# BRIEF NOTE ON STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR BULLETIN OF 23.07.2015)

#### 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 the 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 bulletin of 23.07.2015, live storage available in these reservoirs is 58.596 BCM which is 37% of total live storage capacity of these reservoirs. This storage is 115% of the storage of corresponding period of last year and 108% 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 and is also better 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 in this region having total live storage capacity of 18.01 BCM. The total live storage available in these reservoirs is 10.57 BCM which is 59% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 50% and average storage of last ten years during corresponding period was 43% 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.

#### b) EASTERN REGION

The Eastern region includes States of Jharkhand, Odisha, West Bengal and Tripura. There are 15 reservoirs in this region having total live storage capacity of 18.83 BCM. The total live storage available in these reservoirs is **7.67** BCM which is **41%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **38%** and average storage of last ten years during corresponding period was **26%** 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 in this region having total live storage capacity of 27.07 BCM. The total live storage available in these reservoirs is **6.63** BCM which is **24%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **24%** and average storage of last ten years during corresponding period was **37%** of live storage capacity of these reservoirs. Thus, storage during current year is equal to the storage of last year but is less than the average storage of last ten years.

#### d) CENTRAL REGION

The Central region includes States of Uttar Pradesh, Uttarakhand, Madhya Pradesh and Chhattisgarh. There are 12 reservoirs in this region having total live storage capacity of 42.30BCM. The total live storage available in these reservoirs is 18.72 BCM which is 44% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 38% and average storage of last ten years during corresponding period was 25% 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.

## e) SOUTHERN REGION

The Southern region includes States of Andhra Pradesh, Telangana, AP&TG (2combined project in both states) Karnataka, Kerala and Tamil Nadu. There are 31 reservoirs in this region having total live storage capacity of 51.59 BCM. The total live storage available in these reservoirs is **15.01** BCM which is **29%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **24%** and average storage of last ten years during corresponding period was **41%** 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 4, better than normal storage is available in Ganga, Indus, Narmada, Cauvery& neighbouring EFRs, Mahanadi & neighbouring East Flowing Rivers. Close to Normal in Mahi, Sabarmati, Godavari, and West Flowing rivers of South. Deficient in Tapi and Krishna and Highly Deficient in Rivers of Kutch.
- Table on page 4: Normal, Close to normal, Deficient and Highly Deficient having the same meaning as given at Bullet No.1.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are 54 and reservoirs having storage more than average of last ten years are 42. The numbers of reservoirs having storage less than 20% with respect to last year is 3 and having storage less than 20% with reference to average of last ten years is 7. The numbers of reservoirs having storage less than or equal to 50% with respect to last year are 11 and having storage less than or equal to 50% with reference to average of last ten years are 17.

States having better storage (in %) than last year for corresponding period: Himachal Pradesh, Punjab, Odisha, West Bengal, Tripura, Maharashtra, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Karnataka, Kerala and Tamil Nadu.

States having equal storage (in %) to last year for corresponding period:NIL

States having lesser storage (in %) than last year for corresponding period: Rajasthan, Jharkhand, Gujarat, Chhattisgarh, AP&TG (2combined project in both states), Andhra Pradesh, Telangana.

#### 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
   23.07.2015 is 58.596 BCM ( 37 percent of the live storage capacity at FRL ). The current year's storage is nearly 115 percent of last year's storage and 108 percent of the average of last ten years.

3 Region wise storage status:-

		Filling	positio	n of 91	reserv	oirs w	.r.t. FR	L			
REGION (States) (Monitoring No. of Reservoirs)	100%	91%- 99%	81%- 90%	71%- 80%	61%- 70%	51%- 60%	41%- 50%	40% & below	Departure fi stor		
NORTH (HP,Punjab & Rajasthan), (6 Resv.)	-	-	1	-	1	1	-	3	H.P. PUNJAB RAJASTHAN	46 % 66 % -19 %	
EAST (Jharkhand,Odisha, Tripura W.Bengal ( 15 Resv.)	& 1	-	-	-	3	2	5	4	JHARKHAND ODISHA W. BENGAL TRIPURA	18 % 71 % 36 % 83 %	
WEST (Guj.& Mah.), (27 Resv.)	-	-	-	-	-	2	6	19	GUJARAT MAH.	-28 % -37 %	
CENTRAL (MP,UP,Uttarakhand & Chh. (12 Resv)	), -	-	-	2	1	2	1	6	U.P. UTTARAKHAND M.P. CHHATISGARH	100 % 90 % 82 % 23 %	
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.	-98 % -43 % -45 % -11 % 1 %	
Status of 91 reservoirs	1	2	5	2	7	11	16	47			

#### 4 Basin wise storage position:

Better than normal:

Ganga, Indus, Narmada, Cauvery & neighbouring EFRS, Mahanadi & Neighbouring EFRS.

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

Deficient: Tapi and Krishna Highly deficient: Rivers of Kutch

5 Out of 91 reservoirs, 60 reservoirs reported more than 80% of normal storage & 31 reservoirs reported 80% or below of normal storage. Out of these 31 reservoirs 17 having storage upto 50% of normal

storage.

Name of reservoir	%	Name of reservoir	%	Name of reservoir	%
SRISAILAM	0	KHADAKVASLA	43		
BHIMA(UJJANI)	0	VANIVILAS SAGAR	44		
JAYAKWADI(PAITHON)	0	GHATAPRABHA	46		
NAGARJUNA SAGAR	3	GIRNA	48		
YELDARI	10	SRIRAMSAGAR	48		
PANAM	10	DANTIWADA	48		
SHETRUNJI	20	MAHANADI	50		
BHADAR	21				
MULA	41				
PENCH (TOTALADOH)	42				

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

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

14 reservoirs.

# WEEKLY REPORT - BASINWISE

# GOVERNMENT OF INDIA

# CENTRAL WATER COMMISSION

#### WEEK ENDING :- 23.07.2015

	***************************************	1010 .	23.07.201	<u> </u>				
NAME OF BASIN	LIVE CAP. AT FRL	_	/EAR'S RAGE	LAST Y STOR			YEARS' ORAGE	% DEPARTURE W.R.T. AVE. OF 10 YEARS'
GANGA	28.096	14.227	50.64%	12.121	43.14%	7.295	25.96%	95.02
INDUS	14.730	9.450	64.15%	7.465	50.68%	6.326	42.95%	49.38
NARMADA	17.414	5.543	31.83%	4.367	25.08%	4.695	26.96%	18.06
TAPI	7.394	1.390	18.80%	1.539	20.81%	2.444	33.05%	-43.13
MAHI	4.012	1.375	34.27%	1.908	47.56%	1.645	41.00%	-16.41
SABARMATI	0.735	0.160	21.77%	0.095	12.93%	0.184	25.03%	-13.04
RIVERS OF KUTCH	0.887	0.056	6.31%	0.088	9.92%	0.229	25.82%	-75.55
GODAVARI	15.394	3.569	23.18%	5.104	33.16%	3.667	23.82%	-2.67
KRISHNA	32.831	6.738	20.52%	5.069	15.44%	13.477	41.05%	-50.00
MAHANADI & NEIGHBOURING EFRS	13.181	5.695	43.21%	5.364	40.69%	4.076	30.92%	39.72
CAUVERY& NEIGHBOURING EFRS	8.359	4.518	54.05%	2.981	35.66%	3.952	47.28%	14.32
WEST FLOWING RIVERS OF SOUTH	14.766	5.875	39.79%	4.668	31.61%	6.214	42.08%	-5.46
TOTAL	157.799	58.596		50.769		54.204		
PERCENTAGE								8.10

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA			WEE	K ENDING :-	23.07.2015		CENTRAL	VATER CON	/IIVIISSIO	IN
							STORAGE A	S % OF LIVE C	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	•									
	HIMACHAL PRADESH										
*1	GOBIND SAGAR(BHAKRA)	512.06	499.28	6.229	4.054	22-07-2015	65	61	48	676	1200
*2	PONG DAM PUNJAB	423.67	412.29	6.157	3.437	22-07-2015	56	32	35	-	360
*3	THEIN	527.91	523.23	2.344	1.959	21-07-2015	84	72	50	348	600
	RAJASTHAN										
*4	MAHI BAJAJ SAGAR	280.75	270.90	1.711	0.679	22-07-2015	40	40	35	63	140
5	JHAKAM	359.50	343.50	0.132	0.025	22-07-2015	19	34	25	28	-
*6	RANA PRATAP SAGAR	352.81	346.81	1.436	0.413	23-07-2015	29	58	52	229	172
	EASTERN REGION										
	<u>JHARKHAND</u>										
7	TENUGHAT	269.14	259.61	0.821	0.410	23-07-2015	50	50	39	-	-
8	MAITHON	146.3	142.99	0.471	0.270	23-07-2015	57	67	57	342	-
*9	PANCHET HILL	124.97	125.06	0.184	0.184	23-07-2015	100	63	76	\$	80
10	KONAR	425.81	421.63	0.176	0.107	23-07-2015	61	77	51	\$	-
11	TILAIYA	368.81	366.45	0.142	0.065	22-07-2015	46	85	46	\$	4
	<u>ODISHA</u>										
*12	HIRAKUD	192.02	185.43	5.378	1.494	21-07-2015	28	13	23	153	307
	BALIMELA	462.08	452.66		1.259	22-07-2015	47	47	12		360
	SALANADI	82.30	70.30		0.223	23-07-2015	40	77	27		-
	RENGALI	123.50	117.38		1.531	22-07-2015	45	44	21	3	200
	MACHKUND(JALPUT)	838.16	830.82		0.383	22-07-2015	43	43	35		115
	UPPER KOLAB	858.00	851.12		0.360	22-07-2015	39	39	21	89	320
*18	WEST BENGAL	642.00	630.71	1.456	0.393	23-07-2015	27	35	26	128	600
19	MAYURAKSHI	121.31	117.88	0.480	0.324	22-07-2015	68	68	48	227	-
20	KANGSABATI	134.14	128.52	0.914	0.468	22-07-2015	51	42	38	341	-
	TRIPURA										
	GUMTI	93.55	90.65	0.312	0.201	21-07-2015	64	30	35	-	15
	WESTERN REGION	Ī									
	GUJARAT										
	UKAI	105.16	90.91	6.615		23-07-2015	19	21	34		300
	SABARMATI(DHAROI)	189.59	181.74		0.160	22-07-2015	22		25		1
	KADANA	127.7	121.54			22-07-2015	43	55	47		120
	SHETRUNJI	55.53	55.12		0.027	22-07-2015	9	16	44		-
	BHADAR	107.89	106.68		0.014	22-07-2015	7	19	35		-
	DANTIMADA	79.86	72.75			23-07-2015	40	19	27		1
	DANTIWADA	184.1	165.90		0.015	22-07-2015	4	1	8		-
	PANAM SARDAR SAROVAR	127.41	123.65		0.033	22-07-2015	5	52	46		2
	SARDAR SAROVAR	121.92	117.68		0.887	23-07-2015	57	28	41	2120	1450
31	KARJAN	115.25	99.57	0.523	0.165	23-07-2015	32	35	48	51	3

GOVERNMENT OF INDIA

## CENTRAL WATER COMMISSION

_	GOVERNMENT OF INDIA			WEE	K ENDING :-	23.07.2015		CENTRAL	WATER CON	mivii 33iU	'IN
			CUDDENT				STORAGE A	STORAGE AS % OF LIVE CAPACITY AT FRL		BENE	EFITS
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										
32	JAYAKWADI(PAITHON)	463.91	455.42	2.171	0.000	23-07-2015	0	2	22	227	-
*33	KOYANA	657.90	644.47	2.652	1.305	22-07-2015	49	26	60	-	1920
34	BHIMA(UJJANI)	496.83	489.18	1.517	0.000	22-07-2015	0	0	26	125	12
35	ISAPUR	441.00	429.96	0.965	0.187	22-07-2015	19	44	32	104	-
36	MULA	552.30	537.51	0.609	0.068	22-07-2015	11	9	27	139	-
37	YELDARI	461.77	448.09	0.809	0.010	22-07-2015	1	39	13	78	-
38	GIRNA	398.07	384.10	0.524	0.043	22-07-2015	8	7	17	79	-
39	KHADAKVASLA	582.47	578.75	0.056	0.013	22-07-2015	23	50	54	78	8
*40	UPPER VAITARNA	603.50	594.91	0.331	0.089	16-07-2015	27	20	44	-	61
41	UPPER TAPI	214.00	211.28	0.255	0.114	22-07-2015	45	31	37	45	-
*42	PENCH (TOTALADOH)	490.00	472.60	1.091	0.156	22-07-2015	14	39	34	127	160
43	UPPER WARDHA	342.50	338.81	0.564	0.282	23-07-2015	50	54	46	70	-
44	BHATSA	142.07	110.80	0.942	0.307	15-07-2015	33	26	46	29.378	15
	DHOM	747.70	735.60	0.331	0.157	22-07-2015	47	21	45	36.2	2
	DUDHGANGA	646.00	633.34	0.664	0.350	22-07-2015	53	39	57	2.441	24
	MANIKDOH (KUKADI) BHANDARDARA	711.25 342.50	688.20 338.81	0.288 0.304	0.042 0.129	22-07-2015 23-07-2015	15 50	9 54	17 46	2.2 70	
40	CENTRAL REGION	342.50	330.01	0.304	0.129	23-07-2015	50	54	40	70	-
	UTTAR PRADESH	_									
49	MATATILA	308.46	305.96	0.707	0.383	22-07-2015	54	12	41	_	30
	RIHAND	268.22	258.56	5.649	1.699	23-07-2015	30	11	13	-	300
	UTTRAKHAND										
*51	RAMGANGA	365.30	356.83	2.196	1.573	23-07-2015	72	53	27	1897	198
*52	TEHRI	830.00	782.75	2.615	0.966	23-07-2015	37	33	28	2351	1000
	MADHYA PRADESH										
*53	GANDHI SAGAR	399.90	395.67	6.827	4.234	23-07-2015	62	57	20	220	115
54	TAWA	355.40	347.35	1.944	0.848	23-07-2015	44	37	52	247	-
*55	BARGI	422.76	413.05	3.180	1.065	23-07-2015	33	34	34	157	90
*56	BANSAGAR	341.64	336.23	5.166	2.930	23-07-2015	57	53	24	488	425
*57	INDIRA SAGAR	262.13	251.05	9.745	2.423	23-07-2015	25	17	16	2380	1000
58	BARNA	348.55	343.39	0.456	0.155	23-07-2015	34	73	37	546	-
	CHHATTIS GARH										
*59	MINIMATA BANGOI	359.66	355.75	3.046	2.247	22-07-2015	74	77	52	-	120
60	MAHANADI	348.70	340.96	0.767	0.200	22-07-2015	26	51	52	319	10
;	SOUTHERN REGION	_									
	<u>A.P &amp; TG</u>										
*61	SRISAILAM	269.75	244.60	8.288	0.000	21-07-2015	0	0	26	0	770
*62	NAGARJUNA SAGAR	179.83	155.87	6.841	0.068	21-07-2015	1	2	33	895	810
	ANDHRA PRADESH										
63	SOMASILA	100.58	83.45	1.994	0.269	21-07-2015	13	22	24	168	0
	<u>TELANGANA</u>										
	SRIRAMSAGAR	332.54	320.98	2.300	0.224	23-07-2015	10	30			27
65	LOWER MANAIR	280.42	269.46	0.621	0.118	23-07-2015	19	42	25	199	60

#### WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

**GOVERNMENT OF INDIA** 

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA			WEE	K ENDING :-	23.07.2015		CENTRAL V	WATER COM	VIIVIIOSIU	'IN
							STORAGE A	S % OF LIVE C FRL	APACITY AT	BENE	EFITS
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
	<b>KARNATAKA</b>										
66	KRISHNARAJA SAGRA	752.50	747.94	1.163	0.769	22-07-2015	66	50	58	79	
*67	TUNGABHADRA	497.74	493.70	3.276	1.630	23-07-2015	50	39	55	529	72
68	GHATAPRABHA	662.95	643.22	1.391	0.320	22-07-2015	23	23	50	317	
69	BHADRA	657.76	650.82	1.785	1.064	22-07-2015	60	56	61	106	39
70	LINGANAMAKKI	554.43	542.89	4.294	1.603	23-07-2015	37	34	45	-	55
71	NARAYANPUR	492.25	489.20	0.863	0.396	21-07-2015	46	32	60	425	
72	MALAPRABHA(RENUKA)	633.83	625.05	0.972	0.195	22-07-2015	20	9	29	215	
73	KABINI	696.16	695.74	0.444	0.418	22-07-2015	94	91	49	85	
74	HEMAVATHY	890.63	887.58	0.927	0.761	22-07-2015	82	55	65	265	
75	HARANGI	871.42	870.75	0.220	0.208	22-07-2015	95	94	77	53	
76	SUPA	564.00	537.85	4.120	1.608	23-07-2015	39	31	35	-	
77	VANIVILAS SAGAR	652.28	634.21	0.802	0.044	16-07-2015	5	3	13	123	
*78	ALMATTI	519.60	513.78	3.105	1.154	21-07-2015	37	29	62	@	290
*79	GERUSOPPA	55.00	50.74	0.130	0.106	23-07-2015	82	82	87	83	240
	<u>KERALA</u>										
80	KALLADA(PARAPPAR)	115.82	95.12	0.507	0.129	22-07-2015	25	34	48	62	
*81	IDAMALAYAR	169.00	145.30	1.018	0.413	22-07-2015	41	35	42	33	75
*82	IDUKKI	732.43	717.50	1.460	0.719	22-07-2015	49	28	37	-	780
*83	KAKKI	981.46	959.11	0.447	0.175	22-07-2015	39	27	46	23	300
*84	PERIYAR	867.41	863.12	0.173	0.092	22-07-2015	53	37	52	84	140
85	MALAPMUZHA	867.41	863.12	0.224	0.107	22-07-2015	53	37	52	84	140
	TAMIL NADU										
86	LOWER BHAWANI	278.89	274.65	0.792	0.542	22-07-2015	68	25	55	105	8
*87	METTUR(STANLEY)	240.79	231.62	2.647	1.488	22-07-2015	56	25	51	122	360
88	VAIGAI	279.20	273.30	0.172	0.063	22-07-2015	37	6	20	61	6
89	PARAMBIKULAM	556.26	542.86	0.380	0.125	22-07-2015	33	24	59	101	
90	ALIYAR	320.04	318.11	0.095	0.083	22-07-2015	87	19	55	#	60
*91	SHOLAYAR	1002.79	997.32	0.143	0.116	22-07-2015	81	64	71	-	95
	TOTAL FOR 91 RESERVOIRS			157.799	58.596						

Sd/-

34

 $\$  TOTAL CCA 342 TH. HA OF DVC SYSTEM

PERCENTAGE

Director W. M. , CWC

<sup>\*</sup> HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

<sup>#</sup> TOTAL CCA 101 TH. HA OF PARAMBIKULAM & ALIYAR

 $<sup>@^{\</sup>scriptscriptstyle |}$  TOTAL CCA 425 TH. HA. OF NARAYANPUR AND ALMATTI

<sup>†</sup> SABARMATI RESERVOIR IS SUPPLEMENTED WITH NARMADA WATER THROUGH PIPELINE.

SI. 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

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