

BRIEF NOTE ON STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 17.03.2016)

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 **17.03.2016**, live storage available in these reservoirs is **43.394 BCM**, which is **27%** of total live storage capacity of these reservoirs. This storage is **70%** of the storage of corresponding period of last year and **74%** 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 **17.03.2016**, the total live storage available in these reservoirs is **4.71 BCM** which is **26%** 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 **32%** 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 **17.03.2016**, the total live storage available in these reservoirs is **7.82 BCM** which is **42%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **54%** 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 27.07 BCM. As per Reservoir Storage Bulletin dated **17.03.2016**, the total live storage available in these reservoirs is **6.52 BCM** which is **24%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **43%** 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 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 **17.03.2016**, the total live storage available in these reservoirs is **14.51 BCM**

which is **34%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **45%** and average storage of last ten years during corresponding period was **32%** 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 **17.03.2016**, the total live storage available in these reservoirs is **9.83 BCM** which is **19%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **30%** and average storage of last ten years during corresponding period was **33%** 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 8, better than normal storage is available in Ganga and Narmada. Close to Normal in Sabarmati, Rivers of Kutch and West Flowing rivers of South and Deficient in Indus, Tapi, Mahi, Godavari, Mahanadi & neighbouring East Flowing Rivers 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 **13**. 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 **27** 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 **17.03.2016** is **43.394** BCM (**27** percent of the live storage capacity at FRL).The current year's storage is nearly **70** percent of last year's storage and **74** 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.	-20 %
									PUNJAB	-26 %
									RAJASTHAN	-13 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	-	-	-	2	5	8	JHARKHAND	-35 %
									ODISHA	-12 %
									W. BENGAL	-20 %
									TRIPURA	343 %
WEST (Guj. & Mah.), (27 Resv.)	-	-	-	-	-	1	3	23	GUJARAT	-41 %
									MAH.	-58 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	-	-	-	1	3	8	U.P.	-11 %
									UTTARAKHAND	-51 %
									M.P.	32 %
									CHHATISGARH	-29 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	-	-	2	-	1	1	27	AP&TG	-80 %
									A,P	6 %
									TG	-69 %
									KARNATAKA	-34 %
									KERALA	-4 %
									T.N.	-43 %
Status of 91 reservoirs	0	0	0	2	0	5	12	72		

4 Basin wise storage position:

Better than normal: Ganga and Narmada.

Close to normal: Sabarmati, Rivers of Kutch and West Flowing rivers of south.

Deficient: Indus, Tapi, Mahi, Godavari, Mahanadi & Neighbouring EFRS 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	MULA	33	BHANDARDARA	42
BHIMA(UJJANI)	0	MANIKDOH	34	RAMGANGA	44
JAYAKWADI(PAITHON)	0	ALIYAR	37	MALAPRABHA(RENUKA)	44
GIRNA	0	VAIGAI	39	HARANGI	44
SALANADI	13	SARDAR SAROVAR	40	ISAPUR	45
YELDARI	21	MAITHON	40	LOWER BHAWANI	45
PANCHET HILL	23	MATATILA	41	NARAYANPUR	45
LOWER MANAIR	30	PANAM	41	TUNGABHADRA	45
SRIRAMSAGAR	31	BARNA	41	KARJAN	47
SRISAILAM	33	DUDHGANGA	41	JHAKAM	47

32 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
13	8	11

- 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 :- 17.03.2016

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	9.281	33.03%	11.948	42.53%	8.966	31.91%	3.51
INDUS	14.730	3.768	25.58%	4.561	30.96%	4.771	32.39%	-21.02
NARMADA	17.414	5.666	32.54%	7.086	40.69%	5.608	32.20%	1.03
TAPI	7.394	2.203	29.79%	3.105	41.99%	3.618	48.93%	-39.11
MAHI	4.012	1.125	28.04%	2.032	50.65%	1.814	45.21%	-37.99
SABARMATI	0.735	0.220	29.93%	0.134	18.23%	0.227	30.88%	-3.08
RIVERS OF KUTCH	0.887	0.192	21.59%	0.112	12.63%	0.196	22.10%	-2.30
GODAVARI	15.394	3.708	24.09%	5.990	38.91%	5.832	37.88%	-36.42
KRISHNA	32.831	3.750	11.42%	8.918	27.16%	10.464	31.87%	-64.16
MAHANADI & NEIGHBOURING EFRS	13.181	5.577	42.31%	8.077	61.28%	7.137	54.15%	-21.85
CAUVERY & NEIGHBOURING EFRS	8.359	2.375	28.41%	2.789	33.37%	3.332	39.86%	-28.72
WEST FLOWING RIVERS OF SOUTH	14.766	5.530	37.45%	7.126	48.26%	6.745	45.68%	-18.02
TOTAL	157.799	43.394		61.878		58.710		
PERCENTAGE								-26.09

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 17.03.2016

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	482.50	6.229	2.126	17-03-2016	34	32	33	676	1200
*2	PONG DAM	423.67	397.22	6.157	1.097	17-03-2016	18	27	32	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	498.01	2.344	0.545	16-03-2016	23	38	31	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	269.00	1.711	0.520	17-03-2016	30	42	32	63	140
5	JHAKAM	359.50	338.30	0.132	0.011	17-03-2016	8	20	17	28	-
*6	RANA PRATAP SAGAR	352.81	346.82	1.436	0.414	16-03-2016	29	28	35	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	257.13	0.821	0.315	11-03-2016	38	44	38	-	-
8	MAITHON	146.3	139.03	0.471	0.127	11-03-2016	27	45	67	342	-
*9	PANCHET HILL	124.97	120.81	0.184	0.030	11-03-2016	16	34	70	\$	80
10	KONAR	425.81	420.36	0.176	0.087	11-03-2016	49	71	57	\$	-
11	TILAIYA	368.81	365.19	0.142	0.033	11-03-2016	23	70	40	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	188.20	5.378	2.638	17-03-2016	49	47	55	153	307
*13	BALIMELA	462.08	451.80	2.676	1.154	17-03-2016	43	67	41	-	360
14	SALANADI	82.30	54.55	0.558	0.024	17-03-2016	4	42	34	42	-
*15	RENGALI	123.50	116.69	3.432	1.360	17-03-2016	40	70	52	3	200
*16	MACHKUND(JALPUT)	838.16	832.82	0.893	0.496	17-03-2016	56	57	58	-	115
*17	UPPER KOLAB	858.00	852.55	0.935	0.468	17-03-2016	50	63	43	89	320
*18	UPPER INDRAVATI	642.00	633.38	1.456	0.613	17-03-2016	42	65	49	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	110.46	0.480	0.089	11-03-2016	19	17	34	227	-
20	KANGSABATI	134.14	123.90	0.914	0.225	11-03-2016	25	26	25	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	90.15	0.312	0.164	16-03-2016	53	0	12	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	95.00	6.615	2.120	17-03-2016	32	42	50	348	300
23	SABARMATI(DHAROI)	189.59	183.00	0.735	0.220	17-03-2016	30	18	31	95	1
*24	KADANA	127.7	118.54	1.472	0.440	17-03-2016	30	64	59	200	120
25	SHETRUNJI	55.53	51.17	0.300	0.077	17-03-2016	26	18	36	36	-
26	BHADAR	107.89	102.35	0.188	0.032	17-03-2016	17	23	28	27	-
27	DAMANAGANGA	79.86	73.05	0.502	0.212	17-03-2016	42	44	59	51	1
28	DANTIWADA	184.1	172.58	0.399	0.082	17-03-2016	21	4	9	45	-
29	PANAM	127.41	118.95	0.697	0.154	17-03-2016	22	52	54	36	2
*30	SARDAR SAROVAR	121.92	113.83	1.566	0.342	17-03-2016	22	68	55	2120	1450
31	KARJAN	115.25	99.75	0.523	0.167	17-03-2016	32	57	69	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 17.03.2016

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	455.45	2.171	0.000	16-03-2016	0	16	33	227	-
*33	KOYANA	657.90	639.57	2.652	0.918	16-03-2016	35	66	62	-	1920
34	BHIMA(UJJANI)	496.83	488.67	1.517	0.000	16-03-2016	0	36	47	125	12
35	ISAPUR	441.00	429.79	0.965	0.179	16-03-2016	19	35	42	104	-
36	MULA	552.30	538.24	0.609	0.084	16-03-2016	14	25	42	139	-
37	YELDARI	461.77	449.46	0.809	0.048	16-03-2016	6	21	28	78	-
38	GIRNA	398.07	380.91	0.524	0.000	16-03-2016	0	20	26	79	-
39	KHADAKVASLA	582.47	580.40	0.056	0.030	16-03-2016	54	73	39	78	8
*40	UPPER VAITARNA	603.50	596.87	0.331	0.138	16-03-2016	42	56	63	-	61
41	UPPER TAPI	214.00	210.55	0.255	0.083	16-03-2016	33	88	62	45	-
*42	PENCH (TOTALADOH)	490.00	474.10	1.091	0.197	16-03-2016	18	18	33	127	160
43	UPPER WARDHA	342.50	336.87	0.564	0.172	17-03-2016	30	39	43	70	-
44	BHATSA	142.07	120.16	0.942	0.451	17-03-2016	48	53	55	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	625.69	0.664	0.161	17-03-2016	24	61	59	2.441	24
47	MANIKDOH (KUKADI)	711.25	484.10	0.288	0.024	17-03-2016	8	39	25	2.2	6
48	BHANDARDARA	342.50	336.87	0.304	0.067	17-03-2016	30	39	43	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	302.12	0.707	0.110	16-03-2016	16	30	38	-	30
*50	RIHAND	268.22	257.56	5.649	1.344	17-03-2016	24	28	24	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	332.29	2.196	0.422	17-03-2016	19	64	44	1897	198
*52	TEHRI	830.00	762.40	2.615	0.453	17-03-2016	17	33	32	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	393.63	6.827	3.309	17-03-2016	48	41	27	220	115
54	TAWA	355.40	341.62	1.944	0.359	17-03-2016	18	33	26	247	-
*55	BARGI	422.76	416.85	3.180	1.710	17-03-2016	54	48	41	157	90
*56	BANSAGAR	341.64	333.81	5.166	2.159	17-03-2016	42	69	36	488	425
*57	INDIRA SAGAR	262.13	252.60	9.745	3.052	17-03-2016	31	35	26	2380	1000
58	BARNA	348.55	339.65	0.456	0.036	17-03-2016	8	25	19	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	348.38	3.046	1.258	17-03-2016	41	82	57	-	120
60	MAHANADI	348.70	342.63	0.767	0.297	16-03-2016	39	57	60	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	247.58	8.288	0.912	17-03-2016	11	30	34	0	770
*62	NAGARJUNA SAGAR	179.83	154.93	6.841	0.000	17-03-2016	0	6	25	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	93.02	1.994	1.000	17-03-2016	50	22	47	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	319.43	2.300	0.146	17-03-2016	6	18	20	411	27
65	LOWER MANAIR	280.42	268.07	0.621	0.084	17-03-2016	14	31	45	199	60

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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	740.77	1.163	0.268	17-03-2016	23	52	40	79	-
*67	TUNGABHADRA	497.74	483.37	3.276	0.201	17-03-2016	6	14	14	529	72
68	GHATAPRABHA	662.95	637.10	1.391	0.136	16-03-2016	10	23	15	317	-
69	BHADRA	657.76	645.08	1.785	0.609	15-03-2016	34	61	59	106	39
70	LINGANAMAKKI	554.43	541.54	4.294	1.397	17-03-2016	33	41	43	-	55
71	NARAYANPUR	492.25	487.20	0.863	0.222	17-03-2016	26	48	57	425	-
72	MALAPRABHA(RENUKA)	633.83	621.22	0.972	0.047	16-03-2016	5	13	11	215	-
73	KABINI(Sancherla Tank)	696.16	688.73	0.444	0.094	17-03-2016	21	61	24	85	-
74	HEMAVATHY	890.63	873.90	0.927	0.120	17-03-2016	13	16	21	265	-
75	HARANGI	871.42	851.98	0.220	0.016	17-03-2016	7	9	16	53	-
76	SUPA	564.00	535.11	4.120	1.418	17-03-2016	34	51	44	-	-
77	VANIVILAS SAGAR	652.28	636.82	0.802	0.090	17-03-2016	11	6	15	123	-
*78	ALMATTI	519.60	508.14	3.105	0.275	17-03-2016	9	16	17	@	290
*79	GERUSOPPA	55.00	48.77	0.130	0.096	17-03-2016	74	91	81	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	110.92	0.507	0.380	17-03-2016	75	64	53	62	-
*81	IDAMALAYAR	169.00	144.00	1.018	0.387	17-03-2016	38	55	45	33	75
*82	IDUKKI	732.43	714.10	1.460	0.582	17-03-2016	40	56	45	-	780
*83	KAKKI	981.46	967.34	0.447	0.249	17-03-2016	56	60	57	23	300
*84	PERIYAR	867.41	859.68	0.173	0.030	17-03-2016	17	15	24	84	140
85	MALAPMUZHA	867.41	859.68	0.224	0.031	17-03-2016	17	15	24	84	140
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	265.29	0.792	0.166	17-03-2016	21	32	47	105	8
*87	METTUR(STANLEY)	240.79	222.43	2.647	0.694	17-03-2016	26	39	45	122	360
88	VAIGAI	279.20	268.18	0.172	0.017	17-03-2016	10	10	26	61	6
89	PARAMBIKULAM	556.26	542.45	0.380	0.118	17-03-2016	31	28	48	101	-
90	ALIYAR	320.04	305.79	0.095	0.017	17-03-2016	18	65	48	#	60
*91	SHOLAYAR	1002.79	964.99	0.143	0.024	17-03-2016	17	1	6	-	95
TOTAL FOR 91 RESERVOIRS				157.799	43.394						
PERCENTAGE							27	39	37		

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.

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