

BRIEF NOTE ON STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 23.03.2016)

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 **23.03.2016**, live storage available in these reservoirs is **41.643 BCM**, which is **26%** of total live storage capacity of these reservoirs. This storage is **69%** of the storage of corresponding period of last year and **75%** of storage of average of last ten years.

As per Table-01, 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 **23.03.2016**, the total live storage available in these reservoirs is **4.57 BCM** which is **25%** 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 **31%** 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 **23.03.2016**, the total live storage available in these reservoirs is **7.55 BCM** which is **40%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **52%** and average storage of last ten years during corresponding period was **45%** 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 27.07 BCM. As per Reservoir Storage Bulletin dated **23.03.2016**, the total live storage available in these reservoirs is **6.19 BCM** which is **23%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **42%** and average storage of last ten years during corresponding period was **46%** 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 **23.03.2016**, the total live storage available in these reservoirs is **14.11 BCM**

which is **33%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **44%** and average storage of last ten years during corresponding period was **31%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the storage of last year but 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 **23.03.2016**, the total live storage available in these reservoirs is **9.24** BCM which is **18%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **28%** and average storage of last ten years during corresponding period was **31%** 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 Ganga, Sabarmati and Narmada. Close to Normal in Mahanadi & neighbouring East Flowing Rivers, Rivers of Kutch and West Flowing rivers of South and Deficient in Indus, Tapi, Mahi, Godavari and Cauvery & neighbouring EFRs and Highly Deficient in Krishna basin.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **16** and reservoirs having storage more than average of last ten years are **15**. The numbers of reservoirs having storage less than 20% with respect to last year is **5** and having storage less than 20% with reference to average of last ten years is **5**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **29** and having storage less than or equal to 50% with reference to average of last ten years are **30**.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

- 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 **23.03.2016** is **41.643** BCM (**26** percent of the live storage capacity at FRL).The current year's storage is nearly **69** percent of last year's storage and **75** percent of the average of last ten years.

3 Region wise storage status:-

REGION (Monitoring No. of Reservoirs) (States),	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.)	-	-	-	-	-	-	-	6	H.P.	-19 %
									PUNJAB	-31 %
									RAJASTHAN	-12 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	-	-	-	1	6	8	JHARKHAND	-33 %
									ODISHA	-10 %
									W. BENGAL	-10 %
									TRIPURA	417 %
WEST (Guj. & Mah.), (27 Resv.)	-	-	-	-	-	-	3	24	GUJARAT	-42 %
									MAH.	-58 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	-	-	-	1	3	8	U.P.	-11 %
									UTTARAKHAND	-55 %
									M.P.	33 %
									CHHATISGARH	-28 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	-	-	2	-	1	1	27	AP&TG	-81 %
									A,P	3 %
									TG	-67 %
									KARNATAKA	-32 %
									KERALA	-4 %
									T.N.	-45 %
Status of 91 reservoirs	0	0	0	2	0	3	13	73		

4 Basin wise storage position:

Better than normal: Ganga, Sabarmati and Narmada.

Close to normal: Mahanadi & Neighbouring EFRS, Rivers of Kutch and West Flowing rivers of south.

Deficient: Indus, Tapi, Mahi, Godavari and Cauvery & neighbouring EFRS

Highly deficient: Krishna.

- 5 Out of 91 reservoirs, **29** reservoirs reported more than 80% of normal storage & **62** reservoirs reported 80% or below of normal storage. Out of these **62** reservoirs **30** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	SRIRAMSAGAR	35	BHANDARDARA	41
BHIMA(UJJANI)	0	MANIKDOH	36	ISAPUR	41
JAYAKWADI(PAITHON)	0	ALIYAR	36	BARNA	43
GIRNA	0	VAIGAI	39	SARDAR SAROVAR	43
SALANADI	13	PANAM	39	MALAPRABHA(RENUKA)	44
YELDARI	22	DUDHGANGA	39	HARANGI	44
PANCHET HILL	25	RAMGANGA	40	KARJAN	46
LOWER MANAIR	31	MATATILA	40	JHAKAM	47
SRISAILAM	31	LOWER BHAWANI	41	NARAYANPUR	49
MULA	34	MAITHON	41	KADANA	50

32 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
12	14	6

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

29 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 :- 23.03.2016

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	8.991	32.00%	11.760	41.86%	8.591	30.58%	4.66
INDUS	14.730	3.645	24.75%	4.705	31.94%	4.594	31.19%	-20.66
NARMADA	17.414	5.548	31.86%	6.918	39.73%	5.361	30.79%	3.49
TAPI	7.394	2.037	27.55%	2.990	40.44%	3.493	47.24%	-41.68
MAHI	4.012	1.064	26.51%	2.005	49.98%	1.781	44.39%	-40.27
SABARMATI	0.735	0.216	29.39%	0.131	17.82%	0.216	29.39%	0.00
RIVERS OF KUTCH	0.887	0.165	18.60%	0.110	12.40%	0.183	20.63%	-9.84
GODAVARI	15.394	3.567	23.17%	5.792	37.63%	5.560	36.12%	-35.85
KRISHNA	32.831	3.510	10.69%	8.296	25.27%	9.572	29.16%	-63.33
MAHANADI & NEIGHBOURING EFRS	13.181	5.435	41.23%	7.890	59.86%	6.742	51.15%	-19.39
CAUVERY & NEIGHBOURING EFRS	8.359	2.231	26.69%	2.653	31.74%	3.249	38.87%	-31.33
WEST FLOWING RIVERS OF SOUTH	14.766	5.234	35.45%	6.765	45.81%	6.413	43.43%	-18.38
TOTAL	157.799	41.643		60.015		55.755		
PERCENTAGE								-25.31

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 23.03.2016

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
<u>NORTHERN REGION</u>											
<u>HIMACHAL PRADESH</u>											
*1	GOBIND SAGAR(BHAKRA)	512.06	481.88	6.229	2.063	23-03-2016	33	31	31	676	1200
*2	PONG DAM	423.67	396.86	6.157	1.056	23-03-2016	17	29	31	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	497.47	2.344	0.526	23-03-2016	22	42	33	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	268.35	1.711	0.474	23-03-2016	28	40	31	63	140
5	JHAKAM	359.50	338.25	0.132	0.011	23-03-2016	8	20	17	28	-
*6	RANA PRATAP SAGAR	352.81	346.99	1.436	0.437	22-03-2016	30	28	34	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	256.90	0.821	0.307	23-03-2016	37	43	36	-	-
8	MAITHON	146.3	138.52	0.471	0.111	23-03-2016	24	38	58	342	-
*9	PANCHET HILL	124.97	120.79	0.184	0.030	23-03-2016	16	28	66	\$	80
10	KONAR	425.81	419.73	0.176	0.079	23-03-2016	45	68	53	\$	-
11	TILAIYA	368.81	365.16	0.142	0.033	23-03-2016	23	60	34	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	188.01	5.378	2.545	22-03-2016	47	44	50	153	307
*13	BALIMELA	462.08	451.44	2.676	1.110	22-03-2016	41	65	41	-	360
14	SALANADI	82.30	54.50	0.558	0.024	22-03-2016	4	41	33	42	-
*15	RENGALI	123.50	116.50	3.432	1.315	22-03-2016	38	69	50	3	200
*16	MACHKUND(JALPUT)	838.16	832.64	0.893	0.486	21-03-2016	54	56	58	-	115
*17	UPPER KOLAB	858.00	852.19	0.935	0.441	22-03-2016	47	62	43	89	320
*18	UPPER INDRAVATI	642.00	633.27	1.456	0.603	22-03-2016	41	63	47	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	110.34	0.480	0.086	23-03-2016	18	16	30	227	-
20	KANGSABATI	134.14	123.87	0.914	0.224	23-03-2016	25	26	22	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	89.90	0.312	0.155	23-03-2016	50	0	10	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	94.53	6.615	1.959	23-03-2016	30	40	49	348	300
23	SABARMATI(DHAROI)	189.59	182.93	0.735	0.216	23-03-2016	29	18	29	95	1
*24	KADANA	127.7	118.42	1.472	0.433	23-03-2016	29	64	59	200	120
25	SHETRUNJI	55.53	50.57	0.300	0.063	23-03-2016	21	17	33	36	-
26	BHADAR	107.89	102.23	0.188	0.031	23-03-2016	16	23	27	27	-
27	DAMANAGANGA	79.86	72.50	0.502	0.196	23-03-2016	39	41	57	51	1
28	DANTIWADA	184.1	171.86	0.399	0.071	23-03-2016	18	4	8	45	-
29	PANAM	127.41	118.65	0.697	0.146	23-03-2016	21	51	53	36	2
*30	SARDAR SAROVAR	121.92	113.99	1.566	0.360	23-03-2016	23	72	53	2120	1450
31	KARJAN	115.25	99.44	0.523	0.163	23-03-2016	31	54	67	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 23.03.2016

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	455.27	2.171	0.000	23-03-2016	0	14	27	227	-
*33	KOYANA	657.90	638.81	2.652	0.875	22-03-2016	33	65	59	-	1920
34	BHIMA(UJJANI)	496.83	488.53	1.517	0.000	23-03-2016	0	35	43	125	12
35	ISAPUR	441.00	429.38	0.965	0.161	22-03-2016	17	33	41	104	-
36	MULA	552.30	538.10	0.609	0.081	22-03-2016	13	22	39	139	-
37	YELDARI	461.77	449.43	0.809	0.047	22-03-2016	6	21	27	78	-
38	GIRNA	398.07	380.57	0.524	0.000	22-03-2016	0	19	25	79	-
39	KHADAKVASLA	582.47	580.13	0.056	0.027	23-03-2016	48	68	36	78	8
*40	UPPER VAITARNA	603.50	596.83	0.331	0.137	22-03-2016	41	53	61	-	61
41	UPPER TAPI	214.00	210.43	0.255	0.078	23-03-2016	31	89	60	45	-
*42	PENCH (TOTALADOH)	490.00	473.51	1.091	0.181	23-03-2016	17	18	32	127	160
43	UPPER WARDHA	342.50	336.77	0.564	0.167	23-03-2016	30	38	41	70	-
44	BHATSA	142.07	119.36	0.942	0.437	23-03-2016	46	51	53	29.378	15
45	DHOM	747.70	733.30	0.331	0.125	09-03-2016	38	67	49	36.2	2
46	DUDHGANGA	646.00	624.83	0.664	0.148	23-03-2016	22	60	56	2.441	24
47	MANIKDOH (KUKADI)	711.25	683.92	0.288	0.023	23-03-2016	8	35	22	2.2	6
48	BHANDARDARA	342.50	336.77	0.304	0.062	23-03-2016	30	38	41	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	302.18	0.707	0.114	22-03-2016	16	35	40	-	30
*50	RIHAND	268.22	257.44	5.649	1.303	22-03-2016	23	27	23	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	330.82	2.196	0.372	23-03-2016	17	63	43	1897	198
*52	TEHRI	830.00	760.20	2.615	0.403	21-03-2016	15	31	30	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	393.32	6.827	3.184	23-03-2016	47	40	26	220	115
54	TAWA	355.40	341.62	1.944	0.359	23-03-2016	18	33	26	247	-
*55	BARGI	422.76	416.65	3.180	1.670	23-03-2016	53	46	39	157	90
*56	BANSAGAR	341.64	333.79	5.166	2.153	23-03-2016	42	68	35	488	425
*57	INDIRA SAGAR	262.13	252.37	9.745	2.960	22-03-2016	30	34	24	2380	1000
58	BARNA	348.55	339.63	0.456	0.036	23-03-2016	8	25	18	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	348.37	3.046	1.257	18-03-2016	41	82	57	-	120
60	MAHANADI	348.70	342.57	0.767	0.294	22-03-2016	38	54	57	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	245.10	8.288	0.784	23-03-2016	9	30	30	0	770
*62	NAGARJUNA SAGAR	179.83	155.45	6.841	0.000	23-03-2016	0	4	23	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	92.53	1.994	0.947	23-03-2016	47	20	46	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	319.40	2.300	0.145	23-03-2016	6	17	18	411	27
65	LOWER MANAIR	280.42	268.01	0.621	0.083	23-03-2016	13	30	43	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 23.03.2016

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
<u>KARNATAKA</u>											
66	KRISHNARAJA SAGRA	752.50	739.96	1.163	0.229	22-03-2016	20	48	37	79	-
*67	TUNGABHADRA	497.74	483.16	3.276	0.189	23-03-2016	6	11	11	529	72
68	GHATAPRABHA	662.95	637.00	1.391	0.133	23-03-2016	10	23	14	317	-
69	BHADRA	657.76	644.31	1.785	0.599	21-03-2016	34	58	56	106	39
70	LINGANAMAKKI	554.43	541.11	4.294	1.334	23-03-2016	31	38	40	-	55
71	NARAYANPUR	492.25	487.14	0.863	0.218	23-03-2016	25	32	51	425	-
72	MALAPRABHA(RENUKA)	633.83	621.17	0.972	0.045	21-03-2016	5	13	11	215	-
73	KABINI(Sancherla Tank)	696.16	688.51	0.444	0.087	22-03-2016	20	60	22	85	-
74	HEMAVATHY	890.63	873.73	0.927	0.115	22-03-2016	12	16	20	265	-
75	HARANGI	871.42	851.98	0.220	0.016	22-03-2016	7	9	16	53	-
76	SUPA	564.00	533.43	4.120	1.306	23-03-2016	32	50	42	-	-
77	VANIVILAS SAGAR	652.28	636.35	0.802	0.082	23-03-2016	10	5	15	123	-
*78	ALMATTI	519.60	508.02	3.105	0.262	23-03-2016	8	13	14	@	290
*79	GERUSOPPA	55.00	48.63	0.130	0.095	23-03-2016	73	89	80	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	110.12	0.507	0.365	23-03-2016	72	60	50	62	-
*81	IDAMALAYAR	169.00	142.90	1.018	0.365	23-03-2016	36	52	42	33	75
*82	IDUKKI	732.43	713.29	1.460	0.549	23-03-2016	38	54	42	-	780
*83	KAKKI	981.46	966.37	0.447	0.239	23-03-2016	53	56	54	23	300
*84	PERIYAR	867.41	859.49	0.173	0.030	23-03-2016	17	15	27	84	140
85	MALAPMUZHA	867.41	859.49	0.224	0.030	23-03-2016	17	15	27	84	140
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	264.39	0.792	0.143	23-03-2016	18	28	45	105	8
*87	METTUR(STANLEY)	240.79	222.16	2.647	0.675	23-03-2016	26	38	45	122	360
88	VAIGAI	279.20	268.51	0.172	0.019	23-03-2016	11	10	28	61	6
89	PARAMBIKULAM	556.26	541.87	0.380	0.109	23-03-2016	29	26	46	101	-
90	ALIYAR	320.04	305.75	0.095	0.017	23-03-2016	18	68	49	#	60
*91	SHOLAYAR	1002.79	965.48	0.143	0.025	23-03-2016	17	1	6	-	95
TOTAL FOR 91 RESERVOIRS				157.799	41.643						
PERCENTAGE							26	38	35		

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.

SI. 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