 4277 (30 %) wells are showing water level in the depth range of 5-10 m bgl, 1760 (12%) wells are showing water level in the depth range of 10-20 m bgl, 462 (3%) wells are showing water level in the depth range of 20-40 mbgl and the remaining 219 (2 %) 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 112.60 m bgl is observed in Rajasthan whereas the minimum is less than 1 m bgl.

The depth to water level map of January 2014 (**Plate III**) for the country indicates that in Sub-Himalayan area, north of river Ganges, Assam, Bihar, Chhattisgarh, Maharashtra, Jharkhand, Madhya Pradesh Odisha, Bihar, Gujarat, Tripura and Coastal Tamil Nadu generally the depth to water level varies from 2-5 meter below ground level. Shallow water level less than 2 m bgl have also been observed as isolated patches in Maharashtra, Andhra Pradesh, Assam, Northern Uttar Pradesh, Madhya Pradesh, Gujarat and Odisha. 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 Delhi and Rajasthan water level of more than 40 m bgl is recorded. Along the eastern & western coast water level is generally less than 10 m. Central part of West Bengal state recorded water level in the range of 5-10 m bgl and also 10-20 m bgl. In Central India water level generally varies between less than 2 m bgl to 5 m bgl, except in isolated pockets where water level less 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

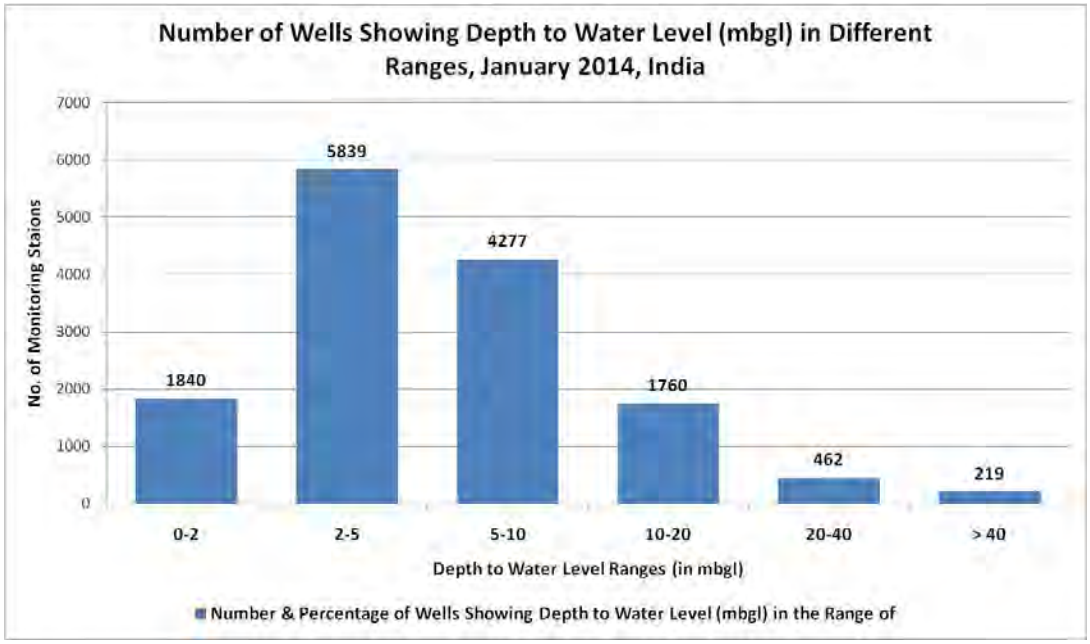
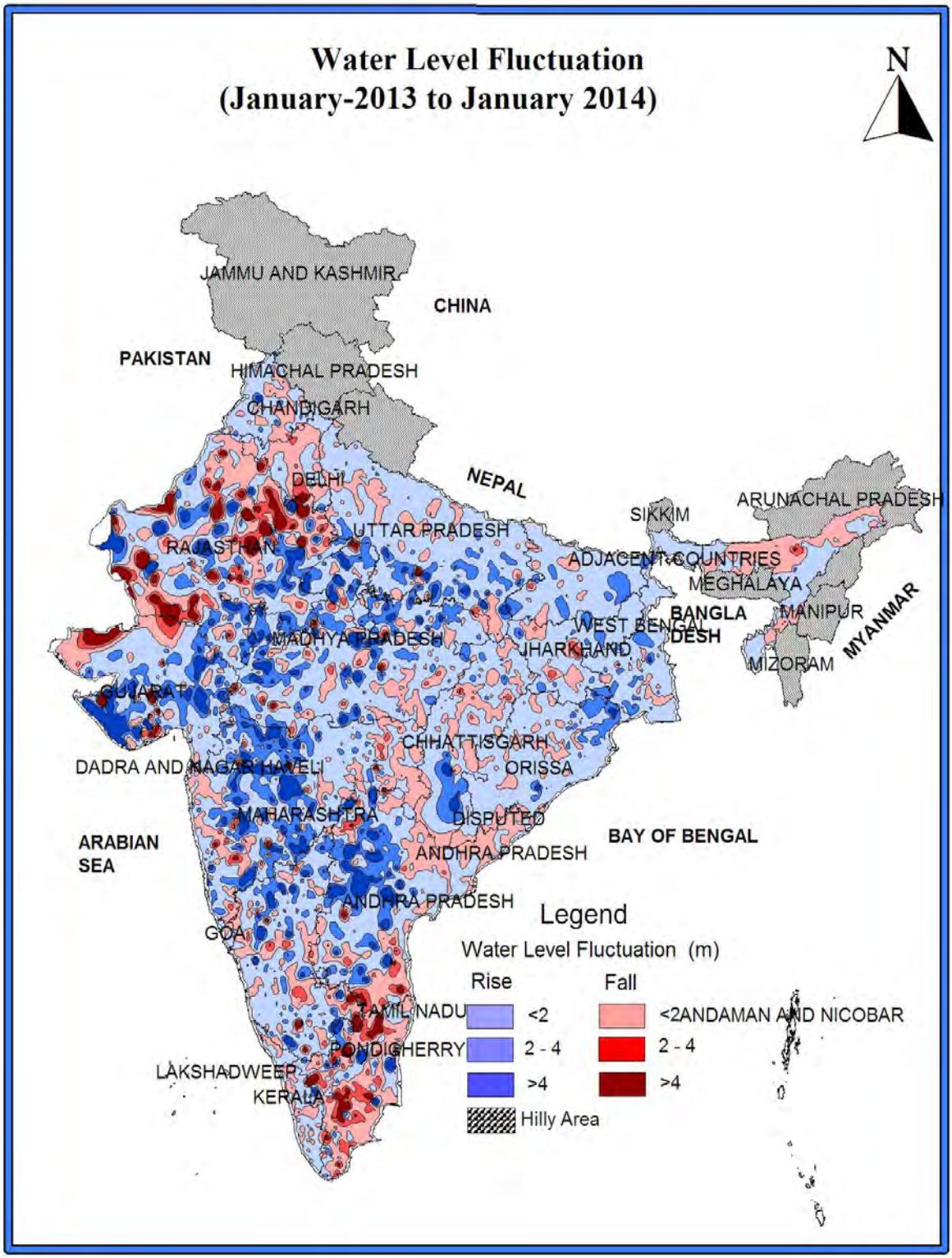


Plate IV

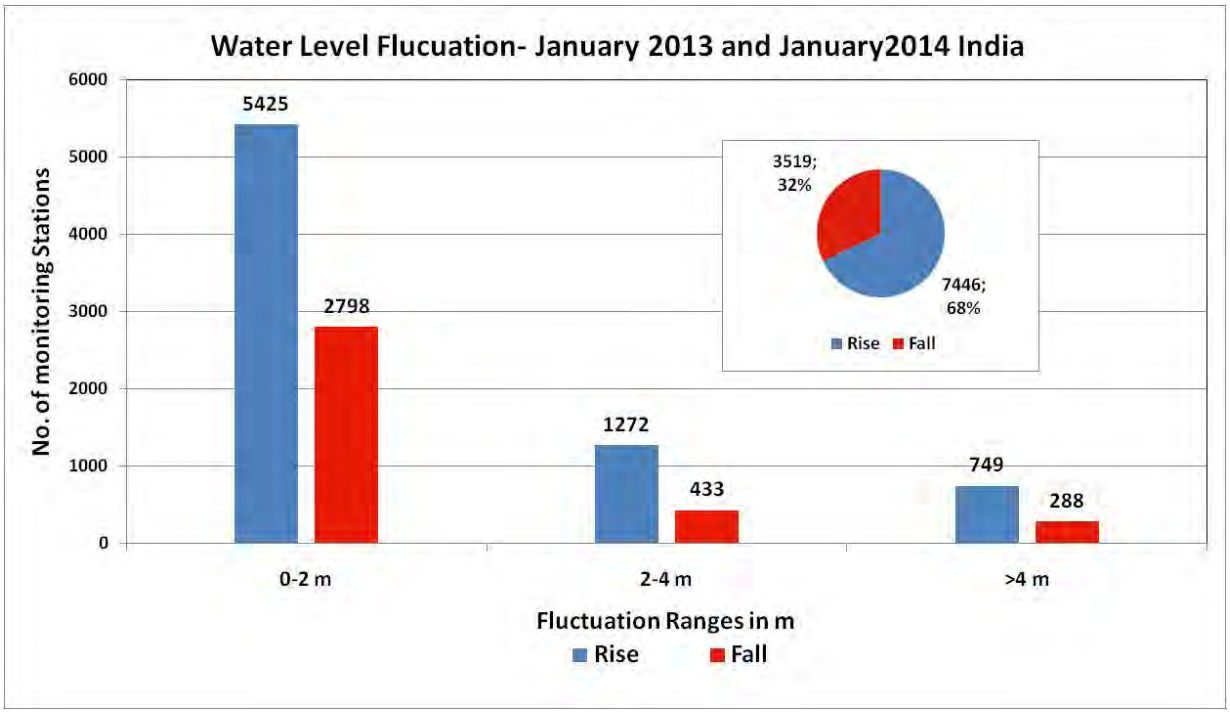

Water Level Fluctuation
(January-2013 to January 2014)
N
JAMMU AND KASHMIR
CHINA
PAKISTAN
HIMACHAL PRADESH
CHANDIGARH
DELHI
NEPAL
SIKKIM
ARUNACHAL PRADESH
UTTAR PRADESH
RAJASTHAN
ADJACENT COUNTRIES
MEGHALAYA
BANGLA DESH
MANIPUR
WEST BENGAL
MADHYA PRADESH
JHARKHAND
MYANMAR
MIZORAM
GUJARAT
CHHATTISGARH
DADRA AND NAGAR HAVELI
ORISSA
MAHARASHTRA
DISPUTED
ARABIAN SEA
BAY OF BENGAL
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

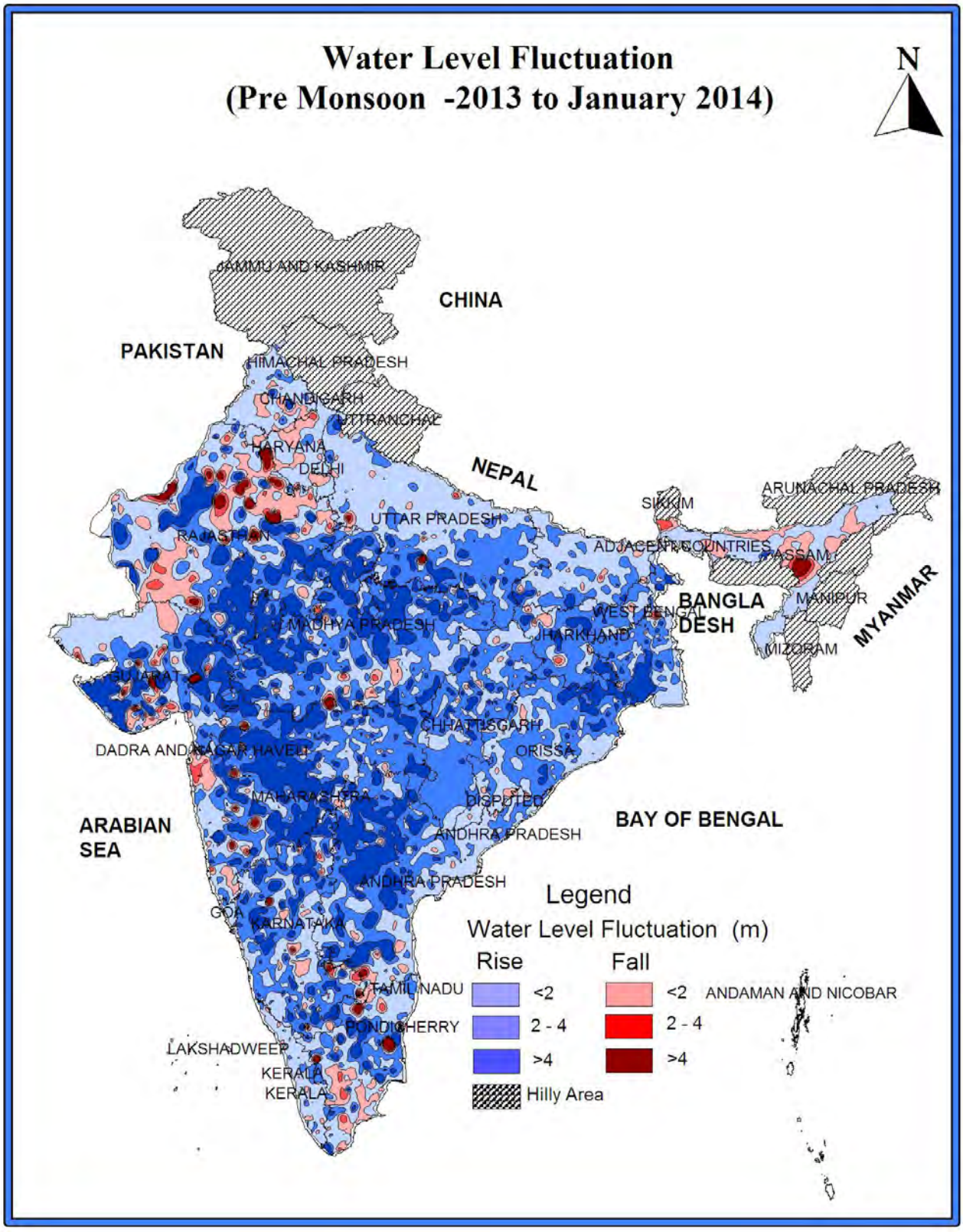
3.2 Water Level Fluctuation (January 2014 to January 2013)

The water level fluctuation of **January 2014 to January 2013** shows that out of 11204 wells analysed, 7446 (66%) are showing rise and 3519 (31%) are showing fall in water level. Remaining 239 (2%) stations analysed do not show any change in water level. About 48% wells are showing rise in the water level in the range of less than 2 m. About 11% wells are showing rise in water level in 2-4 m range and 7 % wells showing rise in water level more than 4 m range. About 31% wells are showing decline in water level, out of which 25% wells are showing decline in water level in less than 2 m range. About 4 % wells are showing decline in water level in 2-4 m range. Only 3% 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 January 2014 to January 2013 **presented in the form of water level fluctuation map (Plate IV)** reveals that in general, there is rise in the water level in almost the entire country, especially in the states of Uttar Pradesh, Jharkhand, Bihar, West Bengal, Chhatishgarh, Orissa, Maharashtra and Gujarat. There is a fall in water level mostly in the range of 0-2 m covering most parts of the country. Fall in water level of more than 2 m has been observed in small pockets in the states of Assam, Tamil Nadu, Rajasthan and Gujarat. Fall of more than 4 m observed in small pockets in the states of Andhra Pradesh, Gujarat, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Uttar Pradesh and Tamil Nadu (Plate-IV)

Fig- 2

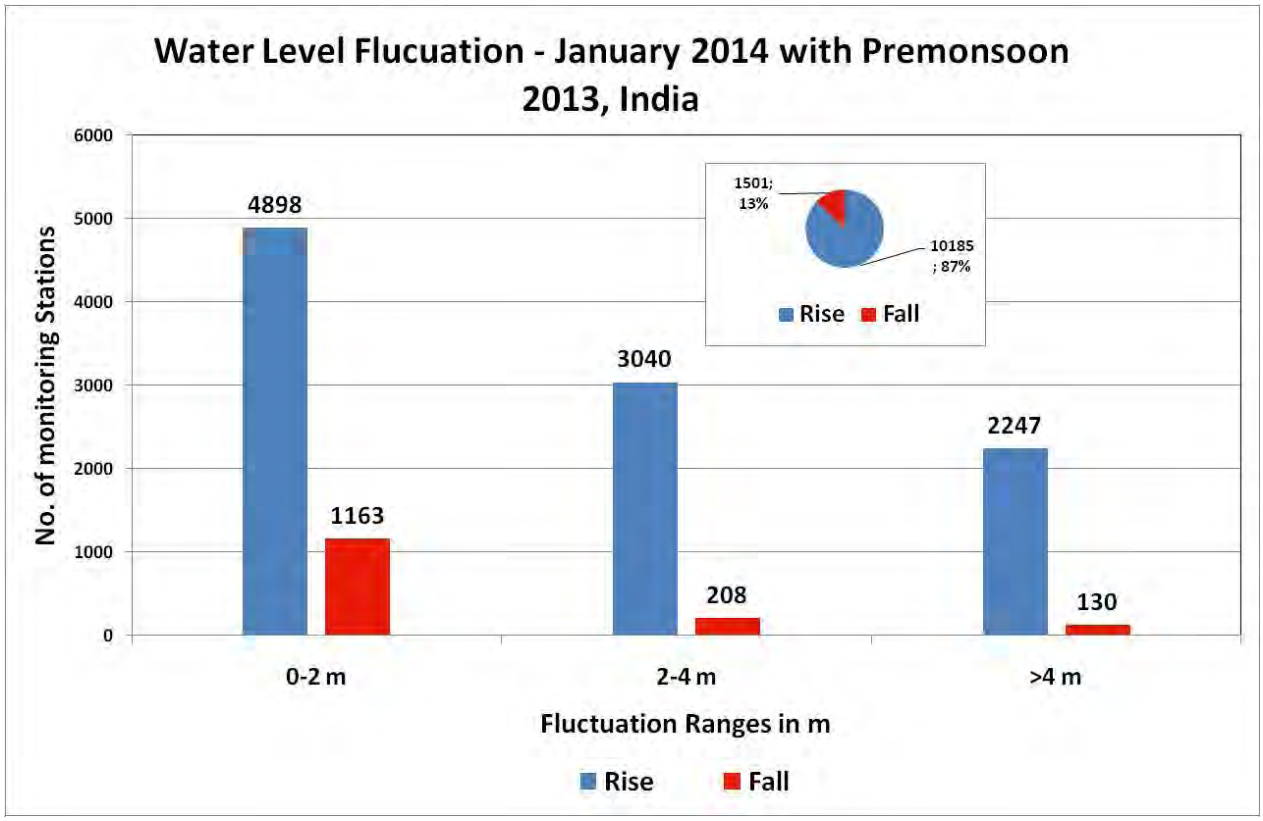


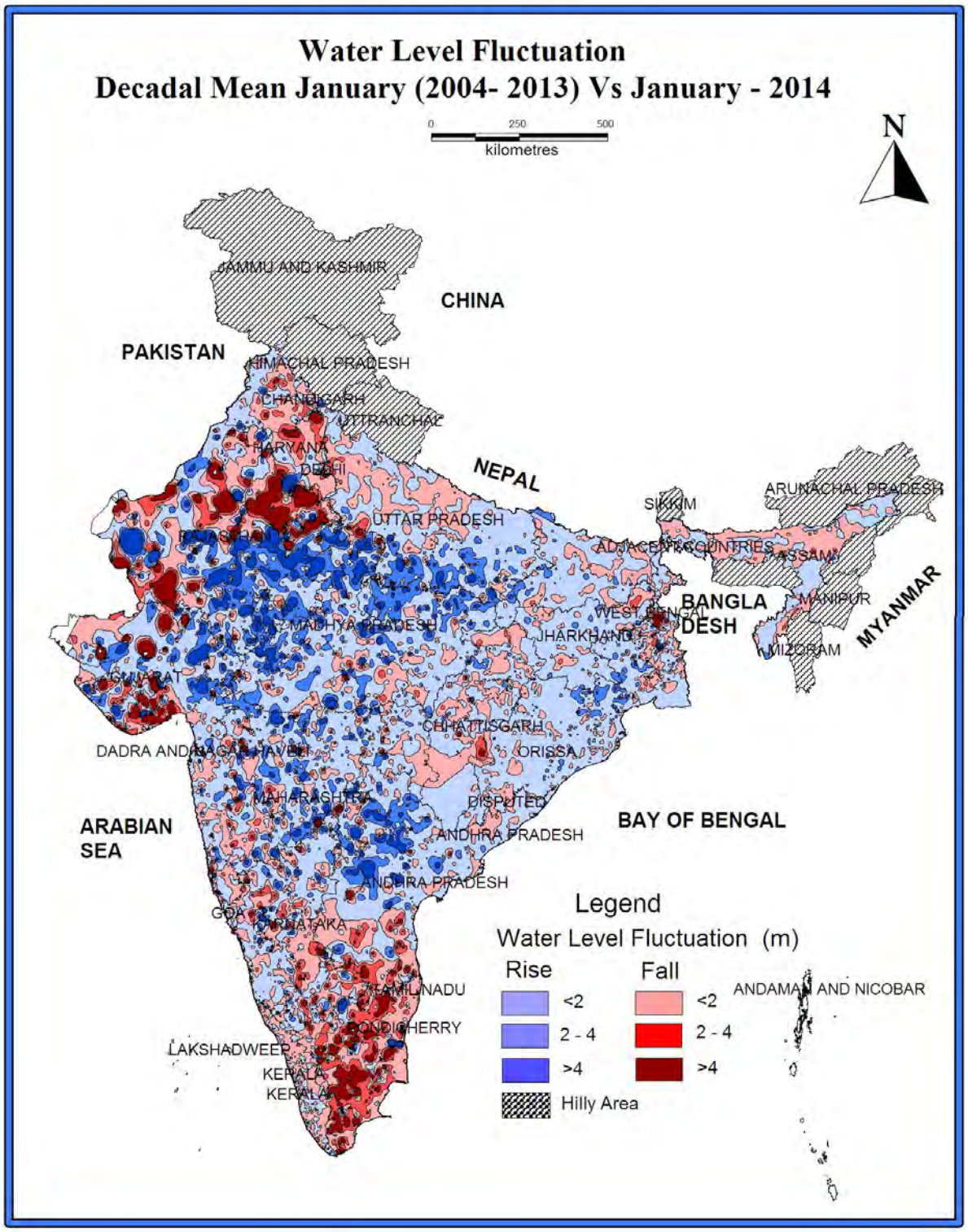

Water Level Fluctuation
(Pre Monsoon -2013 to January 2014)
N
JAMMU AND KASHMIR
CHINA
PAKISTAN
HIMACHAL PRADESH
CHANDIGARH
UTTRANCHAL
HARYANA
DELHI
NEPAL
SIKKIM
ARUNACHAL PRADESH
UTTAR PRADESH
RAJASTHAN
ADJACENT COUNTRIES
ASSAM
BANGLA DESH
MANIPUR
WEST BENGAL
MADHYA PRADESH
JHARKHAND
MYANMAR
MIZORAM
GUJARAT
CHHATTISGARH
DADRA AND NAGAR HAVELI
ORISSA
MAHARASHTRA
DISPUTED
ARABIAN SEA
BAY OF BENGAL
ANDHRA PRADESH
ANDHRA PRADESH
GOA
KARNATAKA
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area
TAMIL NADU
PONDICHERRY
LAKSHADWEEP
KERALA
KERALA
ANDAMAN AND NICOBAR

3.3 Seasonal Water Level Fluctuation (Pre Monsoon 2013 to January 2014)

A comparison of depth to water level during **January 2014 with Pre Monsoon 2013** reveals that in general, there is rise in the water level in 10185 (86%) wells, out of which 41% are showing rise in range of 0-2 m, 26% and 19 % shows rise in the range of 2-4 m and more than 4m respectively. The seasonal water level fluctuation map of India is shown in **Plate-V** and **Fig-3** shows frequency distribution of wells showing fluctuation in different ranges. There is a fall in 1501 (13%) wells. Out of which 10% of the wells are showing fall in the range of 0-2 m. Most of the wells have been showing rise of water level in the range of less than 4 m range. Rise in water level in the range of 0-2 m and 2-4 m range is observed in the entire country, covering almost all the states. Decline in water level in the range of 0-2 m and 2-4 m is observed mainly in Assam, Punjab, Haryana, Gujarat, Chandigarh, Rajasthan and also in small pockets in Tamil Nadu, and Maharashtra states. Decline in water level in the range of 4 m is observed in pockets in Assam, Punjab, Haryana, Gujarat and Rajasthan states. The state wise fluctuation is given in **Annexure-III.**

Fig- 3




Water Level Fluctuation
Decadal Mean January (2004- 2013) Vs January - 2014
0
250
500
kilometres
N
JAMMU AND KASHMIR
CHINA
PAKISTAN
HIMACHAL PRADESH
CHANDIGARH
UTTRANCHAL
HARYANA
DELHI
NEPAL
SIKKIM
ARUNACHAL PRADESH
UTTAR PRADESH
ADJACENT COUNTRIES
ASSAM
BANGLA DESH
MANIPUR
WEST BENGAL
MADHYA PRADESH
JHARKHAND
MIZORAM
MYANMAR
GUJARAT
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DADRA AND NAGAR HAVELI
ORISSA
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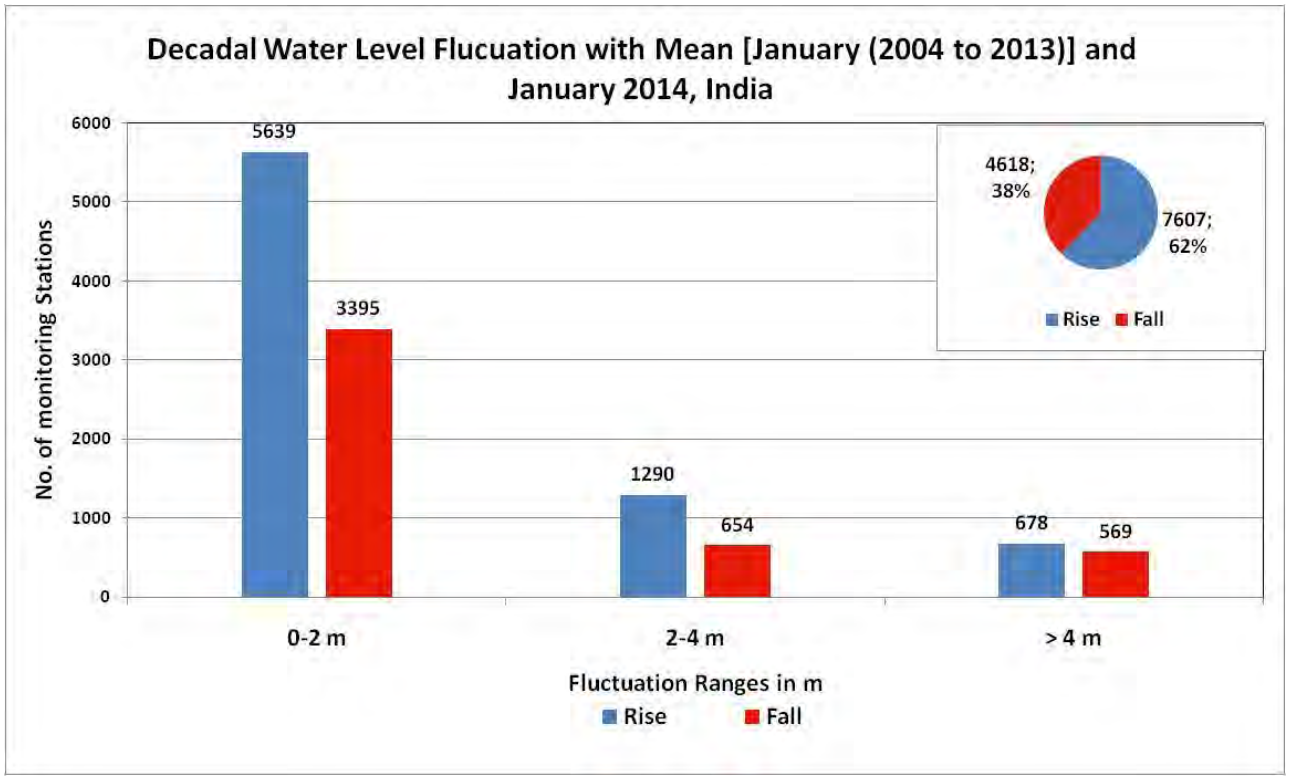
ANDHRA PRADESH
ANDHRA PRADESH
GOA
KARNATAKA
ANDAMAN AND NICOBAR
TAMIL NADU
PONDICHERRY
LAKSHADWEEP
KERALA
KERALA
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
<2
2 - 4
2 - 4
>4
>4
Hilly Area

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

A comparison of depth to water level of January 2014 with decadal mean of January (2004-2013) indicate that 7607 (about 62%) of wells are showing rise in water levels, out of which 46% wells are showing rise of less than 2 m (**Annexure-IV**). About 11% wells are showing rise in water in the range of 2-4 m and about 5 % wells are showing rise in water level in the range of more than 4 m. 4618 (about 38%) wells are showing decline in water level, out of which 28% wells are showing decline in water in the range of 0-2 m. 5% wells are showing decline in water level in 2-4 m range and remaining 5% 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 Delhi, Gujarat, Haryana, Karnataka, Punjab, Rajasthan and Tamil Nadu. Rise in water level of more than 4 m is observed mostly in the states of Andhra Pradesh, Gujarat, Himachal Pradesh, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.

As observed in **Plate-VI** maximum fall is observed in and around parts of Punjab, Rajasthan and Tamil Nadu. A rise in water level is observed in almost all parts of the country. In states of Punjab, Kerala and Tamil Nadu rise in water level is observed as patches. The decadal water level fluctuation map of India for January, 2014 with the mean of January (2004-2013) is shown in Plate-VI and frequency distribution of fluctuation ranges is shown in **Fig. 4.**

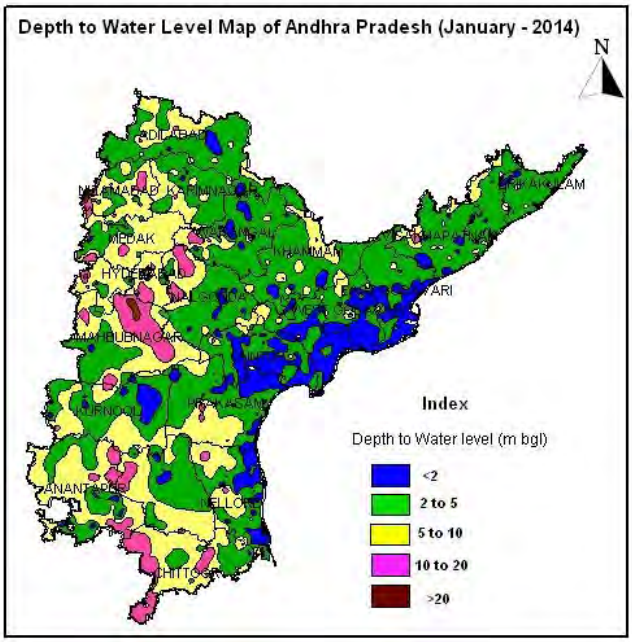
Fig- 4



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

4.01 Andhra Pradesh

Depth to Water Level – January 2014



Very Shallow water level ranging between 0-2 m bgl was observed in 27 % of the wells monitored. Shallow water level ranging between 2-5 m bgl was observed in 42% of wells. The depth to water level between 5-10 meters has been observed 23 % wells. Depth to water level ranging between 10-20 meters has been observed 7% wells. Water level of more than 20 m bgl has been observed in only 1% well. The depth to water level in the state ranges upto 33.77 m bgl (in Ranga Reddy district).

Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that about 61 % of the wells analysed are showing rise in the water level and 33% wells are showing fall in water level. 6% wells show no change in water level. Out of this, 40% wells have shown a rise in 0-2 m range,12% of the wells have shown rise in the range of 2-4 m and another 9% of the wells show rise in the range of >4m. About 27% of the wells show fall in 0-2 m range. Maximum rise in water level has been recorded as 28.75 m and maximum fall in water level has been recorded as 11.50 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of January 2014 when compared to that of Pre Monsoon 2013 shows that there is dominantly rise in water level in the entire state. Water level rise is seen in almost all the districts of the state. About 91% of the wells analysed show rise in water level. Out of this, 39% of the wells show rise in water level in the range of less than 2 m. A rise of 2-4 m is observed in 27% of the wells analysed and rise of more than 4 m is noticed in 25 % of the wells. Only 7 % of wells analysed have shown fall in water level and 5% of the wells shows fall in the range of 0-2 m. 2% wells show no change in water level.

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

The water level data of January 2014 has been compared with decadal mean (January 2004-2013) to assess the rise/fall in water level during current year with respect to long term average of the corresponding period. About 70 % of analysed wells have shown a rise in water level. Out

of this 49% of the wells have shown rise in the range of 0 to 2 m, 12% wells have shown rise in the range of 2 to 4 m and 9% in the range of more than 4 m bgl. About 30% wells have shown a fall in water level, out of which 23% wells have shown fall in the range of 0 to 2 m and 7 % wells have shown fall of more than 2 m.

4.02 Arunachal Pradesh

Depth to Water Level – January 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 almost 80 % of the wells monitored. Only 8% monitoring station recorded water level within 2 m bgl and around 50 % wells recorded water level between 2-5 m bgl. About 33% wells recorded water level between 5-10 m bgl.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

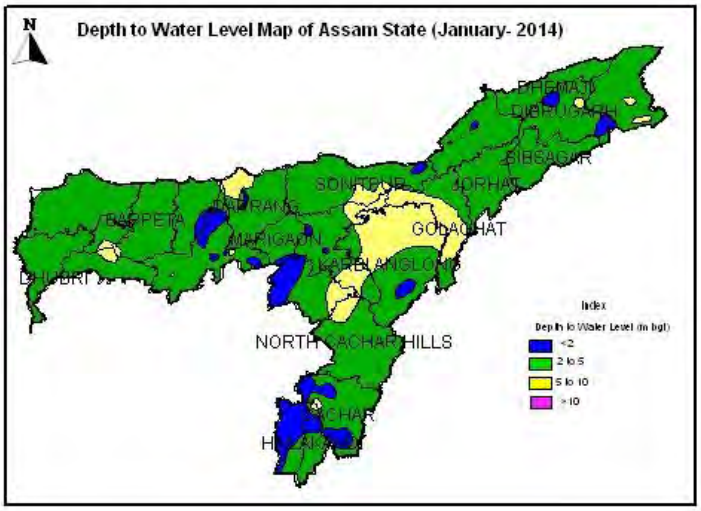
Water level of Pre Monsoon 2013 when compared to that of January 2014 shows that there is dominantly rise in water level in the entire state. About 90 % of the wells analysed show a rise in water level in 0-2 m range.

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

The water level data of January 2014 has been compared with decadal mean (January 2004-2013) and it is observed that out of 11 wells analyzed 73 % shows rise in water level where as 27% show a fall in water level.

4.03 Assam

Depth to Water Level – January 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 80 % of the wells monitored. Around 18% monitoring stations recorded water level within 2 m bgl and around 66 % wells recorded water level between 2-5 m bgl. About 15 % wells recorded water level between 5-10 m bgl and only less than 1% wells show water level between 10-20 m bgl.

A shallow water level within 2 m bgl is recorded in almost all the districts and prevalent throughout the state except in few districts such as Hailakandi, Karbi Anglong, Kokrajhar etc. The maximum depth to water level has been recorded as 10.58 m bgl in Karbi Anglong district.

Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that in general there fall in water level in almost most parts of the state. About 38 % of the wells analysed are showing rise in the water level and 61% wells are showing fall in water level. 2 % wells show no change in water level. Out of 38%, 34% wells have shown a rise in 0-2 m range. Out of 61 % wells in the fall category, about 54 % of the wells have shown fall in 0-2 m range. Maximum rise in water level has been recorded as 5.92 m.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

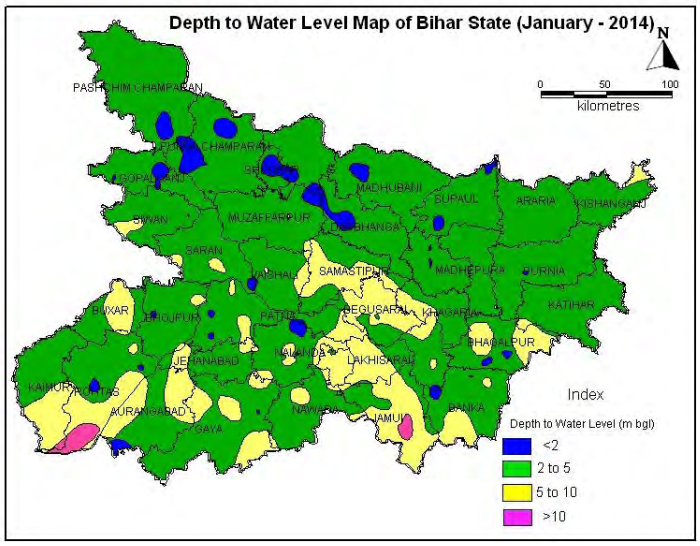
Water level of Pre Monsoon 2013 when compared to that of January 2014 shows that there is dominantly rise in water level in the state. About 74 % of the wells analysed show a rise in water level. Out of this, 67 % of the wells showing rise in water level in less than 2 m range. A rise of 2-4 m is observed in 4% of the wells analyzed and a rise of more than 4 m is noticed at 2 % of the wells. About 24 % of wells analysed have shown fall in water level where 20 % of the wells shows fall in the range of 0-2 m.

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

The water level data of January 2014 has been compared with decadal mean (January 2004-2013) and it is observed that out of 193 wells analyzed 51 % show a fall in water level where as 48% show a rise in water level. 47% wells show fall in the range of 0-2 m and about 45% wells show rise in the range of 0-2 m.

4.04 Bihar

Depth to Water Level – January 2014



During January 2014 water level measurement, a total of 380 wells have been monitored. About 12 % of the wells are showing water level in the range 0-2 m bgl. 65 % of the wells are showing water level in the range 2-5 m bgl and 22 % of the wells analysed are showing water level in the range of 5-10 m bgl. 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 12.72 m bgl in Jamui district.

Fluctuation-January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that in general there is rise in water level in the entire state. About 87 % of the wells analysed are

showing rise in the water level and 13 % wells are showing fall in water level. Out of this, 72% wells have shown a rise in 0-2 m range, 14% wells have shown rise in 2-4 m range. About 12 % of the wells have shown fall in 0-2m range and 1% wells have shown fall in 2-4 m range. Maximum rise in water level has been recorded as 5.27 m and maximum fall in water level has been recorded as 3.44 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level data of Pre Monsoon 2013 was compared to January 2014 and the analysis shows that in general there is rise in water level in the entire state. About 92 % of the wells analysed are showing rise in the water level. Out of this, 61 % wells have shown a rise in 0-2 m range. About 25 % of the wells have shown rise in 2- 4 m range and about 7 % of the wells have shown rise of more than 4 m range. About 7 % 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 8.15 m and maximum fall in water level has been recorded as 3.07 m in the State.

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

The water level data of January 2014 has been compared with decadal mean (January 2004 to 2013) and it indicates that out of 284 wells analyzed 64% wells show a rise in water level whereas 36% show a fall in water level. Out of 61 % rise, about 58% wells show rise in the range of 0-2 m bgl.

4.05 Chandigarh

Depth to Water Level – January 2014

In general depth to water level scenario in the UT of Chandigarh depicted a water level in the range of 10 to 40 m bgl with more than 60 % of the wells monitored falling in this range. Around 25% monitoring stations recorded water level between 2-5 m bgl. About 13 % wells recorded water level between 5-10 m bgl, 31% wells show water level between 10-20 m bgl and another 31% falls in the range of 20-40m. The maximum depth to water level has been recorded as 38.73 m bgl.

Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that in general there is both rise and fall in water level in almost most parts of the Chandigarh. About 53 % of the wells analysed are showing rise in the water level and 47% wells are showing fall in water level. Out of 53%, 40% wells have shown a rise in 0-2 m range. Out of 47 % wells in the fall category, about 33 % of the wells have shown fall in 0-2 m range.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

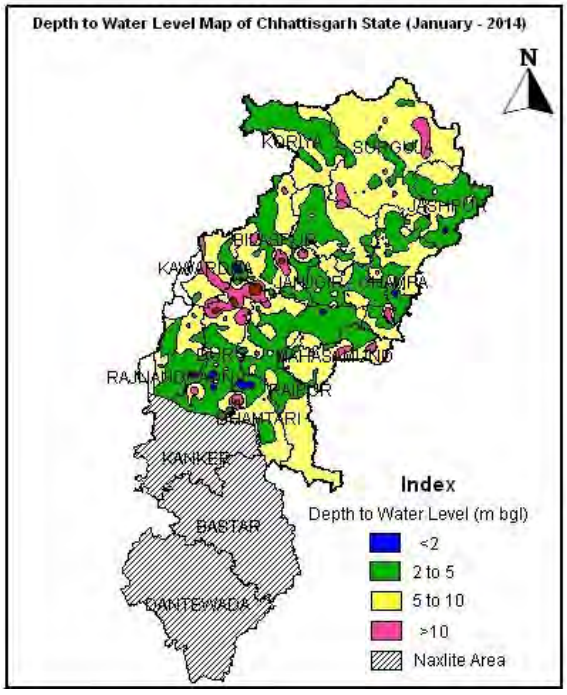
Water level of Pre Monsoon 2013 when compared to that of January 2014 shows that there is both rise and fall in water level in the UT. About 50 % of the wells analysed show a rise in water level and another 50% shows decline in water level. Both rise and fall is in the 0-2 m range.

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

The water level data of January 2014 has been compared with decadal mean (January 2004-2013) and it shows that there is both rise and fall in water level in the UT. About 50 % of the wells analysed shows rise in water level and another 50% shows decline in water level. Out of 50% in the rise category, all the wells fall in the 0-2 m range. Decline in 0-2 m range is shown by 31% wellsmonitored.

4.06 Chhattisgarh

Depth to Water Level – January 2014



During January 2014 water level measurement, a total of 816 wells have been monitored. About 5 % of the wells monitored shows water level in the range of 0-2 m bgl, 47 % wells shows water level in 2-5 m bgl and about 39 % wells falls under the category of 5- 10 m bgl. About 8% wells show water levels in the range of 10 – 40 m bgl. The maximum water level measured is 49.40 m bgl in Bilaspur District.

Water Level Fluctuation-January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 55% of the wells and fall in about 44% of the wells. 47% wells have shown a rise in 0-2 m range, about 39% of the wells have shown fall in 0-2m range. Maximum rise in water level has been recorded as 6.73 m and maximum fall in water level has been recorded as 9.77 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

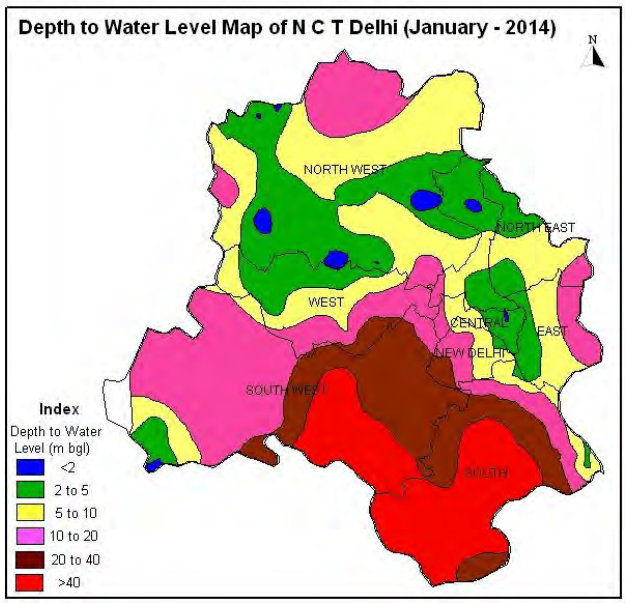
Water level of Pre Monsoon 2013 is compared to January 2014 and the analysis shows that the entire state of Chhattisgarh shows rise in water level. Almost 89 % of the observation wells are showing rise in water level. Rise in the range of 0- 2 m is observed in about 35% of the monitored wells. Rise in the range of 2 to 4 m and more than 4 m is observed in 33% and 21 % of the monitored wells respectively.

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

When compared the decadal mean water level (January 2004 to 2013) with January 2014, about 52 % of observation wells are showing a rise in water level. Out of the 52% wells, 43 % of the wells are showing a rise upto 2 m, 8 % of the monitored wells show rise between 2 to 4 meters and 1% of the monitored wells are showing rise in water level of more than 4 m. Fall of water level as compared to the decadal mean is observed in 48 % of the monitored wells. Almost 42% of the monitored wells are showing a fall in the range of 0-2m.

4.07 Delhi

Depth to Water Level – January 2014



The depth to water level recorded in the state of Delhi during January 2014 ranged from 0.70 m bgl (NW District) to 72.96 m bgl (SW District). It is observed that 8% of the wells have shown water level in the range of 0-2 m bgl. About 20 % of the wells analysed have shown water level in the range of 2-5 m bgl, about 27% of the wells have shown water level in the range of 5-10 mbgl and 24 % wells shows 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 10% & 11% of the wells analysed respectively.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 64 % of the wells and fall in about 36% of the wells analysed. Out of 64% wells showing rise, 57% shows rise in 0-2 m range. Almost all the 36% wells have shown fall in 0-2m range. Maximum rise in water level has been recorded as 4.48 m and maximum fall in water level has been recorded as 2.10 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of Pre Monsoon 2013 when compared to water level of January 2014 in the state indicates that about 83 % of the wells analysed have recorded a rise in water level, out of which 66 % of analysed wells have recorded a rise in the range of 0 to 2 m, 14 % of analysed wells have shown rise in the range of 2 to 4 m and 3% of the wells have shown rise more than 4 m. About 17 % of the wells have shown fall in water level, out of which 16 % fall in the range of 0 to 2m.

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

The fluctuation analysis of water level during January 2014, when compared with the Decadal mean (January 2004-2013) indicate that in general there is rise as well as fall in water level. About 48 % of analysed wells have shown rise in water level. Out of this 42 % of the wells have shown rise in the range of 0-2 m, 6 % of analysed wells have shown rise in the range of 2 to 4 m. About 52% wells have shown a decline in water level. Out of this 30 % of the wells have shown decline in water level in the range of 0-2 m, 15% of the wells have shown decline in water level in the range of 2-4 m, 8 % of the wells have shown decline in water level in the range of more than 4 m.

4.08 Goa

Depth to Water Level - January 2014

The depth to water level recorded in the state of Goa during January 2014 ranges from 0.67 m bgl to 18.45 m bgl in North Goa. It is observed that out of 46 monitored wells, 11 % wells show less than 2 m bgl water level, 48% wells show 2 to 5 m bgl water level, 30% wells show 5 to 10 m bgl water level and 11 % wells show 10 to 20 m bgl water level.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 51% of the wells and fall in about 49% of the wells. 49% wells have shown a rise in 0-2 m range and 44% of the wells have shown fall in 0-2 m range. Maximum rise in water level has been recorded as 2.21 m and maximum fall in water level has been recorded as 2.77 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of January 2014 when compared to water level of Pre Monsoon 2013 in the state of Goa indicates that in general the entire state have recorded a rise in water level. About 86 % of the wells analysed show rise in water level. Out of which 67 % wells have recorded a rise in the range of 0 to 2 m, 17% of analysed wells have shown rise in the range of 2 to 4 m and 2 % of the wells have shown rise more than 4 m. 14 % wells shows fall in water level, out of which 12 % shows fall in the range of 0-2 m.

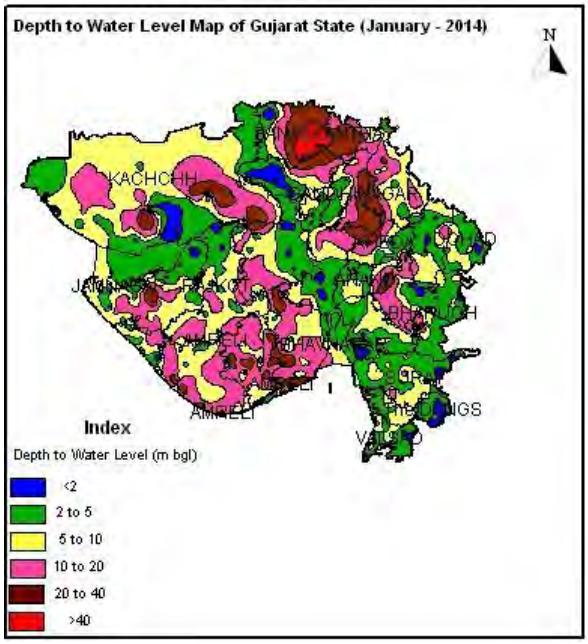
Fluctuation - January 2014 to January Decadal mean (2004-13)

The fluctuation of water level during January 2014 when compared with the Decadal mean (January 2004-2013) indicates that about 62% of analysed wells have shown a rise in water level. Out of this 58 % of the wells have shown rise in the range of 0 to 2 m, 4 % wells have shown a rise in water level in the range of 2-4 m. About 38 % wells have shown a decline in water level and 33% shows fall in the range of 0-2 m.

4.09 Gujarat

Depth to Water Level - January 2014

The depth to water level recorded in the state of Gujarat during January 2014 ranges up to 61.20 m bgl in Banaskantha district. The depth to water level for 10 % of the wells analysed have shown water level in the range of 0-2 m bgl, 33 % of the wells have shown water level in the range of 2-5 m bgl. About 29 % of the wells analysed have shown water level in the range of 5-10 m bgl and 21 % 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 8% of the wells analysed.



Water Level Fluctuation - January 2014 to January 2013

Water level data of January 2014 has been compared to January 2013 and the analysis shows that in general there is rise in water level, where 78% of the wells show rise in water level and 21% of the wells show fall in water level. 1% of wells have recorded no change in water levels. 42% wells have shown a rise in 0-2 m range, 19 % show rise in water level in the range of 2-4 m and 17 % shows water level in the range of more than 4 m. About 15% of the wells have shown fall in 0-2m range. Maximum rise in water level has been recorded as 40.88 m and maximum fall in water level has been recorded as 29.32 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

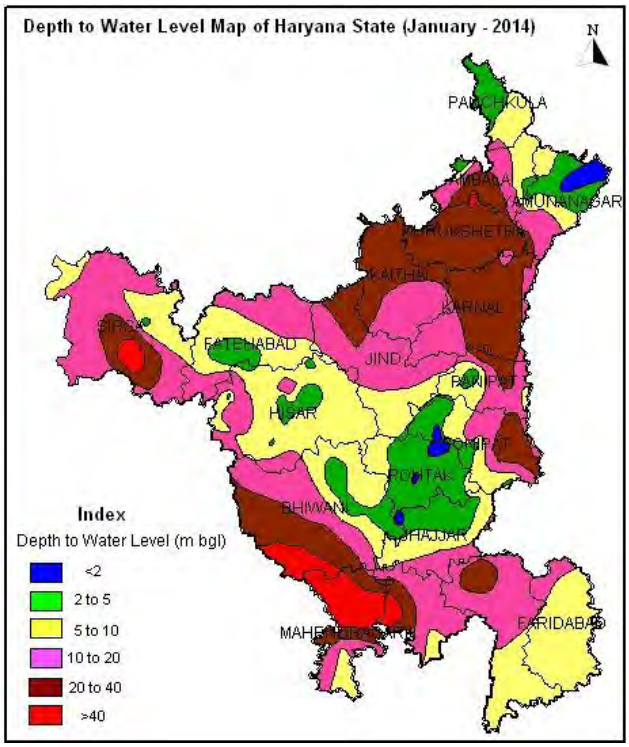
Water level data of January 2014 when compared to Pre Monsoon 2013 shows that in general there is rise in water level in the entire state. About 81 % of the wells analysed shows rise in the water level. Out of this, 23% wells have shown a rise in the range of 0-2 m. About 25% of the wells have shown rise in 2-4 m range and about 33 % wells have shown rise in water in more than 4 m. About 17 % of the total wells have shown a fall in water level, out of which 10% wells have shown a fall in 0-2 m range. 3% of the wells show no change in water levels.

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

The water level data of January 2014 has been compared with decadal mean (January 2004 to 2013) to assess the rise/fall in water level of this year with respect to long term average of the corresponding period. 67% of monitoring wells shows rise in water level and 33 % wells are showing fall in water level. About 41% of wells show rise in 0-2 m range, 15% wells shows rise in the 2-4 m range and 10% wells are showing rise in the range of more than 4 m. 19 % of the wells have shown fall in water level in the range of 0-2 m.

4.10 Haryana

Depth to Water Level - January 2014



During January 2014, the depth to water level in the state of Haryana varies from 1.20 m bgl in Ambala district to 70.00 m bgl in Sirsa district.

About 6% of wells monitored have reported water level up to 2 m bgl. About 22% of the wells monitored falls within the range of 2-5 m bgl. Another 22 % 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 31% of the monitored wells. Deep water level i.e. 20-40 m bgl is observed in 16% of the monitored wells. Very deep water levels more than 40 m bgl are also observed in almost 4% of the monitored wells.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 48% of the wells and fall in about 50% of the wells and 2% wells show no change. 42% wells have shown a rise in 0-2 m range and about 41% of the wells have shown fall in 0-2m range. Maximum rise in water level has been recorded as 2.67 m and maximum fall in water level has been recorded as 3.60 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

The water level data of January 2014 when compared with Pre Monsoon 2013 indicates that there is rise in water level in about 67 % of the wells monitored. In most of the areas rise is in the range of 0-2 m. About 57 % of the wells monitored show rise in the range between 0-2 m. The water level rise in the range between 2-4 m and more than 4 m have been observed in about 9 % wells & 1 % wells respectively. Decline in water level has been recorded in 33 % of the wells. Fall in range of 0-2m has been recorded in 27 % wells.

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

The fluctuation of water level during January 2014 when compared with the average water level of past decade (Decadal mean January 2004-2013) indicates in general there is decline as well as rise in water level in the entire state. About 47% of monitored wells have shown rise in water level. The rise of 0-2 m has been observed in about 40 % of the wells analysed. About 7% of wells reported rise in water level more than 2 m. About 53% of wells analysed have shown fall in water level. Fall in the range of 0-2 m has been recorded in 34% of monitored wells.

4.11 Himachal Pradesh

Depth to Water Level - January 2014

The depth to water level in the state of Himachal Pradesh during January 2014 varies from 0.45 m bgl in Mandi district to 29.62 m bgl in Sirmaur district. About 57 % of the wells show water level of less than 5 m bgl. Out of these almost 17 % of the wells are showing water level in the range of 0-2 m bgl, another 40 % of the wells show water level in the range of 2-5 m bgl, About 19% of the wells are showing water level in the range of 5-10 m bgl while 18% 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 at 7 % wells.

Water Level Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 72% of the wells and fall in about 28% of the wells. 60% wells have shown a rise in 0-2 m range, about 9% of the wells have shown rise in the range of 2-4 m. Out of 28 % wells showing fall, 26% of the wells have shown fall in 0-2m range. Maximum rise in water level has been recorded as 5.98 m and maximum fall in water level has been recorded as 6.80 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level data of January 2014 compared to Pre Monsoon 2013 shows that there is rise in water level in entire state. About 89% of the wells analysed shows rise in the water level covering the whole state. Out of this 58 % wells have shown a rise in 0-2 m range, about 26 % of the wells have shown rise in 2- 4 m range and about 6 % wells has shown rise in water level of more than 4 m. About 9 % of the total wells have shown a fall in water level and all the wells shows fall in the range of 0-2 m. 1% wells shows no change in water level.

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

The water level data of January 2014 has been compared with decadal mean (January 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 76 % of monitoring wells show rise in water level and rest 24% wells show fall in water level. Out of 76 % wells in the rise category, about 62 % of the monitored wells show rise in the 0-2 m range and 7% wells showing rise in the 2- 4 m range and remaining 7 % wells are showing rise in water level more than 4 m. 24 % of the wells have shown decline in water level, out of which 23% falls in the range of 0-2 m.

4.12 Jammu & Kashmir

Depth to Water Level - January 2014

It is observed that out of the total 206 wells monitored, about 27 % wells have less than 2 m bgl water level, mainly in outer plain areas. About 48% of the wells analysed have shown water level

in the range of 2-5 m bgl. About 15% 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 4% wells have more than 20 m bgl water level. The depth to water level recorded in the state ranges from ground level in Kathua district to 32.14 m bgl in Jammu district. All the areas of valley in Udhampur and Rajouri districts shows water level between 0-2 and 2-5 m bgl.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 69% of the wells, fall in about 29% of the wells and 1% show no change. 56% wells have shown a rise in 0-2 m range, about 10% of the wells have shown rise in the range of 2-4 m. 28% of the wells have shown fall in 0-2 m range. Maximum rise in water level has been recorded as 11.82 m and maximum fall in water level has been recorded as 6.51 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water levels of January 2014 when compared with water level of Pre Monsoon 2013 in the state indicates that 85% of the wells analysed have recorded a rise in water level, out of which 62% of analysed wells have recorded a rise in the range of 0 to 2 m, 13% of analysed wells have shown rise in the range of 2 to 4 m and about 10% of the wells have shown rise more than 4 m. 14% of the wells have shown fall in water levels mostly in 0-2 m range.

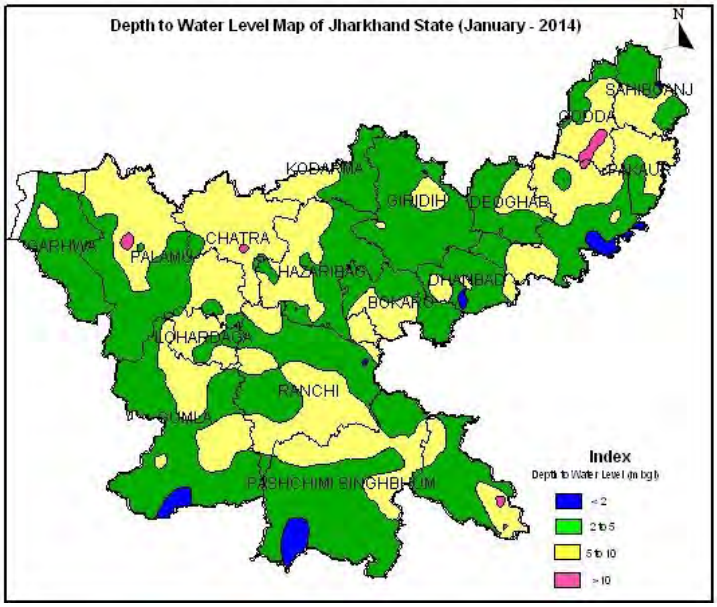
Fluctuation - January 2014 to January Decadal mean (2004-13)

The fluctuation analysis of water level of January 2014 with the decadal mean (January 2004-2013) indicates that about 71% of analysed wells have shown a rise in water level. Out of this 62% of the wells have shown rise in the range of 0 to 2 m, 7% wells have shown rise in the range of 2 to 4 m and 2% in the range of more than 4 m bgl. About 28% wells have shown a decline in water level, out of which al,ost all the wells have shown fall in the range of 0 to 2 m.

4.13 Jharkhand

Depth to Water Level - January 2014

Out of the total 231 wells analysed, about 6% of wells have shown depth to water level in the range of 0 to 2 m. Water level in about 49 % of the wells was found between 2 to 5 m bgl. About 41% 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 4 % wells. The water level ranges from 0.97 m bgl in Ranchi district to 13 m bgl in Palamau District.



Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2013 was compared to January 2012 and the analysis shows that there is rise in water level in about 72% of the wells and fall in about 27% of the wells. Out of 72% wells showing rise, 52% wells have shown a rise in 0-2 m range, about 15% of the wells have shown rise in the range of 2-4m. 22% of the wells have shown fall in 0-2 m range and 4% wells show fall in the range of 2-4m. Maximum rise in water level has been recorded as 4.98 m and maximum fall in water level has been recorded as 4.78 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

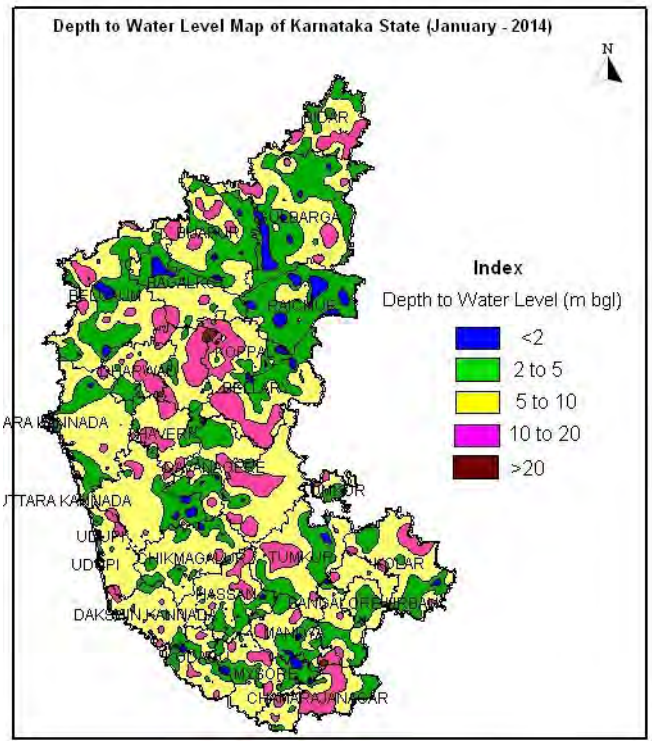
In the state of Jharkhand there is an overall rise in water level in January 2014 as compared to Pre Monsoon 2013. About 90 % of the wells analysed shows rise in the water level. Out of this only, 21% wells have shown a rise in 0-2 m range. About 44% of the wells have shown rise in 2-4 m range. 25% of the wells have shown rise in water level more than 4 m. Only 101% of the wells analysed show decline in the water level, out of which 6% shows fall in the range of 0-2 m.

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

The water level data of January 2014 has been compared with decadal mean (January 2004-2013 to assess the rise/fall in water level during current year with respect to long term average of the corresponding period. About 69% of analysed wells have shown a rise in water level. Out of this 56% of the wells have shown rise in the range of 0 to 2 m, 12% wells have shown rise in the range of 2 to 4 m and 1% in the range of more than 4 m bgl. About 31% wells have shown a fall in water level, out of which 25% wells have shown fall in the range of 0 to 2 m and 5% wells have shown rise in the range of 2 to 4 m.

4.14 Karnataka

Depth to Water Level – January 2014



The analysis of 1191 wells shows that 12% wells have less than 2 m bgl water level, 34% wells show 2 to 5 m bgl water level and 37% wells show 5 to 10 m bgl water level. Moderately deep water level of 10 to 20 m bgl is seen in 16% wells and more than 20 m bgl is observed in almost 1% of wells.

The depth to water level recorded in the state during January 2014 ranges from 0.10 m bgl to 26.95 m bgl in Mandya District.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 65% of the wells and fall in about 29% of the wells. About 6% of wells have shown no change in water level. 49% wells have shown a rise in 0-2 m range. 10% of the wells have shown a rise in 0-2 m range. 24% wells have shown a fall in the range of 0 - 2 m. Maximum rise in water level has been recorded as 33.32 m and maximum fall in water level has been recorded as 9.11 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

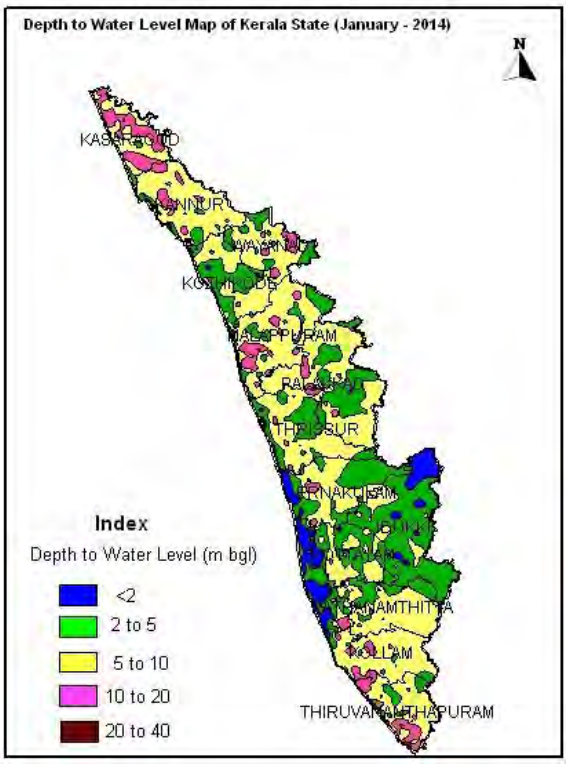
Water level of January 2014 when compared to that of Pre Monsoon 2013 have shown that about 80 % of the analysed wells have recorded a rise in water level and 13% wells have recorded a fall in water level. About 7% of wells have shown no change. The rise of water level in the range 0-2 m is observed in 35% of the analysed wells, rise in water level in the range of 2-4 m is recorded in 25 % wells and more than 4 m is recorded at another 20% of wells. The fall in water level in the range of 0-2 m is observed in 10% of analysed wells.

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

The fluctuation of water level during January 2014 when compared with the average water levels of past decade (Decadal mean January 2004 -2013) indicates that about 56% of the wells analysed shows a rise in water level and the remaining 44% wells shows a fall. A rise of 0-2 m is recorded in 45% 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 31% of analysed wells. Fall of 2 to 4 m and more than 4 m is seen in 7% and 6% of the analysed wells respectively.

4.15 Kerala

Depth to Water Level - January 2014



During January 2014, it is observed that in the state of Kerala, 11% of the wells have less than 2 m bgl water level, mainly in coastal areas. About 32% of the wells analysed have shown water level in the range of 2-5 m bgl and 43% wells have shown water level in the range of 5-10 m bgl, 13% wells have shown 10 to 20 m bgl water level and 1% wells have shown more than 20 m bgl water level.

The depth to water level recorded in the state of Kerala during January 2014 ranges from 0.20 (Alappuza district) to 56.00 m bgl (Thiruvanantha District) .

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 64% of the wells and fall in about 34% of the wells. 2% of the wells shows no change. 59% wells have shown a rise in 0-2 m range, 4 % in the range of 2-4 m. 30% of the wells have shown fall in 0-2 m range and 2% of the wells show fall in the range of 2-4m. Maximum rise in water level has been recorded as 8.19 m and maximum fall in water level has been recorded as 11.39 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of January 2014 when compared to water level of Pre Monsoon 2013 in the state indicates that almost the entire state, about 82 % of the wells analysed, have recorded a rise in water level, out of which 63% of analysed wells have recorded a rise in the range of 0 to 2 m, 14% of analysed wells have shown rise in the range of 2 to 4 m and 4% of the wells have shown rise more than 4 m. About 18 % of the wells have shown fall in water level, out of which 16% shows fall in 0-2 m.

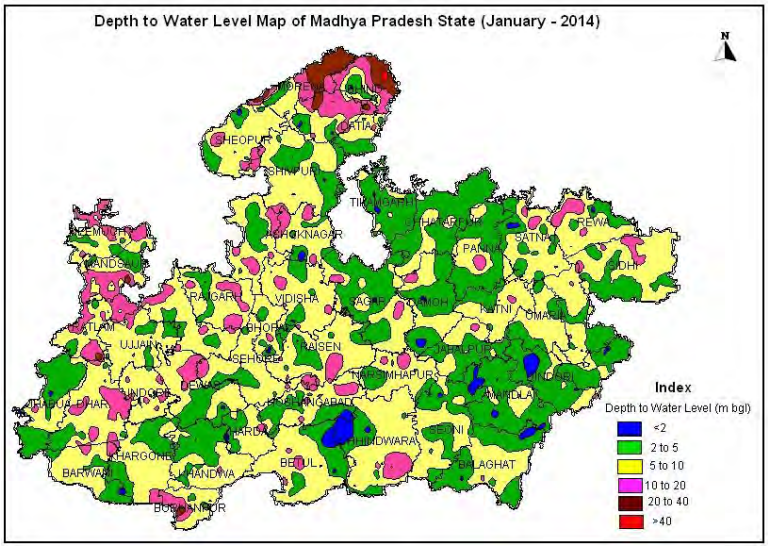
Fluctuation - January 2014 to January Decadal mean (2004-13)

The fluctuation of water level during January 2014 when compared with the decadal mean (January 2004 -2013) indicates that about 57% of analysed wells have shown a fall in water level, of which 53% of the wells fall in the range of 0 to 2 m. About 43% wells have shown a rise in water level out of which 42 % wells shows rise in the range of 0-2 m.

4.16 Madhya Pradesh

Depth to Water Level - January 2014

The depth to water level during January 2014 in Madhya Pradesh varies from 0.20 to 48.79 m bgl. In general the depth to water level ranges up to 10 m bgl in most parts of Madhya Pradesh. About 7 % monitoring wells are showing water level in 0-2 m bgl range. About 39 % 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 39% wells and about 15% wells show water level ranging more than 10 m bgl located mostly in northern most parts of the state in the districts of Bhind.



Water Level Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 77% of the wells and fall in about 22% of the wells.1% well shows no change. 48% wells have shown a rise in 0-2 m range, 19% of the wells have shown rise in 2-4 m range and 10 % shows rise in more than 4 m range. About 17% wells show fall in the range of 0-2 m. Maximum rise in water level has been recorded as 18.17 m and maximum fall in water level has been recorded as 10.75 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water levels of January 2014 when compared to water level of Pre Monsoon 2013 in the state, indicates that the entire state shows rise in water level. About 91% of the wells analysed have recorded a rise in water level, out of which 27% of analysed wells have recorded a rise in the range of 0 to 2 m, 28% of analysed wells have shown rise in the range of 2 to 4 m and 36% of the wells have shown rise of more than 4 m. Only 7% wells shows fall in water level. 2% wells shows no change.

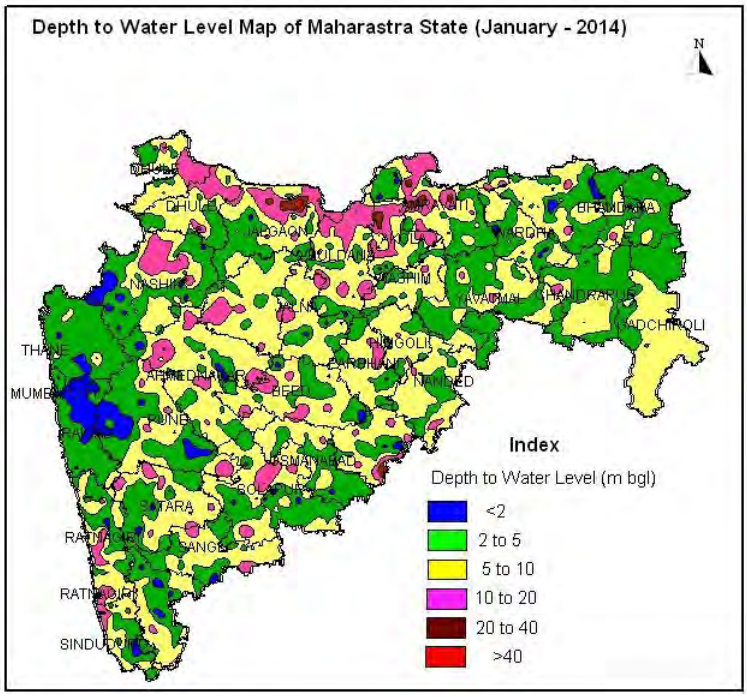
Fluctuation - January 2014 to January Decadal mean (2004-13)

The fluctuation of water level during January 2014 when compared with the Decadal mean (January 2004 -2013) indicates that about 79% of analysed wells have shown a rise in water level, of which 45% of the wells fall in the range of 0 to 2 m. About 21% wells have shown a rise in water level in the range of 2-4 m and 14% wells have shown a rise in water level in the range of more than 4 m. About 21% wells have shown a decline in water level, out of which 16 % falls in the range of 0-2 m.

4.17 Maharashtra

Depth to Water Level - January 2014

During January 2014, in the state of Maharashtra, water level less than 2 m bgl are observed in about 10% wells. Depth to water level of 2 to 5 m bgl is observed in 42% of the wells. About 36% of the wells analysed shows water level in the range of 5-10 m bgl. 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. The depth to water level during January 2014 in the state varies from 0.05 m bgl in Nashik district to 54.47 m bgl in Jalgaon district.



Water Level Fluctuation-January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 73% of the wells and fall in about 26% of the wells. 1% wells show no change. 48% wells have shown a rise in 0-2 m range, about 19% of the wells have shown rise in the range of 2-4 m and 10% wells show rise of more than 4 m. 17% of the wells have shown fall in 0-2 m range. Maximum rise in water level has been recorded as 18.17 m and maximum fall in water level has been recorded as 10.75 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of January 2014 when compared to water level of Pre Monsoon 2013 in the state indicates that about 87% 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, 32% of analysed wells have shown rise in the range of 2 to 4 m and 29% of the wells have shown rise of more than 4 m. Rest 13% of the wells have shown fall in water level, mostly in 0-2 m range.

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

The fluctuations of water level during January 2014 when compared with the Decadal mean (January 2004-2013) indicates that about 71% of analysed wells have shown a rise in water level, 51% of the wells show rise in the range of 0 to 2 m. About 29% wells have shown a decline in water level, 22% of which fall in the range of 0-2 m.

4.18 Meghalaya

Depth to Water Level – January 2014

In general depth to water level scenario in the state depicted a water level in the range of 0 to 5 m bgl. About 37% monitoring stations recorded water level within 2 m bgl and another 63 % wells recorded water level between 2-5 m bgl.

Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that in general there is both rise and fall in water level in the state. About 60 % of the wells analysed are showing rise in the water level and 40% wells are showing fall in water level. Out of 60% wells , 40% wells have shown a rise in 0-2 m range and 20% shows rise in 2-4 m range. All the wells have shown fall in 0-2 m range.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of Pre Monsoon 2013 when compared to that of January 2014 shows that there is dominantly rise in water level in the state. About 67 % of the wells analysed show a rise in water level and another 33% shows decline in water level. Both rise and fall is in the 0-2 m range.

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

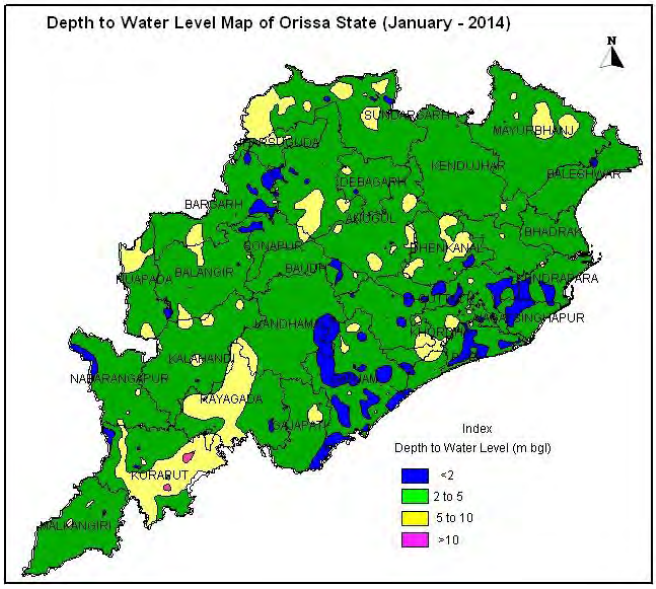
The water level data of January 2014 has been compared with decadal mean (January 2004-2013) and it is observed that 60 % wells show a rise in water level where as 40% wells show a fall in water level. Both rise and fall is in the 0-2 m range.

4.19 Odisha

Depth to Water Level - January 2014

During January 2014, it is observed that in 20% of the wells, water level ranges in 0-2 m bgl. About 64% of the wells analysed have shown water level in the range of 2-5 m bgl. A number of wells fall in the range of 5-10 m bgl as observed at 15% of the wells analysed. Less than 1% wells analysed have water level in the range of 10-20 m bgl.

The depth to water level recorded in the state of Odisha during January 2013 ranges upto 12.10 m bgl in Koraput district.



Water Level Fluctuation-January 2014 to January 2013

Water level data of January 2014 was compared with that of January 2013. The analysis shows that there is rise in water level in about 74% of the wells and fall in about 25% of the wells. Out of 74 % wells showing rise, 60% wells have shown a rise in 0-2 m range and 11 % shows rise in the range of 2-4 m. 24% of the wells have shown fall in 0-2 m range out of 25 %. Maximum rise in water level has been recorded as 10.77 m and maximum fall in water level has been recorded as 6.67 m in the State.

Water Level Fluctuation (January 2013 to Premonsoon 2013)

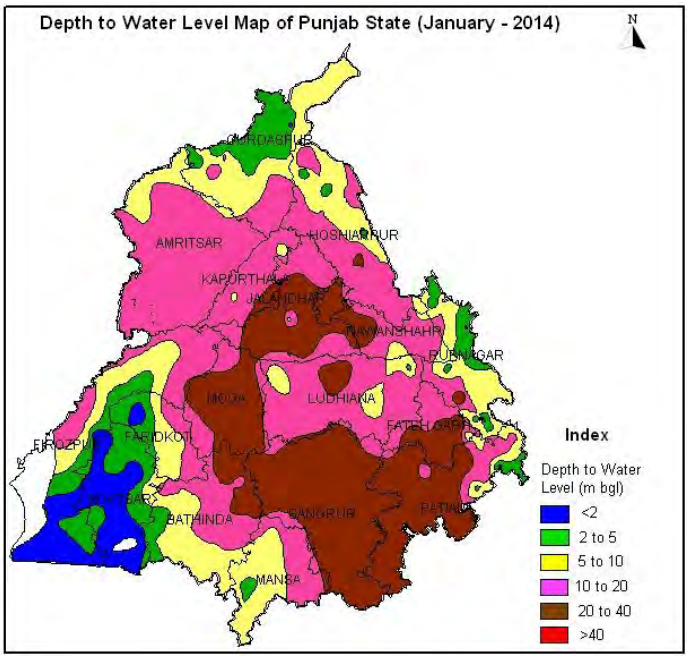
In Odisha water level of January 2014 when compared to water level of Pre Monsoon 2013 in the state indicates that the entire state shows a rise in water level. About 92% of the wells analysed have recorded a rise in water level, out of which 49% of analysed wells have recorded a rise in the range of 0 to 2 m, 31% of analysed wells have shown rise in the range of 2 to 4 m and 12% of the wells have shown rise of more than 4 m. Rest 8 % wells shows fall in water level, mostly in the range of 0-2 m.

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

The fluctuation of water level during January 2014 when compared with the Decadal mean (January 2004-2013) indicates that about 76% of analysed wells have shown a rise in water level out of which 65% of the wells show rise in the range of 0 to 2 m, 10% in the range of 2-4 m and 2% in the range of more than 4 m. About 23% wells have shown a fall in water level, falling mostly in the range of 0-2 m (22% of the wells).

4.20 Punjab

Depth to Water Level - January 2014



During January 2014, in Punjab, it is observed that in 8% of the wells, water level ranges in 0-2 m depth range. About 16% of the wells analysed have shown water level in the range of 2-5 m bgl and a major percentage of wells i.e. 21% fall in the range of 5-10 mbgl. 34% of the wells show water levels in the range of of 10-20 m bgl. 22 % wells have shown water level in the range of 20-40 m bgl. The depth to water level recorded in the state during January 2014 ranges from ground level to 37.33 m bgl.

Water Level Fluctuation-January 2014 to January 2013

Water level data of January 2014 was compared with that of January 2013.The analysis shows that there is rise in water level in about 65% of the wells and fall in about 34% of the wells. 1% well shows no change. Out of 65% wells showing rise, about 58% wells have shown a rise in 0-2 m range and 3 % in 2-4 m range. About 30% of the wells show fall in 0-2 m range. Maximum rise in water level has been recorded as 8.23 m and maximum fall in water level has been recorded as 4.70 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

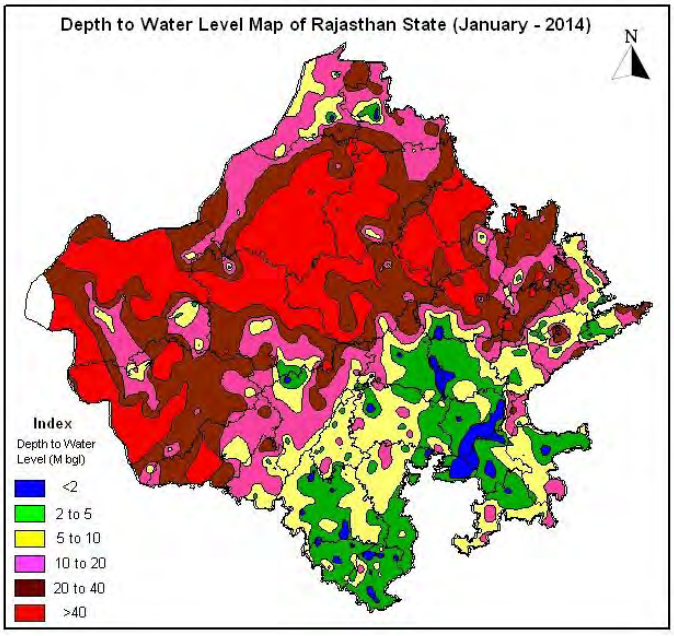
The water level of January 2014 when compared with Premonsoon 2013 indicates that there is rise in water level in almost most part of the state. About 74% of the wells analysed shows a rise in water level. The water level rise between 0-2 m has been observed in 64 % of the wells analysed and 5% of wells showing rise in the range of 2-4 m. 5 % of the wells shows rise of more than 4 m. Decline in water levels is observed in 25% of the wells analysed. The fall of 0-2 m has been observed in 24% of the wells monitored.

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

The fluctuation of water level during January 2014 when compared with the average water level of past decade (Decadal mean January 2004-2013) indicates decline as well as rise of water level in all the districts of Punjab State. About 52% of wells have shown decline, of which 36% wells show water level decline in the range of 0-2 m, 9% of wells reported decline between 2-4 m. Decline of more than 4 m has been observed in 6% of the wells analysed. Rise in water level is observed in 48% of the wells. Out of this, 43% of the wells analysed is showing rise in the range of 0-2 m and 5% of the wells showing rise of more than 2 m.

4.21 Rajasthan

Depth to Water Level - January 2014



During January 2014, it is observed that 7% wells have shown water level in the range of 0-2 m bgl, 17% 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 shown by 17% of the wells analysed and water level more than 40 m bgl is shown by 20% of the wells

analysed. Thus more than 50% of the wells show depth to water level in the range of 10 to more than 40 m bgl.

The depth to water level recorded in the state of Rajasthan during January 2014 ranges from 0.02 m bgl to 112.60 m bgl in Bikaner district.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared with that of January 2013. The analysis shows that there is rise in water level in about 50% of the wells and fall in about 46% of the wells. About 4% wells show no change in water level. 31% wells have shown a rise in 0-2 m range whereas 29% of the wells have shown fall in 0-2 m range. Maximum rise in water level has been recorded as 21.85 m and maximum fall in water level has been recorded as 60.90 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of January 2014 when compared to water level of Pre Monsoon 2013 in the state indicates that about 68% of the wells analysed have recorded a rise in water level, out of which 32% of analysed wells have recorded a rise in the range of 0 to 2 m, 16% of analysed wells have shown rise in the range of 2 to 4 m and 19% of the wells have shown rise more than 4 m. 25% of the wells have shown fall in water level, out of this, 16% have recorded fall in the range of 0 to 2 m. 7% wells show no change in water level.

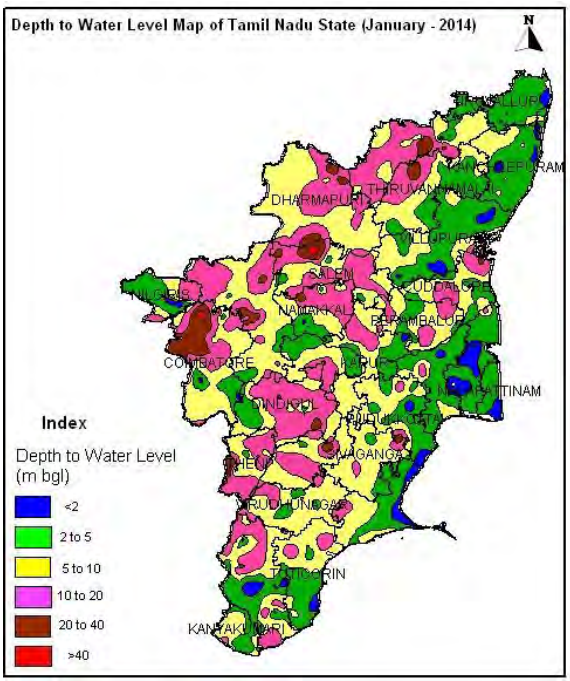
Fluctuation - January 2014 to January Decadal mean (2004-13)

The fluctuation of water level during January 2014 when compared with the Decadal mean (January 2004 -2013) indicates that there is rise in water level in about 57% of analysed wells. Out of this, 27% of the wells have shown rise in the range of 0-2 m, 15% of analysed wells have shown rise in the range of 2 - 4 m and another 15% of the wells have shown rise of more than 4 m. About 40 % of the wells have shown a fall in water level. Out of this 18% of the wells have shown fall in the range of 0-2 m while 7% 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. 3% of wells show no change in water level.

4.22 Tamil Nadu

Depth to Water Level - January 2014

The depth to water level during January 2014 varies from ground level to 51.94 m bgl. It is observed that 12 % wells have shown water level in the range of 0-2 m bgl, 30 % of the wells have shown water level in the range of 2-5 m bgl. About 33% of the wells analysed have shown water level in the range of 5-10 m bgl, 20% 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 5% of the wells analysed and water level more than 40 m bgl is shown by less than 1% of the wells analysed.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared with that of January 2013. The analysis shows that there is rise in water level in about 36% of the wells and fall in about 63% of the wells. 1% wells show no change in water level. Out of the wells showing rise, 25% wells have shown a rise in 0-2 m range, 6 % shows rise in 2-4 m range and another 6% shows more than 4 m range. 37% of the wells have shown fall in 0-2 m range, 15 % shows fall in 2-4 m range and 11% shows decline more than 4 m range. Maximum rise in water level has been recorded as 23.21 m and maximum fall in water level has been recorded as 26.40 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water level of January 2014 when compared to water level of Pre Monsoon 2013 in the state indicated that there is a rise in water level in the entire state. About 76% of the wells analysed have recorded a rise in water level, out of which 40% of analysed wells have recorded a rise in the range of 0 to 2 m, 23% of analysed wells have shown rise in the range of 2 to 4 m and 13% of the wells have shown rise of more than 4 m. About 22% of the wells have shown fall in water level, out of this 16% of wells have recorded fall in the range of 0 to 2 m and 6% have shown fall in the range of more than 2 m. 2% wells show no change in water level.

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

The fluctuation of water level during January 2014 when compared with the Decadal mean (January 2004 -2013) indicates that there is in general fall in water level in the entire state. About 81% 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, 20% of analysed wells have shown fall in the range of 2 - 4 m and 24% of the wells have shown fall of more than 4 m. About 19% of the wells have shown a rise in water level. Out of which 15% of the wells have shown rise in the range of 0-2 m.

4.23 Tripura

Depth to Water Level – January 2014

In general depth to water level scenario in the state depicted a water level in the range of 2 to 10 m bgl at more than 80 % of the wells monitored. Around 17% monitoring stations recorded water level within 2 m bgl and around 62 % wells recorded water level between 2-5 m bgl. About 21 % wells recorded water level between 5-10 m bgl.

Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that in general there is rise in water level in almost the entire state. About 74 % of the wells analysed are showing rise in the water level and 22% wells are showing fall in water level. 4 % wells show

no change in water level. Out of 74% wells showing rise, 70% wells have shown a rise in 0-2 m range. All the 22% wells in the fall category is in 0-2 m range.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

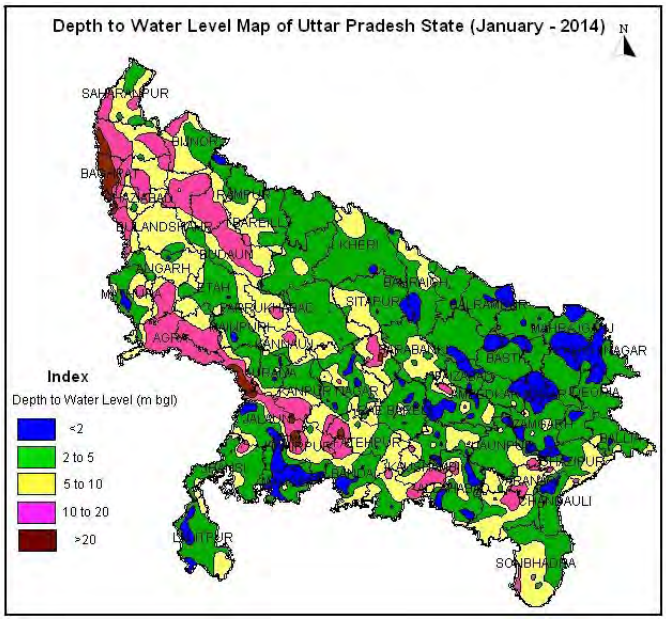
Water level of Pre Monsoon 2013 when compared to that of January 2014 shows that there is dominantly rise in water level in the state. About 96 % of the wells analysed show a rise in water level and only 4% wells depicted a fall in water level. Both rise and fall is in the range of 0-2 m.

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

The water level data of January 2014 has been compared with decadal mean (January 2004-2013) and it is observed that out of 28 wells analyzed 64 % show a rise in water level where as 36% show a fall in water level. 47% wells show fall in the range of 0-2 m and about 45% wells show rise in the range of 0-2 m. Both rise and fall is in the range of 0-2 m.

4.24 Uttar Pradesh

Depth to Water Level - January - 2014



In Uttar Pradesh shallow water level ranging between 0-2 m bgl was observed at 19 % of the wells monitored mostly located in eastern UP. Shallow water level ranging between 2-5 m bgl was observed at 41% of wells. The depth to water level between 5-10 meters has been observed in 25 % wells. Depth to water level ranging between 10-20 meters has been observed 13% wells. Water levels of more than 20 m bgl have been observed in only 3% wells. The depth to water level in the state ranges upto 37.10 m bgl in Etawah district.

Water Level Fluctuation - January 2014 to January 2013

Water level data of January 2014 was compared with that of January 2013. The analysis shows that there is a rise in water level in about 77% of the wells and fall in about 22% of the wells. Less than 1% wells show no change in water level. 61% wells have shown a rise in 0-2 m range, about 12% of the wells have shown rise in the range of 2-4 m and 5% shows rise more than 4 m. 19% of the wells have shown fall in 0-2m range. Maximum rise in water level has been recorded as 10.39 m and maximum fall in water level has been recorded as 15.10 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

Water levels of January 2014 when compared to water level of Pre Monsoon 2013 in the state indicated that the entire state shows a rise in water level. About 95% of the wells analysed have

recorded a rise in water level, out of which 54% of analysed wells have recorded a rise in the range of 0 to 2 m, 30% of analysed wells have shown rise in the range of 2 to 4 m and 10% wells have shown rise of more than 4 m. Only 5% of the wells have shown fall in water level, out of which 4% shows fall in 0-2 m.

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

The fluctuation of water level during January 2014, when compared with the Decadal mean (January 2004-2013), indicates that there is in general rise in water level in the state. About 70% of analysed wells have shown rise in water level. Out of this 54% of the wells have shown rise in the range of 0-2 m, 12% of analysed wells have shown rise in the range of 2 - 4 m and 4% of the wells have shown rise more than 4 m. About 30% of the wells have shown a fall in water level. Out of this 26% of the wells have shown fall in the range of 0-2 m while 4% of the wells have shown fall in the range of more than 2 m.

4.25 Uttarakhand

Depth to Water Level - January 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 bgl is observed in 4% of the wells analysed, 13 % of the wells shows water level in the range of 2-5 m gbl, 48% in the range of 5-10 m bgl, 31% in the range of 10-20 m bgl and 4 % in the range more than 20 m bgl. In general depth to water in January 2014 varies from 1.91 m bgl to 20.30 m bgl in Dehradun district.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in 65% of the wells and fall in 35% of the wells. 53% wells have shown a rise in 0-2 m range and 12% of the wells show rise in 2-4 m range. 30 % wells shows fall in water level in the range of 0-2 m. Maximum rise in water level has been recorded as 3.32 m and maximum fall in water level has been recorded as 4.85 m in the State.

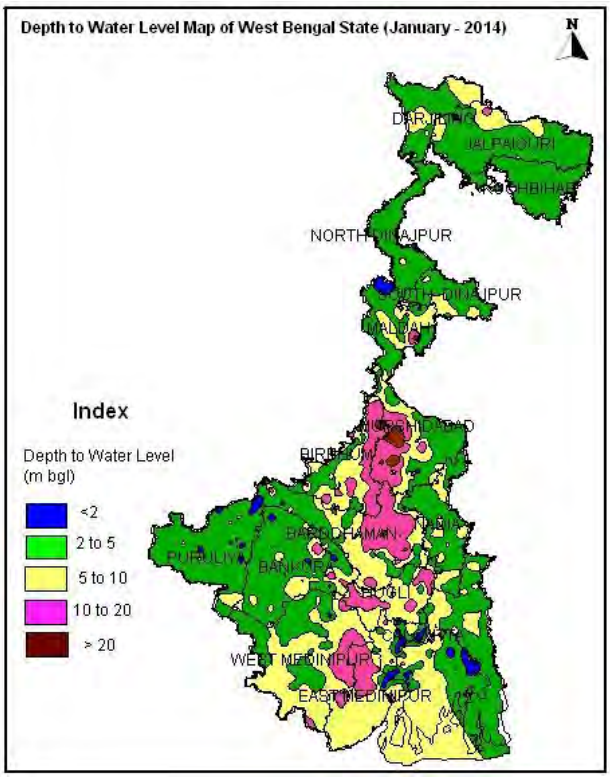
Water Level Fluctuation (January 2014 to Premonsoon 2013)

The comparison of January 2014 water level with Pre Monsoon 2013 reveals that there is rise in water level in most parts of the state. 79% of the well analysed have shown rise in water level. The rise in water level for 0-2 m has been observed for 16 % of wells whereas the rise in water level for 2-4 m is observed in 37% wells and rise in water levels of more than 4 m is observed in 26 % wells. 21% wells show fall in water level.

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

The comparison of January 2014 water level with decadal mean of (January 2004 -2013) reveals that about 64% of the analysed wells have shown rise in water level. Out of this, the rise in water level in the range of 0-2 m has been observed at 50% of wells whereas the rise in water level in 2-4 m range is observed at 14% wells. About 36% of the analysed wells have shown decline in water level and all the wells fall in the range of 0-2 m.

4.26 West Bengal



Depth to Water Level – January 2014

During January, 2014, depth to water level varies in the range of 0-2 m bgl at 9 % of wells analysed, 2-5 m bgl at 48 % of wells analysed, 5-10 m bgl at 28% 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 in the range of 0.11 to 26.93 m bgl.

Water Level Fluctuation – January 2014 to January 2013

Water level data of January 2014 was compared to January 2013 and the analysis shows that there is rise in water level in about 71% of the wells and fall in about 28% of the wells. 56% wells have shown a rise in 0-2 m range, about 11% of the wells have shown rise in the range of 2-4 m, and 4% wells falls in the range of more than 4 m. 23% of the wells have shown fall in 0-2 m range. Maximum rise in water level has been recorded as 10.82 m and maximum fall in water level has been recorded as 20.75 m in the State.

Water Level Fluctuation (January 2014 to Premonsoon 2013)

When compared the water level of January 2014, with Pre Monsoon 2013, the entire state shows rise in water level. About 90% of the observation wells are showing rise in water level. Rise of water level in the range of 0-2 m is observed in 40 % of the observation wells, rise of water level in the range of 2-4m is observed in 31% wells and rise in the range of more than 4 m is observed in about 19% of the wells monitored. Fall of water level is recorded in about only 9 % of the monitored wells in the state, out of which 7% lies in the range of 0-2 m.

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

When compared the decadal mean water level (January 2004 to 2013) with water level of January 2014, there is both rise and fall of water level in the state. About 62% of observation

wells are showing a rise in water level. Out of this, 52 % of the wells are showing a rise up to 2 m, 8% of the monitored wells show rise between 2 to 4 meters and 2% of the monitored wells are showing a rise in water level of more than 4 m. Fall of water level as compared to the decadal mean is observed in 38% of the monitored wells. Out of this, 29 % of the wells are showing a fall up to 2 m, 6% of the monitored wells show fall between 2 to 4 meters and 3% of the monitored wells are showing a fall in water level of more than 4 m.

Annexure-I

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

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (mbgl)		Number & Percentage of Wells Showing Depth to Water Level (metre below ground level) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
1	Andhra Pradesh	1311	0.00	33.77	355	27.08	552	42.11	306	23.34	91	6.94	7	0.53	0	0.00
2	Arunachal Pradesh	12	1.41	10.20	1	8.33	6	50.00	4	33.33	1	8.33	0	0.00	0	0.00
3	Assam	196	0.18	10.58	36	18.37	130	66.33	29	14.80	1	0.51	0	0.00	0	0.00
4	Bihar	380	0.46	12.72	47	12.37	247	65.00	82	21.58	4	1.05	0	0.00	0	0.00
5	Chandigarh	16	2.36	38.73	0	0.00	4	25.00	2	12.50	5	31.25	5	31.25	0	0.00
6	Chhattisgarh	816	0.94	49.40	38	4.66	385	47.18	315	38.60	63	7.72	14	1.72	1	0.12
7	Dadra & Nagar Haveli	6	1.75	7.66	1	16.67	2	33.33	3	50.00	0	0.00	0	0.00	0	0.00
8	Delhi	120	0.70	72.96	10	8.33	24	20.00	32	26.67	29	24.17	12	10.00	13	10.83
9	Goa	46	0.67	18.45	5	10.87	22	47.83	14	30.43	5	10.87	0	0.00	0	0.00
10	Gujarat	684	0.00	61.20	68	9.94	224	32.75	197	28.80	141	20.61	48	7.02	6	0.88
11	Haryana	101	1.20	70.00	6	5.94	22	21.78	22	21.78	31	30.69	16	15.84	4	3.96
12	Himachal Pradesh	90	0.45	29.62	15	16.67	36	40.00	17	18.89	16	17.78	6	6.67	0	0.00
13	Jammu & Kashmir	206	0.00	32.14	55	26.70	98	47.57	31	15.05	13	6.31	9	4.37	0	0.00
14	Jharkhand	231	0.97	13.00	14	6.06	112	48.48	95	41.13	10	4.33	0	0.00	0	0.00

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (mbgl)		Number & Percentage of Wells Showing Depth to Water Level (metre below ground level) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
15	**Karnataka**	1191	0.10	26.95	147	12.34	410	34.42	438	36.78	191	16.04	5	0.42	0	0.00
16	**Kerala**	1180	0.20	56.00	133	11.27	382	32.37	506	42.88	151	12.80	13	1.10	1	0.08
17	**Madhya Pradesh**	1315	0.20	48.79	89	6.77	514	39.09	507	38.56	188	14.30	15	1.14	2	0.15
18	**Maharashtra**	1478	0.05	54.47	147	9.95	615	41.61	527	35.66	163	11.03	24	1.62	2	0.14
19	**Meghalaya**	11	0.53	3.93	4	36.36	7	63.64	0	0.00	0	0.00	0	0.00	0	0.00
20	**Nagaland**	15	1.47	20.95	1	6.67	9	60.00	2	13.33	2	13.33	1	6.67	0	0.00
21	**Odisha**	1199	0.17	12.70	245	20.43	773	64.47	177	14.76	4	0.33	0	0.00	0	0.00
22	**Pondicherry**	4	1.17	4.06	1	25.00	3	75.00	0	0.00	0	0.00	0	0.00	0	0.00
23	**Punjab**	251	0.00	37.33	20	7.97	40	15.94	52	20.72	85	33.86	54	21.51	0	0.00
24	**Rajasthan**	943	0.02	112.60	62	6.57	163	17.29	194	20.57	173	18.35	163	17.29	188	19.94
25	**Tamil Nadu**	628	0.00	51.94	77	12.26	187	29.78	207	32.96	126	20.06	29	4.62	2	0.32
26	**Tripura**	29	0.99	6.09	5	17.24	18	62.07	6	20.69	0	0.00	0	0.00	0	0.00
27	**Uttar Pradesh**	897	0.00	37.10	169	18.84	364	40.58	220	24.53	121	13.49	23	2.56	0	0.00
28	**Uttarakhand**	23	1.91	20.30	1	4.35	3	13.04	11	47.83	7	30.43	1	4.35	0	0.00
29	**West Bengal**	1012	0.11	26.93	88	8.70	487	48.12	281	27.77	139	13.74	17	1.68	0	0.00
	Total	**14391**	**0.00**	**112.60**	**1840**	**12.79**	**5839**	**40.57**	**4277**	**29.72**	**1760**	**12.23**	**462**	**3.21**	**219**	**1.52**

Annexure-II

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from January 2014 to January 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	Andhra Pradesh	846	0.01	28.75	0.01	11.50	336	39.72	98	11.6	83	9.81	225	26.60	36	4.26	19	2.25	517	61	280	33	49	6
2	Arunachal Pradesh	9	0.10	0.10			1	11.11	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	11	0	0	8	89
3	Assam	170	0.01	5.92	0.01	5.92	57	33.53	6	3.53	1	0.59	92	54.12	8	4.71	3	1.76	64	38	103	61	3	2
4	Bihar	173	0.01	5.27	0.05	3.44	124	71.68	24	13.87	2	1.16	20	11.56	3	1.73	0	0.00	150	87	23	13	0	0
5	Chandigarh	15	0.02	3.09	0.02	2.32	6	40.00	2	13.33	0	0.00	5	33.33	2	13.33	0	0.00	8	53	7	47	0	0
6	Chhattisgarh	583	0.01	6.73	0.01	9.77	272	46.66	41	7.03	8	1.37	225	38.59	24	4.12	6	1.03	321	55	255	44	7	1
7	Dadra & Nagar Haveli	6	0.11	1.37	1.81	1.81	5	83.33	0	0.00	0	0.00	1	16.67	0	0.00	0	0.00	5	83	1	17	0	0
8	Delhi	118	0.04	4.48	0.03	2.10	67	56.78	7	5.93	1	0.85	42	35.59	1	0.85	0	0.00	75	64	43	36	0	0
9	Goa	43	0.03	2.21	0.02	2.77	21	48.84	1	2.33	0	0.00	19	44.19	2	4.65	0	0.00	22	51	21	49	0	0
10	Gujarat	615	0.02	40.88	0.34	29.32	259	42.11	117	19.02	106	17.24	91	14.80	22	3.58	15	2.44	482	78	128	21	5	1
11	Haryana	66	0.03	2.67	0.05	3.60	28	42.42	4	6.06	0	0.00	27	40.91	6	9.09	0	0.00	32	48	33	50	1	2
12	Himachal Pradesh	88	0.01	5.98	0.00	6.80	53	60.23	8	9.09	2	2.27	23	26.14	1	1.14	1	1.14	63	72	25	28	0	0
13	Jammu & Kashmir	204	0.02	11.82	0.01	6.51	115	56.37	20	9.80	6	2.94	58	28.43	1	0.49	1	0.49	141	69	60	29	3	1
14	Jharkhand	105	0.02	4.98	0.02	4.78	55	52.38	16	15.24	5	4.76	23	21.90	4	3.81	1	0.95	76	72	28	27	1	1

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	%
15	Karnataka	1064	0.01	33.32	0.01	9.11	516	48.50	110	10.34	62	5.83	251	23.59	41	3.85	18	1.69	688	65	310	29	66	6
16	Kerala	685	0.01	8.19	0.01	11.39	405	59.12	26	3.80	8	1.17	204	29.78	17	2.48	12	1.75	439	64	233	34	13	2
17	Madhya Pradesh	1037	0.01	18.17	0.01	10.75	500	48.22	192	18.51	104	10.03	179	17.26	29	2.80	23	2.22	796	77	231	22	10	1
18	Maharashtra	1189	0.01	14.99	0.02	15.80	527	44.32	197	16.57	143	12.03	239	20.10	53	4.46	23	1.93	867	73	315	26	7	1
19	Meghalaya	10	0.04	3.92	0.16	1.01	4	40.00	2	20.00	0	0.00	4	40.00	0	0.00	0	0.00	6	60	4	40	0	0
20	Odisha	986	0.02	10.77	0.01	6.67	590	59.84	107	10.85	31	3.14	233	23.63	8	0.81	3	0.30	728	74	244	25	14	1
21	Pondicherry	4	0.25	0.47	0.41	0.41	3	75.00	0	0.00	0	0.00	1	25.00	0	0.00	0	0.00	3	75	1	25	0	0
22	Punjab	231	0.02	8.23	0.01	4.70	135	58.44	7	3.03	8	3.46	70	30.30	6	2.60	3	1.30	150	65	79	34	2	1
23	Rajasthan	815	0.02	21.85	0.01	60.90	249	30.55	72	8.83	83	10.18	236	28.96	59	7.24	79	9.69	404	50	374	46	37	5
24	Tamil Nadu	483	0.02	23.21	0.02	26.40	121	25.05	27	5.59	28	5.80	177	36.65	71	14.70	55	11.39	176	36	303	63	4	1
25	Tripura	23	0.06	3.20	0.12	1.08	16	69.57	1	4.35	0	0.00	5	21.74	0	0.00	0	0.00	17	74	5	22	1	4
26	Uttar Pradesh	853	0.01	10.39	0.01	15.10	521	61.08	99	11.61	38	4.45	165	19.34	22	2.58	4	0.47	658	77	191	22	4	0
27	Uttarakhand	17	0.16	3.32	0.18	4.85	9	52.94	2	11.76	0	0.00	5	29.41	0	0.00	1	5.88	11	65	6	35	0	0
28	West Bengal	766	0.01	10.82	0.01	20.75	430	56.14	86	11.23	30	3.92	178	23.24	17	2.22	21	2.74	546	71	216	28	4	1
TOTAL		**11204**					**5425**	**48**	**1272**	**11.35**	**749**	**6.69**	**2798**	**24.97**	**433**	**3.86**	**288**	**2.57**	**7446**	**66**	**3519**	**31**	**239**	**2**

Annexure-III

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from January 2014 to Premonsoon 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	Andhra Pradesh	1012	0.02	29.26	0.01	7.82	396	39.00	270	27.00	254	25.00	51	5.00	14	1.00	9	1.00	920	91.00	74	7.00	18	2
2	Arunachal Pradesh	10	0.49	0.74	0.18	0.18	9	90.00	0	0.00	0	0.00	1	10.00	0	0.00	0	0.00	9	90.00	1	10.00	0	0
3	Assam	163	0.01	5.20	0.01	6.91	110	67.00	6	4.00	4	2.00	33	20.00	4	2.00	2	1.00	120	74.00	39	24.00	4	2
4	Bihar	338	0.09	8.15	0.02	3.07	206	61.00	83	25.00	22	7.00	22	7.00	5	1.00	0	0.00	311	92.00	27	8.00	0	0
5	Chandigarh	16	0.35	4.00	0.05	1.22	6	38.00	2	13.00	0	0.00	8	50.00	0	0.00	0	0.00	8	50.00	8	50.00	0	0
6	Chhattisgarh	752	0.02	17.34	0.02	9.60	265	35.00	247	33.00	157	21.00	64	9.00	8	1.00	3	0.00	669	89.00	75	10.00	8	1
7	Dadra & Nagar Haveli	5	0.23	2.99	0.10	0.80	1	20.00	1	20.00	0	0.00	3	60.00	0	0.00	0	0.00	2	40.00	3	60.00	0	0
8	Delhi	118	0.10	5.66	0.04	2.60	78	66.00	17	14.00	3	3.00	19	16.00	1	1.00	0	0.00	98	83.00	20	17.00	0	0
9	Goa	42	0.10	9.05	0.02	2.89	28	67.00	7	17.00	1	2.00	5	12.00	1	2.00	0	0.00	36	86.00	6	14.00	0	0
10	Gujarat	589	0.10	22.85	0.03	51.10	133	23.00	150	25.00	192	33.00	61	10.00	18	3.00	20	3.00	475	81.00	99	17.00	15	3
11	Haryana	95	0.01	4.41	0.15	3.68	54	57.00	9	9.00	1	1.00	26	27.00	5	5.00	0	0.00	64	67.00	31	33.00	0	0
12	Himachal Pradesh	85	0.07	7.38	0.05	1.12	49	58.00	22	26.00	5	6.00	8	9.00	0	0.00	0	0.00	76	89.00	8	9.00	1	1
13	Jammu & Kashmir	197	0.02	11.94	0.05	2.93	122	62.00	25	13.00	20	10.00	25	13.00	2	1.00	0	0.00	167	85.00	27	14.00	3	2
14	Jharkhand	143	0.06	11.45	0.05	6.17	30	21.00	63	44.00	36	25.00	8	6.00	4	3.00	2	1.00	129	90.00	14	10.00	0	0

15	**Karnataka**	1062	0.01	14.55	0.05	14.82	370	35.00	266	25.00	209	20.00	108	10.00	22	2.00	10	1.00	845	80.00	140	13.00	77	7
16	**Kerala**	920	0.01	24.75	0.01	14.55	582	63.00	131	14.00	40	4.00	146	16.00	7	1.00	8	1.00	753	82.00	161	18.00	6	1
17	**Madhya Pradesh**	1064	0.05	36.16	0.03	8.10	283	27.00	303	28.00	386	36.00	56	5.00	19	2.00	1	0.00	972	91.00	76	7.00	16	2
18	**Maharashtra**	1062	0.01	21.75	0.01	15.35	271	26.00	342	32.00	312	29.00	94	9.00	24	2.00	16	2.00	925	87.00	134	13.00	3	0
19	**Meghalaya**	6	0.44	0.60	0.09	0.76	4	67.00	0	0.00	0	0.00	2	33.00	0	0.00	0	0.00	4	67.00	2	33.00	0	0
20	**Odisha**	1100	0.03	13.52	0.02	4.55	538	49.00	341	31.00	132	12.00	76	7.00	9	1.00	1	0.00	1011	92.00	86	8.00	3	0
21	**Pondicherry**	4	0.15	0.47	0.41	0.41	3	75.00	0	0.00	0	0.00	1	25.00	0	0.00	0	0.00	3	75.00	1	25.00	0	0
22	**Punjab**	234	0.01	8.87	0.01	4.23	150	64.00	12	5.00	11	5.00	55	24.00	3	1.00	1	0.00	173	74.00	59	25.00	2	1
23	**Rajasthan**	792	0.02	19.58	0.01	23.94	257	32.00	130	16.00	153	19.00	130	16.00	37	5.00	31	4.00	540	68.00	198	25.00	54	7
24	**Tamil Nadu**	381	0.03	14.60	0.02	24.90	154	40.00	86	23.00	51	13.00	61	16.00	14	4.00	8	2.00	291	76.00	83	22.00	7	2
25	**Tripura**	23	0.02	2.05	0.52	0.52	21	91.00	1	4.00	0	0.00	1	4.00	0	0.00	0	0.00	22	96.00	1	4.00	0	0
26	**Uttar Pradesh**	772	0.03	12.25	0.01	13.65	418	54.00	235	30.00	78	10.00	31	4.00	3	0.00	5	1.00	731	95.00	39	5.00	2	0
27	**Uttarakhand**	19	0.47	7.76	0.70	2.47	3	16.00	7	37.00	5	26.00	3	16.00	1	5.00	0	0.00	15	79.00	4	21.00	0	0
28	**West Bengal**	903	0.01	15.85	0.01	12.25	357	40.00	284	31.00	175	19.00	65	7.00	7	1.00	13	1.00	816	90.00	85	9.00	2	0
Total		**11907**					**4898**	**41.00**	**3040**	**26.00**	**2247**	**19.00**	**1163**	**10.00**	**208**	**2.00**	**130**	**1.00**	**10185**	**86.00**	**1501**	**13.00**	**221**	**2**

Annexure-IV

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from January 2014 to Decadal Mean [Jan(2004 to 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	Andhra Pradesh	878	0.01	27.45	0.01	16.61	428	48.7	108	12.3	75	8.5	205	23.3	31	3.5	29	3.3	611	70	265	30	2	0
2	Arunachal Pradesh	11	0.06	1.37	0.02	0.02	8	72.7	0	0.0	0	0.0	3	27.3	0	0.0	0	0.0	8	73	3	27	0	0
3	Assam	193	0.01	4.23	0.01	5.03	86	44.6	5	2.6	2	1.0	91	47.2	7	3.6	1	0.5	93	48	99	51	1	1
4	Bihar	284	0.01	3.91	0.01	3.4	164	57.7	17	6.0	0	0.0	95	33.5	8	2.8	0	0.0	181	64	103	36	0	0
5	Chandigarh	16	0.01	1.57	0.03	5.21	8	50.0	0	0.0	0	0.0	5	31.3	2	12.5	1	6.3	8	50	8	50	0	0
6	Chhattisgarh	642	0.01	7.29	0.01	9.62	274	42.7	49	7.6	8	1.2	268	41.7	29	4.5	11	1.7	331	52	308	48	3	0
7	Dadra & Nagar Haveli	6	0.54	1.8	0.11	1.97	4	66.7	0	0.0	0	0.0	2	33.3	0	0.0	0	0.0	4	67	2	33	0	0
8	Delhi	120	0.04	3.78	0.03	7.37	50	41.7	7	5.8	0	0.0	35	29.2	18	15.0	10	8.3	57	48	63	53	0	0
9	Goa	45	0.1	2.44	0.04	3.58	26	57.8	2	4.4	0	0.0	15	33.3	2	4.4	0	0.0	28	62	17	38	0	0
10	Gujarat	674	0.01	18.02	0.01	35.4	276	40.9	103	15.3	70	10.4	125	18.5	49	7.3	51	7.6	449	67	225	33	0	0
11	Haryana	98	0.04	10.2	0.03	20.9	39	39.8	4	4.1	3	3.1	33	33.7	15	15.3	4	4.1	46	47	52	53	0	0
12	Himachal Pradesh	90	0.02	11.5	0	3.4	56	62.2	6	6.7	6	6.7	21	23.3	1	1.1	0	0.0	68	76	22	24	0	0
13	Jammu & Kashmir	205	0.02	11.76	0.03	4.73	126	61.5	15	7.3	5	2.4	57	27.8	0	0.0	1	0.5	146	71	58	28	1	0

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	%
14	Jharkhand	169	0.05	4.25	0.02	4.22	95	56.2	20	11.8	2	1.2	43	25.4	8	4.7	1	0.6	117	69	52	31	0	0
15	Karnataka	1097	0.01	33.32	0	11.25	490	44.7	85	7.7	38	3.5	342	31.2	76	6.9	61	5.6	613	56	479	44	5	0
16	Kerala	715	0.01	6.82	0.01	4.83	297	41.5	7	1.0	5	0.7	380	53.1	23	3.2	3	0.4	309	43	406	57	0	0
17	Madhya Pradesh	1118	0.01	21.35	0.02	9.21	500	44.7	233	20.8	153	13.7	181	16.2	35	3.1	15	1.3	886	79	231	21	1	0
18	Maharashtra	1368	0.01	27.4	0.01	26.64	696	50.9	187	13.7	88	6.4	299	21.9	63	4.6	33	2.4	971	71	395	29	2	0
19	Meghalaya	10	0.15	3.35	0.21	0.71	5	50.0	1	10.0	0	0.0	4	40.0	0	0.0	0	0.0	6	60	4	40	0	0
20	Odisha	991	0.01	6.64	0.01	3.45	641	64.7	99	10.0	18	1.8	222	22.4	9	0.9	0	0.0	758	76	231	23	2	0
21	Pondicherry	4	1.71	1.71	0.2	0.7	1	25.0	0	0.0	0	0.0	3	75.0	0	0.0	0	0.0	1	25	3	75	0	0
22	Punjab	240	0.02	9.73	0.01	6.9	102	42.5	9	3.8	4	1.7	87	36.3	22	9.2	15	6.3	115	48	124	52	1	0
23	Rajasthan	918	0.01	32.55	0.01	44.23	244	26.6	141	15.4	139	15.1	168	18.3	59	6.4	143	15.6	524	57	370	40	24	3
24	Tamil Nadu	621	0.01	27.28	0.01	33.6	92	14.8	15	2.4	11	1.8	231	37.2	122	19.6	150	24.2	118	19	503	81	0	0
25	Tripura	28	0.01	2.68	0.01	2.27	17	60.7	1	3.6	0	0.0	9	32.1	1	3.6	0	0.0	18	64	10	36	0	0
26	Uttar Pradesh	884	0.01	12.79	0.01	5.51	474	53.6	109	12.3	38	4.3	228	25.8	29	3.3	5	0.6	621	70	262	30	1	0
27	Uttarakhand	22	0.3	3.91	0.11	7.94	11	50.0	3	13.6	0	0.0	7	31.8	0	0.0	1	4.5	14	64	8	36	0	0
28	West Bengal	822	0.01	9.44	0.01	20.75	429	52.2	64	7.8	13	1.6	236	28.7	45	5.5	34	4.1	506	62	315	38	1	0
Total		**12269**					**5639**	**46.0**	**1290**	**10.5**	**678**	**5.5**	**3395**	**27.7**	**654**	**5.3**	**569**	**4.6**	**7607**	**62**	**4618**	**38**	**44**	**1.00**


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