

भारत सरकार  
जल संसाधन, नदी विकास व गंगा संरक्षण मंत्रालय  
केंद्रीय भूमिजल बोर्ड



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

वार्षिक भूजल पुस्तिका

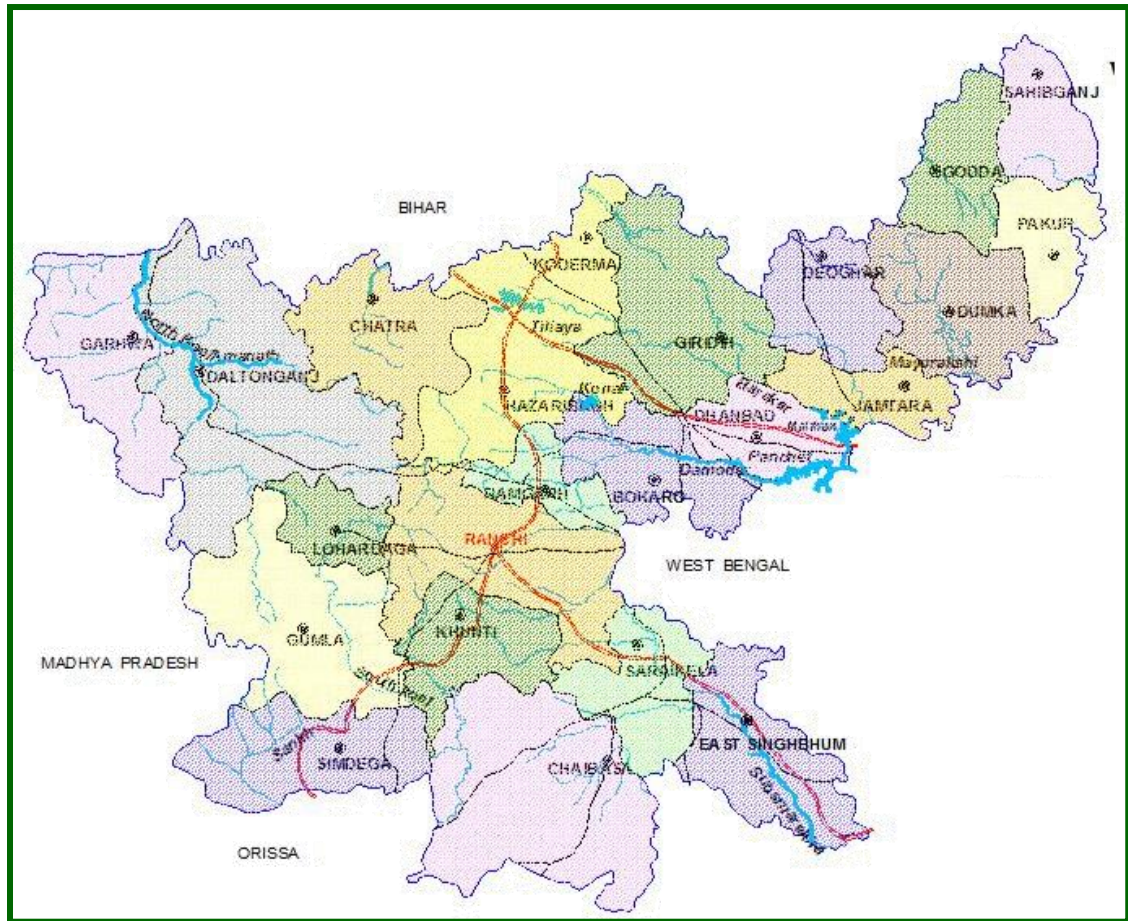
झारखण्ड

(2017 - 2018)

GROUND WATER YEAR BOOK

JHARKHAND

(2017 - 2018)



मध्य पूर्वी क्षेत्र, पटना  
राज्य एकक कार्यालय, राँची  
MID-EASTERN REGION, PATNA  
STATE UNIT OFFICE, RANCHI

April, 2019

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GROUND WATER YEAR BOOK  
**JHARKHAND**  
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## **FOREWORD**

To understand the groundwater situations in diverse hydrogeological environments, changes in various facets of ground water, like variation in water level and water quality are to be monitored. A regular monitoring of ground water regime through a network of observation wells i.e. Ground water Monitoring Well (GWMW) is being carried out by Central Ground Water Board, MER Patna for the state of Jharkhand. Initially the task was taken up with the help of a few GWMW but gradually the numbers of stations were increased, which is now totals 474 GWMW (as on March 2018) which represents all 24 districts and almost all blocks of the state.

This is an attempt to make a presentation in the form of a report for Jharkhand State where the scenarios of water levels for the year 2017-2018 has been produced. The comparisons with decadal mean, seasonal & annual fluctuations, chemical quality of ground water, different maps along with data have been incorporated.

Periodic water level measurements were taken 4 times in a year in 2017-2018, (i.e. in the months of May, 2017, August, 2017, November, 2017 and January, 2018). Water samples from the GWMW were collected during the month of May-2017 to study the changes in hydrochemical regime.

The scientific officers and technical personnel of the state unit office of Jharkhand and the Mid Eastern Regional office Patna, systematically collected field data from the GWMW as required for monitoring purposes and collected water samples during the pre-monsoon period which were latter analysed in the monitoring and chemical cells of this region.

The compilation and analyzing data, its retrieval, evaluation, preparation of suitable maps and their reproduction in the form of present report has been carried out by Dr.Anukaran kujur, Assistant Hydrogeologist.

It is sincerely hoped that the appended write up, maps and basic information in this report would be very useful to the Planners and concerned beneficiaries in Jharkhand State

**(A.K.Agrawal)**  
**Regional Director**

## EXECUTIVE SUMMARY

In Jharkhand state ground water levels of 474 Ground Water Monitoring Wells (GWMW) were monitored four times in the year 2017 - 2018 as a part of regime monitoring of phreatic aquifer in different hydrogeological and agro-climatic zones. The water level monitoring was carried out in the months of May'17, August'17, November'17 and January'18 and ground water samples were collected in pre-monsoon period (May, 2017) for chemical analysis. In the state the phreatic aquifer consists of weathered mantle and saprolite zone. Over 78% area of the state is underlain by rocks of Chotanagpur Granitic Gneissic Complex (CGGC) suit. Hence, most of the GWMW represented water level in weathered CGGC. A few GWMW represented water level of phreatic aquifer of Gondwana Super Group, Basalts, Limestones and Tertiary Formation.

The observed water level data had been grouped into four categories viz. 0 -2m, 2-5m, 5-10m and >10m. Thematic maps depicting ground water levels measured in different periods have been prepared. The water levels have been further analysed to study its change with respect to measurement of pre-monsoon period of the same year, previous year water level data of corresponding period, and decadal mean water level data of the corresponding period. The fluctuations have been shown under rise and fall categories. In each category there are three groups viz. 0-2 m, 2-4 m and >4 m. Thematic maps have been prepared for each category.

The depth to water level data of all the Ground Water Monitoring Wells collected during the four measurements are also presented along with the general well information. The water samples were collected during May, 2017 chemical analysis report is under progress.

During 2016-17, the water level in the State ranges between 1.60 to 19.82 mbgl. The minimum and the maximum depth to water levels during pre-monsoon period have been recorded as 1.60 m bgl and 19.82 m bgl at West-Singhbhum and E. Singhbhum. In general the water level throughout the State varies in the range of 5 – 10 m bgl. During Post-monsoon season minimum and the maximum depth to water levels have been recorded as 0.54 mbgl and 14.70 m bgl in Simdega and East singhbhum district respectively and in general the water level throughout the State varies in the range of 2 – 5 m bgl.

Fluctuation in water level for November, 2017 compared with May, 2017 shows rise in water level (97%) for the entire state of Jharkhand. Out of 264 wells analysed, in the tune of 0.20 - 2.00 m (18%), 2.00 - 4.00 m (32%) and above 4 m (46%) during the period, which is a normal phenomenon due to recharge of ground water, as a result of onset of monsoon and rapid recharge due to moderate to steep slope in undulating tracts. A fall in water level is recorded in 8 wells out of 264 wells of the state which is mainly due to temporal withdrawal of ground water in those areas.

The fluctuation of water level of May, 2017 with respect to decadal mean water level of May 2016 indicate that the fall (48%) as well as rise (35%) in water level in the range of 0 – 2 m shows variation in almost the entire state. However the higher magnitude (>4m) of fall also recorded in 7 wells in 6 districts which may be due to temporal higher withdrawal of ground water on that area.

The fluctuation of water level of November 2017 with respect to decadal mean water level of November indicate the fall (26%) as well as rise (60%) in water level in the range of 0 – 2 m. However, overall regional fluctuation of water level in the entire state is mainly restricted within 2 m only which is normal phenomenon and no abnormal rise or fall in water level is observed except in few localized well.

## GROUND WATER YEAR BOOK OF JHARKHAND

2017 – 2018

### JHARKHAND AT A GLANCE

Geographical Area (sq. km.)	79714
Population (Census 2011)	3,29,66,238
Population density( Persons/Sqkm)	413
Male Population(Million)	16.93
Female Population(Million)	16.03
Decadal Growth (2001-2011)	22.3%
Literacy Rate	67.63%
Sex ratio	947 females to 1000 males
No. of Districts	24
No. of Blocks	260
Normal Annual Rainfall (mm)	1251.2
Net sown area ( in hectare)-2014-15	13,84515
Area under forest (in hectare) -2014-15	2339481
Barren and uncultivated area (in hectare)-2014-15	568009
Cultivable waste land (in hectare)-2014-15	352871
Cropping intensity( %)-2011	114 %
Annual Replenishable Ground Water Resource in BCM (2013)	6.56
Net ground water availability in BCM (2013)	5.99
Annual Ground Water Draft For Domestic & Industrial use in BCM	0.50
Gross annual ground water draft in BCM(2013)	1.35
Stage of ground water development ( in % )(2013)	22.56
Number of over-exploited blocks ( As on March-2013)	4
Number of critical blocks ( As on March-2013)	2
Number of semi critical blocks ( As on March-2013)	10
Number of Safe block ( As on March-2013)	244
Ground Water Quality	In general chemical Constituents are within permissible limit except fluoride Contamination in parts of Palamu, Garhwa, Koderma, Pakur Districts and Arsenic contamination in parts of Sahebganj district



# GROUND WATER YEAR BOOK OF JHARKHAND

2017 – 2018

## 1.0 INTRODUCTION:

Jharkhand state, was created on 15<sup>th</sup> November, 2000, consists of districts falling on Chotanagpur Plateau of erstwhile Bihar on the birthday of legendary tribal freedom fighter Birsa Munda. Presently it consists of 24 districts and 260 administrative blocks. The capital of the state is located at Ranchi. The state spreads over 79714 sq km, between Latitude 21° 55' 00" and 25° 15' 00" and Longitude 83° 15' 00" and 87° 55' 00". The state is bounded by Bihar in the north and by West Bengal in the east. The other two sides, west and south, are bounded by Chhattisgarh and Orissa states respectively (Plate-I).

The population of the state as per 2011 census is 03.30 crore. The population density is 414 person/km<sup>2</sup>. The urban population is 7.912 million and the rural population is 25.05 million. The tribal population constitutes about 28% of total population. The state is moderately urbanized with Ranchi as its capital city. Nearly 24% of total population of the state lives in urban areas. Important urban centers are in the state are Jamshedpur, Dhanbad, Hazaribagh, Daltonganj, Dumka and Deoghar.

To acquire a detailed knowledge vis-a-vis scenario of ground water level with respect to behaviour, availability and quality, Ground Water monitoring is essential in time and space. Thus, the data so collected during monitoring gives an important input for ground water management. Periodical monitoring of ground water regime covering different geomorphic, hydrogeological units is an effort to get information on the behaviour of ground water levels and chemical quality of formation water through representative sampling. Monitoring of ground water regime includes:

- (a) Monitoring of ground water levels
- (b) Monitoring of ground water quality and
- (c) Temperature of ground water.

Monitoring is being carried out by establishing suitable *Ground Water Monitoring Well* (GWMW) based on Geomorphology, Geology, Hydrogeology and status of ground water resource of the area with a view to observe the trend of water level and change of chemical quality with time and space. It is also very useful to estimate the dynamic ground water resources and to demarcate the water logged as well as drought prone areas.

## 2.0 BACKGROUND:

The Central Ground Water Board, State Unit office, Ranchi, is at present monitoring 474 GWMW (Ground water monitoring wells) to delineate the behaviour of ground water level with time and space covering 24 districts in the State of Jharkhand (Plate-I) four times a year, viz January (from 1<sup>st</sup> to 10<sup>th</sup>), May (from 20<sup>th</sup> to 30<sup>th</sup>), August (from 20<sup>th</sup> to 30<sup>th</sup>) and November (from 1<sup>st</sup> to 10<sup>th</sup>). The locations of GWMW are shown in Plate - II.

The district-wise status of GWMW in Jharkhand during the period from May, 2017 to January, 2018 is given in Table 1. The district-wise water level data of GWMW for the period May, 2017, August, 2017, November, 2017 and January, 2018 are given in Annexure- I. The Trend of ground water level data ( January, 2008- January 2018) is presented in Annexure-II. The results of chemical analysis of water samples collected during May, 2017 and analytical data is under progress.

## 3.0 GEOLOGY AND HYDROGEOLOGY:

The generalized geological succession of Jharkhand state is given Table 1 - Generalized geological succession of Jharkhand state.

<i>Age</i>	<i>Formation</i>	<i>Broad Lithology</i>
Quaternary	Alluvial deposits	Sand, clay, silt and occasional gravels.
Tertiary	Dhalbhumgarh Formation	Boulder, pebbly grits, sand, and mottled clay
L-Cretaceous - U-Jurassic	Rajmahal Trap	Basalt flows with inter-trappean sedimentary beds
Cretaceous- Carboniferous	Gondwana Super group	Sandstone, shale, clay conglomerate and coal beds.
L-Cambrian- Proterozoic	Vindhyan Super group	Sandstone, quartzite, shale, limestone etc.
Proterozoic	Younger Granite, Granophyre and Soda Granite. Chhotanagpur Granite Gneissic Complex. Kolhan Group, Singhbhum Group, Gangpur Group. Mahakosal Group. Volcano-Sedimentary Sequence. Iron Ore Group. Singhbhum Granite.	Granites, granite gneiss, schists, phyllites, dolomites, basic lavas, amphibolites, gabbro anorthosite
Archean	Older Metamorphics Gneiss, Older Metamorphic Tonalite Gneiss	Gneiss, amphibolites, schists, arenites

## **Granite - gneiss, schist, phyllite, and other rocks belonging to CGGC**

It covers nearly 85 % of the geographical area of the state. The phreatic aquifer in this formation consists of weathered mantle and underlying secondary porosities like fractures, joints and fissures. In general, the thickness of weathered zone varies between 10 and 25 m, however in localized patches it is > 35 m. The weathered zone is the main repository of ground water. Exploratory wells of CGWB reveal that the fractures underlying the weathered zones form the potential aquifer. The fracture zones (generally beyond 100 m depth) are exploited particularly in urban areas. In general 2-5 sets of fractures have been encountered within 150 m bgl. In a few wells, fractures have been encountered beyond 150 m depth. The ground water occurs under semi-confined to confined condition in the fractures situated at a deeper level. In this formation discharge from negligible to 30 lps has been recorded from the bore wells.

## **Vindhyan Supergroup**

The rocks of this group are exposed in Palamu and Garhwa districts over a limited aerial extent, in the south of the river Son. The sandstones are hard and compact. The ground water occurs within the secondary porosities like fractures and joints. The fractured sandstone has good ground water potential in comparison to the shale. The ground water occurs under unconfined condition in weathered zone. The yield potential of sandstone is poorer than granite gneiss.

## **Volcanic Rocks**

The volcanic rocks occur mainly in the northeastern part of the state in Sahebganj, Pakur, Dumka and Godda districts, and in southeastern part of the state in East & West Singhbhum, and Saraikela districts. The Rajmahal trap is a series of flows horizontally disposed. In an individual flow, the lower part is massive and the upper part is vesicular. In some cases, vesicles are filled with secondary material. Partially filled interconnected vesicles form the potential aquifers. Thin inter-trappean beds are also observed between the flows. The ground water occurs under unconfined conditions in upper vesicular flows, which are exposed generally at the ground level. In the vesicular layers disposed at deeper levels the ground water occurs under semi-confined to confined condition.

## **Gondwana Supergroup**

The Gondwana Super Group ranging in age from Upper Carboniferous to Cretaceous is considered as semi-consolidated formation. Ground water occurs within inter-granular space as well as within the secondary porosities like fractures and joints. Rocks of this unit are exposed as patches in the districts of Hazaribagh, Dhanbad, Giridih, Bokaro, Ranchi, Dumka, Jamtara, Latehar, Godda and Garhwa districts. The sandstones form repository of ground water. The exploratory drilling of CGWB and other agencies indicate that ground water occur in semi-confined to confined condition

in aquifers situated at deeper level, and under unconfined condition at shallow level. At few places, the piezometric head rises above the ground level to give rise to auto flow condition.

### **Laterites and Tertiary Sediments**

The Dhalbhumgarh Formation of Tertiary age occur in Chakulia- Bahragora-Dhalbhumgarh tract of East Singhbhum district. Exploration to a depth of 120 m indicates presence of 2 to 4 sedimentary layers. Laterite formations also occur as cappings in some parts of the state. These sedimentary layers are repository of ground water, which occurs under unconfined condition in aquifers disposed at shallow level and under confined to semi-confined condition in aquifers situated at deeper levels.

### **Younger Alluvium**

The Younger Alluvium deposits are confined mainly to the bordering area of the state and occur in patches in the districts of Godda, Sahebganj and Pakur in the northeast and in Latehar, Palamu, Deoghar and Garhwa districts. In the bordering areas alluvial patches is extension of the Gangetic Plain. There is a patch of alluvial deposit in Ranchi district also. The ground water occurs under unconfined condition in aquifer disposed at shallow level. The depth of dug wells ranges between 10 –15 m in general while the depth of shallow tube well ranges between 20 - 30 m. The hydrogeological map & Geological map of Jharkhand is given in Plate III & IV.

## **4.0 GROUND WATER SCENARIO**

### **4.1 Depth To Water Levels In Jharkhand During 2017 - 2018:**

#### **May 2017**

Water levels during May, 2017 were monitored from 420 wells (out of 474 existing wells). The district-wise status of distribution of Ground Water Monitoring Wells with different ranges of depth to water level is presented in *Table-2*

The minimum and the maximum depth to water levels have been recorded as 1.35 m bgl in Gumla district and 19.82 m bgl in East Singhbhum district. In general the water level throughout the State varies in the range of 5 – 10 m bgl and has been observed in the 253 wells (62.93%) out of 402 analysed wells. Secondly, water level >10 m bgl has been observed in the 57 wells (14.17%). The water level in the range of 2– 5 m bgl has been observed in the 86 wells (21.39%). The water level below 2 m has been observed only in 6 wells, out of which 3 wells located in E Singhbhum 1 well in Paschimi-Singhbhum 1 well in West singhbhum and 1 well is in Dhanbad districts.

As depicted in Plate V, the entire state shows water level varying between 5 and 10 m bgl except few patches where water level is more than 10 m bgl. Including few patches in the State, an area covering the parts of East singhbhum, Saraikela and W Singhbhum has shown water level less than 2 m bgl.

### **August 2017**

Water levels during August, 2017 were monitored from 342 Dug wells. The district-wise status of distribution of Ground Water Monitoring Wells with different ranges of depth to water level is presented in Table 3.

The minimum and the maximum depth to water levels have been recorded as 0.00m bgl in Hazaribag district and 11.15m bgl in Paschimi-Singhbhum district. About 34.21% of wells have water level ranging between 0-2 mbgl. In general the water level throughout the State varies in the range of 2 – 5 (54.38%) m bgl from 342 analysed wells. Secondly, the water level in the range of 5 – 10 m bgl has been observed in the 11.11 % of the wells. Water level >10 m bgl has been observed only in the 4 wells (1.16%) all 4 are in Purbi-Singhbhum district.

As depicted in Plate VI, major part of the State shows water level varying 2 - 5 mbgl. Water level above 5 mbgl is observed mainly in northern and north eastern part of the state whereas the water level less than 2 m bg has been observed in southern, central, eastern and western part.

### **November 2017**

A total of 368 GWMW has been monitored during post-monsoon period in November 2017, five groupings were made based on the range of water level data viz. 0-2, 2-5, 5-10, 10-20 and 20-40 m bgl. The district-wise status of distribution of network hydrograph stations with different ranges of depth to water level is presented in Table 4.

Minimum and the maximum depth to water levels have been recorded as 0.54 m bgl and 14.70 m bgl in Simdega and Purbi-Singhbhum district respectively. In about 237 wells (64.40%) of GWMW, water level in range of 2-5 m bgl which covers almost entire Jharkhand state. The water level in the range of 5-10 m bgl has been observed in the 89 wells (24.18%). Ground water level of 0 – 2 m bgl depth range has been observed only in 39 wells (10.59%) at different locations. Only 3 wells (1%) have shown water level more than 10 m bgl. (Plate VII).

### **Januray 2018**

To study the water levels of recession period data were collected during January, 2018 from 315 wells. The district-wise status of distribution of network hydrograph stations with different ranges of depth to water level is presented in Table 5.

The minimum and the maximum depth to water levels in the State have been recorded as 0.148 m bgl in Gumla district and 17.6 m bgl in Purbi-Singhbhum district. The water level in the range of 5 – 10 m bgl has been observed in the 52.06 % (164 wells) of the wells analysed and covered almost entire State. Few patches (17 wells about 5.39%) of water level range from 10 to 20 m bgl has been observed. 125 wells about 39.68 % of the wells analysed has shown water level in the range of 2-5 m bgl. The water level below 2 m has been observed in 9 wells. Plate VIII

## **4.2 Scenario of Annual Fluctuations In Jharkhand During 2016-17 To 2017-18:**

The annual fluctuation in water levels for the periods of (1) May 2016 and May 2017, (2) August 2016 and August 2017, (3) November 2016 and November 2017 and (4) January 2017 and January 2017 have been analysed to study the net status of ground water conditions during the previous and current year.

### **May 2016 & May 2017**

The annual fluctuation in water level between May, 2016 and May, 2017 indicates the net status of ground water condition during the previous year and current pre-monsoon measurement and the same is presented in Plate IX. The district wise statement of frequency of distribution of ground water monitoring wells falling in different ranges of water level fluctuation is presented in *Table-6*.

The major part of the state shows general rise in water level (55.42%) and general fall in water level (40.16%). Total 116 wells out of 249 analysed wells, comes under 0-2 m rise zone category, on the other hand 82 wells show fall within 2 m, which may indicate that the regional fluctuation of the state (79.51%) is mainly restricted within 2 m. The next higher magnitude of fluctuation is of 2 -4 mbgl rises in water level in the state (6%) is observed in some part of the state. The highest magnitude of >4 mbgl rise has been observed in only 2.81% of wells.

Overall the entire State is covered under rising and falling zone category (138 and 100 wells out of 249 analysed well), which may indicate the slightly moderate rainfall (2017).

### **August 2016 and August 2017**

The annual fluctuation in water level between Aug, 2016 and Aug, 2017 indicates the status of ground water condition during the previous year and current monsoon measurement and the same is presented in Plate X. The district wise statement of frequency of distribution of network hydrograph stations falling in different ranges of water level fluctuation is presented in Table 7.

A general rise in water level (52%) has been found in major part of the State whereas rise in water level recorded 42.65% within 2 m, 6.63% within 2-4m and 2.84% rise has been observed in >4 mbgl. About 47% wells observed fall and 38% ranges between 0 – 2 m has shown fall in water level. Out of 211 analyzed wells fall in water level is recorded in 82 wells within 2 mbgl 17 well 8% within 2-4m and 2 wells >4m.

Overall the entire State is covered under the category of 52% rise and 48 % fall which may be due to more rainfall in respect to during previous year.

### **November 2016 And November 2017**

The Annual fluctuation in water level between November 2016 and November 2017 indicates the net status of ground water conditions during the previous and current post-monsoon year and the same is presented in Plate XI. The district-wise statement of distribution of network hydrograph stations in different ranges of water level fluctuation is presented in *Table 8*.

The comparison of fluctuation in water level between November 2016 and November 2017 shows fall in 52% GWMW as well as rise in 48% GWMW of the total 218 analysed wells during the period. The major part of the state shows a general fall in water level within 2.00 m. Out of 110 wells showing fall, 2 – 4 m and > 4 m fall has been observed in the 8 wells and 1 wells respectively. Only 48% well analysed has shown rise in water level. Total analysed wells 106 out of which 92 wells ranges within 0-2m, 8 wells have shown rise within 2-4 m and only 6 wells have shown higher magnitude of annual fluctuation >4m during the period.

### **January 2016 And January 2017**

The annual fluctuation in water level between January, 2017 and January, 2018 indicates the net status of ground water condition during the previous year and current measurement and the same is presented in Plate XII. The district wise statement of frequency of distribution of network hydrograph stations falling in different ranges of water level fluctuation is presented in *Table 9*.

The major part of the state shows general fall (52%) and 48% rise in water level. Total 89 wells out of 219 of the analysed well comes under 0-2 m rising zone category, on the other hand 100 wells show fall within 2 m, which may indicate that the regional fluctuation (86%) of the state is mainly restricted within 2 m. The rise and fall in water level 2-4 m 10.50% and more than 4m 2% have been observed in the State.

### **4.3 Scenario of Seasonal Fluctuations In Jharkhand During The Ground Water Year 2017 – 2018:**

An attempt has been made to compare the pre-monsoon water levels of May, 2017 with water levels of August 2017, November 2017 and January 2018 to delineate the impact of rainfall as well as ground water development on ground water regime in the state during the above period.

### **May 2017 And August 2017**

The fluctuation in water level between May 2017 and August 2017 indicates the change in water level from pre-monsoon measurement to monsoon measurement and the same is presented in Plate XIII. Fluctuation in water level map for May 2017 and August 2017 has been prepared from 231 analyzed wells. The district wise statement of frequency distribution of network hydrograph stations falling in different ranges of water level fluctuation is presented in *Table 10*.

During this period the entire state of Jharkhand shows a general rise in water level, which is mainly due to recharging of ground water on onset of monsoon from June 2017. However 1 well shows fall in water level which may be mainly due to temporal withdrawal of ground water and less rainfall in those areas.

#### **May 2017 And November 2017**

The seasonal fluctuation in water level between May 2017 and November 2017 indicates the change in water level from pre-monsoon measurement to post-monsoon measurement and the same is presented in Plate XIV. The district-wise statement of distribution of network hydrograph stations in different ranges of water level fluctuation is presented in *Table 11*.

Fluctuation in water level for November 2017 compared with May 2017 shows rise in water level (97%) for the entire state of Jharkhand. Out of 264 wells analysed, in the tune of 0.05 - 2.00 m (18.18%), 2.00 - 4.00 m (32.57%) and above 4 m (46.21%) during the period, which is a normal phenomenon due to recharge of ground water, as a result of onset of monsoon and rapid recharge due to moderate to steep slope in undulating tracts. A fall in water level is recorded in 8 wells out of 264 wells of the state which is mainly due to temporal withdrawal of ground water in those areas.

#### **May 2017 And January 2018**

The fluctuation in water level between May 2017 and January 2018 indicates the change in water level from pre-monsoon measurement to January measurement and the same is presented in Plate XV. Fluctuation in water level maps for May 2017 and January 2018 have been retrieved from 239 analyzed wells. The district wise statement of frequency distribution of network hydrograph stations falling in different ranges of water level fluctuation is presented in *Table 12*.

During the period the entire state of Jharkhand shows a general rise (219 wells) in water level, in the range of 0.00 to 2.00 m (38.91%), 2.00 to 4.00 m (37.65%) and > 4 mbgl (15%) which is mainly due to recharge on ground water for onset monsoon from June 2017 and rainfall during July - October 2017. However, 18 wells of the state shows fall in water level which may be due to temporal withdrawal of ground water at that area.

### **4.4 Scenario of Decadal Water Level Fluctuations With The Ground Water Year 2017 – 2018**

#### **Decadal Mean And May 2017**

Water level fluctuation map (Plate XVI) has been prepared by comparing the water level data (304 wells) for May Mean (2007-2016) with the depth to water level data May 2017. The district wise statement of frequency distribution of ground water monitoring wells falling in different ranges of water level fluctuation is presented in *Table 13*.



The fall (57%) as well as rise (43%) in water level in the range of 0 – 2 m shows variation in almost the entire state. However the higher magnitude (>4m) of fall also recorded in 7 wells in 6 districts which may be due to temporal higher withdrawal of ground water on that area.

However, overall regional fluctuation of water level in the entire state is mainly restricted within 2 m only which is normal phenomenon and no abnormal rise or fall in water level is observed except in few localized well.

#### **Decadal Mean And August 2017**

Water level fluctuation map (*Plate XVII*) has been prepared by comparing the water level data (235 wells) for August Mean (2007-2016) with the depth to water level data August 2017. The district wise statement of frequency distribution of network hydrograph stations falling in different ranges of water level fluctuation is presented in *Table 14*.

The rise (67%) as well and fall (33%) in water level in the range of 0 – 2 m shows variation almost in the entire state. Fluctuation in water level in the range of 2 – 4 m bgl is recorded in 19% wells and for > 4 m in 3% through entire state.

However, overall regional fluctuation of water level in the entire state is mainly restricted within 2 m only which is normal phenomenon and no abnormal rise or fall in water level is observed except in few localized well. Fall > 2 mbgl may be due to irregularities of rainfall during last 3 to 4 years.

#### **Decadal Mean And November 2017**

The fluctuation map of water level between November Mean and November 2017 (*Plate XVIII*) has been prepared on the basis of available Mean water level data(257 wells) of November for last 10 years (2007-2016) with the present water level data for Jharkhand. The district-wise statement of distribution of network hydrograph stations in different ranges of water level fluctuation is presented in *Table 15*.

The fluctuation of water level of November 2017 with respect to decadal mean water level of November, 2016 indicate the fall (26%) as well as rise (60%) in water level in the range of 0 – 2 m. Fluctuation in water level below 2 m has been recorded as fall in more than 3 % of the wells and rise in 8 % of the wells and more than 4 rised 1% fall in one well..

However, overall regional fluctuation of water level in the entire state is mainly restricted within 2 m only which is normal phenomenon and no abnormal rise or fall in water level is observed except in few localized well.

### **Decadal Mean And January 2017**

Water level fluctuation map (Plate XIX) has been prepared by comparing the water level data (241 wells) for January Mean (2008-2017) with the depth to water level data January, 2018. The district wise statement of frequency distribution of network hydrograph stations falling in different ranges of water level fluctuation is presented in *Table 16*.

The fluctuation of water level of January, 2018 with respect to decadal mean water level of January, 2017 indicate 39 % fall and 50% rise in the range of 0 – 2 m has been observed in almost entire state. Out of 241 wells analysed only 7 % wells have shown rise/fall in water level in the range of 2-4m and about 2 % wells have shown rise/fall > 4 mbgl.

However, overall (89%) regional fluctuation of water level in the entire state is mainly restricted within 2 m only which is normal phenomenon and no abnormal rise or fall in water level is observed except in few localized well.

### **4.5 Trend Of Ground Water Level**

The Trend of ground water level data is presented in **Annexure-II**.

The observation shows the rising trend of ground water level in 113 wells and falling trend in 49 wells. The trend of ground water level of the entire state is mainly restricted within 0.5 m only which is normal phenomenon and no abnormal rise or fall in water level is observed in the well of the state.

### **5.0 Hydrochemistry:**

The chemical quality of groundwater is dependent on the source of water and on the course over which it flow. Ground water carries a higher mineral content than surface water due to the slow circulation and longer period of contact with the rocks formation. Depending on the dissolved salts, the quality of ground water in Jharkhand has been depicted with the help of Iso-Conductance and Iso-Chloride map in Plate XIX and XX. In order to assess the chemical quality of ground water of phreatic aquifers of Jharkhand state ground water samples have been analysed for major 15 parameters viz. EC, pH, HCO<sub>3</sub>, CO<sub>3</sub>, Cl, TH, Ca, Mg, K, Na, F, SiO<sub>2</sub>, PO<sub>4</sub> and NO<sub>3</sub>. The chemical analysis data of ground water samples collected (390) during the period May 2017.

Ground water samples throughout the state found to be slightly alkaline in nature as the pH mostly varies between 6.20-8.60. The quality of ground water in most of part of the state is potable with low mineral contents having electrical conductance varying from 84.20 (recorded at Kudri, Khunti) to 2450 (at Chandankiyari, Bokaro)  $\mu\text{S}/\text{cm}$  at 25<sup>0</sup>c. The samples found to be suitable for drinking and irrigation purposes. Only 3 samples are having electrical conductivity greater than 2000  $\mu\text{S}/\text{cm}$ , which can be treated as brackish water. Spatially in major part of the state EC rested in the range of 400-1000  $\mu\text{S}/\text{cm}$ . In most of the samples the concentration of chloride is within the

desirable limit of drinking water (250 mg/l). Concentration of chloride in ground water >250 mg/l is recorded in 14 number of samples in Dumka, Giridih, Sahibganj, Jamtara, Khunti, Saraikela, Dhanbad, palamau, Hazaribagh, Pakur West singhbhum districts.

Thus it is observed that the quality of ground water in shallow aquifers in the entire state is suitable for drinking, irrigation and industrial purposes except in arsenic & fluoride infested areas.

Table - 1

DISTRICT-WISE STATUS OF NHNS FOR THE STATE OF JHARKHAND FOR 2017 – 2018

Sl. No.	District	No. of GWMW as on			No. of GWMW			No. of GWMW			No. of GWMW as on		
		March 31.03.2017			abandoned during the year 2017			established during the year 2017			31.03. 2018		
		DW	PZ	Total	DW	PZ	Total	DW	PZ	Total	DW	PZ	Total
1	Bokaro	22	-	22	3	-	-	-	-	-	19	-	19
2	Chatra	10	-	10	-	-	-	1	-	-	11	-	11
3	Deoghar	11	-	11	-	-	-	-	-	-	11	-	11
4	Dhanbad	24	-	24	-	-	-	-	-	-	24	-	24
5	Dumka	16	-	16	-	-	-	-	-	-	17	-	17
6	Garhwa	10	-	10	-	-	-	-	-	-	11	-	11
7	Giridih	17	-	17	-	-	-	-	-	-	17	-	17
8	Godda	17	-	17	-	-	-	2	-	-	17	-	12
9	Gumla	15	-	15	-	-	-	-	-	-	15	-	15
10	Hazaribag	30	-	30	1	-	-	-	-	-	29	-	29
11	Jamtara	10	-	10	-	-	-	-	-	-	10	-	10
12	Khunti	36	1	36	-	-	-	-	-	-	36	1	36
13	Kodarma	7	-	7	-	-	-	-	-	-	7	-	8
14	Latehar	11	-	11	-	-	-	1	-	-	12	-	12
15	Lohardaga	11	-	11	-	-	-	-	-	-	11	-	11
16	Pakaur	13	-	13	-	-	-	1	-	-	14	-	14
17	Palamu	19	-	19	-	-	-	-	-	-	19	-	19
18	W Singhbhum	18	-	18	-	-	-	-	-	-	18	-	18
19	E Singhbhum	31	-	31	-	-	-	-	-	-	31	-	31
20	Ramgarh	17	4	21	-	-	-	-	-	-	17	4	21
21	Ranchi	56	17	73	-	3	3	-	-	-	56	16	72
22	Sahebganj	19	-	19	-	-	-	6	-	-	24	-	25
23	Saraikela-Kharswan	12	-	12	-	-	-	-	-	-	12	-	12
24	Simdega	15	-	15	-	-	-	-	-	-	15	-	15
	<b>Total</b>	<b>447</b>	<b>22</b>	<b>468</b>	<b>13</b>	<b>-</b>	<b>17</b>	<b>18</b>	<b>0</b>	<b>13</b>	<b>453</b>	<b>21</b>	<b>474</b>

**Table 2: District wise categorisation of depth to water level - May, 2017**

Sl. No.	District Name	No. of Wells	Depth to water level (m bgl)		No./Percentage of wells Showing Depth to Water Level in the Range of									
					0 to 2		2 to 5		5 to 10		10 to 20		20 to 40	
			Min	Max	No.	%	No.	%	No.	%	No.	%	No.	%
1	BOKARO	17	3	12.63	-	-	1	5.88	12	70.59	4	23.53	-	-
2	CHATRA	10	4.43	13.15	-	-	1	10	7	70	2	20	-	-
3	DEOGHAR	11	4	8.86	-	-	1	9	10	91	-	-	-	-
4	DHANBAD	22	1.9	12.4	1	4.54	16	72.74	-	-	5	22.72	-	-
5	DUMKA	16	2.61	10.6	-	-	15	93.75	1	6.25	-	-	-	-
6	JAMTARA	9	5.83	9.82	-	-	-	-	9	100	-	-	-	-
7	GARHWA	8	5.55	16.5	-	-	-	-	7	87.5	1	12.5	-	-
8	GIRIDIH	17	5.9	14.2	-	-	-	-	10	58.82	7	41.18	-	-
9	GODDA	13	4.12	12.29	-	-	3	23	9	69.2	1	7.8	-	-
10	GUMLA	15	1.35	9.5	1	6.67	2	13.33	12	80	-	-	-	-
11	SIMDEGA	9	3.4	8.8	-	-	2	22.22	7	77.78	-	-	-	-
12	HAZARIBAG	25	3.37	12.4	-	-	5	20	13	52	7	28	-	-
13	RAMGARH	9	4.1	10.2	-	-	1	11.11	7	77.78	1	11.11	-	-
14	KODARMA	5	4.85	8.25	-	-	-	-	5	100	-	-	-	-
15	LOHARDAGA	11	5.7	12.6	-	-	-	-	10	90.9	1	9.1	-	-
16	PAKUR	10	2.15	11.38	-	-	4	40	5	50	1	10	-	-
17	PALAMU	15	5.34	15	-	-	-	-	11	73.33	4	26.67	-	-
18	LATEHAR	11	3.62	13	-	-	1	9.1	7	63.63	3	27.27	-	-
19	PASHCHIMI SINGHBHUM	18	1.6	16.5	1	5.57	4	22.22	8	44.44	5	27.77	-	-
20	SARAIKELA KHARSAWAN	12	1.6	12	-	-	4	33.33	7	58.33	1	8.34	-	-
21	PURBI SINGHBHUM	33	1.75	19.8	3	9.1	11	33.33	13	39.39	6	18.18	-	-
22	RANCHI	49	2	13.8	-	-	7	14.28	36	73.47	6	12.25	-	-
23	KHUNTI	32	3.4	9.95	-	-	3	9.37	29	90.63	-	-	-	-
24	SAHIBGANJ	25	2.58	12	-	-	5	20	18	72	2	8	-	-
	<b>Total</b>	402	1.35	19.80	6		86		253		57			

**Table 3: District wise categorisation of depth to water level – August, 2017**

Sl. No.	District Name	No. of Wells	Depth to water level (m bgl)		No./Percentage of wells Showing Depth to Water Level in the Range of									
					0 to 2		2 to 5		5 to 10		10 to 20		20 to 40	
					No.	%	No.	%	No.	%	No.	%	No.	%
1	BOKARO	17	0.8	10.2	9	52.9	5	29.42	3	17.64	-	-	-	-
2	CHATRA	9	2.6	9.75	-	-	5	55.55	4	44.45	-	-	-	-
3	DEOGHAR	11	2.24	4.7	-	-	11	100	-	-	-	-	-	-
4	DHANBAD	7	1.05	3.1	4	57.1	3	42.86	-	-	-	-	-	-
5	DUMKA	16	1.9	6.65	1	6.25	12	75	3	18.75	-	-	-	-
6	JAMTARA	8	1.21	5.85	2	25	4	50	2	25	-	-	-	-
7	GARHWA	8	0.88	5.04	2	25	5	62.5	1	12.5	-	-	-	-
8	GIRIDIH	17	1.6	6.65	2	11.7	11	64.78	4	23.52	-	-	-	-
9	GODDA	15	0.65	9.86	1	6.66	9	60	5	33.34	-	-	-	-
10	GUMLA	15	0.26	4.4	4	26.7	11	73.33	0	-	-	-	-	-
11	SIMDEGA	9	0.52	2.25	7	77.8	2	22.22	0	-	-	-	-	-
12	HAZARIBAG	25	0	7.5	9	36	12	48	4	16	-	-	-	-
13	RAMGARH	11	1.35	4.95	4	36.4	7	63.64	0	-	-	-	-	-
14	KODARMA	6	1.6	6.8	1	16.7	3	50	2	33.33	-	-	-	-
15	LOHARDAGA	11	0.4	6.3	4	36.4	6	54.54	1	9.1	-	-	-	-
16	PAKUR	9	1.1	5.15	3	33.3	6	66.67	0	-	-	-	-	-
17	PALAMU	15	0.4	8.15	6	40	9	60	0	-	-	-	-	-
18	LATEHAR	11	0.7	5.12	5	45.5	5	45.45	1	9.1	-	-	-	-
19	PASHCHIMI SINGHBHUM	18	0.75	11.15	6	33.3	10	55.56	2	11.11	-	-	-	-
20	SARAIKELA KHARSAWAN	9	0.9	5.1	6	66.7	2	22.22	1	11.11	-	-	-	-
21	PURBI SINGHBHUM	25	0.89	10.64	7	28	15	60	2	8	1	4	-	-
22	RANCHI	22	0.98	6.33	9	40.9	11	50	2	9.1	-	-	-	-
23	KHUNTI	32	0.52	5	23	71.9	8	25	1	3.12	-	-	-	-
24	SAHIBGANJ	16	1.75	4.65	2	12.5	14	87.5	-	-	-	-	-	-
	<b>Total</b>	342	0	11.15	117		186		38		1			

**Table 4: District wise categorisation of depth to water level – November, 2017**

Sl. No.	District Name	No. of Wells	Depth to water level (m bgl)		No./Percentage of wells Showing Depth to Water Level in the Range of									
					0 to 2		2 to 5		5 to 10		10 to 20		20 to 40	
					No.	%	No.	%	No.	%	No.	%	No.	%
			Min	Max										
1	BOKARO	16	1.3	10.82	3	18.8	9	56.25	4	25	-	-	-	-
2	CHATRA	8	3.87	10.5	-	-	3	37.5	4	50	1	12.5	0	-
3	DEOGHAR	7	2.22	7.62	-	-	6	85.71	1	14.29	-	-	-	-
4	DHANBAD	19	1.62	9.66	2	10.5	11	57.9	6	31.57	-	-	-	-
5	DUMKA	15	2.85	8.51	-	-	9	60	6	40	-	-	-	-
6	JAMTARA	8	2.46	7.1	-	-	5	62.5	3	37.5	-	-	-	-
7	GARHWA	7	3.07	7.7	-	-	3	42.85	4	57.15	-	-	-	-
8	GIRIDIH	16	1.09	7.44	4	25	8	50	4	25	-	-	-	-
9	GODDA	13	3.02	10.21	-	-	6	46.15	6	46.15	1	7.7	0	-
10	GUMLA	14	0.72	5.2	3	21.4	9	64.28	2	14.3	-	-	-	-
11	SIMDEGA	10	0.54	4.9	3	30	7	70	0		-	-	-	-
12	HAZARIBAG	29	1.05	9.8	2	6.9	15	51.72	12	41.38	-	-	-	-
13	RAMGARH	11	1.14	6.31	1	9.1	9	81.8	1	9.1	-	-	-	-
14	KODARMA	6	2.2	8.04	-	-	4	66.67	2	33.33	-	-	-	-
15	LOHARDAGA	11	1.9	6.98	1	9.1	8	72.7	2	18.2	-	-	-	-
16	PAKUR	5	2.1	6.75	-	-	3	60	2	40	-	-	-	-
17	PALAMU	16	2.88	9.45	-	-	10	62.5	6	37.5	-	-	-	-
18	LATEHAR	11	2.41	8.35	-	-	7	63.64	4	36.36	-	-	-	-
19	PASHCHIMI SINGHBHUM	17	1.45	10.3	3	17.7	11	64.7	3	17.65	-	-	-	-
20	SARAIKELA KHARSAWAN	11	0.74	7.65	2	18.2	7	63.64	2	18.18	-	-	-	-
21	PURBI SINGHBHUM	28	1.1	14.7	4	14.3	17	60.72	6	21.42	1	3.58	-	-
22	RANCHI	43	0.7	6.39	8	18.6	29	67.45	6	13.95	-	-	-	-
23	KHUNTI	32	0.96	5.86	3	9.38	27	84.37	2	6.25	-	-	-	-
24	SAHIBGANJ	15	2.1	7.51	-	-	14	93.34	1	6.66	-	-	-	-
	<b>Total</b>	368	0.54	14.70	39		237		89		3	-	-	-

**Table 5: District wise categorisation of depth to water level – January, 2018**

Sl. No.	District Name	No. of Wells	Depth to water level (m bgl)		No./Percentage of wells Showing Depth to Water Level in the Range of									
					0 to 2		2 to 5		5 to 10		10 to 20		20 to 40	
			Min	Max	No.	%	No.	%	No.	%	No.	%	No.	%
1	BOKARO	14	1.72	12.32	1	7.14	6	42.86	6	42.86	1	7.14	-	-
2	CHATRA	10	4.5	11.77	-	-	2	20	7	70	1	10	-	-
3	DEOGHAR	7	5.41	9.96	-	-	-	-	7	100	-	-	-	-
4	DHANBAD	22	2.18	10.73	-	-	13	59	8	36.41	1	4.5	-	-
5	DUMKA	14	1.6	8.62	-	-	5	35.71	9	64.29	-	-	-	-
6	JAMTARA	4	3.6	6.4	-	-	2	50	2	50	-	-	-	-
7	GARHWA	6	5.07	6.81	-	-	-	-	6	100	-	-	-	-
8	GIRIDIH	17	3.46	10.6	-	-	5	29.41	11	64.71	1	5.88	-	-
9	GODDA	11	3.05	10.3	-	-	5	45.46	4	36.36	2	18.18	-	-
10	GUMLA	14	1.48	7.34	2	14.3	9	64.28	3	21.43	-	-	-	-
11	SIMDEGA	10	1.8	6.38	2	20	5	50	3	30	-	-	-	-
12	HAZARIBAG	28	2.22	11.12	-	-	7	25	17	60.72	4	14.28	-	-
13	RAMGARH	11	2.6	8.98	-	-	5	45.45	6	54.55	0	-	-	-
14	KODARMA	5	3.61	6.1	-	-	2	40	3	60	0	-	-	-
15	LOHARDAGA	10	1.84	7.95	1	10	4	40	5	50	0	-	-	-
16	PAKUR	7	2.66	8.35	-	-	1	14.29	6	85.71	0	-	-	-
17	PALAMU	16	4.48	11.03	-	-	4	25	11	68.75	1	6.25	-	-
18	LATEHAR	11	2.84	10.5	-	-	4	36.36	6	54.54	1	9.1	-	-
19	PASHCHIMI SINGHBHUM	14	3.64	13.15	-	-	3	21.42	10	71.44	1	7.14	-	-
20	SARAIKELA KHARSAWAN	9	1.49	10.35	1	11.1	2	22.22	5	55.56	1	11.1	-	-
21	PURBI SINGHBHUM	12	2.35	17.6	-	-	4	33.33	5	41.67	3	25	-	-
22	RANCHI	18	1.6	8.5	1	5.55	6	33.33	11	61.12	-	-	-	-
23	KHUNTI	32	2.15	7.83	-	-	20	62.5	12	37.5	-	-	-	-
24	SAHIBGANJ	13	1.5	7.1	1	7.7	11	84.6	1	7.7	-	-	-	-
	<b>Total</b>	315	1.48	13.15	9		125		164		17			

**Table 6: District wise categorisation of fluctuation (Annual) in water level and frequency  
Distribution between May 2016 – May, 2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	10	0.02	1.84	0.04	5.35	6 60%	0	0	2 20%	1 10%	1 10%	6	4
2	CHATRA	5	0.46	3.3	0.48	1.77	1 20%	1 20%	0	3 60%	0	0	2	3
3	DEOGHAR	6	0.06	5.01	0.5	0.51	3 50%	0	1 16.67%	2 33.33%	0	0	4	2
4	DHANBAD	15	0.1	5.01	0.02	3.28	8 53.33%	0	1 6.67%	4 26.67%	2 13.33%	0	9	6
5	DUMKA	20	0.06	2.75	0.42	0.45	15 75%	1 5%	0	2 10%	0	0	16	2
6	GARHWA	6	0.6	0.75	0.61	6.79	3 50%	0	0	1 16.67%	1 16.67%	1 16.67%	3	3
7	GIRIDIH	16	0.1	2.61	0.3	1.45	13 81.25%	1 6.25%	0	2 12.50%	0	0	14	2
8	GODDA	10	0.48	0.55	0.05	1.15	3 30%	0	0	7 70%	0	0	3	7
9	GUMLA	22	0.18	3.8	0.1	0.75	6 27.27%	4 18.18%	0	11 50%	0	0	10	11
10	HAZARIBAG	16	0.07	5.61	0.1	3.99	7 43.75%	1 6.25%	1 6.25%	4 25%	2 12.5%	0	9	6
11	KODARMA	3	0.37	1.55	0.69	0.69	2 66.67%	0	0	1 33.33%	0	0	2	1
12	LOHARDAGA	7	0.12	1.9	1.25	1.25	5 71.43%	0	0	1 14.29%	0	0	5	1
13	PAKAUR	10	0.02	4.09	0.03	0.41	5 50%	1 10%	1 10%	2 20%	0	0	7	2
14	PALAMU	22	0.15	7.69	0.17	5.95	7 31.82%	2 9.09%	2	4 18.18	3 13.64%	3 13.64%	11	10
15	PASHCHIMI SINGHBHUM	19	0.3	4.55	0.15	1.65	8 42.11%	0	1 5.26%	9 47.37%	0	0	9	9
16	PURBI SINGHBHUM	24	0.05	2.59	0.1	3.3	5 20.83%	2 8.33%	0	15 62.5	2 8.33%	0	7	17
17	RANCHI &	23	0.05	3.45	0.07	3.97	10 43.48%	2 8.7%	0	8 34.78%	1 4.35%	0	12	9
18	SAHIBGANJ	15	0.03	1.46	0.02	2.46	9 60%	0	0	4 26.67%	1 6.67%	0	9	5
	<b>Total</b>	249	0.02	7.67	0.02	6.79	116	11	7	82	13	5	138	100



**Table 7: District wise categorisation of fluctuation (Annual) in water level and frequency  
Distribution between August, 2016 – August, 2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	13	0.3	1.42	0.17	0.45	7 53.85%	0	0	6 46.15%	0	0	7	6
2	CHATRA	7	0.1	1.28	0.2	0.9	3 42.86%	0	0	4 57.14%	0	0	3	4
3	DEOGHAR	5	0.5	5.5	0.75	1.29	2 40%	0	1 20%	2 40%	0	0	3	2
4	DHANBAD	5	1.5	5.86	0.09	0.39	1 20%	0	1 20%	3 60%	0	0	2	3
5	DUMKA	23	0.05	3.59	0.3	2.39	12 52.17%	1 4.35%	0	9 39.13%	1 4.35%	0	13	10
6	GARHWA	7	0.42	5.02	0.12	0.85	2 28.57%	0	1 14.29%	4 57.14%	0	0	3	4
7	GIRIDIH	12	0.5	3.62	0.4	3.76	2 16.67%	2 16.67%	0	5 41.67%	3 25%	0	4	8
8	GODDA	12	0.14	5.07	0.07	3.65	6 50%	0	1 8.33%	4 33.33%	1 8.33%	0	7	5
9	GUMLA	19	0.28	4.07	0.1	1.8	14 73.68%	0	1 5.26%	4 21.05%	0	0	15	4
10	HAZARIBAG	10	0.13	2.29	0.25	3.3	6 60%	1 10%	0	2 20%	1 10%	0	7	3
11	KODARMA	3	-	-	0.47	2.93	0	0	0	2 66.67%	1 33.33%	0	0	3
12	LOHARDAGA	10	0.25	3.15	0.05	0.8	5 50%	3 30%	0	2 20%	0	0	8	2
13	PAKAUR	8	0.35	0.35	0.02	0.95	1 12.5%	0	0	7 87.5%	0	0	1	7
14	PALAMU	18	0.18	5.54	0.15	1.18	8 44.44%	3 16.67%	1 5.56%	6 33.33%	0	0	12	6
15	PASHCHIMI SINGHBHUM	20	0.04	1.17	0.26	4.27	7 35%	0	0	5 25%	6 30%	2 10%	7	13
16	PURBI SINGHBHUM	12	1.23	3.75	0.48	3.43	1 8.33%	1 8.33%	0	7 58.33%	3 25%	0	2	10
17	RANCHI	14	0.24	2.9	0.15	2.09	6 42.86%	2 14.29%	0	5 35.71%	1 7.14%	0	8	6
18	SAHIBGANJ	13	0.02	3.41	0.03	0.72	7 53.85%	1 7.69%	0	5 38.46%	0	0	8	5
	<b>Total</b>	<b>211</b>	<b>0.04</b>	<b>5.86</b>	<b>0.02</b>	<b>4.27</b>	<b>90</b>	<b>14</b>	<b>6</b>	<b>82</b>	<b>17</b>	<b>2</b>	<b>110</b>	<b>101</b>

**Table 8: District wise categorisation of fluctuation (Annual) in water level and frequency  
Distribution between November, 2016 – November,2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	13	0.59	1.59	0.04	1.15	10 76.92%	0	0	3 23.08%	0	0	10	3
2	CHATRA	7	0.21	1.67	0.15	0.52	4 57.14%	0	0	3 42.86%	0	0	4	3
3	DEOGHAR	6	1.59	6.2	3.27	3.27	1 16.67%	2 33.33%	2 33.33%	0	1 16.67%	0	5	1
4	DHANBAD	15	0.09	1.44	0.01	4.46	9 60%	0	0	5 33.33%	0	1 6.67%	9	6
5	DUMKA	18	0.02	0.09	0.02	1.2	5 27.78%	0	0	13 72.22	0	0	5	13
6	GARHWA	6	-	-	0.79	1.8	0	0	0	6 100%	0	0	0	6
7	GIRIDIH	15	0.21	9.4	0.12	2.95	7 46.67%	2 13.33%	1 6.67%	4 26.67%	1 6.67%	0	10	5
8	GODDA	11	0.02	0.29	0.04	0.12	6 54.55%	0	0	5 45.45%	0	0	6	5
9	GUMLA	22	0.1	0.95	0.1	1.26	6 27.27%	0	0	14 63.64	0	0	6	14
10	HAZARIBAG	11	0.67	5.64	2.72	2.72	8 72.73%	0	2 18.18%	0	1 9.09%	0	10	1
11	KODARMA	5	0.2	0.74	2.02	2.99	3 60%	0	0	0	2 40%	0	3	2
12	LOHARDAGA	9	1.35	1.45	0.4	1.1	3 33.33%	0	0	6 66.67%	0	0	3	6
13	PAKAUR	5	0.02	0.23	0.11	1.51	2 40%	0	0	3 60%	0	0	2	3
14	PALAMU	20	0.09	0.76	0.06	2.22	2 10%	0	0	17 85%	1 5%	0	2	18
15	PASHCHIMI SINGHBHUM	22	0.16	7.97	0.1	2.85	8 36.36%	0	1 4.55%	11 50%	2 9.09%	0	9	13
16	PURBI SINGHBHUM	10	0.3	2.65	0.18	1.35	2 20%	3 30%	0	5 50%	0	0	5	5
17	RANCHI	13	0.25	2.35	0.7	1.1	9 69.23%	1 7.69%	0	3 23.08%	0	0	10	3
18	SAHIBGANJ	10	0.12	1.95	0.12	0.7	7 70%	0	0	3 30%	0	0	7	3
	<b>Total</b>	<b>218</b>	<b>0.02</b>	<b>9.40</b>	<b>0.01</b>	<b>4.46</b>	<b>92</b>	<b>8</b>	<b>6</b>	<b>101</b>	<b>8</b>	<b>1</b>	<b>106</b>	<b>110</b>

**Table 9: District wise categorisation of fluctuation (Annual) in water level and frequency  
Distribution between January, 2017 – January, 2018**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	10	0.08	0.52	0.82	4.87	6 60%	0	0	2 20%	1 10%	1 10%	6	4
2	CHATRA	8	0.71	0.71	0.25	6.15	1 12.5%	0	0	6 75%	0	1 12.5%	1	7
3	DEOGHAR	6	0.06	0.83	0.03	0.03	5 83.33%	0	0	1 16.67	0	0	5	1
4	DHANBAD	16	0.06	1.01	0.11	0.45	11 68.75%	0	0	5 31.25%	0	0	11	5
5	DUMKA	18	0.01	3.65	0.32	0.32	15 83.33%	2 11.11%	0	1 5.56%	0	0	17	1
6	GARHWA	4	-	-	0.8	1.07	0	0	0	4 100%	0	0	0	4
7	GIRIDIH	15	1.1	1.11	0.01	6.33	2 13.33%	0	0	10 66.67%	2 13.33%	1 6.67%	2	13
8	GODDA	6	0.18	3.8	-	-	5 83.33%	1 16.67%	0	0	0	0	6	0
9	GUMLA	23	0.1	2.13	0.01	1.55	10 43.48%	1 4.35%	0	12 52.17%	0	0	11	12
10	HAZARIBAG	21	0.03	2.99	0.02	3.9	4 19.05	3 14.29%	0	11 52.38%	2 9.52%	0	7	13
11	KODARMA	3	0.01	0.01	0.26	0.36	1 33.33%	0	0	2 66.67%	0	0	1	2
12	LOHARDAG A	10	0.02	2.48	0.02	1.65	4 40%	1 19%	0	5 50%	0	0	5	5
13	PAKAUR	4	0.14	1.53	0.05	0.05	3 75%	0	0	1 25%	0	0	3	1
14	PALAMU	14	0.62	0.62	0.4	5.61	1 7.14%	0	0	10 71.43%	2 14.29	1 7.14%	1	13
15	PASHCHIMI SINGHBHUM	22	0.01	0.8	0.1	4.2	4 18.18%	0	0	15 68.18%	2 9.09%	1 4.55%	4	18
16	PURBI SINGHBHUM	11	0.01	0.55	0.05	1.1	3 27.27%	0	0	8 72.73%	0	0	3	8
17	RANCHI	18	0.05	3.6	0.1	1.7	8 44.44%	4 22.22%	0	6 33.33%	0	0	12	6
18	SAHIBGANJ	10	0.06	6.08	0.45	0.45	6 60%	2 20%	1 10%	1 10%	0	0	9	1
	<b>Total</b>	<b>219</b>	<b>0.01</b>	<b>6.08</b>	<b>0.00</b>	<b>6.33</b>	<b>89</b>	<b>14</b>	<b>1</b>	<b>100</b>	<b>9</b>	<b>5</b>	<b>104</b>	<b>114</b>

**Table 10: District wise categorisation of fluctuation (Seasonal) in water level and frequency Distribution, May, 2017 - August, 2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	12	1.85	8.95	-	-	1 8.33%	1 8.33%	10 83.33%	0	0	0	12	0
2	CHATRA	7	2.75	7.24	-	-	0	4 57.14%	3 42.86%	0	0	0	7	0
3	DEOGHAR	6	3.15	6.08	-	-	0	4 66.67%	2 33.33%	0	0	0	6	0
4	DHANBAD	5	0.85	5.82	-	-	1 20%	1 20%	3 60%	0	0	0	5	0
5	DUMKA	24	0.71	7.24	-	-	5 20.83%	8 33.33%	11 45.83%	0	0	0	24	0
6	GARHWA	6	2.37	11.46	-	-	0	3 50%	3 50%	0	0	0	6	0
7	GIRIDIH	12	1.7	10.05	-	-	1 8.33%	0	11 91.67%	0	0	0	12	0
8	GODDA	12	0.82	7.2	0.5	0.5	3 25%	6 50%	2 16.67%	1 8.33%	0	0	11	1
9	GUMLA	22	1	7.65	-	-	1 4.55%	6 27.27%	15 68.18%	0	0	0	22	0
10	HAZARIBAG	15	0.6	8.3	-	-	1 6.67%	2 13.33%	12 80%	0	0	0	15	0
11	KODARMA	3	1.45	3.25	-	-	1 33.33%	2 66.67%	0	0	0	0	3	0
12	LOHARDAG A	11	3.15	8.18	-	-	0	2 18.18%	9 81.82%	0	0	0	11	0
13	PAKAUR	8	0.45	7.39	-	-	3 37.5%	2 25%	3 37.5%	0	0	0	8	0
14	PALAMU	19	1.23	10.68	-	-	2 10.53%	3 15.79%	14 73.68%	0	0	0	19	0
15	PASHCHIMI SINGHBHUM	22	1.4	7.9	-	-	2 9.09%	5 22.73%	14 63.64%	0	0	0	21	0
16	PURBI SINGHBHUM	14	1.2	10.72	-	-	2 14.29%	3 21.43%	9 64.29%	0	0	0	14	0
17	RANCHI	18	2.25	10	-	-	0	2 11.11%	16 88.89%	0	0	0	18	0
18	SAHIBGANJ	15	0.16	8.9	-	-	2 13.33%	6 40%	7 46.67%	0	0	0	15	0
	<b>Total</b>	<b>231</b>	<b>0.16</b>	<b>11.46</b>			<b>25</b>	<b>60</b>	<b>144</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>229</b>	<b>1</b>

**Table 11: District wise categorisation of fluctuation (Seasonal) in water level and frequency Distribution, May, 2017 - November, 2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	12	1.4	8.7	-	-	2 16.67%	4 33.33%	6 50%	0	0	0	12	0
2	CHATRA	8	1.7	6.04	-	-	1 12.5%	6 75%	1 12.5%	0	0	0	8	0
3	DEOGHAR	7	0.38	6.31	-	-	2 28.57%	0	5 71.43%	0	0	0	7	0
4	DHANBAD	19	0.12	6.96	-	-	7 36.84%	4 21.05%	8 42.11%	0	0	0	19	0
5	DUMKA	23	0.87	4.03	0.21	1.22	5 21.74%	13 56.52%	2 8.7%	3 13.04%	0	0	20	3
6	GARHWA	5	1.42	8.8	-	-	3 60%	1 20%	1 20%	0	0	0	5	0
7	GIRIDIH	15	3.25	9.3	-	-	0	3 20%	12 80%	0	0	0	15	0
8	GODDA	13	0.52	3.49	1.8	1.8	7 53.85%	5 38.46%	0	1 7.69%	0	0	12	1
9	GUMLA	22	0.63	6.1	-	-	2 9.09%	11 50%	9 40.91%	0	0	0	22	0
10	HAZARIBAG	9	1.46	5.24	-	-	2 22.22%	2 22.22%	5 55.56%	0	0	0	9	0
11	KODARMA	3	0.21	2.65	0.28	0.28	1 33.33%	1 33.33%	0	1 33.33%	0	0	2	1
12	LOHARDAG A	11	3.35	5.7	-	-	0	3 27.27%	8 72.73%	0	0	0	11	0
13	PAKAUR	5	0.05	4.63	0.32	0.32	2 40%	1 20%	1 20%	1 20%	0	0	4	1
14	PALAMU	21	1.06	9.28	-	-	3 14.29%	10 47.62%	8 38.1%	0	0	0	21	0
15	PASHCHIMI SINGHBHUM	23	0.92	8.63	0.11	0.11	3 13.04%	6 26.09%	13 56.52%	1 4.35%	0	0	22	1
16	PURBI SINGHBHUM	14	1.25	7.05	-	-	1 7.14%	1 7.14%	12 85.71%	0	0	0	14	0
17	RANCHI	39	0.88	8.7	-	-	5 12.82%	8 20.51%	26 66.67%	0	0	0	39	0
18	SAHIBGANJ	15	0.91	7.85	0.05	0.05	2 13.33%	7 46.67%	5 33.33%	1 6.67%	0	0	14	1
	<b>Total</b>	<b>264</b>	<b>0.05</b>	<b>9.28</b>	<b>0.00</b>	<b>1.80</b>	<b>48</b>	<b>86</b>	<b>122</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>256</b>	<b>8</b>

**Table 12: District wise categorisation of fluctuation (Seasonal) in water level and frequency Distribution, May, 2017 - January, 2018**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	12	0.31	8.28	-	-	6 50%	4 33.33%	2 16.67%	0	0	0	12	0
2	CHATRA	8	0.78	3.01	-	-	6 75%	2 25%	0	0	0	0	8	0
3	DEOGHAR	7	0.14	3.07	1.45	1.96	3 42.86%	2 28.57%	0	2 28.57%	0	0	5	2
4	DHANBAD	18	0.7	6.32	0.28	0.93	4 22.22%	7 38.89%	5 27.78%	2 11.11%	0	0	16	2
5	DUMKA	18	0.63	4.64	0.32	0.32	7 38.89%	9 50%	1 5.56%	1 5.56%	0	0	17	1
6	GARHWA	4	0.59	1.7	-	-	4 100%	0	0	0	0	0	4	0
7	GIRIDIH	16	0.1	8.51	-	-	4 25%	8 50%	4 25%	0	0	0	16	0
8	GODDA	7	0.55	4.8	-	-	3 42.86%	3 42.86%	1 14.29%	0	0	0	7	0
9	GUMLA	23	1.18	4.74	0.13	0.13	8 34.78%	10 43.48%	4 17.39%	1 4.35%	0	0	22	1
10	HAZARIBAG	20	0.7	3.98	1.02	2.76	11 55%	6 30%	0	1 5%	2 10%	0	17	3
11	KODARMA	2	1.24	1.31	-	-	2 100%	0	0	0	0	0	2	0
12	LOHARDAGA	10	0.15	5.01	-	-	2 20%	6 60%	2 20%	0	0	0	10	0
13	PAKAUR	5	0.13	3.03	0.32	1.15	2 40%	1 20%	0	2 40%	0	0	3	2
14	PALAMU	22	0.3	8.42	-	-	11 50%	6 27.27%	4 18.18%	0	0	0	21	0
15	PASHCHIMI SINGHBHUM	23	0.65	4.75	0.05	2.55	6 26.09%	11 47.83%	2 8.7%	3 13.04%	1 4.35%	0	19	4
16	PURBI SINGHBHUM	12	0.45	4.05	-	-	5 41.67%	5 41.67%	1 8.33%	0	0	0	11	0
17	RANCHI	20	0.29	5.9	0.15	1.25	6 30%	6 30%	6 30%	2 10%	0	0	18	2
18	SAHIBGANJ	12	0.1	8.1	0.12	0.12	3 25%	4 33.33%	4 33.33%	1 8.33%	0	0	11	1
	<b>Total</b>	<b>239</b>	<b>0.10</b>	<b>8.42</b>	<b>0.00</b>	<b>2.76</b>	<b>93</b>	<b>90</b>	<b>36</b>	<b>15</b>	<b>3</b>	<b>0</b>	<b>219</b>	<b>18</b>

**Table 13: District wise categorisation of fluctuation (Decadal) in water level and frequency  
Distribution between May (2007-2016 mean) - May, 2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	11	0.04	1.27	0.2	4.63	3 27.27%	0	0	7 63.64%	0	1 9.09%	3	8
2	CHATRA	8	0.77	2.12	0.06	1.54	2 25%	1 12.5%	0	5 62.5%	0	0	3	5
3	DEOGHAR	8	0.25	3.29	0.2	1.46	2 25%	2 25%	0	4 50%	0	0	4	4
4	DHANBAD	20	0.27	1.91	0.15	2.33	8 40%	0	0	11 55%	1 5%	0	8	12
5	DUMKA	23	0.16	3.66	0	2.03	10 43.48%	2 8.7%	0	10 43.48%	1 4.35%	0	12	11
6	GARHWA	6	0.7	1.37	0.3	5.97	2 33.33%	0	0	2 33.33%	1 16.67%	1 16.67%	2	4
7	GIRIDIH	17	0.07	1.64	0.06	4.49	3 17.65%	0	0	10 58.82%	3 17.65%	1 5.88%	3	14
8	GODDA	12	0.32	0.66	0.32	1.32	3 25%	0	0	9 75%	0	0	3	9
9	GUMLA	24	0.29	3.26	0.01	3.08	0	1 4.17%	0	16 66.67%	1 4.17%	0	7	17
10	HAZARIBAG	19	0.31	4.92	0.37	3.42	7 36.84%	1 5.26%	1 5.26%	9 47.37%	1 5.26%	0	9	10
11	KODARMA	3	0.37	0.64	0.69	0.69	2 66.67%	0	0	1 33.33%	0	0	2	1
12	LOHARDAG A	9	0.02	1.4	0.5	1.62	5 55.56%	0	0	4 44.44%	0	0	5	4
13	PAKAUR	10	0.02	3.38	0.12	0.56	4 40%	2 20%	0	4 40%	0	0	6	4
14	PALAMU	23	0	3.6	0.18	5.7	13 56.52%	3 13.04%	0	2 8.7%	3 13.04%	2 8.7%	16	7
15	PASHCHIMI SINGHBHUM	22	0.19	4.55	0.17	3.74	4 18.18%	2 9.09%	1 4.55%	12 54.55%	3 13.64%	0	7	15
16	PURBI SINGHBHUM	29	0.03	2.65	0.22	4.45	11 37.93%	2 6.9%	0	14 48.28%	1 3.45%	1 3.45%	13	16
17	RANCHI	42	0.01	4	0.02	3.97	12 28.57%	2 4.76%	0	23 54.76%	4 9.52%	0	14	27
18	SAHIBGANJ	18	0.03	4.8	0.04	4.84	11 61.11%	0	1 5.56%	4 22.22%	1 5.56%	1 5.56%	12	6
	<b>Total</b>	<b>304</b>	<b>0.00</b>	<b>4.92</b>	<b>0.00</b>	<b>5.97</b>	<b>108</b>	<b>18</b>	<b>3</b>	<b>147</b>	<b>20</b>	<b>7</b>	<b>129</b>	<b>174</b>

**Table 14: District wise categorisation of fluctuation (Decadal) in water level and frequency  
Distribution between August (2007-2016 mean) - August, 2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	13	0.09	1.59	0.61	1.86	11 84.62%	0	0	2 15.38%	0	0	11	2
2	CHATRA	7	0.23	1.12	0.43	0.68	5 71.43%	0	0	2 28.57%	0	0	5	2
3	DEOGHAR	6	0.6	5.35	0.34	0.93	2 33.33%	1 16.67%	1 16.67%	2 33.33%	0	0	4	2
4	DHANBAD	6	0.06	5.86	-	-	5 83.33%	0	1 16.67%	0	0	0	6	0
5	DUMKA	24	0.05	2.39	0.58	1.89	14 58.33%	3 12.5%	0	7 29.17%	0	0	17	7
6	GARHWA	7	0.2	3.06	-	-	5 71.43%	2 28.57%	0	0	0	0	7	0
7	GIRIDIH	12	0.22	3.91	0.13	3.82	5 41.67%	3 25%	0	3 25%	1 8.33%	0	8	4
8	GODDA	13	0.15	2.03	0.11	3.72	4 30.77%	1 7.69%	0	6 46.15%	2 15.38%	0	5	8
9	GUMLA	22	0.25	4.93	-	-	18 81.82%	3 13.64%	1 4.55%	0	0	0	22	0
10	HAZARIBAG	16	0.17	2.74	0.21	2.96	9 56.25%	2 12.5%	0	4 25%	1 6.25%	0	11	5
11	KODARMA	5	0.01	0.01	0.47	2.85	1 20%	0	0	2 40%	2 40%	0	1	4
12	LOHARDAGA	11	0.21	3.06	4.45	4.45	6 54.55%	4 36.36%	0	0	0	1 9.09%	10	1
13	PAKAUR	8	0.06	0.4	0.02	1.37	2 25%	0	0	6 75%	0	0	2	6
14	PALAMU	18	0.1	7.63	-	-	7 38.89%	10 55.56%	1 5.56%	0	0	0	18	0
15	PASHCHIMI SINGHBHUM	20	0.02	3.35	0.1	5.19	7 35%	2 10%	0	6 30%	4 20%	1 5%	9	11
16	PURBI SINGHBHUM	14	0.15	1.88	0.04	2.5	4 28.57%	0	0	9 64.29%	1 7.14%	0	4	10
17	RANCHI	19	0.32	4.55	0.12	0.57	10 52.63%	3 15.79%	1 5.26%	5 26.32%	0	0	14	5
18	SAHIBGANJ	14	0.4	3.24	0.03	0.93	4 28.57%	1 7.14%	0	9 64.29%	0	0	5	9
	<b>Total</b>	<b>235</b>	<b>0.01</b>	<b>7.63</b>	<b>0.00</b>	<b>5.19</b>	<b>119</b>	<b>35</b>	<b>5</b>	<b>63</b>	<b>11</b>	<b>2</b>	<b>159</b>	<b>76</b>



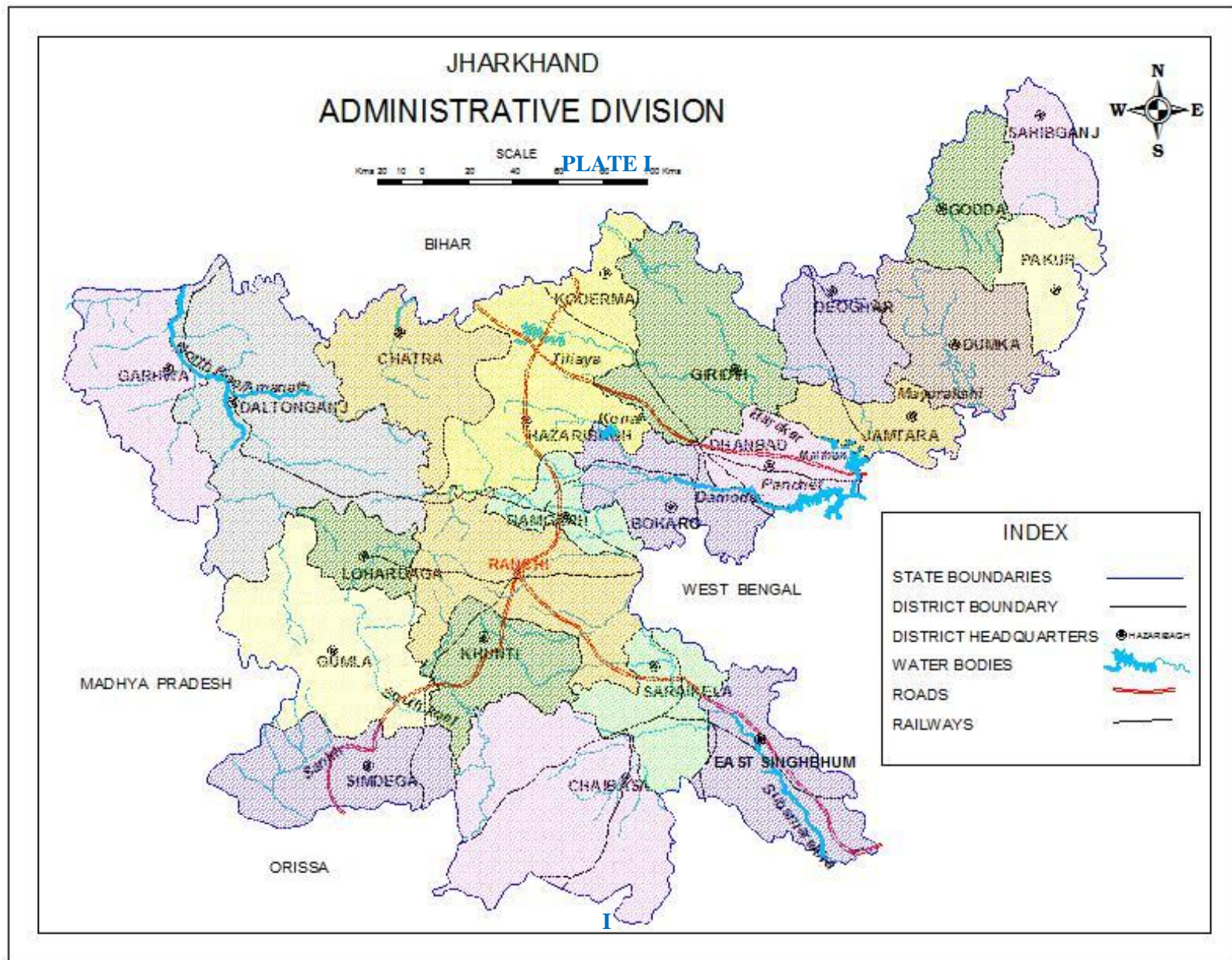
**Table 15: District wise categorisation of fluctuation (Decadal) in water level and frequency  
Distribution between November (2007-2016 mean) - November, 2017**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	13	0.24	1.92	1.63	1.68	11 84.62%	0	0	2 15.38%	0	0	11	2
2	CHATRA	8	0.11	3.08	0.53	0.64	5 62.5%	1 12.5%	0	2 25%	0	0	6	2
3	DEOGHAR	7	0.98	2.76	-	-	3 42.86%	4 57.14%	0	0	0	0	7	0
4	DHANBAD	20	0.1	3.11	0.02	1.2	8 40%	1 5%	0	11 55%	0	0	9	11
5	DUMKA	19	0.02	1.71	0.01	2.8	7 36.84%	0	0	11 57.89%	1 5.26%	0	7	12
6	GARHWA	6	0.28	1.26	0.63	2.9	3 50%	0	0	2 33.33%	1 16.67%	0	3	3
7	GIRIDIH	15	0.08	4.56	0.3	2.83	9 60%	1 6.67%	1 6.67%	3 20%	1 6.67%	0	11	4
8	GODDA	12	0.06	0.45	0.04	3.71	3 25%	0	0	6 50%	3 25%	0	3	9
9	GUMLA	22	0.03	1.77	0.02	0.56	18 81.82%	0	0	4 18.18%	0	0	18	4
10	HAZARIBAG	13	0.1	6.19	1.12	1.57	8 61.54%	1 7.69%	2 15.38%	2 15.38%	0	0	11	2
11	KODARMA	5	0.2	2.19	3.06	3.08	2 40%	1 20%	0	0	2 40%	0	3	2
12	LOHARDAG A	10	0.55	2.77	-	-	9 90%	1 10%	0	0	0	0	10	0
13	PAKAUR	5	0	0.23	0.69	0.69	4 80%	0	0	1 20%	0	0	4	1
14	PALAMU	20	0.08	2.91	0.11	0.79	15 75%	1 5%	0	4 4%	0	0	16	4
15	PASHCHIMI SINGHBHUM	22	0.14	3.37	0.19	4.36	11 50%	2 9.09%	0	7 31.82%	1 4.55%	1 4.55%	13	9
16	PURBI SINGHBHUM	11	0.14	0.59	0.17	1.46	7 63.64%	0	0	4 36.36%	0	0	7	4
17	RANCHI	37	0.08	5.02	0.03	1.13	25 67.57%	6 16.22%	1 2.7%	5 13.51%	0	0	32	5
18	SAHIBGANJ	12	0.12	3.21	0.11	0.7	7 58.33%	2 16.67%	0	3 25%	0	0	9	3
	<b>Total</b>	<b>257</b>	<b>0.00</b>	<b>6.19</b>	<b>0.01</b>	<b>4.36</b>	<b>155</b>	<b>21</b>	<b>4</b>	<b>67</b>	<b>9</b>	<b>1</b>	<b>180</b>	<b>77</b>

**Table 16: District wise categorisation of fluctuation (Decadal) in water level and frequency  
Distribution between January (2008-2017 mean) - January, 2018**

Sl. No.	District Name	No. of Wells	Range of Fluctuation (m)				No. of Wells/Percentage Showing Fluctuation						Total No. of Wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	>4	0 to 2	2 to 4	>4		
1	BOKARO	13	0.12	1.59	0.1	3.03	6 46.15%	0	0	5 38.46%	2 15.38%	0	6	7
2	CHATRA	8	0.02	1.08	0.33	1.35	3 37.5%	0	0	5 62.5%	0	0	3	5
3	DEOGHAR	7	0.4	0.89	0.26	1.81	2 28.57%	0	0	5 71.43%	0	0	2	5
4	DHANBAD	19	0.01	2.76	0.1	1.46	13 68.42%	2 10.53%	0	4 21.05%	0	0	15	4
5	DUMKA	18	0.05	1.52	0.05	1.4	14 77.78%	0	0	4 22.22%	0	0	14	4
6	GARHWA	4	0.11	0.43	0.16	1.96	2 50%	0	0	2 50%	0	0	2	2
7	GIRIDIH	16	0.06	1.85	0.67	6.38	9 56.25%	0	0	3 18.75%	2 12.5%	2 12.5%	9	7
8	GODDA	6	0.03	2.05	0.87	1.17	3 50%	1 16.67%	0	2 33.33%	0	0	4	2
9	GUMLA	23	0.04	1.81	0.13	0.81	15 65.22%	0	0	8 34.78%	0	0	15	8
10	HAZARIBAG	21	0.02	3.39	0.06	1.93	4 19.05%	3 14.29%	0	14 66.67%	0	0	7	14
11	KODARMA	4	1.09	1.09	0.04	0.26	1 25%	0	0	3 75%	0	0	1	3
12	LOHARDAGA	10	0.13	3.04	0.06	1.37	6 60%	1 10%	0	3 30%	0	0	7	3
13	PAKAUR	4	0.27	0.52	0.42	0.51	2 50%	0	0	2 50%	0	0	2	2
14	PALAMU	22	0.06	3.78	0.01	4.25	7 31.82%	3 13.64%	0	11 50%	0	1 4.55%	10	12
15	PASHCHIMI SINGHBHUM	23	0.03	0.86	0.26	4.73	10 43.48%	0	0	10 43.48%	2 8.7%	1 4.35%	10	13
16	PURBI SINGHBHUM	11	0.02	0.81	0.35	1.72	4 36.36%	0	0	7 63.64%	0	0	4	7
17	RANCHI	22	0.17	3.45	0.48	1.61	14 63.64%	2 9.09%	0	6 27.27%	0	0	16	6
18	SAHIBGANJ	10	0.26	5.23	0.78	0.78	6 60%	2 20%	1 10%	1 10%	0	0	9	1
	<b>Total</b>	<b>241</b>	<b>0.01</b>	<b>5.23</b>	<b>0.01</b>	<b>6.38</b>	<b>121</b>	<b>14</b>	<b>1</b>	<b>95</b>	<b>6</b>	<b>4</b>	<b>136</b>	<b>105</b>

PLATE I



## PLATE II

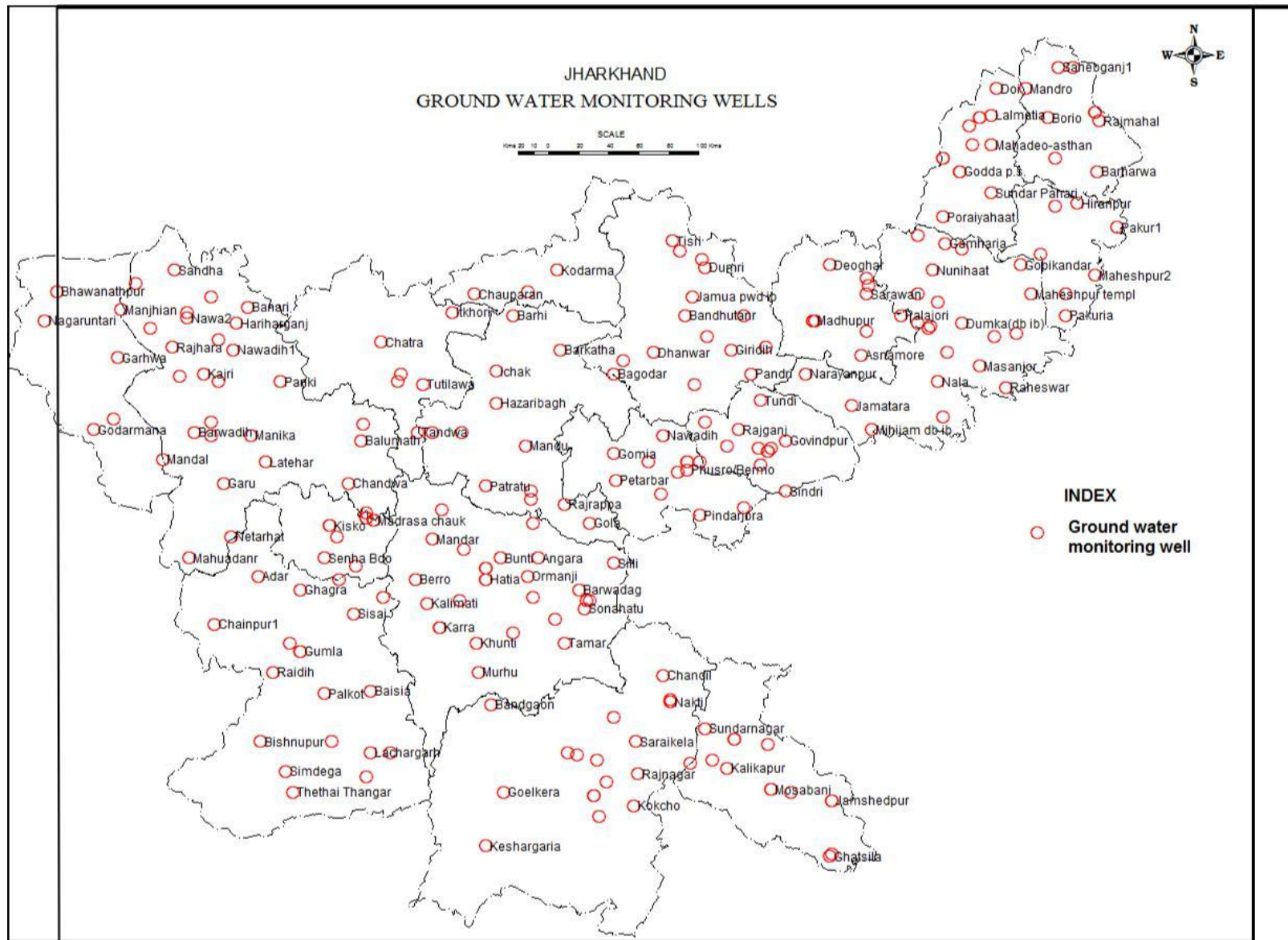
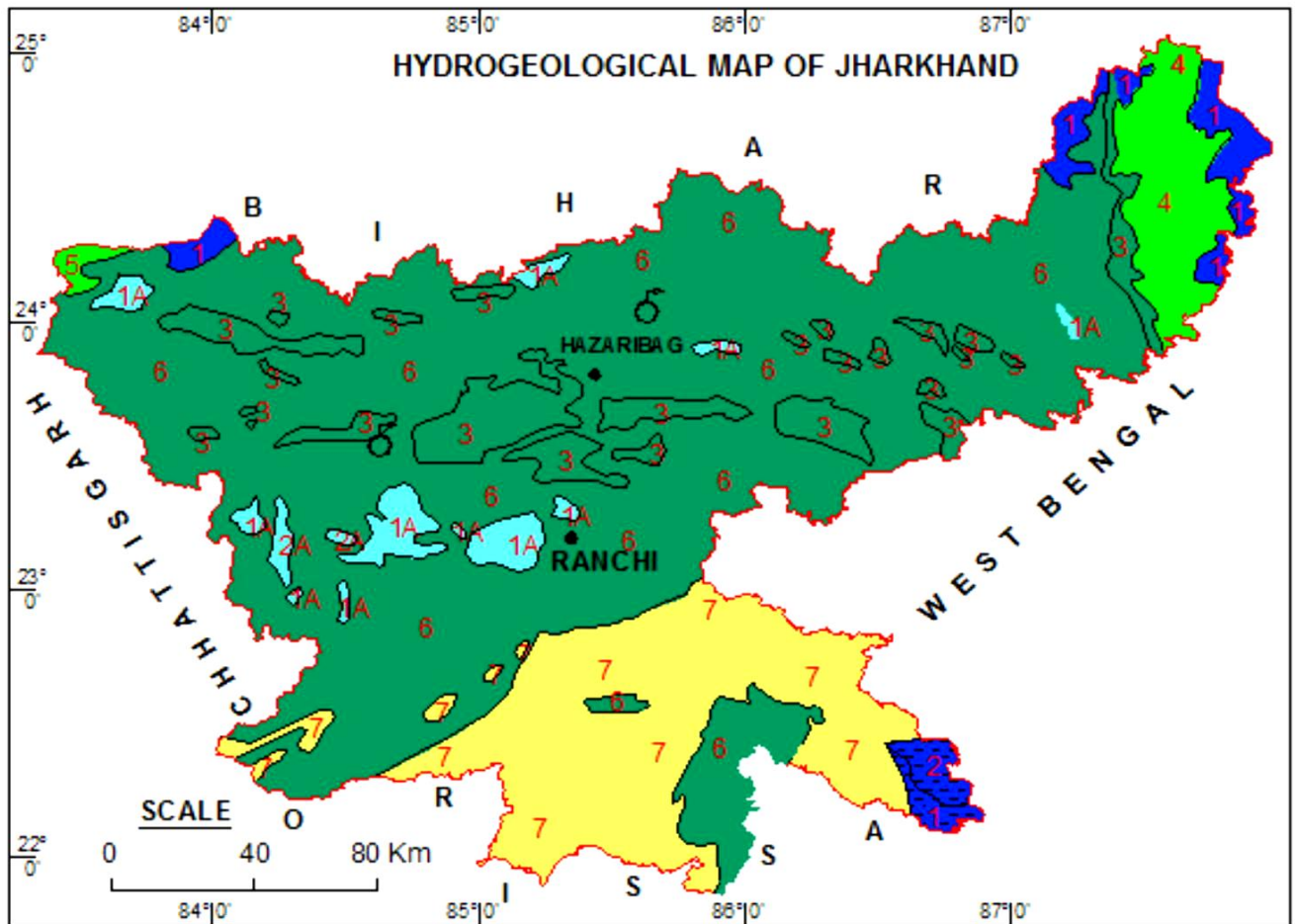




PLATE III



## FISSURED & SEMI-CONSOLIDATED FORMATIONS










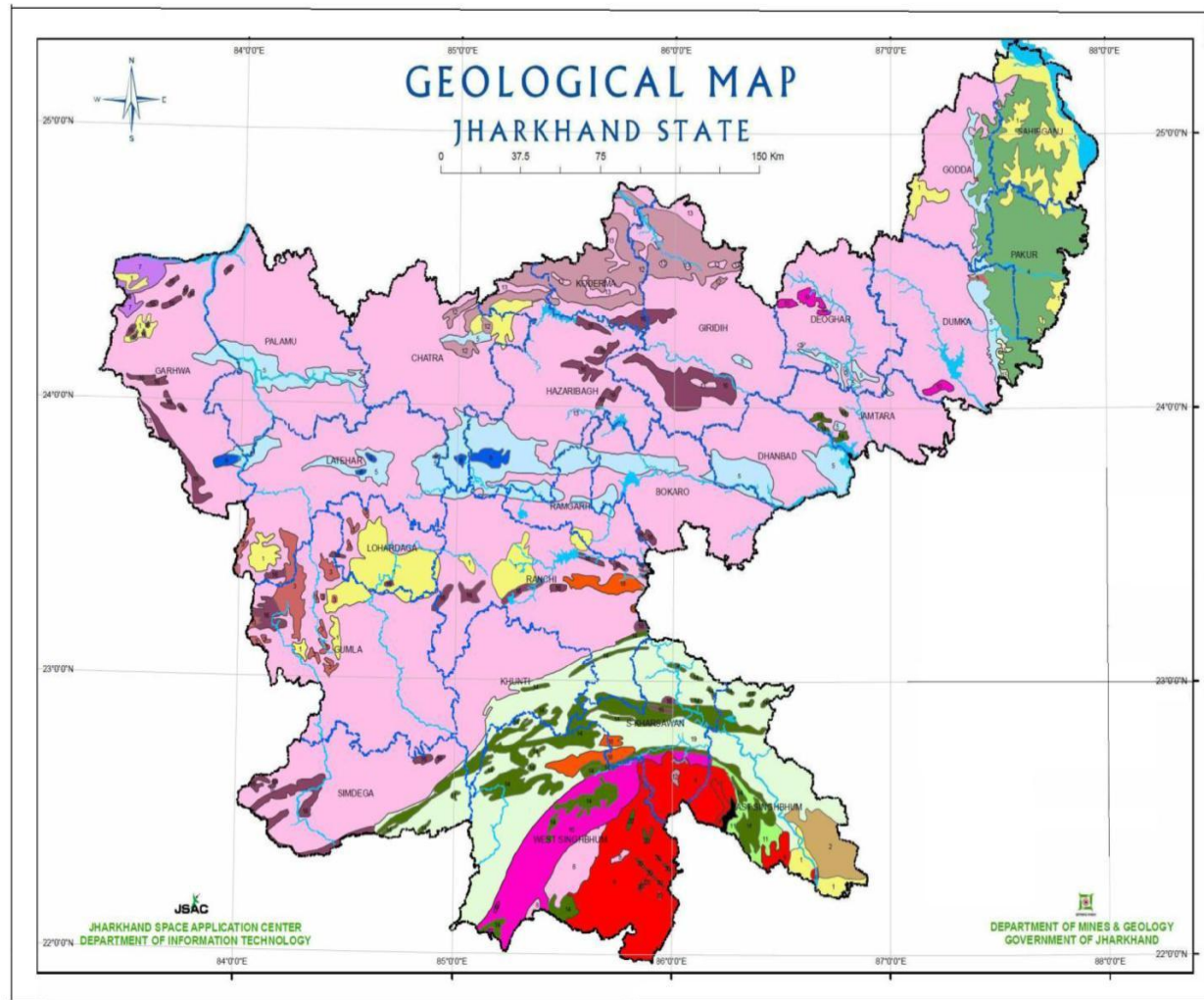
UNITS	AGE GROUP	FORMATION	COLOUR	LITHOLOGY	GROUN WATER POTENTIAL
1	QUATERNARY	ALLUVIUM		CLAY, SILT, GRAVEL, PEBBLES & CALC	>40 m <sup>3</sup> /hr
1A	QUATERNARY	ALLUVIUM		CLAY, SILT & SAND	1-10 m <sup>3</sup> /hr
2	PLEISTOCENE TERTIARY	LATERITES		LATERITES & LITHOMARGE	1-10 m <sup>3</sup> /hr
2A	PLEISTOCENE TERTIARY	TERTIARY		SAND, SILT, CLAY, PABLE & GRAVEL	10-40 m <sup>3</sup> /hr
3	CARBONIFEROUS ECRETACEOUS	GONDWANA		CLAY, SILT, GRIT, SANDSTONE & SHALE	1->25 m <sup>3</sup> /hr
4	LIJURASSIC ECRETACEOUS	RAJMAHAL BASALT		BASALT FLOWS WITH INTERTRAPPEANS	1-25 m <sup>3</sup> /hr
5	PROTEROZOIC E CAMBRIAN	VINDHYAN		QUARTZITE, LIMESTONE, SANDSTONE, DOLOMITE & SHALE	1-25 m <sup>3</sup> /hr
6	PROTEROZOIC ARCHEAN	CHHOTNAGPUR GNEISSC COMPLEX		GNEISSES & GRANITES	1->25 m <sup>3</sup> /hr
7	PROTEROZOIC ARCHEAN	VOLCANO-SEDIMENTARY		SCHISTS, PHYLITES, BASIC & ACIDIC INTRUSIVES	1-15 m <sup>3</sup> /hr

PLATE IV



INDEX

- 1, Alluvium, Soil/Boulder Conglomerate, Older Alluvium & Laterite
- 2, Tertiary Gravels
- 3, Laterite
- 4, Rajmahal Trap/Intertrappean Beds/Trap Dykes
- 5, Lower Gondwana System/Carbonaceous Shale/Sandstone/Coal Seams
- 6, Upper Gondwana System/Sandstone/Red Clay
- 7, Lower Vindhyan System/Limestone/Shale
- 8, Kolhan Series/Limestone/Sandstone/Quartzite
- 9, Singhbhum Granite
- 10, BHQ/BHJ/Metavolcanics/Metasedimentary

- 11, Dhanjori Quartzite and Conglomerate
- 12, Micaschist, Phyllite, Quartzite/Metamorphic of Chhotanagpur
- 13, Chhotanagpur Gneiss & Granophyre
- 14, Dhanjori Lava/Dalma Lava/ Basic rocks
- 15, Sandstone, Shale (Dubrajpur Formation)
- 16, Basic & Ultrabasic
- 17, Gabbro - Anorthosite
- 18, Granite
- 19, Volcanogenic Meta-sediments and Metasedimentary rocks
- 20, Newer Dolerite
- River/Water Body
- District Boundary
- State Boundary

PLATE V

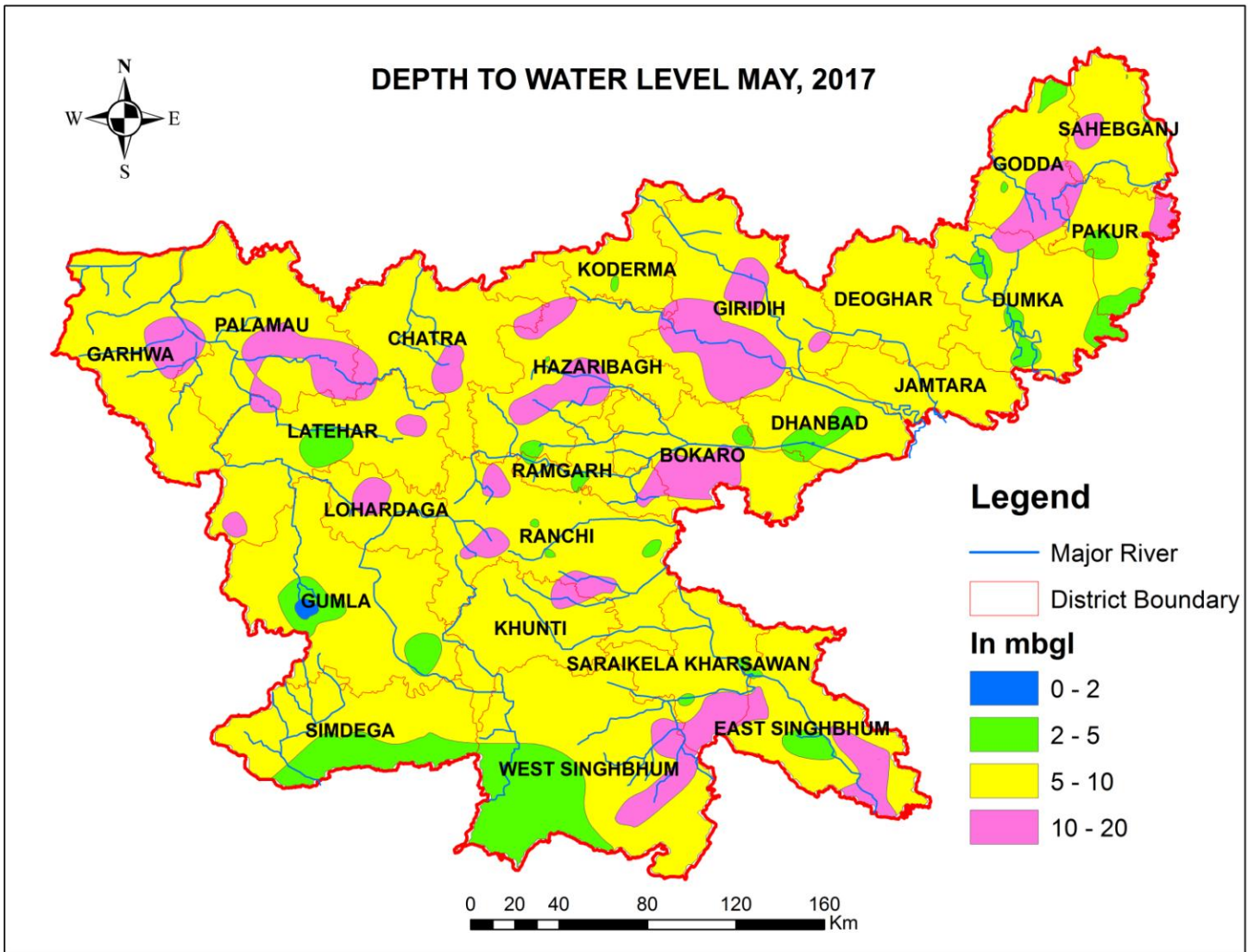




PLATE VI

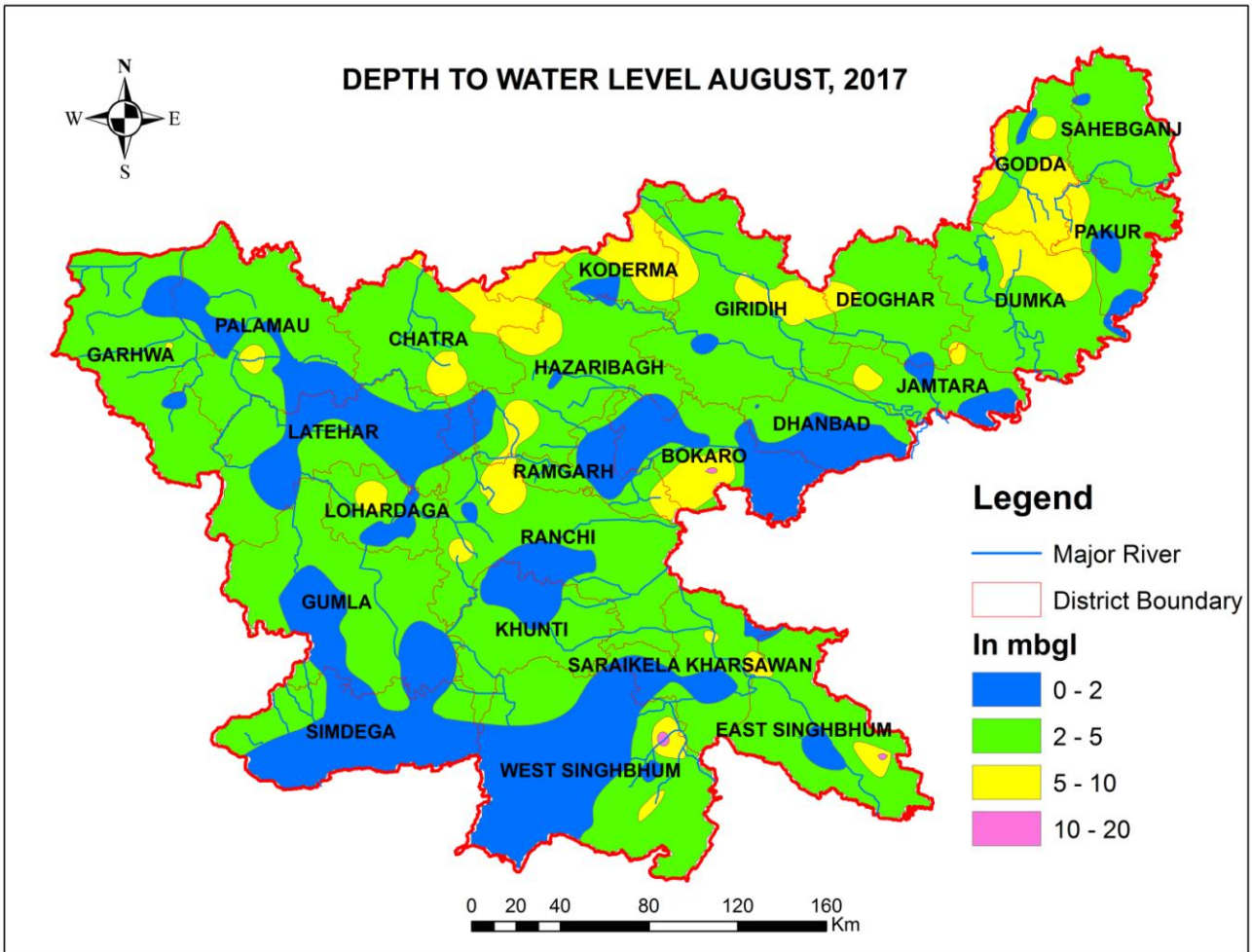




PLATE VII

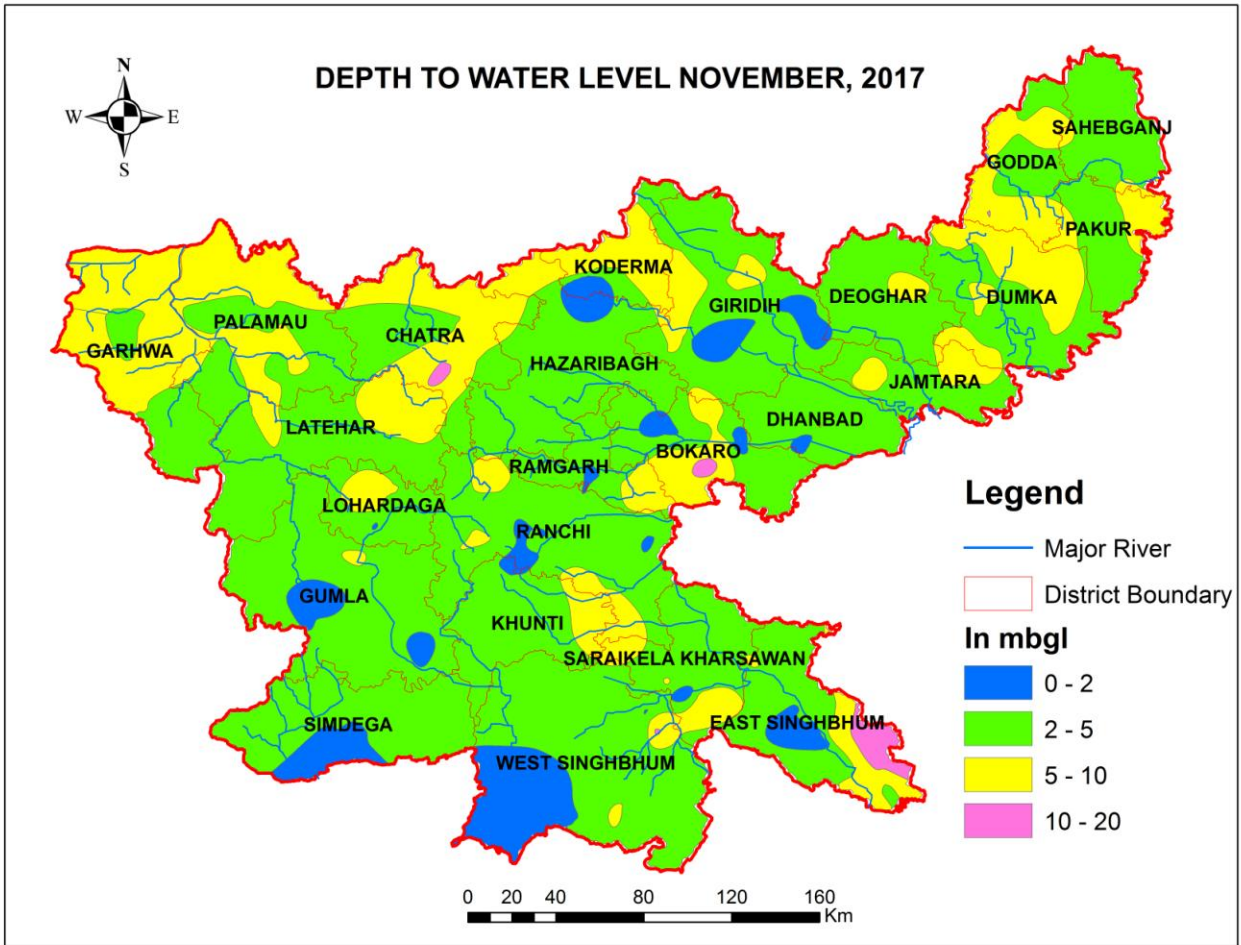


PLATE-VIII

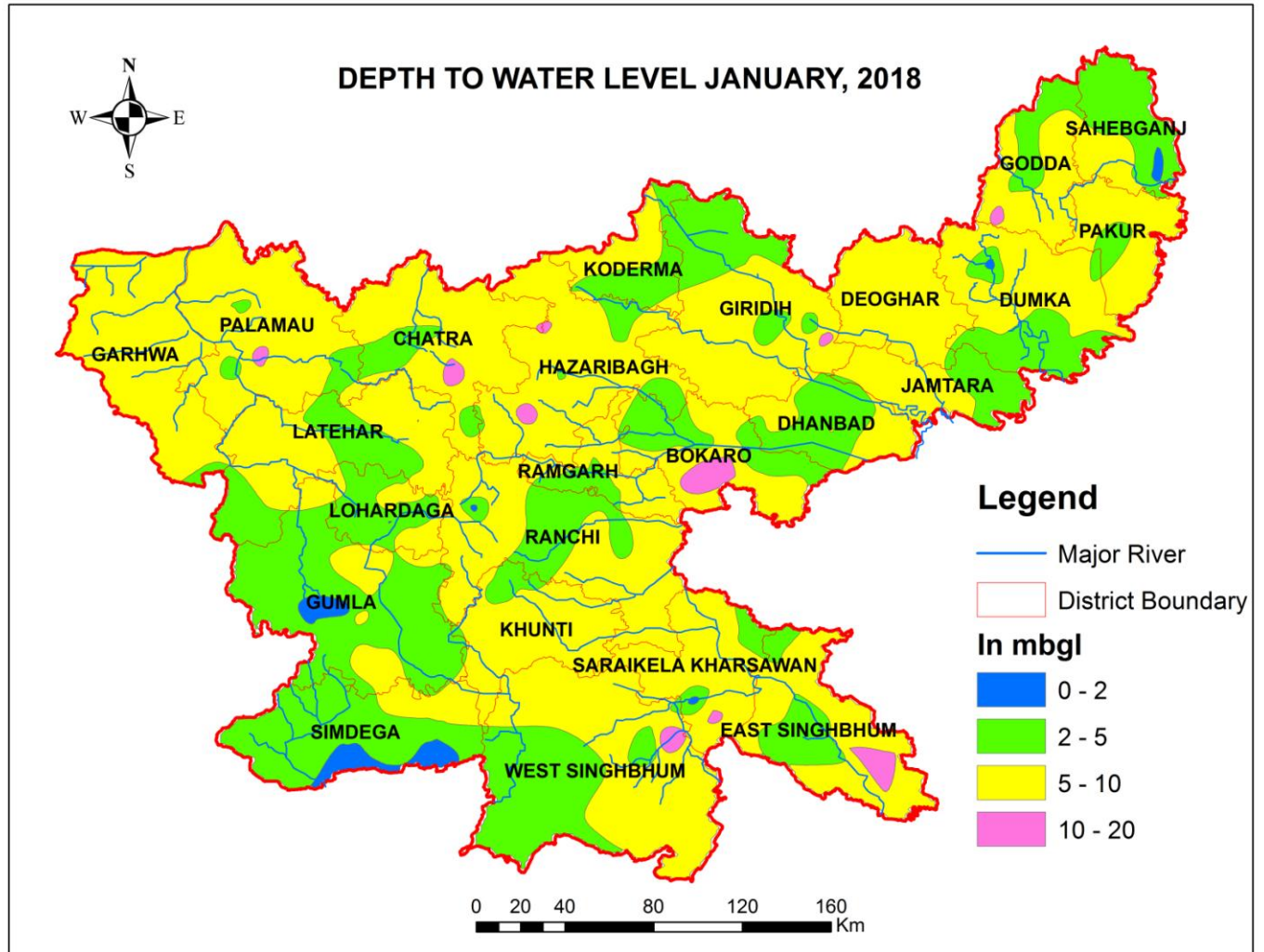


PLATE IX

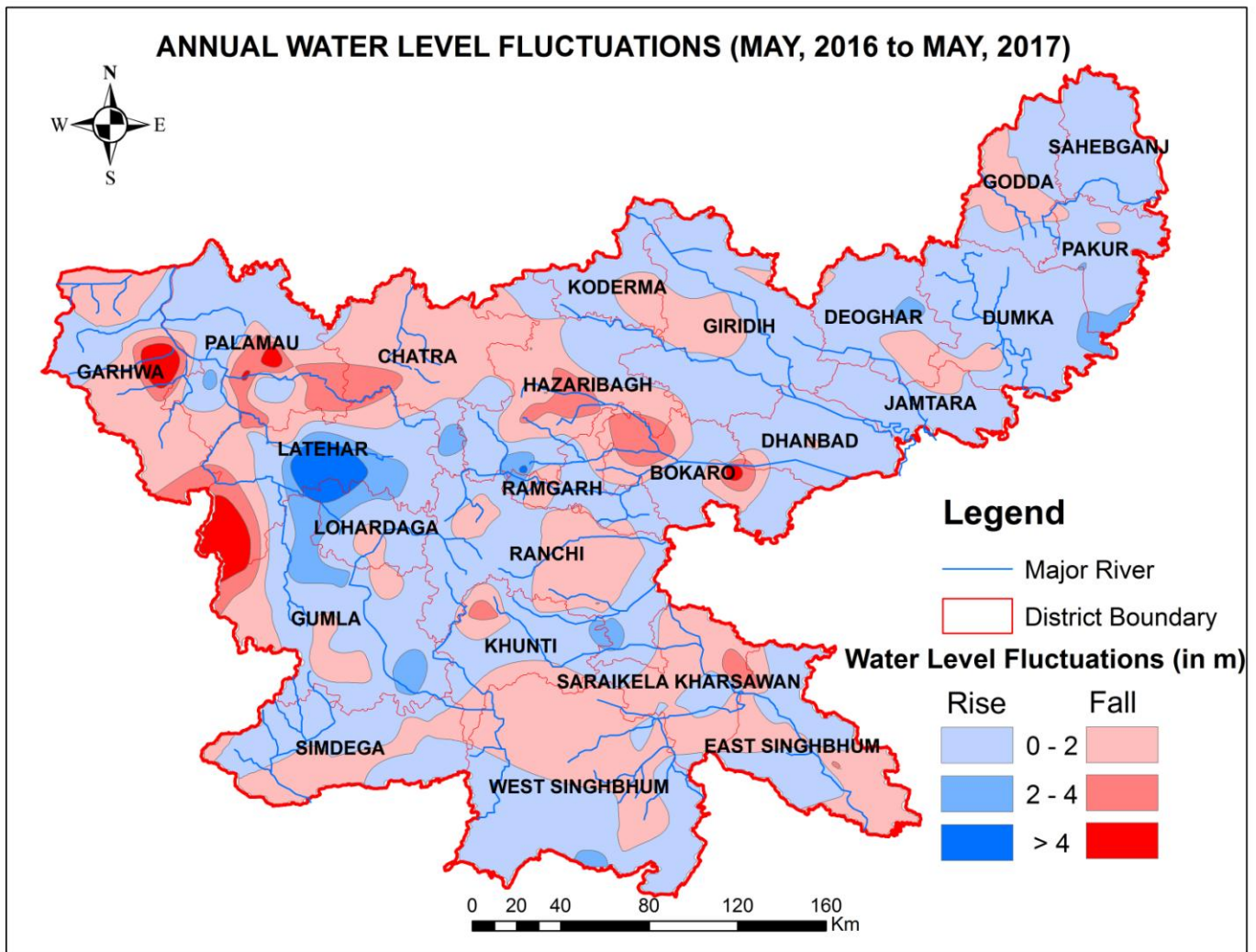


PLATE X

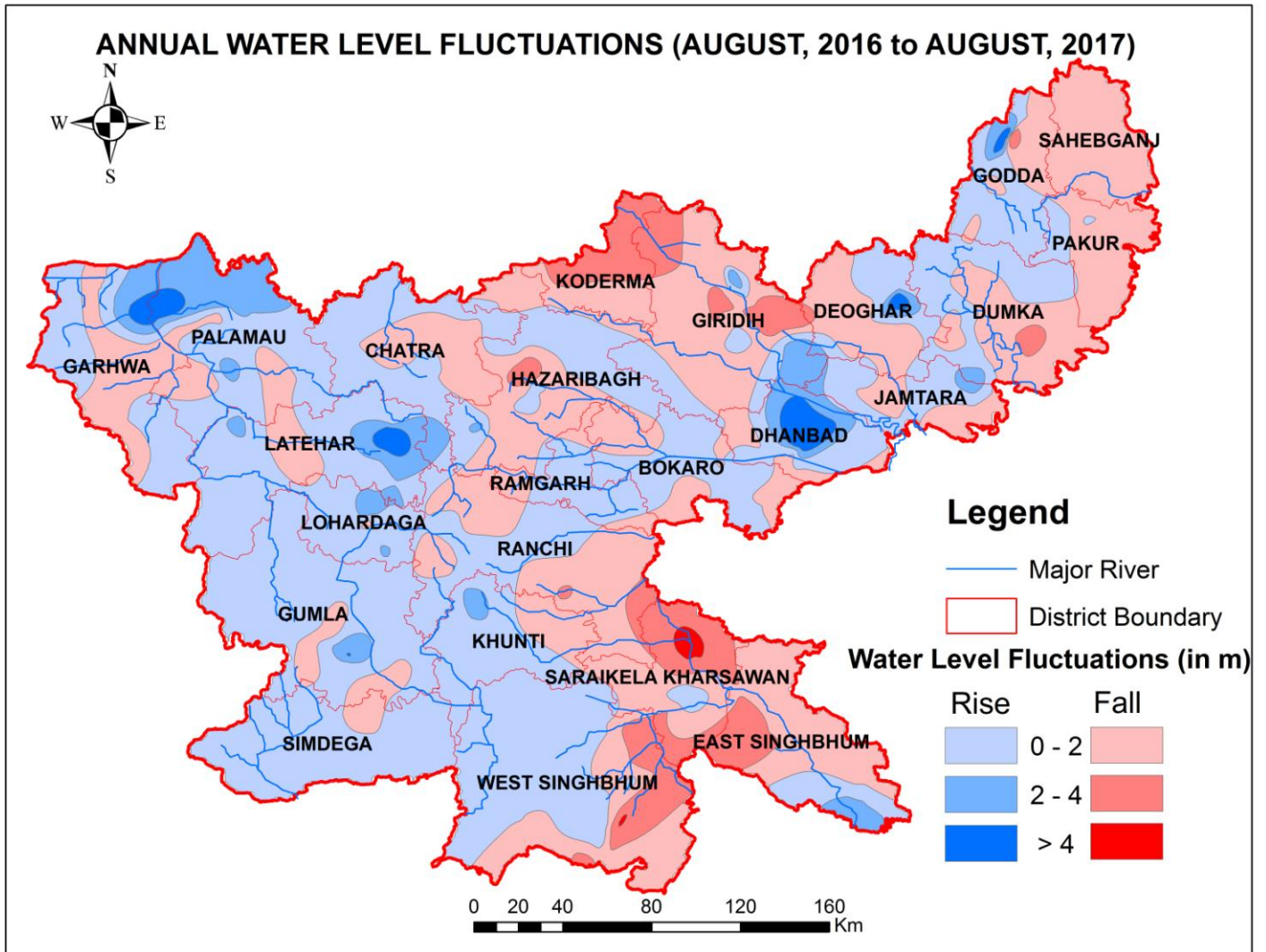




PLATE XI

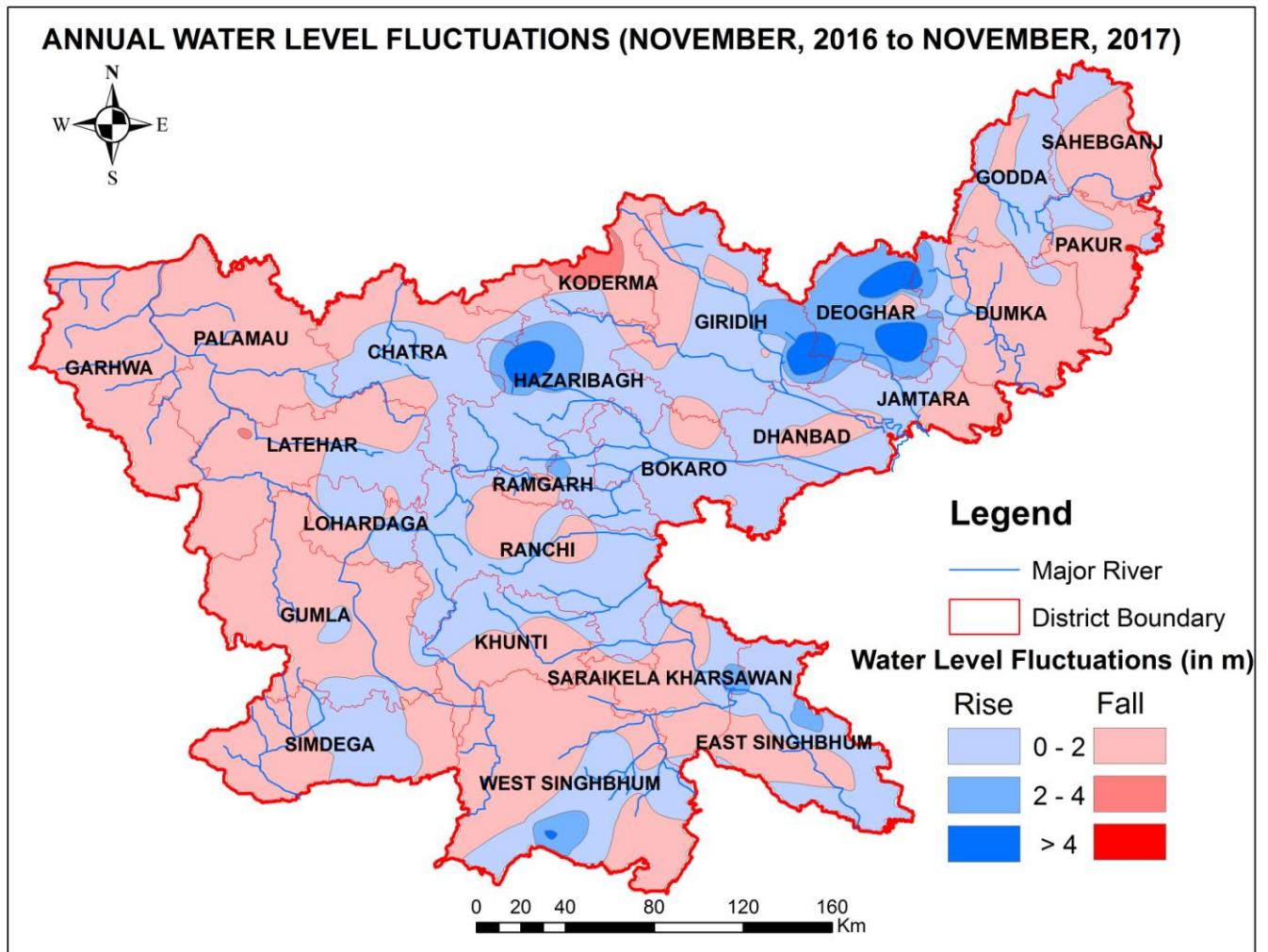


PLATE XII

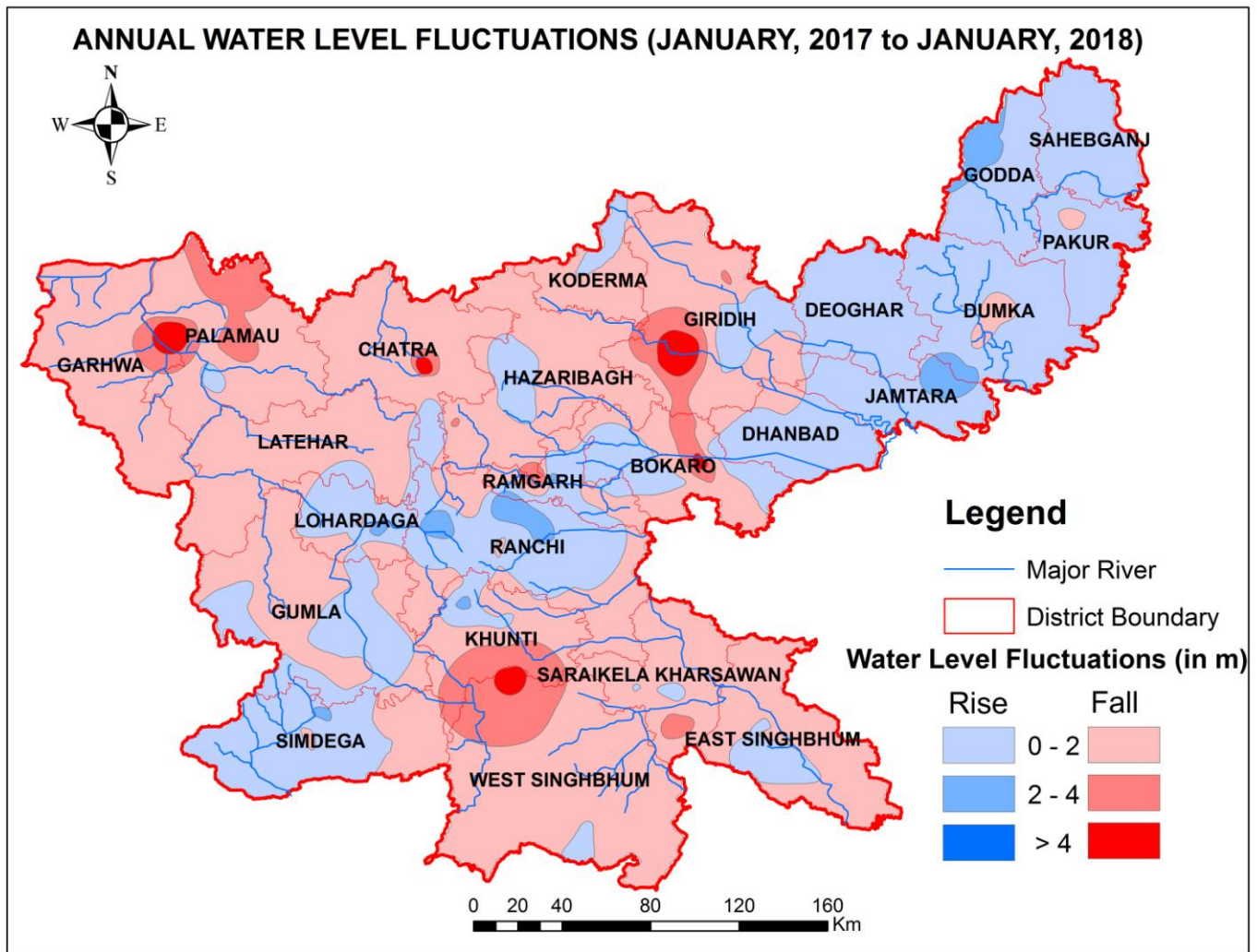


PLATE XIII

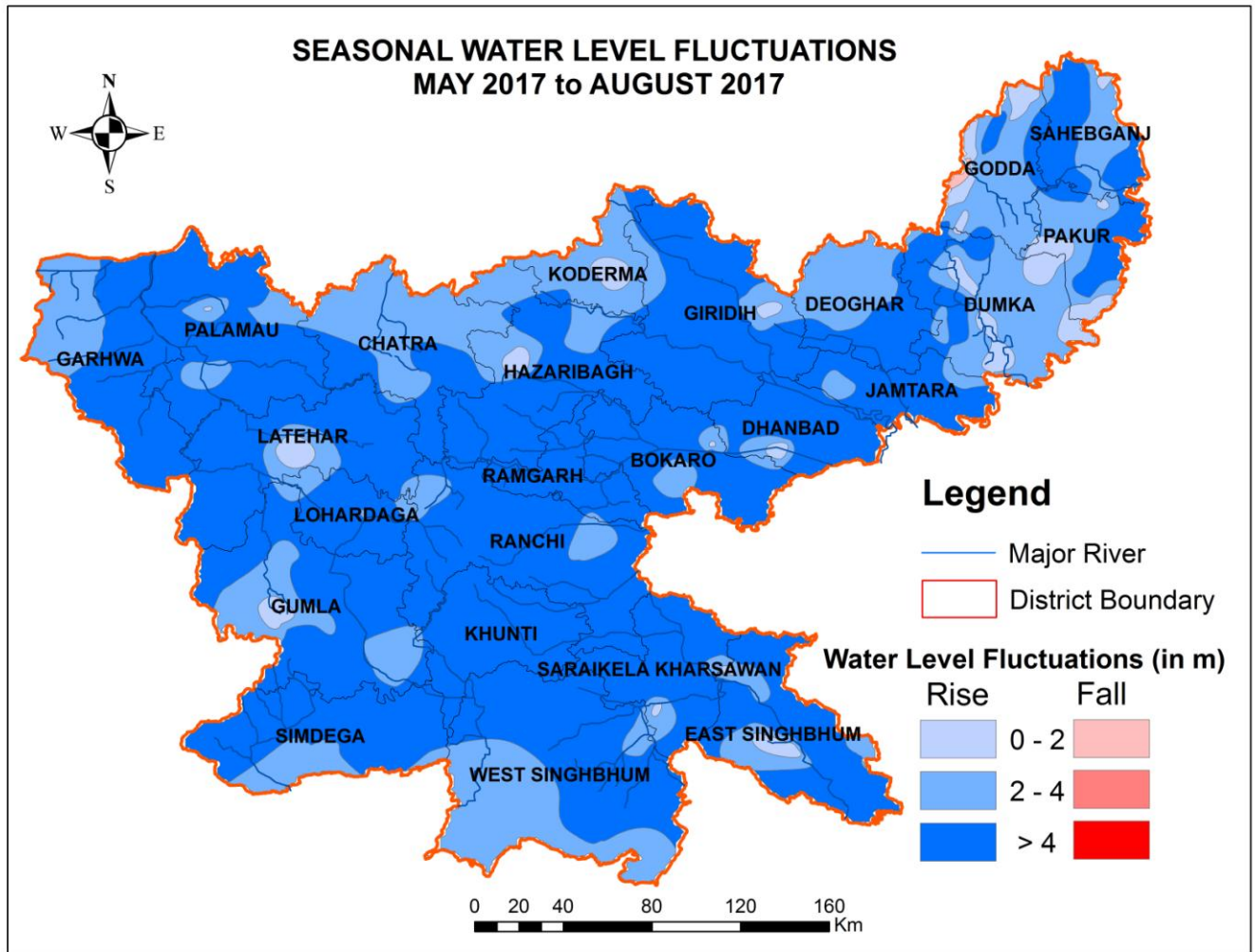


PLATE XIV

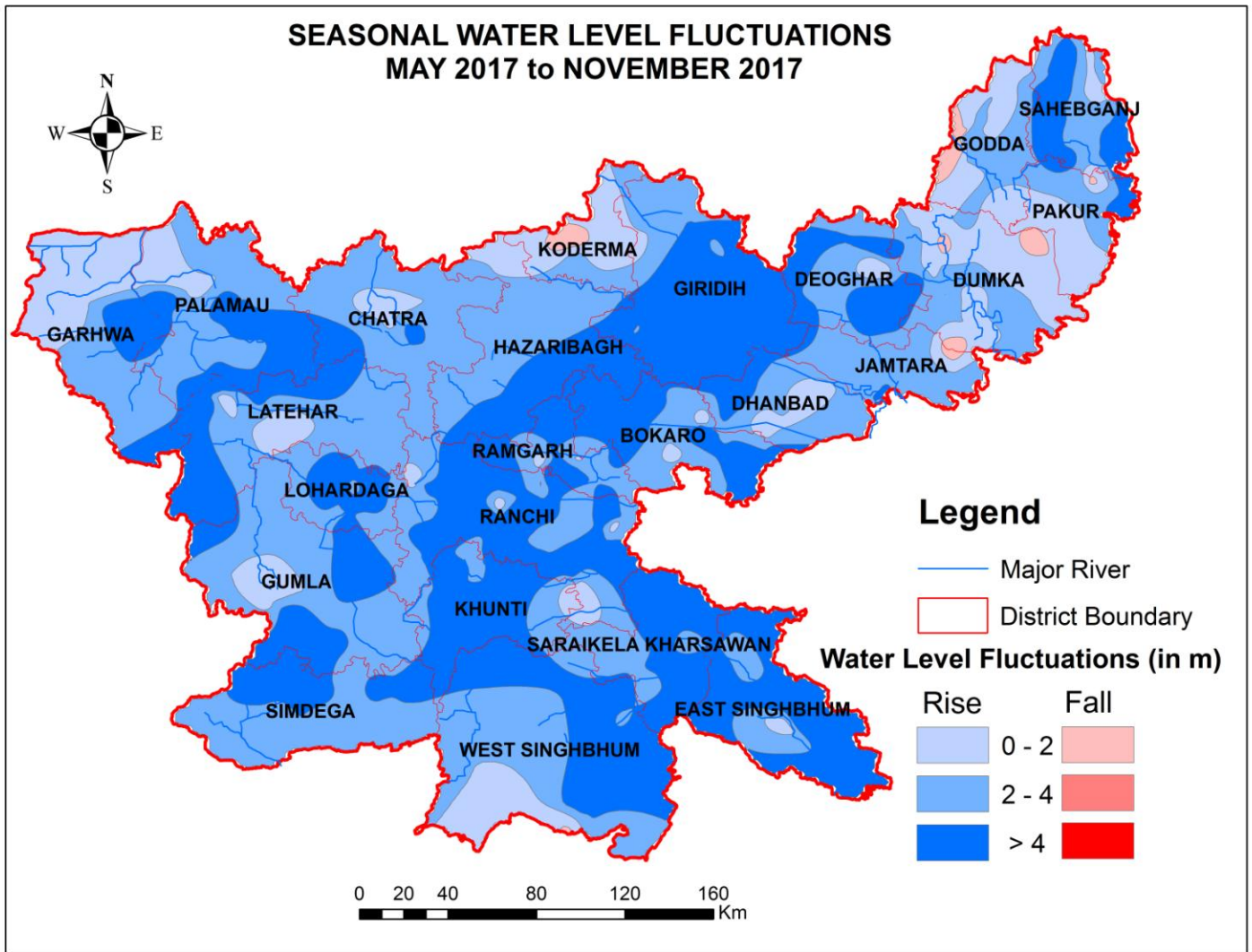




PLATE XV

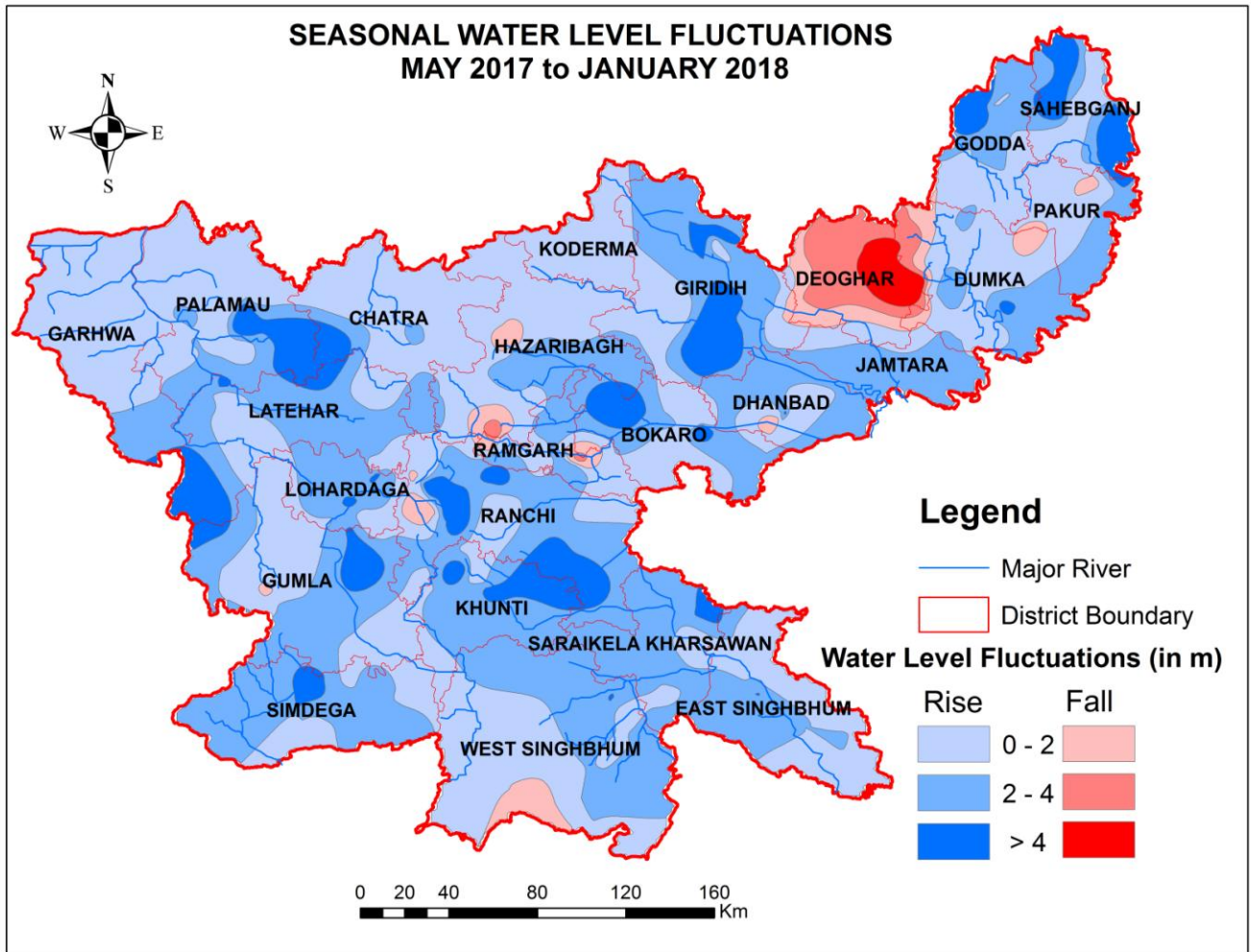


PLATE XVI

DECADAL WATER LEVEL FLUCTUATIONS MAY (MEAN, 2007-2016 ) WITH MAY, 2017)

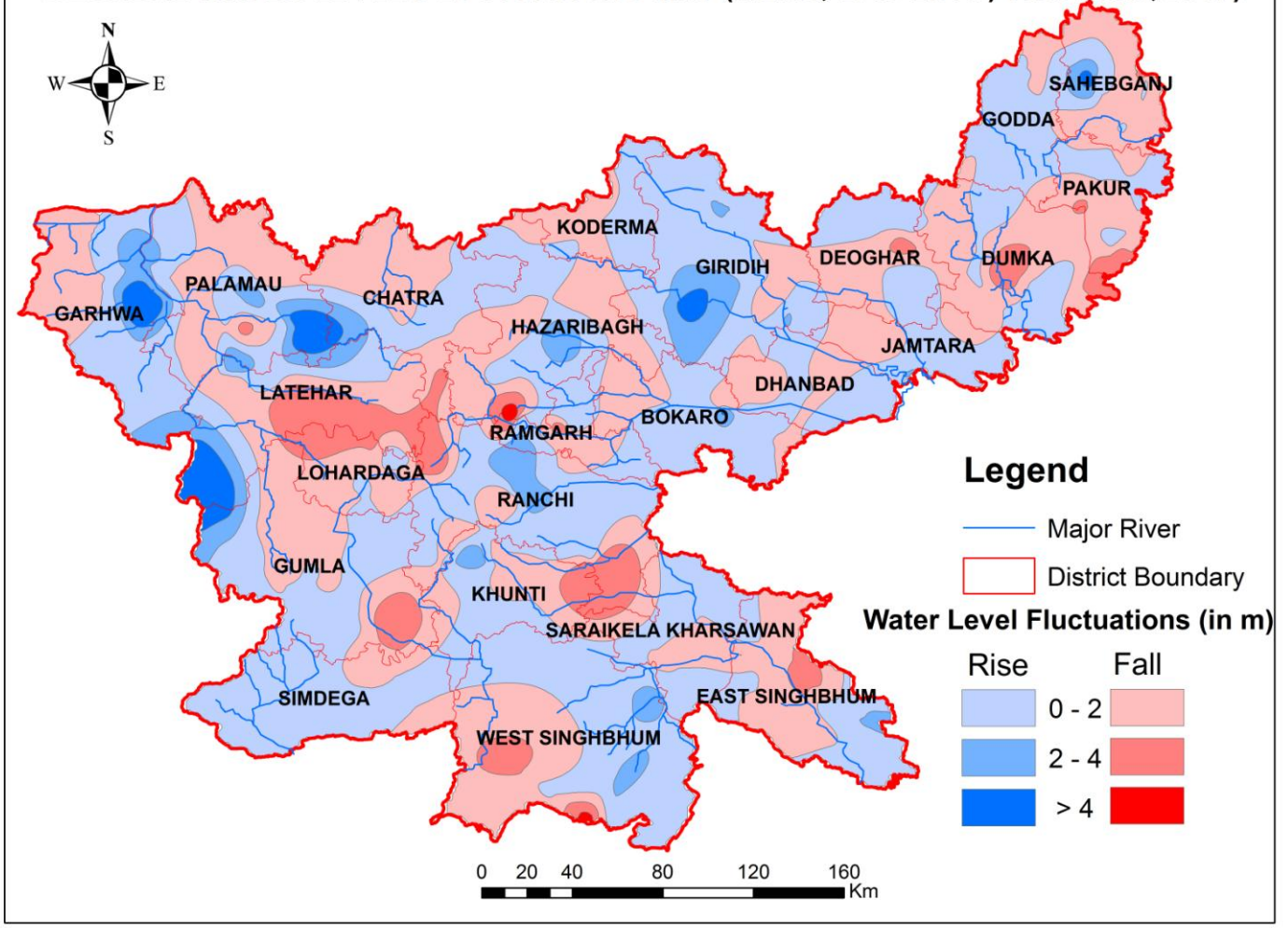


PLATE XVII

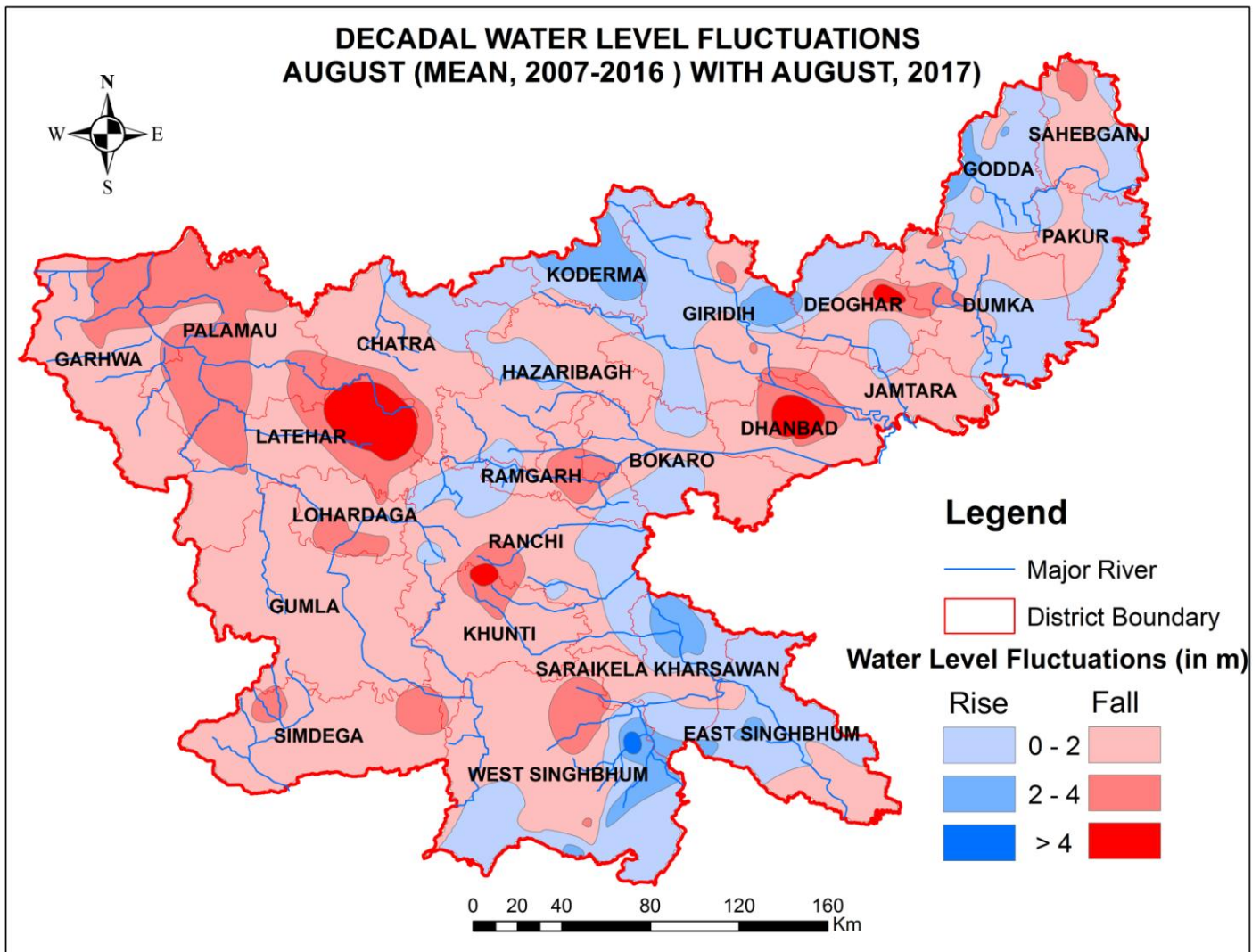




PLATE XVIII

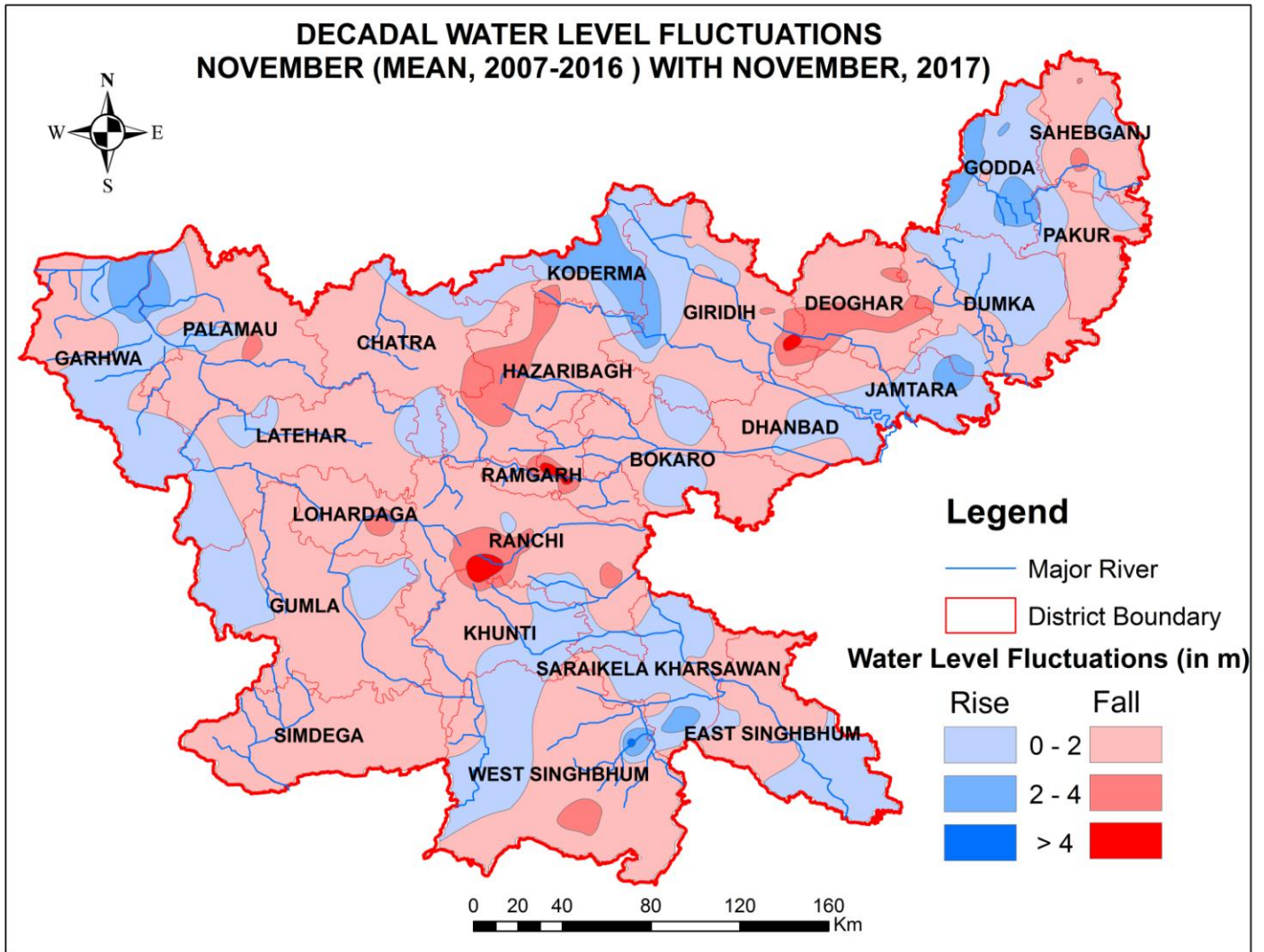


PLATE XIX

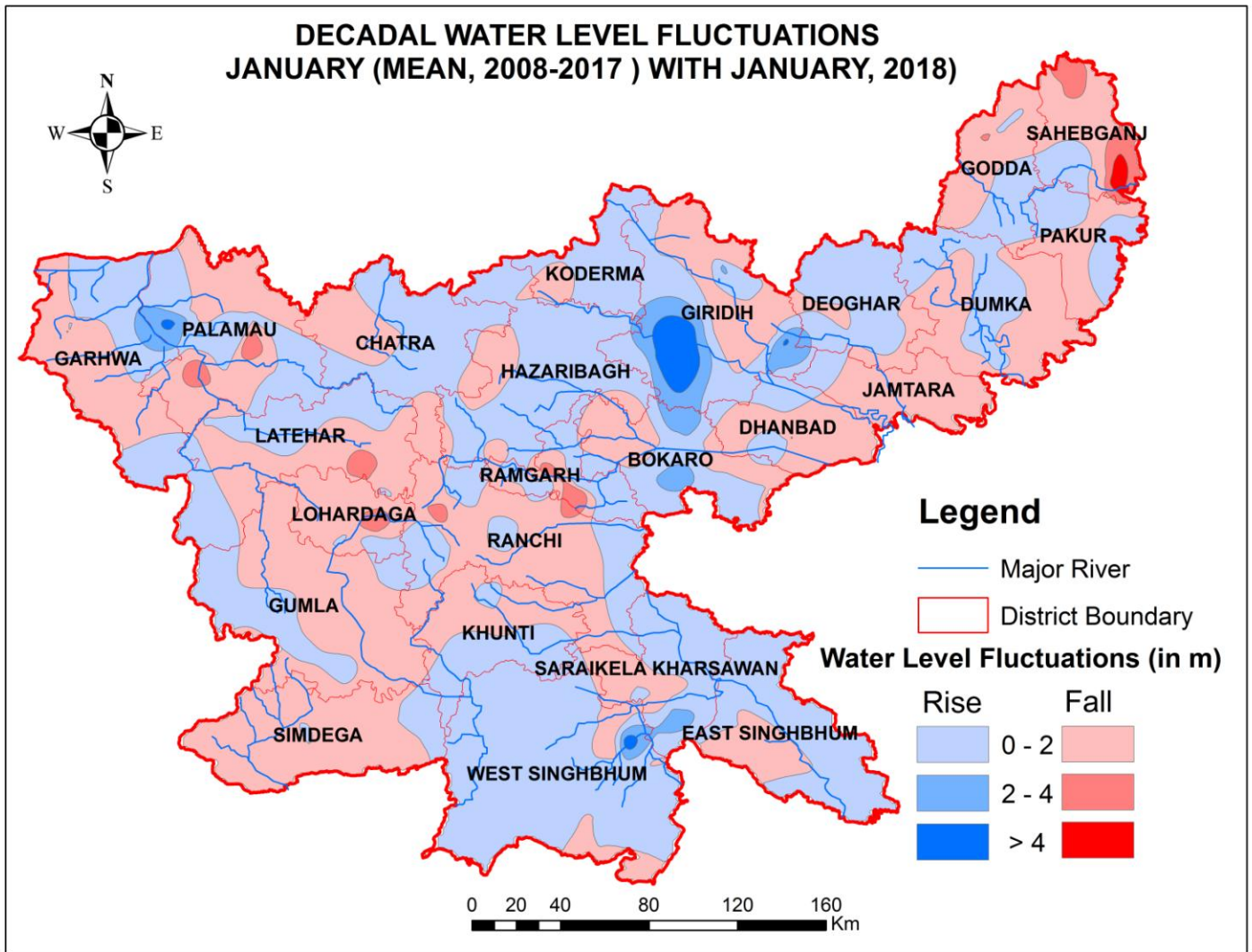


PLATE XX

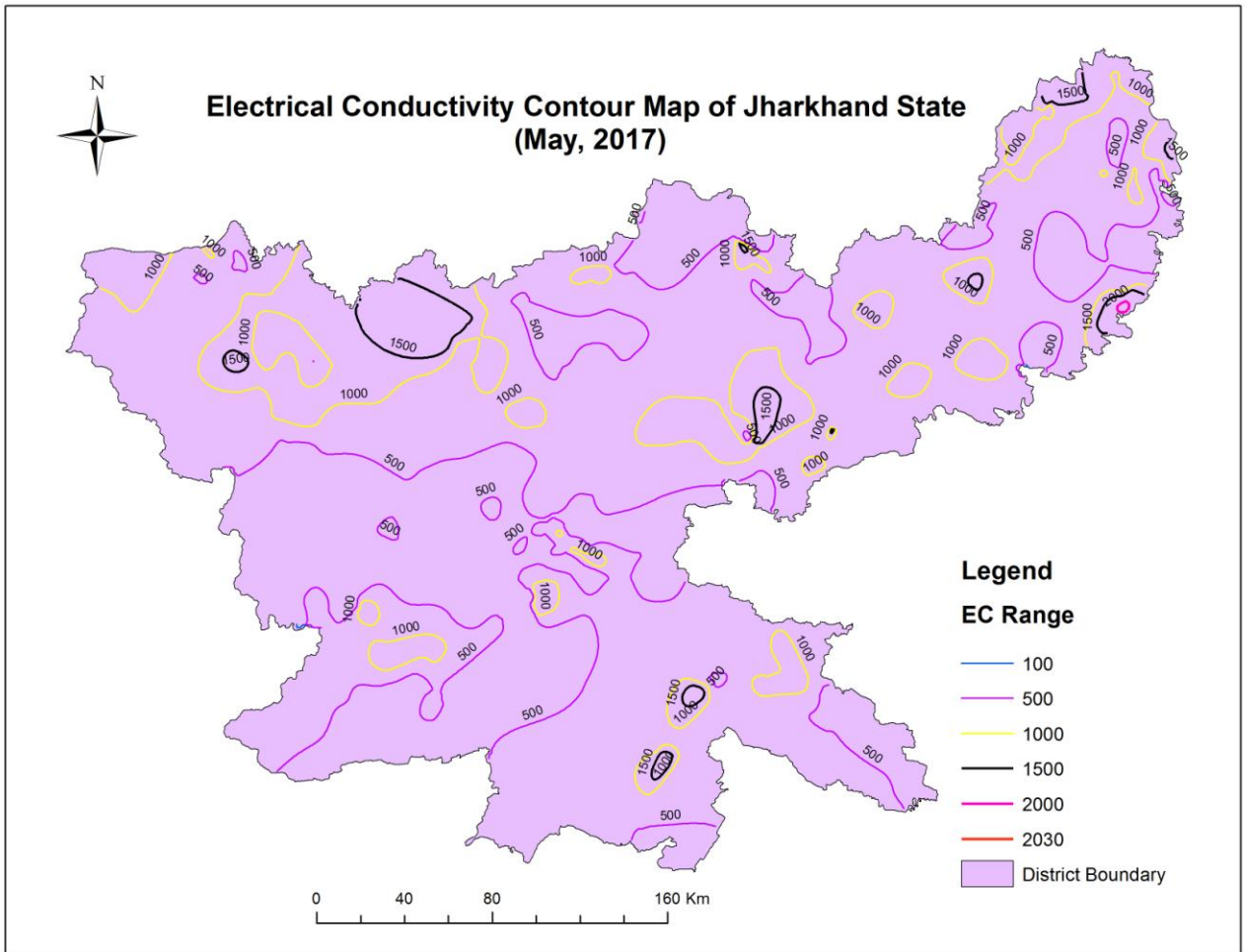
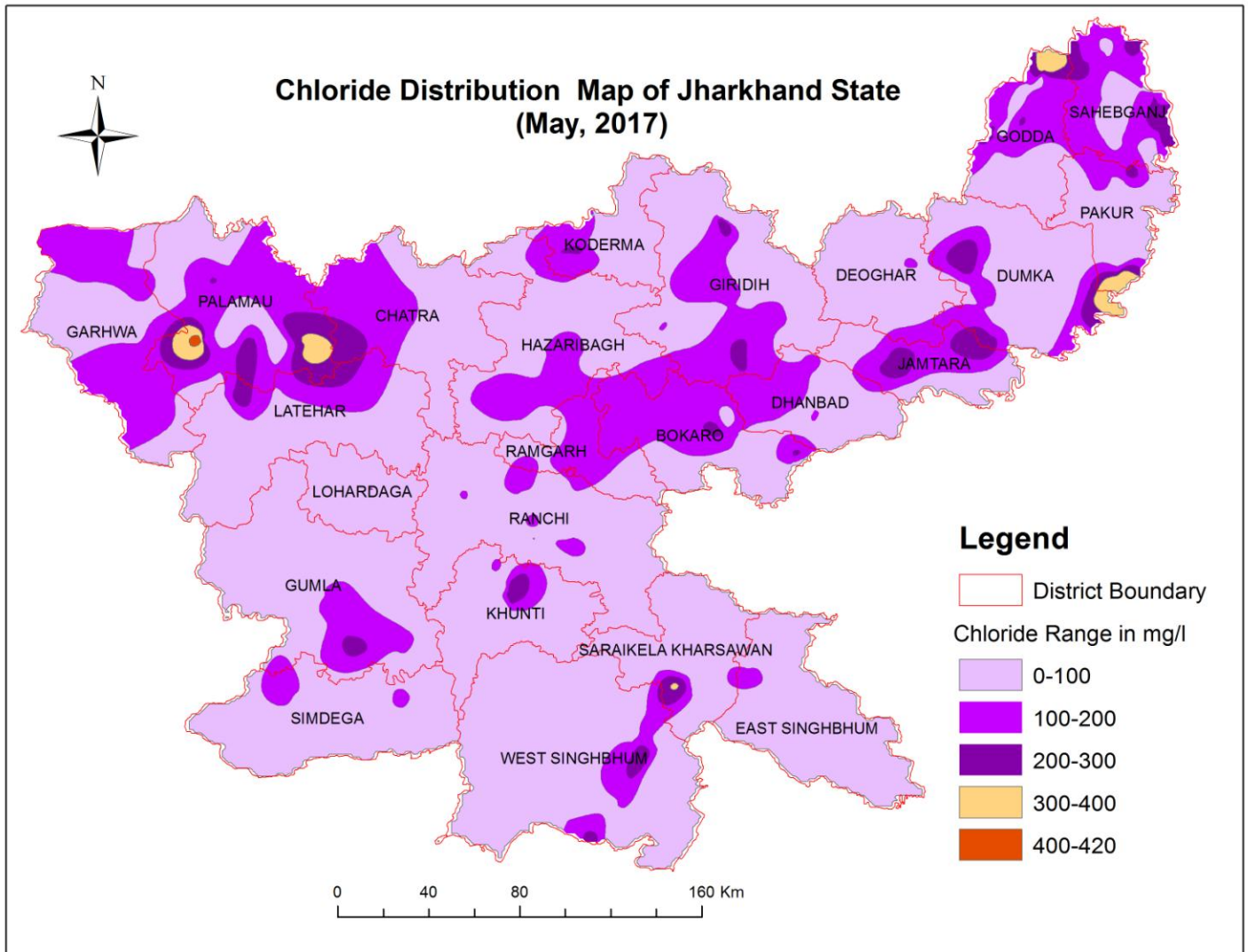


PLATE XXI



## ANNEXURE-I

## DEPTH TO WATER LEVELS (mbgl) MAY, 2017, AUG., 2017, NOV., 2017 AND JANUARY, 2018 IN JHARKHAND

<b>Bokaro district</b>					
Sl No.	Location	May, 2017 (mbgl)	August, 2017 (mbgl)	November, 2017 (mbgl)	January, 2018 (mbgl)
1	Baramasia	7.59	2.1	3.64	5.93
2	Chandankiyari	8.46	1.4	2.22	4.95
3	Chandrapura	3	1.15	1.6	2.31
4	Chas	12.63	10.2	10.82	12.32
5	Gomia	8	1.4	1.64	3.05
6	Jaina More	11	5.4	6.84	9
7	Laghla	6.5	1.5	2.23	4.51
8	Nawadih	9.61	3.9	5.75	8.51
9	Petarbar	10.39	4.05	5.44	7.21
10	Phusro_Bermo	10	1.05	1.3	1.72
11	Pindarjora new	9.38	0.8	3.39	6.01
12	Pupunki	6.1	1.7	2.22	3.75
13	Tenughat	6.35	1.26	2.73	4.02
14	Radhagram	7.85	10.2	3.42	-
15	Nutandih	9.45	3.5	3.25	-
16	Chandra	9.02	1.65	3	5.65
<b>Chatra district</b>					
18	Bagra	13.15	9.75	10.5	11.77
19	Birhu	7.61	3.1	4.04	6.37
20	Chatra1	5.8	3.05	4.1	4.95
21	Itkhori 1	9.02	6.05	6.57	7.87
22	Pitij	8.45	5.65	6.17	7.36
23	Simaria	12.72	5.48	6.68	9.71
24	Tandwa	7.3	-	3.87	4.5
25	Tutilawa1	7.5	2.6	5.08	6.72
26	Behrachochoa	6.2	2.6	-	6.13
27	Piri	4.43	3.2	-	5.1
<b>Deoghar district</b>					
28	Deoghar new	7.5	4.35	3.48	6.62
29	Ghormara	7.95	3.95	2.95	7.81
30	Jasidih	7.98	4.7	3.76	6.1
31	Madhupur1	4	4	2.22	5.45
32	Palajori	8.32	2.24	2.62	5.41
33	Sarath	8.82	3.9	2.51	5.75
34	Sarawan	8	4.2	7.62	9.96



35	Khamrbad New	8.29	2.45	-	-
36	Matiyara New	7.61	3.4		
37	Donihari New	7.72	3.15	-	-
38	Baranawada	8.86	3.5	-	-
<b>Dhanbad district</b>					
39	Baghmara		2		10.73
40	Baghmaranew	10.45	2	9.66	10.73
41	Balajee mandir	10.32	-	7.4	8.09
42	Basudeopur Cidf Camp	7.12		5.8	5.59
43	Bhuli A Block	12.4	-	7.1	7.44
44	Chiragora Hirapur	9.28	-	6.9	7.11
45	Dbl Buglow	7.2	-	3.26	3.22
46	Dhanbad New	3.9	1.05	2.1	2.36
47	Jharia	1.9	1.05	1.78	2.83
48	Mahuda	8.6	2.9	3.64	6.4
49	Matkuria	4.1		3.8	3.18
50	Nirsa ecl l.qtr	3.6	1.25	1.62	2.9
51	Panderpalli	9.7	-	5.45	5.31
52	Pkroy College	8.35	-	2.1	2.18
53	Purandih Jorapokhar	11.09	-	4.13	4.77
54	Rajganj	7.7	3.1	3.26	4.7
55	Sindri Gosalmore	6.8		2.31	2.31
56	Topchanchi	7.8	1.98	3.6	5.36
57	Tundi	6.78		2.89	4.32
58	Dhaiya ISM	4.26	-	2.89	3.08
59	Dhansar MRS	8.09	-	-	4.12
60	Godharbasti	10.13	-	-	4.41
61	Kandra Mandal Basti	9.32	-	-	5.59
<b>Dumka District</b>					
62	Chapodia	6.41	3.1	4.22	5.1
63	Chikania	9.12	3.24	5.1	5.67
64	Dumka(db ib)	4.02	2.9	3.15	-
65	Gamharia	10.6	5.9	8.42	8.48
66	Gopikandar	8.3	6.65	8.51	8.62
67	Hansdiha pwdib	7.24	2.2	5.89	-
68	Jamal	8.57	3.45	5.51	5.75
69	Jarmundi db.ib	6.43	2.21	4.96	5.8
70	Kathikund	6.45	3.65	4.4	5.18
71	Masalia	6.24	2.45	4.22	4.9
72	Masanjor	4.26	3.2	2.58	3.6
73	Nunihaat	2.61	1.9	3.1	1.6

74	Parapalashi	6.78	5.1	-	5.28
75	Patabari	8.24	4.5	4.62	3.6
76	Raneswar	6.85	3.05	3.72	4.05
77	Sikaripara	7.68	4.55	5.66	5.3
<b>Jamtara district</b>					
78	Basti Palajori	5.83	1.21	2.46	-
79	Fatehpur	9.87	5.26	6.24	-
80	Jamatara	8.09	3.25	4.58	5.3
81	Jasaydih	9.59	2.35		
82	Kundahit	6.72	1.8	4.21	4.36
83	Mihijam New	9.01	2.15	4.98	6.4
84	Mohanpur	8.88	5.85	5.79	-
85	Nala	5.88	3	7.1	3.6
86	Narayanpur	5.29	-	4.12	-
<b>Garhwa district</b>					
87	Bhawanathpur	7.7	4.25	-	-
88	Garhwa	16.5	5.04	7.7	-
89	Godarmana	-	3.1	5.01	5.81
90	Manjhian	7.4	0.88	5.98	6.81
91	Nagaruntari	6.77	4.4	5.3	5.94
92	Ramnal	5.85	2.7	4.1	5.07
93	Ranka	7.34	1.88	4.8	5.64
94	Obra	6.22	-	-	-
95	Lagma	5.55	3.4	3.07	5.09
<b>Giridih district</b>					
96	Bagodar	8.1	2.45	3.56	5.85
97	Bandhutanr	9.9	4.6	4.87	7.39
98	Bengabad	8.35	6.65	1.77	5.15
99	Birini	10.7	6.65	7	9.05
100	Chirki (pirtanr)	14.2	4.15	-	5.69
101	Dewri	8.9	2.2	2.77	3.46
102	Dhanidih	9.7	2.4	2	4.21
103	Dhanwar	10.1	1.8	1.09	9.85
104	Dumri	10.71	2.36	7.44	9.51
105	Gandeyl	10.7	2.36	1.4	10.6
106	Giridih	9.05	3.8	4.87	5.53
107	Jamua pwd ib	11	6.1	5.11	7.11
108	Khijri	9.6	3.7	4.02	3.48
109	Maheshmunda1	6.72	1.6	1.67	4.42
110	Pandri	9.45	2.2	3.03	7.36
111	Saraiya new	10.7	5.8	6.05	5.61

112	Tisri	5.9	2.1	2.65	3.47
<b>Godda district</b>					
113	Bara borijore	7.85	0.65	5.21	3.05
114	Bisaha	6.88	3.45	3.52	-
115	Chamudih	8.58	7.52	7.29	7.37
116	Doi	4.34	3.52	3.82	-
117	Gobra	4.12	2.98	3.51	3.98
118	Godda p.s.		3.9	3.51	3.8
119	Godda1	7	2.97	-	3.8
120	Jainipaharpur	7.96	4.68	5.11	5.58
121	Kumardih	4.75	2.02	3.02	4.2
122	Lalmatia	8.68	4.8	7.2	6.6
123	Mahagama1	9.9	7.1	8.79	8.1
124	Maheshpur2	7.48	7.98	9.28	-
125	Pathargama	6.35	3.1	4.41	-
126	Poraiyaahaat	-	5.26	10.21	10.3
127	Sundar Pahari	12.29	9.86		10.3
<b>Gumla district</b>					
128	Adar	6	2.1	3.6	4.22
129	Anjam gram	2.8	0.26	0.85	1.62
130	Baghma	7.6	3.35	3.85	4.32
131	Baisia	4.15	1.18	1.7	2.76
132	Bharno bdo	7.46	2.8	4.35	4.85
133	Bishnupur	7.9	2.4	3.45	4.27
134	Chainpur1	6.18	2.5	4.1	4.24
135	Ghagra	8.7	4.4	5.2	6.94
136	Gumla1	7.9	4.24	4.6	5.15
137	Kasir	1.35	0.35	0.72	1.48
138	Kharke	7.8	2.15	-	-
139	Nagfeni	9.13	2.45	4.5	4.98
140	Palkot	9.5	3.35	5	7.34
141	Raidih	7.7	1.4	2.85	4.35
142	Sisai	9	2.5	3.95	4.26
<b>Simdega district</b>					
143	Bano	7.5	2.1	3.25	5.9
144	Bari Biringa	4.5		0.54	1.8
145	Biru	5.9	0.92	2.6	3.11
146	Jaldega	5.7	0.95	2.4	3.45
147	Kolebira	8.2	2.25	4.9	6.38
148	Lachargarh	8.3	1.9	3.7	5.5
149	Putharitoli	-	1.25	1.55	2.95

150	Simdega	8.8	1.15	2.7	4.78
151	Tengratuku	7.3	0.6	2.2	2.82
152	Thethai Thangar	3.4	0.52	1.3	1.86
<b>Hazaribag district</b>					
153	Amritnagar	8	6.67	8.67	10.5
154	Barhi	10.4	4.5	6.35	8.99
155	Barkagaon	12.1	7.2	9.8	11.12
156	Barkatha	6.05	2.5	3.25	4.93
157	Bottam Bazar	4.13	1.5	1.85	3.76
158	Chauparan	-	3.1	6.1	7.59
159	Collagemore	8.1	0.52	2.31	6.23
160	Dari	8.37	-	4.21	4.45
161	Daru	8.05	1.1	2.27	4.07
162	Garrikalan	6.72	0	4.17	6.02
163	Habibnagar	11.44	5.55	6.51	9.26
164	Hatyari	6.82	-	3.71	5.1
165	Hazaribagh	10.3	2	3.47	7.47
166	Hirabag	8.11	3.71	6.29	8.35
167	Ichak more	4.9	4.3	4.6	5.92
168	Kanhari Road	-	3	5.26	7.31
169	Keradari	7.4	0.85	2.42	5.75
170	Korra chowk	-	3.81	7.25	10.05
171	Kudashram	9.2	0.86	2.05	4.91
172	Masipiri	9.6	4.8	6.92	8.5
173	Meru(Silwar)	12.4	4.7	7	9.72
174	Old bus stand	11.9	2.36	5.29	8.91
175	Padma	11.05	7.5	8.53	10.17
176	Patratu	-	4.4	3.69	
177	Simraresthouse	4.85	0.16	1.05	2.22
178	Sindur	7.8	1.63	3.52	5.91
179	Skrej	7.5	-	3.47	5.24
180	Tatijhariya	3.68	1.6	2.31	3.57
181	Urimari	3.37	-	4.01	6.13
<b>Ramgarh district</b>					
182	Barkakhana	4.1	2.5	2.64	3.33
183	Chitarpur	6.21	1.36	4.27	8.52
184	Dulmi	-	1.35	2.1	4.6
185	Gola	10.2	4.95	6.31	8.98
186	Kaitha	5.4	3.5	1.14	2.6
187	Kuju	8.6	2.1	3.36	5.13
188	Kusumbha	8.4	1.92	3.6	4.61

189	Mandu	8.41	3.2	3.92	6.71
190	Ramgarh2	6.1	1.95	3.63	5.1
191	Sayal	7.33	2.8	3.18	6.5
192	Thakurgora	-	2.65	3.05	3.21
<b>Kodarma district</b>					
193	Domchanch	8.25	6.8	8.04	
194	Kanobigha	-	3.7	4.1	5.73
195	Kodarma	7.41	5	7.69	6.1
196	Pathaldiha	4.85	1.6	2.2	3.61
197	Jhumritilaya	5.9	3.4	3.76	4.93
198	Jainagar	5.45	3.6	3.8	5.74
<b>Lohardaga district</b>					
199	Barwatoli Chowk	6.85	2.2	2.3	1.84
200	Bhandara	8.1	2	4.5	7.95
201	Hesal	9.3	2.5	5.2	5.94
202	Hinjla	8	4.1	3.55	4.72
203	Irgaon	7.65	1.85	2.8	4
204	Kisko1	12.6	6.3	6.98	-
205	Kuru1	9.45	1.27	3.75	5.22
206	Lohardaga(Patra Toli)	5.95	2.8	2.6	3.18
207	Lohardaga(pwdib)	7.3	1.9	3.1	5.25
208	Rudh1	8.8	2	4.75	7.64
209	Senha Bdo	5.7	0.4	1.9	3.6
<b>Pakur district</b>					
210	Amrapara	2.79	1.1	2.4	2.66
211	Hiranpur	6.03	4.45	6.35	6.35
212	Kariodih	7.13	3.2	4.21	-
213	Litipara	9.5	5.15		8.1
214	Litipara 2	4.85	2.48	-	6
215	Maheshpur2	7.15			8.1
216	Pakur1	11.38	3.99	6.75	8.35
217	Pakuria	2.15	1.7	2.1	-
218	Pochaibera	4.45		-	-
219	Salgapara	7.26	2.15	-	-
220	Bikrampur	-	1.1	-	-
221	Sahargram	-	-	-	5.28
<b>Palamu district</b>					
222	Baraw	5.62	2.1	2.88	4.84
223	Bishrampur	8.95	1.8	3.45	8.95
224	Chhatarpur	9.04	4.75	6.7	7.2
225	Daltenganj	6.72		4.3	4.48

226	Haidarnagar	-	0.75	3.05	6.66
227	Hariharganj	7.11	3.25	4.12	5.75
228	Japla	-	2.05	-	-
229	Kajri	11.9	8.15	9.45	11.03
230	Kanda	5.34	3.47	4.22	4.65
231	Lesliganj	6.43	1.98	3.93	5.66
232	Nawadih1	15	-	5.78	6.58
233	Panki	12.28	1.95	3	4.85
234	Patan	10.15	1.8	4.45	8.5
235	Rajhara	8.4	0.4	5.1	6.2
236	Sagalim	9.25	2	5.64	6.92
237	Sandha	5.9	3.5	4.23	5.22
238	Satbarwa	8.34	3.6	7.28	8.04
<b>Latehar district</b>					
239	Aksi	8.32	3.1	5.72	6.89
240	Balumath	11.38	0.7	8.35	10.05
241	Baresad	9.25	4	7.35	8.12
242	Barjatu	7.19	2.55	4.4	6.81
243	Barwadih	8.38	0.7	3.69	5.75
244	Betla	13	5.12	7.32	8.72
245	Chandwa	6.49	1.54	3.14	2.84
246	Garu	7.3	1.6	4.87	6.25
247	Latehar	3.62	2.39	2.41	2.84
248	Mahuadanr	10.1	2.45	2.92	4.35
249	Manika	7.4	1.32	3	4.97
<b>Paschimi Singhbhum</b>					
250	Bandgaon	9.1	3	4.59	6.69
251	Bandgaonnew	4.6	4.6	4.71	4.71
252	Barajamda	2.5	1.1	1.58	5.05
253	Baranada	1.6	3.76	2.2	-
254	Chaibasa	13.9	11.15	10.3	13.15
255	Chakradharpur	8.9	1.4	4.8	6.7
256	Hat Gamhariya	12.2	5.25	3.57	8.22
257	Hesadih	7.1	2.6	2.09	3.64
258	Jagannathpur	10.3	3.5	5.2	8.3
259	Jaitgarh	6.7	4.13	4.4	5.1
260	Jhinkpani	7.85	1.26	3	7.2
261	Kereikela	6.15	2.9	4.35	7.55
262	Khuntpani	9.15	3.11	1.95	5.1
263	Kokcho	10.1	4.93	3.1	6.8
264	Noamundi	3.9	0.75	1.45	3.95

265	Putida	7.1	1.35	2.9	-
266	Talaburu	4.85	1.15	-	-
267	Toretopa Noamundi	16.5	4.62	7.5	-
<b>Saraikela district</b>					
268	Bagrasai	4.1		2.2	-
269	Bhaludih	2.6	-	-	-
270	Chandil	9.5	5.1	3.6	6.4
271	Dugani	9	1.1	3.43	5.33
272	Harison	8.75	2.55	5.23	6.43
273	Kandra	7.65	1.65	3.45	5.25
274	Keshargaria	3.45	0.9	1.5	2.75
275	Kharsawan	7.7	1.86	4.74	5.44
276	Lupungdih	5.75	1.4	3.5	-
277	Nabibera	12	-	7.65	10.35
278	Nimdih_Jamdih	8.55	1.68	2.2	3.8
279	Saraikela	3.9	2.12	0.74	1.49
<b>Purbishingbhum district</b>					
280	Amar J Sch Mango	9.3	7.62	6	-
281	Bagun Nagar	4.6	4.1	2.7	-
282	Baharagora	14.75	4.03	7.7	13.95
283	Baridih	3	1.05	3.8	-
284	Burmamines Thana	2.2	-	2	-
285	Chakulia	19.8	10.64	14.7	17.6
286	Deen Bandhu Shiv Mandir	1.75	-	-	-
287	Dhalbhumgarh	12.05	3.88	6.35	10.05
288	Galudih	9	2.28	2.4	-
289	Garhabasha Jua	1.9	1.27	1.4	-
290	Ghatsila	8.05	1.1	3.65	5.75
291	Golmuri	3	2.22	2.4	-
292	Jabirdiha	8.3	-	4.3	6.65
293	Jugsalai Thana Jua	2.5	1.48	2.25	-
294	Kalikapur	5.95	3.92	1.7	3.2
295	Kendadih	6.75	2	2.1	3.35
296	Matigora	7.1	2.15	1.95	3.05
297	Mosabani	2.35	1.15	1.1	2.35
298	Paridih	9.3	7.62	5.2	-
299	Pipla	5.9	2.87	3.9	5.45
300	Pithajudi	6.3	2.82	4.4	5.1
301	Potka	10.2	4.19	4.24	6.44
302	Ramgarh1	7.97	-	-	-
303	Rankini Madir Jua	2.8	0.89	2.65	-

304	Shitla Mandir Sackchi	4.1	2.95	2.56	-
305	Shree Maria Mandir	2.85	-	-	-
306	Sundarnagar	10.15	2.5	4.4	-
307	Sundarnagar1	10.15	-	5.2	-
308	Telco Zone	1.75	3.88	3.35	-
309	Gitilata	6.3	1.1	4	-
310	Mariyama Temple	2.85	-	-	-
311	Birsa Nagar Zone 11	4.75	-	-	-
312	Kalapathar	8.6	2.24	5.5	-
<b>Ranchi district</b>					
313	AG Office	8.5	-	4.4	-
314	Angara1	9.42	2.73	4.7	6.2
315	Bajra	6.4	-	1.48	2
316	Barwadag	6.4	1.86	4.15	4.2
317	Berro	10.7	5.61	5.07	6.15
318	Bidge Frord Sch	7.05	-	1.7	6
319	Bijupara Tangar	7.5	1.3	3	1.6
320	Bishakhatanga	7.4	1.7	2.8	
321	Bit More	6.8	-	4	8.05
322	Bundu	11	2.32	4.8	6.4
323	Bunti	2.4	-	-	-
324	Burmoo	10.8	6.33	5.95	8
325	Chachgura	11	3.62	5.75	8.5
326	Chutupalu	7.98	1.6	1.91	-
327	Gondlipokhar	8.3	-	3.3	5.2
328	Hill view	3.89	-	3.34	-
329	Hochar	9.1	-	3.3	-
330	Hombai	8.3	-	4.1	-
331	Hurhuri		-	4.2	-
332	Itki NAM	13.8	3.8	5.1	8.2
333	Jonha	6	3.75	3.43	4.1
334	Kanke1	4.5	-	3.38	3.85
335	Kantitanr	5.8	-	3.3	-
336	Karapurti	6.55	1.65	3.38	4.71
337	Kharsidag	7.95	-	3.6	-
338	Khunti	9.4	1.4	3.2	5.14
339	Kita	8.12	-	2.75	-
340	Lodnapiri	7.9	-	1.9	-
341	Lowadih	9.59	-	2.15	-
342	Mandar	7.44	1.3	2.9	-
343	Manitola	4.8	-	1.6	-



344	Morhabadi	6.95	-	2.98	-
345	Namkom Bz Chowk	3.9	-	-	-
346	Ormanji	6.7	2.65	2.7	-
347	Patrahatu	2	-	1.12	-
348	Pindarkom	9.03	-	2.45	-
349	Pithoria	8.3	-	2.55	3.7
350	Rampur	6.3	-	-	-
351	Rangamati	6	3.3	-	-
352	Sani Mandir	5.35		0.7	-
353	Silli	7.8	3.05	4.05	-
354	Siramtoli	5.25	-	-	-
355	Sithipokhartoli	7.45	-	-	-
356	Sonahatu I	7.06	0.98	-	-
357	Sonsbazar	5.35	3	3.8	5.5
358	Sukurhutu	8.6	-	1.48	-
359	Taimara	12.3	2.79	6.39	-
360	Tamar	7	1.24	5.5	-
361	Tatilsilwai EEF	8.5	-	2.85	-
362	Ukrid	4.8	3.9	2.97	-
<b>Khunti district</b>					
363	Amjora	4.7	2.75	3.75	5.09
364	Bala	9.1	3.3	4.6	6.42
365	Barwadag (Khunti)	6.3	-	3.14	4.6
366	Bingaon	8.85	1.45	3.9	6.17
367	Dorma	6.9	1.2	3,10	4.52
368	Dumardagga	5.75	1.05	2.35	5.46
369	Ghunsuli	9.8	2.15	4.6	7.83
370	Gobidpur	7.7	3.25	3.9	5.98
371	Goitjora	7.95	1.1	2.75	4.1
372	Jaltanda	7.2	1.3	4	5.15
373	Jaratoli	8.55	2.8	3.36	4.96
374	Jariya	6.6	5	5.86	5.96
375	Jobra	5.9	1.55	3.3	4.4
376	Jumu	6.3	2.1	2.8	4.11
377	Kakriya	9.1	3.15	4.58	5.78
378	Kalimati	6.5	1.25	2.35	5.55
379	Kasira	6.1	1.2	1.78	4.18
380	Kudri	9.4	1.65	2.85	3.66
381	Kunjala	8.1	1.35	3.2	4.34
382	Kurapurti	6.55	1.65	3.38	4.71
383	Lodmal	5	0.65	1.7	3.44

384	Malgo	9.95	1.36	3.8	4.17
385	Masmano	9.75	0.9	4.4	4.01
386	Murhu	4.3	1.75	2	2.32
387	Nawatoli	6.45	1.65	3.18	5
388	Pelaol	6.15	1.14	2.7	3.94
389	Pokta	6.5	2.35	3.63	4.67
390	Rewa	8.75	1.79	5.3	5.77
391	Rolaghutu	5.5	1.45	3.49	4.45
392	Satiya	6.2	1.87	3.4	4.51
393	Serenghatu	3.4	0.52	0.96	2.15
394	Sirka	8.1	1.7	3.1	4.82
395	Torpa	-	1.2	-	-
<b>Sahebganj district</b>					
396	Baramasia	7.46		7.51	-
397	Barhait	7.2	4.65	4.1	7.1
398	Barharwa	9.3	4.19	4.21	1.5
399	Borio	12	3.1	4.15	3.9
400	Chota Kadma	9.5	1.98	4.4	-
401	Ghat Selumpur	7.21	2.84	3.05	3.79
402	Harinchara Chowk	5.59	2.35		4.5
403	Kotalpokhar	5.47	-	2.7	-
404	Mandro	5.81	1.75	2.1	3.15
405	Mangalhat	5.61	2.2	4.7	-
406	Maricho	7.33	3.62	4.4	-
407	Rajmahal	6.77	4.45	3.1	2.33
408	Ranga	7.76	2.29	4.51	4.76
409	Sahebganj1	8.95	3.2	4.12	3.3
410	Sakrigali	4.99	3.15	3.12	3.58
411	Taljhari	5.3	2.41	3.02	2.7
412	Taljhari1	2.58	2.42	-	2.7
413	Udvababutala	7.3	2.1	-	-
414	Hazipur	3.08	-	-	2.8
415	Dihari	4.1	-	-	-
416	Katthalwari	6.2	-	-	-
417	Fudkipur	5.19	-	-	-
418	Ramnagar	11.15	-	-	-
419	Brindavan	4.25	-	-	-
420	Belphadri	6.62	-	-	-

## ANNEXURE-II

Trend of Water Level for last ten years (2008 to 2017)										
District		Bokaro								
Sl No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
1	Nawadih	6		0.2418	9		0.16	32		0.2677
2	Chandankiyari	4			6		0.19 47	19		
3	Laghla	1			2			9		
4	Chas	10		0.0064	10		0.41 02	39		0.2401
5	Petarbar	10		0.0556	10	0.0049		38	0.0898	
6	Jaina More	10		0.0256	9	0.0219		38	0.0784	
7	Phusro_Bermo	6		0.3824	7	0.2595		24	0.1856	
8	Pachaura Sersadih	1			2			7		
9	Tenughat	9		0.0974	10		0.00 03	38		0.0524
10	Chandrapura	8	0.5465		10	0.0212		38	0.1049	
11	Mahuda	6	0.2033		7	0.0731		24	0.2873	
12	Gomia	10	0.6401		10	0.1315		38	0.2924	
District		CHATRA								
Sl No.	Location	PreMonsoon			PostMonsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
17	Tandwa	6		0.1711	4			19		
18	Bagra	9		0.261	9	0.1463		37		0.1134
19	Simaria	9		0.2397	8		0.15 26	35	0.0799	
20	Itkhori	6		0.046	4			18		
District		DEOGHAR								
Sl No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
21	Sarath	10		0.1219	9		0.13 04	39		0.0289
22	Jasidih	10	0.0303		9	0.162		39	0.1453	

23	Madhupur1	8	0.196		9	0.0872		33	0.1081	
24	Palajori	10	0.088		9	0.1906		39	0.2051	
25	Sarawan	10	0.2308		9	0.6477		39	0.2363	
26	Ghormara	10		0.0457	8		0.17 15	37		0.0201
27	Deoghar	6		0.1827	4			19		
<b>District</b>		<b>DHANBAD</b>								
SI No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
28	Govindpur	9		0.8592	9		0.01 2	33		0.3081
29	Rajganj	10		0.1116	10		0.00 5	40	0.0297	
30	Topchanchi	9		0.0321	10	0.0332		39	0.0576	
31	Tundi	8		0.116	10		0.07 95	37		0.0838
32	Sindri	7		0.0348	4			20		
33	Jharia	7		0.0589	6		0.01 93	23		
34	Nirsa ecl l.qtr	10	0.2904		9	0.2195		38	0.0938	
<b>District</b>		<b>DUMKA</b>								
SI No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
35	Mihijam db ib	6		0.1013	4			16		
36	Kundahit	9		0.2248	8		0.14 01	32		0.0822
37	Jamatara	10		0.077	9		0.10 71	39		0.0177
38	Raneswar	10		0.1227	9	0.0154		38		0.0144
39	Nala	10		0.036	9		0.36 46	37		0.1442
40	Masanjor	10		0.0206	9		0.02 89	38		0.0419
41	Masalia	9	0.1369		9		0.05 23	36	0.0891	
42	Patabari	10		0.0457	8	0.0276		36	0.0458	
43	Sikaripara	6		0.2147	8		0.13 33	27		0.1228
44	Chapuria	2			2			6		
45	Chikania	8		0.087	8	0.0572		36	0.158	
46	Kathikund	10	0.0275		9	0.0591		39	0.1193	
47	Dumka(db ib)	10	0.5992		9	0.4048		36	0.5166	
48	Chapodia	1			3			10		

49	Jamal	10		0.0664	9	0.0857		38	0.19	
50	Jarmundi db.ib	10	0.0612		9	0.0423		38	0.1597	
51	Nunihaat	7		0.0203	9		0.058	36	0.0285	
52	Gopikandar	10	0.1899		9		0.0843	39	0.1252	
53	Gamharia	6		0.1279	5			19		
54	Hansdiha pwdib	9		0.0107	9		0.0479	35	0.0607	
<b>District</b>		<b>GARHWA</b>								
<b>SI No.</b>	<b>Location</b>	<b>Pre-Monsoon</b>			<b>Post-Monsoon</b>			<b>Annual</b>		
		<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>
55	Garhwa	9		0.9327	8		0.0284	34		0.1095
56	Ramnal	4			5			17		
57	Nagaruntari	8	0.3942		9		0.0212	35	0.1199	
58	Bhawanathpur	8	0.0886		6		0.0095	27	0.133	
<b>District</b>		<b>GIRIDIH</b>								
<b>SI No.</b>	<b>Location</b>	<b>PreMonsoon</b>			<b>PostMonsoon</b>			<b>Annual</b>		
		<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>
59	Pandri	10		0.3407	9	0.1523		36		0.1725
60	Bagodar	8	0.0389		10		0.0466	38		0.0329
61	Birini	8		0.0207	8	0.2201		30	0.1167	
62	Dhanwar	10		0.5149	10		0.0243	39		0.1833
63	Gandeyl	3			5			15		
64	Giridih	10	0.493		10	0.1915		39	0.4194	
65	Dhanidih	10		0.257	10		0.0294	40	0.0395	
66	Bengabad	10		0.044	10	0.0115		40		0.0251
67	Bandhutanr	10		0.0044	9		0.0645	39	0.1241	
68	Jamua pwd ib	10		0.1794	10		0.0566	40		0.0005
69	Dumri	10		0.0918	9	0.1216		39	0.104	
70	Dewri	6		0.3828	7	0.1479		25	0.0645	
71	Khijri	6		0.3861	7	0.3991		25	0.1742	
72	Tisri	6		0.3448	6	0.0491		23		
<b>District</b>		<b>GODDA</b>								
<b>SI No.</b>	<b>Location</b>	<b>PreMonsoon</b>			<b>PostMonsoon</b>			<b>Annual</b>		

		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
73	Poraiyahaat	6	0.1105		5			25	0.194	
74	Sundar Pahari	10		0.2462	7		0.3245	33		0.1392
75	Godda1	9		0.1163	9		0.0684	38		0.0568
76	Maheshpur2	7		0.0797	5			27		0.3621
77	Pathargama	10		0.0563	9		0.1225	38		0.063
78	Bara borijore	6		0.1175	8	0.0251		27	0.0098	
79	Mahagama1	8		0.1808	9		0.4125	36		0.1993
80	Lalmatia	9		0.0349	9		0.0976	38		0.0694
81	Gobra	2			2			7		
82	Doi	8	0.0187		9		0.0856	36		0.0403
<b>District</b>		<b>GUMLA</b>								
Sl No.	Location	PreMonsoon			PostMonsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
83	Bharno bdo	9	0.0187		10		0.186	37		0.0621
84	Ghagra	9		0.0536	10		0.0323	39	0.047	
85	Nagfeni	10		0.0293	10	0.0413		39	0.8467	
86	Thethai Thangar	10	0.0017		10	0.0423		39	0.046	
87	Jaldega	10		0.0111	10	0.0653		39	0.0467	
88	Simdega	9		0.0696	10	0.056		38	0.0353	
89	Lachargarh	9	0.0234		9	0.2758		37	0.2045	
90	Bano	8	0.0951		9	0.2891		35	0.2075	
91	Bishnupur	10	0.2084		10	0.0783		39	0.1756	
92	Kolebira	7	0.1753		10	0.042		36	0.0898	
93	Palkot	10		0.0296	10	0.0157		40	0.0696	
94	Baisia	10	0.0255		10	0.0481		39	0.1306	
95	Raidih	9	0.0023		10		0.0216	39	0.0597	
96	Gumla1	6		0.006	6	0.0849		24	0.1241	
97	Anjam gram	9	0.0325		8	0.0835		33	0.0464	
98	Chainpur1	9		0.0397	9		0.0817	35		0.0436
99	Sisai	9		0.0934	9		0.1987	37		0.0944
<b>District</b>		<b>HAZARIBAG</b>								

SI No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
100	Mandu	9		0.0271	10	0.0828		38	0.0608	
101	Hazaribagh	10		0.0379	8	0.3402		37	0.2699	
102	Barkatha	10	0.0715		6	0.1439		34	0.1562	
103	Barhi	10		0.2629	8		0.0388	38		0.1061
104	Gola	9	0.0784		8	0.0024		36	0.006	
105	Barkakhana	10	0.2553		9		0.0543	37	0.0744	
<b>District</b>		<b>KODARMA</b>								
SI No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
106	Chauparan	6	0.0657		3			18		
107	Kodarma	4			6		0.2866	18		
<b>District</b>		<b>LOHARDAGA</b>								
SI No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
108	Bhandara	8	0.0111		9		0.034	37		0.0045
109	Senha Bdo	10	0.047		8	0.1452		38	0.131	
110	Lohardaga(pwd ib)	9	0.0519		9		0.0573	38	0.018	
111	Hinjla	10		0.3096	10		0.083	39		0.1536
112	Kuru dispensary	0			0			0		
113	Kuru 1	10		0.2023	10	0.2459		40	0.1068	
114	Rudh1	2			5			16		
<b>District</b>		<b>PAKAUR</b>								
SI No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
115	Pakuria	7	0.1196		9		0.0643	35		0.0213
116	Salgapara	8		0.0116	7		0.0881	34		0.0534
117	Maheshpur2	7	0.0312		5			29		0.0861

118	Amrapara	8		0.0127	9	0.2217		36	0.1481	
119	Pakurl	9		0.1614	9	0.0167		38		0.0362
120	Litipara	9		0.0313	8		0.1071	37		0.0403
121	Hiranpur	10	0.0562		9	0.0171		39	0.0541	
<b>District</b>		<b>PALAMU</b>								
<b>Sl No.</b>	<b>Location</b>	<b>Pre-Monsoon</b>			<b>Post-Monsoon</b>			<b>Annual</b>		
		<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>
122	Balumath	9		0.0787	10	0.0804		39	0.1677	
123	Satbarwa	9		0.022	10		0.1371	39		0.028
124	Manika	10	0.1238		10	0.0803		39	0.1278	
125	Barwadih	8	0.0397		6	0.009		28	0.1243	
126	Barjatu	8	0.0534		9	0.1008		36	0.1827	
127	Betla	7		0.4342	7	0.2903		30	0.04	
128	Lesliganj	8	0.5176		9	0.3986		34	0.3623	
129	Panki	6		1.1417	6	0.3257		26	0.0021	
130	Daltenganj	9	0.2122		9	0.3322		37	0.3388	
131	Kajri	9	0.3013		9	0.1748		35	0.2148	
132	Nawadih I	7	0.1011		7	0.4526		24	0.3613	
133	Rajhara	8	0.0296		9		0.0297	35	0.0531	
134	Patan	7	0.0037		6		0.04	25	0.1628	
135	Bishrampur	7		0.0186	10	0.0496		36	0.0384	
136	Hariharganj	7		0.0844	8	0.1061		31	0.0356	
137	Kanda	9	0.0592		10		0.0339	37	0.0983	
138	Chhatarpur	10	0.3672		10	0.1217		40	0.2104	
139	Chandwa	10	0.063		10	0.0269		38	0.1497	
140	Latehar	9		0.0462	9	0.1757		35	0.1259	
141	Mandal	0			0			3		
142	Japla	7	0.3397		4			22		
143	Sandha	7	0.1529		6	0.1166		26	0.1795	
<b>District</b>		<b>PASHCHIMI SINGHBHUM</b>								
<b>Sl No.</b>	<b>Location</b>	<b>Pre-Monsoon</b>			<b>Post-Monsoon</b>			<b>Annual</b>		
		<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>
144	Keshargaria	7	0.3366		7	0.2508		27	0.2969	
145	Jhinkpani	7		0.15	8	0.0005		30		0.1039
146	Kokcho	10		0.1118	10		0.1022	40		0.0569
147	Hesadih	10	0.0123		9	0.1298		39	0.0987	
148	Chaibasa	9		0.8911	10		0.7525	39		0.8103
149	Rajnagar	6		0.0827	5			21		
150	Hata_Tirin	6		0.3067	6	0.2847		23		



151	Pandrasalai	8		0.064	7	0.1512		30		0.0118
152	Chakradharpur	9	0.1325		9	0.52		37	0.3774	
153	Saraikele	10	0.1382		10	0.099		40	0.1352	
154	Kharsawan	10	0.1068		9		0.0018	38	0.1016	
155	Bandgaon	9		0.1116	10	0.0728		39	0.0667	
156	Kereikela	10	0.2758		10	0.0508		39	0.1172	
157	Kandra	10		0.03	9	0.14		37	0.0998	
158	Chandil	10	0.1434		10	0.073		40	0.1239	
<b>District</b>		<b>PURBI SINGHBHUM</b>								
<b>Sl No.</b>	<b>Location</b>	<b>PreMonsoon</b>			<b>PostMonsoon</b>			<b>Annual</b>		
		<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>
159	Ghatsila	10		0.0052	10	0.058		40	0.1061	
160	Baharagora	10		0.0247	10	0.0816		39	0.0874	
161	Chakulia	9		0.0505	8	0.0613		36	0.0645	
162	Pithajudi	4			2			15		
163	Dhalbhumgarh	10		0.101	9	0.1025		39	0.0757	
164	Mosabani	6		0.1507	7		0.122	25	0.0364	
165	Kalikapur	10	0.1983		9		0.0642	39	0.1261	
166	Potka	9		0.1224	10	0.0653		37	0.0432	
167	Galudih	10	0.0511		10		0.0893	39		0.0101
168	Ramgarh	10		0.1835	8		0.13	33		0.2037
169	Sundarnagar	8	0.0429		6	0.2177		25	0.0856	
<b>District</b>		<b>RANCHI</b>								
		<b>PreMonsoon</b>			<b>PostMonsoon</b>			<b>Annual</b>		
<b>Sl No.</b>	<b>Location</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>	<b>Data Points</b>	<b>Rise (m/year)</b>	<b>Fall (m/year)</b>
170	Lodma	8	0.3566		7	0.1438		31	0.1879	
171	Kharsidag	3			4			10		
172	Barwadag	10	0.0205		8	0.1526		35	0.0424	
173	Berro	10	0.018		9	0.0167		37	0.0348	
174	Hatia	7		0.2057	8		0.6865	30		0.2116
175	Ormanji	9		0.1319	7		0.2561	31		0.1614
176	Ranchi	8	0.1473		7		0.2229	28	0.0051	
177	Kita	4			3			13		
178	Silli	10		0.0617	8	0.0353		34	0.0261	
179	Bunti	9		0.0034	7		0.1035	31		0.0216
180	Mandar	10	0.0387		8	0.0912		34	0.1209	

181	Chutupalu	10	0.0072		7	0.2079		33	0.0032	
182	Burmoo	5			5			21		
183	Torpa	1			0			4		
184	Murhu	9	0.0251		8		0.26 27	33		0.1852
185	Khunti	8	0.248		8	0.0997		31	0.1059	
186	Tamar	10	0.2249		9	0.5012		35	0.4476	
187	Karra1	8	0.0923		7	0.2542		29	0.2377	
188	Bundu	10		0.1314	9		0.03 44	39	0.0697	
189	Kalimati	7	0.1957		10	0.0554		37	0.0801	
<b>District</b>		<b>SAHIBGANJ</b>								
Sl No.	Location	Pre-Monsoon			Post-Monsoon			Annual		
		Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)	Data Points	Rise (m/year)	Fall (m/year)
190	Barharwa	9	0.0563		7		0.09 37	25	0.2462	
191	Barhait	9	0.2771		9	0.2679		29	0.1852	
192	Rajmahal	10		0.0183	7		0.18 78	34	0.0473	
193	Borio	9		0.5094	9	0.0383		37		0.0861
194	Taljhari l	9	0.7302		7		0.10 43	32	0.3664	
195	Mandro	7	0.1015		5			25	0.1911	
196	Sahebganj l	10		0.0404	8	0.228		36	0.1772	
197	Sakrigali	9		0.0214	7	0.1273		31	0.1237	

## Chemical Quality of Ground Water May, 2017

Sl.No	Location	Block	District	E.C. micro Siemens /cm at 250 C	TDS	pH	CO 32-	HCO3-	Cl-	F-	NO3-	SO42-	TH	Ca2+	Mg2+	Na	K	SiO2	P04	
													as CaCO3							
					mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
1	Radhagram	Chas	Bokaro	1303	846.95	7.88	0	252.15	216	0.362	118	78.27	550	110	66.82	76.16	6.72	NA	0	
2	JainaMore	Chas	Bokaro	1329	863.85	7.78	0	270.6	214	0.35	135	77.33	605	116	76.545	78.52	6.78	NA	0	
3	Pindrajora	Chas	Bokaro	366	237.9	8.19	0	190.65	7.02	0.928	3.02	16.22	170	40	17.131	9.73	5.57	NA	0	
4	Pupunki	Chas	Bokaro	730	474.5	7.93	0	196.8	63.81	0.813	164	72.92	345	110	24.3	23.51	7.21	NA	0	
5	Chandankiyari	Chandankiyari	Bokaro	781	507.65	8	0	190.65	93.4	0.657	70.9	65.95	225	80	6.075	83.92	7.28	NA	0	
6	Laghla	Chandankiyari	Bokaro	1237	804.05	7.78	0	202.95	211	0.903	201	75.16	505	182	12.15	56.87	8.03	NA	0	
7	Nutandih	Chandankiyari	Bokaro	2450	1592.5	7.56	0	246	714	0.293	58.2	85.09	1110	286	95.985	45.28	9.84	NA	0	
8	Baramasia	Chandankiyari	Bokaro	494	321.1	7.79	0	122	71.24	0.174	96.4	36.16	130	36	9.72	54.46	19.56	NA	0	
9	Chandra	Chandankiyari	Bokaro	2115	1374.8	7.63	0	492.4	365	1.52	134	106.5	320	106	13.365	374.94	27.94	NA	0.12	
10	Chandrapura	Petarbar	Bokaro	335	217.75	7.9	0	86.1	25	1.12	1.98	76.76	135	38	9.72	4.86	17.97	NA	0.3	
11	Gomia	Gomia	Bokaro	1206	783.9	8.01	0	460.02	157	1.01	8.52	52.76	200	70	6.075	158.41	8.61	NA	0	
12	Nawadih	Nawadih	Bokaro	997	648.05	8.25	0	276.75	156	0.599	68.8	73.51	375	120	18.225	62	5.18	NA	0	
13	Petarbar	Petarbar	Bokaro	776	504.4	7.63	0	178.49	101	0.246	104	64.02	350	60	48.6	33.5	6.76	NA	0	
14	Bermo/Phusro	Bermo	Deogarh	1218	791.7	7.78	0	455.1	123	0.439	8.76	72.11	425	84	52.245	58.2	5.13	NA	0	
15	Deoghar	Deogarh	Deogarh	683	443.95	8.22	0	295.2	24.7	0.683	35.6	36.67	315	80	27.945	23.98	7.19	NA	0	
16	Ghormara	Mohanpur	Deogarh	903	586.95	8.24	0	319.8	62.1	0.795	146	59.72	325	90	24.3	77.13	5.05	NA	0	
17	Jasidih	Deoghar	Deogarh	1095	711.75	7.95	0	319.8	120	0.43	139	66.89	420	102	40.095	74.07	6.35	NA	0	
18	Madhupur	Madhupur	Deogarh	1170	760.5	7.8	0	473.5	70.9	0.691	86	67.91	265	66	24.3	137.06	5.23	NA	0	
19	Palajori	Palajori	Deogarh	841	546.65	8.05	0	301.35	67.5	0.547	47.5	45.22	290	74	25.515	77.53	6.76	NA	0	
20	Sarath	Sarath	Deogarh	551	358.15	8.24	0	196.8	40.6	0.473	22	36.19	250	60	24.3	15.89	5.72	NA	0	
21	Sarawan	Sarwan	Deogarh	680	442	8.12	0	221.4	104	0.512	47.5	43.88	290	100	9.72	28.47	6.69	NA	0.54	
22	Khamarbad(New)	Palajori	Deogarh	1025	666.25	7.88	0	258.3	130	1.16	182	68.67	350	78	37.665	97.62	5.31	NA	0	
23	Matiyara(New)	Sarath	Deogarh	379	246.35	7.93	0	135.3	51.3	1.02	51.2	20.33	120	40	4.86	37.24	6.18	NA	0	
24	Bada Nawada(New)	Sarath	Deogarh	462	300.3	8.26	0	239.85	6.95	1.17	1.04	23.5	170	32	21.87	15.01	8.96	NA	0	
25	Baghmara	Baghmara	Dhanbad	1121	728.65	7.73	0	369	110	0.74	8.72	88.16	435	72	61.965	72.08	5.35	NA	0	
26	Basudeo pur	Dhanbad	Dhanbad	1160	754	7.91	0	399.75	69.9	0.731	15.2	97.97	375	96	32.71	62.36	100	NA	0	
27	Dhaiyasm	Dhanbad	Dhanbad	532	345.8	8.05	0	147.6	44.4	0.828	8.29	75.35	180	44	17.01	31.09	30.63	NA	0	
28	Dhanbad(New)	Dhanbad	Dhanbad	714	464.1	8.11	0	190.65	105	0.539	8.08	39.65	305	46	46.17	35.88	4.63	NA	0	
29	Dhansar MRS	Jharia	Dhanbad	654	425.1	7.9	27	104.55	67	0.394	121	71.62	245	78	12.15	46.24	4.75	NA	0	

30	Godhar Basti	Dhanbad	Dhanbad	589	382.85	8.02	0	270.6	7.9	1.67	54.5	49.8	185	32	25.515	62	5.57	NA	0
31	Gobindpur	Govindpur	Dhanbad	720	468	8.09	0	270.6	58.3	1.83	56.4	50	215	24	37.665	81.84	5.57	NA	0
32	Jharia	Jharia	Dhanbad	678	440.7	8.06	0	270.6	47.3	0.928	10.3	71.82	200	48	19.44	42.37	32.37	NA	0
33	Kandra Mandal Basti	Jharia	Dhanbad	1079	701.35	8.05	0	375.15	85	0.578	37.1	96.25	255	40	37.66	147.27	9.99	NA	0
34	Mahuda	BAGHMAR A	Dhanbad	1966	1277.9	8	24	282.9	177	0.495	353	91.4	600	100	85.05	206.96	6.91	NA	0
35	Matkuri	DHANBAD	Dhanbad	662	430.3	8.27	0	295.2	30.8	0.777	4.06	40.42	235	22	43.74	51.3	6.72	NA	0
36	Nirsa	NIRSA	Dhanbad	270	175.5	8.25	0	147.6	5.85	1.86	1.17	10.91	110	22	13.365	5.14	5.48	NA	0
37	Pkroy College	DHANBAD	Dhanbad	1968	1279.2	8.1	0	295.2	186	0.566	365	92.34	565	106	72.9	238.76	6.99	NA	0
38	Purandih Jorapokhar	DHANBAD	Dhanbad	1733	1126.5	8.1	0	319.8	169	0.544	262	94.1	390	54	61.96	255.52	8.43	NA	0
39	Rajganj	RAJGANJ	Dhanbad	1153	749.45	8.03	0	270.6	169	0.44	75.3	75.82	326	56	45.198	91.28	5.44	NA	0
40	Sindri Gosala More	JHARIA	Dhanbad	734	477.1	8.02	0	190.65	80.6	0.755	5.79	62.72	300	70	30.375	44.33	7.28	NA	0
41	Topchanchi	TOPCHANHI	Dhanbad	1685	1095.3	8.14	0	442.5	198	0.51	39.4	96.05	459	84	60.57	202.14	6.95	NA	0
42	Tundi	TUNDI	Dhanbad	765	497.25	8.25	0	196.8	104	0.388	20.7	68.99	295	86	19.44	45.55	5.69	NA	0
43	Bagodar	BAGODAR	Giridih	737	479.05	8.31	6	221.4	92	0.831	87.3	65.96	300	56	38.86	46.04	6.08	NA	0
44	Bandhatanr	GIRIDIH	Giridih	906	588.9	8.28	0	172.2	156	0.351	0.82	51.74	255	68	20.655	99.29	5.44	NA	0
45	Bengabard	BENGABAD	Giridih	324	210.6	8.5	12	104.55	33.6	0.306	4.73	24.19	100	16	14.58	27.1	6.7	NA	0
46	Birini	BIRNI	Giridih	725	471.25	8.18	0	196.8	104	0.601	76.6	62.01	285	52	37.665	44.35	5.02	NA	0
47	Dewri	DEWRI	Giridih	486	315.9	8.44	12	264.45	1.6	1.04	0.81	24.87	190	30	27.945	13.09	9	NA	0
48	Dhanayadih	GIRIDIH	Giridih	556	361.4	8.18	21	116.85	90.7	0.74	63.3	42.95	160	46	10.935	58.36	7.23	NA	0
49	Dumri	DUMRI	Giridih	1142	742.3	8.47	15	338.25	110	0.544	108	74.27	430	84	53.46	43.22	6.1	NA	0
50	Gandey	GANDEY	Giridih	305	198.25	8.6	18	129.15	15.7	0.708	9.08	6.17	135	46	4.86	9.05	4.37	NA	0
51	Giridih	GIRIDIH	Giridih	918	596.7	8.12	0	153.75	149	0.211	72.4	77.79	310	28	58.32	80.81	7.08	NA	0
52	Jamua	JAMUA	Giridih	429	278.85	8.36	12	166.05	34	1.12	24.2	23.61	135	44	6.05	42.65	4.89	NA	0
53	Khijri	JAMUA	Giridih	1620	1053	8.03	0	319.8	271	1.56	58	82.7	305	70	31.59	265.1	14.44	NA	0
54	Maheshmunda	GANDEY	Giridih	222	144.3	8.27	0	141.45	1.39	0.988	1.17	4.79	75	18	7.29	16.32	4.18	NA	0
55	Pandri	GANDEY	Giridih	477	310.05	8.1	0	104.55	40.7	0.575	91.1	30.33	205	64	10.935	23.51	4.42	NA	0
56	Saraiya	SARIYA	Giridih	594	386.1	8.19	0	215.25	91.8	0.542	10.1	34.57	215	58	17.01	35.6	4.62	NA	0
57	Tisri	TISRI	Giridih	477	310.05	8.29	0	227.55	35.1	2.66	0.84	21.58	140	40	9.72	39.2	4.92	NA	0
58	Dhanawar	Dhawar	Giridih	512	332.8	8.2	0	202.95	41.1	0.392	1	56.64	130	38	8.505	61.92	5.71	NA	0
59	Chirki(Pirtand)	Chirki(Pirtand)	Giridih	1202	781.3	7.95	0	215.25	206	0.699	161	85.94	420	96	43.74	100.41	5.96	NA	0
60	dorma	Torpa	Khunti	258	167.7	7.8	0	104.55	13.9	0.47	3.55	17.27	65	24	1.215	29.1	2.22	NA	0
61	Kakariya	Lapung	Khunti	488	317.2	7.9	0	178.35	37.7	0.167	39.3	27.52	190	36	24.3	31.87	7.29	NA	0.35
62	Kalamati	Khunti	Khunti	145.7	94.705	7.48	0	55.35	10.4	0.185	5.38	11.39	50	10	6.075	10.93	2.52	NA	0
63	Nawatoli	Karra	Khunti	241	156.65	7.6	0	92.25	29.3	0.337	6.85	4.53	80	14	10.935	23.62	1.19	NA	0
64	Pokta	Karra	Khunti	204.6	132.99	7.77	0	110.7	5.36	0.396	3.4	9.93	75	10	12.15	14.78	0.61	NA	0
65	Barwada	Karra	Khunti	420	273	7.87	0	98.4	50.9	0.203	49.4	15	160	24	24.3	21.03	3.68	NA	0

66	Govindpur	Karra	Khunti	302	196.3	8.27	0	166.05	10	0.782	1.02	12.37	110	16	17.01	22.8	2.04	NA	0
67	Jariya	Karra	Khunti	129	83.85	7.71	0	61.5	3.52	0.257	4.57	7.18	50	6	8.505	8.92	1.46	NA	0
68	Raloguta	Karra	Khunti	142.4	92.56	7.77	0	67.65	7.36	0.334	6.32	4.82	45	6	7.29	13.18	1.19	NA	0
69	Malgo	Karra	Khunti	139	90.35	7.14	0	67.65	1.9	0.107	12.3	6.97	50	8	7.29	7.14	2.78	NA	0.3
70	Masama no	Karra	Khunti	400	260	7.43	0	129.19	68.5	0.118	9.28	4.16	120	20	17.01	38.49	3.87	NA	0
71	Kasir	Karra	Khunti	325	211.25	7.68	0	86.1	38.9	0.128	26	20.17	95	16	13.365	32.96	2.13	NA	0
72	Jobra	Karra	Khunti	475	308.75	7.77	0	166.05	50.3	0.55	20	26.8	190	28	29.16	22	2.07	NA	0
73	satiya	Karra	Khunti	186	120.9	7.81	0	92.25	5.75	0.347	9.33	8.02	70	8	12.15	12.3	1.09	NA	0
74	Bala	Torpa	Khunti	251	163.15	7.67	0	135.3	11.8	0.694	6.41	4.24	100	12	17.01	9.36	12.11	NA	0
75	Kudri	Karra	Khunti	84.2	54.73	7.52	0	24.6	1.95	0	12.3	8.89	40	4	7.29	0.88	2.83	NA	0
76	Jumu	Torpa	Khunti	576	374.4	7.63	0	196.8	70.9	0.301	19.4	37.68	240	38	35.235	21.48	2.06	NA	0
77	Lodhma	Karra	Khunti	276	179.4	7.92	0	129.15	12.6	0.305	12.9	11.2	110	20	14.58	12.25	3.02	NA	0
78	Sirka	Karra	Khunti	232	150.8	7.8	0	86.1	23.9	0.654	9.01	7.6	85	12	13.365	15.14	2.21	NA	0
79	Bingaou	Karra	Khunti	189.3	123.05	7.86	0	79.95	16.6	0.245	5.76	9.51	85	16	10.94	5.084	4.42	NA	0
80	Ghunsuli	Karra	Khunti	881	572.65	8.21	0	209.1	148	0.172	53.6	47.98	255	34	41.31	41.28	75.39	NA	0
81	Guitjora	Khunti	Khunti	1033	671.45	7.74	0	362.85	19.7	0.194	90.5	72.29	260	56	29.16	61.45	85.36	NA	0
82	Jaltaanda	Khunti	Khunti	169.7	110.31	8.07	0	49.2	24.2	0	8.91	4.75	65	8	10.94	11.21	1.91	NA	0
83	dumardaga	Khunti	Khunti	131.5	85.475	7.69	0	36.9	3.4	0.138	27.2	7.26	20	6	1.215	17.41	3.73	NA	0
84	Rewa	Khunti	Khunti	118	76.7	7.38	0	36.9	6.99	0.294	19.8	3.92	49	16	2.3	0.59	3.65	NA	0
85	Amjora	Khunti	Khunti	213.9	139.04	7.6	0	92.25	12.4	0.532	7.2	12.46	85	8	15.795	8.58	2.7	NA	0
86	Jara Toli	Karra	Khunti	116.1	75.465	7.84	0	49.2	5.45	0.172	7.87	3.45	35	6	4.86	12.29	0.71	NA	0
87	Kunjala	Khunti	Khunti	280	182	7.47	0	61.5	53.2	0.186	12.1	14.66	95	16	13.365	19.5	3.8	NA	0
88	Pelaul	Khunti	Khunti	322	209.3	7.61	0	67.65	75.3	0.18	10.6	4.37	130	38	8.505	12.28	2.5	NA	0
89	Serenghatu	Arki	Khunti	353	229.45	7.83	0	172.2	15.3	0.362	4.53	21.35	130	22	18.225	18.02	1.9	NA	0
90	Kurapurti	Murhu	Khunti	1209	785.85	7.9	0	418.2	147	0.225	75.4	22.75	500	70	78.975	32.62	3.43	NA	0
91	Khunti	Khunti	Khunti	1489	967.85	8	0	381.3	289	0.825	37.6	69.67	505	82	72.9	110.4	3.61	NA	0
92	Murhu	Murhu	Khunti	458	297.7	8	0	147.6	50.3	0.544	23.5	37.85	130	38	8.505	35.12	17.5	NA	0
93	Barwatali Chowk	Lohardaga	Lohardaga	488	317.2	8.18	0	166.05	53.2	0.703	20.4	36.08	180	34	23.085	26.67	3.9	NA	0
94	Bhandra	Bhandra	Lohardaga	270	175.5	7.62	0	49.2	61.9	0.227	18.8	5.6	90	16	12.15	21.5	1.63	NA	0
95	Hesal	Lohardaga	Lohardaga	369	239.85	7.91	0	116.85	51.1	0.307	19.3	13.64	135	32	13.365	20.16	1.89	NA	0
96	Hinjila	Kuru	Lohardaga	178.5	116.03	6.2	0	49.2	14	0.171	31.6	9.15	65	10	9.72	10.06	2.88	NA	0
97	Irgaon	Lohardaga	Lohardaga	221	143.65	7.5	0	79.95	16.2	0.103	15.9	14.43	70	12	9.72	18.12	1.21	NA	0
98	Kisko 1	Kisko	Lohardaga	260	169	7.4	0	61.5	51.9	0.14	18	2.85	85	14	12.15	16.52	2.64	NA	0
99	Kuru 1	Kuru	Lohardaga	524	340.6	7.5	0	135.3	96.2	0.195	34.9	12.69	205	38	26.73	17.94	2.48	NA	0
100	Patra Toli	Lohardaga	Lohardaga	590	383.5	7.7	0	116.85	105	0.23	52.7	26.58	200	32	29.16	40.09	2.44	NA	0
101	Lohardaga (pwdib)	Lohardaga	Lohardaga	220	143	7.73	0	116.85	4.8	0.445	6.37	9.39	80	10	13.365	13.32	0.27	NA	0
102	Rudh 1	Kuru	Lohardaga	272	176.8	7.31	0	36.9	37	0.174	75.1	3.54	80	16	9.72	21.45	5.47	NA	0

103	Senha	Senha	Lohardaga	559	363.35	7.61	0	135.3	85.9	0.145	54.4	22.5	180	38	20.655	38.83	1.43	NA	0
104	Adar	Ghaghara	Gulma	485	315.25	7.83	0	196.8	43.6	0.569	20	26.69	190	32	26.73	25.59	1.86	NA	0
105	Anjan Gram	Gumla	Gulma	192	124.8	7.7	0	92.25	13.3	0.536	2.9	5.3	65	16	6.075	14.54	1.41	NA	0
106	Bagham	Palkot	Gulma	887	576.55	8.01	0	172.2	144	0.32	98	39.06	305	60	37.665	58.46	2.45	NA	0
107	Basia	Basia	Gulma	1086	705.9	8.05	0	387.45	107	0.327	67.3	49.51	285	70	26.73	76.5	88.33	NA	0
108	Bano	Bano	Simdega	229	148.85	7.75	0	98.4	16.3	0.171	11.3	10.63	80	20	7.29	15.82	0.81	NA	0
109	Bharnobdo	Bharnobdo	Gulma	101	65.65	7.57	0	55.35	2.11	0.177	2.92	3.92	35	8	3.645	7.85	0.74	NA	0
110	Biru	Simdega	Simdega	415	269.75	8.14	0	209.1	20.3	0.237	2.82	16.71	85	24	6.075	11.89	91.49	NA	0
111	Bishunpur	Bishunpur	Gulma	797	518.05	8.18	0	202.95	109	0.219	9.8	44.9	272	92	10.225	42.65	1.95	NA	0
112	Chainpur 1	Chainpur 1	Gulma	269	174.85	7.9	0	67.65	33.9	0.435	23.4	16.49	85	24	6.075	19.64	1.64	NA	0
113	Ghaghra	Ghaghra	Gulma	214.3	139.3	7.66	0	79.95	14.7	0.249	19.1	9.84	80	20	7.29	11.39	1.37	NA	0
114	gumla	gumla	Gulma	1218	791.7	7.98	0	362.85	179	0.223	66.7	62.61	364	110	21.87	110.8	4.9	NA	0
115	Jaldega	Jaldega	Simdega	459	298.35	7.93	0	153.75	47.2	0.359	46.3	17.26	175	42	17.01	21.54	2.72	NA	0.14
116	Kasir	Raidih	Gulma	568	369.2	7.92	0	178.35	77.3	0.306	35.4	25.46	220	56	19.44	27.56	3.01	NA	0
117	Kharke	Gumla	Gulma	142	92.3	7.58	0	43.05	11.9	0.113	19.5	8.4	40	10	3.645	12.55	1.98	NA	0
118	Kolebira	Kolebira	Simdega	321	208.65	7.92	0	153.75	21.3	3.12	11.1	3.46	80	24	4.86	38.25	0.75	NA	0
119	Lachragarh	Lachragarh	Simdega	847	550.55	7.96	0	215.25	149	0.265	43.2	43.23	285	72	25.515	55.04	2.36	NA	0
120	Nagfeni	Bharno	Gulma	481	312.65	7.82	0	135.3	71.9	0.339	37.8	18.53	150	52	4.86	40.29	2.83	NA	0
121	Palkot	Palkot	Gulma	1282	833.3	7.25	0	246	230.4	0.817	55	55.48	494	144	32.805	48.01	3.8	NA	0
122	Puthri Toli	Kolebira	Simdega	203	131.95	7.58	0	55.35	23.7	0.31	28.7	5.21	60	16	4.86	19	0.76	NA	0
123	Raidih	Raidih	Gulma	526	341.9	7.79	0	209.1	46.9	0.142	4.37	17.43	200	46	20.655	28.03	9.68	NA	0
124	Simdega	Simdega	Simdega	196.1	127.47	7.65	0	55.03	30.9	0.135	11.8	5.84	55	16	3.645	21.01	2.67	NA	0
125	Sisai	Sisai	Gulma	303	196.95	7.37	0	55.35	38.4	0.174	36.3	21.32	70	18	6.075	37.08	0.77	NA	0
126	Tengara Tuku	Jaldega	Simdega	378	245.7	7.7	0	141.45	47.2	0.264	5.11	19.37	120	32	9.72	31.34	2.72	NA	0
127	Thethai Tangar	Thethai Tangar	Simdega	401	260.65	7.77	0	116.85	35.45	1.81	3.08	66.05	115	34	7.29	36.09	2.05	NA	0
128	Bari Biringa	Jaldega	Simdega	293	190.45	7.57	0	86.1	38.8	0.203	20.6	22.65	95	28	6.075	19.35	3.6	NA	0
129	Lomboi	Jaldega	Simdega	240	156	7.68	0	110.7	22	0.211	4.17	5.82	70	22	3.645	24.11	1.24	NA	0
130	Bolba	<b>Bolba</b>	Simdega	448	291.2	7.71	0	172.2	47.3	0.703	6.79	31.09	145	44	8.505	35.53	1.54	NA	0
131	Kerio	Kerio	Simdega	280	182	7.72	0	116.85	23.7	0.577	11	10.92	70	20	4.86	34.03	3.36	NA	0
132	Pardhi	Jugsalai	E. Singhbhum	748	486.2	7.71	0	289.05	41.7	0.198	5.45	41.69	305	90	19.44	28.09	0.46	NA	0
133	Bagnunagar	Jugsalai	E. Singhbhum	868	564.2	7.44	0	209.1	57.2	0.324	84.4	79.43	275	88	13.365	75.31	2.25	NA	0
134	Baharagora	Jugsalai	E. Singhbhum	375	243.75	7.58	0	215.25	1.22	0.361	3.66	3.87	160	46	10.935	17.66	1.91	NA	0
135	Baridih	Jugsalai	E. Singhbhum	314	204.1	7.68	0	141.45	14	0.167	13.5	9.05	145	36	13.365	9.79	1.66	NA	0
136	Barmam Thana	Jugsalai	E. Singhbhum	590	383.5	7.65	0	196.8	21.2	0.31	53.6	44.63	220	62	15.795	35.65	8.72	NA	0
137	Chakulia	Chakulia	E. Singhbhum	236	153.4	6.31	0	24.6	26.7	0	56.8	5.51	60	12	7.29	25.3	3.54	NA	0

			hum																
138	Telco	Jugsalai	E. Singbhum	710	461.5	7.61	0	350.55	10.4	0.903	17.8	7.67	265	66	24.3	41.15	1.59	NA	0
139	Dhalbhumgarh	Dalbhumgarh	E. Singbhum	355	230.75	7.06	0	110.7	33.4	0	45.7	5.53	125	30	12.15	30.22	1.42	NA	0
140	Galudih	Ghatsila	E. Singbhum	412	267.8	7.69	0	153.75	35.7	0	8.52	5.25	115	44	1.215	35.62	13.1	NA	0
141	Garhabasa	Jugsalai	E. Singbhum	865	562.25	8.02	0	319.8	49.7	0.365	73.1	4.27	295	82	21.87	62.49	1.62	NA	0
142	Ghatsila	Ghatsila	E. Singbhum	812	527.8	7.49	0	282.9	88.5	0.437	8.88	4.74	305	72	30.375	41.69	2	NA	0
143	golmuri	Jugsalai	E. Singbhum	767	498.55	8.06	0	362.85	16	0.398	33.5	5.01	270	80	17.01	32.23	40.6	NA	0
144	Hata-tiring	Potka	E. Singbhum	1238	804.7	7.5	0	399.75	136	0.501	61.9	5.44	389	126	18.225	78.73	4.47	NA	0
145	Jugsalai Thana	Jugsalai	E. Singbhum	894	581.1	7.9	0	350.55	67.35	0.848	26	4.38	285	54	36.45	78.83	11.67	NA	0
146	Kala Pathar	Chakulia	E. Singbhum	490	318.5	7.4	0	141.45	44.9	0.113	46.7	6.27	115	36	6.075	35.86	40.27	NA	0
147	Mosabani	Mosabani	E. Singbhum	580	377	7.95	0	215.45	35.45	0.311	13.7	24.67	215	42	26.73	32.74	22.03	NA	0
148	Pithajudi	Chakulia	E. Singbhum	331	215.15	7.8	0	129.15	14.2	0.213	52.2	4.69	100	32	4.86	22.84	2.3	NA	0
149	Potka	Potka	E. Singbhum	828	538.2	7.87	0	350.55	50.6	0.254	18	3.32	375	76	44.955	17.5	0.3	NA	0
150	Rankini Mandir Jadugo	Potka	E. Singbhum	258	167.7	7.91	0	123	17.72	0.352	6.2	3.77	100	24	9.72	16.75	2.72	NA	0.13
151	shitla Mandir Sakchi	Jugsalai	E. Singbhum	560	364	7.72	0	221.4	48.3	0.287	5.82	3.67	190	42	20.655	29.69	2.14	NA	0
152	Barama mines	Jugsalai	E. Singbhum	1354	880.1	7.67	0	448.95	145.3	0.539	49.8	4.54	305	80	25.51	163.05	3.09	NA	0
153	Sundam agar 1	Jamshedpur	E. Singbhum	1143	742.95	7.97	0	356.7	134.7	0.598	43	3.44	369	122	12.15	80.3	24.1	NA	0
154	Piplia	Jamshedpur	E. Singbhum	1238	804.7	7.98	0	553.5	64.8	2.21	24.7	3.06	180	42	18.225	204.65	1.24	NA	0
155	Andharia	Chakulia	E. Singbhum	290	188.5	7.87	0	104.55	12.6	0.165	30.3	5.73	110	22	13.365	13.54	4.78	NA	0
156	Jabirdiha	Chakulia	E. Singbhum	358	232.7	7.65	0	153.75	37	0	16.7	4.61	95	30	4.86	40.56	1.97	NA	0
157	Kendadih	Ghatsila	E. Singbhum	198	128.7	7.31	0	49.2	19.5	0	21.5	4.66	55	14	4.86	9.68	15.76	NA	0
158	Matigora	Potka	E. Singbhum	788	512.2	7.25	0	252.15	96.2	0.263	10.8	5.04	305	84	23.085	33.89	1.39	NA	0
159	Gitilata	Hata	E. Singbhum	810	526.5	8.01	0	264.45	98.8	0.353	32.8	4.26	320	78	30.375	42.15	1.9	NA	0
160	Birsa Nagar Zone 11	Jamshedpur	E. Singbhum	641	416.65	7.94	0	307.5	21.2	0.739	8.17	4.78	227	49	25.51	32.09	0.62	NA	0
161	Mariyama temple Nildih	Jamshedpur	E. Singbhum	788	512.2	7.95	0	350.55	44.1	0.441	7.77	4.33	265	84	13.365	56.83	0.95	NA	0

162	Lodhiso l	Chakulia	E. Singhb hum	266	172.9	6.57	0	18.45	34.1	0	74.7	2.06	90	28	4.86	10.23	8.16	NA	0
163	Bhandga on	Noamundi	W. Singhb hum	251	163.15	7.55	0	86.1	8.77	0	48.6	3.39	115	28	10.935	9.84	1.9	NA	0
164	Bandgao n	Bandgaon	W. Singhb hum	1001	650.65	7.47	0	98.4	222	0	82	1.71	295	68	30.375	94.15	5.76	NA	0
165	Barajam da	Noamundi	W. Singhb hum	445	289.25	7.94	0	190.65	21.7	0.162	18.2	3.28	135	34	12.15	28.34	4.83	NA	0
166	Chaibas a	Chaibasa	W. Singhb hum	1009	655.85	7.35	0	202.95	120	0.382	128	1.18	325	86	26.73	79.76	0.29	NA	0
167	CKP (ulidih)	Chakradhar pur	W. Singhb hum	835	542.75	7.87	0	381.3	38.4	0.409	6.64	7.8	230	68	14.58	83.06	1.44	NA	0
168	Hat Gamhari ya	Hatgamhari ya	W. Singhb hum	850	552.5	7.78	0	196.8	111	0.517	81.9	2.56	280	76	21.87	66.06	1.03	NA	0
169	Hesadih	Bandgaon	W. Singhb hum	598	388.7	7.61	0	178.35	77.8	0.402	15.8	2.55	195	58	12.15	56.37	1	NA	0
170	Jaganna thpur	Jagnnathpu r	W. Singhb hum	814	529.1	7.89	0	227.55	89.9	0.408	70.2	1.41	330	60	43.74	35.33	0.59	NA	0
171	Jaitgarh	Jagnnathpu r	W. Singhb hum	352	228.8	8.26	0	172.2	17.2	0.205	6.07	1.92	115	32	8.505	21.82	1.14	NA	0
172	Jhinkpa ni	Jhinkpani	W. Singhb hum	1910	1241.5	8.08	0	448.95	283.6	0.256	98.4	25.51	394	96	37.665	206.65	25	NA	0
173	kereikel a	Kereikala	W. Singhb hum	944	613.6	8.05	0	313.65	97.1	0.367	32.2	22.57	350	88	31.59	49.32	4.59	NA	0
174	Khuntap ani	Khuntpani	W. Singhb hum	934	607.1	8.07	0	325.95	59.9	0.309	90	18.57	385	84	42.525	41.93	0.61	NA	0
175	Noamun di	Noamundi	W. Singhb hum	811	527.15	8.42	9	221.4	78.9	0.778	28.2	38.81	275	72	23.085	56.46	6.05	NA	0
176	Kokcho	Tantnagar	W. Singhb hum	521	338.65	8.03	0	246	3.61	0.342	11.4	37.14	170	62	3.645	28.63	5.98	NA	0
177	Putida	Chaibasa	W. Singhb hum	115.1	74.815	7.49	0	36.9	4.56	0.247	18.6	2.31	30	10	1.21	10.41	0.12	NA	0
178	Baranan da	Jagnnathpu r	W. Singhb hum	178	115.7	7.7	0	43.05	19.7	0.14	21.4	3.09	72	12	10.206	7.99	0.89	NA	0
179	Toretop a	Noamundi	W. Singhb hum	460	299	7.95	0	215.25	19.26	0.12	5.76	1.9	180	32	24.3	21.72	2.47	NA	1.24
180	Talabur u	Hatgamhari ya	W. Singhb hum	309	200.85	8.25	0	184.5	1.26	0.24	4.09	1.03	145	26	19.44	11.77	-0.09	NA	0
181	Kandra	Gamharia / adityapur	Saraike la	780	507	7.84	0	221.4	56.6	0.372	113	1.81	310	82	25.51	35.67	1.34	NA	0
182	Kharsaw an	Kharsawan	Saraike la	850	552.5	8.22	0	344.4	64	0.393	15.3	1.65	210	54	18.225	69.82	38	NA	0
183	jamdih	Nimdih	Saraike la	861	559.65	8.04	0	301.35	92.4	0.374	14.2	3.18	275	66	26.73	78.37	1.69	NA	0
184	Saraike la	Saraike la	Saraike la	1770	1150.5	7.66	0	405.9	310	0.394	14	22.98	450	68	68.04	161.9	13.19	NA	0
185	Lupungd ih	Nimdih	Saraike la	524	340.6	8.07	0	153.75	46.9	0.317	33.5	19.51	170	48	12.15	41.5	3.76	NA	0
186	bhaludih	Chandil	Saraike la	983	638.95	8.26	0	332.1	77.4	0.3	10.5	15.51	349	62	47.19	39.83	2.27	NA	0
187	Keshara garia	Rajnagar	Saraike la	773	502.45	8.28	0	276.75	55.5	0.271	52.1	6.37	295	60	35.235	51.25	4.3	NA	0
188	Bagra Sai	Rajnagar	Saraike la	377	245.05	8.39	6	190.65	4.98	0.614	4.69	4.35	140	32	14.58	27.78	0.68	NA	0



189	Dugni	Saraike	Saraike	431	280.15	8.14	0	178.35	30.6	0.312	6.99	2	160	44	12.15	21.6	1.86	NA	0
190	Nabibera	Rajnagar	Saraike	654	425.1	7.96	0	178.35	78.7	0.274	33.5	12.29	235	66	17.01	31.29	0.64	NA	0
191	Jonha	Angara	Ranchi	258	167.7	8.11	0	209.1	7.08	0.541	6.39	11.41	135	32	13.365	21	3.33	25	0
192	Hinoo	Namkum	Ranchi	338	219.7	8.12	0	147.6	20.9	1.43	7.04	27.95	110	30	8.505	28.32	4.17	7	0
193	Bajra	Ratu	Ranchi	544	353.6	7.84	0	98.4	68.4	0.327	58.6	45.23	195	46	19.44	36.1	1.19	15	0
194	Bandhe	Nagri	Ranchi	547	355.55	7.97	0	196.8	41.9	0.505	4.14	35.56	220	44	26.73	38	0.3	6	0
195	Barwada	Angara	Ranchi	589	382.85	8.19	0	172.2	37.7	0.903	26.3	61.24	250	40	36.45	24.39	1.82	23	0
196	Berro	Berro	Ranchi	284	184.6	8.05	0	141.45	8.76	0.543	18	26.05	125	28	13.365	17	1.67	27	1.07
197	Chanho	Bijupara	Ranchi	649	421.85	7.9	0	147.6	77.6	0.535	46.8	32.27	165	40	15.795	59	2.65	22	0
198	Bishaka	Mandar	Ranchi	215	139.75	7.83	0	104.55	7.05	0.454	33.8	9.92	120	18	18.225	12	1.7	17	0
199	BIT	Kanke	Ranchi	352	228.8	7.77	0	98.4	53.17	0.245	15.2	22.07	90	20	9.72	44	0.8	15	0
200	Boreya	Kanke	Ranchi	344	223.6	8.17	0	94.09	31.9	1.03	5.09	40.13	90	18	10.935	30	1.38	11	0
201	Brambe	Ratu	Ranchi	112.6	73.19	7.84	0	55.35	3.1	0.516	6.77	9.25	55	8	8.505	6	0.7	10	0
202	Bukru	Kanke	Ranchi	373	242.45	7.64	0	75.64	50.5	0.253	50.2	12.58	130	32	12.15	18	0.9	10.4	0
203	Bundu	Bundu	Ranchi	611	397.15	7.97	0	166.05	45.6	0.497	17.7	75.6	240	46	30.375	35	0.81	22.9	0
204	Buti	Kanke	Ranchi	563	365.95	8.05	0	129.15	75.5	0.343	22.5	57.84	195	36	25.515	41.4	1.12	25	0
205	Burmoo	Burmoo	Ranchi	155.5	101.08	7.9	0	67.65	0.592	0.375	21.1	8.85	55	14	4.86	9	1.3	13	0
206	Itki	Chhahgura	Ranchi	283	183.95	7.16	0	55.35	49.63	0.32	31.5	10.37	90	18	10.935	27	0.46	29	0
207	Chutupa	Ormanjhi	Ranchi	924	600.6	8.23	0	178.35	128	0.606	64	66.38	325	80	30.375	49	1.2	22	0
208	Gondipo	Angarha	Ranchi	253	164.45	7.9	0	73.8	32.9	0.724	12.5	11.42	90	24	7.29	17	2.24	18.1	0
209	Itki	Itki	Ranchi	136.4	88.66	7.69	0	49.2	10.63	0.291	1.46	8.6	50	14	3.64	6	0.3	15.3	0
210	Jonha	Angarha	Ranchi	276	179.4	8.1	0	135.3	8.49	0.597	15.2	10.36	80	22	6.07	24.2	1.8	21.4	0
211	Kanka1	Kanka	Ranchi	489	317.85	8.1	0	98.4	75	0.392	12.2	41.97	170	40	17.01	33.45	1.36	27.3	0
212	Khatitan	Ratu	Ranchi	457	297.05	8.05	0	110.7	54	0.474	42.7	23.23	180	48	14.58	24.5	0.62	22.9	0
213	Kharsida	Namkum	Ranchi	201	130.65	7.78	0	55.35	19.3	0.461	22.9	17	75	28	1.215	17.28	0.95	18.5	0
214	Silli	Kita	Ranchi	302	196.3	8.04	0	129.15	23.6	0.621	4.76	25.02	130	28	14.58	12	3.8	22	0
215	Kurgi	Itki	Ranchi	265	172.25	7.77	0	116.85	7.44	0.431	5.3	14.85	90	22	8.5	19.2	0.46	13.7	0
216	Lowadih	Namkom	Ranchi	1124	730.6	7.84	0	258.3	156	0.329	68.2	71.69	285	68	27.945	116.6	8.82	34.2	0
217	Mahilon	Namkom	Ranchi	294	191.1	7.94	0	73.8	35.45	0.962	42.7	10.05	75	18	7.29	33.6	2.85	14.6	0
218	Mandar	Mandar	Ranchi	772	501.8	7.84	0	184.5	107	0.469	51.1	54.92	210	28	34.02	72	2.89	7.15	0
219	Military	Namkom	Ranchi	512	332.8	7.15	0	135.3	49.63	2.35	1.34	57.25	185	42	19.44	31.8	3.84	17.3	0
220	Namko	Namkom	Ranchi	918	596.7	8.38	9	227.55	110	0.461	41.2	77.29	225	60	18.225	94.82	11.82	14.3	0
221	Hatia	Namkom	Ranchi	344	223.6	7.15	0	86.1	32.5	1.44	1.3	24.96	130	26	15.79	13	3.3	15.2	0
222	Ormanjhi	Ormanjhi	Ranchi	454	295.1	7.9	0	116.85	53	0.685	28.2	36.93	165	30	21.87	28.8	0.83	24.4	0
223	Patarhat	Silli	Ranchi	432	280.8	8	0	115.05	56.8	0.419	14.5	27.54	175	38	19.44	21.6	0.65	21.8	0
224	Pithauri	Kanke	Ranchi	951	618.15	8.34	6	239.85	124	0.485	40.9	71.39	275	80	18.225	110.2	1.97	18.9	0

225	Rampur	Namkom	Ranchi	1073	697.45	7.78	0	393.6	81.53	0.34	20.8	30.86	295	84	20.655	103.2	3.28	21.5	0
226	Ranchi college	Ranchi	Ranchi	488	317.2	7.69	0	221.4	30.4	0.242	3.03	9.5	55	6	9.72	74.8	4.2	30	0
227	Silli	Silli	Ranchi	492	319.8	7.18	0	159.9	42.3	1.48	1.93	49.72	185	46	17.01	28.6	3.4	24.7	0
228	Sithipok hratoli	Silli	Ranchi	264	171.6	7.93	0	129.15	0.244	0.264	6.01	8.73	55	6	9.72	30.8	4.23	17	0
229	Sonahatu	Sonahatu	Ranchi	356	231.4	8.14	0	178.35	35.45	0.328	1.88	10.64	115	38	4.86	36	2.95	6	0
230	Sons Bazar	Sonahatu	Ranchi	203	131.95	7.09	0	166.05	19.8	0.352	15	8.9	75	18	7.29	45	2.97	10	0
231	Taimara	Sonahatu	Ranchi	278	180.7	7.12	0	178.35	19.8	0.438	6.15	21.27	120	34	8.505	29.78	0.5	14.3	0
232	Ukrid	Ormanjhi	Ranchi	201	130.65	7.28	0	92.25	3.8	0.639	2.56	14.61	80	26	3.64	9.6	1.3	9.14	0
233	Ramkrishna Morabadi	Kanke	Ranchi	793	515.45	7.34	0	215.25	74.44	0.45	6.11	44.57	225	56	20.655	58.7	1.79	26.8	0
234	Sukruhtu	Kanke	Ranchi	819	532.35	7.11	0	178.35	118	0.948	17.4	74.86	295	86	19.44	53.76	2.7	24.5	0
235	Pindarom	Namkom	Ranchi	345	224.25	8.2	0	55.35	74.44	0.319	18.2	37.18	160	34	18.22	14.65	1.8	24.9	0
236	Kharsidog	Namkoom	Ranchi	426	276.9	8.27	0	166.05	31.9	0.257	14.6	18.3	90	18	10.935	55.2	3.09	27	0
237	Bridgeford school	Namkoom	Ranchi	423	274.95	7.74	0	110.7	28.3	0.389	28.8	59.91	110	24	12.15	48.3	1.97	22.5	0
238	Kanka School	Kanke	Ranchi	155	100.75	7.21	0	79.95	3.53	0.243	1.21	11.91	45	16	1.21	15.2	1.2	8.94	0
239	Chapodi	Jama	Dumka	584	379.6	8.17		258.3	51.8	0.676	10	12.25	250	20	48.6	31.05	0.09	NA	0
240	Chikania	Jama	Dumka	1027	667.55	8.01		190.65	157	0.505	71.5	57.24	420	50	71.685	37.77	0.29	NA	0
241	Dumka	Dumka	Dumka	778	505.7	8.21		264.45	66.2	0.76	51.4	71.72	230	30	37.665	66.2	5.33	NA	0
242	Gamhari	Ramgarh	Dumka	636	413.4	8.21		233.7	82.2	0.72	23.2	6.97	240	40	34.02	33.56	0.45	NA	0
243	Gopikandar	Gopikandar	Dumka	219	142.35	7.9		67.65	30.3	0	12	10.35	70	8	12.15	16.93	3.17	NA	0
244	Hansdih	Saraihat	Dumka	248	161.2	7.92		141.45	3.54	0.404	12.5	5.3	95	18	12.15	14.66	0.13	NA	0
245	Jama	Jama	Dumka	729	473.85	8.15		227.55	78.7	0.218	64	52.13	270	24	51.03	39.61	0.27	NA	0
246	Jarmundi	Jarmundi	Dumka	887	576.55	8.1		184.5	138	0.418	63	71.79	350	46	57.105	44.32	0.22	NA	0
247	Kathikund	Kathikund	Dumka	871	566.15	8.31	3	325.95	73	0.342	44.1	68.18	325	42	53.46	51.98	0.8	NA	0
248	Masalia	Masalia	Dumka	702	456.3	8.34	3	258.3	78.8	0.446	4.68	46.99	245	30	41.31	50.24	0.16	NA	0
249	Masanjor	Raneshwar	Dumka	259	168.35	8.09		135.3	8.78	0.32	7.72	10.74	100	8	19.44	13.03	0.49	NA	0
250	Nonihat	Jarmundi	Dumka	1203	781.95	8.13		227.55	258	0	51.2	45.59	440	78	59.535	52.55	0.36	NA	0
251	Barapalashi	Jama	Dumka	1585	1030.3	7.96		387.45	282	0.453	13.6	80.33	694	108	103.28	85.35	0.3	NA	0
252	Patabari	Sikaripara	Dumka	828	538.2	8.17		227.55	89.5	0.562	73.2	81.35	350	26	69.255	37.24	0.25	NA	0
253	Raneshwar	Raneshwar	Dumka	634	412.1	7.85		104.55	106	0.235	51.4	67.55	205	16	40.095	50.85	0.12	NA	0
254	Sikaripara	Sikaripara	Dumka	551	358.15	8.1		153.75	69.8	0.449	45.8	38.63	210	26	35.235	32.06	0.17	NA	0
255	Jamtara	Jamtara	Jamtara	917	596.05	8		202.95	136	0.332	69.2	81.16	395	46	68.04	35.95	0.42	NA	0
256	Nala	Nala	Jamtara	1187	771.55	7.99		215.25	247	1.25	36	80.53	295	34	51.03	146.5	1.02	NA	0
257	Mihijam	Mihijam	Jamtara	529	343.85	8.18		166.05	42.6	0.469	35.5	63.57	190	24	31.59	25.94	0.1	NA	0
258	Kundahit	Kundahit	Jamtara	317	206.05	8.18		147.6	18.6	0	2.78	20.42	110	16	17.01	24.7	0.26	NA	0
259	Dhootala	Fatehpur	Jamtara	791	514.15	8.19		178.35	106	0.526	77.1	69.02	300	42	47.385	46.28	0.3	NA	0
260	Jasaydih	Karmatarn	Jamtara	712	462.8	8.2		178.35	92.3	1.45	46.8	68.61	280	28	51.03	33.41	0.12	NA	0

261	Basti Palajori	Fatehpur	Jamtar a	345	224.25	8.11		123	12.28	0.285	21.8	40.18	145	18	24.3	14.91	0.32	NA	0
262	Mohanpur	Narayanpur	Jamtar a	938	609.7	8.14		196.8	146	0.55	66.5	74.59	405	44	71.68	41.16	0.05	NA	0
263	Fatehpur	Fatehpur	Jamtar a	324	210.6	8.15		153.75	14	0.633	7.93	17.03	110	20	14.58	21.71	0.2	NA	0
264	Boarjor	Boarjor	Goooda	537	349.05	8.42	6	258.3	43.5	0.482	0	8.7	175	20	30.375	37.48	0.63	NA	0
265	Doi	Mahagama	Goooda	1981	1287.7	8.02		319.8	362	0.53	33	99.21	510	42	98.41	208	4.77	NA	0
266	Godda	Godda	Goooda	1416	920.4	8.26		319.8	209	1.88	13.1	69.36	245	28	42.52	208.9	0.02	NA	0
267	Jaminipaharpur	Sunsderpahari	Goooda	1175	763.75	8.01		350.55	131	0.915	64.4	81.96	200	22	35.235	171.8	0.33	NA	0
268	Lalmatia	Mahagama	Goooda	1023	664.95	8.27		264.45	121	0.564	45.9	88.67	305	16	64.395	99.5	1.06	NA	0
269	Mahagama	Mahagama	Goooda	1296	842.4	8.37	3	639.6	117	0.794	1.55	20.15	230	30	37.665	203.2	0.36	NA	0
270	Maheshpur	Maheshpur	Goooda	1081	702.65	7.93		209.1	206	2.02	51	88.04	260	28	46.17	132.25	0.29	NA	0
271	Pathergama	Pathergama	Goooda	1130	734.5	7.91		233.7	204	0.541	20.2	75.15	280	26	52.245	111.7	0.36	NA	0.06
272	Sunsderpahari	Sunsderpahari	Goooda	531	345.15	8.34	3	190.65	49.63	0.527	6.38	42.77	185	38	21.87	47.19	0.94	NA	0
273	Chamudih	Poreyahaat	Goooda	624	405.6	8.4	6	307.5	44.6	1.78	2.03	9.87	210	34	30.375	45.96	0.6	NA	0
274	Siktia	Goodda	Goooda	1347	875.55	8.15		246	244	1.32	46.5	89.85	170	34	20.655	208.27	1.78	NA	0
275	Raghunathpur	poreyahaat	Goooda	876	569.4	8.22		276.75	134	0.475	24.7	43.79	165	32	20.655	123.05	4.77	NA	0
276	Bisaha	Pathergama	Goooda	630	409.5	8.3		350.55	29.6	1.36	1.03	11.69	140	16	24.3	81.36	0.06	NA	0
277	Kumardi	Goodda	Goooda	675	438.75	8.33	3	270.6	75.3	0.927	10.7	27.96	185	22	31.59	70.52	0.54	NA	0
278	Bargachari Hariyari	Poreyahaat	Goooda	516	335.4	8.36	3	258.3	7.09	1.75	0	14.74	150	30	18.225	42.84	0.11	NA	0
279	Gobra	Mahagama	Goooda	688	447.2	8.29		313.65	48.8	0.361	12	14.89	185	18	34.02	61.77	0.17	NA	0
280	Amrapara	Amrapara	Pakur	851	553.15	8.28		301.35	63.81	0.181	17	73.98	250	42	35.23	62.86	3.36	NA	0
281	Hiranpur	Hiranpur	Pakur	1094	711.1	8.08		202.95	229	0	17.1	53.56	230	32	36.454	128.1	5.06	NA	0
282	Litipara	Litipara	Pakur	1093	710.45	8.03		190.65	210	0	59	66.58	343	68	42.25	67.48	5.18	NA	0
283	Maheshpur	Maheshpur	Pakur	453	294.45	8.12		233.7	20.7	0.327	3.47	10.74	120	28	12.15	46.88	0.45	NA	0
284	Pakur	Pakur	Pakur	411	267.15	8.15		147.6	42.54	0.11	9.04	24.88	135	20	20.655	31.73	0.13	NA	0
285	Pakuria	Pakuria	Pakur	2031	1320.2	7.89		375.15	386	0	32.8	96.7	395	78	48.6	232.95	18.44	NA	0
286	Salgapara	Maheshpur	Pakur	643	417.95	8.22		246	56.8	0	21	26.81	315	28	59.53	18.88	0.51	NA	0
287	Rtorai	Hiranpur	Pakur	1339	870.35	8.27		301.35	206	0	31	91.5	360	74	42.525	117.54	3.6	NA	0
288	Sahagram	Maheshpur	Pakur	414	269.1	8.27		172.2	30.6	0.193	2.1	18.63	65	6	12.15	69.67	0.53	NA	0
289	Litipara 2	Litipara	Pakur	526	341.9	8.29		295.2	9.2	0.182	15.1	10.21	165	24	25.515	38.02	0.15	NA	0
290	Kariodih	Litipara	Pakur	770	500.5	8.27		289.05	77.99	0.147	27	35.24	270	32	46.17	48.22	0.28	NA	0
291	Vikrampur	Pakur	Pakur	486	315.9	8.28		184.5	64.5	0	12.1	16.37	165	24	25.515	33.41	7.01	NA	0
292	Pachathol	Amrapara	Pakur	287	186.55	8.26		147.6	7.09	0.2	9.88	10.85	125	18	19.44	11.08	0.61	NA	0
293	Berhait	Berhait	Sahebganj	274	178.1	8.26		98.4	20.7	0.7	5.1	25.92	105	14	17.01	17.59	2.33	NA	0
294	Barharwa	Barharwa	Sahebganj	650	422.5	8.15		233.7	67.35	0.8	8.4	43.2	160	42	13.365	59.12	6.48	NA	0
295	Borio	Borio	Sahebganj	735	477.75	8.1		190.65	127.6	0.14	28.3	25.46	165	30	21.87	79.22	1.04	NA	0.21
296	Ghat selampur	Rajmahal	Sahebganj	1044	678.6	8.06		332.1	120.5	0.209	2.3	71.18	260	52	31.59	92.66	11.7	NA	0

297	Mandro	Mandro	Sahebganj	1523	989.95	8.29		430.5	241.1	0.6	46	93.63	335	64	42.525	147.6	81.47	NA	0
298	Rajmahal	Rajmahal	Sahebganj	1101	715.65	8.16		190.65	208	0.174	28	65.25	180	28	26.73	110.25	54.63	NA	0
299	Ranga	Pathna	Sahebganj	1017	661.05	8.29		313.65	127.6	0.157	23.8	59.83	300	56	38.88	76.54	0.03	NA	0
300	Sahebganj	Sahebganj	Sahebganj	983	638.95	8.18		282.9	85.08	0.531	69.9	82.47	260	44	36.45	104.11	0.49	NA	0
301	Sakrigali	Sahebganj	Sahebganj	1145	744.25	7.93		233.7	209.2	0.492	52.7	67.68	315	58	41.31	84.84	17	NA	0
302	Talijhari	Talijhari	Sahebganj	684	444.6	8.15		252.15	71.8	0.437	16.3	47.14	195	34	26.73	56.71	17.1	NA	0
303	Udhwa	Udhwa	Sahebganj	1553	1009.5	8.05		246	280.1	1.02	96.2	82.1	579	106	76.545	58.42	1.58	NA	0
304	Hazipur	Sahebganj	Sahebganj	842	547.3	8.16		344.4	14	0.216	33.6	62.28	250	38	37.665	68.79	4.5	NA	0
305	Dihari	Sahebganj	Sahebganj	1379	896.35	8.03		344.4	177.3	0.187	47.8	81.7	369	102	27.945	131.4	11.57	NA	0.16
306	Harinchara Chowk	Borio	Sahebganj	852	553.8	8.13		332.1	128	0.247	4.82	13.52	225	52	23.085	94.3	0.333	NA	0
307	Maricho	Borio	Sahebganj	409	265.85	8.33	3	196.8	27.4	0.23	1.49	14.46	145	34	14.58	28.47	0.14	NA	0
308	Chota Kadma	Berhait	Sahebganj	1014	659.1	8.17		215.25	152	0.18	43.1	77.92	285	68	27.945	76.97	9.46	NA	0
309	Mangalhat	Rajmahal	Sahebganj	865	562.25	8.23		246	107	0.209	49.3	78.87	150	26	20.655	78.11	87.7	NA	0
310	Baramasia	Berhait	Sahebganj	463	300.95	8.36	6	190.65	24.82	0.106	29.1	24.8	135	20	20.655	42.63	0.13	NA	0
311	Kotalpokhar	Barharwa	Sahebganj	159	103.35	8.28		73.8	7.09	0.245	6.4	10.57	60	6	10.935	9.66	0.43	NA	0
312	Kathalwadi	Udhwa	Sahebganj	721	468.65	7.82		270.6	56.72	0.321	2.44	38.53	175	36	20.655	63.02	0.58	NA	0
313	Fudkipur	Udhwa	Sahebganj	1433	931.45	8.07		424.35	205	0.477	22.3	84.24	295	32	52.245	181.7	1.3	NA	0
314	Ramnagar	Barharwa	Sahebganj	275	178.75	8.39	6	141.45	7.36	0.26	1.6	8.15	95	22	9.72	17.16	0.58	NA	0
315	Brindavan	Talijhari	Sahebganj	478	310.7	8.24		258.3	12.7	0.369	3.4	15.83	120	32	9.72	49.01	0.08	NA	0
316	Belbhadri	Mandro	Sahebganj	529	343.85	8.19		233.7	49.63	0.253	11.9	13.52	185	30	26.73	35.04	0.01	NA	0
317	Talijhari 2	Pathna	Sahebganj	691	449.15	8.38	6	350.55	10.63	0.27	8	60.85	190	38	23.08	66.89	11.27	NA	0
318	Chandwa	Chandwa	Latehar	761	494.65	8.37	9	258.3	99.26	0.35	12.7	43	305	38	51.03	29	8.5	NA	0
319	Latehar	Latehar	Latehar	534	347.1	8.17		178.35	63.81	0.14	34.6	25	210	34	30.37	24	4.2	NA	0
320	Manika	Manika	Latehar	1197	778.05	7.44		436.65	92.17	0.76	33.9	72	425	64	64.39	54	10.8	NA	0
321	Balumath	Balumath	Latehar	915	594.75	8.21		336	96	0.43	22.9	45	401	32	78	26	11.8	NA	0
322	Barwadih	Barwadih	latehar	824	535.6	8.19		301.35	74.44	0.58	5.2	63	258	60	26.25	56.54	8.9	NA	0
323	Bariatu	Balumath	latehar	750	487.5	7.74		276.75	95.71	0.54	1.45	28.4	315	64	37.66	29.1	4.3	NA	0
324	Garu	Garu	latehar	393	255.45	8.29		159.9	42.54	2.34	9.7	18.3	145	24	20.65	23.44	8.35	NA	0
325	Mahundar	Mahundar	latehar	412	267.8	8.36	9	55.35	77.99	0.08	23.7	8.24	105	14	17.01	38.26	17.65	NA	0
326	Akasi	Mahundar	Latehar	877	570.05	8.14		372	35.45	0.33	26.1	52	375	70	48.6	17	24.32	NA	0
327	Baraw	Panki	Palamu	1606	1043.9	8.36	9	110.7	421.9	2.09	15.8	11.87	445	64	69.25	141.28	4.92	NA	0
328	Bishrampur	Bishrampur	Plamu	579	376.35	8.34	6	153.75	74.44	0.87	10	13.25	256	40	38	12.7	0.2	NA	0
329	Daltenganj	Daltenganj	Plamu	1581	1027.7	7.26		615	138.3	1.14	9.2	84	640	76	109.35	37.22	12.4	NA	0
330	Haider Nagar	Japla	Plamu	1010	656.5	8		375.15	85.08	0.77	24.9	47	343	60	47	63.77	24.5	NA	0
331	Harihargang	Harihargang	Plamu	1258	817.7	8.49	15	387.45	152.4	0.61	14.2	4.15	230	30	37.621	156.41	41.3	NA	0
332	Japla	Husainbad	Palamu	480	312	8.27		190.65	38.99	1.24	4.2	3.26	135	34	12.15	34.4	19.65	NA	0

333	Kajri	Bishrampur	Palamu	566	367.9	8.33	6	202.95	42.54	1.37	21.4	3.26	195	34	26.699	36.52	1.2	NA	0
334	Kanda	Patan	Palamu	1071	696.15	8.14		276.75	201.9	0.2	12.6	10	310	62	37.66	71.32	15.34	NA	0
335	Lesliganj	Lesliganj	Palamu	1331	865.15	8.18		301.35	241.2	2.29	11	4.77	379	96	33.981	117.36	5.68	NA	0
336	Nawadiha	Patan	Palamu	594	386.1	8.25		190.7	67.35	0.85	14	9.66	185	40	20.65	51.28	3.68	NA	0
337	Panki	Panki	Palamu	1244	808.6	8.04		141.45	319.1	1.03	1.4	13.35	479	112	48.544	41.69	1.28	NA	0
338	Patan	Patan	Palamu	674	438.1	8.44	15	184.5	70.9	0.29	18.5	15	250	60	24.3	29.38	2.78	NA	0
339	Rajaura	Bishrampur	Palamu	1201	780.65	8.41	15	313.65	170.2	2.16	4.5	14.3	255	44	35.23	139.6	1.08	NA	0
340	Sagalim Govt. Well	Panki	Palamu	499	324.35	8.2		221.4	31.9	0.17	12.7	13.09	125	24	15.79	59.28	13.67	NA	0
341	Sanda	Chhatarpur	Palamu	455	295.75	7.76		196.8	35.45	1.13	4.6	10	125	30	12.15	31.2	34.6	NA	0
342	Satbarwa	Satarbarwa	Palamu	1031	670.15	7.91		135.3	240	0.17	13.1	9.21	334	50	50.971	82.3	1.5	NA	0
343	chandwara	Koderma	Koderma	971	631.15	7.46		264.45	134.7	0.4	23	21	200	40	24.3	134.31	2.3	NA	0
344	Jhumriti aiy	Domchanch	Koderma	1322	859.3	8.32	3	255	231.2	1.52	52.8	51.5	430	60	68.04	106	4.56	NA	0
345	Koderma	KODERMA	Koderma	454	295.1	8.39	6	123	70.9	0.09	9.27	29.25	180	34	23.08	23.55	1.24	NA	0
346	Domchanch	Jainagar	Koderma	405	263.25	8.28		92.25	56.72	0.28	47	25.04	150	24	21.87	20.8	1.78	NA	0
347	Jainagar	Koderma	Koderma	604	392.6	7.99		135.3	95.72	1.18	29.1	2.21	210	28	34.02	41.2	2.2	NA	0
348	Patahal diha	Koderma	Koderma	858	557.7	8.34	3	332.1	63.81	0.07	23.5	15	295	44	44.95	55	3.04	NA	0
349	Kanobigha	Koderma	Koderma	312	202.8	7.21		110.7	31.9	0.31	10	0	140	24	19.44	5.32	3	NA	0
350	Bagra	Bagra	Chatra	644	418.6	8.47	15	239.8	60.26	1.53	1.9	17.2	160	16	29.16	69.21	32.89	NA	0
351	Birhu	Simaria	Chatra	739	480.35	7.27		282.9	70.9	0.22	23.3	18.1	230	52	24.3	53.4	2.7	NA	0
352	Chatra	Chatra	Chatra	1888	1227.2	7.25		756	104.6	0.66	31.4	70.2	565	60	100.84	117.3	41.6	NA	0
353	Itkhor	Itkhor	Chatra	492	319.8	8.22		189	35.45	0.55	7.3	7.24	179	42	18	14.53	14.8	NA	0
354	Pitji	Itkhor		811	527.15	8.37	6	264.45	99.26	0.73	0.2	9.37	107	36	4.28	118.87	32.3	NA	0
355	Simariya	Simariya	Chatra	550	357.5	8.13		98.4	63.81	0.67	25.9	71	195	46	19.44	29.63	14.8	NA	0
356	Tundwa	Tandwa	Chatra	893	580.45	8.34	3	436.65	63.81	1.32	0	34.6	311	58	40.48	59.54	20.68	NA	0
357	Tutilawa	Simaria	Chatra	1334	867.1	8.12		537	96	0.53	23	67	536	88	77	37	23.4	NA	0
358	Bhawna thpur	Bhawna thpur	Garhwa	1166	757.9	8.01		372	145	1.25	22	60	535	18	119	10	13.1	NA	0
359	Garhwa	Garhwa	Garhwa	786	510.9	8.11		227.55	92.17	1.4	26.4	41.8	255	60	25.51	44.7	4.33	NA	0
360	Manjhian	Manjhian	Garhwa	792	514.8	7.88		221.4	113.4	0.27	8.1	21	240	56	24.3	57.2	31.3	NA	0
361	Nagar Utari	Nagar Utari	Garhwa	851	553.15	8.22		252.15	85.08	0.17	24.7	39.5	145	24	20.65	91.8	63.7	NA	0
362	Ramna	Ramna	Garhwa	987	641.55	7.93		369	77.99	1.32	25.6	55.1	315	30	58.32	67.5	17.6	NA	0
363	Ranka	Ranka	Garhwa	730	474.5	8.37	6	172.2	109.9	1.53	2.88	36.3	305	78	26.73	29.31	1.4	NA	0
364	Meral	Meral	Garhwa	532	345.8	8.39	9	252.21	31.9	2.74	12.7	6.82	100	36	2.43	67.24	14.39	NA	0
365	Amritnagar	Hazaribagh	Hazaribagh	1191	774.15	8.14	0	189	340.3	1.86	5.3	6.598	405	40	74.11	91.37	33.22	NA	0
366	Barkagaon	Barkagaon	Hazaribagh	1214	789.1	8.34	6	301.35	169.1	0.44	31.9	31.14	315	80	27.94	127.12	11.17	NA	0
367	Barkatha	Barkatha	Hazaribagh	411	267.15	8.21	0	135	42.54	0.43	0	14.89	165	46	12.15	14.3	5.04	NA	0
368	Bottam bajar	Hazaribagh	Hazaribagh	435	282.75	8.4	15	92.25	70.9	0.29	0	14.03	160	44	12.15	34.83	2.47	NA	0

369	College More	Hazaribagh	Hazari bagh	690	448.5	8.32	3	135.3	102.8	0.72	33.9	25.5	305	58	38.88	10.89	3.5	NA	0
370	Dari	Churchu	Hazari bagh	639	415.35	8.16	0	190.65	81.53	0.8	1.3	21.47	185	42	19.44	48.7	1.45	NA	0
371	Daru	Daru	Hazari bagh	649	421.85	7.81	0	172.2	77.99	1.27	24.3	21.2	205	52	18.22	54.27	0.7	NA	0
372	Garrikalan	Keredari	Hazari bagh	1152	748.8	8.38	12	282.9	145	0.51	39.7	36.21	365	82	38.88	69.63	14.97	NA	0
373	Habibnagar	Hazaribagh	Hazari bagh	453	294.45	8.27	0	104.55	63.8	0.85	15.3	17.08	175	50	12.15	21.04	1.94	NA	0
374	Hatyari	Hazaribagh	Hazari bagh	568	369.2	8.21	0	116.85	113.4	0.24	8.7	20.2	265	52	32.805	21.4	0.87	NA	0
375	Hazaribagh	Hazaribagh	Hazari bagh	512	332.8	8.44	18	110.7	81.53	0.89	14	15	210	60	14.58	17.47	0.77	NA	0
376	Haribag	Hazaribagh	Hazari bagh	606	393.9	8.32	3	135	81.52	0.17	24.3	24.21	255	58	26.73	22	1.14	NA	0
377	Ichak More	Ichak	Hazari bagh	280	182	8.11	0	79.95	35.45	1.58	0	7.41	95	30	4.8544	19.01	1.16	NA	0
378	Kanhari Road	Hazaribagh	Hazari bagh	522	339.3	8.23	0	178.4	56.72	0.4	8.28	9.1	151	56	2.699	38.21	3.22	NA	0
379	Keredari	Keredari	Hazari bagh	734	477.1	8.47	15	227.55	81.5	1.35	9.7	8.67	220	64	14.563	48.87	6.34	NA	0
380	Korra Chowk	Hazaribagh Sadar	Hazari bagh	487	316.55	8.35	6	147.6	56.72	0.14	7.29	5.3	185	52	13.48	25.44	0.12	NA	0
381	Kudashram	Hazaribagh Sadar	Hazari bagh	902	586.3	8.06	0	239.85	148.9	0.32	10.4	15.31	270	84	14.58	65.23	0.71	NA	0
382	Meru (Silver)	Hazaribagh	Hazari bagh	889	577.85	7.29	0	270.6	145	0.12	0	21.17	300	80	24.3	68.27	2.2	NA	0
383	Fasi well (near old bus stand)	Hazaribagh Sadar	Hazari bagh	1021	663.65	8.44	12	270.6	138.3	0.48	14	16.97	340	92	26.73	74.28	5.13	NA	0
384	Padma	Padma	Hazari bagh	381	247.65	8.16	0	129	28.36	0.5	19.4	13.66	145	38	12.15	22.11	0.78	NA	0
385	Sakrej	Barkatha	Hazari bagh	408	265.2	7.82	0	110.7	63.81	0.4	0	9.37	170	48	12.15	16.4	2.71	NA	0
386	Simra rest house	Hazaribagh Sadar	Hazari bagh	698	453.7	8.39	12	135	109.9	0.72	15	19.43	235	70	14.56	54.11	0.2	NA	0
387	Sindur	Hazaribagh Sadar	Hazari bagh	818	531.7	8.47	18	147.6	124.1	0.57	24.9	25.48	300	80	24.3	48.1	0.78	NA	0
388	Tatijhariya	Bishnugarh	Hazari bagh	533	346.45	7.95	0	150.6	70.9	0.8	8.58	11.33	170	46	13.36	44.07	0.27	NA	0
389	Urimari	Barkagaon	Hazari bagh	605	393.25	8.38	9	135	77.99	1.53	18.7	21.46	200	52	17.01	46.08	0.77	NA	0
390	Chouparan	Chouparan	Hazari bagh	403	261.95	7.93	0	172.2	21	0.3	5.2	7.5	155	52	6.068	18.09	3.2	NA	0