



OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

TOGETHER

for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as "developed", "industrialized" and "developing" are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact <u>publications@unido.org</u> for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at <u>www.unido.org</u>

18668

M. Puer a Ang

Putation in the Merican

- F

NEED FOR MONITORING

93. With a view to ensuring that any multinational industrial enterprise (MIE) established fulfills its objectives and purposes satisfactorily, it is necessary to include an appropriate monitoring system, to watch the signals received as a result of such monitoring and to take, well in time, such corrective or remedial actions as are necessary. The outcome of monitoring of successful MIEs could also help to promote the culture of MIEs in the larger interests of African development.

LEVELS OF MONITORING

94. Monitoring is required to be done at different levels as appropriate to each such level. In practice, there can be various levels of which the following three distinct levels are of critical importance for the success of the enterprise:

- M-level Multinational ownership level
- B-level Board of Directors level
- P-level Project or Plant level

1

95. Monitoring at the <u>M-level</u> will be done by the multinational owners of the MIE as per its Articles of Association. This may be a committee of ministers from the participating Governments, committee of chiefs of co-operating and participating corporations or enterprises, or a body of shareholders who might be private citizens.

96. Monitoring at the <u>B-level</u> will be done by the Board of Directors which is constituted in terms of the Articles of Association of the MIE.

97. Monitoring at <u>P-level</u> will be done by the person appointed to be in charge of the execution of the project or in charge of the operation of the plant or enterprise such as the project or plant director, general manager or executive or managing director, etc.

98. Amongst the various auxiliary levels of monitoring which could be useful, mention may be made of, especially, two such levels:

(a) The international, regional, subregional and national levels of monitoring; organizations in the United Nations system such as UNIDO, UNCTAD, UNCTC, etc.; international financial institutions such as World Bank, International Monetary Fund, International Finance Corporation, etc.; regional agencies such as the Economic Commission for Africa, ECCAS, ECOWAS, CCE, CDI, IDEP, etc.; and national and financial institutions such as KFW, etc. could considerably aid with data based on their own regular monitoring.

1 I I I I I I I I

1 1 1 1 1 1 1 1 1 1 1 1

1 I II I

- 1 11 1 - 10 1 1

(b) The industry group level monitoring; industrial enterprises having common interests, features, products or markets may get together within a country, within a region or internationally, such as the Fertilizer Industry Association, Thermal Power Project Groups, Cement Manufacturers Association, Brick Manufacturers Association, etc. They may monitor the entire group for achieving their common goals and sharing their common interests; they may make or assist in making inter-firm comparisons (codified, if need be, where identity is not to be disclosed). These could provide valuable input in the process of evaluations at various levels during monitoring.

OBJECTIVES OF MONITORING

- 99. The objectives of monitoring are:
 - To quickly, regularly and clearly know, as appropriate to the level at which monitoring is being done, what is the status of an industrial enterprise - both when under implementation as well as when in operation.
 - To evaluate the extent to which the enterprise is achieving the set objectives and to take timely corrective steps if and where necessary.
 - To enable comparison with other enterprises and to take steps to further improve performance and in certain cases even secure higher performance levels than those originally envisaged or projected.
 - To provide an effective tool towards ensuring that the enterprise fulfills the goals and objectives set for each level and serves the social and economic interests as envisaged at the time of setting up the multinational enterprise.

FRAMEWORK FOR MONITORING

1 11 1

.

100. The framework of monitoring would include consideration of the following issues::

- (a) The effectiveness of monitoring of multinational enterprises will depend upon the management's commitment to monitoring and the linkages established. The first linkage is with the overall monitoring system for economic development in general and industrial development in particular which the respective Governments would have established within their own countries. Whether the multinational enterprise is in the public sector, private sector or in the joint sector, it has to depend upon appropriate supportive systems for gathering and processing information and data. Decision-makers at both the macro and micro levels would need assistance from the information and data disseminated by these systems; at the same time, their own monitoring activities would give inputs into these systems and this complementarity should be the strength of the framework.
- (b) In view of the rapid technological advances taking place and also arising out of the need to monitor both the micro and macro level issues on a sound scientific basis, it is of critical importance that the support services to the enterprise are well linked; the support service may be in

н т

. .

. . .

.

Ш

п

1

. . . .

the area of industrial information, standardization and testing, research and development, and training and continuing education. The African regional, subregional, and international organizations, such as those indicated in Chapter III, can play a vital role in providing this linkage for the monitoring system by harmonizing and co-ordinating their inputs effectively; mutual competition and differences in approach which have sometimes adversely affected the developmental efforts should be replaced by more effective co-ordination and meaningful linkages between multinational industrial enterprises and these institutions. Whilst consultancy services could play an important role in some of the facets in the development of the enterprise, their role in monitoring is rather limited, especially after effective horizontal and vertical linkages nave been established.

- (c) In the case of MIEs, there are three elements involved. First of all, monitoring is in relation to an industrial enterprise; this is much the same as any other industrial enterprise anywhere. Secondly, the enterprise is multinational, which means they use the resources from and/or serve the markets of more than one country; this makes it necessary to monitor certain special aspects. Thirdly, the multinational enterprise is in Africa; and so the environment in Africa has to be realistically taken into account and integrated in working out the details being monitored.
- (d) Any monitoring system introduced should not be too rigid or cumbersome. It should have the flexibility to adjust to unexpected situations, especially in conditions in Africa; it should be simple enough to achieve the objectives for which the monitoring is being done. Whilst those engaged in the implementation of a project or operation of an enterprise will themselves be substantially the individuals participating in the monitoring, it is necessary that they should receive appropriate training in monitoring activities.

MONITORING TO COVER ENTIRE LIFE CYCLE OF MIES

101. Every stage in the life cycle of an enterprise needs monitoring. These can be grouped in two major phases with each phase having two stages:

(a) Project implementation phase:

Initial stage

Initial stage in the project implementation phase is the one where the various aspects of the project are still at documents and negotiations stage before committing on substantial expenditure on physical progress. At this stage, changes can easily and with little wasteful expenditure be incorporated if the monitoring system detects new parameters of deviations from original assumptions or expectations. UNIDO's COMFAR System (Computer Model for Feasibility Analysis and Reporting) may be used with advantage.

Execution stage

1

1

Execution stage in the project implementation phase is the one where commitment on expenditure has been made and physical progress on

11.1

ground has started. At this stage, any changes indicated as a result of monitoring needs to be looked into keeping in mind if there would be any waste of already committed expenditure. The project would have to be reviewed to the extent considered desirable, renegotiated with all concerned and the shares in investment redistributed to the extent called for and agreed to.

(b) Enterprise operation phase:

Pre-stabilization stage

Pre-stabilization stage in the enterprise operation phase is the initial period after commissioning when operations and production are being stabilized and mastered when relatively lower norms of operational results would be acceptable.

Post-stabilization stage

Post-stabilization stage in the enterprise operation phase is the one when the needed degree of stabilization of operations and maturity in production have been reached and designed capacities are being utilized. Within this stage, there could be a substage when financial debts have been cleared as from then on the balance-sheet and the financial picture of the enterprise may substantially change.

APPROPRIATE DETAILS ON STANDARD FORMATS

102. Although the basic principles and framework may look similar at various levels, the details have to be appropriate to that level; the parameters and the way they are dealt with at different levels have to be complementary to each other as a total system. A single detailed elaboration of the monitoring system cannot be applied to all types and sizes of the enterprises in all situations; therefore a separate format for monitoring of specific multinational enterprises has to be formulated using the above guidelines. Such formats should include the aspects detailed in items 109 to 123.

MONITORING MACHINERY

.

103. The machinery for collection and analyses of data for monitoring should, as far as possible, be the same machinery responsible for execution of the project phase or for the operational phase of the MIE. In fact, it is envisaged that monitoring is an integral part of the implementational, executional and operational activities in the enterprise. The data envisaged to be collected is indeed a necessary part of the information those executing or operating the enterprise should normally have for the proper management of their own functions and responsibilities; the critical overview of some of these data by the identified levels is a part of the supervising process and indeed a part of the process to cause and secure remedial actions needed from the monitoring level. However, in such cases where a separate machinery for assisting in monitoring is considered necessary, and the enterprise can afford it, a separate machinery in the form of a cell or section can be set up.

.....

. .

1 B

i - 11

.....

ш

VERIFICATION AND AUDIT IN MONITORING

104. The most important tool in monitoring is detailed data in the format. Since the analysis of the data and the conclusions arrived at therefrom would be as good as the data, it should be ensured that the data provided are correct and complete.

105. From time to time, the monitored information or data may also have to be verified or re-checked, and for this purpose, sometimes some simple and convenient measuring devices may have to be provided to the monitoring teams. There should, however, be always systems of formal as well as informal internal auditing as well as external auditing to ensure that the data being included for monitoring at each level are indeed factual and fair.

TIMELY FEEDBACK

1 I II I

and a man to

ì

106. It is not uncommon to see that in certain enterprises monitoring is carried out very well. Extensive data comes forth but those who have to review these give it such a low priority in their work that it becomes too late to do anything by the time the analysis is done and the feedback comes. Any monitoring system therefore has to have an accompanying timely feedback system which has to be worked out as appropriate to each given case.

IMPLEMENTATION OF CORRECTIVE SIEPS

107. Even after a good monitoring is done, competently analysed and timely feedback is given, the benefits of these may not be fully realized unless effective corrective steps, remedial measures, or effective methods for further improvement are taken. Each superintending level has therefore to oversee this aspect by what may be called a "Super-Monitoring" to monitor the monitoring activity and implementation of related steps as appropriate to that particular MIE.

108. At the time of considering the data which come forth from monitoring and the results of the analysis of such data, it is important to remember the primary objectives of monitoring. The data and the results of their analysis should be compared with the targets originally set and not with targets imagined later as the more appropriate ones. Of course, whenever the data and the results of analyses thereof so indicate, the original targets should be reviewed and revised targets set after taking into account their implications and effects on the MIE as a whole and after ensuring that the re-evaluated benefits and/or redistributed shares are agreed to by all the partners in the MIE. At this stage, it is not merely the monetary or economic aspects of returns on investment but the whole gamut of other benefits, including social benefits which should be kept in mind.

THE BASIS FOR FORMULATING MONITORING DETAILS

1

1

ш. т.

1 1

109. Collection of required data and their presentation in prescribed formats along with their analyses are to be considered as part of normal functions and duties of the concerned executive, operational and managerial officials, except where a separate machinery is considered necessary and the MIE can afford it. Those who have to monitor the MIEs at different levels use these data and analyses, supplement them with such additional infoimation as may be required either from specialists or from audit and come to conclusions and initiate needed actions.

. . .

. . .

1 I I

0 0

н н

- 5 -

110. In the initial stages, until the Articles of Association of the MIE are adopted and the body of shareholders or owners is created, the promoters themselves do the required monitoring and this is included as part of M-level monitoring in the initial stages.

111. In the following paragraphs, what should be monitored at the different levels is outlined; though the titles of the outline may look substantially similar, it is important to remember that the perspective and purpose of monitoring at the three levels are different and therefore the details to be provided within the outline will also be different.

112. At the multinational ownership level (M-level), the monitoring details should enable them to take a comprehensive and total overview of the MIE in that stage and see what type of actions are called for in terms of re-distribution in shares, market support, foreign exchange and customs regulations, social benefits, etc. and, indeed, in ensuring that the very structure and functioning of the Board of Directors itself are satisfactory.

113. At the Board of Directors level (B-level), the monitoring details should enable the Board to take an overall view of the performance and functioning of the MIE vis-à-vis the objectives for which it was set up. The Board being the highest level of management of the MIE, should be able not only to ensure that the MIE is being run in the best manner within the existing rules, regulations, etc. of the countries involved but also to draw pointed attention of the owners at M-level to the need for any changes in rules, regulations, policies etc. in the best interest of MIE as well as of their collective or joint owners.

114. At the executive or operating level (P-level), the monitoring details should enable the MIE to reach the targets set by the Board and, at the same time, give such feedback to the Board as would enable the Board to take such actions as would improve the functioning and performance of the MIE.

115. UNIDO can provide separate auxiliary documents to illustrate the above aspects.

M-LEVEL MONITORING

1 1

.

11

116. Monitoring at the initial stage of the project implementation phase shall include the following aspects:

- Whether the various data used for carrying out the feasibility study are realistic or do they need any modification?
- Has the feasibility study been done following the guidelines in the UNIDO Manual for the Preparation of Industrial Feasibility Studies (No. E/78/II/B/5)?
- Extent of agreement on who will be the participants in the MIE?
- Extent of agreement on distribution of shares in investment amongst the participants and in what form?
- Extent of agreement in the share in the market and in the distribution of profits, assets and liabilities;

1.11

10 I I I I

III II I I

- Has a suitable software package, such as UNIDO COMFAR been used to simulate short-term and long-term financial and economic situations?
- Has the software package referred to above been applied to various possible situations such as changes in input costs, changes in foreign exchange rates, changes in sales realization due to changes in market situation and prices, etc.?
- Has particular attention been given to:
 - (a) inter-country differentials in prices of goods and foreign exchange;
 - (b) solutions to divergences in fiscal, administrative, customs, etc. regimes followed in the participants' countries;
 - (c) imports and exports amongst the participating countries and outside;
 - Even though the country where the MIE is located seems to gain the maximum economic benefits, has detailed consideration been given to:
 - (a) benefits to each participant due to regional development;
 - (b) benefits on account of import substitution, if any;
 - (c) benefits to each participant in that, if the MIE in one location succeeds another MIE in another location may come up bringing more economic benefits to another participant, thus making the pooled efforts resulting utlimately in benefits to all participants, etc. over a period.
- Has a suitable Article of Association been drafted and appropriately registered?
- Have steps been taken in regard to technology inputs to the MIE in order to ensure that the UNIDO Guidelines on Technology Transfer Negotiations have been followed?

117.. Once the initial stage as above is well monitored and a decision is arrived at to go ahead with the execution stage of the project for the MIE, and once the planning and negotiations are carried out in accordance with the guidelines described in Chapters II, III and IV, the monitoring shifts its attention to actions on the ground which would include:

- (a) <u>Financial monitoring</u>, covering:
 - Mobilization of investments
 - Preparation of balance sheet of the project

- Analysis of the planned and actual cost of the project
- (b) Resource monitoring, covering:
 - Technology transfer arrangements mobilization (with the assistance of organizations, such as UNIDO)

т н т

н. т. О

.....

1111

- Manpower mobilization

1 11

- Materials mobilization

- Machinery mobilization (with the assistance of organizations, such as UNIDO)
- (c) <u>Physical Progress Monitoring</u>, covering:
 - Expected deviations in the targetted time and costs in the completion of the implementation of the project
 - Measures suggested to meet the shortfall in infrastructural requirements
 - Project schedule chart showing the status of the project as a whole
- (d) <u>Quality Monitoring</u>, covering the quality being achieved in the various facets of the project vis-à-vis quality as originally envisaged.
- (e) <u>Social Responsibility Fulfilment Monitoring</u>, covering:
 - Status on environmental pollution prevention measures
 - Status of the manpower development
 - Status of the local infrastructural development
 - Status of any other social responsibility the project has envisaged

118. On completion of the execution of the project, the plant is commissioned and then it is put into operation. Even though the enterprise would have reached its operational phase, initially it will be still in the pre-stabilization stage. Monitoring in the pre-stabilization stage will give attention to almost all the parameters which would be monitored in the post-stabilization stage with particular attention to the following aspects:

- (a) Problems arising out of the technology or technology transfer arrangements;
- (b) Relatively lower norms of operational results would be acceptable which would have, in any way, been anticipated in the detailed project report;
- (c) For the success of the MIE, the plant must get stabilized sconest and efforts would have to be directed towards achieving this;
- (d) When the plant is under stabilization, the product or service can sometimes be of variable quality; it is therefore important to ensure that such products or services which could shake the confidence of the consumers in that product or service are not marketed;
- (e) In the initial period, special attention should be given to building the market with good response to the product or service from the consumers or the clientele;

119. Monitoring at the M-level at the post-stabilization stage of the operational phase shall include:

.

- (a) <u>Financial Progress Monitoring</u>, covering, in terms of currencies as per previous arrangements and in equivalent "hard" currency:
 - Income and expenditure statement

1.1

- Summary of cost of production, cost of sales and realization from sales, including prices

1.1

1.1

- Balance sheet
- Fund (cash) flow statement
- Various financial ratios
- Whether there have been any changes in the regimes of foreign exchange, customs and preferential buying
- Cost-benefit analysis for the modernization/expansion of the Unit, if proposed (increase in production, cost-benefit ratio, net present value, internal rate of return and pay-back period)
- (b) Social and Economic Responsibility Fulfilment Monitoring, covering:
 - Extent of fulfilling the needs for ecological balancing and environmental protection
 - Net benefit achieved by the nation in the form of direct and indirect employment
 - Increase in the availability of production for national use
 - Extent of benefit to the nation on human resources development
 - Quantum of foreign exchange earned and/or saved by import substitution
 - Other indirect benefits derived by the partners in the MIE
- (c) <u>Physical Progress Monitoring</u>, covering:
 - Quarterly production, despatches and stock status
 - Quarterly capacity utilization
 - Quarterly loss of production (due to shortage of input material, shortage of fuel, shortage of power, stoppage of plant on account of planned maintenance and/or repair, unplanned (break-dcwn) maintenance and/or repair, faults/problems)
 - Status of technology transfer (implementation status in terms of agreement; extent of transfer of necessary skill)
 - Technology support services provided (research and development; information; testing and quality control and productivity)
 - Quantum of export
 - Quantum of import
 - International trends in market, product, servicing, etc.
 - Analysis of share of MIE in the national and international markets vis-à-vis the targets

B-LEVEL MONITORING

. . .

....

1.11

120. Monitoring at B-level in the project implementation phase shall include:

(a) <u>Financial Progress Monitoring</u>, in terms of currencies agreed to, including a "hard" currency:

1

- Total expenditure actually incurred on the project vis-à-vis targetted expenditure
- Measures taken to tackle the over-run/under-run cost of the project
- Evaluation of the proposal for revised expenditure targets
- Mode of financing, including mobilization of investments (total equity (promoters and public) and total debt)
- Imports (Variation in CIF price and variation in exchange rates and their effect)

1. 1. 1.

1.11 11 1. 1.

(b) Resource Monitoring, covering:

- Technology transfer arrangements mobilization (with the assistance of organizations, such as UNIDO)
- Manpower mobilization
- Material mobilization
- Machinery mobilization (with the assistance of organizations, such as UNIDO)
- (c) <u>Physical Progress Monitoring</u>, covering:
 - Suggestions, if any, for changes in the design and engineering
 - Revised schedules for various activities under the project
 - Revised BAR chart/CPM network and/or PERT network chart
 - Adherence to the new programme schedule
- (d) <u>Quality monitoring</u>, covering:
 - Evaluation of various corrective steps recommended for quality improvement in respect of materials and workmanship
 - Suggested further measures for quality improvement
- (e) Social Responsibilities Fulfilment Monitoring, covering:
 - Environmental improvement achieved
 - Results of the efforts towards development of manpower
 - Status of any other social responsibility the project has envisaged
- 121. Monitoring at B-level in the enterprise operational phase shall include:
- (a) Consumption Norms Monitoring, covering:
 - Rate of consumption (of raw materials, man-hours, fuel, electrical power, lubricants, refractories, grinding media and so on depending on what are all being consumed in that particular enterprise) per month as well as per unit of production (tons/kgs, etc.)
- (b) <u>Physical Performance Monitoring</u>, covering:

11 1

н н

. .

1 11

- Monthly production, despatches and stock status
- Deviation in monthly production and despatches vis-à-vis planned
- Monthly capacity utilization of the plant and how it compares with
- break-even point and also with performance in earlier periods
- Monthly loss of production in the plant (due to shortage of input materials, shortage of fuel, shortage of power, stoppage of plant on account of planned maintenance and/or repair, unplanned (break-down) maintenance and/or repair, and faults/problems in mechanical aspects, electrical aspects, instrumental aspects, and operational aspects)
- Actions taken for meeting the shortfall in production/despatch
- Demand for the product present, projections for the future, and identification of demand centres (i.e. status of market-survey)
- Supply (i.e. inputs) present, projections for the future and identification of supply centres

1

1

Export potential in the international market as well as in the markets of participating countries - price-wise, quality-wise and demand-wise and the international market trends

a second de la seconda de l

1.1.1.

- (c) Quality Monitoring, covering:
 - **Raw materials**
 - _ Seni-processed goods
 - Finished product, services, software, customer satisfaction
 - Improvements in quality due to quality circles
 - Recommendations for the creation of new quality circles
- (d) Financial Progress Monitoring, covering in currencies of the participating countries as has been agreed to and in equivalent "hard" currency
 - Income and expenditure statement
 - Cost of production
 - Cost of sale
 - Sales realisation (including prices)
 - -Balance sheet - assets and liabilities
 - -Fund (cash) flow statement - sources and applications
 - Financial ratio (current ratio, quick or acid ratio, debt service coverage ratio, debt equity ratio, asset turnover ratio, inventory turnover, return on sales, return on equity, and return on total capital)
 - Effects of changes in foreign exchange rates, customs levies and any other loans in the participating countries
 - Effects of changes in preferential buying agreed to originally by any country
- (e) Social and Economic Responsibility Fulfilment Monitoring, covering:
 - Extent of fulfilling the needs for ecological balancing and environmental protection
 - Net benefit achieved by the local in the form of direct and indirect employment
 - Development of the region
 - Increase in the availability of the product to the local market
 - Status of human resources development (number and details of training programmes conducted, number of participants benefited, level of participation, participation in seminars and workshops, etc.)
 - Extent of import substitution if this is identified as one of the objectives of MIEs
 - Extent of foreign exchange earnings
 - Other social and economic benefits envisaged at the time of embarking on the project and its subsequent reviews

P-LEVEL MONITORING

- 122. Monitoring at P-level in the project implementation phase shall include:
- (a) Financial Progress Monitoring, covering:

1 11 1

- Status of mobilization of investments
- Actual expenditure vis-à-vis planned expenditure
- Original estimated cost of the activity vis-à-vis the revised
- Anticipated cost over-run or under-run if any, and the reasons thereof

Proposals for any revisions in planned expenditure

- (b) <u>Resource Monitoring</u>, covering:
 - Issues arising out of technology transfer activities
 - Manpower mobilization
 - Materials mobilization
 - Machinery mobilization

(c) Physical Progress Monitoring, covering:

- Basic infrastructure for the project
- Progress of various items of work in the form of BAR chart, CRITICAL PATH (CPM) network, or PROGRAMME EVALUATION REVIEW (PERT), network indicating both planned progress and actual progress; these may also include: critical milestones; scheduled completion date; latest allowable date for completion; assessed likely completion date; event slack in terms of (+) or (-) (weeks); description of problems; impact of problems; actions recommended to Board level; cost implications, if any, and additional remarks, if any.
- Proposed amendments to the BAR chart, CPM network and/or PERT network
- Starting date and completion date vis-à-vis planned schedule with reasons for deviations if nay
- Draw attention to any specific issues coming in the way of achieving the planned physical progress
- (d) Quality Monitoring, covering:

į

- Quality of materials vis-a-vis scheduled specifications
- Quality of workmanship vis-a-vis specified
- Impact of the deviations on the total quality of the project
- Recommended corrective steps
- (e) Social Responsibilities Fulfilment Monitoring, covering:
 - Effect on environment vis-à-vis what is envisaged
 - Extent of training of employees of different categories
 - Any other social or economic aspect which the P-level is required to take care of as part of its responsibility
- 123. Monitoring at P-level in the enterprise operational phase shall include:
- (a) Consumption Norms Monitoring, covering:
 - Rate of consumption (of raw materials, man-hours, fuel, electrical power, lubricants, refractories, grinding media, etc, depending on what are all being consumed in that particular enterprise) per day as well as per unit of production (tons/kgs, etc.)
- (b) Physical Performance Monitoring, covering:
 - Loss of production in each unit operation as compared to the norms set as well as the previous performance (due to shortage of input materials, shortage of fuel, shortage of power, stoppage of unit on account of planned maintenance and/or repair, unplanned (breakdown) maintenance and/or repair, and faults or problem: in mechanical aspects, electrical aspects, instrumental aspects, and operational aspects)

1011 I.

How production can be further improved

(c) Quality Monitoring, covering:

- Quality of raw materials vis-à-vis specifications
- Quality of semi-processed materials in the process line vis-à-vis what they should be
- Quality of finished product or service vis-à-vis specified
- Quality of services, software and consumer satisfaction issues
- Effectiveness of quality circles and/or other mechanisms forming part of the total quality system of the enterprise
- Recommended corrective steps
- (d) Financial Progress Monitoring, covering:
 - Status of working capital and cash flow
 - Inventory (in terms of days of stock and its cost) (raw materials, fuel, stores and consumables, goods in process, finished goods, and packaging materials)
 - Variable costs (raw materials, fuel, power, and packaging)
 - Fixed costs (salaries and wages, repairs and stores, overheads, depreciation, and interes)
 - Sales costs

(

- Variation in market prices and sales realization
- (e) <u>Social Responsibilities Fulfilment Monitoring</u>, covering:
 - Measures taken to control the environmental pollution and the results thereof
 - Measures taken towards human resources development (number and details of training programmes conducted, number of participants benefited, level of participation, participation in other seminars, etc.)
 - Any other social and economic benefits envisaged for the MIE

11 I I 11 I I

1

1

. . .

т. ттт