

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 13.12.2018)

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 **13.12.2018**, live storage available in these reservoirs is **92.387 BCM**, which is **57%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **94.374 BCM** and the average of last 10 years live storage was **98.631 BCM**. Thus, the live storage available in 91 reservoirs **as per 13.12.2018 Bulletin** is **98%** of the live storage of corresponding period of last year and **94%** 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 **13.12.2018**, the total live storage available in these reservoirs is **13.55 BCM** which is **75%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **61%** and average storage of last ten years during corresponding period was **62%** 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 **13.12.2018**, the total live storage available in these reservoirs is **12.35 BCM** which is **66%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **75%** and average storage of last ten years during corresponding period was **70%** 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 **13.12.2018**, the total live storage available in these reservoirs is **13.42 BCM** which is **43%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **59%** and average storage of last ten years during corresponding period was **58%** 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 **13.12.2018**, the total live storage available in these reservoirs is **27.01 BCM** which is **64%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **55%** and average storage of last ten years during corresponding period was **62%** 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 **13.12.2018**, the total live storage available in these reservoirs is **26.07 BCM** which is **51%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **53%** and average storage of last ten years during corresponding period was **58%** 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, Mahi, and West Flowing Rivers of South and Cauvery & neighbouring EFRs. Close to Normal in Ganga, Godavari and Mahanadi & Neighbouring East Flowing Rivers, Deficient in Tapi and Krishna and Highly Deficient in Sabarmati and Rivers of Kutch.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **34** and reservoirs having storage more than average of last ten years are **33**. The numbers of reservoirs having storage less than 20% with respect to last year is **1** and having storage less than 20% with reference to average of last ten years is **2**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **15** and having storage less than or equal to 50% with reference to average of last ten years are **13**.

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 13.12.2018

- 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 13.12.2018 is 92.387 BCM (57 percent of the live storage capacity at FRL).The current year's storage is nearly 98 percent of last year's storage and 94 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.)	-	-	2	3	-	-	-	1	H.P.	22	%
									PUNJAB	44	%
									RAJASTHAN	4	%
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	-	-	2	5	1	3	2	2	JHARKHAND	-18	%
									ODISHA	-5	%
									W. BENGAL	-29	%
									TRIPURA	47	%
WEST (Guj.& Mah.), (27 Resv.)	-	-	3	4	3	1	4	12	GUJARAT	-27	%
									MAH.	-27	%
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	2	2	3	2	-	3	U.P.	4	%
									UTTARAKHAND	2	%
									M.P.	5	%
									CHHATISGARH	-4	%
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	-	1	5	7	5	1	3	9	AP&TG	-44	%
									A,P	-35	%
									TG	-30	%
									KARNATAKA	-3	%
									KERALA	5	%
									T.N.	36	%
Status of 91 reservoirs	0	1	14	21	12	7	9	27			

4 Basin wise storage position:

Better than normal: Indus Narmada ,Mahi, West Flowing Rivers of South and Cauvery & neighbouring EFRS .

Close to normal: Ganga, Godavari and Mahanadi & Neighbouring EFRS

Deficient: Tapi and Krishna .

Highly deficient: Sabarmati and Rivers of Kutch

- 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 13 having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
VANIVILAS SAGAR	17		
PENCH (TOTALADOH)	20		
YELDARI	21		
DANTIWADA	28		
SHETRUNJI	35		
NARAYANPUR	35		
SABARMATI(DHAROI)	38		
UPPER WARDHA	39		
MANIKDOH	40		
BHADAR	42		
SRISAILAM	44		
UKAI	45		
BHANDARDARA	48		

22 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
3	13	6

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

21 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 :- 13.12.2018

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	15.836	56.36%	17.100	60.86%	16.067	57.19%	-1.44
INDUS	14.730	11.458	77.79%	9.048	61.43%	9.204	62.48%	24.49
NARMADA	21.608	13.313	61.61%	9.025	41.77%	11.851	54.85%	12.34
TAPI	7.394	2.371	32.07%	3.405	46.05%	4.868	65.84%	-51.29
MAHI	4.012	2.991	74.55%	3.112	77.57%	2.729	68.02%	9.60
SABARMATI	0.735	0.162	22.04%	0.488	66.39%	0.425	57.82%	-61.88
RIVERS OF KUTCH	0.887	0.139	15.67%	0.595	67.08%	0.404	45.55%	-65.59
GODAVARI	15.394	7.781	50.55%	8.980	58.33%	9.027	58.64%	-13.80
KRISHNA	32.831	13.472	41.03%	18.920	57.63%	19.157	58.35%	-29.68
MAHANADI & NEIGHBOURING EFRS	13.181	8.350	63.35%	10.159	77.07%	10.026	76.06%	-16.72
CAUVERY& NEIGHBOURING EFRS	8.359	5.334	63.81%	4.149	49.64%	4.739	56.69%	12.56
WEST FLOWING RIVERS OF SOUTH	14.766	11.180	75.71%	9.393	63.61%	10.134	68.63%	10.32
TOTAL	161.993	92.387		94.374		98.631		
PERCENTAGE								-6.33

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 13.12.2018

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
NORTHERN REGION											
<u>HIMACHAL PRADESH</u>											
*1	GOBIND SAGAR(BHAKRA)	512.06	507.33	6.229	5.218	13-12-2018	84	72	71	676	1200
*2	PONG DAM	423.67	417.88	6.157	4.580	13-12-2018	74	57	59	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	519.08	2.344	1.660	13-12-2018	71	43	49	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	278.70	1.711	1.439	12-12-2018	84	89	73	63	140
5	JHAKAM	359.50	356.90	0.132	0.106	12-12-2018	80	80	67	28	-
*6	RANA PRATAP SAGAR	352.81	347.77	1.436	0.546	13-12-2018	38	25	46	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	259.05	0.821	0.380	13-12-2018	46	50	45	-	-
8	MAITHON	146.3	142.38	0.471	0.249	13-12-2018	53	100	85	342	-
*9	PANCHET HILL	124.97	124.13	0.184	0.144	13-12-2018	78	100	85	\$	80
10	KONAR	425.81	423.02	0.176	0.128	13-12-2018	73	74	82	\$	-
11	TILAIYA	368.81	366.74	0.142	0.073	13-12-2018	51	54	74	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	190.54	5.378	3.885	12-12-2018	72	82	84	153	307
*13	BALIMELA	462.08	460.22	2.676	2.320	12-12-2018	87	44	55	-	360
14	SALANADI	82.30	74.24	0.558	0.316	13-12-2018	57	43	36	42	-
*15	RENGALI	123.50	117.94	3.432	1.669	12-12-2018	49	95	80	3	200
*16	MACHKUND(JALPUT)	838.16	836.16	0.893	0.721	12-12-2018	81	95	84	-	115
*17	UPPER KOLAB	858.00	855.55	0.935	0.703	12-12-2018	75	61	62	89	320
*18	UPPER INDRAVATI	642.00	638.54	1.456	1.091	12-12-2018	75	59	69	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	111.86	0.480	0.118	13-12-2018	25	95	45	227	-
20	KANGSABATI	134.14	126.26	0.914	0.335	13-12-2018	37	89	46	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	91.40	0.312	0.215	12-12-2018	69	87	47	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	94.56	6.615	1.971	13-12-2018	30	43	67	348	300
23	SABARMATI(DHAROI)	189.59	181.77	0.735	0.162	12-12-2018	22	66	58	95	1
*24	KADANA	127.7	125.22	1.472	0.945	12-12-2018	64	68	65	200	120
25	SHETRUNJI	55.53	50.67	0.300	0.064	12-12-2018	21	53	62	36	-
26	BHADAR	107.89	102.97	0.188	0.041	12-12-2018	22	68	52	27	-
27	DAMANAGANGA	79.86	76.00	0.502	0.313	13-12-2018	62	90	88	51	1
28	DANTIWADA	184.1	168.61	0.399	0.034	12-12-2018	9	77	31	45	-
29	PANAM	127.41	126.65	0.697	0.501	12-12-2018	72	70	62	36	2
*30	SARDAR SAROVAR	138.68	124.52	5.760	2.037	13-12-2018	35	27	23	2120	1450
31	KARJAN	115.25	111.01	0.523	0.397	13-12-2018	76	80	79	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 13.12.2018

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	458.51	2.171	0.538	13-12-2018	25	89	46	227	-
*33	KOYANA	657.90	654.00	2.652	2.230	13-12-2018	84	98	86	-	1920
34	BHIMA(UJJANI)	496.83	494.25	1.517	0.740	11-12-2018	49	100	76	125	12
35	ISAPUR	441.00	435.58	0.965	0.489	13-12-2018	51	14	51	104	-
36	MULA	552.30	543.99	0.609	0.248	06-12-2018	41	97	76	139	-
37	YELDARI	461.77	450.13	0.809	0.067	13-12-2018	8	13	39	78	-
38	GIRNA	398.07	390.03	0.524	0.195	13-12-2018	37	66	42	79	-
39	KHADAKVASLA	582.47	580.10	0.056	0.026	13-12-2018	46	77	66	78	8
*40	UPPER VAITARNA	603.50	602.12	0.331	0.287	13-12-2018	87	98	87	-	61
41	UPPER TAPI	214.00	213.12	0.255	0.205	13-12-2018	80	91	92	45	-
*42	PENCH (TOTALADOH)	490.00	471.04	1.091	0.118	13-12-2018	11	26	53	127	160
43	UPPER WARDHA	342.50	336.76	0.564	0.167	13-12-2018	30	78	76	70	-
44	BHATSA	142.07	132.46	0.942	0.699	13-12-2018	74	85	81	29.378	15
45	DHOM	747.70	742.23	0.331	0.216	13-12-2018	65	81	72	36.2	2
46	DUDHGANGA	646.00	641.93	0.664	0.546	13-12-2018	82	92	87	2.441	24
47	MANIKDOH (KUKADI)	711.25	693.19	0.288	0.055	13-12-2018	19	82	48	2.2	6
48	BHANDARDARA	744.91	731.01	0.304	0.125	13-12-2018	41	99	85	63.74	46
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	304.80	0.707	0.285	12-12-2018	40	61	62	-	30
*50	RIHAND	268.22	261.58	5.649	2.865	13-12-2018	51	53	46	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	355.11	2.196	1.465	13-12-2018	67	64	71	1897	198
*52	TEHRI	830.00	819.15	2.615	2.174	13-12-2018	83	79	77	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	391.20	6.827	2.380	13-12-2018	35	55	52	220	115
54	TAWA	355.40	348.97	1.944	1.036	13-12-2018	53	52	73	247	-
*55	BARGI	422.76	419.65	3.180	2.352	13-12-2018	74	80	77	157	90
*56	BANSAGAR	341.64	340.10	5.166	4.479	13-12-2018	87	64	64	488	425
*57	INDIRA SAGAR	262.13	259.32	9.745	7.312	13-12-2018	75	34	61	2380	1000
58	BARNA	348.55	343.95	0.456	0.179	13-12-2018	39	41	63	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	353.80	3.046	1.956	13-12-2018	64	63	66	-	120
60	MAHANADI	348.70	345.89	0.767	0.524	13-12-2018	68	42	73	319	10
SOUTHERN REGION											
A.P. & TG											
*61	SRISAILAM	269.75	258.29	8.288	2.012	13-12-2018	24	50	56	0	770
*62	NAGARJUNA SAGAR	179.83	167.30	6.841	2.144	13-12-2018	31	39	42	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	92.43	1.994	0.938	13-12-2018	47	63	72	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	326.84	2.300	0.956	13-12-2018	42	58	57	411	27
65	LOWER MANAIR	280.42	273.12	0.621	0.238	13-12-2018	38	67	62	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA CENTRAL WATER COMMISSION

WEEK ENDING :- 13.12.2018

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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	749.64	1.163	0.939	12-12-2018	81	61	68	79	-
*67	TUNGABHADRA	497.74	491.43	3.276	1.128	13-12-2018	34	42	53	529	72
68	GHATAPRABHA	662.95	656.12	1.391	0.922	13-12-2018	66	71	63	317	-
69	BHADRA	657.76	655.57	1.785	1.538	13-12-2018	86	71	77	106	39
70	LINGANAMAKKI	554.43	550.83	4.294	3.261	13-12-2018	76	54	70	-	55
71	NARAYANPUR	492.25	487.24	0.863	0.225	13-12-2018	26	67	75	425	-
72	MALAPRABHA(RENUKA)	633.83	627.10	0.972	0.316	13-12-2018	33	29	47	215	-
73	KABINI(Sancherla Tank)	696.16	693.97	0.444	0.323	12-12-2018	73	73	33	85	-
74	HEMAVATHY	890.63	881.03	0.927	0.368	12-12-2018	40	23	39	265	-
75	HARANGI	871.42	855.93	0.220	0.037	12-12-2018	17	26	22	53	-
76	SUPA	564.00	555.96	4.120	3.196	13-12-2018	78	56	59	-	-
77	VANIVILAS SAGAR	652.28	632.96	0.802	0.026	11-12-2018	3	2	19	123	-
*78	ALMATTI	519.60	514.63	3.105	1.348	13-12-2018	43	77	66	@	290
*79	GERUSOPPA	55.00	48.78	0.130	0.096	13-12-2018	74	75	81	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	113.85	0.507	0.443	12-12-2018	87	93	81	62	-
*81	IDAMALAYAR	169.00	156.56	1.018	0.669	12-12-2018	66	75	70	33	75
*82	IDUKKI	732.43	726.47	1.460	1.133	11-12-2018	78	68	64	-	780
*83	KAKKI	981.46	973.10	0.447	0.319	12-12-2018	71	88	80	23	300
*84	PERIYAR	867.41	864.71	0.173	0.109	12-12-2018	63	62	62	84	140
85	MALAPMUZHA	115.06	111.11	0.224	0.140	13-12-2018	63	54	67	21	3
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	277.83	0.792	0.739	12-12-2018	93	45	54	105	8
*87	METTUR(STANLEY)	240.79	235.24	2.647	1.901	12-12-2018	72	44	55	122	360
88	VAIGAI	279.20	275.10	0.172	0.089	12-12-2018	52	33	49	61	6
89	PARAMBIKULAM	556.26	554.19	0.380	0.336	12-12-2018	88	46	70	101	-
90	ALIYAR	320.04	318.00	0.095	0.082	12-12-2018	86	40	76	#	60
*91	SHOLAYAR	1002.79	996.25	0.143	0.097	12-12-2018	68	13	56	-	95
TOTAL FOR 91 RESERVOIRS				161.993	92.387						
PERCENTAGE							57	58	61		

* 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.

Sd/-

Director

W. M. , CWC