BRIEF NOTE ON STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 19.11.2015)

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 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 19.11.2015, live storage available in these reservoirs is 84.1468 BCM, which is 53% of total live storage capacity of these reservoirs. This storage is 77% of the storage of corresponding period of last year and 74% 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 19.11.2015, the total live storage available in these reservoirs is 12.74 BCM which is 71% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 65% and average storage of last ten years during corresponding period was 72% 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 reservoirsunder CWC monitoring having total live storage capacity of 18.83 BCM. As per Reservoir Storage Bulletin dated 19.11.2015, the total live storage available in these reservoirs is 11.55 BCM which is 61% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 80% and average storage of last ten years during corresponding period was 76% 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 19.11.2015, the total live storage available in these reservoirs is 14.13 BCM which is 52% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 71% and average storage of last ten years during corresponding period was 78% 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 19.11.2015, the total live storage available in these reservoirs is 28.34 BCM which

is 67% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 78% and average storage of last ten years during corresponding period was 62% 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 19.11.2015, the total live storage available in these reservoirs is 17.39 BCM which is 34% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 60% and average storage of last ten years during corresponding period was 75% 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, Indus, Narmada, Sabarmati and Rivers of Kutch. Close to Normal in Mahi. Deficient in Tapi, Godavari, Mahanadi & neighbouring East Flowing Rivers, Cauvery & neighbouring EFRs 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 storagemore than last year are 13 and reservoirs having storage more than average of last ten years are 19. 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 number of reservoirs having storage less than or equal to 50% with respect to last year are 18 and having storage less than or equal to 50% with reference to average of last ten years are 22.

States having better storage (in %) than last year for corresponding period: Himachal Pradesh and Tripura.

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

States having lesser storage (in %) than last year for corresponding period: Punjab, Rajasthan, Jharkhand, Odisha, West Bengal, Gujarat, Maharashtra, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, AP&TG (2combined project in both states), Andhra Pradesh, Telangana, Karnataka, Kerala and Tamil Nadu.

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
 19.11.2015 is 84.147 BCM (53 percent of the live storage capacity at FRL). The current year's storage is nearly 77 percent of last year's storage and 74 percent of the average of last ten years.

3 Region wise storage status:-

	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		parture from Normal storage	
NORTH (HP,Punjab & Rajasthan), (6 Resv.)	-	-	2	2	-	-	1	1	H.P. PUNJAB RAJASTHAN	5 % -27 % -14 %	
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	-	1	2	3	1	2	1	5	JHARKHAND ODISHA W. BENGAL TRIPURA	-30 % -18 % -48 % 94 %	
WEST (Guj.& Mah.), (27 Resv.)	-	3	2	3	6	4	3	6	GUJARAT MAH.	-15 % -48 %	
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	3	2	2	1	3	1	U.P. UTTARAKHAND M.P. CHHATISGARH	-24 % -7 % 23 % -33 %	
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	-	-	3	3	2	7	4	12	AP&TG A,P TG KARNATAKA KERALA T.N.	-86 % -19 % -84 % -46 % -23 % -28 %	
Status of 91 reservoirs	0	4	12	13	11	14	12	25			

4 Basin wise storage position:

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

Close to normal: Mahi.

Deficient: Tapi, Godavari, Mahanadi & Neighbouring EFRS, Cauvery & 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 22 having storage upto 50% of normal

storage.

Name of reservoir	%	Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	PANCHET HILL	25	ISAPUR	49
BHIMA(UJJANI)	0	HEMAVATHY	27	MULA	50
SALANADI	13	MALAPRABHA(RENUKA)	31		
SRIRAMSAGAR	14	ALMATTI	34		
GIRNA	17	MANIKDOH	40		
JAYAKWADI(PAITHON)	17	MAITHON	43		
HARANGI	19	GHATAPRABHA	46		
YELDARI	23	MAYURAKSHI	47		
LOWER MANAIR	25	SHOLAYAR	48		
SRISAILAM	25	BHANDARDARA	48		

31 reservors having storage 51% to 80% of normal								
storage.								
51%	61%	71%						
to	to	to						
60%	70%	80%						
7	13	11						

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

26 reservoirs.

WEEKLY REPORT - BASINWISE

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION WEEK ENDING :- 19.11.2015

	WLLIX LI	ADIIAG	19.11.201	J				
NAME OF BASIN	LIVE CAP. AT FRL	_	/EAR'S RAGE	LAST Y STOR	_	LAST 10 AVG. ST	YEARS' ORAGE	% DEPARTURE W.R.T. AVE. OF 10 YEARS'
GANGA	28.096	16.496	58.71%	18.603	66.21%	15.835	56.36%	4.17
INDUS	14.730	10.661	72.38%	9.228	62.65%	10.539	71.55%	1.16
NARMADA	17.414	13.377	76.82%	14.936	85.77%	12.409	71.26%	7.80
TAPI	7.394	4.532	61.29%	5.287	71.50%	5.772	78.06%	-21.48
MAHI	4.012	2.677	66.72%	3.436	85.64%	3.058	76.22%	-12.46
SABARMATI	0.735	0.584	79.46%	0.446	60.68%	0.504	68.57%	15.87
RIVERS OF KUTCH	0.887	0.685	77.23%	0.252	28.41%	0.508	57.27%	34.84
GODAVARI	15.394	6.567	42.66%	9.918	64.43%	10.726	69.68%	-38.77
KRISHNA	32.831	8.471	25.80%	17.894	54.50%	25.509	77.70%	-66.79
MAHANADI & NEIGHBOURING EFRS	13.181	7.682	58.28%	11.146	84.56%	10.543	79.99%	-27.14
CAUVERY& NEIGHBOURING EFRS	8.359	4.067	48.65%	6.284	75.18%	5.792	69.29%	-29.78
WEST FLOWING RIVERS OF SOUTH	14.766	8.348	56.54%	12.333	83.52%	12.077	81.79%	-30.88
TOTAL	157.799	84.147		109.763		113.272		
PERCENTAGE								-25.71

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA			WEE	K ENDING :-	19.11.2015		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	507.78	6.229	5.287	19-11-2015	85	77	80	676	1200
*2	PONG DAM	423.67	416.98	6.157	4.386	19-11-2015	71	53	68	-	360
	<u>PUNJAB</u>										
*3	THEIN	527.91	507.26	2.344	0.988	19-11-2015	42	47	58	348	600
	RAJASTHAN										
*4	MAHI BAJAJ SAGAR	280.75	279.25	1.711	1.516	18-11-2015	89	99	83	63	140
5	JHAKAM	359.50	356.65	0.132	0.104	18-11-2015	79	88	76	28	-
*6	RANA PRATAP SAGAR	352.81	347.17	1.436	0.462	18-11-2015	32	45	62	229	172
_	EASTERN REGION	•									
	<u>JHARKHAND</u>										
7	TENUGHAT	269.14	258.97	0.821	0.377	18-11-2015	46	49	43	-	-
8	MAITHON	146.3	140.78		0.186	18-11-2015	39	81	91	342	-
*9	PANCHET HILL	124.97	121.27		0.042	18-11-2015	23	61	92	\$	80
	KONAR	425.81	423.34		0.132	18-11-2015	75	97	83	\$	-
11	TILAIYA	368.81	368.00	0.142	0.116	18-11-2015	82	100	80	\$	4
	<u>ODISHA</u>										
	HIRAKUD	192.02	190.64			18-11-2015	73	87	90	153	307
	BALIMELA	462.08	457.41	2.676		18-11-2015	70	96	69	-	360
	SALANADI	82.30	56.50		0.035	19-11-2015	6	47	49	42	-
	RENGALI	123.50	118.89			18-11-2015	57	85	81	3	200
	MACHKUND(JALPUT)	838.16	837.32		0.810	18-11-2015	91	96	88	-	115
	UPPER KOLAB	858.00	855.91	0.935		18-11-2015	79	89	66	89	320
*18	UPPER INDRAVATI	642.00	634.88	1.456	0.736	18-11-2015	51	88	76	128	600
	WEST BENGAL	101.01			0.400	40.44.0045					
	MAYURAKSHI	121.31	111.16				21	23	45	227	-
20	KANGSABATI	134.14	124.01	0.914	0.229	18-11-2015	25	27	46	341	-
24	TRIPURA GUMTI	02.55	02.65	0.212	0.270	10 11 2015	07	22	45		15
	WESTERN REGION	93.55	92.65	0.312	0.270	18-11-2015	87	33	45	-	15
	GUJARAT	•									
*22	UKAI	105.16	100.46	6.615	4.239	17-11-2015	64	73	79	348	300
	SABARMATI(DHAROI)	189.59	187.97			18-11-2015	79	61	69	95	1
	KADANA	127.7	123.01	1.472		18-11-2015	79 51	77	69	200	120
	SHETRUNJI	55.53	55.22			18-11-2015	92	42	77	36	.20
	BHADAR	107.89	106.12			17-11-2015	64	39	70	27	_
	DAMANAGANGA	79.86	79.60			17-11-2015	93	85	96	51	1
	DANTIWADA	184.1	181.11			18-11-2015	73	13	37	45	
	PANAM	127.41	123.05			18-11-2015	43	70	75	36	2
	SARDAR SAROVAR	121.92	118.93			17-11-2015	68	72	76	2120	1450
	KARJAN	115.25	107.27			17-11-2015	59	84	94	51	3

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA			WEE	K ENDING :-	19.11.2015		CENTRAL V	VATER CON	MISSIO	N
			QUIDDENT		K ENDING	19.11.2013	STORAGE A	GE AS % OF LIVE CAPACITY AT FRL		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										
32	JAYAKWADI(PAITHON)	463.91	456.86	2.171	0.217	19-11-2015	10	31	57	227	-
*33	KOYANA	657.90	649.35	2.652	1.705	19-11-2015	64	93	94	-	1920
34	BHIMA(UJJANI)	496.83	490.97	1.517	0.000	18-11-2015	0	83	88	125	12
35	ISAPUR	441.00	432.74	0.965	0.324	19-11-2015	34	68	69	104	-
36	MULA	552.30	544.38	0.609	0.261	18-11-2015	43	77	86	139	-
37	YELDARI	461.77	451.58	0.809	0.115	18-11-2015	14	49	62	78	-
38	GIRNA	398.07	384.44	0.524	0.050	18-11-2015	10	45	56	79	-
39	KHADAKVASLA	582.47	579.97	0.056	0.025	18-11-2015	45	84	55	78	8
*40	UPPER VAITARNA	603.50	599.74	0.331	0.214	19-11-2015	65	82	93	-	61
41	UPPER TAPI	214.00	213.83	0.255	0.243	18-11-2015	95	100	100	45	-
*42	PENCH (TOTALADOH)	490.00	483.13	1.091	0.564	18-11-2015	52	50	66	127	160
43	UPPER WARDHA	342.50	341.34	0.564	0.464	19-11-2015	82	86	89	70	-
44	BHATSA	142.07	132.71	0.942	0.705	18-11-2015	75	87	89	29.378	15
45	DHOM	747.70	737.87	0.331	0.192	18-11-2015	58	90	85	36.2	2
46	DUDHGANGA	646.00	638.14	0.664	0.432	18-11-2015	65	99	96	2.441	24
47	MANIKDOH (KUKADI)	711.25	692.94		0.073	19-11-2015	25	50	64	2.2	6
48	BHANDARDARA CENTRAL REGION	342.50	341.34	0.304	0.142	19-11-2015	82	86	89	70	-
_	UTTAR PRADESH	-									
40	MATATILA	308.46	305.62	0.707	0.354	18-11-2015	50	55	68		30
	RIHAND	268.22	259.14		1.914	19-11-2015	34	40	44	-	300
30	UTTRAKHAND	200.22	259.14	3.049	1.514	19-11-2013	34	40			300
*51	RAMGANGA	365.30	354.08	2.196	1.403	12-11-2015	64	86	73	1897	198
	TEHRI	830.00	814.20		1.982	19-11-2015	76	86	78	2351	1000
02	MADHYA PRADESH	000.00	014.20	2.010	1.002	10 11 2010	70	00	70	2001	1000
*53	GANDHI SAGAR	399.90	398.86	6.827	5 992	19-11-2015	88	72	51	220	115
	TAWA	355.40	353.60		1.708	18-11-2015	88	90	89	247	-
	BARGI	422.76	421.05		2.744	18-11-2015	86	95	84	157	90
	BANSAGAR	341.64	336.24		2.934	19-11-2015	57	88	56	488	425
	INDIRA SAGAR	262.13	259.22	9.745	7.246	19-11-2015	74	85	62	2380	1000
58	BARNA	348.55	346.24	0.456	0.306	19-11-2015	67	70	69	546	-
	CHHATTIS GARH										
*59	MINIMATA BANGOI	359.66	349.56	3.046	1.397	17-11-2015	46	84	67	-	120
60	MAHANADI	348.70	343.62	0.767	0.359	18-11-2015	47	91	78	319	10
;	SOUTHERN REGION	_									
	A.P & TG										
*61	SRISAILAM	269.75	255.20	8.288	1.543	18-11-2015	19	2	75	0	770
*62	NAGARJUNA SAGAR	179.83	155.02	6.841	0.000	18-11-2015	0	55	71	895	810
	ANDHRA PRADESH										
63	SOMASILA	100.58	93.86	1.994	1.097	18-11-2015	55	68	68	168	0
	<u>TELANGANA</u>										
64	SRIRAMSAGAR	332.54	320.65	2.300	0.207	19-11-2015	9	28	64	411	27
65	LOWER MANAIR	280.42	269.00	0.621	0.105	19-11-2015	17	32	69	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	19.11.2015					
			CURRENT	10/5			STORAGE A	S % OF LIVE C FRL	CAPACITY 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
	KARNATAKA			•				•		•	
66	KRISHNARAJA SAGRA	752.50	748.25	1.163	0.798	18-11-2015	69	100	86	79	-
*67	TUNGABHADRA	497.74	492.20	3.276	1.285	19-11-2015	39	80	77	529	72
68	GHATAPRABHA	662.95	648.44	1.391	0.526	18-11-2015	38	86	81	317	-
69	BHADRA	657.76	650.41	1.785	1.025	18-11-2015	57	92	91	106	39
70	LINGANAMAKKI	554.43	546.58	4.294	2.272	19-11-2015	53	86	86	-	55
71	NARAYANPUR	492.25	490.07	0.863	0.484	18-11-2015	56	61	89	425	-
72	MALAPRABHA(RENUKA)	633.83	625.43	0.972	0.213	18-11-2015	22	68	70	215	-
73	KABINI(Sancherla Tank)	696.16	691.71	0.444	0.214	18-11-2015	48	76	40	85	-
74	HEMAVATHY	890.63	876.41	0.927	0.186	18-11-2015	20	82	74	265	-
75	HARANGI	871.42	852.90	0.220	0.021	18-11-2015	10	45	50	53	-
76	SUPA	564.00	540.71	4.120	1.813	19-11-2015	44	76	73	-	-
77	VANIVILAS SAGAR	652.28	637.24	0.802	0.099	19-11-2015	12	10	20	123	-
*78	ALMATTI	519.60	512.32	3.105	0.869	18-11-2015	28	76	83	@	290
*79	GERUSOPPA	55.00	49.36	0.130	0.099	19-11-2015	76	87	86	83	240
	KERALA										
80	KALLADA(PARAPPAR)	115.82	111.82	0.507	0.399	18-11-2015	79	94	88	62	-
*81	IDAMALAYAR	169.00	152.05	1.018	0.563	18-11-2015	55	90	82	33	75
*82	IDUKKI	732.43	720.17	1.460	0.831	18-11-2015	57	80	74	-	780
*83	KAKKI	981.46	970.05	0.447	0.280	18-11-2015	63	78	87	23	300
*84	PERIYAR	867.41	865.53	0.173	0.140	18-11-2015	81	100	69	84	140
85	MALAPMUZHA	867.41	865.53	0.224	0.153	18-11-2015	81	100	69	84	140
	TAMIL NADU										
86	LOWER BHAWANI	278.89	269.81	0.792	0.312	18-11-2015	39	71	72	105	8
*87	METTUR(STANLEY)	240.79	230.34	2.647	1.355	18-11-2015	51	74	67	122	360
88	VAIGAI	279.20	274.79	0.172	0.084	18-11-2015	49	28	63	61	6
89	PARAMBIKULAM	556.26	550.93	0.380	0.271	18-11-2015	71	96	88	101	-
90	ALIYAR	320.04	317.69	0.095	0.080	18-11-2015	84	100	94	#	60
*91	SHOLAYAR	1002.79	983.88	0.143	0.062	18-11-2015	43	99	90	-	95
	TOTAL FOR 91 RESERVOIRS			157.799	84.147						

Sd/-

70

72

53

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

PERCENTAGE

Director W. M. , CWC

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

^{*} HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

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

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

 $[\]dagger$ 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