

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 20.03.2019)

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 **20.03.2019**, live storage available in these reservoirs is **54.002 BCM**, which is **33%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **49.605 BCM** and the average of last 10 years live storage was **55.068 BCM**. Thus, the live storage available in 91 reservoirs **as per 20.03.2019 Bulletin** is **109%** of the live storage of corresponding period of last year and **98%** of storage of average of last ten years.

The overall storage position is **more than the** corresponding period of last year in the country as a whole and is **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 **20.03.2019**, the total live storage available in these reservoirs is **8.87 BCM** which is **49%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **24%** and average storage of last ten years during corresponding period was **29%** 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 **20.03.2019**, the total live storage available in these reservoirs is **8.79 BCM** which is **47%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **51%** and average storage of last ten years during corresponding period was **48%** 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.

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 **20.03.2019**, the total live storage available in these reservoirs is **7.08 BCM** which is **23%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **34%** and average storage of last ten years during corresponding period was **36%** 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 **20.03.2019**, the total live storage available in these reservoirs is **16.11 BCM** which is **38%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **32%** and average storage of last ten years during corresponding period was **37%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the storage of last year and is also 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 **20.03.2019**, the total live storage available in these reservoirs is **13.15 BCM** which is **25%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **22%** and average storage of last ten years during corresponding period was **27%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the corresponding period of last year but is 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 West Flowing Rivers of South Close to Normal in Ganga, Mahi, Godavari, Krishna, Mahanadi & Neighbouring East Flowing Rivers and Cauvery & neighbouring EFRs. Deficient in Tapi, Sabarmati and Rivers of Kutch and Nil in Highly Deficient.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **30** and reservoirs having storage more than average of last ten years are **41**. The numbers of reservoirs having storage less than 20% with respect to last year is **4** and having storage less than 20% with reference to average of last ten years is **6**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **16** and having storage less than or equal to 50% with reference to average of last ten years are **16**.

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 20.03.2019

- 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.
- The total live storage in 91 important reservoirs in different parts of the country, monitored by CWC as on **20.03.2019** is **54.002** BCM (**33** percent of the live storage capacity at FRL).The current year's storage is nearly **109** percent of last year's storage and **98** 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		
NORTH (HP, Punjab & Rajasthan), (6 Resv.)	-	-	-	1	-	1	1	3	H.P.	73 %
									PUNJAB	137 %
									RAJASTHAN	18 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	-	1	-	4	5	5	JHARKHAND	-17 %
									ODISHA	-2 %
									W. BENGAL	-2 %
									TRIPURA	126 %
WEST (Guj.& Mah.), (27 Resv.)	-	-	-	-	2	2	4	19	GUJARAT	-41 %
									MAH.	-35 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	-	1	-	1	4	6	U.P.	-29 %
									UTTARAKHAND	12 %
									M.P.	8 %
									CHHATISGARH	-5 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	-	1	-	1	3	5	21	AP&TG	-37 %
									A,P	-74 %
									TG	-25 %
									KARNATAKA	15 %
									KERALA	9 %
									T.N.	16 %
Status of 91 reservoirs	0	0	1	3	3	11	19	54		

4 Basin wise storage position:

Better than normal: Indus, Narmada, and West Flowing Rivers of South.

Ganga, Mahi, Godavari, Krishna, Mahanadi & Neighbouring East Flowing Rivers and Cauvery & neighbouring EFRs.

Close to normal:

Deficient:

Tapi, Sabarmati and Rivers of Kutch .

Highly deficient:

- 5 Out of 91 reservoirs, **56** reservoirs reported more than 80% of normal storage & **35** reservoirs reported 80% or below of normal storage. Out of these **35** reservoirs **16** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
YELDARI	0		
ALIYAR	0		
BHIMA(UJJANI)	0		
JAYAKWADI(PAITHON)	1		
VANIVILAS SAGAR	15		
PENCH (TOTALADOH)	19		
GANDHI SAGAR	21		
SOMASILA	26		
BARNA	31		
TAWA	31		
UKAI	37		
BHANDARDARA	39		
TILAIYA	40		
BHADAR	41		
MULA	43		
DAMANAGANGA	46		

19 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
8	6	5

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

16 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 - BASINWISE

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.03.2019

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	28.096	9.187	32.70%	9.157	32.59%	10.098	35.94%	-9.02
INDUS	14.730	7.805	52.99%	3.096	21.02%	4.248	28.84%	83.73
NARMADA	21.608	7.470	34.57%	5.102	23.61%	6.195	28.67%	20.58
TAPI	7.394	1.319	17.84%	2.159	29.20%	3.236	43.77%	-59.24
MAHI	4.012	1.608	40.08%	1.808	45.06%	1.686	42.02%	-4.63
SABARMATI	0.735	0.106	14.42%	0.147	20.00%	0.174	23.67%	-39.08
RIVERS OF KUTCH	0.887	0.093	10.48%	0.254	28.64%	0.168	18.94%	-44.64
GODAVARI	15.394	4.516	29.34%	4.982	32.36%	5.443	35.36%	-17.03
KRISHNA	32.831	6.587	20.06%	7.419	22.60%	7.971	24.28%	-17.36
MAHANADI & NEIGHBOURING EFRS	13.181	6.349	48.17%	7.787	59.08%	7.242	54.94%	-12.33
CAUVERY & NEIGHBOURING EFRS	8.359	2.362	28.26%	1.445	17.29%	2.516	30.10%	-6.12
WEST FLOWING RIVERS OF SOUTH	14.766	6.600	44.70%	6.249	42.32%	6.091	41.25%	8.36
TOTAL	161.993	54.002		49.605		55.068		
PERCENTAGE								-1.94

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.03.2019

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
<u>NORTHERN REGION</u>											
<u>HIMACHAL PRADESH</u>											
*1	GOBIND SAGAR(BHAKRA)	512.06	494.10	6.229	3.384	20-03-2019	54	26	30	676	1200
*2	PONG DAM	423.67	408.22	6.157	2.700	20-03-2019	44	16	27	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	520.04	2.344	1.721	20-03-2019	73	19	31	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	270.10	1.711	0.607	20-03-2019	35	42	32	63	140
5	JHAKAM	359.50	345.75	0.132	0.034	20-03-2019	26	31	20	28	-
*6	RANA PRATAP SAGAR	352.81	346.87	1.436	0.420	20-03-2019	29	32	23	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	258.18	0.821	0.347	20-03-2019	42	45	40	-	-
8	MAITHON	146.3	139.91	0.471	0.156	20-03-2019	33	100	65	342	-
*9	PANCHET HILL	124.97	123.89	0.184	0.134	20-03-2019	73	53	65	\$	80
10	KONAR	425.81	420.32	0.176	0.087	20-03-2019	49	33	57	\$	-
11	TILAIYA	368.81	364.23	0.142	0.014	20-03-2019	10	15	25	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	188.36	5.378	2.711	20-03-2019	50	51	51	153	307
*13	BALIMELA	462.08	455.19	2.676	1.588	18-03-2019	59	16	40	-	360
14	SALANADI	82.30	73.56	0.558	0.299	20-03-2019	54	41	28	42	-
*15	RENGALI	123.50	115.82	3.432	1.162	18-03-2019	34	76	60	3	200
*16	MACHKUND(JALPUT)	838.16	833.23	0.893	0.519	18-03-2019	58	74	57	-	115
*17	UPPER KOLAB	858.00	852.12	0.935	0.435	18-03-2019	47	40	44	89	320
*18	UPPER INDRAVATI	642.00	635.40	1.456	0.785	18-03-2019	54	42	50	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	110.73	0.480	0.094	20-03-2019	20	68	34	227	-
20	KANGSABATI	134.14	126.19	0.914	0.331	20-03-2019	36	52	29	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	89.15	0.312	0.129	20-03-2019	41	62	18	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	90.29	6.615	1.115	20-03-2019	17	29	45	348	300
23	SABARMATI(DHAROI)	189.59	180.33	0.735	0.106	20-03-2019	14	20	24	95	1
*24	KADANA	127.7	121.31	1.472	0.621	20-03-2019	42	47	55	200	120
25	SHETRUNJI	55.53	49.77	0.300	0.047	20-03-2019	16	19	29	36	-
26	BHADAR	107.89	101.26	0.188	0.018	20-03-2019	10	26	23	27	-
27	DAMANAGANGA	79.86	69.85	0.502	0.124	20-03-2019	25	55	54	51	1
28	DANTIWADA	184.1	167.90	0.399	0.028	20-03-2019	7	37	9	45	-
29	PANAM	127.41	123.95	0.697	0.346	20-03-2019	50	50	45	36	2
*30	SARDAR SAROVAR	138.68	116.50	5.760	0.718	20-03-2019	12	0	13	2120	1450
31	KARJAN	115.25	106.25	0.523	0.291	20-03-2019	56	62	57	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.03.2019

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
MAHARASHTRA											
32	JAYAKWADI(PAITHON)	463.91	455.56	2.171	0.004	20-03-2019	0	58	25	227	-
*33	KOYANA	657.90	648.36	2.652	1.768	20-03-2019	67	70	58	-	1920
34	BHIMA(UJJANI)	496.83	490.88	1.517	0.000	19-03-2019	0	68	38	125	12
35	ISAPUR	441.00	431.76	0.965	0.261	20-03-2019	27	5	32	104	-
36	MULA	552.30	539.06	0.609	0.103	20-03-2019	17	55	39	139	-
37	YELDARI	461.77	446.19	0.809	0.000	20-03-2019	0	3	20	78	-
38	GIRNA	398.07	387.38	0.524	0.122	20-03-2019	23	28	21	79	-
39	KHADAKVASLA	582.47	581.04	0.056	0.037	20-03-2019	66	82	54	78	8
*40	UPPER VAITARNA	603.50	598.49	0.331	0.177	20-03-2019	53	50	56	-	61
41	UPPER TAPI	214.00	210.52	0.255	0.082	20-03-2019	32	44	57	45	-
*42	PENCH (TOTALADOH)	490.00	468.25	1.091	0.062	20-03-2019	6	14	30	127	160
43	UPPER WARDHA	342.50	335.79	0.564	0.121	19-03-2019	21	46	40	70	-
44	BHATSA	142.07	120.42	0.942	0.456	20-03-2019	48	56	54	29.378	15
45	DHOM	747.70	734.96	0.331	0.096	20-03-2019	29	52	43	36.2	2
46	DUDHGANGA	646.00	632.22	0.664	0.285	20-03-2019	43	57	52	2.441	24
47	MANIKDOH (KUKADI)	711.25	689.77	0.288	0.031	20-03-2019	11	36	17	2.2	6
48	BHANDARDARA	744.91	721.93	0.304	0.064	20-03-2019	21	70	54	63.74	46
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	303.00	0.707	0.160	19-03-2019	23	26	39	-	30
*50	RIHAND	268.22	257.13	5.649	1.199	14-03-2019	21	23	29	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	347.49	2.196	1.048	19-03-2019	48	23	41	1897	198
*52	TEHRI	830.00	779.32	2.615	0.873	20-03-2019	33	26	31	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	383.91	6.827	0.477	19-03-2019	7	22	33	220	115
54	TAWA	355.40	337.72	1.944	0.152	20-03-2019	8	9	25	247	-
*55	BARGI	422.76	416.00	3.180	1.540	20-03-2019	48	64	47	157	90
*56	BANSAGAR	341.64	338.36	5.166	3.718	19-03-2019	72	48	48	488	425
*57	INDIRA SAGAR	262.13	255.61	9.745	4.739	14-03-2019	49	26	31	2380	1000
58	BARNA	348.55	339.38	0.456	0.030	19-03-2019	7	10	21	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	352.67	3.046	1.797	20-03-2019	59	59	62	-	120
60	MAHANADI	348.70	343.96	0.767	0.380	19-03-2019	50	51	55	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	251.89	8.288	1.205	19-03-2019	15	12	22	0	770
*62	NAGARJUNA SAGAR	179.83	158.92	6.841	0.571	19-03-2019	8	9	15	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	82.30	1.994	0.215	19-03-2019	11	22	42	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	323.27	2.300	0.402	20-03-2019	17	19	23	411	27
65	LOWER MANAIR	280.42	271.35	0.621	0.172	20-03-2019	28	30	38	199	60

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WEEK ENDING :- 20.03.2019

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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
<u>KARNATAKA</u>											
66	KRISHNARAJA SAGRA	752.50	745.50	1.163	0.563	20-03-2019	48	18	32	79	-
*67	TUNGABHADRA	497.74	484.48	3.276	0.268	20-03-2019	8	5	10	529	72
68	GHATAPRABHA	662.95	642.74	1.391	0.302	19-03-2019	22	24	17	317	-
69	BHADRA	657.76	648.74	1.785	0.883	19-03-2019	49	33	48	106	39
70	LINGANAMAKKI	554.43	543.50	4.294	1.703	20-03-2019	40	31	37	-	55
71	NARAYANPUR	492.25	487.28	0.863	0.228	19-03-2019	26	42	42	425	-
72	MALAPRABHA(RENUKA)	633.83	622.84	0.972	0.100	19-03-2019	10	7	9	215	-
73	KABINI(Sancherla Tank)	696.16	692.03	0.444	0.228	20-03-2019	51	29	22	85	-
74	HEMAVATHY	890.63	874.33	0.927	0.133	20-03-2019	14	15	15	265	-
75	HARANGI	871.42	856.37	0.220	0.040	20-03-2019	18	23	15	53	-
76	SUPA	564.00	544.09	4.120	2.072	20-03-2019	50	46	40	-	-
77	VANIVILAS SAGAR	652.28	632.32	0.802	0.017	19-03-2019	2	1	14	123	-
*78	ALMATTI	519.60	511.91	3.105	0.796	19-03-2019	26	21	16	@	290
*79	GERUSOPPA	55.00	51.29	0.130	0.109	20-03-2019	84	92	81	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	108.80	0.507	0.339	20-03-2019	67	83	53	62	-
*81	IDAMALAYAR	169.00	144.01	1.018	0.387	20-03-2019	38	44	41	33	75
*82	IDUKKI	732.43	717.94	1.460	0.737	20-03-2019	50	46	40	-	780
*83	KAKKI	981.46	965.49	0.447	0.236	20-03-2019	53	67	55	23	300
*84	PERIYAR	867.41	860.20	0.173	0.028	20-03-2019	16	17	17	84	140
85	MALAPMUZHA	115.06	102.46	0.224	0.031	20-03-2019	14	15	21	21	3
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	270.28	0.792	0.331	20-03-2019	42	17	27	105	8
*87	METTUR(STANLEY)	240.79	224.11	2.647	0.814	20-03-2019	31	13	30	122	360
88	VAIGAI	279.20	271.13	0.172	0.038	20-03-2019	22	8	16	61	6
89	PARAMBIKULAM	556.26	546.83	0.380	0.194	20-03-2019	51	9	34	101	-
90	ALIYAR	320.04	300.87	0.095	0.000	20-03-2019	0	0	37	#	60
*91	SHOLAYAR	1002.79	968.52	0.143	0.007	20-03-2019	5	0	4	-	95
TOTAL FOR 91 RESERVOIRS				161.993	54.002						
PERCENTAGE							33	31	34		

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.