

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 20.10.2016)

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 157.799 BCM which is about 62% of the live storage capacity of 253.388 BCM which is estimated to have been created in the country. As per reservoir storage bulletin dated **20.10.2016**, live storage available in these reservoirs is **117.729 BCM**, which is **75%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **91.760 BCM** and the average of last 10 years live storage was **117.929 BCM**. Thus, the live storage available in 91 reservoirs **as per 20.10.2016 Bulletin** is **128%** of the live storage of corresponding period of last year and **100%** of storage of average of last ten years.

The overall storage position is **better than the** corresponding period of last year in the country as a whole but is **approximately equal to 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 **20.10.2016**, the total live storage available in these reservoirs is **12.97 BCM** which is **72%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **81%** and average storage of last ten years during corresponding period was **80%** 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.

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 **20.10.2016**, the total live storage available in these reservoirs is **16.24 BCM** which is **86%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **68%** and average storage of last ten years during corresponding period was **78%** 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.

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 27.07 BCM. As per Reservoir Storage Bulletin dated **20.10.2016**, the total live storage available in these reservoirs is **23.63 BCM** which is **87%** 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 **79%** 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.

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 **20.10.2016**, the total live storage available in these reservoirs is **38.40 BCM** which is **91%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **72%** 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 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 (2 combined 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 **20.10.2016**, the total live storage available in these reservoirs is **26.49 BCM** which is **51%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **35%** and average storage of last ten years during corresponding period was **74%** 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 8, better than normal storage is available in Narmada, Mahi, , Ganga, Sabarmati, Godavari, Tapi and Mahanadi & neighbouring East Flowing Rivers. Close to Normal in Indus and Deficient in Rivers of Kutch, West Flowing Rivers of South, Krishna and Cauvery & neighbouring EFRs Basin .
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **62** and reservoirs having storage more than average of last ten years are **46**. 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 **10** and having storage less than or equal to 50% with reference to average of last ten years are **14**.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 20.10.2016

- 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 **20.10.2016** is **117.729** BCM (**75** percent of the live storage capacity at FRL).The current year's storage is nearly **128** percent of last year's storage and **100** 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.)	2	1	-	-	3	-	-	-	H.P.	-19 %	
									PUNJAB	0 %	
									RAJASTHAN	20 %	
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	4	3	4	2	-	2	-	-	JHARKHAND	13 %	
									ODISHA	8 %	
									W. BENGAL	46 %	
									TRIPURA	46 %	
WEST (Guj.& Mah.), (27 Resv.)	10	6	2	1	3	1	1	3	GUJARAT	12 %	
									MAH.	8 %	
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	4	3	2	2	-	1	-	-	U.P.	50 %	
									UTTARAKHAND	-2 %	
									M.P.	35 %	
									CHHATISGARH	12 %	
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	3	-	1	1	3	5	4	14	AP&TG	-36 %	
									A,P	-13 %	
									TG	58 %	
									KARNATAKA	-33 %	
									KERALA	-37 %	
									T.N.	-55 %	
Status of 91 reservoirs	23	13	9	6	9	9	5	17			

4 Basin wise storage position:

Better than normal: Ganga,Sabarmati,Godavari,Mahi, Narmada ,Tapi and Mahanadi & Neighbouring EFRS.

Close to normal: Indus

Deficient: Rivers of Kutch,West Flowing Rivers of South,Krishna and Cauvery & neighbouring EFRS.

Highly deficient: NIL

- 5 Out of 91 reservoirs, **59** reservoirs reported more than 80% of normal storage & **32** reservoirs reported 80% or below of normal storage. Out of these **32** reservoirs **14** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
VAIGAI	6	KALLADA(PARAPPAR)	42
ALIYAR	8	MALAMPUZHA	48
PERIYAR	10		
SHOLAYAR	17		
BHADAR	17		
KRISHNARAJA SAGRA	20		
HEMAVATHY	22		
VANIVILAS SAGAR	31		
NAGARJUNA SAGAR	32		
TUNGABHADRA	35		
PARAMBIKULAM	37		
LOWER BHAWANI	39		

18 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
4	5	9

- 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 :- 20.10.2016

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	24.359	86.70%	17.919	63.78%	17.568	62.53%	38.66
INDUS	14.730	9.740	66.12%	11.880	80.65%	11.624	78.91%	-16.21
NARMADA	17.414	17.038	97.84%	14.829	85.16%	14.386	82.61%	18.43
TAPI	7.394	7.044	95.27%	5.061	68.45%	5.937	80.29%	18.65
MAHI	4.012	3.769	93.94%	2.934	73.13%	3.093	77.09%	21.86
SABARMATI	0.735	0.726	98.78%	0.647	88.03%	0.554	75.37%	31.05
RIVERS OF KUTCH	0.887	0.348	39.23%	0.781	88.05%	0.586	66.07%	-40.61
GODAVARI	15.394	12.571	81.66%	7.085	46.02%	10.580	68.73%	18.82
KRISHNA	32.831	19.540	59.52%	10.951	33.36%	25.879	78.82%	-24.49
MAHANADI & NEIGHBOURING EFRS	13.181	11.392	86.43%	8.752	66.40%	10.833	82.19%	5.16
CAUVERY & NEIGHBOURING EFRS	8.359	2.564	30.67%	2.749	32.89%	4.981	59.59%	-48.52
WEST FLOWING RIVERS OF SOUTH	14.766	8.638	58.50%	8.172	55.34%	11.908	80.64%	-27.46
TOTAL	157.799	117.729		91.760		117.929		
PERCENTAGE								-0.17

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.10.2016

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	500.35	6.229	4.225	19-10-2016	68	91	86	676	1200
*2	PONG DAM	423.67	415.48	6.157	4.069	20-10-2016	66	81	78	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	515.35	2.344	1.446	20-10-2016	62	54	61	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	281.50	1.711	1.711	20-10-2016	100	99	86	63	140
5	JHAKAM	359.50	359.60	0.132	0.132	20-10-2016	100	92	83	28	-
*6	RANA PRATAP SAGAR	352.81	352.51	1.436	1.385	20-10-2016	96	66	78	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	260.44	0.821	0.435	20-10-2016	53	52	44	-	-
8	MAITHON	146.3	149.00	0.471	0.471	20-10-2016	100	40	91	342	-
*9	PANCHET HILL	124.97	128.24	0.184	0.184	20-10-2016	100	20	91	\$	80
10	KONAR	425.81	425.86	0.176	0.176	20-10-2016	100	81	91	\$	-
11	TILAIYA	368.81	371.06	0.142	0.142	20-10-2016	100	93	89	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	192.11	5.378	4.876	19-10-2016	91	87	92	153	307
*13	BALIMELA	462.08	459.67	2.676	2.226	20-10-2016	83	72	65	-	360
14	SALANADI	82.30	73.20	0.558	0.290	19-10-2016	52	22	58	42	-
*15	RENGALI	123.50	122.95	3.432	3.264	20-10-2016	95	60	85	3	200
*16	MACHKUND(JALPUT)	838.16	837.59	0.893	0.836	20-10-2016	94	95	88	-	115
*17	UPPER KOLAB	858.00	856.77	0.935	0.819	20-10-2016	88	83	67	89	320
*18	UPPER INDRAVATI	642.00	639.65	1.456	1.199	20-10-2016	82	57	78	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	118.51	0.480	0.355	20-10-2016	74	26	57	227	-
20	KANGSABATI	134.14	131.58	0.914	0.712	20-10-2016	78	25	50	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	92.30	0.312	0.254	19-10-2016	81	94	56	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	104.45	6.615	6.315	20-10-2016	95	72	82	348	300
23	SABARMATI(DHAROI)	189.59	189.41	0.735	0.726	20-10-2016	99	88	75	95	1
*24	KADANA	127.7	127.71	1.472	1.472	20-10-2016	100	53	68	200	120
25	SHETRUNJI	55.53	53.87	0.300	0.185	20-10-2016	62	97	78	36	-
26	BHADAR	107.89	101.77	0.188	0.025	19-10-2016	13	82	77	27	-
27	DAMANAGANGA	79.86	80.05	0.502	0.486	20-10-2016	97	100	99	51	1
28	DANTIWADA	184.1	175.46	0.399	0.138	20-10-2016	35	84	52	45	-
29	PANAM	127.41	125.90	0.697	0.454	20-10-2016	65	48	74	36	2
*30	SARDAR SAROVAR	121.92	121.56	1.566	1.501	20-10-2016	96	84	82	2120	1450
31	KARJAN	115.25	108.81	0.523	0.343	20-10-2016	66	68	96	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.10.2016

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	462.87	2.171	1.789	20-10-2016	82	5	53	227	-
*33	KOYANA	657.90	659.21	2.652	2.652	19-10-2016	100	72	96	-	1920
34	BHIMA(UJJANI)	496.83	497.33	1.517	1.517	19-10-2016	100	15	83	125	12
35	ISAPUR	441.00	435.33	0.965	0.484	19-10-2016	50	36	71	104	-
36	MULA	552.30	552.28	0.609	0.608	20-10-2016	100	51	84	139	-
37	YELDARI	461.77	454.68	0.809	0.250	20-10-2016	31	15	55	78	-
38	GIRNA	398.07	397.22	0.524	0.474	19-10-2016	90	11	51	79	-
39	KHADAKVASLA	582.47	582.17	0.056	0.052	19-10-2016	93	20	66	78	8
*40	UPPER VAITARNA	603.50	603.50	0.331	0.331	19-10-2016	100	72	93	-	61
41	UPPER TAPI	214.00	214.00	0.255	0.255	19-10-2016	100	100	100	45	-
*42	PENCH (TOTALADOH)	490.00	483.26	1.091	0.571	19-10-2016	52	68	77	127	160
43	UPPER WARDHA	342.50	342.50	0.564	0.564	20-10-2016	100	97	93	70	-
44	BHATSA	142.07	141.54	0.942	0.929	19-10-2016	99	81	94	29.378	15
45	DHOM	747.70	747.66	0.331	0.330	19-10-2016	100	54	89	36.2	2
46	DUDHGANGA	646.00	646.07	0.664	0.664	19-10-2016	100	76	97	2.441	24
47	MANIKDOH (KUKADI)	711.25	706.66	0.288	0.211	19-10-2016	73	26	61	2.2	6
48	BHANDARDARA	342.50	342.50	0.304	0.304	20-10-2016	100	97	93	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	307.91	0.707	0.583	19-10-2016	82	61	83	-	30
*50	RIHAND	268.22	265.18	5.649	4.335	20-10-2016	77	37	48	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	350.76	2.196	1.219	20-10-2016	56	65	71	1897	198
*52	TEHRI	830.00	824.10	2.615	2.373	20-10-2016	91	83	81	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	399.83	6.827	6.569	20-10-2016	96	91	59	220	115
54	TAWA	355.40	355.43	1.944	1.944	20-10-2016	100	100	98	247	-
*55	BARGI	422.76	422.55	3.180	3.136	20-10-2016	99	87	90	157	90
*56	BANSAGAR	341.64	341.59	5.166	5.166	20-10-2016	100	60	64	488	425
*57	INDIRA SAGAR	262.13	262.07	9.745	9.709	20-10-2016	100	83	77	2380	1000
58	BARNA	348.55	347.82	0.456	0.405	20-10-2016	89	70	75	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	355.42	3.046	2.196	18-10-2016	72	52	69	-	120
60	MAHANADI	348.70	348.69	0.767	0.766	19-10-2016	100	44	71	319	10
SOUTHERN REGION											
A.P. & TG											
*61	SRISAILAM	269.75	268.56	8.288	5.393	20-10-2016	65	25	70	0	770
*62	NAGARJUNA SAGAR	179.83	164.81	6.841	1.646	20-10-2016	24	0	76	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	93.24	1.994	1.026	20-10-2016	51	20	59	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	332.54	2.300	2.300	20-10-2016	100	10	63	411	27
65	LOWER MANAIR	280.42	280.29	0.621	0.621	20-10-2016	100	18	65	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 20.10.2016

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
KARNATAKA											
66	KRISHNARAJA SAGRA	752.50	739.41	1.163	0.204	20-10-2016	18	61	86	79	-
*67	TUNGABHADRA	497.74	490.34	3.276	0.931	20-10-2016	28	60	82	529	72
68	GHATAPRABHA	662.95	660.51	1.391	1.216	19-10-2016	87	38	87	317	-
69	BHADRA	657.76	648.25	1.785	0.843	19-10-2016	47	65	92	106	39
70	LINGANAMAKKI	554.43	547.60	4.294	2.486	20-10-2016	58	53	87	-	55
71	NARAYANPUR	492.25	490.98	0.863	0.583	20-10-2016	68	55	88	425	-
72	MALAPRABHA(RENUKA)	633.83	627.69	0.972	0.358	19-10-2016	37	28	73	215	-
73	KABINI(Sancherla Tank)	696.16	691.46	0.444	0.189	20-10-2016	43	56	45	85	-
74	HEMAVATHY	890.63	875.45	0.927	0.158	20-10-2016	17	30	79	265	-
75	HARANGI	871.42	866.72	0.220	0.116	20-10-2016	53	36	68	53	-
76	SUPA	564.00	547.34	4.120	2.348	20-10-2016	57	44	72	-	-
77	VANIVILAS SAGAR	652.28	633.93	0.802	0.039	20-10-2016	5	11	16	123	-
*78	ALMATTI	519.60	519.60	3.105	3.105	20-10-2016	100	48	91	@	290
*79	GERUSOPPA	55.00	48.36	0.130	0.094	20-10-2016	72	65	81	83	240
KERALA											
80	KALLADA(PARAPPAR)	115.82	98.66	0.507	0.174	20-10-2016	34	49	82	62	-
*81	IDAMALAYAR	169.00	153.94	1.018	0.607	20-10-2016	60	53	80	33	75
*82	IDUKKI	732.43	716.01	1.460	0.658	20-10-2016	45	57	69	-	780
*83	KAKKI	981.46	969.23	0.447	0.271	20-10-2016	61	52	80	23	300
*84	PERIYAR	867.41	858.89	0.173	0.009	20-10-2016	5	38	50	84	140
85	MALAPMUZHA	115.06	108.25	0.224	0.094	20-10-2016	42	63	88	21	3
TAMIL NADU											
86	LOWER BHAWANI	278.89	265.25	0.792	0.165	20-10-2016	21	26	53	105	8
*87	METTUR(STANLEY)	240.79	222.55	2.647	0.702	20-10-2016	27	30	47	122	360
88	VAIGAI	279.20	264.43	0.172	0.004	20-10-2016	2	26	39	61	6
89	PARAMBIKULAM	556.26	542.66	0.380	0.122	20-10-2016	32	72	87	101	-
90	ALIYAR	320.04	303.15	0.095	0.007	20-10-2016	7	88	87	#	60
*91	SHOLAYAR	1002.79	975.36	0.143	0.022	20-10-2016	15	62	91	-	95
TOTAL FOR 91 RESERVOIRS				157.799	117.729						
PERCENTAGE							75	58	75		

Sd/-

* HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

Director

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

W. M. , CWC

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.

Sl. No. 30th The FRL of S.S.P. 138.38 M and Live capacity at FRL will be 5.760 BCM. However at present the lowest block of the dam is at the level of 121.92 M. and the live capacity at this level is 1.566 BCM