

Storage capacity of water bodies

453. DR. PRABHAKAR KORE: Will the Minister of WATER RESOURCES be pleased to state:

(a) whether Government is aware that the storage capacity of all kinds of water bodies have come down due to accumulation of silt;

(b) whether the Central Government has conducted any study to find out the present storage capacity of all water bodies;

(c) if so, the details thereof;

(d) whether Government is taking any steps to de-silt water bodies to increase their storage capacity;

(e) if so, the details thereof; and

(f) if not, the reasons therefor?

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES (SHRI VINCENT PALA): (a) Yes, Sir. The Govt. is aware that the storage capacity of all kinds of water bodies have come down due to accumulation of silt.

(b) and (c) as per the compendium on silting of reservoirs in India (2001) brought out by Central Water Commission (CWC) in respect of 144 reservoirs in the country, the weighted average annual loss in gross storage capacity due to siltation is computed as 0.44%. The abstract of the rate of siltation of these 144 reservoirs is enclosed as Annexure [*See* appendix 226 Annexure No. 4.4.11]. CWC has been conducting the Capacity survey of reservoirs since eighth Plan. So far Capacity survey of 36 reservoirs has been completed. The abstract showing the details of loss in storage capacities of these reservoirs are also given in Statement (*See* below). CWC has also conducted sedimentation studies of total 108 reservoirs using remote sensing technique to assess the live storage capacity of reservoirs in the country. The results of the reservoirs sedimentation survey of these reservoirs are enclosed as Annexure [*See* Appendix 226 Annexure 612].

(d), (e) and (f) The desiltation of reservoirs on large scale has not been considered techno-economically viable as it is associated with the problems of disposal of excavated earth and high cost of repeated desiltation. However, Government had approved pilot scheme for National project for Repair, Renovation and Restoration of Water Bodies directly linked to agriculture in January, 2005 with an estimated cost of Rs. 300 crore to be shared by the centre and state in the ratio

of 3:1 for implementation-during the Twelfth Plan period. The objectives of the scheme were to restore and augment storage capacities of water bodies and also to recover an extent their lost irrigation potential. The scheme was approved for 26 district projects in 15 states with Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Odisha, Rajasthan, Tamil Nadu, West Bengal, Himachal Pradesh, Jammu and Kashmir, Gujarat, Kerala and Maharashtra at an estimated cost of Rs. 299.92 crore and centre grant of Rs. 197.3 crore was released to the states under the scheme. These projects were to cover 1098 water bodies with total Culturable Command Area (CCA) of Rs. 1.72 lakh hectare. The physical work for restoration has been completed in 1985 water bodies in 15 states.

Subsequently, Government had approved a State Sector Scheme for RRR of water bodies with two components (one with external assistance with an outlay of Rs. 1500 crore and second with domestic support with an outlay of Rs. 1250 crore) for implementation during Eleventh Five Year Plan period. A sum of Rs. 811.85 crore has since been released to 12 states viz. Odisha, Karnataka, Andhra Pradesh, Bihar, Uttar Pradesh (Bundelkhand), Madhya Pradesh (Bundelkhand), Meghalaya, Maharashtra, Gujarat, Chhattisgarh, Rajasthan and Haryana under the scheme of RRR of water bodies with domestic support during the year 2009-10, 2010-11 and 2011-12. 3341 water bodies were taken up for restoration out of which works have been completed in 1462 water bodies. Out of 10887 water bodies taken up under the scheme of RRR of water bodies with external assistance, works have been completed in 3093 water bodies in Tamilnadu and Andhra Pradesh.

Statement*Abstract of reservoirs surveyed so far through consultants by CWC*

Sl. No.	Name of Reservoir State	Name of river	Year of first impoundment	C.A. in sq.km.	Storage capacity in M.Cu.m.	Designed rate of siltation Th.cu.nV sq.km/yr	Total number of surveys (year of last survey)	Observed rate of siltation Th.Cu.m/sq.km./yr	Total loss of storage upto the last survey in M.Cu.m	% loss of gross capacity up to the last survey	% Annual loss of gross capacity upto the last survey	% loss of five storage upto the last survey	% loss of dead storage upto the last survey
1	2	3	4	5	6	7	8	9	10	11	12	13-	14
1.	Matatila/UP	Betwa	1956	20720	1132.7	0.133	9(1994)	0.469	D.S-93.50 LS-275.69 G.S-369.19	32.59	0.86	27.04	82.5
2.	Konar/Jharidiand	Konar	1955	997.15	28123	0.619	1(1996)	1.75	D.S-26.20 LS- 45.38 G.S-71.58	25.45	0.62	20.6	43.3
3.	Tilaiya/Jharkhand	Barakar	1953	9842	335.83	0.76	1(1997)	2.857	D.S-61.26 LS-59.66 G.S -120.92	36	0.82	30.8	43.6
4.	Balimela/Odisha	Machkund	1972	4908	3610.53	1.046	1(1999)	2.131	D.S -143.06	7.83	0.29	5.2	15.34

													Written Answers to	
5.	Linganamakki/ Karnatka	Sharavati	1964	1991.71	4435.35	0.71	1(1999)	2.4	LS- 139.49 G.S- 282.55 D.S-76.75 LS-95.08 G.S.-171.83	3.87	0.11	2.2	54.31	[13 AUG, 2012]
6.	Idukh/Kerala	Periyar	1974	649.31	1998.57	0.571	1(1999)	1.592	D.S-18.34 LS - 7.504 G.S-25.844	1.29	0.05	0.513	3.42	
7.	Kakki/Kerala	Kakkiyar	1966	217.55	454.07	0.359	1(1999)	3.522	D.S-0.02 LS-25.27 G.S-2529	5.57	0.17	5.66	026	
8.	Jayakwadi/ Maharashtra	Godavari	1976	21774	2909.04	0.357	1(1999)	0.478	D.S-155.64 LS-94.16 G.S-249.80	8.39	0.37	4.34	21.09	Unstarred Questions
9	Tenughat/ Jharkhand	Damodar	1970	4481	1014	0.473	1(2001)	0.716	D.S-50.81 LS-48.69 G.S-99.50	9.82	0.32	1.28	24	
10.	Ghataprabha/ Karnataka	Ghataprabha	1974	1411.55	1434.14	0.405	3(2000)	3.15	D.S-26.54 L.S - 88.98 G.S-115.52	8.1	0.31	6.51	39.03	
													323	

Written Answers to

[13 AUG, 2012]

Unstarred Questions

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1	2	3	4	5	6	7	8	9	10	11	12	13-	14	324 Written Answers to
11. Dharoi/Gujarat	Sabarmati	1976	5540	907.83	0.238	5(2000)	0.763	D.S-55.37 LS-50.25 G.S -105.62	11.63	0.48'	5.2	42.53	[RAIYA SABHA]	
12. Emerald Avalanche/ Tamil Nadu	Emerald Avalanche	1961	58.534	156.2	0.58	1(2000)	2.83	D.S -1.78 LS-4.846 G.S-6.626	4.24	0.1	3.03	58.82		
13. Getalsud/ Jharkhand	Subarnarekha	1971	725	288.63	0.78	1(2001)	0.968	D.S -12.65 L.S-8.41 G.S-21.06	7.3	0.24	3.63	22.29		
14. Mayurakshi/ West	Mayurakshi	1954	1860	608.2	0.375	6(2001)	0.557	D.S -13.93 LS - 34.78 G.S-48.71	8.01	0.17	6.29	21.83		
15. Minimata/ Chhattisgarh	Hasdeo	1990	6730	3416	0.55	1(2001)	0.678	D.S-29.27 LS-21.54 G.S-5021	1.47	0.13	0.71	7.74		
16. Ukai/ Gujarat	Tapi	1972	62,225	8511	1.49	4(2001)	3.37	D.S-660.71 LS - 0.00 G.S -609.0	7.16	0.25	0	46.58		
														Unstarred Questions

17. Srisailem/AP	Krishna	1976	206030	8724.88	0.079	5(2001)	0.3152	D.S -446 LS-1177.45 GS-1623.4	20.5	0.82	18.66	28.63	Written Answers to
18. Gandhisagar/MP	Chambal	1960	23025	9746	0.363	2(2001)	0.55	D.S.-279 L.S-241 GS-520	6.71	0.16	3.49	33.4	
19. Nagarjuna-sagar/ AP	Krishna	1967	215185	11553	0.215	4(2001)	0.307	D.S-1562 LS - 692 GS-2243	19.41	0.57	9.96	33.14	
20. Watrak/Gujarat	Watrak	1984	1113.7	177	0.203	2(2003)	0.728	D.S-1.60 L.S -13.80 GS -15.40	8.7	0.46	8.9	7.07	[13 AUG, 2012]
21. Warna/ (Maharashtra)	Warna	1984	301	974.19	6.473	2(2003)	8.594	D.S-34.24 L.S-14.91 GS-49.15	5.04	0.26	1.9	17.6	
22. Ravisankarsagar/ (Chhattisgarh)	Mahanadi	1979	3670	909.32	0.389	2(2003)	0.32	D.S-19.00 L.S-09.20 GS - 28.20	3.1	0.13	1.2	13.13	
23. Badua/(Bihar)	Badua	1965	480.7	129.245	0.357	1(2006)	0.802	D.S-5.714 L.S 10.099 GS-15.813	7.98	0.29	6.2	2.92	Unstarred Questions

1	2	3	4	5	6	7	8	9	10	11	12	13-	14	326
24. Kangsabati/ (West)	Kangsabati	1965	3626	1070.01	0.43	1(2006)	0.907	D.S -63.88 L.S-64.2 G.S -128.08	11.97	0.29	9.41	40.92	Written Answers to	
25. Rengali/Odisha	Brahmani	1982	25250	5247.3	03.91	1(2006)	1.255	D.S-369.63 L.S-391.21 G.S - 760.84	14.5	0.604	10.71	37.38		
26. Bhavanisagar/ Tamilnadu	Bhavani	1953	4201.79	932.78	0.05	1(2006)	0.388	D.S-11.22 LS - 75.232 G.S -86.452	9.27	0.175	8.41	53.17	[RAIYA SABHA]	
27. Idamalayar/ Kerala	Idamalayar	1986	481.29	1208.23	—	1(2011)	2.66	D.S.-31.04 L.S.-1.01 G.S.-32.043	2.65	0.11	0.089	43.11		
28. Salaulim/Goa	Sanguem	1990	209	222.28	—	1(2011)	6.75	D.S-1.244 L.S -28.356 G.S -29.60	13.32	0.63	12.94	40.57		
29. Upper Wardha/ Maharashtra	Wardha	1993	4302	802.98	0.642	1(2011)	0.614	D.S -13.01 L.S-34.48 G.S-47.49	5.91	0.33	5.63	6.83	Unstarred Questions	

30. Bhadra/ Karnataka	Bhadra	1964	1968.40	2025.87	--	1(2012)	1.035	D.S -20.10 L.S-75.64 G.S-95.75	4.73	0.10	4.24	8.35	Written Answers to
31. Panchet/ Jharkhand	Damodar	1956	10966	1580.94	0.667	7 (2012)	0.80	D.S -130.8 L.S -84.26 G.S -387.5	24.54	0.45	44	55.40	
32. Ranapratap sagar/ Rajasthan	Chambal	1970	25305	3128.11	--	1 (2012)	0.416	D.S -238.6 L.S-0.00 G.S -238.6	7.63	0.19	--	16.89	
33. Upper Kolab/ Odisha	Kolab	1986	1630	1215	0.70	1 (2012)	3.461	D.S -65.24 L.S -75.81 G.S -141.1	11.61	0.46	8.11	23.30	[13 AUG, 2012]
34 Bhima/ Maharashtra	Bhima	1977	14858	3320	--	1(2012)	1.013	D.S.-3 15.52 L.S.-108.39 G.S.-423.91	12.77	0.38	7.14	17.50	Unstarred Questions
35. Durgapur	Damodar	1955	2295	6.14	--	1(2011)	0.042	D.S.-3.252 L.S.-2.161 G.S.- 5.413	45.56	0.816	20.67	56.56	
36. Dudhwa	Mahanadi	1964	625.27	288.65	--	1(2011)	0.95	D.S.-3.498 L.S.-25.02 G.S.- 28.518	9.88	0.21	8.81	77.22	