BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 23.06.2016)

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 23.06.2016, live storage available in these reservoirs is 23.202 BCM, which is 15% of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 42.906 BCM and the average of last 10 years live storage was 31.121 BCM. Thus, the live storage available in 91 reservoirs as per 23.06.2016 Bulletin is 54% of the live 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 23.06.2016, the total live storage available in these reservoirs is 4.25 BCM which is 24% 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 30% 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 reservoirsunder CWC monitoring having total live storage capacity of 18.83 BCM. As per Reservoir Storage Bulletin dated 23.06.2016, the total live storage available in these reservoirs is 3.07 BCM which is 16% 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 17% 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 23.06.2016, the total live storage available in these reservoirs is 2.49 BCM which is 09% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 21% and average storage of last ten years during corresponding period was21% 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

23.06.2016, the total live storage available in these reservoirs is 8.52 BCM which is 20% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 29% and average storage of last ten years during corresponding period was 15% of live storage capacity of these reservoirs. Thus, storage during current year is less than the storage of last year but 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 23.06.2016, the total live storage available in these reservoirs is 4.88 BCM which is 9% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 23% and average storage of last ten years during corresponding period was 21% 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, Godavari and West Flowing rivers of South. Deficient in Indus, Mahi, Mahanadi & neighbouring East Flowing Rivers and Cauvery & neighbouring EFRs and Highly Deficient in Tapi and Krishna basin.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are 19 and reservoirs having storage more than average of last ten years are 23. The numbers of reservoirs having storage less than 20% with respect to last year is 18 and having storage less than 20% with reference to average of last ten years is 15. The number of reservoirs having storage less than or equal to 50% with respect to last year are 46 and having storage less than or equal to 50% with reference to average of last ten years are 45.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 23.06.2016

- 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
 23.06.2016 is 23.202 BCM (15 percent of the live storage capacity at FRL). The current year's storage is nearly
 54 percent of last year's storage and
 75 percent of the average of last ten years.

3 Region wise storage status:

Region wise storage status:									T	
DEGIGN (C: :)		Filling position of 91 reservoirs w.r.t. FRL								
REGION (States), (Monitoring No. of Reservoirs)	100%	91%- 99%	81%- 90%	71%- 80%	61%- 70%	51%- 60%	41%- 50%	40% & below	Departure fr	
NORTH (HP,Punjab & Rajasthan), (6 Resv.)	-	ı	ı	ı	-	1	-	5	H.P. PUNJAB RAJASTHAN	-31 % -25 % 15 %
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	-	-	-	-	-	-	1	I 14	JHARKHAND ODISHA W. BENGAL TRIPURA	-40 % 9 % -8 % 118 %
WEST (Guj.& Mah.), (27 Resv.)	-	-	-	-	-	-	-	27	GUJARAT MAH.	-45 % -71 %
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	-	-	-	-	-	12	U.P. UTTARAKHAND M.P. CHHATISGARH	33 % -57 % 91 % -30 %
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	-	-	1	-	-	1	-	29	AP&TG A,P TG KARNATAKA KERALA T.N.	-85 % -4 % -44 % -46 % 11 % -68 %
Status of 91 reservoirs	0	0	1	0	0	2	1	87		

4 Basin wise storage position:

Better than normal: Ganga and Narmada.

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

Deficient: Indus, Mahi, Mahanadi & Neighbouring EFRS and Cauvery & neighbouring EFRS

Highly deficient: Tapi and Krishna.

5 Out of 91 reservoirs, 33 reservoirs reported more than 80% of normal storage & 58 reservoirs reported 80% or below of normal storage. Out of these 58 reservoirs 45 having storage upto 50% of normal

storage.

Name of reservoir	%	Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	BHANDARDARA	10	GHATAPRABHA	29
BHIMA(UJJANI)	0	RENGALI	11	PERIYAR	30
JAYAKWADI(PAITHON)	0	SALANADI	12	PARAMBIKULAM	31
GIRNA	0	TUNGABHADRA	15	MATATILA	32
YELDARI	0	KARJAN	21	MALAMPUZHA	32
KABINI	0	LOWER BHAWANI	23	METTUR(STANLEY)	33
DUDHGANGA	0	RAMGANGA	23	KADANA	34
UPPER TAPI	0	VAIGAI	24	BARNA	34
ISAPUR	5	BHADRA	24	SHOLAYAR	34
MALAPRABHA(RENUKA	6	PANCHET HILL	26	MAITHON	35
KOYANA	8	TAWA	26	SRISAILAM	36
ALMATTI	10	PONG DAM	28	JHAKAM	36

JITANAW	30
NARAYANPUR	37
UKAI	37
BHADAR	41
TILAIYA	42
PENCH (TOTALADOH)	43
PANAM	44
LOWER MANAIR	44
VANIVILAS SAGAR	48
KRISHNARAJA SAGRA	50

13	13 reservors									
having storage 51%										
to 80% of normal										
storage.										
51%	61%	71%								
to	to	to								
60%	70%	80%								
3	6	4								

WEEKLY REPORT - BASINWISE

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION WEEK ENDING :- 23.06.2016

	WEEKE	THIS YEAR'S STORAGE LAST YEAR'S AVG. STORAGE W.R.T. AVE. OF 10 YEARS' AVG. STORAGE W.R.T.							
NAME OF BASIN	LIVE CAP. AT FRL	_	_					W.R.T. AVE. OF	
GANGA	28.096	7.014	24.96%	8.756	31.16%	4.949	17.61%	41.73	
INDUS	14.730	3.148	21.37%	6.861	46.58%	4.455	30.24%	-29.34	
NARMADA	17.414	2.672	15.34%	3.563	20.46%	1.892	10.86%	41.23	
TAPI	7.394	0.515	6.97%	1.321	17.87%	1.468	19.85%	-64.92	
MAHI	4.012	0.693	17.27%	1.666	41.53%	1.354	33.75%	-48.82	
SABARMATI	0.735	0.139	18.91%	0.074	10.07%	0.141	19.18%	-1.42	
RIVERS OF KUTCH	0.887	0.047	5.30%	0.083	9.36%	0.049	5.52%	-4.08	
GODAVARI	15.394	2.049	13.31%	3.692	23.98%	2.379	15.45%	-13.87	
KRISHNA	32.831	1.124	3.42%	6.740	20.53%	6.264	19.08%	-82.06	
MAHANADI & NEIGHBOURING EFRS	13.181	1.710	12.97%	4.158	31.55%	2.659	20.17%	-35.69	
CAUVERY& NEIGHBOURING EFRS	8.359	1.156	13.83%	2.372	28.38%	2.430	29.07%	-52.43	
WEST FLOWING RIVERS OF SOUTH	14.766	2.935	19.88%	3.620	24.52%	3.081	20.87%	-4.74	
TOTAL	157.799	23.202		42.906		31.121			
PERCENTAGE			·					-25.45	

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA			WEE	K ENDING :-	23.06.2016		CENTRAL V	VATER CON	/IIVII55IO	IN
							STORAGE A	S % OF LIVE C FRL	APACITY AT	BENE	FITS
S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	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			I.							
	HIMACHAL PRADESH	1)									
*1	GOBIND SAGAR(BHAKRA)	512.06	479.41	6.229	1.853	22-06-2016	30	43	29	676	1200
*2	PONG DAM	423.67	390.53	6.157	0.429	22-06-2016	7	37	24	-	360
	PUNJAB										
*3	THEIN	527.91	504.88	2.344	0.866	22-06-2016	37	82	49	348	600
	RAJASTHAN										
*4	MAHI BAJAJ SAGAR	280.75	266.20	1.711	0.335	21-06-2016	20	30	22	63	140
5	JHAKAM	359.50	337.25	0.132	0.008	21-06-2016	6	17	17	28	-
*6	RANA PRATAP SAGAR	352.81	349.07	1.436	0.754	23-06-2016	53	18	39	229	172
	EASTERN REGION	•									
	JHARKHAND										
7	TENUGHAT	269.14	255.51	0.821	0.268	23-06-2016	33	37	38	-	-
8	MAITHON	146.3	136.32	0.471	0.059	23-06-2016	13	13	35	342	-
*9	PANCHET HILL	124.97	120.67		0.027	23-06-2016	15	53	57	\$	80
	KONAR	425.81	416.25	0.176	0.040	23-06-2016	23	20	34	\$	-
11	TILAIYA	368.81	364.41	0.142	0.018	23-06-2016	13	27	30	\$	4
	<u>ODISHA</u>										
	HIRAKUD	192.02	182.18	5.378	0.524	23-06-2016	10	13	10	153	307
*13	BALIMELA	462.08	450.04	2.676	0.951	22-06-2016	36	48	13	-	360
	SALANADI	82.30	53.80		0.021	16-06-2016	4	37	26	42	
	RENGALI	123.50	110.01	3.432		22-06-2016	1	30	11	3	200
	MACHKUND(JALPUT)	838.16	826.49	0.893	0.199	22-06-2016	22	37	33	-	115
	UPPER KOLAB	858.00	847.42		0.150	22-06-2016	16	41	13	89	320
*18	UPPER INDRAVATI	642.00	629.66	1.456	0.312	23-06-2016	21	33	14	128	600
	WEST BENGAL										
	MAYURAKSHI	121.31	112.21	0.480	0.127	23-06-2016	26	15	23	227	-
20	KANGSABATI	134.14	122.73	0.914	0.181	23-06-2016	20	21	25	341	-
0.4	TRIPURA	00.55	00.70	0.040	0.440	00 00 0010	47	00	00		45
21	GUMTI WESTERN REGION	93.55	89.70	0.312	0.148	22-06-2016	47	26	22	-	15
	GUJARAT	•									
*22	UKAI	105.16	86.56	6.615	0.515	23-06-2016	8	19	21	348	300
	SABARMATI(DHAROI)	189.59	181.21	0.735		21-06-2016	19	10	19	95	1
	KADANA	127.7	114.30			21-06-2016	16	56	47	200	120
	SHETRUNJI	55.53	48.52			21-06-2016	10	13	8	36	-
	BHADAR	107.89	100.00			21-06-2016	5	22	12		_
	DAMANAGANGA	79.86	65.20			23-06-2016	8	20	12		1
	DANTIWADA	184.1	164.80			21-06-2016	2	1	1	45	
	PANAM	127.41	117.40			21-06-2016	17	45	38	36	2
	SARDAR SAROVAR	121.92	115.84			23-06-2016	40	54	28	2120	1450
	KARJAN	115.25	87.29			23-06-2016	8	29	34	51	3

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	23.06.2016					
			CURRENT	1075			STORAGE A	S % OF LIVE C FRL	APACITY AT	BENE	FITS
S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	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			I.							
32	JAYAKWADI(PAITHON)	463.91	453.48	2.171	0.000	23-06-2016	0	2	13	227	-
*33	KOYANA	657.90	619.94	2.652	0.056	22-06-2016	2	25	28	-	1920
34	BHIMA(UJJANI)	496.83	486.00	1.517	0.000	22-06-2016	0	0	5	125	12
35	ISAPUR	441.00	426.01	0.965	0.012	22-06-2016	1	21	25	104	-
36	MULA	552.30	535.54	0.609	0.028	22-06-2016	5	2	5	139	-
37	YELDARI	461.77	444.73	0.809	0.000	22-06-2016	0	2	11	78	-
38	GIRNA	398.07	379.08	0.524	0.000	22-06-2016	0	9	8	79	-
39	KHADAKVASLA	582.47	578.08	0.056	0.007	22-06-2016	13	18	21	78	8
*40	UPPER VAITARNA	603.50	594.79	0.331	0.087	22-06-2016	26	17	26	-	61
41	UPPER TAPI	214.00	205.78	0.255	0.000	22-06-2016	0	13	20	45	-
*42	PENCH (TOTALADOH)	490.00	469.53	1.091	0.086	22-06-2016	8	18	18	127	160
43	UPPER WARDHA	342.50	335.52	0.564	0.109	23-06-2016	19	50	34	70	-
44	BHATSA	142.07	107.21	0.942	0.254	22-06-2016	27	26	30	29.378	15
45	DHOM	747.70	728.87	0.331	0.079	22-06-2016	24	31	22	36.2	2
46	DUDHGANGA	646.00	603.96	0.664	0.000	15-06-2016	0	24	22	2.441	24
	MANIKDOH (KUKADI)	711.25	681.85	0.288	0.017	23-06-2016	6	8	4	2.2	6
48	CENTRAL RECION	342.50	335.52	0.304	0.003	23-06-2016	19	50	34	70	-
_	CENTRAL REGION	•									
	UTTAR PRADESH	000.40									
	MATATILA	308.46	301.11	0.707	0.063	22-06-2016	9	52	28	-	30
"50	RIHAND	268.22	255.85	5.649	0.803	23-06-2016	14	11	8	-	300
*54	UTTRAKHAND BAMCANCA	205.20	202.50	0.400	0.404	00.00.0040		50	25	4007	400
	RAMGANGA	365.30	322.59	2.196	0.131	23-06-2016	6	56	25	1897	198
52	TEHRI MADHYA PRADESH	830.00	748.50	2.615	0.150	23-06-2016	6	1	4	2351	1000
*50	GANDHI SAGAR	200.00	201.25	6 927	2.426	22.06.2016	26	20	15	220	115
	TAWA	399.90 355.40	391.35 337.20	6.827 1.944	2.436	22-06-2016 23-06-2016	36 6	38 31	15	247	115
	BARGI	422.76	411.00		0.125 0.795	23-06-2016	25	16	23 9		90
	BANSAGAR	341.64	332.59			22-06-2016	35	54	19	488	425
	INDIRA SAGAR	262.13	246.88			23-06-2016	11	14	5	2380	1000
	BARNA	348.55	339.01	0.456		22-06-2016	5	22	14	546	-
00	CHHATTIS GARH	0.0.00		000	0.02	22 00 20.0	· ·			0.0	
*59	MINIMATA BANGOI	359.66	345.57	3.046	0.958	22-06-2016	31	70	45		120
	MAHANADI	348.70	340.17			23-06-2016	21	15	29	319	10
	SOUTHERN REGION										
	A.P & TG	ı									
*61	SRISAILAM	269.75	237.41	8.288	0.469	23-06-2016	6	30	16	0	770
	NAGARJUNA SAGAR	179.83	153.86		0.000	23-06-2016	0	2	26	895	810
	ANDHRA PRADESH							_			
63	SOMASILA	100.58	87.17	1.994	0.485	23-06-2016	24	14	25	168	0
	TELANGANA										
64	SRIRAMSAGAR	332.54	319.03	2.300	0.132	23-06-2016	6	14	9	411	27
65	LOWER MANAIR	280.42	267.17	0.621	0.067	23-06-2016	11	19	24	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	23.06.2016					
			CURRENT	10/5			STORAGE A	S % OF LIVE C FRL	BENE	BENEFITS	
S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	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	736.07	1.163	0.082	22-06-2016	7	16	14	79	-
*67	TUNGABHADRA	497.74	481.17	3.276	0.102	23-06-2016	3	59	14	529	72
68	GHATAPRABHA	662.95	631.17	1.391	0.027	22-06-2016	2	5	7	317	-
69	BHADRA	657.76	635.79	1.785	0.127	22-06-2016	7	30	28	106	39
70	LINGANAMAKKI	554.43	534.76	4.294	0.627	20-06-2016	15	14	14	-	55
71	NARAYANPUR	492.25	485.93	0.863	0.139	23-06-2016	16	28	44	425	-
72	MALAPRABHA(RENUKA)	633.83	619.52	0.972	0.004	22-06-2016	0	6	7	215	-
73	KABINI(Sancherla Tank)	696.16	684.00	0.444	0.000	22-06-2016	0	46	18	85	-
74	HEMAVATHY	890.63	872.84	0.927	0.096	22-06-2016	10	25	14	265	-
75	HARANGI	871.42	855.41	0.220	0.033	22-06-2016	15	25	25	53	-
76	SUPA	564.00	524.60	4.120	0.800	20-06-2016	19	33	22	-	-
77	VANIVILAS SAGAR	652.28	634.45	0.802	0.048	21-06-2016	6	6	13	123	-
*78	ALMATTI	519.60	505.53	3.105	0.049	23-06-2016	2	7	16	@	290
*79	GERUSOPPA	55.00	49.91	0.130	0.105	23-06-2016	81	77	77	83	240
	KERALA										
80	KALLADA(PARAPPAR)	115.82	104.75	0.507	0.259	23-06-2016	51	20	26	62	-
*81	IDAMALAYAR	169.00	132.65	1.018	0.185	23-06-2016	18	21	18	33	75
*82	IDUKKI	732.43	706.76	1.460	0.322	23-06-2016	22	34	20	-	780
*83	KAKKI	981.46	954.00	0.447	0.136	22-06-2016	30	18	22	23	300
*84	PERIYAR	867.41	859.65	0.173	0.020	23-06-2016	12	15	38	84	140
85	MALAPMUZHA	867.41	859.65	0.224	0.023	23-06-2016	12	15	38	84	140
	TAMIL NADU										
86	LOWER BHAWANI	278.89	260.99	0.792	0.075	23-06-2016	9	41	40	105	8
*87	METTUR(STANLEY)	240.79	217.11	2.647	0.377	23-06-2016	14	39	43	122	360
88	VAIGAI	279.20	265.90	0.172	0.008	23-06-2016	5	22	19	61	6
89	PARAMBIKULAM	556.26	537.19	0.380	0.037	23-06-2016	10	16	32	101	-
90	ALIYAR	320.04	308.02	0.095	0.027	23-06-2016	28	72	42	#	60
*91	SHOLAYAR	1002.79	971.74	0.143	0.014	23-06-2016	10	32	29	-	95
	TOTAL FOR 91 RESERVOIRS			157.799	23.202						
	PERCENTAGE						15	27	20		

Sd/-

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

Director W. M. , CWC

 $^{^{\}star}$ HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

[#] TOTAL CCA 101 TH. HA OF PARAMBIKULAM & ALIYAR

^{@&#}x27;TOTAL CCA 425 TH. HA. OF NARAYANPUR AND ALMATTI

 $[\]dagger$ 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