UNIT 16 WAREHOUSING AND STOCKPILING

Structure

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16.0 OBJECTIVES

After studying this unit, you should be able to:

- explain the need for warehousing and stockpiling of essential commodities as part of preparedness for disaster;
- describe the inventorisation of commodities based on established need; and
- discuss the network and distribution mechanism of stocked goods.

16.1 INTRODUCTION

At the national level, the central government, maintains buffer stocks of essential items to cater to fluctuating demand pattern. In case of food items, the inventory is maintained by the Food Corporation of India of the Ministry of Food and Civil Supplies, with their warehouses located all over the country. In overall working and distribution system, the government may vary its own procurement based on the level of buffer stocks. Essential items such as medicines are also maintained through a system of Medical Stores at national and regional level. This is maintained by the Ministry of Health & Family Welfare.

While Medical Stores cater directly to emergencies, the food stocks service the public distribution system and also take into consideration, the seasonal demand shifts and international trade.

At the district level, as part of the contingency action plan, stores are identified and stocks maintained of essential items in addition to medicines and food for use during emergencies.

The level of stocks and the various techniques for distribution may vary from item to item and time to time according to exigencies. Needless to say, this depends very much on the population of the district and the vulnerability of the district to any particular types of disaster.

16.2 IMPORTANCE OF WAREHOUSING AND STOCKPILING

Disasters occur suddenly, sometimes without warning, and in a very short span of time. The government through the district administration has to provide maximum succour to the affected community.
Usually a whole range of items is required. Besides essential food and medicines, other items for search and evacuation, temporary shelter, communication systems, energy fuel needs to be mobilized by different Government departments.

Mobilization of such large range and quantity of items in times of emergency can be done only if there are enough stocks available within a short accessible distance. A well organized stockpiling system for easy availability and easy access becomes the basic requirement of a dependable contingency plan.

## 16.3 LOCATION OF WAREHOUSES

Location of warehouses is very important and is dependent on the degree of vulnerability of certain areas and on facility of transportation. The location should be at a comparatively safer place. Maintaining stocks of items required in contingency also depends on availability and it may not be viable for the State Government to be able to station such warehousing in the required quantities at ideal locations. The problem gets further complicated due to the limited life of certain items such as food and medicines. They need to be replenished after a fixed time failing which they would become useless and harmful.

Without compromising on the accessibility of stores yet maintaining a balance with the high cost of maintenance, the following criteria are adopted:

### Vulnerability of the Area

Certain regions are much more vulnerable than others. This can be assessed from the frequency of disasters that have taken place in the past or from regional studies. For example, the coastal districts of the States in southern zone are exposed to the threat of cyclones every year. It is natural that stores be located in areas that would need them.

### Types of Goods

Goods, which have a limited time span and may be rendered useless if left unutilized, could be stored in fewer places. Such places could be strategically located at selected points. Food items and medicines fall under this category.

### Distributing Agencies

In the event of a disaster, it is the responsibility of various agencies, under whose care the various items are put, to mobilize necessary infrastructure for distribution. Location of the warehouses should serve to make the functions of distributing agencies more efficient.

On the whole, a well-developed and clearly identified system of interlinked warehouses within accessible distances will considerably improve the effectiveness of the contingency plans.

### Check Your Progress 1

Note:

i) Use the space given below for your answers.

ii) Check your answers with those given at the end of the unit.
1) Briefly discuss the importance of stockpiling.

2) Discuss the criteria kept in consideration for selecting location of warehouses.

16.4 COMMODITIES AND TOOLS

A list of the commodities and tools required for different types of disaster situations forms part of the district contingency plan. Normally, there are two types of warehousing— at the district level which stocks all rescue and evacuation equipment/tools and at regional level (groups of districts) for items such as food and medicines. Respective departments may also be required to maintain their own stores.

Typically, in a cyclone or flood contingency plan, special 'cyclone store' or "flood store" is required to be set up stocking the following items:

1) Hooks for clearing debris, ladders.
2) Rubber Tires and Tubes for using as float in water; also boats.
3) Tents, tarpaulin, galvanized corrugated sheets, asbestos sheets, bamboo and other material for providing temporary shelter.
4) Kerosene, lanterns, candles, matchboxes, lighters and battery operated lights along with cells/batteries.
5) Large cooking vessels for use in relief camps; Food serving utensils.
6) Identity slips (in plastic pouches) to be issued to the refugees in relief camps.
7) Copies of Maps.
8) Ropes, Wires. Chains, Lights fittings with wire, lead wires, spades, and crowbars.
9) Spare road-marker stores, steel pole, bamboos and slotted stripes of metal (to be laid on broken or muddy road surface for better traction. Double handled saws (for cutting fallen trees), concrete cutter, shovels and Hose Pipes. Few diesel pumps and generator sets.
10) First-Aid Kits, duty sign boards, jerry cans, empty oil drums, gunny bags and gunny bags and sand bags. Polythene bags for dropping supplies. Buckets, wireless sets and satellite phones.
11) Equipment for filling or boiling water.
A separate store for medicines (attached to district level hospital) would need to maintain stock of essential life saving medicine, drugs for preventing infections, vaccines and First Aid equipments.

Similarly, the Public Health Department would need to maintain stores in each district containing the following items:

a) Disinfectants such as phenyl, naphthalene balls, bleaching powder, chlorine liquid, water purifying tablets equipment for checking quality of water and for checking quantity of free chlorine and supplying safe potable water.

b) Mobile water tankers, canvas water tanks, drums and jerry cans for transporting drinking water.

c) Vaccines

d) Insecticides

e) Temporary or portable lavatories

The animal husbandry department is required to stock essential drugs and vaccines for livestock cattle.

Likewise, separate lists of store items are prepared for each type of disaster situation and stocks maintained by the respective agency.

### 16.5 IDENTIFICATION OF AREAS AND SUFFERERS

The amount of stock maintained at the stores in the district or at regional level (groups of districts) is dependent on the resident population and the requirements due to different types of likely disasters.

The basis of calculating medical supplies is based on the statistics of number of people affected due to floods each year averaged for a 10-year period. It has been estimated that as far as health impact of flood is concerned, approximately 2% of the affected population would need medical attention. Stocks are thus kept accordingly.

A similar kind of study is carried out for other disaster situations and total requirement worked out. In cases where one district is prone to more than one type of disaster, the range (types) of medicines in the stock is increased proportionately.

### 16.6 TECHNIQUES FOR DISTRIBUTION

Distribution of Relief Material is well organized and predetermined by rehearsal through drill, prior to disaster. Many state government departments mobilize the items they are responsible for based on the requirement placed by the district disaster committees.

Food and Essential items for the affected population are directly distributed through temporary kitchens set up in relief camps. Alternatively, they may be air dropped to people who are not otherwise accessible.

Teams of doctors move in mobile vans to the affected areas if movement is still feasible. They could also form part of the defence team, which has its own transportation arrangements.

A lot of material from regional stores is moved in by rail. Earlier the practice of moving was by wagon loads. This kind of piecemeal traffic movement resulted inordinate delays. Now a days in cases of emergency, food etc., is moved by special relief train thus optimizing on total movement and distribution time.
An important factor to be kept in consideration during distribution is that the same community should be given the relief material over and over again so long as they need it. At the same time, one has to be cautious against free riding, i.e., those that do not deserve the relief but take undue advantage of the occasion. Such incidents happen when either there is no way of identifying the actual victims or if the distributing agencies are not coordinating amongst them.

Such anomalies may be taken care of, by issuing identity slips to the victims and making a person or institution incharge of coordinating the overall distribution.

Check Your Progress 2

Note: i) Use the space given below for your answers.
    ii) Check your answers with those given at the end of the unit.

1) List our the items to be stocked in a “cyclone store”?

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   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

2) Describe technique for distribution.

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   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

16.7 LET US SUM UP

Warehousing of essential items for distribution as relief material, and tools/equipment as means for evacuation and rescue are critical to any disaster management exercise.

Needless to say, the quantity and range of stock has to be kept on the basis of thorough calculations on anticipated requirement with sufficient margin for fluctuation. Lastly, the stock should be able to reach the victims in the shortest possible time.

16.8 KEY WORDS

Buffer Stocks : Stock of essential items like food and such commodities required at the time of contingencies like disaster.

Exigencies : Urgent need or demand or necessity

Shelf life : Length of time for which food/medicines/other commodities can be stored before deterioration.
16.9 REFERENCES AND FURTHER READINGS


Health Sector Contingency Plan for Management of Crisis Situations in India; Emergency Medical Relief, Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India, New Delhi.

Cyclone Contingency Plan of Action; Revenue Department, Government of Andhra Pradesh, Hyderabad.

16.10 ANSWER TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Your answer should include the following points:

- In disaster situations, the affected people need help of various types such as food, medicines, shelter, fuel, and tools. These can be made available only if stocks are stockpiled at easily accessible warehouses beforehand by government agencies and made available for distribution during emergencies.

2) Your answer should include points like vulnerability of the area; types of goods and distributing agencies

Check Your Progress 2

1) Your answer should include the following points:

a) Boats, rubber tires and tubes
b) Tents, tarpaulin, bamboo
c) Lanterns, kerosene, torches with cells
d) Cooking and serving utensils
e) Candles, match box
f) Maps and identity slips
g) Ropes, wires, spades, crowbars, gunny bags
h) First aid kits
i) Mobile water tankers
j) Water purifying kits
k) Vaccines
l) Disinfectants and insecticides

2) Your answer should include the following:

a) Essential items including food and water are distributed at the relief camps or are airdropped if the people are marooned or otherwise inaccessible.

b) Medicines and healthcare are distributed by teams of doctors in mobile vans if such movement is practicable. Otherwise doctors join the special defence teams.

c) Need-based and equitable distribution of essential items is ensured on the basis of identity slips (packed in plastic covers) issued to the attached people.