31.0 OBJECTIVES

After reading this Unit, you should be able to:

- explain the concept and significance of monitoring
- discuss various methods and techniques for effective monitoring of a disaster management related programme; and
- highlight the problems in the process of monitoring.

31.1 INTRODUCTION

There are various programmes related to different aspects of disaster management such as prevention, preparedness, mitigation, response, rehabilitation and recovery. For any such programme, information about the progress and effectiveness of the programme is required. Monitoring is the process by which all such information about the programme is generated and critically analysed. Monitoring provides feedback to the programme manager or administrator as to whether the means and resources of the programme are being utilised and implemented and whether the desired objectives are being achieved. Programme Monitoring is basically an appraisal of the following aspects:

1) The extent to which the target population (affected community) is being served.
2) The quantity and quality of staff performance; if these are satisfactory and could lead to the achievement of the goals or objectives of the programme.
3) The peoples' perception about the designed programme and method of its implementation.
4) The acceptance of the programme methodology and technology by the people concerned in the local community.
5) Whether progress and implementation comply with predesignated standards, laws and regulations imposed on the agency by internal or external funding sources, regulatory agencies, professional bodies, experts and others.
6) Short-term and long-term gains of the programme in economic terms.
31.2 MONITORING: CONCEPT AND SIGNIFICANCE

First of all we should understand the concept and importance of monitoring in a project and the stage at which it can be started. Monitoring can be started right from the beginning after the planning objectives have been clearly spelled out. The first and foremost job is to identify the following clearly and unambiguously:

a) goals and objectives of the programme or project
b) target group
c) methodology/technology involved
d) staff required and their experience, interest and training in the area
e) available resources

Monitoring starts with the delineation of performance standards consistent with the planning objectives. The next step will be the systematic collection of information on regular basis on performance, based on designated standards. With this information, one can find out and make a judgement about the extent to which deviations exist between the actual performance and the expectations from the programme.

Monitoring provides information to the decision maker about the gap between actual and expected performance of the programme so that appropriate administrative decisions can be made as to whether the programme operation, its methodology etc., should be changed or modified slightly or abandoned. Further significance of monitoring lies in obtaining peoples' response and developing public relations as well as help in reporting programme activities to the sponsors/donors. The format of information to be collected about the programme operations is normally designed to assess performance standards as mentioned earlier and to analyse whether project is on course. This information may then become the basis for annual reports to sponsors generating documents for public information and publicity and so on.

Monitoring is more significant in the projects in which it is difficult to get any direct quantitative measures of the programme's effectiveness. For example, in most of the rehabilitation projects, the programme is not according to the needs and expectations of the target group. In case it was monitored on a regular basis from the beginning changes or modifications could have been made to cater to the needs of the affected people. Otherwise not much can be achieved if such knowledge becomes available only towards the end of the programme. In areas in which effective and reliable technologies have been developed, monitoring is required to measure the effectiveness and help in the evaluation of the programme. For example, in flood affected areas, for monitoring cholera vaccination programme, all that would be necessary is knowledge whether the whole target population has been vaccinated and whether medically appropriate performance standards have been met by the staff.

Monitoring for Administrative Decisions

The primary purpose of monitoring is to enable the administrator to make rational and informed decisions about programme operations. If the officer concerned follows a 'Management by Objectives' approach in which the objectives are clearly and rigorously specified, he would like to use monitoring
information for even minor corrections in the programme and will modify it accordingly. The officer concerned has an accountability of the programme towards various groups such as funding agencies, the community (target group), professionals and others. Monitoring generates necessary information to assist in appropriate administrative decisions as discussed below:

1) **Staff allocation** - Whether to reallocate staff to different programmes or to various activities of the same programme. This can result in increase or decrease of staff according to the need/requirement.

2) **Funding** - Sponsors may be asked for an increase in the operational budget for a modified programme or some activity within the programme. Other funding agencies or potential sources also could be approached if the sponsors are not in a position to increase funding.

3) **Modify programme objectives** - In the face of budget cutbacks, existing activities may be reduced or restructured and programme may be modified accordingly.

4) **Legal requirements** - In case the programme is deviating from the legal requirements of the state or central government, policies and practices can be suitably modified to comply with legal requirements.

5) **Quality and extent of services** - The administrator has responsibility for many other decisions that bear on the quality and extent of services or work delivered to the sponsors or client organisation. Monitoring provides inputs to revise programme where necessary, select, train and supervise staff, devise patterns of staff organisation and development, manage the fiscal activities of the programme with adequate and established accounting and auditing procedures, reporting to the sponsors about the periodic progress in the project, and make budget requests accordingly.

In brief, it can be concluded that the administrator and his staff who are responsible for the overall implementation of the programme are benefited through reviewing of the programme operations, through monitoring procedures and for enabling right decisions based on systematic, reliable and valid monitoring information.

### 31.3 ROLE OF MONITORING IN DISASTER MANAGEMENT PROGRAMME

Monitoring has an important role to play in all the three phases of disaster management as is explained below:

A) **Pre-disaster phase:** This is the phase in which the administrator, voluntary organisations and the community are involved in the programmes related to prevention and preparedness pertaining to the occurrence of disasters. These are planned activities and monitoring of such projects is very much needed for their successful implementation. For example, the Government and Non-Government organisations constructed of large number of cyclone shelters on the east coast in Andhra Pradesh, Orissa and Tamil Nadu. These are to provide temporary shelters to the affected community at the time of cyclones. If we critically examine the type of shelters constructed 20 years back and now, there is a lot of difference in structure, location and use of these shelters. Gradually these shelters, made only for emergency habitat, were modified into multipurpose buildings so that these structures can be utilised by the community in the normal situation as well and thereby ensure proper upkeep and maintenance. Proper
Monitoring and evaluation of projects/programme had made it much more useful for the community than it was planned by the authorities/organisations.

B) Disaster Situation: Rescue, evacuation and relief as well as temporary resettlement and rehabilitation are some of the important activities undertaken at the time of disaster. Monitoring is very useful to the decision makers in this situation also and will help make the operations quick, effective and acceptable to the communities.

C) Post - disaster Situation: Relief and recovery are some of the important post-disaster activities. Monitoring can make these more effective and help the administrator in taking appropriate decisions. Monitoring helps in seeing the progress of the project successfully to its final completion. For instance, in 1993 Latur earthquake occurred in which 20 villages were badly affected. The first and foremost post-disaster work was to provide temporary shelter to 60,000 affected people within the shortest period of time. Providing food, drinking water and ensuring sanitary conditions were important tasks for the administrators. Monitoring played an important role in the timely and effective completion of the project.

Check Your Progress 1

Note:  
1) Use the space given below for your answers.
   ii) Check your answers with those given at the end of this Unit.

1) What is meant by Monitoring especially with reference to any programme?

2) Comment on the significance of monitoring.

3) How is monitoring important at various stages of disaster management?
As mentioned earlier, there cannot be a single method or technique for monitoring. It will vary from project to project and would depend on the goals and objectives of the project. There may be a few personal interviews; group discussions might be sufficient for the purpose or it may require a large survey with a set questionnaire and proper sampling technique. It would also depend on the size of the project or target population. In a disaster situation, when the affected community is large, it is important to know how to collect information/data, analyse and interpret the same to achieve useful results.

The most important problem in monitoring is collection of data. In the process of monitoring, data is gathered for three main purposes, viz.,

a) description
b) explanation
c) prediction

Though, these three purposes cannot be exclusively separated but there is a logical progress from description to explanation and then to prediction. Description is the first step towards explaining the nature, underlying causes, relationship and context of a phenomenon or process.

Descriptive data would answer questions of WHO will be involved in the project, WHEN it will be started and WHERE it will be started and implemented but it will not be able to explain HOW and WHY it will be implemented and the methodology part is mostly not covered in the descriptive data. The data generated for physical and financial monitoring are typical examples of descriptive data. Although this type of data record the progress, describe the relationship between expenditure and achievement of physical targets, and identify possible deviations from the planned course; they would not explain the reasons for shortcomings or bottlenecks in the progress.

Most of the data secured from beneficiary are also descriptive.

In a project, where we would like to find out reasons for its success or failure, which is more a diagnostic study, normally some explanation is required. For example, when project staff are trying to find out why the beneficiaries are not responding properly to a technically sound package of rehabilitation, which has proved highly successful in another part of the country or elsewhere in the world, they are searching for local factors and conditions which could possibly explain the cause of this unexpected phenomenon. They are seeking to answer the question of "why".

Prediction is based on an understanding of the causes like description and explanation, and project the scene in the future that will affect the overall design, scope and modes of data collection and the analysis.

Data gathering is one of the most important aspects of monitoring and evaluation. There are two types of data collection as follows:

1) Qualitative Data - result in information which can best be described in words.
2) Quantitative Data - produce numerical data.

In the context of disaster management, the qualitative data describe the situations, events, people, their participation, interactions and observed behaviour of people, direct quotations from affected people or media or from
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prepared documents or reports, state memorandums, correspondence between district-state-central governments, official records and case studies. Qualitative data mainly focus on the signs and symbols that decode the reality seen by the target population. For instance, during any rehabilitation programme, in case a number of persons respond in the same manner, the investigator will become more cautious and will also seek to examine the context and manner in which they have responded or spoken. An attempt will be made to see if they all meant the same. Both verbal and non-verbal behaviour are examined in qualitative studies in order to understand the views, attitudes, and perspectives of the respondents. The qualitative method is retractive and there is an ongoing opportunity to revise interview or observe records as the study progresses so that new facts can be brought to light.

Quantitative data is normally gathered by a structured survey, with a set of questionnaire to a sample of respondents at one set of time or at various time intervals. In this type of method, iteration is not common. The investigator is not usually expected to ask additional questions even if they feel that these questions will be useful in the project review. Nor can the investigator discard an interview even if the respondent did not give candid answers. The advantage of the structured surveys are that the interview mode and construction of questions can be standardized on the basis of experience so that bias introduced by either the enumerator style or the respondent's misunderstanding is controlled. This type of survey can be used to compare the standard of living of the target group population before and after the disaster or to see the nutritional status of the population. The quantitative data is often obtainable from the records of project agencies and other institutions. The statistical officer at the district or state level may have extensive data on his files which can be recorded, aggregated, disaggregated and reanalysed for diagnostic studies and impact evaluations.

Qualitative data can be collected by the following ways:

- indepth interviews with individuals respondents. The flow of ideas is more frequent in such conversations.
- group interviews such as (a) community meetings and (b) focused group discussions after sufficient notice and advertisement had been made for ensuring good attendance. In such meetings two to three interviewers are better than a single investigator. Focused group discussions are good with small number of invited participants. The interviewer should just introduce the subject and initiate the discussion and keep it focused on the desired topic as often, this type of discussion tends to deviate from the main topic.
- third method is participants observation. This involves direct, extensive observation of an activity, behaviour or relationship. Participant observation can also include qualitative interviews with the informants.

Most of the projects, of some development activity or disaster management require both quantitative and qualitative data. Both have their strengths and weaknesses. Choosing the right and appropriate method for monitoring will be the responsibility of the monitoring staff.

**Problems of Data Collection**

The most important constraint for collection of data is the extent of available resources. It is useless to design a data collection operation to reach a widely dispersed sample of population or respondents with the use of questionnaires
and in depth interviewing techniques if neither the logistic resources to manage such an operation nor the skills to collect and observe accurate data are available. Another important constraint will be the availability or otherwise of the time within which the complete data is to be collected and analysed.

**Data Analysis and Interpretation**

From the foregoing description, the importance of proper data collection is clear. Accurate data processing, analysis and interpretation are equally important parts of monitoring for effective decision making. It has often been seen that even important data collected by researchers does not get interpreted. In recent years with the help of computers, a large amount of data can be handled easily and quickly. There is a need to discuss the objectives and goals of the research with the programmer so that the right software could be used for data analysis. Computerisation should be considered carefully during project preparation stage itself as part of designing of the information system.

In case of monitoring of disaster management projects, if an existing and well tested manual system works efficiently and no extensive data gathering is required, computerisation will not be an immediate concern. However, in the report preparation, in view of the many revisions of the draft from time to time, we can use word processing capability. Computers are helpful in handling survey data particularly if large number of variables are used in a survey.

Interpretations, based on proper data analysis can provide useful information to the decision maker such as about the following:

- staff performance
- time frame for the project
- people's perception about the programme
- proper utilisation of funds
- further requirement of financial resources and manpower
- selection of activity measures
- major or minor changes required in the activities or programme as a whole.

**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 this Unit.

1) What is the main purpose of data collection?
2) What are the types of data collected for monitoring?

3) How are data analysis and interpretation important in monitoring?

31.5 LET US SUM UP

Monitoring is the process by which information about programme operation is generated and critically analysed. Monitoring provides feedback to the administrator as to how the programmes' means and resources are being utilised and implemented. By monitoring, the decision makers get an idea about the extent the target group is being served as well as the quality and quantity of work done by the staff. Monitoring gives an idea about the acceptance of the programme by the people and the need for changes or modifications in the activities.

Monitoring can be started right from the beginning of the programme just after the identification of goals and objectives, target group, methodology/technique involved, and available resources. Monitoring generates information enabling administrative decisions regarding staff allocation, funding, need for modification or change in objectives, legal requirements as well as quality and quantity of services.

There are several methods/techniques for monitoring, depending on the project programme. There may be personal interviews, group discussions, brief surveys or large surveys, where considerable extent of data is required. It is important to identify the correct methodology for a project and proper collection, analysis and interpretation of data.

Data may be gathered for three main purposes - description, explanation and prediction. Similarly data may be of two types (i) Qualitative data, which result in information which can best be described in words and (ii) Quantitative data - which produce numerical data. The available resources and time are the two major constraints for the data collection.

Accurate data processing, analysis and interpretation are equally important parts of monitoring for effective decision-making. Use of computers is very common in data processing now-a-days, as they can handle a large amount of data, particularly if there are more variables. But data should be handled and processed by skilled, experienced persons to get correct results.
31.6 KEY WORDS

Management by Objectives : It is a process wherein purposes and goals are stated clearly before resources are spent, effort expended and work done. It defines each individual's major areas of responsibility in terms of results expected.

Retractive Sampling : Where a revision is permitted.

31.7 REFERENCES AND FURTHER READINGS


Mills, Mathew B. and A. Michael Huberman Qualitative Data Analysis: A Source Book of New Methods, Beverly Hills, Calif, Sage Publication, 1984


31.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Your answer should include the following points:
   • Monitoring is basically the task of appraisal of various aspects relating to a programme or activity.
   • With regard to programme monitoring, it involves appraisal of the extent to which the affected community is being served, appraisal of staff performance, peoples perception about the programme and its implementation of policies with certain designed standards, laws, regulation and the short-term and long-term going of the programme in economic terms.
   • Monitoring ensures that the specified standards and legal requirements are being followed.

2) Your answer should include the following points:
   • Monitoring provides necessary information to the decision maker about the gap between the actual and expected performance of programme so that appropriate correction measures can be taken in time.
   • It obtains peoples' response and help in developing public acceptance.
   • It facilitates reporting activities of programme to the sponsors/donors.
   • It enables the administrator to make rational and informed decisions about programme operations.
   • It generates specific information about any aspect like staff allocation, funding, quality and extent of services etc. that facilitates appropriate administrative decisions.
3) Your answer should include the following points:
• During Pre-disaster phase, monitoring enables timely completion of programmes and projects.
• During Disasters, monitoring helps to maintain a clear picture of the situation and to take additional decisions as the situation demands.
• During the post-disaster scenario, monitoring helps in effective and timely use of resources in the programmes for relief and recovery of the affected community.

Check Your Progress 2

1) Your answer should include the following points:
• The main purpose of data collection is to gather information for (a) describing the underlying causes, relationship and context of a phenomenon or process. (b) explaining reasons for its success or failure; (c) predicting the scene in the future.

2) Your answer should include the following points:
• There are two main types of data collected for monitoring. They include (a) Qualitative data which result in information that can be described (b) Quantitative data that produces numerical data.

3) Your answer should include the following points:
Data analysis and interpretation provide useful information to the decision maker about the following and are thus important in monitoring.
• Staff performance
• Time frame for the project
• People’s perception about the programme
• Proper utilisation of funds
• Further requirements of financial resources and manpower
• Selection of activity measures
• Any major or minor changes required in the activities or performance as a whole.