

# IMPROVEMENT IN GROUNDWATER LEVEL

Relevant for: null | Topic: Important Schemes & Programmes of the Government

Central Ground Water Board (CGWB) monitors groundwater levels throughout the country on a regional scale, four times every year during the months of March to May, August, November and January.

During the November 2022, about 67.2% of the wells monitored in the country have registered the water level upto 5 mbgl. State-wise Depth to water level and distribution of percentage of wells for November 2022 is given at **Annexure**. Further, in order to assess the long-term fluctuation in ground water level, the water level data collected by CGWB during November 2022 has been compared with the decadal mean of November (2012-2021). Analysis of water level data indicates that about 61.1% of the wells monitored have registered rise in ground water level.

Water being a State subject effective rainwater harvesting/recharge of groundwater for increasing its levels in the country falls under States' mandate however, a number of steps have been taken by Central government which can be accessed through web-link:

<https://cdnbbsr.s3waas.gov.in/s3a70dc40477bc2adceef4d2c90f47eb82/uploads/2023/02/2023021742.pdf>

Some of them are listed as under:

Government of India is implementing Jal Shakti Abhiyan (JSA) in the country. First JSA was launched in 2019 in water stressed blocks of 256 districts which continued during the years 2021 and , 2022(across entire country both rural and urban areas) with the primary aim to effectively harvest the monsoon rainfall through creation of artificial recharge structures, watershed management, recharge and reuse structures, intensive afforestation and awareness generation etc. JSA for the year 2023 have been launched by President of India on 04 March 2023 with the theme "Source Sustainability for Drinking Water".

Prime Minister has launched Amrit Sarovar Mission on 24<sup>th</sup> April 2022. The Mission is aimed at developing and rejuvenating 75 water bodies in each district of the country as a part of celebration of Azadi ka Amrit Mahotsav.

The Central Government is implementing Atal Bhujal Yojana with an outlay of Rs. 6,000 crore, in collaboration with States, in certain water stressed areas of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The primary aim of the scheme is demand side management through scientific means involving the local communities at village levels leading to sustainable groundwater management in the targeted areas.

Central Ground Water Authority (CGWA) has been constituted under Section 3(3) of the "Environment (Protection) Act, 1986" for the purpose of regulation and control of ground water by industries, mining projects, infrastructure projects etc in the country. The latest guideline in this regard with pan-India applicability was notified by the Ministry on 24 September 2020 with subsequent amendment on 29 March 2023. CGWA and States issue No Objection Certificate (NOC) for extraction of groundwater to various industries/project proponents as per their jurisdiction and as per the extant guidelines.

CGWB is implementing National Aquifer Mapping Program (NAQUIM) in the country and an

area of 25.15 lakh sq km (the available mappable area) has been covered under the NAQUIM studies. The NAQUIM study report along-with management plans are shared with States/UTs for suitable interventions.

Master Plan for Artificial Recharge to Groundwater- 2020 has been prepared by the CGWB with States/UTs providing a broad outline of the project and expected investments. The Master Plan envisages construction of about 1.42 crore Rain water harvesting and artificial recharge structures in the country to harness 185 Billion Cubic Metre (BCM) of water. The Master plan has been shared with States/UTs for suitable interventions.

Ministry of Housing & Urban Affairs (MoHUA) has formulated Model Building Bye Laws (MBBL), 2016 for the States/UTs, wherein adequate focus has been given on requirement of rainwater harvesting and water conservation measures. As per MBBL, all buildings having a plot size of 100 Sq.m. or, more shall mandatorily include the complete proposal of rainwater harvesting. 35 States/ UTs have adopted the features of the Bye Laws.

Ministry has constituted Central Level Expert Group with Members from various stakeholder Ministries/Organisations to supervise the assessment of groundwater resources in the country periodically which includes monitoring of Groundwater level as well.

Groundwater (GW) level data collected by the CGWB for the entire country as on Nov 2018 indicates that around 81.10 % of monitored wells have depth to water level upto 10 m whereas, the GW level data of Nov 2022 shows around 88.7 % of monitored wells have water level upto 10m. With respect to Punjab, the GW level data for the years 2018 and 2022 indicate that 43.68 % and 39.7% of monitored wells respectively have depth to water level upto 10m.

Further, groundwater level data of Nov 2022 indicate that certain monitoring wells of Chandigarh, Delhi, Haryana, Punjab, Rajasthan and Uttarakhand have depth to water level beyond 40m.

As per 2017 assessment, 1186 (17%) assessment units out of 6881 assessment units falling in 17 States/UTs were over-exploited. As per 2022 assessment, 1006 (14%) assessment units (Mandals/Blocks/ Firkas/ Taluks etc) out of 7089 assessment units falling in 16 States/UTs are over-exploited where groundwater extraction is more than groundwater recharge. Further, some of the major states like Delhi, Haryana, Punjab, Rajasthan and Tamil Nadu have more than 25 % of assessment units as over-exploited. Punjab has 76.47 % over-exploited units.

This information was given by the Minister of State for Jal Shakti, Shri Bishweswar Tudu in a written reply in Rajya Sabha today.

\*\*\*\*\*

**PK/AS**

**ANNEXURE**

**State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of November, 2022**

**S. No.**

**Name of State**

**No. of wells Analysed**

**Number & Percentage of Wells Showing Depth to Water Level (mbgl) in the Range of**

**Min**

**Max**

**0-2**

**2-5**

**5-10**

**10-20**

**20-40**

**> 40**

**No**

**%**

**No**

**%**

**No**

**%**

**No**

**%**

**No**

**%**

**No**

**%**

**1**

Andaman and Nicobar

99

0.05

4.45

87

87.9

12

12.1

0

0.0

0

0.0

0

0.0

0

0.0

**2**

Andhra Pradesh

730

GL

37.62

370

50.7

226

31.0

97

13.3

29

4.0

7

1.0

1

0.1

**3**

Arunachal Pradesh

9

2.67

7.30

0

0.0

4

44.4

5

55.6

0

0.0

0

0.0

0

0.0

**4**

Assam

173

0.10

18.32

74

42.8

82  
47.4  
13  
7.5  
4  
2.3  
0  
0.0  
0  
0.0  
**5**  
Bihar  
638  
0.33  
11.30  
105  
16.5  
434  
68.0  
96  
15.0  
3  
0.5  
0  
0.0  
0  
0.0

6

Chandigarh

14

2.51

53.80

0

0.0

4

28.6

2

14.3

3

21.4

3

21.4

2

14.3

7

Chhattisgarh

774

0.65

22.95

157

20.3

437

56.5

142

18.3

36

4.7

2

0.3

0

0.0

**8**

Dadra & Nagar Haveli

15

1.98

7.80

1

6.7

12

80.0

2

13.3

0

0.0

0

0.0

0

0.0

**9**

Daman & Diu

7

1.45

6.37

1

14.3

4

57.1

2

28.6

0

0.0

0

0.0

0

0.0

**10**

Delhi

84

0.62

66.75

8

9.5

16

19.0

26

31.0

19

22.6

10

11.9

5

6.0

**11**

Goa

63

1.22

12.93

5

7.9

28

44.4

26

41.3

4

6.3

0

0.0

0

0.0

**12**

Gujarat

709

0.12

61.42

125

17.6

271

38.2

198

27.9

82

11.6

29

4.1

4

0.6

**13**

Haryana

268

0.11

77.95

36

13.4

68

25.4

37

13.8

59

22.0

56

20.9

12

4.5

**14**

Himachal Pradesh

84

0.54

36.25

16

19.0

29

34.5

15

17.9

19

22.6

5

6.0

0

0.0

**15**

Jammu and Kashmir

273

0.30

32.86

75

27.5

138

50.5

39

14.3

14

5.1

7

2.6

0

0.0

**16**

Jharkhand

178

0.26

12.80

19

10.7

109

61.2

48

27.0

2

1.1

0

0.0

0

0.0

**17**

Karnataka

1327

GL

27.30

467

35.2

495

37.3

320

24.1

43

3.2

2

0.2

0

0.0

**18**

Kerala

1412

0.05

52.82

281

19.9

454

32.2

539

38.2

125

8.9

12

0.8

1

0.1

**19**

Madhya Pradesh

1259

GL

37.67

239

19.0

608

48.3

326

25.9

76

6.0

10

0.8

0

0.0

**20**

Maharashtra

1472

0.10

40.00

358

24.3

732

49.7

320

21.7

52

3.5

10

0.7

0

0.0

**21**

Meghalaya

24

0.15

4.93

13

54.2

11

45.8

0

0.0

0

0.0

0

0.0

0

0.0

**22**

Nagaland

4

0.63

6.73

1

25.0

0

0.0

3

75.0

0

0.0

0

0.0

0

0.0

**23**

Orissa

1212

0.03

11.16

491

40.5

601

49.6

116

9.6

4

0.3

0

0.0

0

0.0

**24**

Pondicherry

4

1.06

3.45

2

50.0

2

50.0

0

0.0

0

0.0

0

0.0

0

0.0

**25**

Punjab

232

0.79

49.14

18

7.8

40

17.2

34

14.7

60

25.9

63

27.2

17

7.3

**26**

Rajasthan

890

0.06

121.55

71

8.0

226

25.4

150

16.9

158

17.8

134

15.1

151

17.0

**27**

Tamil Nadu

621

0.03

52.83

216

34.8

252

40.6

110

17.7

33

5.3

5

0.8

5

0.8

**28**

Telangana

529

GL

49.55

187

35.3

218

41.2

94

17.8

27

5.1

1

0.2

2

0.4

**29**

Tripura

20

0.98

6.81

5

25.0

12

60.0

3

15.0

0

0.0

0

0.0

0

0.0

**30**

Uttar Pradesh

634

0.15

44.14

158

24.9

250

39.4

132

20.8

72

11.4

18

2.8

4

0.6

**31**

Uttaranchal

45

0.20

55.20

9

20.0

11

24.4

16

35.6

6

13.3

2

4.4

1

2.2

**32**

West Bengal

774

0.40

30.49

102

13.2

309

39.9

216

27.9

109

14.1

38

4.9

0

0.0

**Total**

**14577**

**GL\***

**121.55**

**3697**

**25.4**

**6095**

**41.8**

**3127**

**21.5**

**1039**

**7.1**

**414**

**2.8**

**205**

**1.4**

**\*GL = Ground level**

\*\*\*\*\*

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**Name of State**

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**Min**

**Max**

**0-2**

**2-5**

**5-10**

**10-20**

**20-40**

**> 40**

No

%

No

%

No

%

No

%

No

%

No

%

1

Andaman and Nicobar

99

0.05

4.45

87

87.9

12

12.1

0

0.0

0

0.0

0

0.0

0

0.0

**2**

Andhra Pradesh

730

GL

37.62

370

50.7

226

31.0

97

13.3

29

4.0

7

1.0

1

0.1

**3**

Arunachal Pradesh

9

2.67

7.30

0

0.0

4

44.4

5

55.6

0

0.0

0

0.0

0

0.0

**4**

Assam

173

0.10

18.32

74

42.8

82

47.4

13

7.5

4

2.3

0

0.0

0

0.0

**5**

Bihar

638

0.33

11.30

105

16.5

434

68.0

96

15.0

3

0.5

0

0.0

0

0.0

**6**

Chandigarh

14

2.51

53.80

0

0.0

4

28.6

2

14.3

3

21.4

3

21.4

2

14.3

7

Chhattisgarh

774

0.65

22.95

157

20.3

437

56.5

142

18.3

36

4.7

2

0.3

0

0.0

8

Dadra & Nagar Haveli

15

1.98

7.80

1

6.7

12

80.0

2

13.3

0

0.0

0

0.0

0

0.0

**9**

Daman & Diu

7

1.45

6.37

1

14.3

4

57.1

2

28.6

0

0.0

0

0.0

0

0.0

**10**

Delhi

84

0.62

66.75

8

9.5

16

19.0

26

31.0

19

22.6

10

11.9

5

6.0

**11**

Goa

63

1.22

12.93

5

7.9

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44.4

26

41.3

4

6.3

0

0.0

0

0.0

**12**

Gujarat

709

0.12

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125

17.6

271

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198

27.9

82

11.6

29

4.1

4

0.6

**13**

Haryana

268

0.11

77.95

36

13.4

68

25.4

37

13.8

59

22.0

56

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12

4.5

**14**

Himachal Pradesh

84

0.54

36.25

16

19.0

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15

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19

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5

6.0

0

0.0

**15**

Jammu and Kashmir

273

0.30

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75

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138

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39

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14

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7

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0

0.0

**16**

Jharkhand

178

0.26

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10.7

109

61.2

48

27.0

2

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0

0.0

0

0.0

**17**

Karnataka

1327

GL

27.30

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35.2

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320

24.1

43

3.2

2

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0

0.0

**18**

Kerala

1412

0.05

52.82

281

19.9

454

32.2

539

38.2

125

8.9

12

0.8

1

0.1

**19**

Madhya Pradesh

1259

GL

37.67

239

19.0

608

48.3

326

25.9

76

6.0

10

0.8

0

0.0

**20**

Maharashtra

1472

0.10

40.00

358

24.3

732

49.7

320

21.7

52

3.5

10

0.7

0

0.0

**21**

Meghalaya

24

0.15

4.93

13

54.2

11

45.8

0

0.0

0

0.0

0

0.0

0

0.0

**22**

Nagaland

4

0.63

6.73

1

25.0

0

0.0

3

75.0

0

0.0

0

0.0

0

0.0

**23**

Orissa

1212

0.03

11.16

491

40.5

601

49.6

116

9.6

4

0.3

0

0.0

0

0.0

**24**

Pondicherry

4  
1.06  
3.45  
2  
50.0  
2  
50.0  
0  
0.0  
0  
0.0  
0  
0.0  
0  
0.0  
0  
0.0  
25  
Punjab  
232  
0.79  
49.14  
18  
7.8  
40  
17.2  
34  
14.7  
60

25.9

63

27.2

17

7.3

**26**

Rajasthan

890

0.06

121.55

71

8.0

226

25.4

150

16.9

158

17.8

134

15.1

151

17.0

**27**

Tamil Nadu

621

0.03

52.83

216

34.8

252

40.6

110

17.7

33

5.3

5

0.8

5

0.8

**28**

Telangana

529

GL

49.55

187

35.3

218

41.2

94

17.8

27

5.1

1

0.2

2

0.4

**29**

Tripura

20

0.98

6.81

5

25.0

12

60.0

3

15.0

0

0.0

0

0.0

0

0.0

**30**

Uttar Pradesh

634

0.15

44.14

158

24.9

250

39.4

132

20.8

72

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18

2.8

4

0.6

**31**

Uttaranchal

45

0.20

55.20

9

20.0

11

24.4

16

35.6

6

13.3

2

4.4

1

2.2

**32**

West Bengal

774

0.40

30.49

102

13.2

309

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216

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14.1

38

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**Total**

**14577**

**GL\***

**121.55**

**3697**

**25.4**

**6095**

**41.8**

**3127**

**21.5**

**1039**

7.1

414

2.8

205

1.4

\*GL = Ground level

\*\*\*\*\*

**END**

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