

## **BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 20.06.2019)**

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

Central Water Commission is monitoring live storage status of 91 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 37 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 91 reservoirs is 161.993 BCM which is about 63% 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 **20.06.2019**, live storage available in these reservoirs is **27.265 BCM**, which is **17%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **29.699 BCM** and the average of last 10 years live storage was **29.194 BCM**. Thus, the live storage available in 91 reservoirs **as per 20.06.2019 Bulletin** is **92%** of the live storage of corresponding period of last year and **93%** of storage of average of last ten years.

The overall storage position is **less than the** corresponding period of last year in the country as a whole and is also **less 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 6 reservoirs under CWC monitoring having total live storage capacity of 18.01 BCM. As per Reservoir Storage Bulletin dated **20.06.2019**, the total live storage available in these reservoirs is **6.85 BCM** which is **38%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **16%** and average storage of last ten years during corresponding period was **26%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the corresponding period of last year and is also better 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 and Tripura. There are 15 reservoirs under CWC monitoring having total live storage capacity of 18.83 BCM. As per Reservoir Storage Bulletin dated **20.06.2019**, the total live storage available in these reservoirs is **3.14 BCM** which is **17%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **19%** and average storage of last ten years during corresponding period was **15%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the corresponding period of last year but is better 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 27 reservoirs under CWC monitoring having total live storage capacity of 31.26 BCM. As per Reservoir Storage Bulletin dated **20.06.2019**, the total live storage available in these reservoirs is **2.98 BCM** which is **10%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **13%** and average storage of last ten years during corresponding period was **17%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the storage of last year and is also less 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 12 reservoirs under CWC monitoring having total live storage capacity of 42.30 BCM. As per Reservoir Storage Bulletin dated **20.06.2019**, the total live storage available in these reservoirs is **9.03 BCM** which is **21%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **21%** and average storage of last ten years during corresponding period was **19%** of live storage capacity of these reservoirs. Thus, storage during current year is equal to the storage of last year and 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 31 reservoirs under CWC monitoring having total live storage capacity of 51.59 BCM. As per Reservoir Storage Bulletin dated **20.06.2019**, the total live storage available in these reservoirs is **5.26 BCM** which is **10%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **20%** and average storage of last ten years during corresponding period was **16%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the corresponding period of last year and is also less 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 4, better than normal storage is available in Indus, Narmada and Mahanadi & Neighbouring East Flowing Rivers. Close to Normal in Ganga, Mahi, and West Flowing Rivers of South. Deficient in Sabarmati, Rivers of Kutch, Godavari, Krishna and Cauvery & neighbouring EFRs and Highly Deficient in Tapi.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **19** and reservoirs having storage more than average of last ten years are **22**. The numbers of reservoirs having storage less than 20% with respect to last year is **18** and having storage less than 20% with reference to average of last ten years is **22**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **39** and having storage less than or equal to 50% with reference to average of last ten years are **36**.

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**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 20.06.2019**

- 1 Central Water Commission is monitoring storage status of 91 important reservoirs spread all over the country, in which **37** 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 91 important reservoirs in different parts of the country, monitored by CWC as on **20.06.2019** is **27.265** BCM ( **17** percent of the live storage capacity at FRL ).The current year's storage is nearly **92** percent of last year's storage and **93** percent of the average of last ten years.

**3 Region wise storage status:-**

REGION (States), (Monitoring No. of Reservoirs)	Filling position of 91 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), (6 Resv.)	-	-	-	-	-	1	1	4	H.P.	71 %
									PUNJAB	21 %
									RAJASTHAN	-5 %
<b>EAST</b> (Jharkhand, Odisha, Tripura & W. Bengal ( 15 Resv.)	-	-	-	-	-	1	-	14	JHARKHAND	-26 %
									ODISHA	18 %
									W. BENGAL	16 %
									TRIPURA	-4 %
<b>WEST</b> (Guj. & Mah.), (27 Resv.)	-	-	-	-	-	-	-	27	GUJARAT	-24 %
									MAH.	-71 %
<b>CENTRAL</b> (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	-	-	-	1	1	10	U.P.	-8 %
									UTTARAKHAND	10 %
									M.P.	25 %
									CHHATISGARH	-11 %
<b>SOUTH</b> (Karnataka, TN, AP&TG, AP, TG, & Kerala), ( 31 Resv.)	-	-	-	1	-	-	-	30	AP&TG	-52 %
									A,P	-83 %
									TG	-36 %
									KARNATAKA	-23 %
									KERALA	-38 %
									T.N.	-43 %
Status of 91 reservoirs	0	0	0	1	0	3	2	85		

**4 Basin wise storage position:**

**Better than normal:** Indus, Narmada and Mahanadi & Neighbouring East Flowing Rivers

**Close to normal:** Ganga, Mahi and West Flowing Rivers of South .

**Deficient:** Sabarmati, Rivers of Kutch, Godavari, Krishna and Cauvery & neighbouring EFRs .

**Highly deficient:** Tapi

- 5 Out of 91 reservoirs, **32** reservoirs reported more than 80% of normal storage & **59** reservoirs reported 80% or below of normal storage. Out of these **59** reservoirs **36** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
YELDARI	0	BHADAR	14
BHIMA(UJJANI)	0	GHATAPRABHA	15
JAYAKWADI(PAITHON)	0	UKAI	16
SHOLAYAR	0	SOMASILA	17
UPPER TAPI	0	MANIKDOH	20
PENCH (TOTALADOH)	0	TEHRI	21
NAGARJUNA SAGAR	0	UPPER VAITARNA	30
ISAPUR	0	MATATILA	32
GANDHI SAGAR	0	KAKKI	34
TILAIYA	0	KOYANA	35
BARNA	0	TAWA	35
ALIYAR	3	DAMANAGANGA	36
DHOM	3	PANCHET HILL	37
DUDHGANGA	8	MALAMPUZHA	41
BHANDARDARA	9	UPPER WARDHA	42
VANIVILAS SAGAR	11	PERIYAR	43
TUNGABHADRA	12	IDAMALAYAR	44
		MALAPRABHA(RENUKA)	47

23 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
5	12	6

- 6 Out of **37** reservoirs with significant(\*) hydropower generation, the storage build up is less than or equal to normal in **23** 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



**WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA**

**WEEK ENDING :- 20.06.2019**

S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	STORAGE AS % OF LIVE CAPACITY AT FRL			BENEFITS	
							CURRENT YEAR	LAST YEAR	LAST 10 YEARS AVERAGE	IRR. (CCA) IN TH. HA	HYDEL IN MW
1	2	4	6	5	7	8	9	10	11	3A	3B
<b><u>NORTHERN REGION</u></b>											
<b><u>HIMACHAL PRADESH</u></b>											
*1	GOBIND SAGAR(BHAKRA)	512.06	489.62	6.229	2.588	20-06-2019	42	10	25	676	1200
*2	PONG DAM	423.67	405.85	6.157	2.191	20-06-2019	36	8	20	-	360
<b><u>PUNJAB</u></b>											
*3	THEIN	527.91	512.35	2.344	1.263	20-06-2019	54	33	44	348	600
<b><u>RAJASTHAN</u></b>											
*4	MAHI BAJAJ SAGAR	280.75	267.80	1.711	0.440	20-06-2019	26	31	24	63	140
5	JHAKAM	359.50	345.30	0.132	0.032	20-06-2019	24	28	19	28	-
*6	RANA PRATAP SAGAR	352.81	346.30	1.436	0.338	20-06-2019	24	30	30	229	172
<b><u>EASTERN REGION</u></b>											
<b><u>JHARKHAND</u></b>											
7	TENUGHAT	269.14	256.35	0.821	0.291	20-06-2019	35	30	34	-	-
8	MAITHON	146.3	136.67	0.471	0.066	20-06-2019	14	25	24	342	-
*9	PANCHET HILL	124.97	120.82	0.184	0.031	20-06-2019	17	60	46	\$	80
10	KONAR	425.81	414.48	0.176	0.026	20-06-2019	15	17	31	\$	-
11	TILAIYA	368.81	363.33	0.142	0.000	20-06-2019	0	7	18	\$	4
<b><u>ODISHA</u></b>											
*12	HIRAKUD	192.02	183.24	5.378	0.803	20-06-2019	15	18	11	153	307
*13	BALIMELA	462.08	444.73	2.676	0.441	20-06-2019	16	7	14	-	360
14	SALANADI	82.30	73.57	0.558	0.299	20-06-2019	54	43	25	42	-
*15	RENGALI	123.50	110.76	3.432	0.158	20-06-2019	5	8	6	3	200
*16	MACHKUND(JALPUT)	838.16	827.35	0.893	0.233	20-06-2019	26	16	24	-	115
*17	UPPER KOLAB	858.00	846.33	0.935	0.097	20-06-2019	10	10	16	89	320
*18	UPPER INDRAVATI	642.00	628.31	1.456	0.221	20-06-2019	15	10	16	128	600
<b><u>WEST BENGAL</u></b>											
19	MAYURAKSHI	121.31	109.74	0.480	0.075	20-06-2019	16	34	22	227	-
20	KANGSABATI	134.14	125.67	0.914	0.302	20-06-2019	33	46	24	341	-
<b><u>TRIPURA</u></b>											
21	GUMTI	93.55	88.10	0.312	0.094	18-06-2019	30	100	31	-	15
<b><u>WESTERN REGION</u></b>											
<b><u>GUJARAT</u></b>											
*22	UKAI	105.16	84.22	6.615	0.213	20-06-2019	3	9	20	348	300
23	SABARMATI(DHAROI)	189.59	178.77	0.735	0.058	20-06-2019	8	13	14	95	1
*24	KADANA	127.7	119.43	1.472	0.494	20-06-2019	34	39	44	200	120
25	SHETRUNJI	55.53	47.72	0.300	0.019	20-06-2019	6	12	10	36	-
26	BHADAR	107.89	98.93	0.188	0.003	20-06-2019	2	12	11	27	-
27	DAMANAGANGA	79.86	63.55	0.502	0.019	20-06-2019	4	15	11	51	1
28	DANTIWADA	184.1	166.65	0.399	0.019	20-06-2019	5	16	3	45	-
29	PANAM	127.41	121.50	0.697	0.237	20-06-2019	34	34	37	36	2
*30	SARDAR SAROVAR	138.68	119.63	5.760	1.165	20-06-2019	20	0	10	2120	1450
31	KARJAN	115.25	97.88	0.523	0.148	20-06-2019	28	33	28	51	3

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							CURRENT YEAR	LAST YEAR	LAST 10 YEARS AVERAGE	IRR. (CCA) IN TH. HA	HYDEL IN MW
1	2	4	6	5	7	8	9	10	11	3A	3B
<b><u>MAHARASHTRA</u></b>											
32	JAYAKWADI(PAITHON)	463.91	454.18	2.171	0.000	20-06-2019	0	22	8	227	-
*33	KOYANA	657.90	619.91	2.652	0.200	20-06-2019	8	23	22	-	1920
34	BHIMA(UJJANI)	496.83	485.30	1.517	0.000	20-06-2019	0	0	3	125	12
35	ISAPUR	441.00	425.49	0.965	0.000	20-06-2019	0	0	17	104	-
36	MULA	552.30	534.78	0.609	0.014	20-06-2019	2	1	4	139	-
37	YELDARI	461.77	445.33	0.809	0.000	20-06-2019	0	0	8	78	-
38	GIRNA	398.07	384.04	0.524	0.041	19-06-2019	8	10	8	79	-
39	KHADAKVASLA	582.47	578.33	0.056	0.009	20-06-2019	16	14	20	78	8
*40	UPPER VAITARNA	603.50	589.67	0.331	0.025	20-06-2019	8	27	25	-	61
41	UPPER TAPI	214.00	205.96	0.255	0.000	19-06-2019	0	0	15	45	-
*42	PENCH (TOTALADOH)	490.00	459.60	1.091	0.000	20-06-2019	0	6	16	127	160
43	UPPER WARDHA	342.50	334.56	0.564	0.071	20-06-2019	13	34	30	70	-
44	BHATSA	142.07	105.26	0.942	0.230	20-06-2019	24	31	31	29.378	15
45	DHOM	747.70	725.68	0.331	0.002	20-06-2019	1	15	19	36.2	2
46	DUDHGANGA	646.00	609.90	0.664	0.010	20-06-2019	2	22	19	2.441	24
47	MANIKDOH (KUKADI)	711.25	683.45	0.288	0.002	20-06-2019	1	5	3	2.2	6
48	BHANDARDARA	744.91	700.74	0.304	0.003	20-06-2019	1	28	11	63.74	46
<b><u>CENTRAL REGION</u></b>											
<b><u>UTTAR PRADESH</u></b>											
49	MATATILA	308.46	300.78	0.707	0.049	19-06-2019	7	9	22	-	30
*50	RIHAND	268.22	255.42	5.649	0.678	20-06-2019	12	11	11	-	300
<b><u>UTTRAKHAND</u></b>											
*51	RAMGANGA	365.30	338.74	2.196	0.663	20-06-2019	30	8	23	1897	198
*52	TEHRI	830.00	741.82	2.615	0.025	20-06-2019	1	0	5	2351	1000
<b><u>MADHYA PRADESH</u></b>											
*53	GANDHI SAGAR	399.90	380.29	6.827	0.000	19-06-2019	0	16	19	220	115
54	TAWA	355.40	337.35	1.944	0.133	20-06-2019	7	9	19	247	-
*55	BARGI	422.76	412.90	3.180	1.044	20-06-2019	33	40	17	157	90
*56	BANSAGAR	341.64	335.56	5.166	2.696	20-06-2019	52	42	34	488	425
*57	INDIRA SAGAR	262.13	250.41	9.745	2.254	20-06-2019	23	17	9	2380	1000
58	BARNA	348.55	337.05	0.456	0.000	19-06-2019	0	4	16	546	-
<b><u>CHHATTIS GARH</u></b>											
*59	MINIMATA BANGOI	359.66	349.42	3.046	1.380	20-06-2019	45	51	49	-	120
60	MAHANADI	348.70	339.14	0.767	0.112	20-06-2019	15	27	24	319	10
<b><u>SOUTHERN REGION</u></b>											
<b><u>A.P &amp; TG</u></b>											
*61	SRISAILAM	269.75	245.76	8.288	0.815	20-06-2019	10	9	9	0	770
*62	NAGARJUNA SAGAR	179.83	154.84	6.841	0.000	20-06-2019	0	1	13	895	810
<b><u>ANDHRA PRADESH</u></b>											
63	SOMASILA	100.58	77.78	1.994	0.082	20-06-2019	4	17	25	168	0
<b><u>TELANGANA</u></b>											
64	SRIRAMSAGAR	332.54	319.71	2.300	0.159	20-06-2019	7	13	12	411	27
65	LOWER MANAIR	280.42	268.99	0.621	0.104	20-06-2019	17	16	22	199	60

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							CURRENT YEAR	LAST YEAR	LAST 10 YEARS AVERAGE	IRR. (CCA) IN TH. HA	HYDEL IN MW
1	2	4	6	5	7	8	9	10	11	3A	3B
<b><u>KARNATAKA</u></b>											
66	KRISHNARAJA SAGRA	752.50	738.83	1.163	0.180	20-06-2019	15	52	13	79	-
*67	TUNGABHADRA	497.74	479.81	3.276	0.060	20-06-2019	2	21	15	529	72
68	GHATAPRABHA	662.95	629.77	1.391	0.011	20-06-2019	1	10	5	317	-
69	BHADRA	657.76	638.76	1.785	0.249	20-06-2019	14	27	23	106	39
70	LINGANAMAKKI	554.43	531.86	4.294	0.404	20-06-2019	9	22	14	-	55
71	NARAYANPUR	492.25	487.19	0.863	0.222	20-06-2019	26	44	33	425	-
72	MALAPRABHA(RENUKA)	633.83	620.37	0.972	0.024	20-06-2019	2	6	5	215	-
73	KABINI(Sancherla Tank)	696.16	687.78	0.444	0.063	20-06-2019	14	93	20	85	-
74	HEMAVATHY	890.63	872.94	0.927	0.098	20-06-2019	11	57	15	265	-
75	HARANGI	871.42	855.28	0.220	0.033	20-06-2019	15	39	23	53	-
76	SUPA	564.00	531.60	4.120	1.190	20-06-2019	29	33	22	-	-
77	VANIVILAS SAGAR	652.28	631.69	0.802	0.010	20-06-2019	1	1	11	123	-
*78	ALMATTI	519.60	508.03	3.105	0.263	20-06-2019	8	9	10	@	290
*79	GERUSOPPA	55.00	48.40	0.130	0.094	20-06-2019	72	67	77	83	240
<b><u>KERALA</u></b>											
80	KALLADA(PARAPPAR)	115.82	98.65	0.507	0.173	20-06-2019	34	71	30	62	-
*81	IDAMALAYAR	169.00	124.27	1.018	0.079	20-06-2019	8	30	18	33	75
*82	IDUKKI	732.43	703.08	1.460	0.212	20-06-2019	15	40	22	-	780
*83	KAKKI	981.46	931.97	0.447	0.037	20-06-2019	8	47	24	23	300
*84	PERIYAR	867.41	859.74	0.173	0.021	20-06-2019	12	58	28	84	140
85	MALAPMUZHA	115.06	101.54	0.224	0.024	20-06-2019	11	39	26	21	3
<b><u>TAMIL NADU</u></b>											
86	LOWER BHAWANI	278.89	265.34	0.792	0.167	20-06-2019	21	45	24	105	8
*87	METTUR(STANLEY)	240.79	217.87	2.647	0.415	20-06-2019	16	19	29	122	360
88	VAIGAI	279.20	267.40	0.172	0.013	20-06-2019	8	22	12	61	6
89	PARAMBIKULAM	556.26	538.57	0.380	0.057	20-06-2019	15	20	25	101	-
90	ALIYAR	320.04	301.34	0.095	0.001	20-06-2019	1	14	35	#	60
*91	SHOLAYAR	1002.79	956.79	0.143	0.000	20-06-2019	0	73	26	-	95
TOTAL FOR 91 RESERVOIRS				<b>161.993</b>	<b>27.265</b>						
PERCENTAGE							<b>17</b>	<b>18</b>	<b>18</b>		

Sd/-

Director

W. M. , CWC

\* HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

# TOTAL CCA 101 TH. HA OF PARAMBIKULAM & ALIYAR

@' TOTAL CCA 425 TH. HA. OF NARAYANPUR AND ALMATTI

† SABARMATI RESERVOIR IS SUPPLEMENTED WITH NARMADA WATER THROUGH PIPELINE.