

## UNIT- IV

### COPING STRATEGIES

Coping strategies refer to a set of measures taken by the communities for obtaining resources in time of adversity and disaster. They are based on their experience, social structures, resources and their capacities to combine them.

Coping strategies are often complex and involve a number of sequenced mechanisms we will refer to in the text as “coping mechanisms”. They can include preparation, mitigation, and response or rehabilitation measures.

Coping strategies are often transmitted from generation to generation within communities and households. They depend on the assumption that reoccurring disasters “will follow a familiar pattern, and that people's earlier actions will be a reasonable guide for similar events”

.

### **Alternative adjustment process**

Though the effects of natural disasters can be severe and far-reaching, there are steps you can take to cope. Here are some ways you may be able to reduce the trauma of a natural disaster.

- **Seek out and connect with social support.** Research has consistently found that early intervention, resources, and support from others can be a major factor in helping people overcome the negative effects of a traumatic event.

- **Identify local support groups or available crisis counselors to talk to.** After a natural disaster, crisis counselors may be brought in to offer support and help you come up with ways of coping with the impact of a natural disaster. Take advantage of these opportunities.
- **Try to establish a schedule.** For example, set regular times for meals, waking up in the morning, or talking with family and friends. A natural disaster can greatly disrupt your regular schedule increasing the extent to which your life feels chaotic and out of control. Coming up with a daily, structured schedule can help you establish a sense of predictability and control
- **Talk about the effect of the natural disaster.** Sharing our feelings with others, or at the very least, find some way to express your emotions. A natural disaster can result in strong feelings of anger, anxiety, and sadness. These emotions need to be expressed.
- **Focus on self-care.** A natural disaster can deplete us physically as well as emotionally. It is very important that we make time to care for yourself. Self-care is integral to emotional and physical health.
- **Practice healthy coping strategies.** Following a natural disaster, we experience a number of intense negative emotions. Therefore, it is very important to identify healthy ways of managing these emotions. Alcohol or substance use, excessive sleep, and seeking comfort in food can be effective short-term strategies for managing emotional distress, but in the long-term, these behaviors don't address the root issue and often increase distress
- **Try to limit other sources of stress in your life.** Although you may have little control over other sources of stress in your life, try to limit the extent to which you make major decisions or life changes. Your most

important task following a natural disaster is getting your life and emotions back in order. Therefore, it is important to put yourself in a place where it is going to be easier to do this.

## **Conceptual change of disaster management models**

The first category is logical models. Logical models provide a simple definition of disaster stages and emphasize the basic events and actions that constitute a disaster. Traditional model of disaster management is one of the well-known and common logical models. In this model, the traditional process of disaster management has three phases: before, during and after the disaster

The second category of models is integrated models. An integrated model of disaster management is a tool for organizing the involved activities in order to ensure effective and efficient implementation, and four factors can be identified for it: hazard assessment, risk management, mitigation and preparedness.

The third category of these models is cause models. The cause category is not based on the idea of defining stages in a disaster. This category suggests some underlying causes of disasters. The Crunch model is one of them which proposes a frame to understand the causes of a disaster

The fourth category consists of combinatorial models in which the logical, integrated and cause models are combined to propose a model. The Cuny model is one of these models which is made by compilation of features of the other three categories

Finally, the fifth category applies to other models in which no features of the other mentioned categories have been used. These models are miscellaneous and refer to a condition that the structure and template of the model is not located in any of the mentioned categories.

Every industry will have their own safety policy, which indicates the sincere commitment of the factory towards safety at work place.

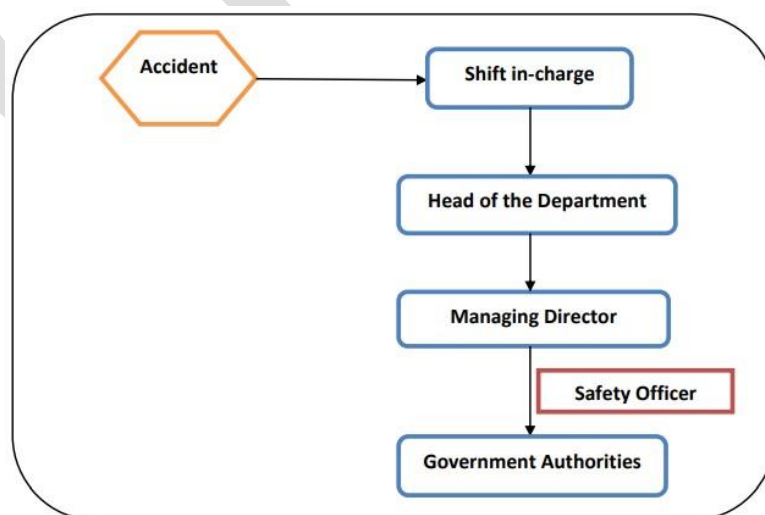
### Goals/Targets of Safety

- Accident prevention
- Accident control
- Protection of human health/life
- Protection of material and property
- Protection of environment
- All workmen as well as staff of the factory are committed to safe work environment and hence they follow the basic principle of 'safety first'

The safety department of the factory is responsible for creating safe environment at workplace. They are also responsible for creating and maintaining awareness on safety aspects at factory premises. This is achieved by regular training programmes, display of posters and notices at strategic locations, arranging documentary film shows related to safety, on job training, daily safety round, recommendation for corrective action, etc. The Department has formulated safety procedures and rules, depending upon the nature of work carried out at respective location

### Procedures in case of accident

According to the procedures, when an accident occurs at any place of the factory, respective shift in charge immediately fills the accident report form. In the next step, this form is sent to respective Head of the Department who signs the form and submits it to Managing Director (MD), who communicate it to the Government Authority/ies. MD also initiates the process of investigation under the supervision of safety officer. Root cause of accident is determined and suitable preventive/corrective action is drawn.



## **HAZARD IDENTIFICATION**

To help with the process of identifying hazards it is useful to categorize hazards in different ways like by topic, for example:

- a. Mechanical
- b. Electrical
- c. Thermal
- d. Noise and vibration
- e. Material/Substances
- f. Fire and explosion

### **Mechanical Hazard**

It mainly involves properties of machine parts or work pieces, such as:

- a. Faulty design (Shape): It may cause injury to workman
- b. Relative location: Confined location during repairs & maintenance
- c. Mass and stability: May cause physical injury
- d. Inadequacy of mechanical strength
- e. Accumulation of energy inside the equipment: steam/ air /water pressure cause injury to workman

### **Electrical Hazard**

Probable incidences for electrical hazards, could be

- a. Contact of persons with live parts (direct contact,
- b. Contact of persons with parts which have become live under faulty conditions (indirect contact)
- c. Approach to live parts under high voltage
- d. Electrostatic phenomena
- e. Thermal radiation or other phenomena such as the projection of molten particles and chemical

f. Effect of short circuits, overloads, etc identified during construction, production and maintenance.

### **Thermal Hazard**

Probable causes of thermal hazards are –

- a. Burns, scalds and other injuries by a possible contact of persons with objects or materials with an extremely high or low temperature, by flames or explosions and also by radiation of heat sources
- b. Damage to health by hot or cold working environment
- c. Thermodynamic hazard such as overpressure, under pressure, over-temperature, under temperature need to be avoided by providing system management

### **Hazard generated by noise & vibration**

In the proposed project, probable source of noise are – boilers, steam turbine generators and transportation of bagasse on conveyer belts, motors, loading of bagasse, etc. Usually prolong exposure to high noise level, results into

1. Hearing loss (deafness), other physiological disorder (e.g., loss of balance, loss of awareness)
2. Interference with speech communication, acoustic signals, etc.

### **Hazards generated by materials/substances**

1. Hazards from contact with or inhalation of harmful fluids such as: anti rusting chemicals, cleaning agents/acids/organic solvents gases, superheated steam through leaks and bagasse dusts
2. Fire or explosion hazard—dry bagasse
3. Biological or microbiological (viral or bacterial) hazards: -Workplace exposure to dusts from the processing of bagasse can cause the chronic lung condition pulmonary fibrosis.

#	Hazard	Probability	Severity	Mitigation Measure
<b>Mechanical Hazard</b>				
1.	Physical injury to hand/legs, body parts during process	Frequent Once per month or more often	Minor	Use PPE/PPA
2.	Boiler Explosion	Remote	Catastrophic	Layers of Protection area (LOPA)
3.	Fingers nipping in between moving part. Eg. Belt	Probable Once per year	Major	Fixed /Movable Guards at probable sites
4.	Steam pipe leakages	Frequent Once per month or more often	Major	Proactive Maintenance/PPE
5.	Working on height Impact /falling down	Probable Once per year	Critical	Work permit system Life belts/Helmet
6.	Water feeder pump failure	Occasional Once per 10 years	Critical	Alarming/communication arrangements
<b>Electrical Hazard</b>				
7.	Contact of persons with parts which have become live under faulty conditions (indirect contact)	Occasional Once per 10 years	Major	PPE/PPA/Permits
8.	Approach to live parts under high voltage	Occasional Once per 10 years	Catastrophic	Guards/ authorization Enter Restriction
9.	Electrostatic phenomena	Remote	Major	Earthing, avoid Dust Explosion
10.	Thermal radiation or other Short circuits, overloads, etc.	Probable Once per year	Major	PPE/Checking /Inspection
<b>Thermal Hazard</b>				

11.	Burns, scalds and other injuries by steam	Occasional Once per 10 years	Major	Safe working distance /PPA/protective dress code
12.	Damage to health by hot working environment	Frequent Once per month or more often	Critical	Minimum exposure Ventilation/Humidity control
<b>Hazard generated by Noise</b>				
13.	Belt movement, Pump/Motor, Turbo generator	Frequent	Critical	Confinement of source, Use Ear Muff/Plugs
<b>Hazard generated by Vibration</b>				
14.	Whole body vibration, during working on feeder platform	Remote	Major	Engineering solutions

## SURVIVAL KITS

An emergency cupboard shall be made available in the plant area. This cupboard should contain certain number of Personal Protective Equipment (PPE), for use in case of disaster. These items kept in the cupboard should be used only during an emergency and not under normal working conditions. A printed or typed list of items available in the cupboard should be displayed on the front of cupboard. The key of emergency cupboard should be available with the Shift In-charge.

Sr. no.	Item	Quantity
1	Air line mask set	2 sets
2	Self-containing breathing apparatus	1 set
3	Safety belt with life time	1 set
4	PVC gloves	2 pairs
5	Leather gloves	2 pairs
6	Flextra or asbestos gloves	2 pairs
7	PVC Suit	2 pairs
8	Electrical rubber gloves	2 pairs
9	Safety touch	2 pieces
10	Safety goggle	2 pieces
11	Face- shield	2 pieces
12	Ear-muff	1 set
13	Flexure or asbestos blanket	2 Nos.
14	Manila Rope 100 m long bundle	1No
15	Resuscitator	1No
16	Safety helmet	2 Nos.

This item should be examined once in week by safety observer to ensure that all the items are available and that they are in good condition. Items, if found defective must be replaced immediately.



## **Important requirements**

1. Helmets for the Work Incident Controller and others
2. Megaphone (workable hand-held PA system)
3. Walkie- Talkie/ mobile phones/ pagers
4. Stock of fire fighting material
5. Note books/pads and pens/ pencils
6. Sign boards such as –
  - Assembly point
  - Emergency exit door/Stair case
  - Fire alarms
  - Fire extinguishers
  - Water hydrants
  - Emergency control center
  - Road closed

## **ROLE OF MASS MEDIA IN DISASTER MANAGEMENT**

The media can play a leadership role in changing the mindset of society for making it more proactive rather than reactive. It also has the responsibility to make the message more valuable and credible for the general public.

The role of media is vital in the overall promotion of a better disaster management regime within a state. The role of print media cannot be neglected as it has been observed that receivers of the information have more trust in the written message than the word of mouth. The information given in newspapers is perceived as a reliable advice and people take it more seriously.

Another much neglected aspect during the pre- and post-disaster activities is the lack of communication and coordination among humanitarian organisations, development partners and state agencies. This leads to duplication of efforts along with lack of effective work on ground, particularly in the sensitive areas. Improved communication among various organizations is a must, but that is only possible in pre-hazard period.

There must be identified focal persons and departments dedicated for such coordination. For disaster mitigation or response, focal persons can remain in contact with partner organizations and government officials for effective measures.

Despite the fact that private media groups and channels do have commercial interests, the media's role in the case of a disaster should be based more on ethical and moral dimensions.

This is one area where the media should be much more responsible in disseminating information. It must win people's confidence, and the provision of reliable information will serve the purpose. The media should not only be providing correct information and the right message at the right time but should also create an environment of solidarity and faith. This will help in augmenting the collective responsibility of all segments of society to tackle the challenges posed by any disaster.

