

## **BRIEF NOTE ON LIVE STORAGE STATUS OF 133 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 16.12.2021)**

### **1. ALL INDIA STATUS**

Central Water Commission is monitoring live storage status of 133 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 44 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 133 reservoirs is **172.463 BCM** which is about **66.89%** of the live storage capacity of 257.812 BCM which is estimated to have been created in the country. As per reservoir storage bulletin dated **16.12.2021**, live storage available in these reservoirs is **131.325 BCM**, which is **76%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **133.599 BCM** and the average of last 10 years live storage was **112.659 BCM**. Thus, the live storage available in 133 reservoirs as per **16.12.2021 Bulletin** is **98%** of the live storage of corresponding period of last year and **117%** of storage of average of last ten years.

As per Table-01, the overall storage position is **less than the** corresponding period of last year in the country as a whole but it is **better than the** average storage of last ten years during the corresponding period.

### **2. REGION WISE STORAGE STATUS:**

#### **a) NORTHERN REGION**

The northern region includes States of Himachal Pradesh, Punjab and Rajasthan. There are 9 reservoirs under CWC monitoring having total live storage capacity of 19.37 BCM. As per Reservoir Storage Bulletin dated **16.12.2021**, the total live storage available in these reservoirs is **10.54 BCM** which is **54%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **52%** and average storage of last ten years during corresponding period was **63%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the corresponding period of last year but it is less than the average storage of last ten years during the corresponding period.

#### **b) EASTERN REGION**

The Eastern region includes States of Jharkhand, Odisha, West Bengal, Tripura, Nagaland and Bihar. There are 21 reservoirs under CWC monitoring having total live storage capacity of 20.09 BCM. As per Reservoir Storage Bulletin dated **16.12.2021**, the total live storage available in these reservoirs is **13.98 BCM** which is **69.57%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **70%** and average storage of last ten years during corresponding period was **72%** of live storage capacity of these reservoirs. Thus, storage during current year is lesser than the corresponding period of last year and also lesser than the average storage of last ten years during the corresponding period.

**c) WESTERN REGION**

The Western region includes States of Gujarat and Maharashtra. There are 42 reservoirs under CWC monitoring having total live storage capacity of 35.24 BCM. As per Reservoir Storage Bulletin dated **16.12.2021**, the total live storage available in these reservoirs is **28.55 BCM** which is **81%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **87%** and average storage of last ten years during corresponding period was **64%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the storage of last year but it is better than the average storage of last ten years during the corresponding period.

**d) CENTRAL REGION**

The Central region includes States of Uttar Pradesh, Uttarakhand, Madhya Pradesh and Chhattisgarh. There are 24 reservoirs under CWC monitoring having total live storage capacity of 45.45 BCM. As per Reservoir Storage Bulletin dated **16.12.2021**, the total live storage available in these reservoirs is **33.38 BCM** which is **73%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **78%** and average storage of last ten years during corresponding period was **72%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the storage of last year but is better than the average storage of last ten years during the corresponding period.

**e) SOUTHERN REGION**

The Southern region includes States of Andhra Pradesh, Telangana, AP&TG (2combined projects in both states), Karnataka, Kerala and Tamil Nadu. There are 37 reservoirs under CWC monitoring having total live storage capacity of 52.32 BCM. As per Reservoir Storage Bulletin dated **16.12.2021**, the total live storage available in these reservoirs is **44.87 BCM** which is **86%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **83%** and average storage of last ten years during corresponding period was **59%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the storage of corresponding period of last year and is also better than the average storage of last ten years during the corresponding period.

The region wise and reservoir wise details are given in the following pages of the Bulletin.

## **BROAD ANALYSIS OF OTHER TABLES IN THE BULLETIN**

- Normal storage means average storage of last ten years, Close to normal storage means where shortfall is upto 20% of normal, deficient storage is where shortfall is more than 20% of the normal and upto 60% of the normal, highly deficient means where shortfall is more than 60% of normal.
- In the table on page 10, better than normal storage is available in Ganga, Subarnarekha, Narmada, Tapi, Rivers of Kutch, Godavari, Krishna, Mahanadi & Neighbouring East Flowing Rivers, Cauvery & neighbouring EFRs and West Flowing Rivers of South. Close to Normal in Mahi, Deficient in Indus and Sabarmati and Nil in Highly Deficient.
- Table on page 11-13 of the bulletin. The numbers of reservoirs having storage more than last year are **68** and reservoirs having storage more than average of last ten years are **103**. The numbers of reservoirs having storage less than or equal to 20% with respect to last year is **01** and having storage less than or equal to 20% with reference to average of last ten years is **0**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **10** and having storage less than or equal to 50% with reference to average of last ten years are **07**.

States having better storage (in %) than last year for corresponding period: Punjab, Rajasthan, Jharkhand, West Bengal, Bihar, Uttarakhand, Telangana, Karnataka, Kerala and Tamil Nadu.

States having equal storage (in %) to last year for corresponding period: Nil

States having lesser storage (in %) than last year for corresponding period: Himachal Pradesh, Odisha, Tripura, Nagaland, Gujarat, Maharashtra, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, AP&TG (Two combined projects in both states) and Andhra Pradesh.

**Disclaimer:** The Data contained in this Bulletin is as received from the State Government/Project Authorities.

**STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY**
**AS ON : 16-12-2021**

1 Central Water Commission is monitoring storage status of 133 important reservoirs spread all over the country, in which **44** reservoirs have hydropower benefit each with installed capacity of more than 60 MW. These reservoirs are identified thus(\*) in the enclosed weekly report.

2 The total live storage in 133 important reservoirs in different parts of the country, monitored by CWC as on

**16-12-2021** is **131.325** BCM ( **76** percent of the live storage capacity at FRL ).The current year's storage is nearly **98** percent of last year's storage and **117** percent of the average of last ten years.

**3 Region wise storage status:-**

REGION (States), (Monitoring No. of Reservoirs)	Filling position of 133 reservoirs w.r.t. FRL								Departure from Normal storage	
	100%	91% 99%	81%- 90%	71% 80%	61% 70%	51% 60%	41% 50%	40% & below		
<b>NORTH</b> (HP,Punjab & Rajasthan), (9 Resv.)	-	2	2	-	-	1	2	2	H.P.	-24 %
									PUNJAB	-22 %
									RAJASTHAN	16 %
<b>EAST</b> (Jharkhand,Odisha, Tripura, Nagaland, W.Bengal and Bihar ) ( 21 Resv.)	4	4	2	1	1	4	4	1	JHARKHAND	13 %
									ODISHA	-10 %
									W. BENGAL	57 %
									TRIPURA	46 %
									NAGALAND	-10 %
<b>WEST</b> (Guj.& Mah.), (42 Resv.)	6	17	5	4	2	-	2	6	GUJARAT	24 %
									MAH.	27 %
<b>CENTRAL</b> (MP,UP,Uttarakhand & Chh.), (24 Resv)	1	2	4	4	3	6	1	3	U.P.	0 %
									UTTARAKHAN	16 %
									M.P.	1 %
									CHHATISGARH	0 %
<b>SOUTH</b> (Karnataka,TN,AP&TG,AP, TG, & Kerala), ( 37 Resv.)	9	12	10	3	-	2	-	1	AP&TG	39 %
									A.P	60 %
									TELANGANA	62 %
									KARNATAKA	41 %
									KERALA	32 %
									T.N.	73 %
Status of 133 reservoirs	20	37	23	12	6	13	9	13		

**4 Basin wise storage position:**
**Better than normal:**

Ganga, Narmada, Tapi, Rivers of Kutch, Godavari, Krishna,Mahanadi & Neighbouring East Flowing River, Cauvery & Neighbouring East Flowing River and West Flowing Rivers of South .

**Close to normal:**

Subernarekha & Mahi .

**Deficient:**

Indus and Sabarmati .

**Highly deficient:**

NIL

5 Out of 133 reservoirs,  
80% or below of normal storage.      **113** reservoirs reported more than 80% of normal storage & **20** reservoirs reported  
Out of these **20** reservoirs **7** having storage upto 50% of normal storage.

Name of Reservoir having storage less than 50% of normal storage.	%
JAWAI DAM	26
DANTIWADA	31
RANGAWAN	34
DUDHAWA	41
WATRAK	44
BRAHMANI(GUJ)	46
UPPER INDRAVATI	47

<b>13</b> reservoirs		
having storage 51% to 80% of normal storage.		
51%	61%	71%
to 60%	to 70%	to 80%
3	4	6

6 Out of **44** reservoirs with significant(\*) hydropower generation, the storage build up is less than or equal to normal in **17** reservoirs.

NOTE : **Normal:** Average of previous ten years, **Close to normal:** Where shortfall is up to 20% of the normal,

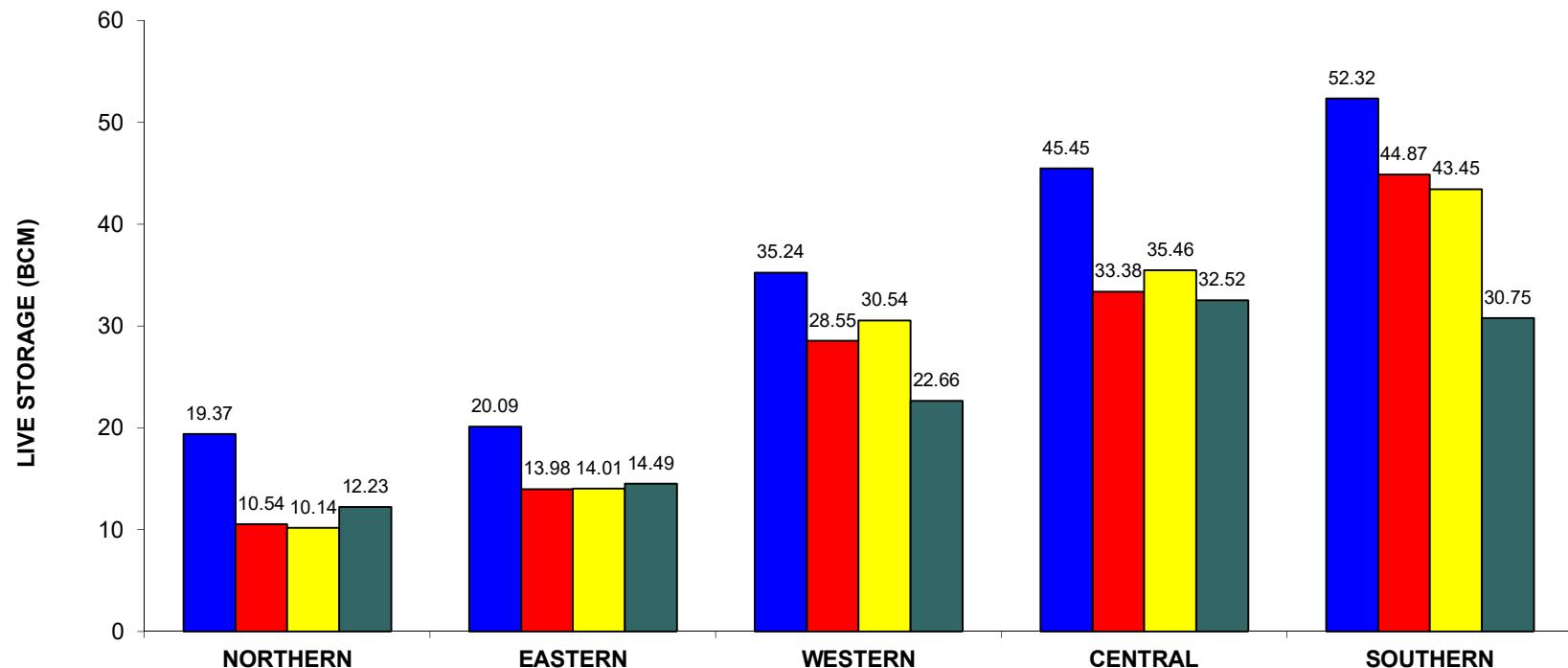
**Deficient:** Where shortfall is more than 20% of the normal and up to 60% of the normal,

**Highly deficient :** Where shortfall is more than 60% of the normal



## REGION-WISE STORAGE POSITION

(As on 16.12.2021)



REGION	(H.P., Pun., Raj.)	(Jhar., Ori, W.B., Tripura, Nagaland, Bihar)	(Guj., Mah.)	(U.P., Uttranchal, M.P., Chht.)	(A.P., TG., Kar., T.N., Ker)
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■ DESIGNED CAPACITY   ■ CURRENT STORAGE   ■ LAST YEAR'S STORAGE   ■ 10 YRS AVG. STORAGE

**Statewise distribution of projects having storage 50% or less of avg. Of last 10 yrs' storage as on:**

**16-12-2021**

STATE	TOTAL NO OF PROJECTS MONITORED	PROJECTS HAVING DEFICIENCY MORE THAN 50% OF AVG. OF LAST 10 YRS.	Current Year's Storage as %age of NORMAL
Gujarat	17	DANTIWADA	31
		WATRAK	44
		BRAHMANI(GUJ)	46
Chhattisgarh	4	DUDHAWA	41
Odisha	10	UPPER INDRAVATI	47
Rajasthan	5	JAWAI DAM	26
Uttar Pradesh	8	RANGAWAN	34

**Table-02 STATEWISE DISTRIBUTION OF PROJECTS HAVING STORAGE 80% OR LESS OF AVG. OF LAST 10 YRS' STORAGE AS ON:**

**16-12-2021**

STATE	TOTAL NO OF PROJECTS MONITORED	PROJECTS HAVING DEFICIENCY MORE THAN 20% OF AVG. OF LAST 10 YRS.	Current Year's Storage as %age of NORMAL
Gujarat	17	SABARMATI(DHAROI)	54
		DANTIWADA	31
		PANAM	68
		WATRAK	44
		HATHMATI	56
		BRAHMANI(GUJ)	46
Himachal Pradesh	3	GOBIND SAGAR(BHAKRA)	76
		PONG DAM(BEAS)	76
Chhattisgarh	4	DUDHAWA	41
		TANDULA	80
Maharashtra	25	KHADAKVASLA	53
Odisha	10	BALIMELA	66
		MACHKUND(JALAPUT)	62
		UPPER KOLAB	71
		UPPER INDRAVATI	47
		HARIHARJHOR	61
Punjab	1	THEIN DAM	78
Rajasthan	5	BISALPUR	72
		JAWAI DAM	26
Uttar Pradesh	8	RANGAWAN	34

**Statewise distribution of projects having storage 50% or less of avg. Of last 10 yrs' storage as on:**

**16-12-2021**

STATE	TOTAL NO OF PROJECTS MONITORED	PROJECTS HAVING DEFICIENCY MORE THAN 50% OF AVG. OF LAST 10 YRS.	Current Year's Storage as %age of NORMAL
Gujarat	17	DANTIWADA	31
		WATRAK	44
		BRAHMANI(GUJ)	46
Chhattisgarh	4	DUDHAWA	41
Odisha	10	UPPER INDRAVATI	47
Rajasthan	5	JAWAI DAM	26
Uttar Pradesh	8	RANGAWAN	34

IMD SUB-DIVISIONS HAVING LOW RAINFALL (80% or LESS THAN 80% OF NORMAL) AND						
Arunachal Pradesh	148	-41	No reservoir monitored by CWC falls under this IMD sub-Division			
Assam & Meghalaya	149	-22	No reservoir monitored by CWC falls under this IMD sub-Division			
Nagaland, Manipur, Mizoram & Tripura	149	-31	Gumti	0.31	0.24	<b>46</b>
			Doyang HEP	0.54	0.27	<b>-10</b>
East Madhya Pradesh	32	-40	Bargi	3.18	2.99	<b>15</b>
			Bansagar	5.17	4.03	<b>-4</b>
			Indira Sagar	9.75	6.07	<b>-11</b>
			Sanjay Sarovar	0.51	0.27	<b>6</b>
			Rangawan	0.16	0.02	<b>-66</b>
Vidarbha	62	-20	Yeldari	0.81	0.80	<b>114</b>
			Pench (Totladoh)	1.09	0.83	<b>23</b>
			Upper Wardha	0.56	0.49	<b>18</b>
Telangana	94	-23	N.J.Sagar	5.11	4.78	<b>94</b>
			Sriram Sagar	2.30	2.30	<b>102</b>
			Lower Manair	0.62	0.62	<b>49</b>
			Nizam Sagar	0.48	0.48	<b>55</b>
			Singur	0.82	0.80	<b>97</b>

\*Information/Data as received from IMD via e-mail.

**WEEKLY REPORT - BASINWISE**

**WEEK ENDING :- 16-12-2021**

NAME OF BASIN	LIVE CAP. AT FRL	THIS YEAR'S STORAGE	LAST YEAR'S STORAGE	LAST 10 YEARS' AVG. STORAGE	% DEPARTURE W.R.T. AVE. OF 10 YEARS'
GANGA	31.319	23.704	75.69%	22.314	71.25%
SUBERNAREKHA	0.218	0.116	53.21%	0.108	49.54%
INDUS	14.819	7.027	47.42%	6.978	47.09%
NARMADA	22.344	14.739	65.96%	18.545	83.00%
TAPI	7.394	7.107	96.12%	6.642	89.83%
MAHI	4.012	3.019	75.25%	3.109	77.49%
SABARMATI	1.042	0.359	34.45%	0.824	79.08%
RIVERS OF KUTCH	1.379	0.752	54.53%	1.004	72.81%
GODAVARI	17.714	13.515	76.30%	15.178	85.68%
KRISHNA	31.298	26.397	84.34%	26.636	85.10%
MAHANADI & NEIGHBOURING EFRS	14.151	11.316	79.97%	10.626	75.09%
CAUVERY & NEIGHBOURING EFRS	10.151	9.625	94.82%	8.294	81.71%
WEST FLOWING RIVERS OF SOUTH	16.622	13.649	82.11%	13.341	80.26%
<b>TOTAL</b>	<b>172.463</b>	<b>131.325</b>		<b>133.599</b>	
<b>PERCENTAGE</b>					<b>16.57</b>







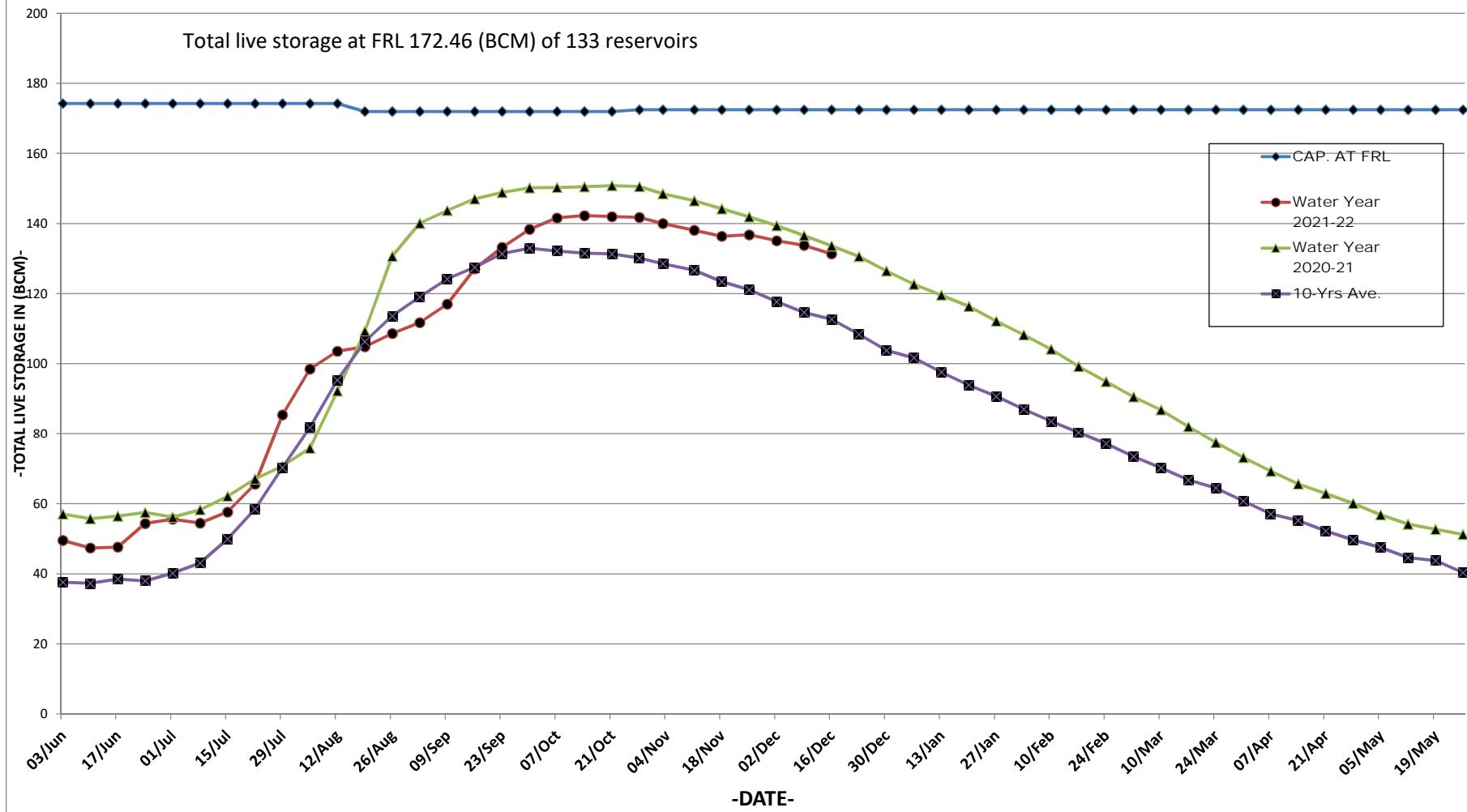
**16-12-2021**  
**TABLE-03 - CHANGE IN STORAGE FROM LAST WEEK TO THIS WEEK**

S. NO.	STATE	NO. OF RESERVOIRS MONITORED	LIVE CAPACITY AT FRL (BCM)	CHANGE IN STORAGE (BCM)		
				CURRENT YEAR	LAST YEAR	10 YRS AVG.
<b>NORTHERN REGION</b>						
1	H.P.	3	12.48	-0.29	-0.36	-0.23
2	PUNJAB	1	2.34	-0.03	-0.07	-0.05
3	RAJASTHAN	5	4.55	-0.02	-0.14	-0.13
<b>SUB-TOTAL</b>		<b>9</b>	<b>19.37</b>	<b>-0.34</b>	<b>-0.57</b>	<b>-0.41</b>
<b>EASTERN REGION</b>						
1	JHARKHAND	6	2.01	-0.01	-0.02	-0.01
2	ORISSA	10	15.70	-0.21	-0.11	0.13
3	W. BENGAL	2	1.39	0.00	0.00	0.00
4	TRIPURA	1	0.31	0.00	-0.01	-0.01
5	NAGALAND	1	0.54	-0.01	0.00	-0.01
6	BIHAR	1	0.14	0.00	0.00	0.00
<b>SUB-TOTAL</b>		<b>21</b>	<b>20.09</b>	<b>-0.23</b>	<b>-0.13</b>	<b>0.11</b>
<b>WESTERN REGION</b>						
1	GUJARAT	17	17.96	-0.20	-0.21	-0.21
2	MAH.	25	17.27	-0.17	-0.25	-0.13
<b>SUB-TOTAL</b>		<b>42</b>	<b>35.24</b>	<b>-0.36</b>	<b>-0.46</b>	<b>-0.34</b>
<b>CENTRAL REGION</b>						
1	U.P.	8	7.66	-0.14	-0.13	0.15
2	UTTARAKHAND	3	4.99	-0.10	-0.14	-0.11
3	M.P.	9	28.40	-0.58	-0.68	-0.37
4	CHHATISGARH	4	4.41	-0.01	0.00	0.03
<b>SUB-TOTAL</b>		<b>24</b>	<b>45.45</b>	<b>-0.83</b>	<b>-0.93</b>	<b>-0.31</b>
<b>SOUTHERN REGION</b>						
1	AP&TG	2	11.12	-0.30	-0.36	-0.25
2	A.P	3	4.29	-0.01	-0.02	-0.02
3	TELANGANA	4	4.23	-0.01	-0.01	-0.02
4	KARNATAKA	16	24.63	-0.29	-0.45	-0.54
5	KERALA	6	3.83	-0.07	-0.06	-0.04
6	T.N.	6	4.23	0.00	0.08	-0.10
<b>SUB-TOTAL</b>		<b>37</b>	<b>52.32</b>	<b>-0.67</b>	<b>-0.83</b>	<b>-0.98</b>
<b>COUNTRY AS A WHOLE</b>		<b>133</b>	<b>172.46</b>	<b>-2.43</b>	<b>-2.93</b>	<b>-1.94</b>

# STORAGE POSITION OF 133 IMPORTANT RESERVOIRS IN INDIA

## (WATER YEAR 2021-2022)

AS on 16.12.2021



# Map Indicating Statewise Storage Position

As on 16.12.2021

