



सत्यमेव जयते

**REPORT  
OF  
WORKING GROUP  
ON  
WAREHOUSING DEVELOPMENT AND REGULATION  
FOR THE TWELFTH PLAN PERIOD (2012-17)**

**GOVERNMENT OF INDIA  
PLANNING COMMISSION  
NEW DELHI**

**OCTOBER, 2011**

## **TABLE OF CONTENTS**

<b>Preface</b>	<b>v-vii</b>
<b>Executive Summary</b>	<b>viii-xi</b>
<b><u>CHAPTER – I</u></b>	<b>1-2</b>
<b>Introduction of Negotiable Warehouse Receipt System</b>	
1.1. Report of All India Rural Credit Survey	
1.2. Expert Committee on Agricultural Marketing	
1.3. Inter-Ministerial Task Force On Marketing Reforms	
1.4. Report of the Working Group on Warehouse Receipts & Commodity Futures, April, 2005	
<b><u>CHAPTER – II</u></b>	<b>3-4</b>
<b>Current Status of Warehousing Capacity in India</b>	
2.1. Need for modern warehousing in India.	
2.2. Procurement of wheat and rice during last five Rabi and Kharif Marketing Seasons.	
<b><u>CHAPTER – III</u></b>	<b>5-7</b>
<b>Negotiable Warehouse Receipt (WHR) System and its impact on agri-business</b>	
3.1. Salient Features of Warehousing (Development and Regulation) Act, 2007	
3.2. Regulation of warehousing business	
3.3. Requirement for registration of warehouses	
3.4. Advantages of Registered warehouses with the Authority	
3.5. Advantages of Negotiable Warehouse Receipts over Non-negotiable WHR	
3.6. Electronic Warehouse Receipts	
<b><u>CHAPTER – IV</u></b>	<b>8-9</b>
<b>National Policy on Handling, Storage and Transportation of Foodgrains</b>	
4.1. Main Objectives of the Policy	
4.2. Facilities for Central Pool Stocks	
4.3. Private Sector Participation	

**CHAPTER – V****10-13****Warehousing Sector – Initiatives, Constraints and future role of WDRA**

- 5.1. Private Entrepreneurs Godown (PEG), 2008 Scheme
- 5.2. Gramin Bhandaran Yojana (Construction of Rural Godowns)
- 5.3. Scheme for Financing Warehousing Infrastructure under Rural Infrastructure Development Fund (RIDF)
- 5.4. Capacity Building Programme in Warehousing Sector
- 5.5. Financial support to Public Private Partnership (PPP) in Infrastructure
- 5.6. Constraints and Impediments in setting up of Warehouses
- 5.7. Future Role of Warehousing Development and Regulatory Authority

**CHAPTER – VI****14-18****Post Harvest Schemes for Minimizing foodgrain losses**

- 6.1. Traditional Rural Storage Structures
- 6.2. Improved Storage Structures
- 6.3. Storage losses at farm level
- 6.4. Save Grain Campaign
  - 6.4.1. Stipendiary Training Programme for Farmers
- 6.5. Post-Harvest Technology and Management Scheme of Ministry of Agriculture, Government of India
- 6.6. Need for Post Harvest Scheme for Farmers

**CHAPTER – VII****19-27****Recommendations of the Working Group:**

- 7.1. Rebate on storage charges for small and marginal farmers
- 7.2. Incentives on staggered procurement of foodgrains
- 7.3. Post-Harvest Management Loan
- 7.4. Incentives on the purchase of scientific storage structures
- 7.5. Incentives on the purchase of pesticides for scientific storage of foodgrains and other agricultural commodities
- 7.6. Stipendiary Training Programme for farmers on scientific storage
- 7.7. Publicity Programmes on Scientific Storage

- 7.8. Incentives to aggregators at village level
- 7.9. Liberalization of Rural Godown Scheme
- 7.10. Status of Full-fledged infrastructure for warehousing
- 7.11. Financial Support under Viability Gap Funding (VGF)
- 7.12. Warehouses to be declared as Mandis.
- 7.13. Agriculture Economic Zones
- 7.14. Development of Modern Storage Infrastructure
- 7.15. Simplification of procedure for conversion of land use
- 7.16. Procurement of foodgrains through NWR.
- 7.17. Targets for lending against NWR for banks
- 7.18. Setting up Market Information Network
- 7.19. Capacity Building Programme in Warehousing Sector
- 7.20. Integration of PACs with NWR system
- 7.21. Linkage of Rural Godown Scheme with NWR system
- 7.22. Indemnity Fund
- 7.23. Agri-Logistic Parks
- 7.24. Studies for the assessment of post-harvest losses at farm level for important agricultural commodities.
- 7.25. Cold storages in the negotiable warehouse receipt system.
- 7.26. Encouraging registration of all warehouses

## **Annexures**

## PREFACE

Warehousing plays a very vital role in promoting agriculture marketing, rural banking and financing and ensuring Food Security in the country. It enables the markets to ease the pressure during harvest season and to maintain uninterrupted supply of agricultural commodities during off season. Hence, it solves the problems of glut and scarcity, which are the usual problems in agricultural marketing. Though warehousing is an independent economic activity, yet is closely linked with production, consumption and trade. Development of agro processing agricultural marketing needs a strong warehousing system. Warehousing is the most important auxiliary service for development of trade and commerce.

There had been lack of sustained investment in the warehousing sector. The private sector initiatives were small and sporadic in this sector. Besides, most of the private sector warehousing capacities available in the country were of poor quality, small, fragmented and do not meet the requisite infrastructure standards.

Warehousing is a capital intensive sector and without availing finance from banks and other financial institutions, warehousing facilities cannot be created by the entrepreneurs. Besides, land requirements for construction of the warehouses are difficult to meet now-a-days due to high cost of land. Although 100% FDI and some benefits are allowed for the warehousing sector, there has been moderate growth in the private warehousing sector.

About 80% handling and warehousing facilities are not mechanized and traditional manual methods for loading, unloading and handling of foodgrains and other commodities are used. However, the warehouses which are mechanized have just forklifts or hydraulic hand pallet trucks. These numbers clearly indicate that there is an acute shortage of organized and good quality warehousing and storage infrastructure in the country, for both, agricultural and non agricultural commodities.

In the context of the formulation of the 12<sup>th</sup> Five Year Plan, it was decided by the Planning Commission to constitute a Working Group on Warehousing Development & Regulation for the 12<sup>th</sup> Plan Period, with the following composition:-

- |  |   |          |
|--|---|----------|
| 1. Sh. Dinesh Rai,<br>Chairman,<br>Warehousing Development and<br>Regulatory Authority       | - | Chairman |
| 2. Sh. Rajinder Tiwari,<br>Joint Secretary & AMA,<br>Deptt. of Agriculture & Cooperation     | - | Member   |
| 3. Sh. Girish Shanker,<br>Joint Secretary (Storage),<br>Deptt. Of Food & Public Distribution | - | Member   |

4. Sh. Umesh Kumar, Joint Secretary, Deptt. of Financial Services	-	Member
5. Sh. S. K. Mitra, Executive Director, NABARD	-	Member
6. CMD (or his representative), Punjab National Bank	-	Member
7. Sh. B. B. Pattanaik, Managing Director, Central Warehousing Corporation	-	Member
8. Dr. Amar Singh, Executive Director, (Storage), Food Corporation of India	-	Member
9. Sh. D. Basavaraju, Managing Director, Karnataka State Warehousing Corporation	-	Member
10. Sh. Sanjay Kaul, MD & CEO, National Collateral Management Services Ltd. (NCMSL)	-	Member
11. Smt. Ravneet Kaur, Joint Secretary, WDRA	-	Member Secretary

**The Terms of Reference of the Working Group were as follows:**

1. To suggest the approach towards orderly growth of the warehousing business and regulation thereof during the 12<sup>th</sup> Plan Period.
2. To develop an integrated post-harvest management system including concept of Negotiable Warehousing Receipts and financing thereof.

A copy of order dated 18.07.2011 issued by the Planning Commission for constitution of the Working Group on Warehousing Development and Regulation for the 12<sup>th</sup> Plan Period (2012-17) is annexed (Annexure-I).

The Working Group had extensive deliberations with the members in three meetings held on 24.08.2011, 08.09.2011 and 30.09.2011 and presentations were made before the Working Group by the various technical experts. The Chairman and Member Secretary of the Working Group also held meetings with the senior officers of Reserve Bank of India, Private Banks and NABARD at Mumbai on 21<sup>st</sup> and 22<sup>nd</sup> September, 2011

for their considered views on the various issues related to development of warehousing sector and agri-financing.

The report has been structured keeping in view the Terms of References identified by the Planning Commission and divided accordingly into 7 chapters covering various aspects of the warehousing sector.

I personally, feel honored and thankful to the Planning Commission particularly to Sh. Saumitra Chaudhuri, Member Planning Commission for giving me the opportunity to head the Working Group on the Warehousing Development and Regulation for the 12<sup>th</sup> Plan Period (2012-17). I am also thankful to Dr. Yogesh Suri, Adviser (DP) for his advice, support and useful suggestions.

My special thanks are due to Smt. Ravneet Kaur, Joint Secretary, WDRA and Member Secretary of the Working Group for providing all the support and involvement in organizing the meetings and finalizing the report.

Thanks are also due to all the Members of the Working Group and especially Sh. B. B. Pattanaik, MD, CWC and Sh. Sanjay Kaul, MD & CEO, NCMSL for participating in the meetings and sharing their views. I shall also like to record my thanks to Sh. Karnail Singh, Sh. B. K. Bal, Members and Dr. Ashok Kumar, Consultant, WDRA for providing their technical inputs in drafting the report.

I hope this report would prove to be useful document for finalizing the policies and programmes for the holistic development and regulation of the warehousing sector in the country during the 12<sup>th</sup> Plan Period (2012-17).

(Dinesh Rai)  
Chairman

Working Group on

Warehousing Development and Regulation

Dated: .10.2011

## EXECUTIVE SUMMARY

The All India Rural Credit Survey appointed by the RBI in 1951 and the Expert Committee on Agriculture Marketing appointed by the Ministry of Agriculture in 2000 recommended creation of scientific storage facilities for the farmers and developing a negotiable warehouse receipt system to facilitate credit to the farmers. The Inter-Ministerial Task Force on Marketing Reforms constituted by the Ministry of Agriculture and Working Group on Warehouse Receipts & Commodity Futures constituted in April, 2005 also recommended for introducing negotiable warehouse receipt system with legal backup in the country.

The warehousing capacity available in India, in public, cooperative and private sector is about 108.75 million MTs and as estimated by the Sub Group on Warehousing and Bulk Handling set up by the Working Group on Agricultural Marketing, Secondary Agriculture and Policy required for internal and external trade, additional 35 million MTs warehousing capacity is required during the 12<sup>th</sup> Five Year Plan period for the storage of all major crops.

The Government of India has introduced a negotiable warehouse receipt system in the country. The Warehousing (Development and Regulation) Act, 2007 had been made effective from 25<sup>th</sup> October, 2010. As provided in the Act, the Warehousing Development and Regulatory Authority has been set up by the Government from 26<sup>th</sup> October, 2010.

With a view to reduce storage and transit losses of foodgrains at farm and commercial level, the Government of India had approved a National Policy on Handling, Storage and Transportation in June, 2000. Under the policy, integrated bulk grain handling, storage and transportation facilities to the tune of 5.5 lakh MTs had been created through private sector participation on Build-Own-Operate (BOO) basis.

About 65-70% of total foodgrains produced in the country are stored at farm level. There are estimates that substantial quantity of foodgrains (about 6.0% to 10% of total production) are damaged due to moisture, insects, rodents and fungi. The Working Group observed that Government of India should formulate a comprehensive Post Harvest Scheme for the farmers at the national level.

The Working Group studied the various initiatives taken for the development of the warehousing sector. These include the Private Entrepreneurs Godown (PEG), 2008 Scheme. The Government had formulated this scheme for creation of additional storage capacity for foodgrains through private sector participation in 2008. Under the scheme, there is a proposal for creation of 15.29 million MTs storage capacity in 19 States through private sector participation and CWC/SWCs. The Gramin Bhandaran Yojana is aimed at the construction/renovation of rural godowns, so as to create scientific storage capacity with allied facilities in rural areas to meet the requirements of farmers for storing farm produce. Under the scheme, subsidy is provided for construction/renovation of rural godowns. An allocation of Rs. 2000 crores has

been announced by the Government of India for the setting up of warehousing infrastructure in the country under the scheme for Financing Warehousing Infrastructure under Rural Infrastructure Development Fund (RIDF). Loans to Government entities and private sector would be given for the construction of warehouses. Further, capital investment in the creation of modern storage capacity including cold chains and post-harvest storage has been included in the list of infrastructures under the scheme of financial support to Public Private Partnership (PPP) in Infrastructure.

The Working Group noted that there is an acute shortage of trained manpower in warehousing, both in public and private sectors. Moreover, they are not familiar with the code of practices of scientific storage of agricultural and other commodities. A comprehensive course content for different category of staff engaged in warehousing activities needs to be prepared and training should be arranged through some expert institutions.

Warehousing is a capital intensive sector and without availing finance from banks and financial institutions at cheaper interest rate, warehousing facilities cannot be created by the entrepreneur. Land requirements for constructing the warehouse are difficult to meet due to high rising cost of land in urban, semi urban and rural areas. Warehousing has not been accorded the status of full-fledged infrastructure and all financial and other benefits available to infrastructure sector are not available for warehousing sector. Further the storage charges and other handling charges offered by the Government agencies to private warehouse operators are not attractive. It was also stated that modern technology has not been introduced in the warehousing sector.

It was mentioned that the Warehousing Development and Regulatory Authority should not play the role of a regulatory body only by registering warehouses interested to issue negotiable warehouse receipt. It should play a vital role in developing an orderly, robust and reliable warehousing system in the country. The authority should encourage testing and grading of perishable agricultural commodities so that consumers may get good quality of fruits and vegetables. To develop efficiency and expertise among the warehousemen, intensive training programmes for the officials of warehouses, both public and private, should be initiated by the Authority in collaboration of some expert institutions. It is desirable that the WDRA proactively encourages registration of all warehouses receiving deposit of goods of others.

The Working Group held three meetings on 24.8.2011, 8.9.2011 and 30.9.2011 wherein detailed discussions were held among the members on the issues mentioned above. Presentation on integration of godowns of PACS with NWR system, Indemnity Fund and logistics parks were made by the experts from WDRA and CWC. The Chairman and Member Secretary of the Working Group discussed the various issues like extension of crop loan facilities to post harvest loan against NWRs, integration of PACS godowns with NWR system, RIDF loan for warehousing sector, liberalization of Gramin Bhandaran Yojana with senior officers of RBI, NABARD and private banks on 21<sup>st</sup> and 22<sup>nd</sup> September, 2011 at Mumbai.

After detailed deliberations, the Working Group made the following recommendations in its 3<sup>rd</sup> meeting held on 30.9.2011:

- (i) A comprehensive "Post-Harvest Management Scheme at farm level" should be initiated by Government of India for minimizing post-harvest losses in foodgrains and other agricultural commodities covering incentives on purchase of scientific storage structures, purchase of pesticides for scientific storage, publicity programmes and stipendiary programme for farmers.
- (ii) Rebate on storage charges for small and marginal farmers by Government and Private Warehouses should be allowed to attract farmers for storage of agricultural produce in warehouses.
- (iii) Government of India may consider for some incentives to farmers over and above the MSP on staggered procurement of foodgrains to avoid glut in the markets/mandis during the peak marketing season.
- (iv) Post-harvest loans against NWRs may be provided with interest subvention on timely repayment of loan on the pattern of crop loans to farmers.
- (v) Targets should be fixed for banks and financial institutions for lending against NWRs to increase agriculture financing.
- (vi) Incentives for aggregators at village level viz. cooperatives, self help groups, farmers/producers companies may be considered so that they may collect agriculture produce from small farmers and deposit the same in registered warehouses.
- (vii) The Rural Godown Scheme may be liberalized by revising the capital cost and increasing the maximum capacity of the warehouses upto 25,000 MTs. The subsidy component @ 25% of Project cost may be fixed upto 10,000 MTs capacity and it may be reduced to half i.e. 12.5% beyond 10,000 MTs and upto 25,000 MTs.
- (viii) Warehousing sector should be given the status of full-fledged infrastructure so that tax benefits and other concessions allowed to infrastructure sector may also be availed by the warehousing sector.
- (ix) The Central and State Agencies like CWC and SWCs may take the lead in inviting private entrepreneurs for the construction of warehouses under Viability Gap Funding (VGF) scheme.
- (x) Setting up of Agricultural Economic Zones (AEZs) on the lines of Special Economic Zones (SEZs) may be allowed by the Government.
- (xi) Warehouses may be declared as mandis by the State Governments.
- (xii) The Government may encourage development of modern integrated storage facilities for the storage of foodgrains and other agricultural commodities.
- (xiii) The procedures for conversion of land use need to be simplified.
- (xiv) Procurement of foodgrains through NWR may be taken up in a few districts in some DCP States on a pilot basis.
- (xv) There is a need for setting up of Market Information Network for the benefit of farmers/traders.
- (xvi) Capacity building programmes for warehousing sector may be initiated by the WDRA.

- (xvii) There is a need to integrate godowns of PACS with NWR system so that the benefits of NWR may also be availed by the small and marginal farmers.
- (xviii) Linkage of Rural Godown Scheme with NWR system will help farmers in seeking loan from banks against NWR.
- (xix) A study through some professional organization for creation of Indemnity Fund for warehousing sector may be conducted.
- (xx) Planning Commission may identify the Ministry/Department for formulating the schemes for the regulation and development of Agri-Logistic Parks in the country.
- (xxi) WDRA may proactively encourage the registration of all warehouses receiving deposit of goods of others.
- (xxii) Study for the assessment of post-harvest losses in important agricultural commodities may be got conducted through some professional institution.
- (xxiii) WDRA may formulate regulations for the inclusion of cold storages/temperature controlled warehouses in the negotiable warehouse receipt system.

\*\*\*



## CHAPTER – I

### Introduction of Negotiable Warehouse Receipt System

#### 1.1. Report of All India Rural Credit Survey:

The Reserve Bank organized a comprehensive All-India Rural Credit Survey under the directions of a Committee (Chairman: A. D. Gorwala) appointed in 1951. The recommendations of the Committee, which submitted its report in 1954, set the pace and directions for subsequent years not only for the Bank's agricultural credit policy but also for the related policies of Central and State Governments. The Committee in its report submitted in 1954 recommended for:

- i) Creation of scientific storage facility for farmers near their door step to avoid storage losses in agriculture produce which were estimated to be around 9.6%.
- ii) Creation of negotiable warehouse receipt system to facilitate credit to farmers.

#### 1.2. Expert Committee on Agricultural Marketing:

The Government of India in the Ministry of Agriculture had appointed an Expert Committee on 19<sup>th</sup> December, 2000 to review the present system of agricultural marketing in the country and to recommend measures to make the system more efficient and competitive under the Chairmanship of Sh. S. L. Guru. The Committee in its Report dated 29<sup>th</sup> June 2001, had suggested various legislative reforms as well as the reorientation of policies and programs for development and strengthening of agricultural marketing in the country. One of the important recommendations made by the Committee was:

“A system of negotiable warehouse receipt also needs to be introduced in the country for agricultural commodities to improve credit delivery, better loan recovery and convenience in commodity management”.

#### 1.3. Inter-Ministerial Task Force On Marketing Reforms:

With a view to examine the findings and recommendations of the Expert Committee and to suggest measures to implement them, the Ministry of Agriculture constituted a Task Force on 4.7.2001 under the chairmanship of Sri RCA Jain, Additional Secretary in the Department of Agriculture & Cooperation.

The Task Force identified nine priority areas to work out a road map for strengthening the agricultural marketing system in the country and constituted a separate Group on each area. These areas were:

- a) Legal reforms;
- b) Direct marketing;
- c) Market infrastructure;
- d) Pledge financing;
- e) Warehousing receipt system;

- f) Forward and futures markets;
- g) Price support policy;
- h) IT in agricultural marketing and
- i) Marketing extension, Training and Research.

The Working Group constituted by the Task Force on Warehouse Receipt under the Chairmanship of Sh. N. K. Chaube, the then MD of CWC recommended that there is a need to introduce a negotiable warehouse receipts system in the country, with large benefits such as increased liquidity in rural areas, lower costs of financing, shorter and more efficient supply chains, enhanced rewards for grading and quality, development of other productivity-enhancing agricultural services and better price-risk management. The Task Force recommended the enactment of a Central legislation on the pattern of The Multimodal Transportation of Goods Act, 1993 for making the warehouse receipt a fully negotiable instrument. The law should be framed in such a manner which gives full enforceability and transparency to the warehouse receipts.

#### **1.4. Report of the Working Group on Warehouse Receipts & Commodity Futures, April, 2005:**

In the Mid-term Review of the Annual Policy Statement for the year 2004-05, the then Governor, Reserve Bank of India announced constitution of a Working Group on Warehouse Receipts & Commodity Futures with a view to examine the role of banks in providing loans against warehouse receipts and evolving a framework for participation of banks in the commodity futures market. The Group had members from the Reserve Bank of India, Indian Banks' Association (IBA), Forward Markets Commission (FMC), NABARD and select banks such as State Bank of India, Punjab National Bank, Bank of Baroda and ICICI Bank Ltd.

The Working Group recommended that there has to be in place an appropriate legal, regulatory, and institutional environment to support the Warehouse Receipt system. There should be reliable warehouse certification, guaranteeing basic physical and financial standards. A national grading system for independent determination and verification of the quantity and quality of stored commodities should be in place.

## CHAPTER – II

### Current Status of Warehousing Capacity in India

The warehousing capacity available in India, in public, cooperative and private sector is about 108.75 million MTs. The warehousing capacity available in India, with various agencies/sectors is as follows:

S.No.	Name of the Organization /Sector	Storage Capacity in Million MTs
1.	Food Corporation of India (FCI)	32.05
2.	Central Warehousing Corporation (CWC)	10.07
3.	State Warehousing Corporations (SWCs)	21.29
4.	State Civil Supplies	11.30
5.	Cooperative Sector	15.07
6.	Private Sector	18.97
	<b>Total</b>	<b>108.75</b>

The storage capacity available with FCI and a part of the warehousing capacity available with CWC and SWCs is used for the storage of foodgrains procured by Government agencies for Central Pool. The storage space available in the country is not sufficient to cater to the procured stocks. As a result, a substantial quantity of foodgrains is stored in Cover and Plinth (CAP) Storage.

#### 2.1. Need for modern warehousing in India:

Due to record levels of procurement in the last four years, several States have been facing a problem of covered storage capacity. In the current Rabi Marketing Season (RMS) 2011-12, the Food Corporation of India (FCI) has procured more than 281.31 lakh tonnes of wheat which is around 30 lakh tonnes higher than the earlier record procurement. As on 01.06.2011, FCI is holding 65.5 million MTs of the wheat and rice which is the highest level, ever achieved. This is against the buffer and strategic norms of 319 lakh MTs of foodgrains.

#### 2.2. Since the year 2007-08, procurement of foodgrains (wheat and rice) by the Government agencies for Central Pool has increased substantially. The procurement of these commodities during last five years is given below:

Procurement of wheat during last five Rabi Marketing Seasons (RMS)

(Fig. in lakh MTs)

RMS 2007-8	RMS 2008-9	RMS 2009-10	RMS 2010-11	RMS 2011-12
111.28	226.89	253.82	225.25	281.44

Procurement of Rice during last five Kharif Marketing Seasons (KMS)  
(Fig. in lakh MTs)

KMS 2006-07	KMS 2007-08	KMS 2008-09	KMS 2009-10	KMS 2010-11
251.07	284.91	336.83	320.00	335.16 (as on 12.09.2011)

The procurement of wheat and rice viz. a viz. their production during last five years in the country is given below:

**(Fig. in Million MTs)**

<b>Year</b>	<b>Production (Wheat and Rice)</b>	<b>Procurement (Wheat and Rice)</b>
2006-07	169.2	36.2
2007-08	175.3	51.4
2008-09	179.9	59.1
2009-10	169.8	54.5
2010-11	178.3	59.2

Therefore, availability and augmentation of storage capacity is one of the main priorities of the Government of India. As per the estimates, additional 35 million MTs warehousing capacity is required in next 5 to 10 years. There is a need that sufficient modern warehousing capacity should be created in the country to store and preserve the foodgrains procured for Central Pool. Apart from this, there is also requirement for construction of storage facilities for agricultural inputs like seeds, fertilizers etc.

## CHAPTER – III

### Negotiable Warehouse Receipt (NWR) System

For the first time in the country, Government of India has introduced a negotiable warehouse receipt system in the country. The Warehousing (Development and Regulation) Act, 2007 had been made effective from 25<sup>th</sup> October, 2010. As per the provisions of the Act, the Warehousing Development and Regulatory Authority was set up by the Government on 26<sup>th</sup> October, 2010. The negotiable warehouse receipt system has been formally launched by Prof. K. V. Thomas, Hon'ble Minister of State (Independent Charge), for Consumer Affairs, Food and Public Distribution on 26.04.2011 at New Delhi.

The main objectives of the Warehousing (Development and Regulation) Act, 2007 are to make provision for the development and regulation of warehouses, negotiability of warehouse receipts, establishment of a Warehousing Development and Regulatory Authority (WDRA) and related matters. The Negotiable Warehouse Receipts (NWRs) issued by the warehouses registered under this Act would help farmers to seek loans from banks against NWRs to avoid distress sale of agricultural produce. It will also be beneficial for a number of other stakeholders such as banks, financial Institutions, insurance companies, trade, commodities exchanges as well as consumers.

#### **3.1. Salient Features of Warehousing (Development and Regulation) Act, 2007:**

- Regulation of warehousing activities
- Liabilities of warehousemen
- Format of warehouse receipts
- Setting up of a Warehousing Development and Regulatory Authority (WDRA).
- Constitution of Warehousing Advisory Committee
- Powers of Central Government
- Appeals
- Offences and Penalties

#### **3.2. Regulation of warehousing business:**

The Act provides that no person shall commence or carry on the business of warehousing for issuing negotiable warehouse receipts unless he has obtained a registration certificate from the WDRA after fulfilling the prescribed norms in respect of the concerned warehouse or warehouses.

#### **3.3. Requirement for registration of warehouses:**

- i. The warehouses should be constructed as per Bureau of Indian Standards (BIS) / FCI/CWC specifications.
- ii. The warehouses should be storage worthy for different goods.

- iii. The warehouses should be equipped with all necessary equipment for weighing, handling, sampling, grading, firefighting and insect/pest management.
- iv. The warehouses should have positive net worth certified by a Chartered Accountant or credit worthiness certificate from a scheduled bank for individual warehouse or for its organization.
- v. The warehouses should have adequate trained staff with expertise and knowledge about the scientific storage of goods to be stored in the warehouses.
- vi. Warehouses should have adequate security arrangements.
- vii. Any other requirement prescribed by the Authority from time to time.

### **3.4. Advantages of Registered warehouses with the Authority:**

The registered warehouses:

- (a) May Issue Negotiable Warehouse Receipts on which farmers / depositors may be able to seek loans easily from banks.
- (b) Warehouses would be following certain norms / requirements and would encourage scientific storage.
- (c) They will be having trained warehousemen.
- (d) The registered warehouses would be indicating quality standards/grades of the commodities stored in their warehouses on the Negotiable Warehouse Receipt.

### **3.5. Advantages of Negotiable Warehouse Receipts over Non-negotiable WHR:**

With the introduction of negotiable warehouse receipts system, there would be following advantages: -

1. Increased liquidity in rural areas for farmers.
2. Encouragement of scientific warehousing of goods.
3. Lower cost of financing by banks.
4. Shorter and more efficient supply chains.
5. Enhanced rewards for grading and quality.
6. Better price risk management by farmers.
7. Higher returns to farmers and better services (quality) to the consumers.
8. Avoid distress sale of agricultural produce by farmers during peak marketing season.

The non - negotiable warehousing receipts in the past did not enjoy the fiduciary trust of depositors and banks, as there was fear of not being able to recover the loans in events, such as fraud, or mis-management on behalf of the warehouse or insolvency of depositor. The available legal remedies were also time consuming and inadequate. Further, the format of warehouse receipts used in the country was not uniform. Hence, there were impediments in the negotiability of warehouse receipts creating difficulties for the farmers and other depositors of goods.

Therefore, it was envisaged to establish a negotiable warehouse receipt system for all commodities including agricultural commodities. On the one hand, it will make warehouse receipts a prime tool of trade and facilitate finance against it throughout the country. On the other, it will allow banks to improve the quality of their lending portfolio and enhance their interest in lending against goods deposited by farmers in registered warehouses.

### **3.6. Electronic Warehouse Receipts (EWR):**

As per the Warehousing (Development and Regulation) Act, 2007, negotiable warehouse receipts (NWRs) can be in both paper and electronic forms. The format of the NWR has been finalized in consultation with various stakeholders and Indian Banks' Association (IBA), and paper NWRs are now being issued by the registered warehouses across the country.

The Act empowers Warehousing Development and Regulatory Authority (WDRA) to regulate and develop the electronic system of holding and transfer of credit balances of fungible goods deposited in the warehouses. The objective is to electronically connect farmers and consumers which will go a long way in eliminating intermediaries, and help increase farm gate and lower consumer prices. The advantages of electronic warehouse receipts over the paper warehouse receipts include: reduction in manual paper handling, elimination of transportation of paper warehouse receipts, reduction in chances of forgery, and quick access of information.

EWRs will help farmers:

- (i) To have access to a large number of buyers nationwide;
- (ii) To have better bargaining powers;
- (iii) To realize higher prices by selling graded produce;
- (iv) To have their prices quoted and immediate payment received; and
- (v) To avoid distress sales by getting loans from banks against warehouse receipts.

The EWR system will therefore:

- (i) enable multiple transfers without physical movement of goods;
- (ii) provide alternate channels of marketing to farmers and reduce the cost of intermediation for consumers;
- (iii) facilitate standardization of farm produce, grading, scientific warehousing, packing and logistics;
- (iv) enable consumers (industries, processors, wholesalers, retailers etc.) to procure graded produce at competitive prices at locations of their choice,
- (v) promote an efficient clearing, settlement and delivery system; and
- (vi) bring transparency in trading of agricultural produce.

## CHAPTER - IV

### **National Policy on Handling, Storage and Transportation of Foodgrains**

In order to reduce storage and transit losses of foodgrains at farm and commercial level, to modernise the system of handling, storage and transportation of foodgrains procured by the Food Corporation of India (FCI) and to bring in additionality of resources through private sector participation, the Government of India had approved a National Policy on Handling, Storage and Transportation in June, 2000 and notified the same in the Gazette of India dated 15<sup>th</sup> July 2000.

#### **4.1. The main objectives of the policy are:**

- (i) To reduce storage and transit losses at farm level where about 70% of the total foodgrains production is retained and consumed and also to encourage the farmers to adopt scientific storage methods.
- (ii) To modernize the system of handling, storage and transportation of foodgrains procured by the Food Corporation of India (FCI).
- (iii) To harness efforts and resources of public and private sectors, both domestic and foreign, to build and operate infrastructure for introduction of bulk handling, storage and transportation of foodgrains in the country.

#### **4.2. Facilities for Central Pool Stocks:**

It was envisaged in the Policy that:

- (i) For storage of foodgrains procured by the FCI, integrated bulk handling facilities with silos of large capacity for wheat along with testing facilities for quality control would be created at about 20 identical central locations in producing and consuming areas as well as a few port towns.
- (ii) These facilities, including the infrastructure for bulk handling to these centres, will be created and maintained in private sector under the overall co-ordination of the FCI.
- (iii) The design of special top fillings and bottom discharge wagons would be decided in consultation with the Ministry of Railways.
- (iv) The Ministry of Railways will also be consulted while deciding the locations and the circuits where these wagons would ply.

#### **4.3. Private Sector Participation:**

- (i) Private sector participation would be sought and encouraged for development of infrastructure for the integrated bulk handling, storage and transportation through measures such as Build-Own-Operate-Transfer (BOOT), Build-Own-Lease-Transfer (BOLT), Build-Own-Operate (BOO), Lease -Develop-Operate (LDO), Joint Ventures etc.
- (ii) Generation of funds through public issues by private enterprise.
- (iii) Automatic approval for Foreign Direct Investment (FDI) up to 100%.

- (iv) Loans from financial institutions, NABARD, external commercial borrowings, etc.

Integrated bulk grain handling, storage and transportation facilities to the tune of 5.5 lakh MTs have been created through private sector participation at the following locations:

<b>Circuit 1</b>		<b>Circuit 2</b>	
<b>Location</b>	<b>Storage Size (MTs)</b>	<b>Location</b>	<b>Storage Size (MTs)</b>
Base Depot Moga	200,000	Base Depot Kaithal	200,000
Field Depots Chennai	25,000	Field Depots Navi Mumbai	50,000
Coimbatore	25,000	Hooghly	25,000
Bangalore	25,000		

The project had been implemented in 36 months and it had become operational at all the locations and special wagons had also been procured by the DCO for bulk movement of wheat from base depots to field depots.

## CHAPTER – V

### Warehousing Sector – Initiatives, Constraints and future role of WDRA

#### 5.1. Private Entrepreneurs Godown (PEG), 2008 scheme:

To meet the situation arising out of high procurement level of wheat and rice as a result of increase in Minimum Support Price (MSP) during last five years, the Government formulated a scheme for creation of additional storage capacity for foodgrains through private sector participation in 2008. The scheme is known as Private Entrepreneurs Godowns (PEG-2008).

A state wise mapping of existing capacities and analysis of additional requirements was undertaken based on certain criteria by State level committees and a High Level Committee of the Food Corporation of India (FCI). Under the scheme, the Food Corporation of India would now give a business guarantee of ten years for assured hiring. A capacity of about 15.29 million MTs is proposed to be created in 19 States under the Private Entrepreneurs Godown (PEG) scheme through private sector participation and Central and State Warehousing Corporations. Out of this, tenders have been finalized for creation of storage capacity of 52.32 Lakh tonnes by private entrepreneurs. CWC and SWCs are constructing 5.31 lakh tonnes and 15.49 lakh tonnes storage capacity respectively under the scheme. 3.5 lakh tonnes storage capacity has already been constructed by CWC/SWCs.

To make the scheme more attractive for private entrepreneurs, the guarantee period was increased from five years to seven years and subsequently to 10 years. The ceiling of rate fixed for hiring of godowns has been revised from Rs. 3.80 per quintal per month to Rs. 4.78 per quintal per month. In appropriate cases, the High Level Committee has been empowered to decide higher rates by recording reasons in writing.

The Planning Commission is also keen for argumentation of storage facilities for the storage of foodgrains through Public Private Partnership (PPP). There is a proposal for setting up modern silos of 2.0 million MTs in PPP mode. All these efforts will be beneficial for creating integrated modern warehousing capacities in the country. For meeting the capital expenditure on construction of silos, the private entrepreneurs would be eligible for Viability Gap Funding (VGF) under the existing VGF scheme which allows grants of upto 20% of capital cost on the basis of competitive bidding. The FCI would provide an additional VGF of upto 20% of capital costs. For storage of wheat in these silos, the developer will be entitled to receive a recurring service charge provided he meets the required performance and maintenance standards.

#### 5.2. Gramin Bhandaran Yojana (Construction of Rural Godowns):

The main objectives of the scheme for construction/renovation of rural godown, launched in 2001, include creation of scientific storage capacity with

allied facilities in rural areas to meet the requirements of farmers for storing farm produce, processed farm produce and agricultural inputs, promotion of grading standards and quality control of agricultural produce to improve their marketability and prevention of distress sale immediately after harvest. Individual farmers, Group of Farmers/Growers, Partnership Proprietary Firms, NGO's/Self-Help Groups, Co-operatives, APMCs and Agro Processing Corporations are eligible for the scheme.

Under the scheme, subsidy @25% of project cost is provided for construction/renovation of rural godowns to all categories of farmers, agriculture graduates, cooperatives & Central Warehousing Corporation (CWC)/State Warehousing Corporations (SWCs) subject to a maximum ceiling of Rs.46.87 lakh. In case of North Eastern States/hilly areas & SC/ST entrepreneurs and their cooperatives and women farmers, subsidy is provided @ 33.33% of project cost subject to a maximum ceiling of Rs.62.50 lakh. The scheme has now been made more farmer friendly by allowing subsidy for smaller godowns of 50 MTs size in general and 25 MTs in hill areas. 5 lakh tonnes capacity to be created has been reserved for small farmers. By the end of December, 2010, 23047 godowns having a capacity of 274, 13 Lakh MTs with a subsidy amount of Rs. 671.69 Crores have been sanctioned by NABARD and NCDC all over the country. During 2010-11 (up to 31.12.2010) 1210 rural godowns with a capacity of 17.49 lakh MTs have been sanctioned by NABARD/NCDC.

### **5.3. Scheme for Financing Warehousing Infrastructure under Rural Infrastructure Development Fund (RIDF):**

The Rural Infrastructure Development Fund (RIDF) scheme is an important scheme for routing bank funds for financing rural infrastructure. In 2011-12, an exclusive RIDF scheme for development of warehousing sector with allocation of Rs. 2000 crores has been announced by Government of India. The scheme will be open to the State Governments as also to entities owned and/or supported by the Central and / or State Governments and to other agencies engaged in setting up warehousing infrastructure. The scheme would cover the following requirements:

- (a) Storage of agricultural produce, especially foodgrains, at centres of (i) production, (ii) distribution and (iii) consumption.
- (b) All dry, wet and cold storage needs of agricultural produce like fruits and vegetables, integrated loans to food parks, etc, as also the needs of sectors allied to agriculture, viz., dairy (bulk milk coolers, etc.), poultry, meat processing, fisheries (viz. cold chains, cold storage), etc, and
- (c) Storage of agricultural inputs like seeds, fertilizers, etc.

NABARD has obtained approval from Government of India to extend loans from RIDF to the private sector also for the construction of warehouses. The interest rate would vary, based on the creditworthiness of the entrepreneurs.

Loans to Government entities like CWC and the SWCs backed by the Government guarantee would be eligible for 6.5 % interest rate provided the loan is for a maximum period of 7 years as per RIDF norms. In case any institution

wants longer repayment period, the interest rate would be somewhat higher. NABARD has indentified 1000 vibrant PACs having surplus land to be considered for funding from RIDF for the development of warehouses. NABARD is in the process of working out two to three models, in association with WDRA for handholding of these PACs by involving CWC / SWCs / Private Sector for providing logistics including marketing facilities for the sale of agricultural commodities.

#### **5.4. Capacity Building Programme in Warehousing Sector:**

There is an acute shortage of trained manpower in the warehousing sector, both in the public and private sectors. Most of the private warehouses are not having trained warehousemen and other technical staff. Therefore, there is a need that all these warehousemen and other personnel should be imparted proper training in their respective fields. A comprehensive course content for different category of staff engaged in warehousing activities needs to be prepared and training arranged through some expert institutions like IGMRI, Hapur, NIAM, Jaipur, CWC, Institute of Food Security, FCI, Gurgaon etc. The WDRA has finalized course content for 5 day training programme for warehousemen in consultation with IGMRI, Hapur, Department of Agriculture and Cooperation and CWC. The course content is given in Annexure – II.

#### **5.5. Financial support to Public Private Partnership (PPP) in Infrastructure:**

Capital investment in the creation of modern storage capacity including cold chains and post-harvest storage has been included in the list of infrastructure under the scheme of financial support to Public Private Partnership (PPP) in Infrastructure.

The scheme aims at supporting infrastructure projects that are economically justified but fall short of financial viability. The lack of financial viability usually arises from long gestation periods and the inability to increase user charges to commercial levels. Public warehousing is an example of such projects. Through the provision of a catalytic grant assistance of up to 20% of the capital cost, several projects may become bankable and help mobilize the much needed private capital and efficiencies.

Apart from the financial support to be made available under this scheme, an additional grant of up to 20% can be provided by the sponsoring Ministry or State Governments. This scheme may be implemented for creation of modern warehousing capacity in the country.

#### **5.6. Constraints and Impediments in setting up of Warehouses:**

During interactions with warehouse service providers, it has been brought out that the development of warehousing faces the following constraints:

- (i) Warehousing is a capital intensive sector and without availing finance from banks and financial institutions at cheaper interest rate, warehousing facilities cannot be created by the entrepreneur.
- (ii) Besides, land requirements for constructing the warehouse are difficult to meet due to rising cost of land in urban, semi urban and rural areas. Procedures for conversion of agriculture land for industrial or commercial use are cumbersome and difficult.
- (iii) Warehousing has not been accorded the status of full-fledged infrastructure and all financial and other benefits available to infrastructure sector are not available for warehousing sector.
- (iv) Storage charges and other handling charges offered by the Government agencies to private warehouse operators are not attractive.
- (v) There is acute shortage of trained manpower in warehousing sector.
- (vi) Modern technology has not been introduced in the warehousing sector.

#### **5.7. Future Role of Warehousing Development and Regulatory Authority:**

- The Warehousing Development and Regulatory Authority should not play the role of a regulatory body only by registering warehouses interested to issue negotiable warehouse receipt. It should play a vital role in developing an orderly, robust and reliable warehousing system in the country not only for foodgrains and other dry commodities but also for perishable commodities like fruits and vegetables wherein post-harvest losses are reported to be about 30%.
- For the storage of perishable agricultural commodities, warehouses with controlled conditions of temperature and humidity would have to be created. Such type of cold storages and cold chains are lacking in the rural areas resulting in huge wastages in such commodities. The Authority should encourage testing and grading of such commodities so that consumers may get good quality of fruits and vegetables.
- Storage space in warehouses particularly in rural areas should be reserved for agricultural commodities for which enough provisions are there in the Warehousing Act.
- To develop efficiency and expertise among the warehousemen, intensive training programmes for the officials of warehouses, both public and private, should be initiated by the Authority in collaboration of some expert institutions.
- Accreditation of warehouses for which there are provisions in the Act, should be encouraged among warehousemen.

## CHAPTER - VI

### Post Harvest Schemes for Minimizing Foodgrain Losses

About 65-70% of the total foodgrains produced in India are retained by farmers for their self-consumption or meeting their other financial requirements. The foodgrains at farm level are stored in traditional as well as in modern storage structures. A large number of traditional rural grain storage structures are found in India. These structures are made of locally available cheaper materials like mud, bamboo, wood, paddy and wheat straw and stones.

Foodgrains are stored in bulk in these storage structures, which are neither rodent proof nor moisture proof. These structures cannot protect the foodgrains from insects, pests, fungi and rodents. There are estimates that substantial quantity of foodgrains (about 6.0% to 10% of total production) are damaged in these storage receptacles due to moisture, insects, rodents and fungi.

Some of the commonly used rural grain storage structures in India are:

#### 6.1. Traditional Rural Storage Structures:

##### **Mud bin or Kachha Kothi**

The mud bin or Kachha kothi with capacity ranging from 2 to 5 quintals are indoor, circular storage structures made of mud mixed with wheat or paddy straw. The bottom portion of the wall section and floor is made in the form of rings which can be put one over the other so as to make the structure of desired capacity. Finally, the top with an inlet is provided to complete the kothi. Both the sides of the structure are plastered with mud and cow dung. The thickness of the wall is about 7.5 to 10.00 cms. and an outlet of 10.00 cm diameter is provided at the bottom. These mud bins are available in U.P, Haryana, Bihar and M.P and are used for the storage of wheat, paddy, rice, maize and pulses. The foodgrains stored in such bins are easily damaged by insects, rodents and moisture.

##### **Paddy straw bins**

For storing paddy in eastern humid regions in India, dried paddy plants are used for making temporary structures which after filling the grains are further reinforced from outside by winding paddy straw ropes around the whole structure. These structures generally store 1-6 quintals of paddy grain. Sometimes, palm leaves are also incorporated in these structures to provide them extra strength and safety from heavy rains which are prevalent in these regions. Such type of structures are used in Jharkhand, West Bengal and Orissa.

## **6.2. Improved Storage Structures:**

### **Coal tar Drum bin**

The structure was developed and recommended by Central Institute of Agricultural Engineering (CIAE), Bhopal for grain storage at farm level. These are the used tar coal or bitumen drums which are discarded after using the material in road construction work. These drums are heated by open fire to remove excess coal tar. A layer of bitumen remains inside the drum which serves as insulator and protects the galvanized iron sheet. A lid is fabricated by local artisans and its capacity is about 1.5 quintals. These are popular among farmers in Madhya Pradesh and Chhattisgarh.

### **Pusa Bin**

The Pusa Bin which is used for storage of foodgrains at farm level was developed by Indian Agricultural Research Institute (IARI), New Delhi. It is a LDPE (Low density polythene sheet) sandwiched bin. About 10 MTs grain can be safely stored in this bin.

The bin is fabricated on a pucca brick surface to prevent rat damage. A platform of burnt brick is made and LDPE film of 700 gauge is spread over the platform extending 6 cm from all sides. Another layer of unburnt bricks is spread over this layer. The inside wall is built to the required height depending upon the capacity of the bin. A wooden frame with an additional pole at a distance of 45 cms from the end of structure is prepared and is placed at the top of the inner wall to support the roof.

A small hole of 9.0 cms diameter is made in the middle of front wall for delivery of the grain. A mud slab of 5.00 cm thick is placed on the roof leaving a manhole of 50 cms at one corner. The structure is plastered with mud on all sides and left to dry.

A LDPE film cover of 700 gauge black sheet made in form of a mosquito net is then placed over the dried structure. A 9.00 cm diameter plastic pipe or galvanized iron sheet outlet with cover is fixed at delivery point. The LDPE film is pulled down and sealed with earlier layer of extended sheet. The outer layer is constructed using burnt bricks up to 45 cm and then unburnt bricks. The whole structure is again plastered with mud and allowed to dry before use.

### **Domestic Hapur Metal Bins**

These domestic grain bins have been developed by IGMRI previously known as Indian Grain Storage Institute (IGSI) Hapur, UP. These are made of galvanized iron sheet or aluminum sheet of 18 gauge and have covered inlet and outlets. Their capacity ranges from 2 to 10 quintals.

In addition to above rural storage structures, outdoor reinforced brick bin (capacity ranging from 3.5 to 10.5 mts.), reinforced cement concrete (RCC)

bins (capacity ranging from 1.0 MT to 2.5 MTs) and indoor pucca kothi (capacity 2.0 MTs) developed by IGMRI, Hapur are also used for storage of food grains by farmers.

### 6.3. Storage losses at farm level:

Considerable quantity of foodgrains are lost during post-harvest handling, storage and transportation. The losses are caused by moisture, temperature and biological agents during storage viz. insects, rodents, birds and fungi. Various estimates have been made to assess the post-harvest foodgrain losses.

The Government of India had appointed a Committee to estimate the post-harvest losses in 1966 under the chairmanship of Dr V.G. Panse, the then member of Planning Commission. In its interim report, the Committee reported 9.33% post-harvest losses. The breakup of these losses is as follows;--

(i)	Threshing losses .....	1.68%
(ii)	Transport losses.....	0.15 %
(iii)	Processing losses.....	0.92%
(iv)	Storage losses due to:	
	(a) Rodents.....	2.50%
	(b) Birds .....	0.85%
	(c) Insects.....	2.55%
	(d) Moisture.....	0.68%
	<b>Total Post Harvest Losses.....</b>	<b>9.33%</b>

In another study conducted by Indian Grain Management and Research Institute (IGMRI) Hapur, U.P. during 1998-99 and 1999-2000, **4.75%** post-harvest losses have been reported in wheat in major wheat producing states viz. Punjab, Haryana, UP, MP and Rajasthan. The breakup of these losses is as follows:

(as %age of production)		
(i) Harvesting.....	1.13%	
(ii) Threshing yards losses .....	0.59%	
(iii) Transport losses.....	0.14 %	
(iv) Processing losses.....	0.99%	
(v) Storage losses due to:		
	(a) Rodents.....	0.59%
	(b) Birds .....	0.05%
	(c) Insects.....	1.22%
	(d) Moisture.....	0.04%
	<b>Total Post Harvest Losses.....</b>	<b>4.75%</b>

### 6.4. Save Grain Campaign:

With a view to minimize post harvest losses in foodgrains at farm level, the Government of India had launched a Central Sector scheme known as Save Grain

Campaign (SGC) in 1971. The scheme was implemented by Department of Food and Public Distribution, Government of India.

The objectives of the scheme were:

- (i) To popularize the scientific techniques of storage of foodgrains among farmers by organizing training, demonstration and publicity programmes.
- (ii) To popularize scientific storage structures like metal bins, RCC ring bins and Pucca Kothis among farmers.
- (iii) To suggest improvements in traditional storage structures used by farmers.

The Save Grain Campaign used to organize stipendiary training programmes of 5 days duration in villages for farmers including farm women on scientific storage of foodgrains. The training programmes used to be organized at village, panchayat or block level in association with State Governments, NGOs and Corporate Houses. These programmes were very popular among farmers.

However, the scheme was discontinued in 2009 by the Government of India on the recommendation of Report of Expenditure Reform Commission (ERC) which had found the scheme obsolete.

#### **6.5. Post-Harvest Technology and Management Scheme of Ministry of Agriculture, Government of India:**

One of the thrust areas of the Ministry of Agriculture is a scheme of Post-Harvest Technology and Management. Under the scheme, technology developed by ICAR, CSIR and those identified from within the country and abroad for primary processing, value addition, low cost scientific storage/transport of foodgrains and oil seeds etc. shall be given a boost. The scheme basically focuses on the lower end of the spectrum of post harvest management and processing, the areas which are not covered by the Ministry of Food Processing or National Horticulture Board (NHB). Supply of low cost PHT equipment with Government assistance, demonstration of technologies and training of farmers are the main components of the scheme.

#### **6.6. Need for Post Harvest Scheme for Farmers:**

Since substantial quantity of foodgrains produced in the country (65-70% of total production) is stored by farmers in their houses and there are considerable post harvest losses of foodgrains, there is a need that Government of India should formulate a comprehensive Post Harvest Scheme for farmers at the national level. The scheme may be implemented by the State Governments with financial assistance provided by Government of India. The Post-Harvest Management Scheme of the Ministry of Agriculture may be merged with this scheme.

The benefits of such a Post Harvest Scheme for Farmers would be as follows:

- (i) Post Harvest losses in foodgrains at farm level will be minimized.

- (ii) The retention capacity of farmers will be increased and there will be no glut in the Markets / Mandis during the marketing session.
- (iii) Distress sale of foodgrains would be avoided.
- (iv) The quality of the foodgrains will be maintained and consumers will get better quality.
- (v) The farmers will get better return from their agricultural produce.
- (vi) With the help of loans on NWRs, farmers will be able to purchase good quality and high yielding seeds, fertilizers, plant protection pesticides and other inputs for agriculture. All these efforts would lead to higher agriculture production in the country.

## CHAPTER – VII

### Recommendations of the Working Group

#### 7.1. Rebate on storage charges for small and marginal farmers:

The farmers may be encouraged to store their agricultural produce in registered warehouses. At initial stage, some rebate on storage charges, transportation charges and quality testing may be allowed to farmers so as to make the farmers quality conscious and to induce them to store their produce in scientific warehouses which is the very spirit of the Warehousing (Development and Regulation) Act, 2007. At present CWC is providing 30% rebate in storage charges to farmers. Besides, some State Governments through their State Warehousing Corporations (SWCs) are also giving rebate in storage charges. All the State Governments should be requested to allow rebate in storage charges for small and marginal farmers through their respective SWCs.

#### 7.2. Incentives on staggered procurement of food grains:

During the peak marketing season of food grains, there is a glut in the market as most of the farmers are keen to sell their produce to Government agencies at Minimum Support Price (MSP). This creates a lot of problem for procurement agencies as well as for farmers. If the Government were to announce a markup on the MSP for crops brought to the mandi a few months after the procurement season is over, this would enhance the farmers' holding capacity, improve returns to the farmers and avoid distress sales. This markup on MSP should be so determined as to cover the additional costs incurred by farmers in transporting and storing the produce in scientifically managed warehouse facilities. On the other hand, the procurement agencies and Government would find this option attractive if they save some of the money, which they would have spent on storage and handling during the interim period.

#### 7.3. Post-Harvest Management Loan:

The pledge finance and crop loans should be treated at par as both are classified as direct agriculture loan and sanctioned to the same categories of loanees i.e. farmers. There is no economic reason for a higher interest rate for produce pledge loan particularly when pledged loans guaranteed by commodities are more secure than the crop loan. Pledge loans will help the farmers through better price discovery and the volume of loan to the farm sector will almost double. Financing at reduced interest rate is desirable for minimizing intermediation, providing for pan-India market and to free the farmers from the clutches of money lenders and also empower them to quote their own price for sale of their goods.

Agriculture credit policy of the Government of India for the year 2011-12 stipulates a target of Rs. 4, 75, 000 crores for credit flow to small and marginal farmers, at a concessional rate of interest. The farm sector loan is available to farmers only as a pre-harvest loan. The post-harvest loan sanctioned against

negotiable warehouse receipts to the farmers is between 11% to 13% rate of interest. At present, short term crop loans facilities @ 7% interest rate p.a. with interest subvention of 3% for prompt repayment with maximum limit of Rs. 3.0 lakh is provided to the farmers by Government of India. Thus, the effective rate of interest for such farmers will be 4% p. a. It has been brought out in various meetings with State Governments and other stakeholders that small and marginal farmers can take the benefits of scheme only if the crop loan facilities are extended to post-harvest loan against negotiable warehouse receipts.

Provision of loans against Negotiable Warehouse Receipt at the same rate of interest as short-term crop loan would encourage farmers to deposit their food grains in warehouses and avail the benefits of warehousing in terms of better price realization. The extension of crop loan will enhance the farmers' holding capacity so that they are not forced to sell their produce immediately after harvesting. Initial requirement of finance under negotiable warehouse receipt will be small but will go on multiplying year and year within the overall annual target of agricultural credit. Further, the small and marginal farmers will have requisite liquidity for timely availability of inputs used in agriculture. They will also get empowered to experiment new package of practices for enhancing productivity and for diversification into other crops including cash crops.

There are substantial post-harvest losses, both in foodgrains as well as in other agricultural commodities including perishable commodities. The negotiable warehouse receipt system will encourage scientific storage of agricultural commodities and minimize storage losses in foodgrains and other agricultural commodities. This in turn will contribute to the fulfillment of the objectives of National Food Security. Warehousing of foodgrains such as wheat and paddy under NWR, in the private warehouses will avoid glut at the procurement centres. It will not only ease the storage constraints of government agencies like FCI and CWC but will also help in preserving the quality of such foodgrains against deterioration.

It is, therefore, recommended by the Working Group that farmers may be provided post-harvest loans against Negotiable Warehouse Receipts at a rate of interest of 7% per annum with interest subvention of 3% for timely repayment of loan. It was also suggested that interest subvention on NWR finance may be extended to private sector banks also and the limit for warehouse receipt finance by banks may be enhanced from Rs. 10 lakhs per farmer to Rs. 50 lakhs per farmer.

#### **7.4. Incentives on the purchase of scientific storage structures:**

The Govt. of India should provide incentives in form of subsidy for the purchase of metallic storage structures and construction of improved non-metallic and modern storage structures like RCC ring bins, etc. Subsidy to the tune of 33% to 50% may be provided on the purchase of metal bins ranging from 2 to 10 qtls. storage capacity manufactured by State Agro Industries Corporations or other private manufacturers as per design approved by IGMRI. Subsidy may also be considered for the purchase of appropriate scientific storage structures such as

silo bags of larger capacity by the farmers for the storage of foodgrains and other agricultural produce. Farmers including farm women of weaker sections of the society including SC and ST farmers may be considered for 75% subsidy on the purchase/construction of these scientific storage structures for foodgrains and other agricultural commodities.

**7.5. Incentives on the purchase of pesticides for scientific storage of foodgrains and other agricultural commodities:**

The Government should consider providing subsidy on the purchase of storage pesticides used by farmers for foodgrains and other agricultural commodities stored by them. Insecticides for prophylactic treatment and for curative treatments (fumigants) and rodenticides may be considered for grant of such subsidy.

**7.6. Stipendiary Training Programme for farmers on scientific storage:**

Short duration training programme on all aspects of scientific storage of foodgrains and other agricultural commodities should be organized by the Government at village/panchayat/block level. State and Central Government Agriculture Departments, Agriculture Universities, Krishi Vigyan Kendra (KVKs), NGOs etc. may be involved for organizing such training programmes. These programmes should be stipendiary in nature and practical demonstration on various techniques of insect, pests and rodent control should be organized.

**7.7. Publicity Programmes on Scientific Storage:**

Publicity programmes by distributing leaflets, booklets, and posters, by organizing film and video shows on benefits of scientific storage of foodgrains and other agricultural commodities should also be organized in the villages. Farm women, should be involved in training and publicity programmes.

**7.8. Incentives to aggregators at village level:**

Small and marginal farmers are sometimes not able to bring their produce to the nearby warehouses due to lack of transportation facilities. In such cases, the services of aggregators (cooperative farmers group, self help group, farmers/producers companies) may be used. Aggregators at the village level may collect foodgrains from the farm-gate or from the houses of farmers and may transport the same to nearby warehouses. These aggregators may be considered for some transport subsidy for bringing the collected foodgrains to the warehouses, after cleaning, sorting and drying, so as to meet the requirements of scientific warehouses for issuing NWRs. Therefore, some financial incentives for them may also considered by the Government.

**7.9. Liberalization of Rural Godown Scheme:**

The Rural Godown Scheme is aimed at the creation of scientific storage capacity to meet the requirements of farmers. The Scheme has made a valuable

contribution to the creation of storage capacity. The Rural Godown Scheme must continue during the 12<sup>th</sup> Five Year Plan as well. However, the norms with regard to subsidy and project cost were revised in the year 2008 based on the Cost Index of the year 2002. Further, godowns with maximum storage capacity of 10,000 Metric Tonnes only are covered. The Rural Godown Scheme needs to be revised so as to cover godowns having a capacity of up to 25,000 MT and the capital cost needs to be revised keeping in view the current cost of construction of godowns. The subsidy component @25% of project cost may be fixed upto 10,000 MTs capacity and for the warehouses more than 10,000 MTs to 25,000 MTs the subsidy component may be reduced to half i.e. 12.5% of project cost.

#### **7.10. Status of full-fledged infrastructure for warehousing:**

Warehousing sector should be given full fledged status of infrastructure and all financial and other benefits available to infrastructure sector should be available for warehousing sector. Under Section 80IA of the Income Tax Act, a deduction of a certain percentage of profits and gains is allowed for a stipulated period while computing the total income of the assessee. Further, for attracting investments into SEZ's, exemption from service tax is being provided. On the same lines, with a view to promote the development of warehouses, tax benefits viz. Income Tax exemption as per Section 80 IA of the Income Tax Act and exemption from Service Tax should also be provided to warehousing sector.

#### **7.11. Financial support under Viability Gap Funding (VGF):**

Post-harvest storage has been covered under the Viability Gap Funding Scheme of Public Private Partnerships (PPPs). The Central and State Agencies like FCI, CWC, and SWCs etc. may take the lead in inviting private entrepreneurs for the construction of warehouses. This scheme has not made much progress and therefore, fresh initiatives are required to popularize this scheme.

#### **7.12. Warehouses to be declared as mandis:**

Agricultural markets in most parts of the country are notified and regulated under the APMC Act. The geographical area of the State is divided and declared as a market area wherein markets are managed by the Market Committees constituted by the State Government. No person or agency is allowed to freely carry on wholesale marketing activities without the approval of the State. While Section 45 of the Model APMC Act, 2003 enables establishment of private yards; the establishment of such yards can take place only after the grant of license by the State Authorities.

In addition, the required amendments in the State APMC Act on the lines of the Model Act have not been made by all the States. Thus, a warehouse operator has to obtain a license from the State entity of each State where they would operate; leading to the requirement of multiple licenses and varied compliances/reporting requirements. The Govt. may pursue the matter with all States for permitting Warehouses registered with WDRA to be notified as mandis under the relevant APMC Act. Further, a uniform set of guidelines for notification,

compliance and reporting need to be adopted by all the States. This would, of course, be subject to the condition that the warehouse owner would ensure deposit of mandi fees, cess and other State levies. Such a move would facilitate the corporate sector to operate on a pan-India basis without causing any loss of revenue to the States.

#### **7.13. Agricultural Economic Zones:**

Government may plan to set up Agricultural Economic Zones (AEZs) on the lines of Special Economic Zones (SEZs). In these special agricultural zones, land may be acquired by the Government and may be given on lease for setting up of warehouses, agro processing units, farmers training centres and agricultural produce marketing facilities. Setting up of warehouses in AEZ may be treated as priority sector and easy loans at lower interest rates may be provided to entrepreneurs for setting up of warehouses. This would be helpful in development of modern and scientific warehousing facilities for agricultural and other commodities.

#### **7.14. Development of modern storage infrastructure:**

It has been announced in the Budget Speech that modern storage infrastructure in the shape of silos would be encouraged. However, silos may not be a cost effective alternative as they would involve de-bagging and re-bagging of agricultural produce which would entail higher manpower costs and longer handling time. In this scenario, development of a complete chain of modern storage and handling infrastructure which would eliminate the need for transportation in the form of bags is required. Greater emphasis needs to be placed on creating an efficient, integrated and mechanized bulk handling, storage and transportation system.

#### **7.15. Simplification of procedure for conversion of land use:**

Procedure for conversion of agriculture land for industrial or commercial use are cumbersome and time-consuming. Simplification of procedure for conversion of land use for warehousing sector and earmarking of land for warehouses by State Governments at planning stage would facilitate the development of warehousing infrastructure in the country.

#### **7.16. Procurement of foodgrains through NWR:**

The Central Government extends price support to paddy, coarse grains and wheat through Food Corporation of India and the State Agencies. All the food grains conforming to the prescribed specifications offered for sale at specified centers are bought by these agencies. The producers have the option to sell their produce to FCI/State Agencies at the support price or in the open market as is advantageous to them. The procurement policy is open ended and no targets, as such, are fixed for the procurement of food grains. There is a huge rush among farmers to bring the produce to the market if the MSP is attractive and/or higher than the prevailing market price. This leads to a glut in the market; delays in

procurement & lifting and issues like quality, drying, cleaning of the grain take the back seat. Government of India/Food Corporation of India may explore the possibility of use of Negotiable Warehouse Receipts for procurement of food grains for TPDS to avoid a glut in the market and bring about efficiency improvements in storage and handling operations. In this way, the grain would be properly dried, cleaned, graded and stored in a scientific environment which could be accessed by the procurement agencies from the warehouse as and when required for distribution. The farmers would, of course, be paid immediately on delivery of the negotiable warehouse receipts. It is recommended that procurement through NWR may be undertaken in DCP States on a pilot basis in a few districts.

#### **7.17. Targets for lending against NWR for Banks:**

Loans to farmers against NWRs issued by registered warehouses are treated as priority sector lending by the banks. The Boards of Public Sector Banks may prescribe targets for sanctioning of loans against NWRs.

#### **7.18. Setting up of a Market Information Network:**

The farmers can realize the best price for their agricultural produce in case they have up to date information on the current price and other relevant factors like stocks, overall availability of the commodity in question, etc. The development of a robust information dissemination system would significantly increase the efficiency of distribution from farmers to the consumers, reduce the intermediation costs and maximize the returns to the farmer. It should be mandatory for all agricultural markets and warehouses to provide latest information on prices, stocks, etc on a real-time basis.

#### **7.19. Capacity Building Programme in Warehousing Sector:**

There is an acute shortage of trained manpower in the warehousing sector, both in the public and private sectors. Most of the private warehouses are not having trained warehousemen and other technical staff. Moreover, they are not familiar with the code of practices of scientific storage of agricultural and other commodities. Graders, weighmen and staff engaged in sampling and physical analysis of agricultural and other commodities are not properly trained. Therefore, there is a need that all these warehousemen and other personnel should be imparted proper training in their respective fields.

#### **7.20. Integration of Primary Agriculture Cooperative Societies (PACS) with NWR System:**

Banks and financial institutions support financing of storage infrastructure by both public and private entities, with credit plus intervention to improve efficiency in implementation and ensure effectiveness in utilization of infrastructure created. PACS would find it financially viable to create new storage capacity and upgrade existing warehouses in case they are permitted and

encouraged to take up other activities like retail sale of products of daily use; gas agencies; petrol pumps etc. To provide backbone support to producers, member friendly multifunctional services could be taken up by PACS in their area of operation and they could link up with supply chain logistic providers.

Integration of PACS with NWR System will help in reduction of storage losses and provide scientific storage facilities to farmers. The Working Group felt that it would be of great use, especially for small and marginal farmers, to utilize the PACS godowns for storage of food grains under NWR System. The PACS godowns however need improvement/construction as per BIS specified structure to make them storage worthy and WDRA complaint. The funds for this purpose can be provided under Rural Infrastructure Development Fund (RIDF) and subsidy can be provided under Rural Godown Scheme (RGS). Central Warehousing Corporation/State Warehousing Corporations/private warehousing companies may be involved in hand holding of these PACS for technical, logistics and marketing activities. There is a need to have a special incentivized scheme with specific regulations to achieve this objective, which may be administered by the Department of Agriculture and Cooperation through NABARD and NCDC. Provisioning of logistics for scientific storage and marketing of produce needs to be an integral component of the stipulated scheme. Since the PACS godowns are essentially of small capacities which are not financially viable, there is a need to relax the requirement for registration of these godowns by the WDRA without in any way compromising with their storage worthiness and interest of the farmers depositing their agricultural produce.

#### **7.21. Linkage of Rural Godown Scheme with NWR system:**

Linkage of Rural Godown Scheme with NWR System will encourage farmers to store their produce in these warehouses/godowns. The farmers will be able to seek loans from the banks and scientific storage and warehousing will minimize the storage losses, thereby saving grains for national food security.

#### **7.22. Indemnity Fund:**

After preliminary study, Warehousing Development and Regulatory Authority has observed that two stakeholders who need to be protected from financial risks on account of the NWR system are farmers/beneficial owners of NWRs, and the bankers. The Warehousing (Development & Regulation) Act mandates the warehouses to have insurance indemnifying for fire, floods, theft, burglary, misappropriation, riots, strikes and terrorism. The Act also enjoins upon the warehouseman to be liable for loss of/damage to goods caused by his failure to exercise care and diligence, and also even if the goods are damaged/lost despite all care and precautions taken by him, except for force majeure circumstances. Therefore, major uncovered risks are economic value of commodities and decline in prices which could go below the amount (with interest) lent by the Bank and force majeure circumstances. Keeping in view the experience of American and European countries, we may get professional study conducted on the feasibility of creation of the Indemnity Fund.

### **7.23. Agri-Logistic Parks:**

An agri-logistic park is an area wherein integrated facilities for warehousing, cold chain for perishables and non-perishable agriculture produce and transportation facilities are available. Most of these agri-logistic parks are in Special Economic Zones (SEZs) areas. The basic criteria for such parks is that they should be near National Highways and in metros and close to the producing areas. Numerous benefits accrue from agri-logistic parks, which are as follows:

- a) Scientific storage facilities for agri-produce, both perishable and non-perishable lead to minimization of storage losses
- b) Proper grading of agri-commodities and better prices to farmers.
- c) No glut of commodities in the Mandis during marketing season.
- d) Reduces logistics cost.
- e) Facilities for packing, re-packing and testing and distribution are available under one roof and
- f) Better quality to consumers.

The Working Group was of the opinion that Planning Commission may identify the Ministry/Department which could formulate schemes for the promotion and regulation of agri-logistic parks.

### **7.24. Study for assessment of post-harvest losses in important agricultural commodities:**

Only a few scientific studies have been conducted in the past for the assessment of post-harvest losses at farm level for foodgrains and pulses. Authentic data on post-harvest losses in various agricultural commodities at farm level are very important for formulating schemes to minimize these losses. Institutions like Indian Agricultural Statistical Research Institute (IASRI), New Delhi, Indian Grain Storage, Management and Research Institute (IGMRI), Hapur, U.P., ICAR institutions etc. may be assigned these studies for major agricultural commodities such as cereals, pulses, spices, oil seeds, edible nuts, fruits, vegetables etc.

### **7.25. Cold storage in the Negotiable Warehouse Receipt System:**

The WDRA should notify regulations to include cold storages/temperature controlled warehouses in association with National Horticulture Board (NHB), in the negotiable warehouse receipt system so that farmers producing fruits and vegetables may avail the benefits of negotiable warehouse receipts issued by the registered cold storages/temperature controlled warehouses for seeking loans from the banks.

### **7.26. Encouraging registration of all warehouses:**

In view of the increase in the economic activities, it is essential to promote efficiency in the warehousing sector with improvement in basic standards and operational procedures for warehouses.

The receipt issued by any warehouse in respect of goods deposited by farmers or traders should enjoy the fiduciary trust of depositors, receipt holders and banks with legal remedies in case of default with willful violation. Considering the increasing importance of warehousing sector in the economy of the country and in order to enhance the trust and confidence of the stakeholders, it is desirable that the WDRA proactively encourages registration of all warehouses receiving deposit of goods of others. The WDRA may prescribe varying standards based on capacities, locations and commodities to be stored so that the farmers can benefit from a large number of registered warehouses spread throughout the length and breadth of the country.

\*\*\*