

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 20.12.2018)

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 **20.12.2018**, live storage available in these reservoirs is **88.943 BCM**, which is **55%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **91.188 BCM** and the average of last 10 years live storage was **95.650 BCM**. Thus, the live storage available in 91 reservoirs **as per 20.12.2018 Bulletin** is **98%** 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 **20.12.2018**, the total live storage available in these reservoirs is **12.84 BCM** which is **71%** 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 **59%** 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 **20.12.2018**, the total live storage available in these reservoirs is **12.31 BCM** which is **65%** 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 **20.12.2018**, the total live storage available in these reservoirs is **12.67 BCM** which is **41%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **58%** and average storage of last ten years during corresponding period was **57%** 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 **20.12.2018**, the total live storage available in these reservoirs is **26.06 BCM** which is **62%** 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 **60%** 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 **20.12.2018**, the total live storage available in these reservoirs is **25.07 BCM** which is **49%** 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 **56%** 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 **36** and reservoirs having storage more than average of last ten years are **31**. The numbers of reservoirs having storage less than 20% with respect to last year is **2** and having storage less than 20% with reference to average of last ten years is **1**. 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 20.12.2018

- 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 **20.12.2018** is **88.943** BCM (**55** percent of the live storage capacity at FRL).The current year's storage is nearly **98** percent of last year's storage and **93** percent of the average of last ten years.

3 Region wise storage status:-

REGION (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	2	2	-	-	1	H.P.	25 %
									PUNJAB	46 %
									RAJASTHAN	-5 %
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	-	-	2	5	1	2	3	2	JHARKHAND	-18 %
									ODISHA	-5 %
									W. BENGAL	-29 %
									TRIPURA	49 %
WEST (Guj.& Mah.), (27 Resv.)	-	-	2	4	3	2	4	12	GUJARAT	-31 %
									MAH.	-26 %
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	1	4	2	-	2	3	U.P.	2 %
									UTTARAKHAND	1 %
									M.P.	4 %
									CHHATISGARH	-3 %
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	-	-	4	7	5	2	4	9	AP&TG	-45 %
									A,P	-38 %
									TG	-29 %
									KARNATAKA	-3 %
									KERALA	5 %
									T.N.	30 %
Status of 91 reservoirs	0	0	10	22	13	6	13	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, **58** reservoirs reported more than 80% of normal storage & **33** reservoirs reported 80% or below of normal storage. Out of these **33** reservoirs **13** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
VANIVILAS SAGAR	17		
PENCH (TOTALADOH)	21		
YELDARI	26		
DANTIWADA	27		
MANIKDOH	32		
NARAYANPUR	34		
SHETRANJI	35		
SABARMATI(DHAROI)	39		
UPPER WARDHA	39		
SRISAILAM	41		
UKAI	43		
BHADAR	46		
BHANDARDARA	50		

20 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
4	12	4

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

22 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 :- 20.12.2018

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	15.170	53.99%	16.579	59.01%	15.526	55.26%	-2.29
INDUS	14.730	11.072	75.17%	8.672	58.87%	8.693	59.02%	27.37
NARMADA	21.608	12.588	58.26%	8.542	39.53%	11.455	53.01%	9.89
TAPI	7.394	2.235	30.23%	3.283	44.40%	4.759	64.36%	-53.04
MAHI	4.012	2.649	66.03%	3.032	75.57%	2.610	65.05%	1.49
SABARMATI	0.735	0.158	21.50%	0.453	61.63%	0.408	55.51%	-61.27
RIVERS OF KUTCH	0.887	0.136	15.33%	0.573	64.60%	0.387	43.63%	-64.86
GODAVARI	15.394	7.730	50.21%	8.857	57.54%	8.889	57.74%	-13.04
KRISHNA	32.831	13.009	39.62%	17.942	54.65%	18.454	56.21%	-29.51
MAHANADI & NEIGHBOURING EFRS	13.181	8.348	63.33%	10.139	76.92%	9.971	75.65%	-16.28
CAUVERY& NEIGHBOURING EFRS	8.359	4.922	58.88%	3.916	46.85%	4.565	54.61%	7.82
WEST FLOWING RIVERS OF SOUTH	14.766	10.926	73.99%	9.200	62.31%	9.933	67.27%	10.00
TOTAL	161.993	88.943		91.188		95.650		
PERCENTAGE								-7.01

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.12.2018

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	506.55	6.229	5.096	20-12-2018	82	70	68	676	1200
*2	PONG DAM	423.67	416.94	6.157	4.377	20-12-2018	71	55	55	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	517.98	2.344	1.599	20-12-2018	68	41	47	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	278.15	1.711	1.144	19-12-2018	67	86	68	63	140
5	JHAKAM	359.50	356.20	0.132	0.100	19-12-2018	76	75	61	28	-
*6	RANA PRATAP SAGAR	352.81	347.64	1.436	0.528	20-12-2018	37	24	43	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	258.96	0.821	0.376	20-12-2018	46	50	45	-	-
8	MAITHON	146.3	142.53	0.471	0.255	20-12-2018	54	100	85	342	-
*9	PANCHET HILL	124.97	124.10	0.184	0.143	19-12-2018	78	100	85	\$	80
10	KONAR	425.81	422.82	0.176	0.125	20-12-2018	71	74	81	\$	-
11	TILAIYA	368.81	366.32	0.142	0.061	20-12-2018	43	54	70	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	190.51	5.378	3.863	19-12-2018	72	81	84	153	307
*13	BALIMELA	462.08	460.13	2.676	2.304	19-12-2018	86	42	59	-	360
14	SALANADI	82.30	74.24	0.558	0.316	20-12-2018	57	43	36	42	-
*15	RENGALI	123.50	117.91	3.432	1.662	19-12-2018	48	94	78	3	200
*16	MACHKUND(JALPUT)	838.16	836.37	0.893	0.736	19-12-2018	82	94	83	-	115
*17	UPPER KOLAB	858.00	855.51	0.935	0.699	19-12-2018	75	61	61	89	320
*18	UPPER INDRAVATI	642.00	638.74	1.456	1.110	19-12-2018	76	59	69	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	111.80	0.480	0.117	20-12-2018	24	95	45	227	-
20	KANGSABATI	134.14	126.26	0.914	0.333	20-12-2018	36	89	46	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	91.25	0.312	0.209	19-12-2018	67	86	45	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	93.97	6.615	1.850	20-12-2018	28	41	65	348	300
23	SABARMATI(DHAROI)	189.59	181.68	0.735	0.158	19-12-2018	21	62	56	95	1
*24	KADANA	127.7	124.92	1.472	0.917	19-12-2018	62	67	64	200	120
25	SHETRUNJI	55.53	50.62	0.300	0.064	19-12-2018	21	52	60	36	-
26	BHADAR	107.89	102.87	0.188	0.039	19-12-2018	21	63	45	27	-
27	DAMANAGANGA	79.86	75.60	0.502	0.298	20-12-2018	59	89	86	51	1
28	DANTIWADA	184.1	168.60	0.399	0.033	18-12-2018	8	75	30	45	-
29	PANAM	127.41	126.40	0.697	0.488	19-12-2018	70	69	61	36	2
*30	SARDAR SAROVAR	138.68	123.61	5.760	1.672	20-12-2018	29	23	22	2120	1450
31	KARJAN	115.25	110.73	0.523	0.390	20-12-2018	75	80	78	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.12.2018

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	458.42	2.171	0.516	19-12-2018	24	88	45	227	-
*33	KOYANA	657.90	653.64	2.652	2.205	19-12-2018	83	96	85	-	1920
34	BHIMA(UJJANI)	496.83	494.10	1.517	0.701	20-12-2018	46	100	73	125	12
35	ISAPUR	441.00	435.30	0.965	0.469	20-12-2018	49	14	44	104	-
36	MULA	552.30	543.99	0.609	0.248	06-12-2018	41	97	76	139	-
37	YELDARI	461.77	450.09	0.809	0.066	20-12-2018	8	13	32	78	-
38	GIRNA	398.07	389.99	0.524	0.194	20-12-2018	37	62	40	79	-
39	KHADAKVASLA	582.47	580.71	0.056	0.033	19-12-2018	59	54	61	78	8
*40	UPPER VAITARNA	603.50	601.92	0.331	0.281	20-12-2018	85	96	85	-	61
41	UPPER TAPI	214.00	212.90	0.255	0.191	20-12-2018	75	89	89	45	-
*42	PENCH (TOTALADOH)	490.00	470.83	1.091	0.113	20-12-2018	10	24	48	127	160
43	UPPER WARDHA	342.50	336.61	0.564	0.160	20-12-2018	28	77	73	70	-
44	BHATSA	142.07	131.64	0.942	0.681	20-12-2018	72	83	79	29.378	15
45	DHOM	747.70	741.53	0.331	0.203	19-12-2018	61	79	72	36.2	2
46	DUDHGANGA	646.00	641.42	0.664	0.530	19-12-2018	80	90	85	2.441	24
47	MANIKDOH (KUKADI)	711.25	691.55	0.288	0.042	20-12-2018	15	81	45	2.2	6
48	BHANDARDARA	744.91	730.97	0.304	0.125	20-12-2018	41	98	82	63.74	46
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	304.65	0.707	0.274	19-12-2018	39	60	59	-	30
*50	RIHAND	268.22	261.31	5.649	2.758	20-12-2018	49	51	45	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	354.77	2.196	1.444	20-12-2018	66	61	69	1897	198
*52	TEHRI	830.00	817.00	2.615	2.088	20-12-2018	80	76	75	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	390.36	6.827	2.105	19-12-2018	31	52	49	220	115
54	TAWA	355.40	348.20	1.944	0.946	20-12-2018	49	47	68	247	-
*55	BARGI	422.76	419.40	3.180	2.282	20-12-2018	72	79	75	157	90
*56	BANSAGAR	341.64	339.82	5.166	4.354	19-12-2018	84	63	62	488	425
*57	INDIRA SAGAR	262.13	259.08	9.745	7.154	19-12-2018	73	33	59	2380	1000
58	BARNA	348.55	343.12	0.456	0.144	19-12-2018	32	38	62	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	353.80	3.046	1.956	20-12-2018	64	63	66	-	120
60	MAHANADI	348.70	346.23	0.767	0.551	19-12-2018	72	50	76	319	10
SOUTHERN REGION											
A.P. & TG											
*61	SRISAILAM	269.75	257.25	8.288	1.836	20-12-2018	22	48	54	0	770
*62	NAGARJUNA SAGAR	179.83	167.34	6.841	2.150	20-12-2018	31	33	39	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	91.90	1.994	0.882	20-12-2018	44	60	71	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	326.78	2.300	0.944	20-12-2018	41	58	56	411	27
65	LOWER MANAIR	280.42	273.16	0.621	0.240	20-12-2018	39	66	62	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA CENTRAL WATER COMMISSION

WEEK ENDING :- 20.12.2018

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
<u>KARNATAKA</u>											
66	KRISHNARAJA SAGRA	752.50	749.55	1.163	0.929	19-12-2018	80	61	66	79	-
*67	TUNGABHADRA	497.74	490.87	3.276	1.024	20-12-2018	31	40	50	529	72
68	GHATAPRABHA	662.95	656.06	1.391	0.919	20-12-2018	66	70	59	317	-
69	BHADRA	657.76	655.60	1.785	1.540	20-12-2018	86	71	78	106	39
70	LINGANAMAKKI	554.43	550.51	4.294	3.176	19-12-2018	74	53	68	-	55
71	NARAYANPUR	492.25	487.15	0.863	0.219	20-12-2018	25	68	74	425	-
72	MALAPRABHA(RENUKA)	633.83	626.21	0.972	0.258	20-12-2018	27	21	41	215	-
73	KABINI(Sancherla Tank)	696.16	693.82	0.444	0.315	19-12-2018	71	71	33	85	-
74	HEMAVATHY	890.63	879.80	0.927	0.310	19-12-2018	33	23	35	265	-
75	HARANGI	871.42	854.80	0.220	0.031	19-12-2018	14	26	17	53	-
76	SUPA	564.00	555.31	4.120	3.126	19-12-2018	76	55	59	-	-
77	VANIVILAS SAGAR	652.28	632.90	0.802	0.025	20-12-2018	3	2	18	123	-
*78	ALMATTI	519.60	514.53	3.105	1.324	20-12-2018	43	69	62	@	290
*79	GERUSOPPA	55.00	49.92	0.130	0.102	20-12-2018	78	82	78	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	113.96	0.507	0.446	20-12-2018	88	94	80	62	-
*81	IDAMALAYAR	169.00	156.01	1.018	0.656	20-12-2018	64	72	69	33	75
*82	IDUKKI	732.43	726.17	1.460	1.119	20-12-2018	77	67	63	-	780
*83	KAKKI	981.46	972.80	0.447	0.315	20-12-2018	70	88	79	23	300
*84	PERIYAR	867.41	864.05	0.173	0.096	20-12-2018	55	52	58	84	140
85	MALAPMUZHA	115.06	110.75	0.224	0.134	20-12-2018	60	48	62	21	3
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	277.33	0.792	0.705	20-12-2018	89	42	51	105	8
*87	METTUR(STANLEY)	240.79	233.31	2.647	1.673	20-12-2018	63	39	52	122	360
88	VAIGAI	279.20	274.31	0.172	0.077	20-12-2018	45	29	47	61	6
89	PARAMBIKULAM	556.26	553.91	0.380	0.331	20-12-2018	87	41	69	101	-
90	ALIYAR	320.04	316.70	0.095	0.074	20-12-2018	78	37	72	#	60
*91	SHOLAYAR	1002.79	994.99	0.143	0.091	20-12-2018	64	8	49	-	95
TOTAL FOR 91 RESERVOIRS				161.993	88.943						
PERCENTAGE							55	56	59		

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.