

BRIEF NOTE ON STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 14.01.2016)

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 **14.01.2016**, live storage available in these reservoirs is **66.82 BCM**, which is **42%** of total live storage capacity of these reservoirs. This storage is **77%** of the storage of corresponding period of last year and **75%** 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 **14.01.2016**, the total live storage available in these reservoirs is **8.91 BCM** which is **49%** 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 **51%** 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.

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 **14.01.2016**, the total live storage available in these reservoirs is **10.45 BCM** which is **55%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **69%** and average storage of last ten years during corresponding period was **65%** 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 **14.01.2016**, the total live storage available in these reservoirs is **10.29 BCM** which is **38%** 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 **65%** 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 **14.01.2016**, the total live storage available in these reservoirs is **22.14 BCM**

which is **52%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **63%** and average storage of last ten years during corresponding period was **50%** 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 (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 **14.01.2016**, the total live storage available in these reservoirs is **15.03 BCM** which is **29%** 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 **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 8, better than normal storage is available in Ganga, Narmada, Sabarmati and Rivers of Kutch. Close to Normal in Indus, Mahi and Cauvery & neighbouring EFRs. Deficient in Tapi, Godavari, Mahanadi & neighbouring East Flowing Rivers and West Flowing rivers of South 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 **18** and reservoirs having storage more than average of last ten years are **16**. The numbers of reservoirs having storage less than 20% with respect to last year is **6** and having storage less than 20% with reference to average of last ten years is **8**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **23** and having storage less than or equal to 50% with reference to average of last ten years are **24**.

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 **14.01.2016** is **66.820** BCM (**42** percent of the live storage capacity at FRL). The current year's storage is nearly **77** 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)	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	-	2	2	H.P. PUNJAB RAJASTHAN	4 % -46 % -9 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	-	3	3	1	3	5	JHARKHAND ODISHA W. BENGAL TRIPURA	-38 % -12 % -45 % 179 %
WEST (Guj. & Mah.), (27 Resv.)	-	-	-	-	4	5	5	13	GUJARAT MAH.	-28 % -54 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	-	1	1	4	4	2	U.P. UTTARAKHAND M.P. CHHATISGARH	-10 % -14 % 21 % -34 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	-	2	4	2	4	4	15	AP&TG A.P TG KARNATAKA KERALA T.N.	-83 % 17 % -82 % -43 % -9 % -23 %
Status of 91 reservoirs	0	0	2	8	12	14	18	37		

4 Basin wise storage position:

Better than normal: Ganga, Narmada, Sabarmati and Rivers of Kutch.

Close to normal: Indus, Mahi and Cauvery & neighbouring EFRS.

Deficient: Tapi, Godavari, Mahanadi & Neighbouring EFRS and West Flowing rivers of south.

Highly deficient: Krishna.

- 5 Out of 91 reservoirs, **38** reservoirs reported more than 80% of normal storage & **53** reservoirs reported 80% or below of normal storage. Out of these **53** reservoirs **24** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	MANIKDOH	23	SARDAR SAROVAR	41
BHIMA(UJJANI)	0	ALMATTI	27	MAYURAKSHI	44
GIRNA	8	SRISAILAM	27	HEMAVATHY	46
SHOLAYAR	8	MULA	28	NARAYANPUR	48
SALANADI	12	TUNGABHADRA	28		
YELDARI	15	MALAPRABHA(RENUKA)	34		
SRIRAMSAGAR	16	HARANGI	34		
JAYAKWADI(PAITHON)	16	MAITHON	36		
LOWER MANAIR	22	BHANDARDARA	37		
PANCHET HILL	23	ISAPUR	37		

29 reservoirs having storage 51% to 80% of normal storage.

51% to 60%	61% to 70%	71% to 80%
9	9	11

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

28 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 :- 14.01.2016

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	13.472	47.95%	15.742	56.03%	13.446	47.86%	0.19
INDUS	14.730	7.358	49.95%	6.355	43.14%	7.541	51.19%	-2.43
NARMADA	17.414	9.417	54.08%	11.349	65.17%	9.005	51.71%	4.58
TAPI	7.394	3.571	48.30%	4.455	60.25%	4.893	66.18%	-27.02
MAHI	4.012	1.964	48.95%	2.750	68.54%	2.439	60.79%	-19.48
SABARMATI	0.735	0.421	57.28%	0.301	40.95%	0.371	50.48%	13.48
RIVERS OF KUTCH	0.887	0.436	49.15%	0.164	18.49%	0.365	41.15%	19.45
GODAVARI	15.394	5.414	35.17%	8.270	53.72%	8.826	57.33%	-38.66
KRISHNA	32.831	5.958	18.15%	12.368	37.67%	18.560	56.53%	-67.90
MAHANADI & NEIGHBOURING EFRS	13.181	7.056	53.53%	9.927	75.31%	9.178	69.63%	-23.12
CAUVERY & NEIGHBOURING EFRS	8.359	4.045	48.39%	4.586	54.86%	4.681	56.00%	-13.59
WEST FLOWING RIVERS OF SOUTH	14.766	7.708	52.20%	10.105	68.43%	9.921	67.19%	-22.31
TOTAL	157.799	66.820		86.372		89.226		
PERCENTAGE								-25.11

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 14.01.2016

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	498.82	6.229	3.994	13-01-2016	64	57	59	676	1200
*2	PONG DAM	423.67	409.22	6.157	2.876	12-01-2016	47	32	48	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	496.68	2.344	0.488	14-01-2016	21	35	39	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	274.95	1.711	1.043	13-01-2016	61	70	57	63	140
5	JHAKAM	359.50	350.90	0.132	0.061	13-01-2016	46	57	48	28	-
*6	RANA PRATAP SAGAR	352.81	347.08	1.436	0.451	14-01-2016	31	29	46	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	258.07	0.821	0.345	12-01-2016	42	47	44	-	-
8	MAITHON	146.3	139.69	0.471	0.148	12-01-2016	31	70	88	342	-
*9	PANCHET HILL	124.97	121.17	0.184	0.039	12-01-2016	21	64	91	\$	80
10	KONAR	425.81	421.94	0.176	0.112	12-01-2016	64	83	71	\$	-
11	TILAIYA	368.81	366.72	0.142	0.073	12-01-2016	51	85	61	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	190.13	5.378	3.644	14-01-2016	68	70	78	153	307
*13	BALIMELA	462.08	455.92	2.676	1.682	14-01-2016	63	83	58	-	360
14	SALANADI	82.30	56.10	0.558	0.032	07-01-2016	6	47	47	42	-
*15	RENGALI	123.50	118.09	3.432	1.704	14-01-2016	50	76	64	3	200
*16	MACHKUND(JALPUT)	838.16	835.65	0.893	0.684	14-01-2016	77	80	78	-	115
*17	UPPER KOLAB	858.00	855.57	0.935	0.705	14-01-2016	75	83	58	89	320
*18	UPPER INDRAVATI	642.00	634.83	1.456	0.732	14-01-2016	50	83	69	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	110.72	0.480	0.094	12-01-2016	20	22	44	227	-
20	KANGSABATI	134.14	123.98	0.914	0.228	12-01-2016	25	27	41	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	91.65	0.312	0.226	13-01-2016	72	9	26	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	98.44	6.615	3.379	13-01-2016	51	61	67	348	300
23	SABARMATI(DHAROI)	189.59	186.08	0.735	0.421	13-01-2016	57	41	50	95	1
*24	KADANA	127.7	121.41	1.472	0.628	13-01-2016	43	72	64	200	120
25	SHETRANJI	55.53	53.97	0.300	0.190	12-01-2016	63	29	66	36	-
26	BHADAR	107.89	103.50	0.188	0.051	13-01-2016	27	32	48	27	-
27	DAMANAGANGA	79.86	76.85	0.502	0.346	13-01-2016	69	68	80	51	1
28	DANTIWADA	184.1	177.65	0.399	0.195	13-01-2016	49	4	19	45	-
29	PANAM	127.41	121.35	0.697	0.232	13-01-2016	33	60	65	36	2
*30	SARDAR SAROVAR	121.92	114.76	1.566	0.470	13-01-2016	30	79	74	2120	1450
31	KARJAN	115.25	103.72	0.523	0.235	13-01-2016	45	72	83	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 14.01.2016

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	456.54	2.171	0.165	14-01-2016	8	28	48	227	-
*33	KOYANA	657.90	645.16	2.652	1.361	13-01-2016	51	78	80	-	1920
34	BHIMA(UJJANI)	496.83	490.17	1.517	0.000	13-01-2016	0	75	74	125	12
35	ISAPUR	441.00	430.36	0.965	0.205	13-01-2016	21	53	57	104	-
36	MULA	552.30	539.60	0.609	0.117	07-01-2016	19	50	68	139	-
37	YELDARI	461.77	449.62	0.809	0.053	13-01-2016	7	34	45	78	-
38	GIRNA	398.07	382.87	0.524	0.018	13-01-2016	3	33	43	79	-
39	KHADAKVASLA	582.47	579.55	0.056	0.021	13-01-2016	38	80	52	78	8
*40	UPPER VAITARNA	603.50	597.94	0.331	0.163	13-01-2016	49	68	84	-	61
41	UPPER TAPI	214.00	212.56	0.255	0.174	13-01-2016	68	100	85	45	-
*42	PENCH (TOTALADOH)	490.00	480.24	1.091	0.422	13-01-2016	39	37	48	127	160
43	UPPER WARDHA	342.50	338.98	0.564	0.293	14-01-2016	52	61	67	70	-
44	BHATSA	142.07	127.47	0.942	0.591	13-01-2016	63	71	73	29.378	15
45	DHOM	747.70	733.84	0.331	0.132	13-01-2016	40	78	66	36.2	2
46	DUDHGANGA	646.00	633.24	0.664	0.308	13-01-2016	46	84	82	2.441	24
47	MANIKDOH (KUKADI)	711.25	686.02	0.288	0.031	13-01-2016	11	40	46	2.2	6
48	BHANDARDARA	342.50	338.98	0.304	0.087	14-01-2016	52	61	67	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	305.74	0.707	0.364	13-01-2016	51	45	50	-	30
*50	RIHAND	268.22	258.69	5.649	1.744	13-01-2016	31	35	35	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	349.34	2.196	1.142	14-01-2016	52	80	62	1897	198
*52	TEHRI	830.00	796.60	2.615	1.378	14-01-2016	53	64	60	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	396.54	6.827	4.679	14-01-2016	69	57	48	220	115
54	TAWA	355.40	348.45	1.944	0.974	14-01-2016	50	61	57	247	-
*55	BARGI	422.76	419.40	3.180	2.282	14-01-2016	72	70	61	157	90
*56	BANSAGAR	341.64	334.81	5.166	2.449	14-01-2016	47	82	47	488	425
*57	INDIRA SAGAR	262.13	256.38	9.745	5.275	14-01-2016	54	62	43	2380	1000
58	BARNA	348.55	344.01	0.456	0.181	14-01-2016	40	51	46	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	349.00	3.046	1.329	13-01-2016	44	83	64	-	120
60	MAHANADI	348.70	343.44	0.767	0.347	14-01-2016	45	94	79	319	10
SOUTHERN REGION											
A.P. & TG											
*61	SRISAILAM	269.75	253.65	8.288	1.369	14-01-2016	17	0	60	0	770
*62	NAGARJUNA SAGAR	179.83	154.78	6.841	0.000	14-01-2016	0	26	42	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	97.19	1.994	1.555	14-01-2016	78	51	66	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	320.01	2.300	0.174	14-01-2016	8	21	48	411	27
65	LOWER MANAIR	280.42	268.59	0.621	0.095	14-01-2016	15	38	69	199	60

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GOVERNMENT OF INDIA

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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	746.07	1.163	0.608	13-01-2016	52	86	71	79	-
*67	TUNGABHADRA	497.74	486.50	3.276	0.432	14-01-2016	13	51	46	529	72
68	GHATAPRABHA	662.95	644.06	1.391	0.349	12-01-2016	25	48	44	317	-
69	BHADRA	657.76	649.93	1.785	0.983	12-01-2016	55	88	90	106	39
70	LINGANAMAKKI	554.43	545.59	4.294	2.073	14-01-2016	48	67	68	-	55
71	NARAYANPUR	492.25	488.42	0.863	0.324	14-01-2016	38	75	78	425	-
72	MALAPRABHA(RENUKA)	633.83	623.48	0.972	0.125	12-01-2016	13	40	38	215	-
73	KABINI(Sancherla Tank)	696.16	690.50	0.444	0.162	12-01-2016	36	71	36	85	-
74	HEMAVATHY	890.63	874.50	0.927	0.138	13-01-2016	15	32	32	265	-
75	HARANGI	871.42	850.17	0.220	0.010	13-01-2016	5	5	13	53	-
76	SUPA	564.00	540.00	4.120	1.761	14-01-2016	43	66	61	-	-
77	VANIVILAS SAGAR	652.28	637.36	0.802	0.102	14-01-2016	13	9	19	123	-
*78	ALMATTI	519.60	509.40	3.105	0.421	14-01-2016	14	44	50	@	290
*79	GERUSOPPA	55.00	50.72	0.130	0.106	14-01-2016	82	81	84	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	113.92	0.507	0.445	14-01-2016	88	86	80	62	-
*81	IDAMALAYAR	169.00	151.74	1.018	0.556	14-01-2016	55	78	67	33	75
*82	IDUKKI	732.43	719.97	1.460	0.822	14-01-2016	56	72	66	-	780
*83	KAKKI	981.46	973.68	0.447	0.326	14-01-2016	73	76	78	23	300
*84	PERIYAR	867.41	865.87	0.173	0.134	14-01-2016	77	51	49	84	140
85	MALAPMUZHA	867.41	865.87	0.224	0.074	14-01-2016	77	51	49	84	140
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	271.75	0.792	0.395	14-01-2016	50	58	63	105	8
*87	METTUR(STANLEY)	240.79	227.74	2.647	1.110	14-01-2016	42	55	55	122	360
88	VAIGAI	279.20	273.60	0.172	0.067	14-01-2016	39	13	46	61	6
89	PARAMBIKULAM	556.26	549.35	0.380	0.241	14-01-2016	63	70	77	101	-
90	ALIYAR	320.04	315.64	0.095	0.066	14-01-2016	69	94	69	#	60
*91	SHOLAYAR	1002.79	966.82	0.143	0.004	14-01-2016	3	22	35	-	95
TOTAL FOR 91 RESERVOIRS				157.799	66.820						
PERCENTAGE							42	55	57		

Sd/-

Director

* HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

\$ 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. 19th 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

(At sl. 30th) 0.444 BCM, Live storage at FRL of Kabini reservoir is intrim