

# 14.Storage Infrastructure





## 14. STORAGE

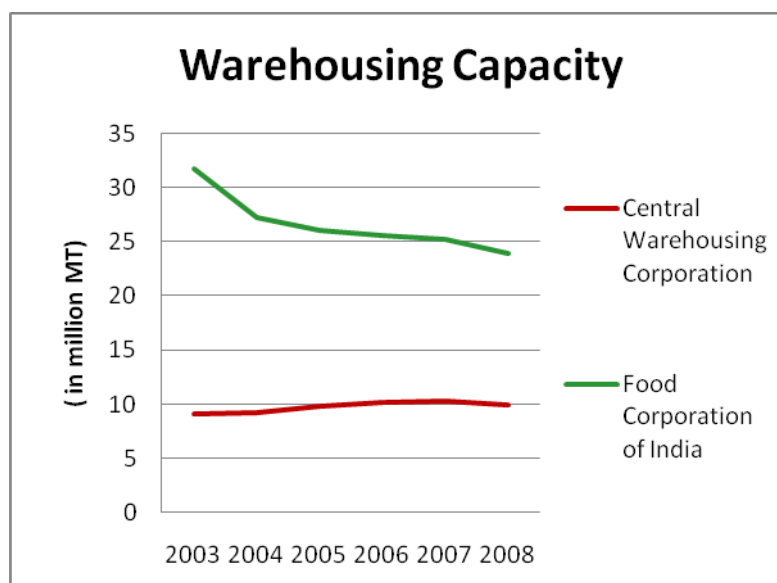
14.1 There is no specific data source for this item, which compiles data for all types of storages in one place. Data has been individually obtained from Central Warehousing Corporation, website of the Food Corporation of India and website of the Agricultural Marketing Information Network (AGMARKNET) and Transport Research Wing (TRW) of the M/o Shipping. As of now for this sector only capacity indicators have been compiled which were readily available.

14.2 Liquid Storage data for major ports, as supplied by the TRW is expressed in terms of different weight and volume units, hence could not be totaled up to obtain total liquid storage capacity at major ports (Table 14A.5).

14.3 Unless otherwise stated the analytical highlights given below are based on Table 14.0 on "Trends in Indicators of Storage Infrastructure".

### Capacity

14.4 Storage capacity with CWC is not showing much increase during 2003-2008. The total warehousing capacity increased from 9.15 million MT to 9.93 million MT during the period showing a CAGR of 1.65%. Foodgrain storage capacity under CWC declined from 3.92 million MT to 2.77 million MT. However capacity in terms of number of containers handled increased from 549 thousand TEU to 942 thousand TEU during the period showing a CAGR of 11%.



14.5 Storage capacity with FCI decreased from 31.73 million MT in 2003 to 27.71 million MT in 2009.

FCI has both owned and hired storage capacity. Hired storage capacity varies from year to year. It varied from 0.03 million MT to 13.77 million MT during 2003 to 2009 (Table 14A.2). Cold storage capacity with AGMARKNET increased from 23.66 million MT as on 30.4.08 to 26.53 as on 30.4.09 (Table 14A.3).

14.6 As on 31<sup>st</sup> March 2008, there was 3.59 million sq. metre of covered dry storage capacity and about 9 million sq. metre of open dry storage capacity at major ports.(Table 14A.5).

**Table 14.0: Trends in Indicators of Storage Infrastructure**

Sl. No.	Types of Storage	Indicators	2003	2004	2005	2006	2007	2008	2009	CAGR
			( Reference Date / Period - As on 31st March for Stock Variables - Financial Year ending on 31st March for Flow Variables)							
<b>A</b>			<b>ACCESS</b>							
1	Cold Storages of Central Warehousing Corporation	Number	3	3	3	3	3	3	-	0
		Capacity (in Million Tonnes)	0.002	0.002	0.002	0.002	0.002	0.002	0.002	-
2	Food grain Storage against total CWC Capacity	Capacity (in Million Tonnes)	3.92	2.44	2.50	2.65	2.84	2.77	-	-6.75
3	Warehouses	Number	471	464	484	507	511	490	-	0.79
		Capacity (in Million Tonnes)	9.15	9.26	9.81	10.21	10.27	9.93	-	1.65
4	Container Depots	Number	32	29	31	33	32	33	-	0.62
		Capacity(No. of containers handled in '000 TEU's)	548.62	651.11	782.32	908.47	773.54	941.87	-	11.42
5	FCI (As on 1st April)	Capacity (in Million Tonnes)	31.73	27.24	26.03	25.55	25.2	23.89	-	-5.52
<b>B</b>			<b>QUALITY</b>							
6	Storage Capacity with FCI (in million tonnes) (As on 1st April)									
	Covered	Owned	12.82	12.82	12.91	12.93	12.94	12.95	12.97	0.19
		Hired	13.77	10.85	10.46	9.9	9.34	8.71	12.01	-2.25
	CAP (Cover and Plinth)	Owned	2.26	2.21	2.25	2.21	2.29	2.2	2.31	0.37
		Hired	2.88	1.36	0.41	0.51	0.63	0.03	0.42	-27.45

Source :Material supplied by Central Warehousing Corporation

**Table 14A.1 : Statewise Foodgrain Storage Capacity, Cold Storages, Warehouses and Container Depots as on 31.3.08**

Sl. No.	State/UTs	Foodgrain Storages(in MT)	Cold Storages (in number)	Warehouses (in number)	Container Depots (in number)
1	Andhra Pradesh	371357		48	2
2	Arunachal Pradesh				
3	Assam	34987	1	6	
4	Bihar	61754		17	
5	Chhattisgarh	243813		12	
6	Goa	0		2	
7	Gujarat	106899		28	7
8	Haryana	273039		31	
9	Himachal Pradesh	5150		3	
10	Jammu & Kashmir				
11	Jharkhand	14000		4	
12	Karnataka	113545		30	2
13	Kerala	7375		10	
14	Madhya Pradesh	165622		28	
15	Maharashtra	118828	1	62	9
16	Manipur				
17	Meghalaya				
18	Mizoram				
19	Nagaland	6597		1	
20	Orissa	92841		11	
21	Punjab	303033		27	
22	Rajasthan	64336		35	
23	Sikkim				
24	Tamil Nadu	128771		25	5
25	Tripura	13000		2	
26	Uttar Pradesh	599972		51	3
27	Uttarakhand	34354		6	
28	West Bengal	92505	1	37	2
	<b>State Total</b>	<b>2851778</b>	<b>3</b>	<b>476</b>	<b>30</b>
	<b>Union Territories</b>				
1	A & N Islands	0		1	
2	Chandigarh	6530		1	
3	Dadar & Nagar Haveli				
4	Daman & Diu				
5	Delhi	10000		11	5
6	Lakshadweep				
7	Puducherry	2027		1	
	<b>UT Total</b>	<b>18557</b>		<b>14</b>	<b>5</b>
	<b>India Total</b>	<b>2870335</b>	<b>3</b>	<b>490</b>	<b>35</b>

Source: Material supplied by Central Warehousing Corporation

**Table 14A.2 : Storage Capacity (Covered and Cover & Plinth) with FCI as on 1st April**

	(in Million Tonnes)						
Type	2003	2004	2005	2006	2007	2008	2009
<b>Covered</b>							
Owned	12.82	12.82	12.91	12.93	12.94	12.95	12.97
Hired	13.77	10.85	10.46	9.9	9.34	8.71	12.01
<b>Total</b>	<b>26.59</b>	<b>23.67</b>	<b>23.37</b>	<b>22.83</b>	<b>22.28</b>	<b>21.66</b>	<b>24.98</b>
<b>CAP (Cover and Plinth)</b>							
Owned	2.26	2.21	2.25	2.21	2.29	2.2	2.31
Hired	2.88	1.36	0.41	0.51	0.63	0.03	0.42
<b>Total</b>	<b>5.14</b>	<b>3.57</b>	<b>2.66</b>	<b>2.72</b>	<b>2.92</b>	<b>2.23</b>	<b>2.73</b>
<b>Grand Total</b>	<b>31.73</b>	<b>27.24</b>	<b>26.03</b>	<b>25.55</b>	<b>25.2</b>	<b>23.89</b>	<b>27.71</b>

Source: www.fciweb.nic.in

**Table 14A.3 : Statewise and Sectorwise Distribution of Cold Storages As On 31.12.08**

Sl.No	State/UT	Private Sector		Cooperative Sector		Public Sector		Total	Total Capacity in MTs
		No.	Capacity (in MT)	No	Capacity (in MT)	No	Capacity (in MT)		
1	Andhra Pradesh	265	860907	11	11598	10	3451	286	875956
2	Arunachal Pradesh	1	5000	0	0	0	0	1	5000
3	Assam	19	85948	1	1000	4	1120	24	88068
4	Bihar	242	1362429	18	77200	0	0	260	1439629
5	Chhattisgarh	63	286136	1	29	1	41	65	286206
6	Gujarat	351	1075148	21	30669	5	6437	377	1112254
7	Goa	29	7705	0	0	0	0	29	7705
8	Haryana	233	377319	4	3403	6	11399	243	392121
9	Himachal Pradesh	9	12896	2	767	7	6195	18	19858
10	Jammu & Kashmir	15	40689	3	2134	1	46	19	42869
11	Jharkhand	37	142733	8	27415	0	0	45	170148
12	Kerala	170	54360	6	1080	11	1690	187	57130
13	Karnataka	126	405393	18	6689	17	9594	161	421676
14	Maharashtra	373	525126	55	25346	32	13724	460	564196
15	Madhya Pradesh	167	692724	20	101348	5	2434	192	796506
16	Manipur								
17	Meghalaya	1	1200	0	0	2	2000	3	3200
18	Mizoram	0	0	0	0	0	0	0	0
19	Nagaland	1	5000	1	1150	0	0	2	6150
20	Orissa	83	252097	26	55550	0	0	109	307647
21	Punjab	402	1298425	18	39092	0	0	420	1337517
22	Rajasthan	97	310901	9	3832	1	14	107	314747
23	Sikkim	0	0	0	0	0	0	0	0
24	Tamil Nadu	122	224129	13	7562	4	5162	139	236853
25	Tripura	3	12750	1	5000	7	11700	11	29450
26	Uttar Pradesh								
27	Uttarakhand	1501	8770530	87	281480	3	8000	1591	9060010
28	West Bengal	481	5647259	50	302000	0	0	531	5949259
<b>Union Territories</b>									
1	A & N Islands	1	170	0	0	1	40	2	210
2	Chandigarh	5	11216	1	1000	0	0	6	12216
3	Dadar & Nagar Haveli								
4	Daman & Diu								
4	Delhi	76	103250	2	5201	16	17680	94	126131
7	Lakshadweep	0	0	0	0	1	15	1	15
8	Puducherry	2	35	1	50	0	0	3	85
<b>India Total</b>		<b>4875</b>	<b>22571475</b>	<b>37</b>	<b>990595</b>	<b>13</b>	<b>100742</b>	<b>5386</b>	<b>2366281</b>
				<b>7</b>		<b>4</b>			<b>2</b>

Source : www.agmarknet.nic.in



**Table 14A.4 : Statewise Storage Capacity with FCI as on 30.04.09**

(in million tonnes)

Sl. No.	State/UTs	Covered						CAP (Open)			Grand Total	Utilisation %	
		FCI Owned	Hired From				Total Hired	Total Covered	Owned	Hired			Total
			State govt.	C.W.C	S.W.C	Pvt. Parties							
1	Andhra Pradesh	1.27	0	0.341	1.511	0.045	1.897	3.163	0.262	0	0.262	3.425	85
2	Arunachal Pradesh	0.02	0.002	0	0	0	0.002	0.02	0	0	0	0.02	45
3	Assam	0.21	0	0.017	0.01	0.039	0.066	0.273	0	0	0	0.273	69
4	Bihar	0.37	0.003	0.066	0.079	0.048	0.196	0.562	0	0	0	0.562	76
5	Chhattisgarh	0.51	0.013	0.022	0.119	0.1	0.254	0.766	0	0.168	0.168	0.934	98
6	Goa	0.02	0	0	0	0	0	0.015	0	0	0	0.015	113
7	Gujarat	0.50	0.014	0.07	0	0	0.084	0.584	0.026	0	0.026	0.61	81
8	Haryana	0.77	0.384	0.216	0.407	0.255	1.262	2.03	0.321	0.011	0.332	2.362	87
9	Himachal Pradesh	0.01	0.006	0.005	0	0	0.011	0.025	0	0	0	0.025	60
10	Jammu & Kashmir	0.10	0.016	0	0	0.01	0.026	0.129	0	0	0	0.129	81
11	Jharkhand	0.07	0.002	0.013	0.017	0.02	0.052	0.118	0	0	0	0.118	79
12	Karnataka	0.38	0	0.115	0.125	0	0.24	0.618	0.135	0	0.135	0.753	90
13	Kerala	0.52	0	0	0	0	0	0.517	0	0	0	0.517	78
14	Madhya Pradesh	0.34	0.026	0.161	0.188	0.134	0.509	0.846	0.035	0	0.035	0.881	84
15	Maharashtra	1.18	0.013	0.207	0.203	0.088	0.511	1.688	0.092	0	0.092	1.78	70
16	Manipur	0.02	0	0	0	0	0	0.02	0	0	0	0.02	30
17	Meghalaya	0.01	0	0.007	0.005	0	0.012	0.026	0	0	0	0.026	50
18	Mizoram	0.02	0.001	0	0	0	0.001	0.023	0	0	0	0.023	39
19	Nagaland	0.02	0	0.012	0	0	0.012	0.032	0	0	0	0.032	81
20	Orissa	0.29	0	0.104	3	0.015	3.119	3.412	0	0	0	3.412	85
21	Punjab	2.18	0.003	0.344	2.742	0.388	3.477	5.661	0.62	0.328	0.948	6.609	84

**Table 14A.4(contd.) : Statewise Storage Capacity with FCI as on 30.04.09**

Sl. No.	State/UTs	(in million tonnes)										Grand Total	Utilisation %
		Covered					CAP (Open)						
		FCI Owned	Hired From			Total Hired	Total Covered	Owned	Hired	Total			
State govt.	C.W.C	S.W.C	Pvt. Parties										
22	Rajasthan	0.71	0	0.126	0.213	0.105	0.444	1.15	0.158	0.069	0.227	1.377	78
23	Sikkim	0.01	0.001	0	0	0	0.001	0.011	0	0	0	0.011	82
24	Tamil Nadu	0.58	0	0.224	0.05	0	2.74	8.54	0.058	0	0.058	8.598	102
25	Tripura	0.03	0.005	0.017	0	0	0.022	0.049	0	0	0	0.049	55
26	Uttar Pradesh	1.50	0.007	0.215	0.444	0.023	0.689	2.184	0.415	0.01	0.425	2.609	59
27	Uttarakhand	0.07	0.027	0.044	0.056	0.005	0.132	0.198	0.009	0.012	0.021	0.219	87
28	West Bengal	0.86	0.02	0.092	0	0.087	0.199	1.058	0	0	0	1.058	89
<b>Union Territories</b>													
1	A & N Islands	0.01	0	0	0	0	0	0.007	0	0	0	0.007	71
2	Chandigarh	0.04	0	0.046	0.02	0	0.066	0.106	0.008	0.017	0.025	0.131	95
3	Dadar & Nagar Haveli	0.00	0	0	0	0	0	0	0	0	0	0	0
4	Daman & Diu										0	0	
5	Delhi	0.34	0	0	0	0	0	0.336	0.034	0	0.034	0.37	95
6	Lakshadweep	0.00	0	0	0	0	0	0	0	0	0	0	0
7	Puducherry	0.04	0	0	0.002	0	0.002	0.046	0.008	0	0.008	0.054	87
<b>India Total</b>		<b>12.97</b>	<b>0.54</b>	<b>2.46</b>	<b>9.19</b>	<b>1.36</b>	<b>13.56</b>	<b>34.21</b>	<b>2.18</b>	<b>0.62</b>	<b>2.796</b>	<b>37.01</b>	<b>82</b>

Source: www.fciweb.nic.in

**Table 14A.5: Storage Facilities Available at Major Ports (As on 31.3.2008)**

Sl. No.	Port	Dry Storage Accomodation					Liquid Storage Tanks		
		Covered area		Open Area		Container Yard		Capacity	Type of Cargo
		No.	Area/ Capacity (m <sup>2</sup> )	No.	Area/ Capacity (m <sup>2</sup> )	No.	Area/ Capacity		
1	Kandla	31	143231		1627808				
2	Mumbai	66	310862		309789	8534 Slots	341089 KL 144100 T	POL / Slop / HSD / SKO / FO / Chemical / Lube Oil Molasses / Veg. Oil / LPG	
3	Mormugao	11	49812		325389		253506 KL	Molasses, CausticSoda, F. Oil / POL Products / Phosphoric Acid	
4	New Manglore	15	43944				15000 T 232009 KL 48500 T	Ammonia / Liquid Products Chemicals / POL/ Molasses/ Edible Oil Phosphoric Acid / Ammonia/ Edible Oil / Cement Silos	
5	J. L. Nehru	15	2087158		1422614		629990 MT	A,B,C class of chemicals, POL Products, Edible Oil & other liquids.	
6	Cochin	17	50546	8	149750		274111 KL	Chemical, POL / Edibile Oil	
7	Tuticorin	25	503092	2	568700	1	54000 TEUs 22000 M <sup>3</sup> 25000 T 109810 KL	Phosphoric Acid / Vinyl Chloride, Monomer LPG / Ammonia Naptha / Diesel (HSD) / Kerosene / Ethylene Di - Chloride /DNS / Petrol / LSFO / Furnace Oil / LSHF / HSD	
8	Chennai	17	125816		731672		152397 KL	Edible Oil , Palm oil & NHCL / Phosphoric Acid, Lube Oil and Black & White Oil	
9	Vishakhapatnam	14	65307		1221548		1424950 T	POL & Ethonel / Crude / LPG / Sulphuric Acid,P.Acid,Ammonia / Sulphur & Caustic Soda Products / Edible Oil, chemicals Sulphuric Acid, Ethanol, Molasses.	
10	Paradip	14	36100		1700000		532000 KL	POL / FRM	
11	Kolkata Dock System	32	145516				554662 KL	Vegetable Oil / POL / Chemicals	
12	Haldia Dock Complex	5	25040	11	892840			HDC does not have Liquid storage facilities	
13	Ennore			1	42000				
<b>Total</b>		<b>262</b>	<b>3586424</b>	<b>22</b>	<b>8992110</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>

Source : Material supplied by TRW,M/o Shipping

14.Storage

Accessibility