Public Information and Consultation
on
Sectoral Environmental Assessment Report

India - Hazardous Waste Management Project

Submitted to
The World Bank

By
Ministry of Environment and Forests
New Delhi

September 1997
This Report has been prepared by the Environmental Management Centre, Mumbai for Ministry of Environment and Forests, Government of India. The co-operation extended by the Ministry of Environment and Forests, World Bank, State Pollution Control Boards of Andhra Pradesh, Gujarat, Maharashtra, Tamil Nadu is gratefully acknowledged.
Public Information and Consultation on

Sectoral Environmental Assessment Report

India - Hazardous Waste Management Project

Submitted to

the World Bank

By

Ministry of Environment and Forests, New Delhi

September, 1997
# Table of Contents

Executive Summary

1.0 Background and Objectives
   1.1 Sectoral Environmental Assessment
   1.2 Public Information and Consultation (PIC) of SEAR
   1.3 Objective of the PIC for SEAR

2.0 Organization of the PIC
   2.1 Methodology and Approach
   2.2 Non-Technical Summary (NTS)
   2.3 Draft Sectoral Environmental Assessment Report (SEAR)
   2.4 Public Announcements
   2.5 Participants for PIC
   2.5 Post PIC Activities

3.0 Public Information and Consultation at GPCB
   3.1 Observations at the PIC at GPCB

4.0 Public Information and Consultation at APPCB
   4.1 Observations at the PIC at APPCB

5.0 Public Information and Consultation at MPCB
   5.1 Observations at the PIC at MPCB

6.0 Public Information and Consultation at TNPCB
   6.1 Observations at the PIC at TNPCB

7.0 Public Information and Consultation at MOEF
   7.1 Observations at the PIC at MOEF

8.0 Recommendations of the PIC

PIC on SEAR
List of Annexes

Annex 2-1 - Guidelines issued for conduct of the Public Information and Consultation

Annex 2-2 - Non-Technical Summary of the Sectoral Environmental Assessment Report

Annex 2-3 - Copies of the Non-Technical Summary in local languages

Annex 2-4 - Newspaper Inserts and Articles Pre and Post PIC

Annex 2-5 - List of Participants

Annex 2-6 - Format used for Recording Questions / Comments during PIC
The Sectoral Environmental Assessment (SEA) is a tool recommended for planning environmentally sound sector-wide investments. SEA avoids the inherent limitations of project specific EAs by moving upstream in the planning process to a stage where major strategic decisions have not been made. The Ministry of Environment and Forests prepared a draft SEA Report on the proposed Hazardous Waste Management Project under the assistance of the Environmental Management Centre (EMC), Mumbai. This draft report led to development of the project design (in terms of components and sub-projects) and the associated process guidance framework, recommended to eliminate, minimize and contain any residual risks/impacts.

The preparation of SEAR itself was a consultative exercise and was an outcome of four strategic planning workshops at the State Pollution Control Boards (SPCBs), a workshop on Identification and Management of Risks, Procurement related meetings and several missions of the World Bank with the stakeholders. In February, 1997, a draft SEAR (version 1.0) was prepared and was subsequently reviewed and commented by the World Bank. A second draft of SEAR was prepared in August, 1997 (version 2.0) in response to these comments and to absorb the evolving project design.

PIC is an integral part of the Environmental Assessment (EA) process. However, the level of the PIC activity is governed by the type of the EA process being conducted. Since SEA normally covers an entire sector (in a national or sub-national context) and is conducted before concrete investment decisions are made, it may not always be possible to consult representatives of all potentially affected people during preparation of the SEA. Often, it is more feasible and appropriate to carry out consultations with national NGOs (for example, for natural protection) scientific experts, relevant government agencies, and perhaps also industrial and commercial interests. A successfully implemented consultation process also helps ensure public support for the final sector program.

With these objectives in mind, the MOEF under the assistance from the EMC organized PIC of the draft SEAR (version 2.0) at Gandhinagar, Gujarat; Hyderabad, Andhra Pradesh; Mumbai, Maharashtra; Chennai, Tamil Nadu and New Delhi. The PIC meetings were organized between the period of August 14 to September 4, 1997. On the whole, the PIC meetings were well received and in all 222 participants attended representing NGOs, Government bodies, Research and Academic Institutions, Financing Institutions, Consultants, Media Persons, Environmental lawyers.

This report summarizes the approach followed, documents prepared as well as the observations made in the meetings along with salient recommendations.
The PIC exercise helped in many ways. First of all, it made a clear delivery of the project and its concept to the critical mass of the stakeholders. In this process, some of the initial apprehensions towards the project and its concept got resolved due to discussions and better communication.

Secondly, PIC gave an opportunity to serve as a sounding board to the project design strategy and process guidance framework as evolved in SEAR. Many of the recommendations made were in fact supportive to the overall project content, implementation arrangements as well as the process guidance framework.

Thirdly, the PIC led to some additional recommendations and suggestions which were very useful in finalizing the project design as well as the SEAR. Most of these recommendations have been reflected in the final SEAR to lend a final shape to the project design and the process guidance framework.
1.0 BACKGROUND AND OBJECTIVES

1.1 Sectoral Environmental Assessment

The Sectoral Environmental Assessment (SEA) is a tool recommended by the World Bank for planning environmentally sound sector-wide investments. SEA avoids the inherent limitations of project specific EAs by moving upstream in the planning process to a stage where major strategic decisions have not been made.

The Operational Directive 4.01 of the World Bank states that SEA is particularly suitable for reviewing (a) sector investment alternatives (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation and monitoring at the sectoral level; and (d) the cumulative impacts of many relatively small, similar investments that do not merit individual project specific Environmental Assessments. The objective of SEAs is also to strengthen the environmental management capability of the sectoral or other relevant agencies.

In accordance with the requirements of the World Bank, the Ministry of Environment and Forests (MOEF), New Delhi prepared a SEAR, with the assistance of Environmental Management Centre (EMC), New Delhi for the proposed Hazardous Waste Management Project.

The objective of the Hazardous Waste Management Project, supported by the World Bank, is to assist Government of India in the implementation of a modern and sustainable hazardous waste management system in the country. The project will help in modernizing the regulatory framework, strengthening the institutions in charge of enforcement and monitoring, and financing priority investments in hazardous waste mitigation, treatment, and disposal.

The specific goals are to: (i) promote the development of a comprehensive monitoring and enforcement system for timely implementation of the hazardous waste rules and other legislation concerning the management of hazardous wastes; (ii) assist in the implementation of priority investments in hazardous waste management; and (iii) provide technical assistance for the training, technology development, and awareness programs in hazardous waste management and support for the development of background data for policy-making.
1.2 Public Information and Consultation (PIC)

PIC is an integral part of the Environmental Assessment (EA) process. However, the level of the PIC activity is governed by the type of the EA process being conducted. The EA Sourcebook update of the World Bank on SEA\(^1\) states the following.

"since SEA normally covers an entire sector (in a national or sub-national context) and is conducted before concrete investment decisions are made, it may not always be possible to consult representatives of all potentially affected people during preparation of the SEA. Often, it is more feasible and appropriate to carry out consultations with national NGOs (for example, for natural protection) scientific experts, relevant government agencies, and perhaps also industrial and commercial interests. A successfully implemented consultation process will help ensure public support for the final sector program."

The PIC of SEAR was conducted at four state SPCBs viz., Andhra Pradesh, Gujarat, Tamil Nadu and Maharashtra, and the Ministry of Environment and Forests (MOEF). Since, at this stage, the details of the individual sub-projects have not yet been finalized, selected representatives were invited to participate in the PIC. The recommendations emerging from the PICs have been appropriately reflected in the SEAR.

1.3 Objective of the PIC for SEAR

The main objective of the PIC for SEAR was to convey the spirit, design and content of SEAR with specific reference to the management of hazardous wastes in India. The focus of the PIC was on the project as a whole rather than on individual sub-projects as at the stage of SEA, details on the sub-project are not available. Independent public participation activities would require to be conducted for each of the sub-projects after the PIC for the SEAR, as and when each sub-project is planned and designed.

While, this report provides the proceedings and minutes of the PIC, some of the useful suggestions and recommendations made, have been reflected appropriately in the SEAR. This has benefited to a significant extent the project design and the associated process guidance framework.

---

\(^1\) Environmental Assessment Sourcebook Update No. 4, Sectoral Environmental Assessment, Environment Department, The World Bank, October 1993.
2.0 ORGANIZATION OF THE PIC

2.1 Methodology and Approach

The PIC was designed to be a half day long programme and its conduct involved three stages of activity which were undertaken by the SPCBs, MOEF and the Environmental Management Centre, (EMC) Mumbai. At the outset, EMC prepared guidelines for the PIC which were sent to the four SPCBs and the MOEF. A copy of the guidelines is enclosed as Annex 2-1.

The three stages of activity for the PIC were:

- **Preparation** for PIC which included identification of the communication techniques, list and composition of the participants,

- **Conduct** of PIC which led to a practical plan for implementation of the PIC programme;

- **Reporting** of the PIC included recording the discussions and reflecting them appropriately in the finalization of the SEAR.

The preparatory stage involved preparation of the relevant documents, identifying the critical participants and making logistic arrangements for the conduct of PIC. Group meeting with handouts was considered as the public participation technique suitable for meeting the objectives.

2.2 Non-Technical Summary (NTS)

To facilitate public dissemination of the contents of the SEAR, a Non-Technical Summary (NTS) of the SEAR, was prepared by EMC and sent to SPCBs and the MOEF. A copy of the NTS is enclosed as Annex 2-2. The NTS is a summary of the main findings and conclusions of the study and how they were reached. The NTS avoids to the extent possible, technical terms, lists of data and detailed explanations.

The objective of the NTS was to convey the spirit, design and content of the SEAR. The NTS was made available in English and was translated into Marathi, Telugu and Tamil at Maharashtra PCB, Andhra Pradesh PCB and Tamil Nadu PCB respectively. The copies of the NTS in these local languages are enclosed as Annex 2-3.

Copies of the NTS were sent to all the invitees and additional copies were made available at the SPCB and MOEF offices for any interested citizen for review and making any written comments.
2.3 Draft Sectoral Environmental Assessment Report (SEAR)

A copy of the draft SEAR (Version 2.0), prepared by MOEF with the assistance of EMC, was provided to the SPCBs. Copies of this SEAR were made available at the office of the SPCBs and MOEF to all stakeholders who might be interested in reviewing the entire SEAR.

2.4 Public Announcement

For the dissemination of NTS and obtaining comments, a public announcement of the project was made in:

- the *Times of India* on August 16 and *Sandesh*, a regional daily in Gujarati on August 14, 1997, by GPCB
- the *Hindu* on August 16, 1987 and *Vartha*, a regional daily in Telugu on August 13, 1997 by APPCB
- the *Times of India* on August 26, 1987 and *Saamna*, a regional daily in Marathi on August 13, 1997, by MPCB
- the *News Today*, *Indian Express* and *Financial Express* on August 22, 1997; in regional dailies in Tamil viz., *Dina Thanthi, Malai Murasu, Dinamalar* on August 22, 1997, by TNPCB.

Copies of the inserts, as they appeared in the four states is placed in Annex 2-4. Several citizens made requests to SPCBs to issue the NTS based on these public notices. Some citizens sent written comments to the SPCBs based on the review of the NTS.

2.5 Participants for PIC

Selected representatives were invited to participate in the PIC. These stakeholders included representatives from Government Agencies such as, State Department of Environment, Industrial Development Corporations, Directorate of Industrial Safety and Health, Customs department, and Transport Commissioner’s Office; Industry Associations/Industries; Research Institutions / Academe/ Health Professionals; Reputed Waste Management Consultants; Media persons; Leading NGOs/ Environmental Lawyers and Financing Institutions like Bank of Baroda (BOB), Industrial Credit and Investment Corporation of India (ICICI) etc.

A list of the participants at all the five PICs is enclosed in Annex 2-5 with their signatures for attendance. In all, across all the five PICs, 222 participants attended.
2.6 Post PIC Activities

All the SPCBs allowed three days after the PIC for written responses/suggestions from the participants on the NTS as well as the SEAR. Prior to and Post PIC, communications were received in writing from Mr. A.K. Rathi, Director, Dept. of Forests and Environment, State of Gujarat; Dr. K.S. Sivasubramaniam, Manager GIS, Fugro-Genoics, Navi Mumbai and Bharat Jairaj, Legal Coordinator, Citizen's Action Group, Chennai. The Times of India covered the PIC at Mumbai and featured two articles called “Major Waste Disposal Project to start Soon August 28, 1997 and "Making the Polluter Pay and Prosper September 1, 1997". These two pieces have been included in Annex 2-3.

Many of the recommendations made in the PIC were already incorporated in the second draft of the SEAR. Any additional recommendations which were considered to be useful and effective within the scope of the program were compiled and have been appropriately reflected in the final version of the SEAR.
The PIC was conducted at Hotel Haveli, Gandhinagar on August 14, 1997. The participants for the PIC at GPCB primarily included representatives from the NGOs, government agencies and research institutes. The programme of PIC was as follows,

10.30 hr. Opening Remarks and Welcome  
Mr. J.M. Barot, Member Secretary, GPCB  
Mr. P.S. Bhatt, Chairman, GPCB

10.45 hr. Presentation of the Sectoral Environmental Assessment Report  
Dr. Prasad Modak, Environmental Management Centre (EMC)

11.30 hr. The Hazardous Waste Management Project - A State Perspective  
Mr. J.M. Barot, Member Secretary, GPCB

11.40 hr. Address by Mr. Rangadurai, Additional Chief Secretary, Environment and Forest Dept., Government of Gujarat.

11.45 hr. Question and Answer Session

13.30 hr. Close

In their opening remarks, both the Chairman and Member Secretary emphasized on the need to keep the public informed and involve the community at large in managing the problem of hazardous waste. Creating awareness among industries regarding the costs of clean up or remediation was recognized as an area that needed attention. An appeal was made that there is a need for NGOs and other stakeholders to cooperate with the GPCB in managing a complex problem such as hazardous wastes. An increasing concern of the Board with respect to the illegal import of hazardous waste was also expressed.

The SEAR was presented by Dr. Prasad Modak of the Environmental Management Centre. This focus of this brief presentation of the SEAR was maintained on the philosophy of sectoral assessment being used as a means of designing an environmentally sustainable option for hazardous waste management.

This presentation provided a perspective of the project and included a brief description of the sectoral context which provided information on the present status of hazardous waste management - legal; institutional and technical - in the country and the need for the project. It also included a brief note on the key environmental and health impacts due to the present status.
of hazardous waste management; a brief project description together with the major potential benefits and risks from the project; an outline of the process guidance framework and the strategies proposed to mitigate the risks/impacts due to the project. A summary of the project costs and implementation arrangements were provided by way of conclusion.

The state's perspective of the Hazardous Waste Management Project was provided by Mr. Barot, the Member Secretary. He spelt out the various initiatives taken by the GPCB in preparation for the project. A summary of the components and the budgetary estimates submitted by GPCB to the World Bank for the project was also briefly indicated.

The session was subsequently thrown open for discussion. To ensure effective recording of the proceedings, a format (refer to Annex 2-6) was provided to all the participants to record their questions and comments.

3.1 Observations at the PIC at GPCB

The proceedings of the PIC were conducted in English and the question and answer session was co-ordinated by the Chairman, GPCB. NGO participation during this PIC was very strong. The comments, queries and corresponding clarifications provided during the course of the PIC are detailed below.

Policy related issues

- It was suggested that management of municipal solid waste and medical waste should be considered in addition to hazardous waste.

- NGOs felt that a proactive approach is required on the part of the GPCB and information on management of hazardous waste and its status in the state, should be provided on a regular basis by the Board rather than only when requested by the public.

- The J.J. Mehta Commission had recommended guidelines for siting of industries. In these guidelines, it was recommended that no habitation should be allowed within a radius of 1 km in the case of high disaster industries and 2 km in the case of low disaster industries. It was observed that these recommendations have not been implemented.

GPCB clarified that the siting guidelines specified by the MOEF for industries are being adopted. In the case of hazardous waste management GPCB will follow the guidelines specified by MOEF for siting of common facilities for treatment and disposal of hazardous wastes.
Need for accurate information on quantity of hazardous waste generated in each sector and industry wise was strongly recommended as a pre-requisite to any activity on hazardous waste management. A reliable inventory was essential for planning tools needed for management of hazardous wastes.

The Chairman, GPCB stated that initiatives on the part of GPCB are in progress to ensure validity of the inventorization. Waste generation factors were developed by the National Productivity Council from the types of industrial processes and products for various industrial sectors. These factors were validated through sample field studies in representative industries of each sector.

Additionally, GPCB together with the National Productivity Council (NPC) and a consultant, prepared a data sheet to obtain information from the 8500 hazardous waste generating industries in order to update the State's hazardous waste inventory. Response from industry being poor even after two attempts to elicit information through these data sheets, GPCB was compelled to use powers granted to Chairman under section 5 of the EP Act, 1986 and legal notices were issued. The flow of information upon serving this notice has improved.

* Legislation

Most of the participants felt that the definition of hazardous waste is not clear.

It was clarified that presently hazardous waste is defined in the Indian legislation as those wastes which fall within the 18 categories specified in the Hazardous Waste (Management and Handling) Rules, 1989. However, revisions have been proposed in these Rules whereby hazardous wastes are defined with respect to their origin, presence in the waste stream and properties.

The need to develop standards and define acceptable limits with respect to end-of-the pipe emissions from hazardous waste treatment and disposal facilities was expressed.

It was clarified that the standard setting activity has been already initiated at the Central Pollution Control Board (CPCB) and under the assistance to MOEF/CPCB, these standards will be finalized very shortly.

Disaster management systems to be considered in hazardous waste management particularly with respect to Common Hazardous Waste Treatment and Disposal Facilities (CHWTDFs).
One of the eligibility criteria for investments under the Infrastructure Development Component or for demonstration projects under the Technical Assistance component required any investor / proponent should be registered under the Companies Act. By virtue of this all the laws and regulations mandatory for an industry are applicable on investors in this project, such as the requirement of a Disaster Management Plan.

**Common Hazardous Waste Treatment and Disposal Facilities**

- Management of landfills was considered as a significant issue. Hence site selection, design and operation must be very carefully done.

- The likely exhaustion of disposal sites and hence need for additional land is an issue which needs to be considered in management of hazardous waste.

In the hazardous waste management project, GPCB proposes to, prepare manuals for waste minimization, treatment and disposal site design.

Exhaustion of the sites can be delayed by promoting waste minimization and by laying down policies regarding which waste will go to the common sites and which waste will have to be treated on site. The latter is especially critical for high volume low hazard wastes such as the sludges from effluent treatment plants.

- It was observed that use of incinerators as a treatment option should be considered with precaution and there is a need for emission standards for incinerators.

Exclusionary factors have been specified in the eligibility criteria for the project, as explained in the SEAR, wherein it is specified that wastes containing halogenated compounds or mercury shall not be incinerated.

- Satellite imagery may be useful in site selection for treatment and disposal facilities.

- NGO representatives observed that in keeping with the Polluter Pays Principle, industry - the polluter, must contribute to the cleaning of the illegal dump sites. This maybe along the lines of the Superfunds Act enacted in the USA to remediate dump sites.

It was clarified that one of the guiding principles of the Project design has been Polluter Pays. In keeping with this, the project supports only the development of a strategy for clean-up of dump sites. The onus of the actual cleaning of the sites will be on industry.

- Transportation of hazardous wastes is also a significant issue and hence a strict vigilance system needs to be established.
The GPCB informed that under another World Bank assistance, efforts for establishing Geographical Information System (GIS) based tracking system are already underway.

Industry initiatives

- There is a need for industry to take proactive initiatives in providing information to the public regarding the nature of the processes in their units, the potential risks and the safety measures to be taken to alleviate these risks.

Public Participation

- The NGOs expressed that GPCB should be proactive at the subsequent stages of the project as far as public participation was concerned. They should ensure that the critical sections of the community be present at public participation activities. NGO involvement should be high since they are not adversaries but partners in development. They expressed their willingness to participate in the process of hazardous waste management and offered the services of their laboratories for any analytical work, especially for independent assessment. However, financial assistance was required by NGOs.

It was informed that one of the sub-projects of the Enforcement and Compliance Component of the present project includes assistance for community outreach.

Training and Awareness

- Need for emergency preparedness programmes to protect against potential risks due to accidents in areas where hazardous waste generators are located or hazardous waste is transported/ treated / disposed, was identified. It was suggested that these programmes should involve citizens' groups, emergency services and government agencies.

- Need to develop awareness on the correlation between occupational diseases and industrial processes both for the general public, GPCB officials and industry.

- Awareness on technological innovations in hazardous waste management to be brought to industry particularly medium and small scale industries.

It was clarified here that the project focuses on providing technical assistance to small scale industries through sub-projects on Waste Minimization Circles and the demonstration projects.
Project Monitoring

- A need to develop performance indicators *apriori* to monitor the project was identified. Additionally, expected outcomes of the project should also be delineated and the performance indicators linked to these outcomes.

It was clarified that MOEF will be developing the performance indicators in consultation with the World Bank. The SEAR however recommends quarterly, semi-annual and annual evaluation reports to monitor the performance of the project.
4.0 PUBLIC INFORMATION AND CONSULTATION AT APPCB

The PIC was conducted at the EPTRI Seminar Hall, Hyderabad on August 19, 1997. The programme included:

10.00 hr. Opening Remarks and Welcome  
Mr. G.V. Raghava Rao, Suptdg. Engineer, APPCB

10.05 hr. Introduction of the speakers

10.10 hr. Presentation of the Sectoral Environmental Assessment Report  
Dr. Prasad Modak, Environmental Management Centre (EMC)

10.50 hr. The Hazardous Waste Management Project - A State's Perspective  
Mr. Vishwanath, APPCB

11.30 hr. Question and Answer Session

13.00 hr. Closure of PIC

In his opening remarks Mr. Raghava Rao emphasized on the need to consider management of hospital/medical wastes on priority similar to management of hazardous wastes. The need to verify and authenticate the inventory of hazardous waste in the State was also expressed. It was also emphasized that since inventory is a continuous process the Board aims to continuously update it. Mr. Rao also expressed that waste minimization and clean technology in hazardous waste management are the focal areas of APPCB.

The SEAR was presented by Dr. Prasad Modak of the Environmental Management Centre. This focus of this brief presentation of the SEAR was maintained on the philosophy of sectoral assessment being used as a means of designing an environmentally sustainable option for hazardous waste management.

This presentation provided a perspective of the project and included a brief description of the sectoral context which provided information on the present status of hazardous waste management - legal; institutional and technical - in the country and the need for the project. It also included a brief note on the key environmental and health impacts due to the present status of hazardous waste management; a brief project description together with the major potential benefits and risks from the project; an outline of the process guidance framework and the strategies proposed to mitigate the risks/impacts due to the project. A summary of the project costs and implementation arrangements were provided by way of conclusion.
The state's perspective on the hazardous waste management project was provided by Mr. Vishwanath, Environmental Engineer, APPCB. During the course of this presentation, details were provided regarding the status of hazardous waste generation in the State and the efforts made by the APPCB in identification of suitable sites for setting up of CHWTDFs. The nature of assistance provided by the Australian Aid (AUS-AID) for hazardous waste management in the State was also briefly described. A summary of the proposal together with the budgetary estimates for assistance from the World Bank was also presented.

The session was subsequently thrown open for discussion. To ensure effective recording of the proceedings, a format (refer to Annex 2-6) was provided to all the participants to record their questions and comments. The participants for the PIC at APPCB included representatives from the NGOs, government agencies, consultants and press.

4.1 Observations at the PIC at APPCB

The proceedings of the PIC were conducted in English and the question and answer session was co-ordinated by Mr. Raghava Rao, Suptdg. Engineer, APPCB. Media, NGO and Industry participation during this PIC was strong. The comments, queries and corresponding clarifications provided during the course of the PIC are detailed below.

**Policy**

- Industry representatives felt that incentives should be provided to small scale industries practicing hazardous waste minimization/recycle/recovery. These incentives may be in the form of tax benefits or other such fiscal incentives.

- NGOs considered urban waste management as an important issue to be considered as part of hazardous waste management.

**Legislation and Definition of Hazardous Waste**

- Lack of clarity in the definition of hazardous waste under the present legislation as well as the general ambiguity of the legislation was commented upon by a number of participants. Only solids and semi-solids are considered as hazardous wastes while liquid hazardous wastes are not regulated by the Hazardous Waste (Management and Handling) Rules, 1989.

- NGO representatives also expressed the view that the present rules for hazardous waste management are ambiguous. Due to the present method of categorization of hazardous
wastes, those generated below the specified threshold levels are not regulated. However, these are also hazardous due to their properties and need to be managed.

APPCB agreed that the definition of hazardous wastes is ambiguous and needs revision. The participants were informed that The Hazardous Waste (Management and Handling) Rules, 1989 are proposed to be revised. The revisions proposed provide a more specific definition and categorization of hazardous wastes. The origin and composition of the waste streams are used to define whether the wastes are hazardous or not. Additionally, the properties of the wastes are also being used as criteria to categorize hazardous wastes. The revisions have been sent to all the State Pollution Control Boards for their comments and feedback. Hazardous liquid and gaseous wastes are regulated under the Water and Air Acts.

Institutional set-up

NGOs expressed the need for improvement in interaction between government departments. This was an essential requirement for success of the project.

Inventorization

- It was observed by a participant from a commercial laboratory that development of a reliable inventory is difficult because insufficient information is available from industry regarding waste generation. This was attributed to the ineffective methods used by APPCB to obtain information. Industry is asked to provide similar information in various formats to different government departments. This results in a reluctance on the part of industry to provide information. It was also suggested that knowing the material balance of an industry the APPCB should be able to estimate the extent of hazardous waste generated.

- It was observed by a representative of the Andhra Pradesh Chamber of Commerce that although the industrial development in West Godavari is lower than that in Medak and Ranga Reddy, the quantity of hazardous waste generated was reported as higher in the former case.

APPCB clarified that the inventorization is weak and they are in the process of verifying this data. It was observed that the higher quantity could also be due to the fact that the technology used in some of the industrial units in West Godavari were obsolete and hence generating higher quantities of waste vis-à-vis the more modern units in the other more industrialized districts.
Public Participation

- Need for community involvement in rural areas and small towns rather than only in urban centres was expressed by NGOs.

It was clarified that the Process Guidance Framework of the SEAR specifies the need for public involvement at two levels viz., policy level, which is the current PIC and at the sub-project level which would include communities affected directly by the sub-project. In the latter case the public involvement and participation will be sought in rural and urban areas depending on the location of the sub-project.

Project Monitoring

- Consultants felt that mid-term evaluation of the project was essential for which the services of NGOs and government agencies should be used.

Response to this concern was that as part of the Process Guidance Framework provided in the SEAR, the monitoring requirements of the project include quarterly, semi-annual and annual reports on the progress of the project.

- Some of the participants felt that any risks associated with the project need to be accommodated and absorbed in the project.

It was clarified that the project design as well as the process guidance framework have been developed considering the risks associated with the project. Inclusion of demonstration projects as part of the Technical Assistance Component and support for one pilot CHWTDF in each of the six select states (Andhra Pradesh, Gujarat, Maharashtra, Rajasthan and Uttar Pradesh) rather than under the Infrastructure Development Component are some of the means by which the risks in the project are proposed to be accommodated.

Financing institutions such as ICICI and BOB and State Intermediaries have been given the responsibility of identification and appraisal of investments (sub-projects) funded under the project. Provision for training of these financing institutions in technical issues related to the project has been included as a sub-project. This will also be useful in absorbing some of the risks associated with the project. Additionally, requirement for extensive public involvement and participation at various levels of the project has been included in the project.
The PIC was conducted at the Yashwantrao Chavan Auditorium on August 26, 1997. The programme included:

14.00 hr. Registration

14.35 hr. Opening Remarks and Welcome
   *Mr. C.S. Sangitroa, Member Secretary, MPCB*

14.45 hr. Address by Mr. Walter Vergara, Principal Chemical Engineer, The World Bank

15.05 hr. Presentation of the Sectoral Environmental Assessment Report
   *Dr. Prasad Modak, Environmental Management Centre (EMC)*

15.40 hr. The Hazardous Waste Management Project - A State's Perspective
   *Dr. S.R. Choudhari, Principal Scientific Officer, MPCB*

16.04 hr. Question and Answer Session

17.00 hr. Closure of PIC

In his opening remarks, the Member Secretary (MS) observed that with the liberalization of the economy, industrial development in India has emerged from the license and regulatory regime. However, environmental investment and pollution control devices are considered as external attachments by industry since it apparently does not have economic benefits. The MS stated that waste minimization, recycle and waste reduction at source is the order of the day. In keeping with this, a large part of the assistance provided by the World Bank through the hazardous waste management project has been earmarked for efforts in waste reduction at source. The financial institutions (in this case Bank of Baroda and ICICI) will play a major role in promoting these efforts.

In their efforts to manage the hazardous waste generated in the State, the MS stated that MPCB is adopting a carrot and stick approach and he hoped that through this project hazardous waste reduction at source will be achieved.

Mr. Walter Vergara, the Task Manager for this project from the World Bank, in his address expressed the hope that this project will be an investment for the future. He stated that the project philosophy is based on three common sense principles viz., Precautionary, Risk Reduction and Polluter Pays. Although avoidance of hazardous waste generation is
the focus and governing principle of the project, complete avoidance is not possible. Hence a hierarchy of recycle > treatment > disposal should be followed. The need to reduce risk to people and the environment was also emphasized. Additionally, since hazardous waste management is recognized as a part of industrial development, the fact that the polluter must pay was stressed upon.

Mr. Vergara specified that the key problems facing the country today in hazardous waste management were (i) insufficient information (ii) inadequate vigilance (iii) inadequate awareness of risks and (iv) improper infrastructure. The project has been designed as an attempt to solve these problems. During this address, Mr. Vergara informed that the project has been designed with the objective of developing a modern and comprehensive hazardous waste management system.

The SEAR was presented by Dr. Prasad Modak of the Environmental Management Centre. This focus of this brief presentation of the SEAR was maintained on the philosophy of sectoral assessment being used as a means of designing an environmentally sustainable option for hazardous waste management.

This presentation provided a perspective of the project and included a brief description of the sectoral context which provided information on the present status of hazardous waste management - legal; institutional and technical - in the country and the need for the project. It also included a brief note on the key environmental and health impacts due to the present status of hazardous waste management; a brief project description together with the major potential benefits and risks from the project; an outline of the process guidance framework and the strategies proposed to mitigate the risks/impacts due to the project. A summary of the project costs and implementation arrangements were provided by way of conclusion.

The state’s perspective on the hazardous waste management project was provided by Dr. S.R. Choudhari, Principal Scientific Officer, MPCB. During this presentation, MPCB’s proposal together with the budgetary estimates for the project were described. MPCB’s initiatives in hazardous waste management were also briefly presented.

The session was subsequently thrown open for discussion. To ensure effective recording of the proceedings, a format (refer to Annex 2-6) was provided to all the participants to record their questions and comments. The participants for the PIC at MPCB included representatives from the government agencies, industry associations, consultants and press.
5.1 Observations at the PIC at MPCB

The proceedings of the PIC were conducted in English and the question and answer session was co-ordinated by the Member Secretary, MPCB. Government, Industry association, consultants and media participation during this PIC was strong. The comments, queries and corresponding clarifications provided during the course of the PIC are detailed below.

**Policy**

- It was felt that the principle of polluter pays is presently being followed, hence the stress on this as a guiding principle for the present project may not appear to be necessary.

The Principal Secretary, State Department of Environment (SDOE) was of the view that today polluter pays is not being practiced in Maharashtra and hence an explicit stress should be made.

- Industry association representatives stated that if the state government (viz. Maharashtra Industrial Development Corporation - MIDC) develops infrastructure for management of hazardous waste, industry would definitely pay and use the services provided. The polluter pays principle could thus be maintained.

- Representatives from industry associations felt that the location of the sites proposed by MPCB for setting up of CHWTDFs were not optimal and transportation of hazardous wastes could be an issue.

Mr. Vergara, World Bank's Task Manager for the project clarified that the Process Guidance Framework for the present project had established eligibility criteria for CHWTDFs which required that these facilities should be located in brownfields. These brownfields would preferably be within industrial estates thereby minimizing transportation needs.

**Legislation**

- The hazardous nature of Effluent Treatment Plant (ETP) sludge was questioned, particularly since 78% of the total hazardous waste generated in Maharashtra state is categorized as ETP sludge. Participants felt that much of the ETP sludge could be non-hazardous.

The Principal Secretary, SDOE, clarified that inclusion of ETP sludge as a category of hazardous waste was based on some research and study of the characteristics of ETP sludges, however he welcomed that additional investigations could be taken up.

PIC on SEAR
Mr. Walter Vergara, World Bank’s Task Manager for the project clarified that international studies also indicated that in special cases ETP sludge could also be hazardous. Hence, a thorough study for analysis and alternative treatment options for ETP sludges is being supported as a national study under the Technical Assistance Component of this project.

**Institutional set-up**

- Representative consultants felt that the project had a strong public sector bias and involvement of private sector was conspicuous by its absence. It was observed that this project appeared to be targeted at strengthening of SPCBs only.

Mr. Vergara, clarified that the project has a large private sector involvement since out of the total project cost of US$ 300 million almost US$ 200 million is being provided for investments through the Infrastructure Development Component. This includes support to efforts in waste minimization and treatment in individual facilities. This financial assistance can be accessed as a loan by the private sector from financial institutions such as BOB and ICICI.

Moreover, establishment of pilot CHWTDFs is also being supported through this component. In this case although the ownership of the facility is with the government, private sector can get involved in the construction, operation and management of the facility since it is required that a professional organization carry out these activities.

Additionally, national studies under the Technical Assistance Component are to be bid out to private consultants, research institutions etc. therefore private sector involvement is possible here too.

- Regarding the ownership models for pilot CHWTDFs, it was observed that there was no mention of Build Own Operate (BOO), Build, Own, Operate and Transfer (BOOT) or Build Own Transfer (BOT) type of models in the NTS.

- Consultants also remarked that drawing from the experience with Common Effluent Treatment Plants (CETPs), the failure of the scheme was not due to technological problems but due to institutional failures. Although a number of models viz., government owned, private sector owned, private consortium owned etc. had been tried out, the problem of managing common facilities had not yet been sorted out. A related query in this regard was whether the pilot CHWTDFs proposed under this project would be initially managed by the state government and subsequently transferred to the private sector.
It was clarified that a number of ownership models had been discussed for CHWTDFs and the risks associated with the establishment of CHWTDFs had also been identified during a preparatory workshop on risk management for the project. It was however felt that a pilot effort would assist in understanding and managing the risks associated with CHWTDFs and based on the lessons learnt full scale facilities could be set up anywhere in the country operating on any ownership model suitable for the local condition. The SEAR provides details on the recommended pilot projects on CHWTDF on the principles of reverse BOOT of progressively moving from Government ownership to Government-Private ownerships as the experience accumulates.

- It was felt that if MPCB was involved in the operation of the CHWTDFs there would be a conflict of interest between its regulatory activities and the need to recover the costs of establishing the CHWTDFs.

Mr. Vergara, clarified that no conflict of interest is envisaged with respect to CHWTDFs because MPCB is not involved in the financing of the investment. Its function is only as a regulatory agency while the financial assistance is being provided through MIDC.

- One of the queries was regarding the exact nature of the institutional arrangements for implementation of the project. Clarification was required on,
  
  - whether the project was state or centre owned
  - who would be the project operator.
  - what would be the infrastructure for the project and how will the staff for the project be sustained.

- Some of the participants felt that only one agency at the State level should be responsible for the implementation of the project. Involvement of too many agencies results in conflicts.

Clarification was provided by the Principle Secretary, SDOE, regarding the institutional arrangements for the project. The World Bank assistance is being provided directly to the MPCB through the MOEF. The State Government does not receive any assistance through this project.

The Member Secretary clarified that there will be only one agency implementing the project in the State viz., the MPCB, while MOEF is the overall project coordinator.

Technology
- The participants observed that awareness regarding technology for hazardous waste management was low among industries.

- It was felt that the emphasis in this project appeared to be on recycle, reuse and waste minimization while clean technology was not given sufficient focus.

Mr. Vergara, clarified that the project supported avoidance of hazardous waste generation which included waste minimization and clean technology.

**Technical Assistance and Training**

- Some of the participants wanted to know the agency(ies) who could be approached for obtaining technical assistance and advice by industries regarding waste minimization and clean technology, technology for treatment and disposal.

The Principal Secretary expressed the need to identify local expertise in the area of hazardous waste management. He also stated that industries could use the facility of the Waste Minimization Circles proposed under the Technical Assistance Component of the present project for assistance in hazardous waste minimization.

- MPCB proposes to assist in setting up of Pollution Prevention Centres (*not in the proposed Project*) for which it will provide a one time assistance of Rs. 20 lakhs. Some of the participants wanted to know what the eligibility criteria were for forming or accessing the facility provided by these Centres. It was also felt that the services of these centres should be readily accessible to interested parties.

The Member Secretary, MPCB clarified that the Pollution Prevention Centres are proposed for participatory management of waste and the objective of supporting their establishment is to use them as counseling centres to provide technical assistance in pollution prevention technologies.

- Technical assistance in the form of treatment technologies for management of recalcitrant hazardous wastes was observed to be essential. Additionally, it was also expressed that the technical information and results that arise out of treatability studies for hazardous wastes should also be made available free of cost.

Mr. Vergara clarified that treatability studies were being supported as part of the Technical Assistance Component under the World Bank's earlier intervention in India viz., the Industrial Pollution Prevention Project. However, he emphasized that providing information and its dissemination is very much a part of the present project.
The need to educate and train small and medium scale industries in hazardous waste management was emphasized.

Need for training and creating awareness about hazardous waste management among NGOs and industry associations was suggested.

It was clarified that provision has been made in the project for community outreach and public awareness which includes NGOs and other stakeholders. This is proposed to be implemented through a sub-project under the Enforcement and Compliance Component of the project.

Representative consultants felt that private sector should also be provided technical training since their involvement in the project is high.

**Financing**

The experience of some of the participants with establishment of Common Effluent Treatment Plants (CETPs), funded by a previous World Bank intervention viz., the Industrial Pollution Control Project, was not very good especially with respect to the loan sanctioning process by the financing institution, viz. Industrial Development Bank of India (IDBI). Some of the participants stated that IDBI's term lending rate was too high and also it was discriminatory in selecting projects for loan assistance. The participants felt that the financing pattern for investments under the Infrastructure Development Component of the present project should be simple and uniform. The main query of most of the participants therefore was whether the loan sanctioning process had been streamlined.

Both the Principal Secretary, SDOE and Member Secretary, MPCB stressed on the need to improve and streamline the financing pattern for the assistance through the Infrastructure Development Component of the present project.

Additionally, participants from industrial associations expressed the need to provide more assistance to the unorganized sector. In the case of the earlier credit line of the World Bank viz., the Industrial Pollution Control Project, IDBI, the financial intermediary did not provide small loans. The participants felt that such a practice should be prevented from recurring in the investments under the present project.

BOB representatives clarified that the financing procedure is proposed to be simplified. The rate of interest for loans under the Infrastructure Development Component is proposed to be linked with the Profit and Loss Report (PLR). BOB proposes to consider small projects also for loan assistance and would not restrict only to large projects.
• The Member Secretary, MPCB observed that new and simpler forms may require to be prepared for invitation of proposals for loan assistance under this project. He also recommended that the financial institutions should be provided some technical training to enable them to appraise the proposals.

BOB representatives clarified that training of their project officers has commenced and that provision has been made under the Enforcement and Compliance Component of this project to train financial institutions.

Public Participation

• Representatives from industry associations felt that NGOs should work together with industry and the MPCB. Need for imparting training to NGOs in this regard was also expressed.

• It was observed by the representatives of industry associations that participation of beneficiaries is essential for the success of any project and in the case of the present project this was absent.

It was clarified that the element of public involvement and participation has been built into the project through the Process Guidance Framework whereby the stakeholders / beneficiaries would be involved in public participation activities for the sub-projects where required.

Project Design

• Some of the participants expressed the need to include management of hazardous wastes emissions in the air as part of the project.

It was clarified that management of hazardous air emissions is handled under the Air Act. The present project is limited to hazardous waste definition as per the Hazardous Waste (Management and Handling) Rules under the Environmental Protection Act of 1986.
6.0  **PUBLIC INFORMATION AND CONSULTATION AT TNPCB**

The PIC was conducted at the TNPCB's Auditorium on September 1, 1997. The programme included:

14.00 hr.  Registration

14.30 hr.  Opening Remarks  
*Mr. G. Rengasamy, Member Secretary, TNPCB*

14.40 hr.  The Hazardous Waste Management Project - A State's Perspective  
*Mr. Rohit Kumar, Hazardous Waste Management Cell, TNPCB*

14.55 hr.  Presentation by Mr. Walter Vergara, Principal Chemical Engineer,  
The World Bank

15.10 hr.  Presentation of the Sectoral Environmental Assessment Report  
*Dr. Prasad Modak, Environmental Management Centre (EMC)*

16.15 hr.  Question and Answer Session

18.00 hr.  Closure of PIC

In his opening remarks, the MS observed that hazardous waste management is not only a national but also a global issue. The MS remarked that costs of inaction in terms of the damage to public health and the ecosystem, have necessitated the need for development of a comprehensive hazardous waste management system in the country. The present hazardous waste management project has been designed in view of this need.

The status of hazardous waste generation and management in the State of Tamil Nadu was presented by Mr. Rohit Kumar, TNPCB. During this presentation, the status of hazardous waste generation in the State was presented. Clean technology, recycle and reuse initiatives proposed by industries and suggested by TNPCB that can reduce the hazardous waste generation were also described. The need for the project was emphasized and the crucial role of public participation in the project was presented.

Mr. Walter Vergara, stated that one of the objectives of this project was to develop a system for credible enforcement of the law. He observed that in view of the serious nature of the hazardous waste problem in the country, the Government of India (GOI) felt the
need for assistance in the development of a proper, modern hazardous waste management system.

Mr. Vergara specified that the key problems facing the country today in hazardous waste management were (i) insufficient information (ii) inadequate vigilance (iii) inadequate awareness of risks and (iv) improper infrastructure. The project has been designed as an attempt to solve these problems by (i) modernizing the planning process (ii) improving the Management Information System (MIS) (iii) supporting the inventoryization of waste and identification of proper sites (iv) supporting community outreach activities (v) training (vi) promoting greener technologies, recycle and recovery, treatment and destruction and finally disposal. It was also stated that 65% of the project costs have been allocated for waste avoidance, recovery and recycle efforts.

Mr. Vergara drew the attention of the participants to the fact that the project also proposes to support national studies through which areas where sufficient information is not available in the country will be strengthened. Additionally as part of the technical assistance component of the project, proposals of innovative technologies will also be supported.

The SEAR was presented by Dr. Prasad Modak of the Environmental Management Centre. This focus of this brief presentation of the SEAR was maintained on the philosophy of sectoral assessment being used as a means of designing an environmentally sustainable option for hazardous waste management.

This presentation provided a perspective of the project and included a brief description of the sectoral context which provided information on the present status of hazardous waste management - legal, institutional and technical - in the country and the need for the project. It also included a brief note on the key environmental and health impacts due to the present status of hazardous waste management; a brief project description together with the major potential benefits and risks from the project; an outline of the process guidance framework and the strategies proposed to mitigate the risks/impacts due to the project. A summary of the project costs and implementation arrangements were provided by way of conclusion.

The session was subsequently thrown open for discussion. To ensure effective recording of the proceedings, a format (refer to Annex 2-6) was provided to all the participants to record their questions and comments. The participants for the PIC at TNPCB included representatives from the government agencies, industry associations, NGOs, consultants, press and educational and research institutions.
6.1 Observations at the PIC at TNPCB

Policy

- A representative from Geological Survey of India (GSI) observed that the TNPCB had shortlisted sites in the State for CHWTDFs. However, a number of these sites were geologically unsuitable for consideration as potential sites for CHWTDFs. Hence the need to use the services of GSI in this process of site selection was recommended.

TNPCB clarified that they would definitely use the services of GSI in future.

Legislation

- Representative NGOs expressed the need to include medical wastes under the hazardous waste management legislation. They also stated that although medical wastes are extremely contagious and dangerous, its management has been neglected in the State.

It was clarified that the GOI has drafted a separate rule for the management of medical wastes. These rules termed the Medical Wastes (Management and Handling) Rules, 1997 are presently under review.

- Some of the participants expressed the need for strict legislation regarding a ban on import of hazardous wastes.

TNPCB clarified that the Supreme Court has issued an order banning the import of hazardous wastes.

- It was suggested that hazardous wastes should be classified as "high hazard" and "low hazard" and specific recommendations may be made for their management.

Institutional set-up

- Some of the NGOs expressed their apprehension at the capacity of the institutional set-up at TNPCB and in the State Government and their ability to implement the project.

It was clarified that through the Enforcement and Compliance Component of the project the technical and infrastructural capacity of the SPCBs is proposed to be strengthened to enable effective implementation of the project.
TNPCB clarified that training for all SPCB personnel, NGOs, customs officials, road transport officers etc. proposed under the project will enable effective implementation of the Project.

**Technology for Treatment and Disposal**

- It was suggested that while selecting technologies for hazardous waste treatment and disposal, care should be taken to select only those which are cost-effective and which generate the least residues. It was also suggested that incineration as an option should be selected with great caution and final disposal should be only in landfills.

- Some of the NGOs expressed concerns about the establishment of CHWTDFs particularly the safety of landfills and wanted to know how the TNPCB proposes to ensure that landfills do not leak.

Mr. Vergara clarified that even the best designed systems have risks associated with them. However in this project through the process guidance framework and the eligibility criteria defined as part of this framework it is attempted to ensure minimization of these risks. Moreover, in comparison to unmitigated release of hazardous waste an organized management of waste can only improve the situation.

TNPCB also clarified that in accordance with the Process Guidance Framework (PGF), only brownfields will be considered for site selection for CHWTDFs. Moreover, public information and consultation will be an integral part of the process of selection of sites for the facilities. This is proposed to ensure a minimization of risks.

A consultant among the participants clarified that presently landfill engineering is highly developed in terms of leachate management, durability of the liners used etc. to reach a situation that landfills no more leak.

- While some of the participants observed that indigenous technology for hazardous waste treatment and disposal is not available and there would be a need for international collaboration others differed. The belief was that although indigenous expertise was available, it was not being tapped properly. A case in point was that of Bhabha Atomic Research Centre (BARC) where the expertise was available since they are managing nuclear wastes safely in the country.

**Technical Assistance and Training**

- It was observed that educational and research institutions which provide the expertise for a number of technology and policy related issues of hazardous waste management were not being considered in this project for strengthening.
It was clarified that this will be considered in the project design. Mr. Vergara also clarified that the World Bank has a large programme for education which can be used to strengthen educational institutions. He also stated that the possibility of inclusion of educational institution strengthening will be explored in this project by discussing with the Department of Economic Affairs and MOEF.

**Project Design**

- An NGO representative raised a query, whether the recommendations of Agenda 21 were proposed to be considered in the implementation of the hazardous waste management project. It was also suggested that the recommendations provided by UNEP in a recently released environmental guide on hazardous waste management may also be considered in developing the project.

The TNPCB was informed after the PIC that the proposed project addresses all the points made in Agenda 21 under section 20.8 except for item (c) which is towards promoting and strengthening intentional cooperation in the management of transboundary movement of hazardous wastes.

**Project Risks**

- Some of the NGOs expressed their concern over the issue of liabilities due to the project particularly due to the CHWTDFs. They wanted to know if any provisions had been made to take care of the liabilities, along the lines of the Superfund Programme of the United States of America.

Mr. Vergara clarified that the liabilities due to the particularly the CHWTDFs, will be taken care of through risk sharing contractual agreements between the various stakeholders. This is to be enforced by TNPCB and international experience will be used to develop these contracts.

**Project Implementation**

- It was suggested by some NGOs that training and capacity strengthening of the SPCBs should be done first, their progress monitored and only after it is ensured that the SPCB is sufficiently equipped with expertise should the investment component, particularly the sub-project on the pilot CHWTDF, be implemented.
It was clarified that the implementation plan has been staggered so as to strengthen the SPCBs in the early-phase of the project. However, the various activities of capacity building both in terms of strengthening of SPCBs’ capacity and pilot infrastructure for treatment and disposal in the form of CHWTDFs have to be done concurrently to ensure that the system is in place at the earliest.

Mr. Vergara clarified that provision has been made in the project in the form of an unallocated amount for additional capacity building and training activities which may be envisaged in the project at a later stage.

It was also stated that as mentioned in the SEAR, the economic costs of inaction even in the case of municipal solid waste were very high, of the order of US $ 1 billion for India. Hence the costs in the case of hazardous waste would be unaffordable. The need therefore for establishment of a hazardous waste management system, at the earliest was emphasized.

**Financing**

- A representative from a research institution observed that more than 50% of the project costs are available as loan through FIs to industry for hazardous waste minimization, recycle and treatment initiatives. The FIs, while evaluating the proposals would place higher priority on credit worthiness of the industry than on the hazardous waste minimization / treatment potential of the industry. The need therefore to insist through the Project, on FIs to place equal weightage on the two aspects.

- It was also suggested that the Financing Institution (IF) should integrate the aspects of minimization with the treatment and disposal of existing dumps of hazardous wastes on the site in order to lead to a total solution to the problem.

**Public Participation**

- NGOs expressed the need for transparency from the TNPCB and welcomed the idea of this PIC. It was also emphasized that information dissemination particularly during the process of site selection for CHWTDFs should be done through organized community involvement and interactions.

A participant consultant suggested that the technical details regarding the treatment and disposal options for e.g., regarding secured landfills, should be disseminated to the public in a form so that they are able to appreciate the extent of risk mitigation possible due to well engineered structures.
7.0 PUBLIC INFORMATION AND CONSULTATION AT MOEF

The PIC was conducted at the MOEF’s Conference Hall on September 3, 1997. The programme included:

10.30 hr. Opening Remarks
   *Mr. Vijai Sharma, Joint Secretary, MOEF*

11.00 hr. Presentation of the Sectoral Environmental Assessment Report
   *Dr. Prasad Modak, Environmental Management Centre (EMC)*

11.45 hr. Question and Answer Session

13.00 hr. Closure of PIC

In his opening remarks, the Joint Secretary (JS) observed that there are about 9000 hazardous waste generating units in the country with 7800 having been granted authorizations. However the hazardous waste inventory of these units is to be verified. The JS stated that through the present project, the exact inventory of hazardous waste in the project states will be verified. The legislation is proposed to be strengthened through this project for which the necessary amendments in the Hazardous Waste (Management and Handling) Rules, 1989 are under discussion.

The SEAR was presented by Dr. Prasad Modak of the Environmental Management Centre. This focus of this brief presentation of the SEAR was maintained on the philosophy of sectoral assessment being used as a means of designing an environmentally sustainable option for hazardous waste management.

This presentation provided a perspective of the project and included a brief description of the sectoral context which provided information on the present status of hazardous waste management - legal; institutional and technical - in the country and the need for the project. It also included a brief note on the key environmental and health impacts due to the present status of hazardous waste management; a brief project description together with the major potential benefits and risks from the project; an outline of the process guidance framework and the strategies proposed to mitigate the risks/impacts due to the project. A summary of the project costs and implementation arrangements were provided by way of conclusion.

The session was subsequently thrown open for discussion. The participants at the PIC included representatives from the Ministry of Petroleum, Ministry of Commerce, MOEF,
ASSOCHAM, FICCI, industry, NGOs, consultants, press and educational and research institutions.

7.1 Observations at the PIC at MOEF

*Inventorization*

- A representative from the Ministry of Petroleum observed that the inventory figures particularly in the case of Tamil Nadu need to be checked as the reported quantity of oily sludges per annum was higher than the annual oil consumption by the State.

It was clarified that this issue will definitely be communicated to TNPCB for verification.

*Project Design*

- It was observed that due to improper hazardous waste management in the country, groundwater, among other components of the environment, has been extensively contaminated. The need therefore was expressed for inclusion of groundwater remediation in the hazardous waste management project.

- One of the queries was regarding how the proposed World Bank assisted Capacity Building Project compares with the hazardous waste management project.

It was clarified that the projects focus is only on capacity strengthening for hazardous waste management. Moreover, the former project is still under discussion. However, the design of the capacity building project will consider the inputs provided by the hazardous waste management project towards capacity building to avoid any overlap.

- Some of the participants were of the view that a major share of the project costs should be for CHWTDFs rather than capacity building of SPCBs.

It was clarified that the focus of this project was waste avoidance with a high priority on minimization, recycle and reuse. CHWTDFs cannot be the sole solution for hazardous waste management.

- A query was raised regarding the method proposed to ensure waste supply at CHWTDFs and would industries have to send their wastes to CHWTDFs.

It was clarified by MOEF that there was no compulsion on industrial units to send their wastes for off-site treatment and disposal. The compulsion was only for compliance with legislation.
Additionally it was also clarified that there were several options before industry for management of hazardous wastes viz., new technologies ensuring waste minimization and cleaner production, on site treatment in industry’s individual facilities and / or use of off-site CHWTDFs.

- It was recommended that waste exchange may be considered as an effective way to minimize hazardous wastes. Examples of possible waste exchanges were given such as recycle of gypsum sludges to cement industry and Nickel catalysts in the vegetable oil industry.

**Financing**

- There was a query on the financing pattern proposed in the project particularly the lending rates likely to be adopted by financing institutions for investments under the Infrastructural Development Component.

It was clarified that the term lending rates will be linked to the financial status of the proponent i.e. the Profit and Loss Report. The repayment period is proposed to be 12 years with a 3 year grace period. It was also stated that assistance for the individual sub-projects under the Technical Assistance Component and under the Infrastructure Development Component is applicable across the country whereas the Enforcement and Compliance Component is restricted to six select states (Andhra Pradesh, Gujarat, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal).

**Public Participation**

- One of the queries was whether there would be PIC done for all the sub-projects.

It was clarified that PIC will be done for the sub-projects wherever applicable.

- Some of the participants were of the view that information to the public should be provided only after partial implementation of the project. If information is provided upfront there is a likelihood that this will create more apprehensions among the public and exacerbate the risk of public rejection.

MOEF clarified however that for long term sustainability of the project PIC is essential and will be an integral part of the project. It was also emphasized, that as far as the Project was concerned, public apprehensions could be reduced by informing the public that almost 65% of the project costs are for waste minimization and in-house treatment initiatives. Additionally,
the experience of APPCB under the AUS-AID project was cited wherein extensive public involvement lead to a successful selection of a site for a CHWTDF.

Project Monitoring

- One of the queries was regarding the modus operandi proposed for monitoring the performance of sub-projects.

It was clarified that performance monitoring indicators will be developed by MOEF for the sub-projects which will be used for project monitoring. This will entail technical, environmental and financial monitoring. Representation of local NGOs is also proposed in monitoring.
PIC at Gujarat State Pollution Control Board, August 14, 1997

PIC at Andhra Pradesh State Pollution Control Board, August 19, 1997
PIC at Maharashtra State Pollution Control Board, August 26, 1997
PIC at Tamil Nadu State Pollution Control Board, September 1, 1997

PIC at the Ministry of Environment and Forests, September 3, 1997
8.0 RECOMMENDATIONS OF THE PIC

Many of the recommendations made in the PIC were already incorporated in the second draft of the SEAR. These recommendations are listed below,

- A need to develop performance indicators *apriori* to monitor the project was stressed.

- Project outreach should be done by the SPCBs and MOEF on a regular and proactive basis.

- There is a need to modernize the existing hazardous waste management related regulations. The definitions should be clear to communicate and unambiguous for enforcement.

- Standards should be set for the residues and emissions arising from the treatment and disposal of hazardous wastes. Monitoring procedures needed for the purpose of vigilance should also be spelt out.

- Inventorization of hazardous waste should be a continued exercise. Guidelines should be evolved for the inventorization.

- It was observed that use of incinerators as a treatment option should be considered with precaution.

- Sludges from the effluent treatment plants form a major portion of the state wide hazardous waste inventory. Studies should be undertaken to tackle this problem.

- Awareness on technological innovations in hazardous waste management to be brought to industry particularly medium and small scale industries.

- Since the States may eventually manage a multiple number of CHWTDFs, strategic considerations need to be made to evolve the policy of on-site and off-site handling of the hazardous wastes, which would lead to prolonged life of the CHWTDFs.

- There is a need to update the existing Guidelines regarding site selection, site ranking criteria, design, operation and closure of the CHWTDF.

Further to above, following additional recommendations were made as essentially emerged from the PIC. Most of these recommendations were considered to be useful and effective to
include them in the scope of the program. The project design as well as the process guidance framework in the final SEAR reflects this consideration.

- Incentives should be provided to small scale industries practicing hazardous waste minimization/recycle/recovery. These incentives may be in the form of tax benefits or other such fiscal incentives. For instance, the small and medium scale units should be subsidized for usage of CHWTDFs. Guidelines for developing charges, specifically for these units, need to be developed.

- Development of national industry specific waste generation factors should be taken as an extension of the exercise of hazardous waste inventorization. These waste generation factors can be used as indicators for benchmarking.

- The activities on Waste Minimization Circles should be more proactive, well publicized and accessible to a larger fraction of the small and medium industries. Roundtables should be set up on waste minimization as well as when reports to monitor the project performance are discussed.

- Waste exchange should be studied and promoted by identifying probable by-products/recyclable wastes in various industrial units. Formation of waste exchange bureaus are recommended at SPCBs or in partnership with Industry Associations. The MOEF should develop guidelines for insurance related to risks associated with the waste exchange process and the taxation policy for waste exchange.

- Provisions may be made in the present project to constitute awards and provide incentives for practice of hazardous waste minimization.

- NGOs may be invited to assist in the tasks related to public consultation and participation. NGO involvement should be high since they are not adversaries but partners in development. NGOs may also participate in the independent assessment, especially for the assessment of the CHWTDFs.

- Agencies like Geological Survey of India, National Remote Sensing Agency, BARC should be part of the technical committee during the process of site selection for CHWTDFs. Satellite imagery may be useful in site selection for treatment and disposal facilities and even for detecting the contaminated dump sites.

- Disaster management plans should be requested in the appraisal of the CHWTDFs as well as for the infrastructure development projects at the individual facilities, if found relevant. These plans should involve citizens' groups, emergency services and government agencies.
• Insurance is an issue which needs to be examined for compensations with respect to the liabilities and risks associated with CHWTDFs. MOEF should develop guidelines for insurance and associated compensations for the various risks.

• A corpus, similar to the Superfund may be developed keeping with the Polluter Pays Principle, for making contributions to the cleaning of the illegal dump sites.

• Wherever applicable, site selection for CHWTDF and for disposal of industrial solid waste may be done simultaneously in adjoining sites.

• The eligibility criteria for CHWTDF should clearly state that only "brownfields" should be considered during site selection. A rider must be attached in the eligibility criteria to ensure that "greenfields" acquired and termed "brownfields" should not be used.

• During the site selection process for CHWTDFs, the area of land to be acquired should consider area required for green belt and buffer zone. It should also be linked to land use or development policy. In other words a minimum size should be prescribed for CHWTDFs considering all these aspects.

• During collection of hazardous waste for transportation to CHWTDFs a cluster approach is recommended for small and medium scale industrial units to ensure lower transportation costs.

• The financing procedure at the BOB/ICICI should be simplified to the extent possible. The FIs should consider small projects also for loan assistance as well and should not restrict only to large infrastructure development projects.

• The FIs, while evaluating the proposals should place equal weightage on the credit worthiness of the industry as well as the hazardous waste mitigation potential.

• The FIs should integrate the aspects of minimization with the treatment and disposal of existing dumps of hazardous wastes on the site in order to lead to a total solution to the problem.

• Technical committees should be formed at the FIs for appraisal of proposals seeking assistance under the Infrastructure Development Component. Representation of NGOs is essential on these technical committees to ensure public participation and consultation at the sub-project level.
- Strengthening of educational and research institutions may be considered through the hazardous waste management project. This may include strengthening of (a) laboratories and (b) technical capacity of the institutions in the area of hazardous waste management through training. Educational institutes should be able to offer advanced courses related to management of hazardous wastes.

- An information package should be created out of the information that emerges from the national studies. These information packages (databases, reports etc.) should be made accessible to any interested person/institution.

- Planning workshops that were conducted at the four SPCBs as preparation for the project should be also conducted at CPCB and at the other two SPCBs, followed by public information and consultation exercises.
Annex - 2-1
Guidelines issued for conduct of the Public Information and Consultation
GUIDELINES FOR CONDUCT OF THE PUBLIC INFORMATION AND CONSULTATION OF
THE SECTORAL ENVIRONMENTAL ASSESSMENT REPORT OF
THE HAZARDOUS WASTE MANAGEMENT PROJECT
SUPPORTED BY THE WORLD BANK

(Version 1.1)

drafted by
Environmental Management Centre,
Mumbai, India

19 July 1997
1.0 Introduction

The Sectoral Environmental Assessment (SEA) study as defined by the World Bank's Operational Directive (OD) 4.01, 1991 is used for the (environmentally sound) design of sector investment programmes. SEA avoids the inherent limitations of project specific EAs in addressing issues related to policy and planning and the legal and institutional framework. By moving upstream in the planning process to a stage where major strategic decisions have not been made, SEA offers better opportunities not only for analyzing existing policies, institutions and development plans, in terms of environmental issues; but also for supporting environmentally sound sector-wide investment strategies.

The OD 4.01 quotes that "SEA is particularly suitable for reviewing (a) sector investment alternatives (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation and monitoring at the sectoral level; and (d) the cumulative impacts of many relatively small, similar investments that do not merit individual project specific Environmental Assessments. The objective of SEAs is also to strengthen the environmental management capability of the sectoral or other relevant agencies." The findings of such a study are presented in the form of a Sectoral Environmental Assessment Report (SEAR).

MoEF, under assistance from the Environmental Management Centre (EMC), Mumbai developed a draft SEAR of Hazardous Waste Management Project, supported by the World Bank in March 1997. This document has been now reviewed and a draft with necessary updates is under preparation.

Public information and consultation (PIC) is an integral part of the environmental assessment (EA) process. However, the level of the PIC activity is governed by the type of the EA process being conducted. The EA Sourcebook update of the World Bank on SEA states...

"since SEA normally covers an entire sector (in a national or subnational context) and is conducted before concrete investment decisions are made, it may not always be possible to consult representatives of all potentially affected people during preparation of the SEA. Often, it is more feasible and appropriate to carry out consultations with national NGOs (for example, for natural protection) scientific experts, relevant government agencies, and perhaps also industrial and commercial interests. A successfully implemented consultation process will help ensure public support for the final sector program."

In keeping with the guidelines provided in the OD 4.01 and the sourcebook update referred above, this note has been prepared to provide guidelines on the preparation and conduct of the

---

2 Environmental Assessment Sourcebook Update No. 4, Sectoral Environmental Assessment, Environment Department, The World Bank, October 1993.
PIC of the SEAR of the Hazardous Waste Management Project. While, the proceedings and minutes of the PIC of SEAR are to be made available as records, any useful suggestions emerging from the outcome of the PIC of SEAR may be considered for incorporation in the SEAR.

In order for the PIC of the SEAR to be effective, the following elements need to be addressed:

- Understanding Components of the Hazardous Waste Management Project;
- Delineation of the objectives of the PIC of the SEAR;
- Identification of the stakeholders essential to be involved;
- Development of a plan for conducting the PIC.

PIC is to be thus done using public participation techniques that are most appropriate (such as group meeting with handouts) for meeting the objectives.

2.0 Components of The Hazardous Waste Management Project

The objective of the project is to assist in the implementation of a modern and sustainable hazardous waste management system in the country. The project will assist in modernizing the regulatory framework, strengthening the institutions in charge of enforcement and monitoring, and financing priority investments in hazardous waste mitigation, treatment, and disposal.

The specific goals are to: (i) promote the development of a comprehensive monitoring and enforcement system for timely implementation of the hazardous waste rules and other legislation concerning the management of these residues; (ii) assist in the implementation of priority investments in hazardous waste management; and (iii) provide technical assistance for the implementation of training, technology development, and awareness programs in hazardous waste management and support for the development of background data for policymaking. Components of the project are described in the following text.

The Enforcement and Monitoring Component

This component has been designed to support a program of activities aimed at strengthening the monitoring and enforcement capacity of the State Pollution Control Boards in those States where the most serious hazardous waste concerns have arisen. These are the States of Andhra Pradesh, Gujarat, Maharashtra and Tamil Nadu. In addition, an allocation has been made to serve the needs of another 2 State Pollution Control Boards, as yet not identified. Key themes are presented below:

- Strengthening of Analytical Capability.
• Institutionalization of the Planning Process.

• Improving the Information Management Process that includes GIS (Geographical Information System), and development of a Toxic Release Inventory (TRI) covering key generators of hazardous waste in the State.

• Inventories of Hazardous Waste.

• Identification and Notification of Sites for Secure Destruction and Disposal of Residues.

• Organization of a Community Outreach Effort.

• Training.

• Support to MOEF and CPCB in its policy making role.

The Infrastructure Development Component

• Primarily, this project will assist in the avoidance and minimization of hazardous waste generation. The emphasis is on preventing future discharges of hazardous waste by promoting actions that will result in the avoidance, recycle or recovery of otherwise hazardous effluents.

• However, in some cases generation of hazardous waste can not be avoided and requires destruction and or, ultimately, disposal. For those cases, where destruction and disposal is required by medium and small scale generators, the proposed project will assist in the introduction of institutional models and technologies to be used for the proper ultimate destruction and safe disposal of hazardous residues.

The model to be supported consists of one centralized facility at each of the project participating state, owned at least in part by selected State Agencies. Purpose of the project is to appraise the viability of establishing infrastructure for hazardous waste transportation, storage, treatment, and disposal. Moreover, the provision of treatment and disposal services by the State Agencies will result in the generation of income through the lease agreements with the selected operators. This income will be recycled by the State agencies for the financing of additional Common Hazardous Waste Treatment and Disposal Facilities (CHWTDFs), making the investment sustainable in the long term.

The Technical Assistance (The National Studies and Technology Development) Component

This component will support activities designed to complement the Boards' and improve the participation and access of the general public to information regarding the management of hazardous waste in the country and other activities of technical nature. These consist of national studies for:

PCC on SEAR
- Support for the expansion of the Waste Minimization Circles, already initiated by MOEF, to focus on small scale generators of hazardous waste;

- Development of a strategy for containment and disposal of polychlorinated by-phenols (PCBs) in the power industry;

- Development of an approach to clean contaminated sites;

- Identification and assessment of long-term alternatives for containment and disposal of halogen and mercury containing waste and other technical studies.

- The project will also support a limited effort to promote the development of innovative technologies for waste minimization and prevention of generation of hazardous residues.

- Support to dose-response analysis of hazardous waste and pernicious organic pollutants.

- Technical Alternatives for Disposal of Sludge from Waste Water Treatment Plants.

Figure 1 shows budgetary allocation for the various project components

![Budgetary Allocation for the project components](image-url)

**Figure 1: Budgetary Allocation for the project components**

*The Project Costs are in US$ Million
Total Project Cost is 290 US$ Million*
3.0 Objective of the PIC for SEAR

The main objective of the PIC for SEAR is to convey the spirit, design and content of SEAR with specific reference to the Hazardous Waste Management Sector. The focus is therefore on the project as a whole rather than on individual sub-projects. In fact at the stage of SEA, details on the sub-project are not available. Independent public participation activities would require to be conducted for each of the sub-projects after the PIC for the SEAR, as and when each sub-project is planned and designed. This becomes a part of the Process Guidance Framework (PGF) directed by the SEAR itself.

4.0 Plan for conducting the PIC

The PIC is proposed to be a half day long programme and the conduct of PIC would involve three stages of activity to be undertaken by the SPCBs/MoEF. Distribution of responsibilities between SPCB's, MoEF and Environmental Management Centre in Public Information and Consultation (PIC) of Sector Environmental Assessment Report is shown in Annex 1.

- Preparation for PIC which would identify the techniques to be used to achieve the objective as well identify the public anticipated to be involved in the PIC for the SEAR.

- Conduct of PIC which would provide a practical plan for implementation of the PIC programme;

- Reporting of the views expressed by the stakeholders and reflecting them appropriately in the finalization of the SEAR.

4.1 Preparation Stage

This stage entails preparation of necessary documents, identifying the critical participants and making logistic arrangements for the conduct of PIC.

4.1.1 Documents

- Non-Technical Summary (NTS): A Non-Technical Summary (NTS) of the SEAR, shall be provided to the SPCBs. The NTS is a summary of the main findings and conclusions of the study and how they were reached. The NTS avoids to the extent possible, technical terms, lists of data and detailed explanations. The NTS must however convey the spirit, design and content of the SEAR. It is necessary that the text of the NTS is translated in the local language for the benefit of the local stakeholders. This NTS is to be made available to any interested citizens of India.
NTS will include:

- an introduction which will describe the philosophy of sectoral environmental assessment vis-à-vis this project,
- a brief description of the sectoral context which will provide information on the present status of hazardous waste management - legal, institutional and technical - in the country and need for the project. This will also include a brief note on the key environmental and health impacts due to the present status of hazardous waste management,
- a brief project description together with the major potential benefits and risks from the project,
- an outline of the process guidance framework and the public consultation process proposed to mitigate the risks due to the project and the sub-projects included,
- summary of the project finance
- implementation arrangements including project monitoring

**Full SEAR:** Few stakeholders may be interested to review the entire SEAR. To enable this, a Master Copy of the full SEAR will be provided to the SPCBs. Duplication of this SEAR is to be made by the SPCB for making the same available to any interested stakeholder.

(Mr. Walter Vergara of the World Bank has provided each of the four Boards a draft copy of the Sectoral Environmental Assessment Report (SEAR). This copy is to give you an indication of the typical contents of the SEAR. Please note however the SEAR is under further revision right now and you would be receiving by August 1st a copy which can be used for the purpose of duplication. Please do not duplicate therefore the copy presently made available to you by Mr. Walter Vergara.)

4.1.2 Public Announcement

For the dissemination of NTS and obtaining comments, a public announcement of the project is to be made in the newspaper. The newspaper insert is to be placed in at least one national daily and one regional daily announcing the project. The insert should be placed at least twice. In the case of Andhra Pradesh care may be taken that both Urdu and Telugu dailies are covered. There may be a 2 day gap between successive inserts. A sample of the text is placed in the box 1, below for your consideration.
The......... State Pollution Control Board/ MoEF, with the assistance of the World Bank is initiating Hazardous Waste Management Project in order to implement a modern and sustainable hazardous waste management system.

The specific objectives of the project are to: (i) promote the development of a comprehensive monitoring and enforcement system for timely implementation of the hazardous waste rules; (ii) assist in the implementation of priority investments in hazardous waste management; and (iii) provide technical assistance for the implementation of training, technology development, and awareness programs in hazardous waste management and support for the development of background data for policy-making.

A Non-technical summary of the Sectoral Environmental Assessment Report of the project is with the Board/ MoEF which can be made available on request. A copy of the full Sectoral Environmental Assessment Report is available with the SPCB/ MOEF for reference. Interested citizens of India are welcome to give suggestions on the project till August 28, 1997.

... State Pollution Control Board/ MOEF

Name of the Contact Staff
Address:
Phone:
Fax:

4.1.3 Participants for PIC

- Selected stakeholders are to be invited to participate in the PIC.

- The total number of critical invitees may be about 35. For an effective participation, this number should not be exceeded. While identifying stakeholders, an optimum distribution of representatives from various institutions/organizations needs to be ensured (Refer to Table 1). A sample letter for invitation to the participants is given in the box 2 for your consideration.
Table 1: Suggested Composition of Stakeholders for the PIC of SEAR

<table>
<thead>
<tr>
<th>Organization / Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Agencies such as, State Department of Environment, Industrial Development</td>
</tr>
<tr>
<td>Corporations, Directorate of Industrial Safety and Health, Customs department, and Transport</td>
</tr>
<tr>
<td>Commissioner’s Office.</td>
</tr>
<tr>
<td>Industry Associations/ Industries</td>
</tr>
<tr>
<td>Research Institutions / Academic/ Health Professionals</td>
</tr>
<tr>
<td>Reputed Waste Management Consultants</td>
</tr>
<tr>
<td>Members of the Press (Newspapers and Magazines)</td>
</tr>
<tr>
<td>Leading NGOs/ Environmental Lawyers</td>
</tr>
<tr>
<td>Financing Institutions like Bank of Baroda, ICICI etc. who have a stake in the project</td>
</tr>
<tr>
<td>Important technical staff of the Hazardous Waste Management Cell, legal and Planning Cell of the SPCB</td>
</tr>
</tbody>
</table>

Note:
The SPCBs may kindly ensure that the participants at the Risk Management Workshop held at Hyderabad on January 17-18, 1997 are among the invitees for the PIC. A list of the participants at the Risk Management Workshop held at Hyderabad on January 17-18, 1997 is attached as Annex 2.
Box 2: Sample letter for invitation to the participants

Date

Mr./Mrs. *****

*****

Sub: Public Information and Consultation of The Sectoral Environmental Assessment of the Hazardous Waste Management Project

Dear Mr./Mrs. *****

The State Pollution Control Board, with the assistance of the World Bank, is initiating the Hazardous Waste Management Project in order to implement a modern and sustainable hazardous waste management system.

The specific objectives of the project are to: (i) promote the development of a comprehensive monitoring and enforcement system for timely implementation of the hazardous waste rules; (ii) assist in the implementation of priority investments in hazardous waste management; and (iii) provide technical assistance for the implementation of training, technology development, and awareness programs in hazardous waste management and support for the development of background studies for policy-making. The MOEF has prepared a draft Sectoral Environmental Assessment Report on the project as per the guidelines of the World Bank.

Public information and consultation (PIC) is an integral part of the sectoral environmental assessment (SEA) process. The main objective of the PIC for SEAR is to convey the spirit, design and content of SEAR with reference to the Hazardous Waste Management Sector. The focus is on the project as a whole. The PIC is to carry out consultations with national NGOs, media persons, scientific experts, relevant government agencies, and industrial and commercial interests. The proceedings and minutes of the PIC of SEAR are to be recorded and useful suggestions may be considered for incorporation in the SEAR.

With your kind cooperation and participation, we hope to achieve the objectives of the PIC and the project successfully.

Sincerely

*****

SPCB/ MOEF
4.1.4 Logistics

- The arrangements for the venue for the PIC with facilities for visual presentation, is to be made by the SPCBs.

- The invitation for the PIC should reach the participants at least 8-10 days prior to the date of conduct of the PIC.

- The NTS (in English and/or local language) should be dispatched to the invitees to reach them 3-4 days prior to the date of conduct of the PIC.

4.2 Conduct of PIC

A suggested programme for conduct of the PIC is proposed. The Boards may kindly finalise on the suggested programme.

10.00 hr. Opening Remarks and Welcome

*MoEF/Secretary (Environment) of the State
Chairman / Member Secretary of the SPCB

(The opening remarks may include a brief introduction indicating the background and the purpose of the PIC.)

10.15 hr. Presentation of the Sectoral Environmental Assessment Report

*Dr. Prasad Modak, Environmental Management Centre (EMC)

(A brief presentation of the SEAR with the focus being maintained on the philosophy of sectoral assessment being used as a means of designing an environmentally sustainable option for hazardous waste management. This presentation will provide the national perspective of the project and will include a brief description of the sectoral context which will provide information on the present status of hazardous waste management - legal; institutional and technical - in the country and need for the project. It will also include a brief note on the key environmental and health impacts due to the present status of hazardous waste management; a brief project description together with the major potential benefits and risks from the project; an outline of the process guidance framework and the public consultation process proposed to mitigate the risks due to the project; summary of the project finance and implementation arrangements)

10.30 hr. The Hazardous Waste Management Project - The State's Perspective

*Secretary (Environment) of the State/ Member Secretary of SPCB/ A Senior Official of the SPCB

*PIC on SEAR
This presentation should cover, the present status of hazardous waste management in the State which will include all the ongoing initiatives in the State for hazardous waste management; the magnitude of the problem in the state; the need for the project; the State specific details for each component such as the kind of institutional strengthening, technical assistance proposed etc. and the cost distribution between the various components; the stages of the project wherein public participation is envisaged.

11.00 hr.  Coffee Break

11.15 hr.  Question and Answer Session
To be chaired by the Member Secretary/Secretary (Environment) of the State

13.00 hr.  Closure of PIC

The entire meeting is to be coordinated by the SPCB/MOEF. The minutes and proceedings of the PIC are to be recorded by EMC. A representative of the SPCB may also kindly record the minutes of the proceedings especially to capture the local language discussions.

4.3 Post PIC

The SPCB should allow three days after the PIC for written responses/suggestions from the participants on the NTS as well as the SEAR. In addition, there may be written comments sent to the SPCB/MOEF based on the NTS. A representative at the SPCB/MOEF who is involved with the Hazardous Waste Management Project may co-ordinate and compile these written responses. All these comments should be sent to EMC for final compilation and production of a complete report on the PIC of the project.

The SPCBs may also use this opportunity to provide any additional information on project such as the updated inventory figures, proposed elements in the institutional component etc. for final incorporation in the SEAR. This may be the final opportunity available for incorporation of information in the SEAR.

4.4 Anticipatory Planning

The following aspects may be required to be considered in anticipation of the likely queries that may arise during the PIC.
- The SPCBs may also require to make available to the public, information on the present facilities (institutional and technical) that the SPCB holds with respect to hazardous waste management.

- Some sample anticipated questions for which the SPCBs may need to be prepared to provide clarifications for are:
  
  - Why has management of medical wastes been excluded from the project? How does the state PCB propose to handle this problem? Why medical waste is excluded in the MoEF hazardous waste classification?
  
  - Are hazardous waste minimization technologies locally or indigenously available? How will the SPCB’s outreach to the industries to influence on minimization of waste?
  
  - What has been the progress so far of the Waste Minimization Circles as under the Industrial Prevention and Pollution Control (IPPC) Project, presently coordinated by the National Productivity Council, New Delhi.
  
  - When will the proposed changes in the hazardous waste management rules be implemented? What are the specific changes envisaged? Will the Boards be in a position to adapt to the new rules?
  
  - Will there be difference in policies to tackle large hazardous waste generators and small hazardous waste generators?
  
  - Will there be any interstate movement of hazardous waste? i.e. Will there be a common hazardous waste treatment and disposal facility common to say two states?
  
  - The inventories of hazardous wastes show that the contribution of category 12 (viz. sludges from Effluent Treatment Plant) is the highest amongst other categories. What is the strategy to address this problem? Is all sludge arising out of the ETP hazardous? Are there any possibilities to minimize its generation at source?
  
  - What is the policy regarding waste exchange i.e. selling of waste to interested parties for reuse, recycle and recovery? How will the sharing of responsibilities with respect to risks will be done in this case?
- What are the specific roles played by the Customs department regarding the control on the import of the hazardous wastes?

- What is the responsibility of the transporter of the hazardous waste? Who will be responsible in case of accidental spill of hazardous waste?

- What is the plan for clean-up of contaminated illegal hazardous waste dump sites? How will the polluter pays principle be implemented in case of illegal dump sites?

- How is hazardous waste proposed to be managed in the State in the interim period between pilot demonstration projects for common hazardous waste treatment and disposal facilities and the establishment of full scale facilities?

**Debate on Anticipatory Issues**

*Anticipating these questions upfront is important in any such PIC. SECB is should therefore hold a half day brainstorming of the senior officers (HQ and RO) to debate on such issues prior to PIC.*
Annex 1

Distribution of Responsibilities Between SPCB’s, MoEF and Environmental Management Centre (EMC) in Public Information and Consultation of Sector Environmental Assessment Report

EMC

- Develop guidelines for PIC for the Boards of SEAR and send a copy to the Member Secretaries and MoEF.
- Prepare a Non-Technical Summary of 10 to 12 pages of SEAR and send to the Boards and MoEF.
- Send draft SEAR to SPCBs and MoEF (one master copy) for the purpose of reproduction.
- Be present at the SPCB and MoEF one day before the PIC with the Team.
- Make a presentation on SEAR in the PIC.
- Record the discussions carefully and prepare minutes of the meeting.
- Compile the minutes at each PIC and the feedbacks (on PIC and NTS) and prepare a report for MoEF.
- Incorporate the findings in finalising the SEAR.

SPCBs and MoEF

- SPCBs to organize the PIC on SEAR based on the guidelines developed by EMC.
- Translate the NTS developed in local language
- Place an advertisement on the project in the local and national newspapers as per the Guideline
- Make adequate copies of SEAR as well as that of the NTS prior to PIC.
- Arrange the Venue for PIC and be responsible for all the organizational aspects including tea breaks and lunch at the end of the PIC.
- Send EMC any feedbacks on the SEAR/NTS/PIC till August 31, 1997. Boards should ensure that this information reaches EMC in time for the purpose of consolidation
- Allocate one of the staff to EMC during PIC, to assist in recording of the local language discussions.
Annex - 2-2
Non-Technical Summary of the Sectoral Environment Assessment Report
INDIA - Hazardous Waste Management Project

SECTORAL ENVIRONMENTAL ASSESSMENT REPORT

Non-Technical Summary

Ministry of Environment and Forests
Government of India

August 1, 1997
Table of Contents

1.0 Policy, Legal and Administrative framework for Management of Hazardous Wastes
2.0 The Hazardous Waste Management System
3.0 The Hazardous Waste Management Project
4.0 Sectoral Environmental Assessment of the Project
5.0 Status of Hazardous Waste Generation
6.0 Key Issues Related to Hazardous Waste Management
7.0 Project Description
8.0 Process Guidance Framework for the Management of Risks
9.0 Project Implementation

List of Tables

Table 1.0 Typical Examples of Waste Minimization Techniques
Table 2.0 Status of hazardous waste generated in Gujarat, Maharashtra, Andhra Pradesh and Tamil Nadu
Table 3.0 Project Design Summary

List of Figures

Figure 1.0 Hazardous Waste Management Components
Figure 2.0 Key issues in Hazardous waste Management
Figure 3.0 Influence of Project Design on Resolution of Key Issues of Hazardous Waste Management
Figure 4.0 Budgetary allocations for the project components
**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoB</td>
<td>Bank of Baroda</td>
</tr>
<tr>
<td>CPCB</td>
<td>Central Pollution Control Board</td>
</tr>
<tr>
<td>CHWTDFs</td>
<td>Common Hazardous Waste Treatment and Disposal Facilities</td>
</tr>
<tr>
<td>EAP</td>
<td>Environment Action Program</td>
</tr>
<tr>
<td>ETP</td>
<td>Effluent Treatment Plant</td>
</tr>
<tr>
<td>FI</td>
<td>Financial Intermediate</td>
</tr>
<tr>
<td>GIDC</td>
<td>Gujarat Industrial Development Corporation</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographical Information System</td>
</tr>
<tr>
<td>GOI</td>
<td>Government of India</td>
</tr>
<tr>
<td>ICICI</td>
<td>Industrial Credit and Investment Corporation of India</td>
</tr>
<tr>
<td>ITF</td>
<td>Interim Trust Fund</td>
</tr>
<tr>
<td>MOEF</td>
<td>Ministry of Environment and Forests</td>
</tr>
<tr>
<td>MIDC</td>
<td>Maharashtra Industrial Development Corporation</td>
</tr>
<tr>
<td>PGF</td>
<td>Process Guidance Framework</td>
</tr>
<tr>
<td>RPF</td>
<td>Resettlement Policy Framework</td>
</tr>
<tr>
<td>SEAR</td>
<td>Sectoral Environmental Assessment Report</td>
</tr>
<tr>
<td>SPCBs</td>
<td>State Pollution Control Boards</td>
</tr>
<tr>
<td>TRI</td>
<td>Toxic Release Inventory</td>
</tr>
<tr>
<td>TUDFC</td>
<td>Tamil Nadu Urban Development Finance Corporation</td>
</tr>
</tbody>
</table>

*PIC on SEAR*
1.0 Policy, Legal and Administrative Framework for Management of Hazardous Wastes

India is the first country to provide for the protection and improvement of the environment in its Constitution. Article 51-(g) of the Constitution states: "It should be the duty of every citizen of India to protect and improve the natural environment including forest, lakes, rivers and wildlife and to have compassion for living creatures."

The "Directive Principles of State Policy", an integral and significant element of India's democratic set-up, also contains a specific provision emphasizing the government's commitment to protecting the environment. These constitutional provisions are implemented through various environmental protection policies and laws.

A proactive policy framework for pollution abatement has been developed by the Government of India (GOI) and issued in 1992 as the Policy Statement for Abatement of Pollution. The GOI's stated policy is "to prevent pollution at source".

The Ministry of Environment and Forests, Government of India, issued an Environment Action Program (EAP), in 1993. This provides a focus for environmental programmes to be implemented in the country. The EAP identifies improper management of hazardous wastes generated from industrial and commercial activities as one of the priority problem areas. It also recognizes that indiscriminate disposal of these wastes has resulted in land, surface and ground water contamination. These wastes include heavy metals, cyanides and pesticides, complex organic compounds (such as H-acids) that are toxic flammable, corrosive, or explosive or have high chemical reactivity. Proper treatment and disposal of these materials are much more expensive and complex when compared to common air and water pollutants.

In keeping with the spirit of EAP and recognition of hazardous wastes as priority problem area, rules have been issued by Govt. of India for hazardous waste management under the Environmental Protection Act of 1986. The rules were issued in 1989 as “The Hazardous Waste (Management and Handling) Rules” to govern the generation, collection, treatment, transport, storage, disposal and import of hazardous wastes. The responsibility for enforcement of these rules is vested with the State Pollution Control Boards.

In addition to the Hazardous waste (Management and Handling) Rules, 1989, two supporting rules in the Environmental Protection Act that aim to regulate hazardous substances/wastes are:

*PIC on SEAR*
• Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
• Manufacture, Use, Import, Export and Storage of Hazardous microorganisms/ genetically engineered organisms of cells, Rules 1989

Additionally, in 1991, Ministry of Environment and Forests (MOEF) issued Guidelines for Management and Handling of Hazardous Wastes for (a) generators; (b) transport of hazardous waste; and (c) owners/operators of hazardous storage, treatment and disposal facility. In 1995, MOEF issued Guidelines for the Safe Road transport of Hazardous Chemicals. This also included guidelines for establishment of a Transport Emergency Plan and provisions for the Identification and Assessment of Hazards.

2.0 The Hazardous Waste Management System

A time bound and comprehensive management of hazardous wastes has acquired a sense of urgency in India. Rapid urbanization and industrialization have resulted in increased needs for proper disposal of industrial hazardous waste which may contain a variety of undesirable anthropogenic pollutants.

Improper management of hazardous wastes may lead to threat of serious contamination of ground and surface water resources, possibilities of health and vegetation impacts due to airborne emission of toxins, and damage to land, depriving its productive use. As evidence mounts to indicate that the costs of improper disposal are unsustainable, actions are beginning to be implemented to address their impact and prevent further deterioration.

Typically, hazardous waste management involves components such as identification, prevention, treatment, and disposal. The first component of identification and quantification of wastes assists in the definition of the hazardous waste problem and development of management plans. The component of waste prevention includes both reduction of quantities and the hazardous character of the waste. Treatment techniques renders the waste less hazardous in order to allow disposal in a manner such that human health problems and environmental damages do not occur.

The waste generated should be processed at the site of generation i.e., on-site to explore possibilities of recycle, reuse, recovery and further treated for safe storage and disposal on site. Transportation of waste and residues of treated waste, is sometimes unavoidable due to unavailability of space for treatment and disposal at the place of generation and the economy of scale, which is indeed relevant for small scale generators. Finally, wastes or residues when
transported to a common site, can be further processed (e.g. segregated or blended) to permit recycle, reuse, recovery or else treated to allow their safe ultimate disposal.

Any integrated waste management approach should follow the hierarchy: Source reduction > Reuse or recycling > On-site treatment > Off-site treatment > Final disposal. Source reduction, (i.e. reducing the hazardous waste at the source and in the plant) is the most desirable option. In a particular case, when source reduction options have been exhausted, then recycling of the remaining should be the next option considered. When recycling opportunities have been exhausted, then treatment is the next priority. Only after treatment options have been exhausted, secure final disposal is to be considered.

Selection of a combination of the above options should minimize risk to human health and environmental resources. Responsible management of the waste by the generator, transporter, operator of the treatment/disposal facilities and the regulatory authority is essential. In all the options public involvement is the key to success. Various options of hazardous waste minimization, treatment and disposal are described in below.

2.1 Hazardous Waste Minimization

Hazardous waste minimization means the reduction, to the extent feasible, of hazardous waste that is generated prior to treatment, or disposal. Waste minimization techniques focus on source reduction or recycling activities that reduce either the volume or the toxicity of hazardous waste generated. The Table 1.0 below gives some typical examples of hazardous waste minimization options.
<table>
<thead>
<tr>
<th>Technique category</th>
<th>Industry</th>
<th>Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory management</td>
<td>Textiles</td>
<td>• Review all chemical purchases</td>
</tr>
<tr>
<td></td>
<td>Organic chemicals</td>
<td>• Review all new products purchased</td>
</tr>
<tr>
<td>Material change</td>
<td>Printing</td>
<td>• Substitute water-based for solvent-based ink</td>
</tr>
<tr>
<td></td>
<td>Textiles</td>
<td>• Reduce phosphorus in wastewater by reducing use of phosphate-containing chemicals</td>
</tr>
<tr>
<td></td>
<td>Pharmaceuticals</td>
<td>• Replace solvent-based tablet-coating process with a water-based process</td>
</tr>
<tr>
<td></td>
<td>Aerospace</td>
<td>• Replace cyanide cadmium-plating based bath with non cyanide bath</td>
</tr>
<tr>
<td></td>
<td>Ink manufacture</td>
<td>• Remove cadmium pigment from products</td>
</tr>
<tr>
<td>Production modification</td>
<td>Chemical reaction</td>
<td>• Optimize reaction variables and reactor design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Optimize reactant addition method</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Eliminate use of toxic catalysts</td>
</tr>
<tr>
<td></td>
<td>Surface coating</td>
<td>• Use airless air-assisted spray guns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use electrostatic spray coating system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Control viscosity with heat units</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use high-solid coatings</td>
</tr>
<tr>
<td>Technique category</td>
<td>Industry</td>
<td>Technique</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>In-plant recycling and Recovery and reuse</td>
<td>Metal fabricators</td>
<td>• Recover synthetic cutting fluids using a centrifuge system</td>
</tr>
<tr>
<td></td>
<td>Paint fabricating</td>
<td>• Use distillation unit to recover cleaning solvents</td>
</tr>
<tr>
<td></td>
<td>Printing</td>
<td>• Use vapor-recovery system to recover solvents</td>
</tr>
<tr>
<td></td>
<td>Textiles</td>
<td>• Use ultrafiltration system to recover dye stuffs from wastewater</td>
</tr>
<tr>
<td></td>
<td>Metal fabrication</td>
<td>• Recover synthetic cutting fluid using a centrifuge system</td>
</tr>
<tr>
<td></td>
<td>Wastewater treatment</td>
<td>• Reuse waste caustic solids to treat acid waste stream</td>
</tr>
<tr>
<td></td>
<td>Chemicals</td>
<td>• Use spent electrolyte spent from one decision as raw material in another</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Purify hydrochloric acid in waste stream and sell as a product</td>
</tr>
<tr>
<td>Volume reduction</td>
<td>Pesticide formulation</td>
<td>• Use separate bag houses at each process line and recycle collected dust into product</td>
</tr>
<tr>
<td></td>
<td>Paint formulation</td>
<td>• Segregate and reuse tank cleaning solvents in paint formulations</td>
</tr>
</tbody>
</table>

2.2 Treatment of Hazardous Waste

There are several treatment technologies (e.g., acid-base neutralization, incineration, chemical-fixation/solidification etc.) which may be used prior to ultimate disposal of the hazardous wastes. The treatment technologies convert the waste into innocuous form, or immobile-toxic components, or reduce volume of the waste. The objective of waste treatment is modification of the physical and/or chemical properties of the waste to make it suitable for safe disposal. Treatment technologies are characterized by their compatibility with the specific waste types, waste-residue generation factor, and the cost and risk considerations associated with them.
2.3 Disposal of Hazardous Waste

Disposal of the waste-residues is the final process in the management of hazardous wastes. The disposal facilities act as permanent repository for the waste-residues generated from the treatment facilities. Landfilling, deep well injection, ocean disposal, etc. are some of the disposal methods. However, landfilling is one of the most commonly used methods of waste disposal.

3.0 The Hazardous Waste Management Project

In addition to enacting regulations, and strengthening institutions at national and state levels in this priority area, financial assistance from bi-lateral and multilateral agencies has been obtained for implementation of effective environment improvement measures. The MOEF has decided to seek World Bank assistance for development of a program of sound management of hazardous waste in the country.

The objective of the Hazardous Waste Management Project, supported by the World Bank, is to assist Government of India in the implementation of a modern and sustainable hazardous waste management system in the country. The project will help in modernizing the regulatory framework, strengthening the institutions in charge of enforcement and monitoring, and financing priority investments in hazardous waste mitigation, treatment, and disposal.

The specific goals are to: (i) promote the development of a comprehensive monitoring and enforcement system for timely implementation of the hazardous waste rules and other legislation concerning the management of hazardous wastes; (ii) assist in the implementation of priority investments in hazardous waste management; and (iii) Provide technical assistance for the training, technology development, and awareness programs in hazardous waste management and support for the development of background data for policy-making.

4.0 Sectoral Environmental Assessment of the Project

A Sectoral Environmental Assessment Report (SEAR) has been prepared by MOEF for this Project in response to the requirements of the World Bank. The SEAR offers opportunities for analyzing existing policies, institutions and development plans, in terms of environmental issues; therefore, leading to environmentally sound sector-wide investment strategies.

*Focus on SEAR*
The SEAR presents an analysis, sectorwise of the existing situation in Hazardous Waste Management and integrates environmental concerns to support long-term investment plans in this area. The Project Design as well as the guidelines developed in the form of a Process Guidance Framework to mitigate the risks likely to arise from the project are a result of the sectoral environmental assessment.

5.0 Status of Hazardous Waste Generation

A comprehensive picture of hazardous waste generation in India is not available. Considering international and national waste generation factors and a sample of state-wide surveys, hazardous waste generation is estimated at 5.0 million tons/year. As per preliminary estimates, there are approximately 8792 hazardous waste generators in 20 States. The States of Andhra Pradesh, Gujarat, Maharashtra, and Tamil Nadu together comprise 72% of the hazardous waste generated in the country. A summary table (Table 2.0) of the hazardous waste generated in these states is presented below.

Table 2.0. Status of hazardous waste generated in Gujarat, Maharashtra, Andhra Pradesh, and Tamil Nadu

<table>
<thead>
<tr>
<th>State</th>
<th>Quantity of Hazardous Waste Generated (million tons/annum)</th>
<th>Categories in which maximum waste is generated</th>
<th>District / Region showing maximum waste generation</th>
</tr>
</thead>
</table>
| Andhra Pradesh   | 0.10                                                      | Category 12, Effluent Treatment Plant (ETP) Sludge - 30%  
|                  |                                                           | Category 6 (Halogenated Hydrocarbons including solvents) - 16% | Ranga Reddy and Modak |
| Gujarat          | 0.50                                                      | Category 12 (ETP Sludge) - 45%  
|                  |                                                           | Category 9 (Wastes from Dyes and Dye Intermediates) - 43% | Vadodara |
| Maharashtra      | 1.60                                                      | Category 12 (ETP Sludge) - 78%  
|                  |                                                           | Category 17 (Off specification and discarded products) - 12.8% | Thane, Raigad, Pune and Mumbai |
| Tamil Nadu       | 1.40                                                      | Category 12 (ETP Sludge) - 41.4%  
|                  |                                                           | Category 10 (Waste Oil and Oil Emulsions) - 28% | North Arcot, Anna, MGR and Coimbatore |

According to the State Pollution Control Boards (SPCBs), 6686 units have valid authorization for handling of the hazardous wastes out of a total of 8792 hazardous waste generating units. While some individual units have in-house treatment and disposal
facilities, there are no centralized plants that can be accessed by small and medium scale units.

6.0 Key Issues Related to Hazardous Waste Management

The following are the key problems identified by the GOI for hazardous waste management:

a) insufficient information on the total quantity and types of waste generated;

b) inadequate compliance with regulations;

c) lack of awareness regarding risks to health, safety and environment; and

d) lack of proper infrastructure for treatment and safe disposal.

These issues are schematically represented in Figure 2.0.

Inadequate Vigilance and Enforcement of Regulations. Although some progress has been achieved in the professionalization of the Boards and in the improvement of their analytical capability, the SPCBs are still ill-equipped to deal with the analytical and monitoring requirements posed by hazardous wastes. Further, the State Pollution Control Boards lack modern and effective planning and information systems, that are essential to ensure a credible enforcement of all acts and regulations. Also, there is a need to take advantage of emergent public involvement in the vigilance of environmental laws.

Inadequate Awareness of Risks. There has been little experience in the country in the application of environmental impact assessment to hazardous waste problems. Mechanisms of identifying, translating and sharing of on-site as well as off-site risks in setting up treatment and disposal facilities are not fully clear- not only to the regulators but also to the private enterprise, interested in developing the facilities. Additionally there is inadequate awareness regarding the risks to public health and ecosystem associated with the improper management of hazardous waste.

Insufficient information. Further efforts are required to quantify and characterize the volume of hazardous residues originated by industry. Additionally there is a lack of a structured and defined system for management of information.
Figure 2.0 Key Issues in Hazardous waste Management

- Insufficient Information about the quantity and characteristics of the hazardous waste
- Inadequate vigilance and enforcement of Regulations
- Inadequate awareness of risks associated with the hazardous wastes
- Lack of proper infrastructure for hazardous waste treatment and disposal

Hazardous Waste Management Problem leading to Adverse Impacts on Public Health and Environment
Lack of Proper Infrastructure for Hazardous Waste Management. Apart from on-site waste management facilities at few large chemical companies, India lacks the infrastructure required to be set up for common facilities for recovery, recycle, treatment, and disposal of hazardous wastes.

6.1 No Intervention Scenario

Exposure to hazardous waste can affect human health through direct exposure or indirectly through contamination of ecosystems. Direct exposure can lead to chemical contamination that has a detrimental impact on public health and environment. When discharged on land, heavy metals and certain organic compounds are phytotoxic and at relatively low levels of concentration can adversely affect soil productivity for extended periods of time.

In the absence of any intervention for hazardous waste management in the country, the situation may deteriorate further leading to irreversible contamination of the environment.

7.0 Project Description

The proposed project adopts a precautionary strategy, starting with improved hazardous waste management in selected sites of high industrial concentrations, high existing levels of ambient toxicity, and/or potentially rapid growth of high toxics generating industries. This approach is considered as the most consistent with the economic, political, and social reality in India today.

The design of the project has been done keeping in view the key problems cited above and using the following three guiding principles:

- *The Precautionary Principle*. MOEF recognizes that the best approach to hazardous waste management is avoidance;
- *The Risk Reduction Principle*. The management of hazardous waste involves elements of risk, which need to be minimized; and
- *The Polluter Pays Principle*. The generation of hazardous waste is part of the manufacturing process. Therefore, treatment and disposal costs have to be considered as part of the production costs.

The principle components of the project are described below.
7.1 The Enforcement and Monitoring Component.

This component has been designed to support a program of activities aimed at strengthening the monitoring and enforcement capacity of the State Pollution Control Boards in those States where the most serious hazardous waste concerns have arisen. These are the States of Andhra Pradesh, Gujarat, Maharashtra and Tamil Nadu. In addition, an allocation has been made to serve the needs of another 2 State Pollution Control Boards, as yet not identified. Key themes are presented below:

- Strengthening of Analytical Capability.
- Institutionalization of the Planning Process.
- Improving the Information Management Process that includes Geographical Information System (GIS), and development of a Toxic Release Inventory (TRI) covering key generators of hazardous waste in the State
- Inventories of Hazardous Waste.
- Identification and Notification of Sites for Secure Destruction and Disposal of Residues.
- Organization of a Community Outreach Effort.
- Training
- Support to MOEF and Central Pollution Control Board (CPCB) in its policy making role.

7.2 The Infrastructure Development Component

This component has been designed to support infrastructure development for hazardous waste management.

- Primarily, this project will assist in the avoidance and minimization of hazardous waste generation. The emphasis is on preventing future discharges of hazardous waste by promoting actions that will result in the avoidance, recycle or recovery of otherwise hazardous effluents.

- However, in some cases generation of hazardous waste can not be avoided and requires destruction and or, ultimately, disposal. For those cases, where destruction and disposal are required by medium and small scale generators, the proposed project will assist in the introduction of institutional models and technologies to be used for the proper ultimate destruction and safe disposal of hazardous residues.
The model to be supported consists of one centralized facility at each of the project participating state, owned at least in part by selected State Agencies. Purpose of the project is to apprise the viability of establishing infrastructure for hazardous waste transportation, storage, treatment, and disposal. Moreover, the provision of treatment and disposal services by the State Agencies will result in the generation of income through the lease agreements with the selected operators. This income will be recycled by the State agencies for the financing of additional Common Hazardous Waste Treatment and Disposal Facilities (CHWTDs), making the investment sustainable in the long term.

7.3 The Technical Assistance Component

This component will support activities designed to complement the Boards' and improve the participation and access of the general public to information regarding the management of hazardous waste in the country and other activities of technical nature. These consist of national studies for the following.

- Support for the expansion of the Waste Minimization Circles, already initiated by MOEF, to focus on small scale generators of hazardous waste;

- Development of an approach to clean contaminated sites;

- The project will also support a limited effort to promote the development of innovative technologies for waste minimization and prevention of generation of hazardous residues;

- Support to dose-response analysis of hazardous waste and pernicious organic pollutants;

- Identification and assessment of long-term alternatives for containment and disposal of halogen and mercury containing waste and other technical studies;

- Technology Alternatives for Disposal of Sludge from Waste Water Treatment Plants.

Figure 3.0 illustrates how the project components attempt to resolve the key issues in hazardous waste management recognized.
Influence of Project Design on Resolution of Key Issues of Hazardous Waste Management

- Inventorisation of Hazardous Wastes
- Improving the Information management process that includes GIS and TRI covering key generators

More Information about the quantity and characteristics of the hazardous waste

Improved Hazardous Waste Management leading to Reduced Adverse Impacts on Public Health and Environment

- Increased awareness of risks associated with the hazardous wastes
- Improved infrastructure for hazardous waste treatment and disposal

- Organization of community outreach programme
- Support to dose response analysis of hazardous waste and pernicious organic pollutants

- Strengthening of Analytical capability of SPCBs
- Institutionalization of planning process
- Training and awareness programmes
- Support to MOEF in policy making
- Improving the Information management process that includes GIS and TRI covering key generators

- Identification and Notification of sites for CHWTDFs
- Pilot project on CHWTDFs leading to well developed infrastructure for transportation, treatment and disposal of Hazardous Wastes
- Inventorisation of Hazardous Wastes
- Waste Minimization circles
- Demonstration projects on innovative hazardous waste minimization and treatment at individual facilities

- Long term alternatives for containment of Mercury and Halogen containing wastes
- Development of strategy for cleanup and remediation of illegal dump sites
- Technology Alternatives for Disposal of Sludge from Waste Water Treatment Plants

Action points (Study level)

Action points (Field level)
7.4 Project Financing

The total cost of the proposed project is 290 US$ Million. The proposed project would be financed through two Bank loans of US$50 million equivalent each, provided to each of the Financial Intermediates (FIs) (Bank of Baroda (BoB) and Industrial Industrial Credit and Investment Corporation of India (ICICI)), an Interim Trust Fund (ITF) credit of US$76.0 million equivalent, additional loans extended by the FIs to the project sponsors, equity contributions and budgetary allocations from GOI. The proposed Bank loans and the proceeds of the ITF credit would finance about 64% of the project costs.

Enforcement and Monitoring Component. The costs of the activities supported through the component are estimated at US$44 million and will be financed through the proceeds of the IT-funded credit (US$34 million equivalent) and contributions from GOI and the project beneficiaries (State Pollution Control Boards). The credit will finance part of the cost of training, equipment and consulting services. The balance plus all of the operation and recurrent costs will be funded by GOI and the project beneficiaries.

Infrastructure Development Component. The CHWTDFs will be funded as follows: (i) project sponsors are expected to provide for at least 20% of the total project costs; (ii) the GOI will finance the balance of the State’s participation in the CHWTDF. Eligible sub-projects presented by individual companies will be financed as follows: (i) project sponsors are expected to provide at least 25% of the total project costs; (ii) the balance can be financed through the proceeds of the lines of credit with ICICI and BOB and/or other domestic loans.

Technical Assistance Component. The costs of the activities supported through the technical assistance component are estimated at US$19.5 million and will be financed through the proceeds of the IT-funded credit (US$8.8 million equivalent) and contributions from the GOI and the project beneficiaries.

Table 3.0 provides a summary of the project components and the anticipated benefits. Figure 4.0 shows budgetary allocations for the project components.
Table 3.0: Project Design Summary

<table>
<thead>
<tr>
<th>Component/Activity</th>
<th>Anticipated Benefits</th>
</tr>
</thead>
</table>
| Enforcement and Compliance          | • Strengthened institutions involved in enforcement of the law to result in improvement in monitoring, enforcement and ultimately compliance by generators with regulations.  
• Institution of routine and efficient Planning.  
• Improved effective information and decision making systems. |
| Infrastructure Development          | • Reduction and management of the hazardous wastes from priority industries in priority industrial areas therefore, leading to improved environmental performance of most generators of hazardous waste. |
| Technical Assistance Components     | • Feasible options for waste minimization, management of PCBs, Mercury, Halogen containing waste, and waste water treatment plant sludge, resulting in improvement in the quality of environment.  
• Feasible options for contaminated site remediation.  
• Establishment of safe exposure limits with respect to various types of wastes leading to improvements in safety measures. |

Figure 4.0 - Budgetary allocations for the project components

*The Project Costs are in US$ Million  
Total Project Cost is 290 US$ Million
8.0 Process Guidance Framework for the Management of Risks

The Process Guidance Framework (PGF) serves as a mitigation plan to minimize the risks that are anticipated due to the project and maximize the objectives of the project. The project, as described in section 5.0 has three components viz., The Enforcement and Monitoring Component; The Infrastructure Development Component and The Technical Assistance Component. Most of the risks anticipated due to the project are associated with the Infrastructure Development Component. No significant risks are anticipated due to the other two components which entail capacity building and strengthening of the enforcement and regulatory agencies as well as other institutions involved in hazardous waste management in the country. In fact, these two component assist in reducing the overall project risk to a great extent as seen from Figure 3.0.

The suggested framework includes a step wise approach for selection, appraisal and monitoring of sub-projects in the infrastructure development component at three levels viz., project entry level; project appraisal level and project monitoring level.

**Project Entry Level**

<table>
<thead>
<tr>
<th>Screening of sub-projects by Financing Institutions, World Bank and MoEF by applying defined Eligibility Criteria to ensure that risks are minimized.</th>
</tr>
</thead>
<tbody>
<tr>
<td>These eligibility criteria are defined to ensure that the projects shortlisted for selection focus on hazardous waste prevention, minimization, recycling or reuse and/or disposal facilities for proper management of hazardous waste. Eligibility criteria includes checking the project concept, size or contents, siting, environmental benefits and financial soundness or feasibility. The facilities will ensure that the adverse impacts on the environment are alleviated and/or minimized.</td>
</tr>
</tbody>
</table>

Screening and selection of sub-projects are proposed to be done so as to ensure that only those sub-projects that are environmentally sustainable be selected. Some of the typical precautions that will be taken to ensure this will be for e.g., (a) only wastelands or brownfields be selected for establishment of treatment and disposal facilities (b) a resettlement policy framework (RPF) has been developed with provisions for the project affected persons (c) care will be taken while selecting treatment technologies to ensure that the problem is not aggravated due to the treatment e.g., wastes containing mercury or halogens will be excluded while considering incineration as a treatment option.
Project Appraisal Level

Appraisal of screened sub-projects through Environmental Impact Assessment, Social Assessment and Risk Assessment studies leading to improvement in project design as well as mitigation and monitoring plan.

GOI regulations and World Bank Guidelines for selected sub-projects are to be adopted during appraisal. Public Consultation would be an integral part of this appraisal process.

Appraisal of selected sub-projects is proposed to be done to ensure that any environmental, social or technical risks likely to arise from the sub-projects are recognized at the early stages of the sub-projects. Following this, suitable measures to minimize/ alleviate these risks are proposed to be developed. These measures will be evolved in the form of plans that will emerge from defined studies such as the environmental, social and risk assessments. Both the GOI and the World Bank have well established guidelines and regulations for such studies which will be followed for development of the mitigation plans. To ensure that the proposed mitigation plans are incorporated during implementation of the sub-projects, monitoring plans will also be developed during the course of these studies.

Project Monitoring Level

The selected and appraised sub-projects will be monitored for their technical, environmental, social and financial performance using indicators.

The indicators will be developed based on the mitigation and monitoring plans recommended in the environmental, social and risk assessment. Institutional structure for monitoring shall be drawn covering construction, operation as well as closure phases.

During implementation of the selected and appraised sub-projects, indicators will be used to monitor their performance. These performance indicators will be used to monitor the sub-projects at every stage ranging from construction through operation and eventually closure. To ensure careful and systematic monitoring, the institutional set-up and the agencies that will conduct the monitoring activity will be clearly defined after the projects have been appraised. This is a very crucial step since it is through rigorous monitoring of the performance of the sub-projects that the project proposes to ensure minimization of risks likely due to the selected and appraised sub-projects.
9.0 Project Implementation

MOEF will be responsible for overall monitoring and coordination of all project activities. For the monitoring and coordination function, MOEF will be assisted by a team of consultants organized by the National Productivity Council (NPC). NPC will staff a project coordination and monitoring office. Project implementation will be the responsibility of:

- The SPCBs of the participating States, each through a dedicated implementation cell for purposes of implementation of all project activities under their purview.
- ICICI and BoB.
- State IDC (viz., MIDC, GIDC and TUDF in Maharashtra, Gujarat and Tamil Nadu respectively. A suitable agency is yet to be decided in Andhra Pradesh)
Copies of the Non-Technical Summary in Local Languages
(Non-Technical Summary)
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Hazardous Waste Management Components</td>
<td>5</td>
</tr>
<tr>
<td>20</td>
<td>*</td>
<td>15</td>
</tr>
<tr>
<td>30</td>
<td>*</td>
<td>30</td>
</tr>
<tr>
<td>40</td>
<td>*</td>
<td>23</td>
</tr>
</tbody>
</table>
2.0: მიღებულ დამატებითი გამოქვეყნებული, გადამთავრები

მოხატვა დამტკიცველ პროდუქტის სახელში შენახული მოქალაქეთა, მოტორები და წვიმა მიღებული იქნება, რომლებიც მოუსაზღვრელია. მიღებული პროდუქტი შეიძლება გადახურდეს ნავთობის მარკაზში შეიქმნათ წყალი დამოუკიდებლად დამატებით გამოქვეყნებულ მოქალაქეთათა მიხმარებით. გადამთავრები იქნება მომთაბარი მარკაზში შეიქმნათ. მომთაბარი წყალი შეიქმნათ მომთაბარი პროდუქტის გამოქვეყნების შემდეგ.
ვითარება და სამუშაო დარგები და ფუნქციები არ ჩაწერილი არ აქტიური არიან. განსაკუთრებით. ჭორის ზუსტი გათვალისწინებით ამოცანი ჩადეტანილი არ ერთი ჭორის დეტალები არ წარმოადგენს. ამ დეტალები მისაღწევად უჭირდება მატერიალურ ხელნაწერ და გადაწყდის გეგმი. საჭიროა კვლევა და გარემო აზროვნება ჩამოყალიბებულ და მოთხოვნა მიღწევა.
<table>
<thead>
<tr>
<th>పత్రిక</th>
<th>ప్రాంగణం</th>
<th>సంఖ్య</th>
<th>నామాంశాలు</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>మాధ్యమికీను</td>
<td>1</td>
<td>మాధ్యమికీ</td>
</tr>
<tr>
<td>2</td>
<td>మాధ్యమికీను</td>
<td>2</td>
<td>మాధ్యమికీ</td>
</tr>
<tr>
<td>3</td>
<td>మాధ్యమికీను</td>
<td>3</td>
<td>మాధ్యమికీ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>హారాలు</th>
<th>ప్రాంగణం</th>
<th>సంఖ్య</th>
<th>నామాంశాలు</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>గౌరవిత్తం</td>
<td>1</td>
<td>గౌరవిత్తం</td>
</tr>
<tr>
<td>2</td>
<td>గౌరవిత్తం</td>
<td>2</td>
<td>గౌరవిత్తం</td>
</tr>
<tr>
<td>3</td>
<td>గౌరవిత్తం</td>
<td>3</td>
<td>గౌరవిత్తం</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>మొదలు</th>
<th>ప్రాంగణం</th>
<th>సంఖ్య</th>
<th>నామాంశాలు</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>మొదలు</td>
<td>1</td>
<td>మొదలు</td>
</tr>
<tr>
<td>2</td>
<td>మొదలు</td>
<td>2</td>
<td>మొదలు</td>
</tr>
<tr>
<td>3</td>
<td>మొదలు</td>
<td>3</td>
<td>మొదలు</td>
</tr>
</tbody>
</table>
2.2: జాతి భాగపత్రికలు ఏ ని చేయండి

సూచన. జాతి భాగపత్రికల ప్రామాణిక మరింత విధానాలు
తొలి సంక్షిప్తమాగించబడింది. ఇవి ప్రతి ప్రతి
ప్రామాణిక సంస్మరణాన్ని వివరించి, సమీకరణ ప్రతి
విధానాలను మార్గాల తీసుకుంటుంది. ఇవి జాతి భాగపత్రికల ప్రామాణిక
సంక్షిప్తమాగించబడింది. జాతి భాగపత్రికల ప్రామాణిక
మరింత విధానాలు ప్రతి ప్రతి

2.3: జాతి భాగపత్రికలు అవసరం

సూచన. జాతి భాగపత్రికల ప్రామాణిక మరింత విధానాలు
తొలి సంక్షిప్తమాగించబడింది. ఇవి ప్రతి ప్రతి
ప్రామాణిక సంస్మరణాన్ని వివరించి, సమీకరణ ప్రతి

3.0: జాతి భాగపత్రికలు చేస్తుంది

సూచన. జాతి భాగపత్రికల ప్రామాణిక మరింత విధానాలు
తొలి సంక్షిప్తమాగించబడింది. ఇవి ప్రతి ప్రతి
ప్రామాణిక సంస్మరణాన్ని వివరించి, సమీకరణ ప్రతి

1) ప్రతి జాతి భాగపత్రి సంస్మరణాన్ని అవగాహితం చేసే
మరిపు, మ్యామాసం అనే విషయాలకు మోడిపడతాడు.
2) జాతి భాగపత్రి సంస్మరణాన్ని అవగాహితం చేసే
మరిపు, మ్యామాసం అనే విషయాలకు మోడిపడతాడు.
3) ప్రతి జాతి భాగపత్రి సంస్మరణాన్ని అవగాహితం చేసే
మరిపు, మ్యామాసం అనే విషయాలకు మోడిపడతాడు.
4.0: గరిష్ఠ దేశాల శాసనంలో నియంత్రణలు ఎందేసు?

ప్రత్యేకించినందుకు జేసి తెలియజేసిన కారణాలు దీర్ఘతం ఉండటం జరిగింది. పింది సమాచారాన్ని స్మరించడం నిర్ణయించిన సమితి తెలియజేసినది. సమితి నిర్వహణ కార్యక్షేత్రం సాధారణంగా సమితి నిర్వహణ కార్యక్షేత్రం ఉండటం జరిగింది. సమితి నిర్వహణ కార్యక్షేత్రం సాధారణంగా సమితి నిర్వహణ కార్యక్షేత్రం ఉండటం జరిగింది.

5.0: గరిష్ఠ దేశాలకు ఎంటి ప్రత్యేక సమాచారాన్ని స్మరించడం జరిగింది?

మహాశాహిత్యం సమితి గరిష్ఠ దేశాలకు ఎంటి ప్రత్యేక సమాచారాన్ని స్మరించడం జరిగింది. సమితి గరిష్ఠ దేశాలకు ఎంటి ప్రత్యేక సమాచారాన్ని స్మరించడం జరిగింది. సమితి గరిష్ఠ దేశాలకు ఎంటి ప్రత్యేక సమాచారాన్ని స్మరించడం జరిగింది. సమితి గరిష్ఠ దేశాలకు ఎంటి ప్రత్యేక సమాచారాన్ని స్మరించడం జరిగింది. సమితి గరిష్ఠ దేశాలకు ఎంటి ప్రత్యేక సమాచారాన్ని స్మరించడం జరిగింది.
7.3: మార్గం నిషేధం:

1) ప్రతి కోట్లు పల్లెలో పాటు పంచాయతుల సంస్థ ప్రతి వేల ప్రధాన కోటలను విభజించాలి. 2) పాటు పంచాయతు సంస్థ ప్రతి వేల ప్రధాన కోటలను విభజించాలి. 3) పాటు పంచాయతు సంస్థ ప్రతి వేల ప్రధాన కోటలను విభజించాలి.

7.4: యుద్ధం కొరకు నిషేధం:

ప్రతి కోటల పల్లెలో 200 మందివారు మా.మూర్చి పోయించాలి. 5 మందివారు పెక్కడ లాంటి మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి.

ప్రతి కోటల పల్లెలో 75 మందివారు మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి. మా.మూర్చి పోయించాలి.
8.0 : యాత్రా చేసేందుకు తాలుగులు

మీకు యాత్రా చేయడానికి ప్రస్తుతంగా తాలుగులు ఇవే సూచిస్తుంది: (1) ప్రాతిసమాన, స్థానప్రాంతం, (2) ప్రాతిసమాన ప్రాంతం, (3) ప్రాతిసమాన ప్రాంతం, మేము నేడు మీకు ఆ ప్రాతిసమాన సుధారించబడింది. ముందు బాగా మీకు మేము చేయడానికి ప్రస్తుతంగా తాలుగులు ఇవే సూచిస్తుంది:

(a) మీదు అబ్దుల ధ్యానం
(b) మీదు అబ్దుల ధ్యానం
(c) మీదు అబ్దుల ధ్యానం (ప్రభుత్వ ధ్యానం)

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార

(ప్రాతిసమాన ప్రాంతం) సమాచార
(c) ఇది తెలుగు లో ముఖ్యమైన విషయాలు తెలియజేస్తుంది. దీనిని వివిధ విషయాలకు పంపిన లోహం సాధారణంగా ఉంటే, తెలుగులో ఇది పరిపాలన చేయబడతుంది.

9.0: తిరంగాలు

ఈ విషయాలను ఎంచుకుంటే, దీనిని మూలదిశలు చేయడం చాపంగా ఉంటే, తొలి విషయాలను పంపిన లోహం సాధారణంగా ఉంటే, తెలుగులో ఇది పరిపాలన చేయబడతుంది.

(సేవ) యోగ్యతను ప్రకటించడం సమాధానం లో స్థాయించడంపై సంస్థలు సంచారప్రాంతీకరించడానికి, తెలుగు లో ఇది పరిపాలన చేయబడతుంది.

(సేవ) యోగ్యతను ప్రకటించడం సమాధానం లో సంచారప్రాంతీకరించడానికి, తెలుగు లో ఇది పరిపాలన చేయబడతుంది.

(సేవ) యోగ్యతను ప్రకటించడం సమాధానం లో సంచారప్రాంతీకరించడానికి, తెలుగు లో ఇది పరిపాలన చేయబడతుంది.

(సేవ) యోగ్యతను ప్రకటించడం సమాధానం లో సంచారప్రాంతీకరించడానికి, తెలుగు లో ఇది పరిపాలన చేయబడతుంది.
There are two things you can do about the environment

Destroy it
Protect it

We chose to do the latter and with a good cause at heart. An enriched Environment is the most precious gift that we can hand down to our children. So that they can have a better tomorrow.

As a measure in this direction we set up India's first common effluent treatment plant at Jeedimetla Industrial Estate, near Hyderabad. This self financed project initiated by the Sixty eight member units, most of whom are in the small scale sector, has changed the picture of the industrial scene in Jeedimetla.

The aim of the project was to prevent and control water pollution. In fact industrial units are first encouraged to treat the effluents at source before they are let out into the treatment plant. The water after treatment is let out into the sewage system.

We are happy to have done our bit for the Environment.

Why don't you all get along and do something in your industrial areas.

We shall be happy to assist you with our experience.

JEEDIMETLA EFFLUENT TREATMENT LTD.
Plot No.267, I.D.A., Phase 1, Jeedimetla, HYDERABAD-500 855.
Tel: 3093180, 3092141, Thc: 6425-2130 VCPULN, FAX: 3097 335.
MAHARASHTRA POLLUTION CONTROL BOARD
MUMBAI

PUBLIC INFORMATION AND CONSULTATION MEETING

PROGRAMME

14.00 Registration

14.10 Welcome/Introduction of the Guests/Speakers

14.15 Opening Remarks

14.20 Presentation of Sectoral Environment Assessment Report

15.00 Hazardous Waste Management Project- The State’s Perspective

15.30 Question and Answer session

17.00 Closure of PIC


9.0 धोकादाय कथ्यांवेश व्यवस्थापन याकरिता धोरण वैधानिक व प्रावस्तमक चीफ

आपत्या संविधानादेश पर्यावरणाचे संरक्षण व सुधारणा याकरिता सर्वे करण्या भारत हा पहिला देश आहे.

संविधानार्थ ५८ (जॉ) महत्त्वाचे आहे : "वन, वनाधीक्षां, नदी व वन्यजीवांचा अधिनियमकार मंत्रालयांमध्ये पर्यावरणाचे संरक्षण व सुधारणा करणे आणि सल्लीम प्रान्तावर होत दीवाळी असणे भारताच्या प्रदेशांनी नागरिकांनी कल्याण आहे.

राज्य धोरणाची निर्देशनता तत्त्वाचे, भारताच्या तसावरी धीमतीची एवढी वैधत्वपूर्ण मूलतः यांच्याचून धोकादाय पर्यावरणाचे संरक्षण करण्याची वैधत्वीक कार्य करून देशात विशिष्ट तरंगी तयार केलेलेल्या अती आहे.

भारत सरकारच्या (जीओआय) प्रदूषण नियन्त्रण संरक्षण धोरण चीफ वित्तिसिद्धी केलेली आहे व प्रदूषणाच्या अतीविश्वसनीयता धोरण नियोजन महाराष्ट्र १९९२ मध्ये याच्या केलेली आहे. जीओआयचे निर्देशन धोरण.

पर्यावरण व वन संख्यान, भारत सरकार यांनी १९९३ मध्ये, पर्यावरण कृती कार्यक्रम (ए.पी.एम.) आंदोलन केला.

सामग्री, देखील अंतर्भाज्यी करते, पर्यावरणातून कार्यकर्त्यांमध्ये केंद्रीय करणे तयार होते. अंतर्भाज्यी व व्यापारी कर्मचारी मुद्द्याने साधनाने कार्यकर्त्यांना अव्यस्था व्यवस्थापन हे अनुप्रयोग समस्या क्षेत्रात स्किन पूर्ण नाही आहे हे ईएपी असल्यास तर त्याची अव्यक्ति ओळखल्या आहे. त्याची अव्यक्ती ओळखल्या आहे की, त्याच्या अव्यक्तीत विश्लेषण राखूनसे. जमानत, पृष्ठभंडारी व पूर्णतः पाणी दूर केल्यास तर, या कार्यक्रमात, जड धातु, सामग्री व कोटनाशके, भविष्य व्याप्तीत जरावाही. नागरिक वित्तीय स्फोटनोर्म अवस्था नियम उच्च राजस्व नियमक प्रतिक्रियासंदर्भता अवस्था विशेष तयारी समुद्री मौजूद राज्यांच्या (भारत-अंतरराष्ट्रीय सार्वत्रिक) याच्या संरक्षण आचरण. सामान्य हुना व जल प्रदूषणाच्या नागरिकांनी तयार करता या कार्याच्या योग्य उपचार व विश्लेषण लागणे फरसा विशिष्ट व गुंपगुंप असले.

ईएपीसाठी आशय व अप्रकृती समस्या क्षेत्र महाराष्ट्र धोकादाय काथयांची ओळख त्यात घेतली. १९८६ वर पर्यावरणाचे संरक्षण अधिनियमाच्या धोकादाय काथ्याचा नियम संपर्कात निम्न जमीने जाणी केली आहेत. धोकादाय काथयांची निर्देशन, जमा करणे, उपचार, वातावरण, सतत, विश्लेषण व आयात यांचे नियमण कामसाठी 'धोकादाय कपडा (पर्यावरण व हाताळाच) नियम' महाराष्ट्र १९९२ मध्ये हे नियम जमीनी करण्यात आलेले होते. ज्या नियमाची अंतर्भाज्यी काथयांची नियमण राजस्व प्रदूषण नियन्त्रण यंत्रजनके विशिष्ट करण्यात आलेले आहेत.

धोकादाय कपडा (पर्यावरण व हाताळाच) नियम. १९८६ वर वत्तिरित, पर्यावरणातून संरक्षण अधिनियमामध्ये 'वन संपर्क' नियम आहेत ज्या नियमण यंत्र धोकादाय कपडा/कपडा यांचे नियमण करणे असा असून ते पुढीलप्रमाणे आहेत.

• धोकादाय संस्थापित, सार्वजनिक सर्वात नियम. १९८९.
• धोकादाय सार्वजनिक / सर्वात नियमणसंबंधी श्लोक प्रस्ताव जोडीचे जोडीत नियमित, वापर, आयात, नियंत्रण व सार्वजनिक सर्वात नियम, १९८९.
या आवश्यक, १९९५ मध्ये, पद्यादरण व वन मंगलयाने (एम.आई.एस.) (अ) निमित्तीकर (ब) धोकादायक कव्यातील वाहनक आणि (स) धोकादायक मूर्त, उपचार व विद्येय वाद्य यासो मालक/प्रवेश याच्यासाठी धोकादायक कव्याचे व्यवस्थापन व हातातली याच्यात असंतान तत्वांना जाती केली १९९५ मध्ये, एम.आई.एस.मध्ये धोकादायक सरसळसाठी संचालित मार्गाधारी मार्गदर्शक तत्वांना जाती केली १९९५ मध्ये, एम.आई.एस.मध्ये धोकादायक सरसळसाठी संचालित मार्गाधारी मार्गदर्शक तत्वांना धोकादायक ओझर्व व निर्देश याच्यात परिस्थित मार्गाधारी अंतर्गत आहे.

2.0 धोकादायक कव्याचे व्यवस्थापन पद्धती
पद्यादरण व सनमाद्याच्यात धोकादायक कव्याचे समयांत व सर्वसामायिक व्यवस्थापन कव्यातील महत्व जाणारे आहे. अतः धोकादायक कव्याचे शासन व वाच्यातील मार्गाधारी व्यवस्था, उपचार ओझर्वाच्यांनुसार विविध तत्त्वातील अॅस्ट्रोलॉजी व वैज्ञानिक शास्त्रात असते. धोकादायक कव्याचे व्यवस्थापन व संरक्षणाचे मूल्यवान अंतर्गत आहे.

धोकादायक कव्याचे असाधारण व्यवस्थापनानुसार, मूल्य व संरक्षणाची संरक्षणाची गणना दृष्टिकोण. हेंडरोगन बाहरीतून जीव विविधता प्रविष्टाचे होकसीच प्रविष्टाचे उपचार व संरक्षणातील अवस्थाची राहणी. उपचारात उपयोगाची संख्या विविधत करण्याची जागी साधने होती. तथा तरस तयार करती. प्राण पुनर्वाढणण आहे निर्भरता होते की, असाधारण विविधतेचा निर्भर, जीव जर शासनाडून तयार करण्याची असरातील उपचार उपचार

विशेषता त्या धोकादायक कव्याचे व्यवस्थापनानुसार, ओझर्व, प्रतिबंध, उपचार आणि विद्येय अशा साधनांचा धारकांचा अंतर्गत आहे. (आकृती १.०) कव्याची ओझर्व व परिस्थित यासा परिस्थित घटक, धोकादायक कव्याचा संरक्षणाची वाचमय व व्यवस्थापन योजनाच्या विविध वाचमये मदत करते. कव्या विविधांतक घटकाच्या परिस्थिती नाही व संरक्षणाचे स्वरूप या दोहोद अंतर्गत आहे. उपचार तत्त्वातून, मानवी आसोषिता संरक्षण व पद्यादरणात वही उद्देश तयार करण्याचा परिस्थित करते.

निर्माण झालेला कवर, जेव्हा निर्माण झाला त्या जागरूक प्रतिस्पर्धेचे विषयात ज्ञात असे, कवर जागरूक पुनर्वाढणणे, विविधीकरण, कसूली यासा असाधारण व पुढे जागरूक पुनर्वाढणणे व विद्येय याच्यात उपचार करते. कवर व उपचार केलेलेचा कवराचे अर्थ केले वाहनूक, निर्माण झालेला जागरूक उपचार व विद्येय याच्यात ज्ञात अनुपलब्धतांना काही वेळा अपरिवर्त्तन असते, आदिक प्रभाव जेव्हा तहात प्रभावातील निर्माणकंद्रा दृंढतने संरक्षित असते. स्वच्छता कवर व अर्थक याची जोडणा सर्वसामायिक जागरूक बाहुल्य केली जाते, तक्षक व वाचमये सुरुविधा अंतर्गत विद्येय याच्यात उपचार करण्याचे कारण पुनर्वाढणणे, पुनर्वाढणणे व पुनर्वाढणणे कवराची पद्धत देणे दृंढताने पुनर्वाढणणे (पुढे, उच्चक तयार किंवा निसर्ग) करत येईल तत्त्वातून.

योग्यतेही एकत्रीकृत कवर व व्यवस्थापन, पुढे पुढे अनुकूलने अनुसार केलेले पाहिजे: मुख्याच्या कप्रिय > दुर्लक्ष जागरूक उपचार > दुर्लक्ष जागरूक उपचार > अंतिम
विशेषता: मुख्य क्षेत्र (स्थान इंद्रधनुष आग रंग प्रस्तर कार्यालय कंट्रोल करने की कंपनी) है। अन्य इकाई प्रमाण आहे. विशेषता प्रकट नरी, मुख्य क्षेत्र करन्याचे पद्धत संपर्क तेथे उपलब्ध इंद्रधनुष पुनर्वाचन करणे या पृथक पर्यावरण विचार केल्याप्रमाणे. इथेस मुख्य क्षेत्र करन्याच्या संपर्क समावेश होतो. तेथे पृथक पर्यावरण अभियंता इंद्रधनुष शहरातील उपचार, उपचार संस्थानांतर्गत सुरक्षित आंतरिक विशेषता करण्याचा विचार केला पाहिजे.

वरील पर्यावरण संयोजित निवड केल्यास, मानवी आरोग्य व पर्यावरणकल्प संसाधनाना होणारी जोखिम कसाची होऊ शकते. निर्माण, उपचार / विशेषता पुनरुद्धार यांचे चालक आणि विशेषता प्राधिकरण सांख्यिकी प्रमाण करण्याचे उद्देश्य वाहन संस्थान होणे अस्वाभाविक आहे. सर्व पर्यावरणात जनतेचा सहभाग ही राष्ट्रीय विशेषता आहे.

आकृती 1.0 धोकादायक करण्या व्यवस्थापन घटक

धोकादायक करणा क्रिया करण्यास आपल्या विविध पद्धती, खालील विश्लेषणपत्र देखील वैताल आहेत:

2.9 धोकादायक करण्या क्रिया करण्यास

धोकादायक करण्या क्रिया करण्यास शहरातील उपचार क्रिया विशेषता यांच्यामध्ये निर्माण झालेला धोकादायक कार्यालयाची स्थान तथा प्रामाण्य करणे करणे. कार्य क्रिया करण्यासाही रुपे, निर्माण झालेला धोकादायक कार्यालयाचा पर्यावरण क्रिया विविधता करण्या मुख्यात्मक व प्रशस्ती करण्यास वर्तने क्रियालय होतात. खालील तंत्र 1.0 धोकादायक करणा क्रिया करण्यास यांच्या बाह्य विशेषता उद्देश्ये दर्शविता.
<table>
<thead>
<tr>
<th>თანახმად ჩაწერილი ტექსტი</th>
<th>ბინარული ხედი</th>
<th>ხელთანხედი</th>
<th>შედეგი</th>
</tr>
</thead>
<tbody>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ბინარული ხედი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ბინარული ხედი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ბინარული ხედი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ბინარული ხედი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ბინარული ხედი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ბინარული ხედი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
<tr>
<td>თანახმად ჩაწერილი ტექსტი</td>
<td>ხელთანხედი</td>
<td>შედეგი</td>
<td></td>
</tr>
</tbody>
</table>
2.2 धोकादायक कब्जायां सरकार

किन्तु उपचार तंत्र (फ़ैक्टरी, आत्म-आधार एवं उद्देश्यीकरण, भूस्तरकरण, प्रसाधन-स्थिरीकरण / धनीकरण, etc.) उपलब्ध अनुपस्थित ती धोकादायक कब्जाया अंतिम विशेषज्ञात पूर्वायात्मक उपचार तंत्र, कब्जा अनुपस्थित स्वरूपात किया अचर विवाह घटकामें परिवर्तित करतात किंवा कब्जायां परिवर्त अन्यत कार्यात. पुरस्कृत विशेषज्ञात कर्मचारियां पूर्वायात्मक कब्जायां प्रत्येक आरोग्य / किवा सामान्यस्थित गुणधर्मान् फेखेतने कचरे हे कब्जा उपचाराचे उत्तराय असेह. उपचार तंत्र, विशिष्ट कब्जा प्रकार, कब्जा अवशेष निमित्ती घटक आरोग्य लाभार्थी निर्मित खाल एवं जीर्णिम विकास याच्यांचा त्याच्या असुरुक्तने त्याच्या दृष्टीकोष आहेह.

2.3 धोकादायक कब्जायां सर्वेखात

कब्जा-अवशेषित सर्वेखात, ही धोकादायक कब्जाया व्यवस्थापनातील अंतिम प्रक्रिया आहे. सर्वेखात पुनरुत्थान, उपचार विशेषज्ञात निर्माण ज्ञानीत्रांना कब्जा-अवशेषित सर्वेखात प्रसन्न मनाहक उपचार तंत्र कार्य. जमीन-भाग, खोले विभागां, अंतःक्रिया, समूही सर्वेखात हे. कंपनी सर्वेखात पूर्णता वाचेह. सारखी, जमीन भाग ही, कब्जे सर्वेखाती वस्त्रसंगमने मान्यतिक वापरली ज्ञानास्त्र प्राप्त असेहे.

3.0 धोकादायक कब्जा व्यवस्थापन प्रक्रिया

या अनुकूली होजामध्ये सर्वेखात अंतिम प्रक्रिया व राष्ट्रीय र सार्वजनिक संस्था वातावरणात व व्यवस्थापन प्रक्रिया व व्यवस्थापन प्रक्रिया उपकरण ज्ञानीत्रांना मान्यतास्वरूप त्याच्याच व्यवस्थापनाच्या कार्यक्रमाच्या विविध कब्जायां जागरूक बैंक सहयोग प्राप्त करताने ठरवल्याचे आहे. जागरूक बैंकांना सममत करते आहे, धोकादायक कब्जा व्यवस्थापनाचे उद्देश्य वेसीतल्यांने मान्यता एवं प्रमाणांत धोकादायक कब्जा व्यवस्थापन पद्धती अस्तित्वातील कब्जावाचा सरकाराचे मदत करणे तसे आहे. हा प्रबन्ध, धोकादायक कब्जा तंत्रिकारण, उपचार व सर्वेखात यांत्रणे अस्तित्वातील व संदर्भात घाले प्रमुख अस्तित्वाच्या आद्य अनुप्रयुक्त विधानाच्या विकास करणे याच्या प्रमुख अस्तित्वाचा संस्थानाचा वाढदृष्टी विविधाने जोडतील आपल्यी कसलिंक कर्मचारी कर्मयात्रा मदत करते.

विशेषत ध्याये असेहे आहे : (१) धोकादायक कब्जा नियान्त्रण आरोग्य धोकादायक कब्जायां व्यवस्थापनाची समस्तत अन्य विशेषज्ञात सृजीव आमदानीची कर्नयात्मक, सर्व सेवाहील संदर्भात व असलंकाराची पहाणी याच्याच विधानाची जोडते मदत करणे देखील (२) धोकादायक कब्जा व्यवस्थापनाचे आपल्यी गुणधर्मांची अस्तित्वातील कर्मयात्रा मदत करणे आहे (३) धोकादायक कब्जा व्यवस्थापनाचे प्रशिक्षण, तत्कालीन विकास व जगतातील कर्मचारी याच्याचतुर तार्किक सहयोग पुरुषविने इत्यादी दृष्टिकोनाची विधान विकास कर्नयात्मक पुढील देखील आहे. 5
4.0 Regulatory Principles

The objective of this section is to outline the regulatory principles that govern the operation of the financial sector in the country. The principles are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

The principles outlined in this section include:

- Individual Responsibility: Each individual in the financial sector is responsible for ensuring that their conduct is ethical and in line with the principles outlined in this section.
- Transparency: The financial sector is required to operate in a transparent manner, with all transactions and decisions being open to public scrutiny.
- Competitiveness: The financial sector is encouraged to operate in a competitive manner, with incentives provided to encourage innovation and efficiency.
- Consumer Protection: Consumers are protected from harm, with strict measures in place to ensure that they are not exploited.

5.0 Statutory Provisions

The statutory provisions outlined in this section are designed to provide a legal framework for the operation of the financial sector. These provisions include:

- The Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- The Capital Markets Act: This act governs the operation of the capital markets.
- The Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
</tbody>
</table>

Statutory Provisions

- Financial Sector Act: This act provides the legal framework for the operation of the financial sector.
- Capital Markets Act: This act governs the operation of the capital markets.
- Insurance Act: This act governs the operation of the insurance sector.

The statutory provisions outlined in this section are designed to ensure that the financial sector operates in a transparent, efficient, and competitive manner.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regulatory Principle</th>
<th>Statutory Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Responsibility</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>2</td>
<td>Transparency</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>3</td>
<td>Competitiveness</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>4</td>
<td>Consumer Protection</td>
<td>Financial Sector Act</td>
</tr>
<tr>
<td>राज्य</td>
<td>निर्माण झालेल्या धोकादायक कच्च्याचे (दक्षिणी टन/वार्षिक)</td>
<td>ज्याने कमायल कच्च्याचे निर्माण झाला आहे से संरचना</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>गुजरात</td>
<td>0.50</td>
<td>संरचना 92. (इंटीपी चिकाल) - 45%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>संरचना 9. (डाइजू व डाय इंटरमिडियेट, एट्रांगील कच्च्या) - 43%</td>
</tr>
<tr>
<td>महाराष्ट्र</td>
<td>9.50</td>
<td>संरचना 92. (इंटीपी-चिकाल) - 48%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>संरचना 97. (विनिर्देशान्वेषण न काही ही टाकलेल्या उपचारावर) - 92.8%</td>
</tr>
<tr>
<td>तमिळनाडू</td>
<td>9.40</td>
<td>संरचना 92. (इंटीपी चिकाल) - 84.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>संरचना 90. (राष्ट्रीय तेल व ऑइल इन्टर्सन) - 28%</td>
</tr>
</tbody>
</table>

राज्य प्रदेश नियंत्रण मंडळ (एसपीजीबी) याद्याचे आनंदार, एकूण 892 धोकादायक कच्च्याचे निर्मिती युनिटच्या मध्ये धोकादायक कच्च्याचे हातातल्या काममध्ये मागे प्राधिक असलेली 6,686 युनिट आहेत. काही व्यवसाय युनिटांनी अंतर्गिते उपचार व वित्तवाद विविधा असत्या तरी सहज व मध्यम श्रेणी युनिटांमध्ये प्रवेश करून शक्तिगत अशी केंद्रित ठरणांची प्रतिक्रिया नाहीत.

6.0 धोकादायक कच्च्यांचे व्यवसायानंतरी संबंधित महत्त्वाचे प्रश्न

धोकादायक कच्च्यांचे व्यवसायानंतरी जीवनावर यांनी जागृतात या महत्त्वाच्या संस्था खालीलप्रमाणावर आहेत.

| अ) निर्माण झालेल्या कच्च्याचे पृथिवी परमाणु व प्रकार याबद्ध अपूर्ण माहिती. |
| ब) विभिन्नमध्ये अपूर्ण अनुपालन. |
| व) आत्मरुप, वुखव म वित्तवाद याच्यासाठी जगाभारती अभाव |
| झ) उपचार व सुरक्षित वित्तवाद साधनांची योग्य सहसंसाधनांची उपलब्ध |

हे प्रश्न आकृती 2.0 मध्ये सुप्रेराविकादत्ते दर्शणविरुद्ध आले आहेत.

अपूर्ण दागता व विनियमांची अंतर्गतावणी:

मंडळाच्या व्यवसायांबोटरणाचे व साधारण विनियमणात्मक प्रकारातून युद्धागोष्टी काही प्रथमोत्तर झाली असलेली तरी, एसपीजीबीज धोकादायक कच्च्याचे उपलब्ध केलेल्या वित्तवादात्मक व संपर्कदर्‌दर्शणात प्राप्त.
ჯიშ ხელი იქნინა

შეშვება და მონაწილეობა იშვიათი სწავლებით. ჯიშ შემოქმედების გამარჯვება იქვე გამოყოფილი იქნა მთელი რეგიონის მყურაზე. უპირატესი შემოქმედების პრაქტიკა უნდა იყოს მარაგვით როგორც საერთაშორისო მონაწილეობა.

: უნარი ჯერი

: თითქმის კათედრის ტექსტი
आकृती २.० धोकादायक कचरा व्यवस्थापनातील महत्त्वाचे प्रकार

धोकादायक कचर्याचे परिदृश्य व स्वरूप यासंबंधी अपूर्ण माहिती

धोकादायक कचराशासी निरीक्षित जोखांची अपार्यावत जागरूकता

अपार्यावत दक्षता व विनियमांची अभावजवाची

धोकादायक कचरा उपचार व वित्तीयता वाकरिता योग्य सह-संरचनाचा आभाव
थोकादायक कार्य व्यवस्थापनार्थिता योग्य सह-संरचनांचा अभावः

जाती मोजाचा साधन कम्प्यूटरसंबंधी जागरूकीत कार्य व्यवस्थापन सुविधा योग्यता, थोकादायक कब्ज्याची पुनरावृत्ती, पुनरावृत्ती, उपचार या विलोमवाट याच्या सामान्य सुविधार्थिता उभारावाच्या आवश्यक सह-संरचनांचा भारतात अभाव आहे.

6.1 हस्तक्रिया उपक्रमण गाठ

थोकादायक कब्ज्याची उपचारक थेट उपचारक माफ्यास द्‍या अपराध जीवनदृष्टीत्या दृष्टिमान्यक मानवी आरोपाचार परिणाम करते. थेट उपचारक रासायनिक दृष्टिकोणातून नेंदू शाळणे. ती सार्वजनिक आरोपी व पर्यावरणाची हानीत अशा प्रकारे कसली ते. तेहा जागरूकीत सांगते जातात तेहा. जग धातु 'सा' सहभागी सुपर्ने 'थोकादायक' अशा तसंदेखून एकांनेच निन्न स्तर. दौरान वाचकाने एक उपचारकेतर प्रतिकूल परिणाम करत झालेले.

देशानिधीत थोकादायक कृत कार्य व्यवस्थापनार्थिता योग्यता हस्तक्रिया अभावाची परिस्थिती, पर्यावरणाच्या अप्रत्यावर्ती दृष्टिकोनेच अशा होळून अधिक विभंग प्रयोगाची शक्ती असते.

6.0 प्रक्रिया वर्णन

प्रस्तावित प्रकार, उच्च औद्योगिक केंद्रे, आसपासच्या विवाहाच्या उच्च विद्यासार रत आणि / दिवा उच्च विभागाची निर्णय करण्यास उद्योग याच्या निकटदर जागरूकीय धोकादायक व्यवस्थापनाच्या प्रारंभ करते. सामयिक प्रयोगाच्या योजना अधिक बनावते. हा धृष्टिकोण आले भारतातील आयुर्विज्ञान, राजकीय व सामाजिक वातावरणातील असंवतस्त दृष्टिकोण समजावून आलेला आहे.

प्रक्रियाचे संक्षेपसूची वर उद्योग नेत्रविळ्या महापणाच्या समस्या संपर्क लागून या नीचेच्या तीन मार्गदर्शक तसे बागलन तयार करण्यात आलेले आहे.

साधनुक्तीत तत्त्व एकत्रीकृत मानतो की, थोकादायक कार्य व्यवस्थापनाचा सर्वोत्तम दृष्टिकोण म्हणजे. ती दाखली.

जोडकृत कार्याचा तत्त्व : थोकादायक कार्याच्या व्यवस्थापनाचा जोखमीय पूर्वांत अनुभूत असतात, ती किंवा निवृत्त करण्याची रर्ज असते.

प्रदूषण प्रदानाचा तत्त्व : थोकादायक कार्याचे उत्पाद्यांना हा निमित्त प्रतिकृत याचा म्हणून आहे. म्हणून उपचार व विलोमवाट खच, उत्पादन खर्चांचा म्हणून समजपूर्त आला पाहिजे.
7.1 अंतर्गतवाणि के संहितायोग्य घटना

यदि अन्याय प्रदूषण ध्रुवस्करण कार्यपत्र बाबत उद्यमार्फत आयेह अथ राज्यमण्डल संग्रह प्रदूषण नियम भंडारण से संहितायोग्य व अंतर्गतवाणि कर्मवाहक वादमार्फत राज्यमण्डल कार्यक्रम पुष्टि दोहे जासतय या घटनाओं संक्षेपित करणे आयेत आयेह. अंद्र प्रदेश, पुणे, महाराष्ट्र व नागालाङ्कूट हे नी साधे होते.

यासाठी आवश्यक 1 साधन प्रदूषण नियंत्रण मंडळाने गरजा भागविन्यासातील वापर करणे आयेत आयेह. महल्यात विशेष खासी सादर करणे येत आहेत.

विवरणात्मक कर्मवाहक अभियोजन.

निवडताने प्रत्येकचे संस्थानातील आयुक्त.

सार्थक व्यवस्थापक प्रथित पर्यावरण, ज्ञानपात्र वोल्टिस्क महत्त्वाची फास्टेरी (जीआयएससी) आणि टॉक्सिक रिसीज इंश्योरेंसी (टॉक्सिक्रिसी) या विभाग या राज्यमण्डल ध्रुवस्करण कार्यपत्र घटकाचे संत्त्वित करणे निर्माणाचे साधन समावेश असतल्या बाबा अनुप्रृत्त आयेत.

ध्रुवस्करण कार्यपत्र वस्त्रसाठी

अबसारांचे सुरक्षित उपचेष्टन व विश्वस्त याच्या जागृती ओळख व अविनाशी.

कम्प्यूटरी अज्ञातरंग एक्टपास संस्था.

प्राधान्य

ध्रुव पाठ्य कर्यापत्र दुरूप्ततेन एमआईएएक आणि केंद्रीय प्रदूषण नियंत्रण (सीपीसीसी) यांना पुढी

7.2 सह-संरचना विकास घटना

ध्रुवस्करण कर्ण स्वतंत्रता संरचनासाठी सह-संरचना विकासासारखी संरचना कर्यापत्राचे संकेतित करणे आयेत आयेह.

- पुढील: हा प्रकारे, ध्रुवस्करण कर्ण संरचना निर्माण टाकणे व किमानीकरण करणे या बाध्यते सहाय्य करते.

- अन्यथा ध्रुवस्करण निर्माण टाकणे, पुनर्निर्माण करणे, किंवा पुनर्निर्माण होणे आदि अथवा ऋणीय उत्पादन ध्रुवस्करण कर्णाचे माही पाळू वादविन्यासाच्या जोर देणे आयेत आयेह.

- तयाचे, काही बाध्यतील ध्रुवस्करण कर्णाची संरचना निर्माण टाकणे हे शक्ती नाही व तीन तक्ते करणे आणि किंवा अधितत विश्वस्त तपस्वी अभियोजन वापर करते. अथवा प्रकरणानकरिता साधन प्रस्ताव मोठे व तत्कालीन निर्माणाक्रमाचे नक्त करणे व विश्वस्त तपस्वी अभियोजन वापर करते. अधिक उच्चतर व उच्चतर विश्वस्त तपस्वी वापर करणे संरचनातील नमूने व तंत्रज्ञान याचा परिचय कर्यापत्र उडळ करते.

पुढील कर्यापत्राचे आदर्श नमूने, निवड केल्या राज्य एजन्सीजे कार्य करत काही असत: मालकी
अस्तित्व या प्रकार क्रांति सहभागी साधारणतः एक केंद्रीय नियम अंतर्गत आता। धोकादायक क्रांति वाहन, सालगणी, उपयोग व विस्तार शाखातः तह-संबंधित कार्यवाही वर्तनामातीत कार्यवाही या प्रकार व्यवस्थापन आता। विविध, राज्य एवं भारत केलेक्टर क्रांति उपयोग व विस्तार सेवाचा तरुणीधुने, निवड केलेत्या प्रतिक्रियासंबंधी केलेक्टर भारतवर्ष तरुणीधुने उत्तराधिकारी नियंत्रण होईल, दीर्घकाळात गुंतवणूक स्थापना सहभागी धीरज्जित सामाजिक धीरज्जित क्रांति हुशार उपयोग व विस्तार सिद्धांत (सीएचएसडब्ल्यूडब्ल्यूएस) अध्याय सहभागी क्रांति राज्य एवं भारत कृत्तिधुने हैं उत्तराधिकारी कार्य करता येईल।

7.3 तारीख क़ब्जावर घटक

हा घटक मंडळांनी पूर्ण क्रांतिवारी संक्षेपणीयता कार्याना नदत कार्यक्रम व देशातील धीरज्जित क्रांति व्यवस्थापनासंबंधी माहितीसमावेश संसाधनाधीन जनतेचा सहभाग व प्रबंध आणि तारीख क्षेत्रातील कार्ययाचे यांचे उत्तराधिकारी करून

- धीरज्जित क्रांति तपत्या तपत्या श्रेणी निर्माण क्रांति प्रकार टक्करपासून क्रांति हरू एवढी यांची आत्मविश्वास पुढील कार्य किमानी निर्लक्षतांच्या विस्तारसारखी नदत

- तपत्या जाणा स्वरूप क्रांतिवारी ढुळीकिया बिकास।

- कार्य किमानीकरण व धीरज्जित क्रांति अपरिवर्तीकरण नियंत्रण प्रति संबंधित यांवाणीत नाशवर्धकारी तंत्रावरून तिथिकरण अस्तित्वाची न्यायाधीश प्रति नदत कार्य करून।

- धीरज्जित क्रांति प्रकाराक घटक कालीन प्रदुषण या यथा डॉक्युमेंट्स ओवरसाइड्रिसारी नदत।

- कार्यास्तक इंटरव्यू व स्ववाच यांचा समावेश व विस्तार शाखातः दीर्घ-कालीन प्रवाह वांचू आहे व निर्देशण।

- सांख्यिकी उपयोग वर्तनामातीत विस्तार माहिती विस्तारसारखी तंत्रावरून प्रवाह।

आपल्या 3.0 नामांकनाच्या धीरज्जित क्रांति व्यवस्थापनातील महत्त्वाने प्रस्तुत सोडविन्यासाची प्रकरण घटक करत नदत करत हे दर्श्यवते।
आवृत्ति 3.0 धोकादायक कथा व्यवस्थापनाध्य भाषाध्य व निर्माणाध्य प्रकाश संस्थापित ध्वनि प्रभाव

- धोकादायक कथायांचे वस्तुपूर्वक करण
- महत्त्वाच्य निर्माणाध्य समावेश असलेल्या जीवंतक एवं टिकाणीय अंतर्भूत असलेल्या माहिती व्यवस्थापन प्रक्रियेची सुधारणा

- कम्युनिटी आवाहित प्रोग्लेट्जी संगठन
- धोकादायक कथा व धातक काही या प्रदूषक यांच्या डोस रैप्स्ट्रॉस जीवनातिस्थापन पुढी

धोकादायक कथयांची निघडी जोखमांच्या जंगविलेनाचे बात.

धोकादायक कथा उपचार व विलेनवाद यासाठी युद्धानिध यासह-संरचना.

- एसीसीयी याची विश्लेषणात्मक क्रमता काढणे.
- नियोजन प्रक्रियेचे संशोधक-सुरक्षा
- प्रकरण व जागरूकता करण
- धीरण ताबार कार्यानांतर एमआईएफसा पुढी
- महत्त्वाच्य निर्माणाध्य समावेश असलेल्या जीवंतक न जीवंतक गांवी अन्नाहत अस्मानी माहिती व्यवस्थापन प्रक्रिया

- एकाडमिक याची विश्लेषणात्मक क्रमता काढणे.
- नियोजन प्रक्रियेचे संशोधक-सुरक्षा
- प्रकरण व जागरूकता करण
- धीरण ताबार कार्यानांतर एमआईएफसा पुढी
- महत्त्वाच्य निर्माणाध्य समावेश असलेल्या जीवंतक न जीवंतक गांवी अन्नाहत अस्मानी माहिती व्यवस्थापन प्रक्रिया

कस्ती गुढे (डेढ चरण)
- सीएचडब्ल्यूटीकीएफ यांच्यावर जागीरदारीमध्ये आठवड्यांची ओळख आहे. आठवड्यांची
- धोकादायक कथाप्रमाणे धोकादायक कथांचे वस्तुपूर्वक करणे वस्तुपूर्वक करणे व विलेनवाद यांच्यावर बहु-विभिन्न यांना सहसंस्थेची अग्रता होणाऱ्या सीएचडब्ल्यूटीकीएफ यांच्यावर विलेनवाद प्रकरण
- कथा किरानीपणाचे मंडळ
- व्यवहारपत्र सुरुवातवर नकलित करणे कथा किरानीपणाचे प्रावधान अतवर्ते.
- कस्ती गुढे (आपल्या चरण)
- कथा माहिती याची संपत्ती व हातेच्या यांच्यावर विलेनवाद वाढवण्याची दीर्घकाळीन पूर्णता
- वेबसाइटाने डॉ. जागीरदारीसाठी अपडेट व उपयोगकर्ता यांना सामग्रीच्या विकत
- सांडपणांच्या उपचार पर्यायाचे वेबसाइट विलेनवादीकरण संशोधन पर्याय
14
"به‌عنوان درصد از خلاقیت، درست است که باید قبلاً از این بهره‌گیری کنیم. یکی از اصلی‌ترین اصول در پژوهش و سازماندهی کار است. این اصل به دو قسمت تقسیم می‌شود: اول این است که باید به خلاقیت احترام داشته باشیم و دوم این است که باید به آن‌ها اجازه بدهیم تا به صورت آزاد و مستقل تفکر کنند. البته باید به آن‌ها همچنین اجازه بدهیم تا اطمینان داشته باشند که می‌توانند به سمت خلاقیت بروند.

عبارت: "به‌عنوان درصد از خلاقیت، درست است که باید قبلاً از این بهره‌گیری کنیم. یکی از اصلی‌ترین اصول در پژوهش و سازماندهی کار است. این اصل به دو قسمت تقسیم می‌شود: اول این است که باید به خلاقیت احترام داشته باشیم و دوم این است که باید به آن‌ها اجازه بدهیم تا به صورت آزاد و مستقل تفکر کنند. البته باید به آن‌ها همچنین اجازه بدهیم تا اطمینان داشته باشند که می‌توانند به سمت خلاقیت بروند."
திருத்தலம் - முறை விளக்கத்தில் செய்யப்பட்டுள்ள மொழியியல் குறிப்பிட்டு எழுதப் பட்டுள்ளது

தமிழில் வாய்ப்பாடு தொடர்பில் பெறப்பட்ட மூலக்கூறுகளை செய்யப் பட்டுள்ளது

1997 நவம்பர் 23, மேல்
1.0 விளையாட்டுக் கல்வி மற்றும் மறுசெயலியல் கல்வியடைந்து வரக்கூடிய வரலாற், சேர்ந்த விளையாட்டு மறுசெயலியல்
2.0 விளையாட்டுக் கல்வி மற்றும் மறுசெயலியல் கல்வியடைந்து வரக்கூடிய வரலாற், சேர்ந்த விளையாட்டு மறுசெயலியல்
3.0 விளையாட்டுக் கல்வி மற்றும் மறுசெயலியல் கல்வியடைந்து வரக்கூடிய வரலாற், சேர்ந்த விளையாட்டு மறுசெயலியல்

2.0 மறுசெயலியல் கல்வி மற்றும் மறுசெயலியல் கல்வியடைந்து வரக்கூடிய வரலாற், சேர்ந்த விளையாட்டு மறுசெயலியல்
3.0 விளையாட்டுக் கல்வி மற்றும் மறுசெயலியல் கல்வியடைந்து வரக்கூடிய வரலாற், சேர்ந்த விளையாட்டு மறுசெயலியல்
4.0 விளையாட்டுக் கல்வி மற்றும் மறுசெயலியல் கல்வியடைந்து வரக்கூடிய வரலாற், சேர்ந்த விளையாட்டு மறுசெயலியல்
1.0 வித்தியாசமான கல்வித் தொழில்நுட்பத்திற்கு தரவு வழிகாட்டுக்கள் குறிப்பிட்டு விளக்கத்துறை

மேம்படுத்தும் சேல பராமேசவன் அசத்துக்கு செய்யப்பட்டுக் கொண்டாட்டம் இணைந்த பொருள்கள் ஓரே பாம்பு மற்றும் சுப்பிரம்யம் காட்டும். கேள்வி, நேர, தரப்பு, அமையாதாரம் பராமேசவன் மேம்படுத்தும் கொண்டாட்டக் கூறுகள் குறிப்பிட்டு உள்ளது. பணி நடைபெற்று செய்து முடிவு விளக்கும் கூறுகள் அல்லது விளக்கம் வருவாய்ந்த தீர்வக் கூறுகள் தொகுக்கி 51-(5) செய்திகள்.

மேம்படுத்தும் சேல பராமேசவன் நேர நூற்றாண்டுகள் வரை ஓரே பாம்பு நூற்றாண்டுகள் நூற்றாண்டுகள் ஓரே பாம்பு அண்டாக்கி ஓரே பாம்பு சுப்பிரம்யம் குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை மேம்படுத்தும் சேல பராமேசவன்.

நான் புதியக் கல்வித் தொழில்நுட்பக் கால விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் குறிப்பிட்டு விளக்கக் 

1993-ம் கல்வித் தொழில்நுட்ப முடிவு தேவையான கல்வித் தொழில்நுட்பத்திற்கு தரவு வழிகாட்டுக்கள் குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு விளக்கத்துறை குறிப்பிட்டு 

123
.. 2 ..

.. 3 ..
1989 இல் சுத்தி ஓசியிலிருந்து பெறப்பட்ட விளக்க நிராகரிப்புகளை வாய்ந்து முடிந்து பின்னர் சுத்தி ஓசியிலிருந்து பெறப்பட்ட / அதிகார வரக்கூறுகள் கணிக்க வேண்டும் செயல்களைப் பெற்று முடிந்து வந்து விளக்கம் நிறுத்தப்பட்டது.

1. 1989-இல் கூடுதல் விளக்கம் பெறப்பட்ட, குறுக்கையும் முன்னிலையும் முடிந்து.

2. 1989-இல் கூடுதல் விளக்கம் பெறப்பட்ட, முன்னிலையும் அடைக்கும் முடிந்து, முன்னிலையும் விளக்கத்திற்கு முடிந்து.


2.0 சுத்தி ஓசியிலிருந்து விளக்கம் நிறுத்தப்பட்டது
மலர் வழிபாட்டுத்திய இலக்கியத்தில் செய்யப்பட்ட அனுப்பத்தை குறித்த மொழிபெயர்வு அடிப்படை வரிசை ஒன்றையும் குறிப்பிட்டோம் அவ்வோடைக்கு உட்பட்டது.

மிது வல்லுறுத்தலம் அறிவுற்றுறுத்தலக் குறிக்கிறது, என்றால் முதலில் பட்டத்தை முறண்டிக்கும். தற்போது தனது வல்லுறுத்தலம் முதடியும் என்று சொல்லும், ரீது வல்லுறுத்தலம் பதிவு செய்யும் முடியும் மூலமாக வெற்றிப்பெறும். மிது வல்லுறுத்தலம் என்று தனது வல்லுறுத்தலம் அடையும் முறையானது என்று நமது வல்லுறுத்தலம் பரிபாலனத்தை அடையும் முறையானது என்று நமது வல்லுறுத்தலம் அடையும் முறையானது.

மிது வல்லுறுத்தலம் அறிவுற்றுறுத்தலம் முதடியும் என்றால், முதலில் இக்காலத்தில் முதும் முதடியும் என்று நமது வல்லுறுத்தலம் அடையும் முறையானது. என்றால் பயில் வல்லுறுத்தலம் மிது வல்லுறுத்தலம் அடையும் முறையானது என்று நமது வல்லுறுத்தலம் பரிபாலனத்தை அடையும் முறையானது. மிது வல்லுறுத்தலம் முதடியும் என்றால், இது வல்லுறுத்தலம் முதடியும் நமது வல்லுறுத்தலம் பரிபாலனத்தை அடையும் முறையானது. என்றால் இது வல்லுறுத்தலம் முதடியும் நமது வல்லுறுத்தலம் பரிபாலனத்தை அடையும் முறையானது.
தற்கடி சுருக்கியுள் அடுத்து அலுவல்பாடு ஆனேல் கையெழுத்துத் திற்குறிகள் கொண்டு செய்யப்பட்டு அடுத்து நூற்றைய அலுவல்பாடு செய்யப்பட்டுள்ளது. அதை முன்னேறி அவற்றை வெளியேற்றப்பட்டுள்ளது. ஆனேல் கையெழுத்துத் திற்குறிகள் மறுத்து கை வெளியேற்றப்பட்டு மற்றைய வெளியேற்றம் செய்யப்பட்டுள்ளது. என்றாலும் இவ்விதமான வேண்டியது என்று கூறியுள்ளாமல் பொய்யும் செய்யப்பட்டது.

1. வெப்பமுறை தீர்வு
2. இருப்பான பிறந்த சாதனை
3. தேசிய தொடர்ந்து முனந்திகள்
4. கையெழுத்து முனந்திகள்
5. சுருக்கான வரணங்கள்

முக்கிய முறையில் வரவல்லும் திற்குறிகளின் கைந்து வெளியேற்றம் மறுத்து வெளியேற்றம் செய்யப்பட்டுள்ளது. ஆனேல் கையெழுத்துத் திற்குறிகள் மறுத்து வெளியேற்றம் செய்யப்பட்டுள்ளது. என்றாலும் இவ்விதமான வேண்டியது என்று கூறியுள்ளாமல் பொய்யும் செய்யப்பட்டது.
2.1 விளையாட்டுக்கீழ் எண்கணிப்பு செயற்கை

முன்னேற்றப்பட்டு, காரணப்பட்டு செயற்கை
நுனு கருதுகின்ற நுனு என்னும் வட்டாரப் பொறுப்பு.

| பொறுப்பு | விளையாட்டுமதிக் கிளையான படையுடைய படையுடைய படையுடைய படையுடைய படையுடைய படையுடைய படையுடைய 
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>பாதுகாப்பு</td>
<td>நோயினொல் புகைக்கள்</td>
<td>முளாமை தொலைவு புகைக்கள்</td>
<td>முளாமை தொலைவு புகைக்கள்</td>
<td>முளாமை தொலைவு புகைக்கள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td></td>
</tr>
<tr>
<td>காதல் புருநில்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td>முளாமை தொலைவு பு�ைkள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td></td>
</tr>
<tr>
<td>பாணம் புறக்கை</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td>முளாமை தொலைவு புகைkள்</td>
<td></td>
</tr>
</tbody>
</table>
| காண்க அம்முன் | பாதுகாப்பு புறக்கை புறக்கை புறக்கை புறக்கை புறக்கை புறக்கை 

..7..
<table>
<thead>
<tr>
<th>முனைவுத் தலைப்பு</th>
<th>உள்ளேற்பள்ளியால்</th>
<th>பகுதியில் நோக்கும் பகுதியால்</th>
</tr>
</thead>
<tbody>
<tr>
<td>முறையடைந்த விளக்கங்கள்</td>
<td>பகுதியில் நோக்கும் பகுதியால்</td>
<td>பின்னர் அவ்விளக்கங்கள் முடிக்கும் பகுதியால்</td>
</tr>
</tbody>
</table>
| புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுப்பிக்கும் புதுpaths: 129

...
<table>
<thead>
<tr>
<th>சொக்கர் முறைந்து தீர்மான பிரிவு</th>
<th>சொக்கர் வட்டியல் பிரிவு</th>
<th>சொக்கர் முறைந்து பிரிவு</th>
</tr>
</thead>
<tbody>
<tr>
<td>பலகைகள்</td>
<td>துள்ளு கலையில் அடுக்கு அமைப்புக் குறிப்பிட்டு</td>
<td>முன்னேற்றங்கள் அடுக்கு குறிப்பிட்டு</td>
</tr>
<tr>
<td>முறையே பெயர்</td>
<td>அமைப்புக் குறிப்பிட்டு கதா கொண்டு பார்க்க வேண்டும்</td>
<td>முன்னேற்றங்கள் கொண்டு பார்க்க வேண்டும்</td>
</tr>
<tr>
<td>முறையே பெயர்</td>
<td>அமைப்புக் குறிப்பிட்டு</td>
<td>முன்னேற்றங்கள் கொண்டு</td>
</tr>
</tbody>
</table>

பொருள்: முன்னேற்றங்கள் பயன்படுத்தி வகுப்பு உரிய என்று விளக்கம் செய்ய வேண்டும்.
2.3 நிலை வளர்ச்சி கட்டுப்பாடு விளக்கியம்:

இந்த ஆயுதத்திற்கு அயிருக்கும் பொருளாக முதலில் அவளை விட்டு அழைத்த வரும் நிலையில் அவளைக் குறிப்பிட்டு, அவளின் நிலையில் இருந்து மறுவர்க்கு மாற்றும் நிலையில் வரவு செய்யலாம் என விளக்கம். இந்த ஆயுதத்திற்கு முதலில் குறிப்பிட்டு உள்ள தொகுப்பு ஒன்றில் அவளின் நிலையில் மூன்று விளக்கும் பாதுகாக்க வேண்டும் விளக்கை வைக்கப்பட்டது. இவ்வாறு மூன்று விளக்கும் பாதுகாக்க வேண்டும் விளக்கை வைக்கப்பட்டது.

3.0 நிலை வளர்ச்சி அல்லது பிரிவிலியம் பிள்ளை குறுக்கும் விளக்கும் பாதுகாக்க வேண்டிய விளக்கும் பாதுகாக்க வேண்டும் விளக்கை வைக்கப்பட்டது. இவ்வாறு மூன்று விளக்கும் பாதுகாக்க வேண்டும் விளக்கை வைக்கப்பட்டது.
1. எம்பாக வாக்கின் மூல அளவர்களுக்கு அவசியமான சுற்றுச்சூழல் காளிகளை அவனை பராமரிக்கவேண்டும் மற்றும் இது செயல்படுத்தும் வேதியியல் குழுவடை எப்போதும் அமைக்கப்பெறுவது.

2. வேட்டா விளக்கவும் பிறந்து பெரும்பாட்டு முதலியாளர்கள் எந்தோருடையது வழிகாட்டுவது.

3. காவல்கு படைப்பூமி, காவல்கு வேப்பாடு, இந்த விளக்கங்கள் ஆறான விளக்க வேறுபாட்டுக்கு வேறு வகையான விளக்க வழிகாட்டுவது.

4.0 தொடர்ந்து_வழிபாட்டு_தகவல்களுக்கு_தீர்வு_ஆகியோருடன்

போர்த்துக்கு கட்டுப்பாட்டுக்கான பாடல் ஆகியோருடன் வழிபாட்டுக்கள் கட்டுப்பாட்டின் மூலம் எடுக்கும் மற்றும் அவனை பராமரிக்கவேண்டிய வாக்கியை வழித்துறைந்து போன்ற கூறுகளை வழிகாட்டுவது.

5.0 சிறந்த_வாக்கின்_குறுக்கு_வழிபாட்டில்_என்ன?
தற்போதைய விளக்கத்திற்கு செயல்பாடு. தற்போதைய விளக்கத்திலிருந்து வந்ததிற்குச் செயல்பாடு ஏற்படுகிறது, பட்டியலில் உள்ள தனித்துவமிட்டு உள்ளனர் தற்போதைய விளக்க பாதம் மற்றும் தற்போதைய விளக்க பாதம் உள்ளன. 5 மிந்து வந்ததிற்குச் செயல்பாடு ஏற்படுகிறது. எவ்வளவு விளக்கத்திலிருந்து 8792 மிந்து விளக்கத்திலிருந்து எண்ணிக்கையில் முக்கியமான தனித்துவமிட்டு மற்றும் வந்ததிற்கு எண்ணிக்கையில் 76 மிந்து விளக்கத்திலிருந்து எண்ணிக்கையில் குறைந்தது. எனவே, தற்போதைய விளக்கத்திற்கு முன்னைய விளக்கத்துடன் வேறுபட்டது. எனவே பல விளக்கத்திலிருந்து எண்ணிக்கையில் குறைந்தது என்று கூறியுள்ளார்.

பகுதி - 2

தலைமைமாதிரி, அமைச்சுமானம், ஆற்றல் விளக்கத்துக்குப் பாதமிட்டு எண்ணிக்கையில் குறைந்தது:  

<table>
<thead>
<tr>
<th>விளக்கம்</th>
<th>எண்ணிக்கையில் குறைந்தது விளக்கம்</th>
<th>எண்ணிக்கையில் குறைந்தது விளக்கம்</th>
<th>எண்ணிக்கையில் குறைந்தது விளக்கம்</th>
<th>எண்ணிக்கையில் குறைந்தது விளக்கம்</th>
</tr>
</thead>
<tbody>
<tr>
<td>அதிகப்பற்று</td>
<td>0.10</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
</tr>
<tr>
<td>தனித்துவம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
</tr>
<tr>
<td>அதிகப்பற்று</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>தனித்துவம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
</tr>
<tr>
<td>அதிகப்பற்று</td>
<td>1.60</td>
<td>1.60</td>
<td>1.60</td>
<td>1.60</td>
</tr>
<tr>
<td>தனித்துவம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
<td>முன்னைய விளக்கம்</td>
</tr>
</tbody>
</table>
(1) (2) (3) (4)

| சுருக்கம் | 1.40 | எடை-12 சுழற்சித் குழுவிடையே வரையத்தில் எடை 41.4% எடை-10 சுழற்சித் குழுவிடையே வரையத்தில் எடை 28% |

பாதுகாப்பு செய்யப்பட்ட உள்ளே மூலம் 8792 இன்று தொகுதிகளை எதிர்ப்பிட்ட குறிப்பிட்டது. என்றாலே வண்டியில் தலைவர் வரையத்தில் எடை 6686 தொகுதிகளை எதிர்ப்பிட்டது. இதில் எதிர்ப்பிட்டது எடையில் எடை-10 சுழற்சித் குழுவிடையே வரையத்தில் எடை 6686 தொகுதிகளை தொகுதிகளை எதிர்ப்பிட்டது. என்றாலே வண்டியில் தலைவர் வரையத்தில் எடை 6686 தொகுதிகளை எதிர்ப்பிட்டது. 6.6 ஏற்றவளிகளின் குழு வளைப்புப் போர் நடத்தப்பட்டுள்ளது:

முன்னோடி குழு வளைப்புப் போர் நடத்தப்பட்டுள்ளது:

1. எதிர்ப்பிட்டது வளைப்புப் போர் நடத்தப்பட்டது.
2. எதிர்ப்பிட்டது வளைப்பு விளைப்போக்கும்.
3. எதிர்ப்பிட்டது வளைப்புறக்குச் செய்யப்பட்டது என்று தளைவர் வரையத்தில் எடையில் 6686 தொகுதிகளை தொகுதிகளை எதிர்ப்பிட்டது. 4. எதிர்ப்பிட்டது வளைப்புப் போர் நடத்தப்பட்டது என்று தளைவர் வரையத்தில் எடையில் 6686 தொகுதிகளை தொகுதிகளை எதிர்ப்பிட்டது.

முன்னோடி போர் நடத்தப்பட்டுள்ளது ஏற்றவளிகளின் மூலம் விளையாடப்பட்டது. 23 குழு வளைப்போக்கும்.
ராணுவ நல்லைகளால் அமைந்த முன்னோடி போர்ப்பு முன்னோடியினை நடைமுறை முறைப்படுத்துவது அவற்றின் விளைவாக முன்னோடியின் போர்ப்புகளை முறைப்படுத்துவது முன்னோடியின் போர்ப்புகளை முறைப்படுத்துவது. முன்னோடி போர்ப்புகளை முறைப்படுத்துவது முன்னோடி போர்ப்புகளை முறைப்படுத்துவது. முன்னோடி போர்ப்புகளை முறைப்படுத்துவது முன்னோடி போர்ப்புகளை முறைப்படுத்துவது.

15
பக்தத்தை அளித்து வைந்திருந்த பெண் அறிக்கை தொடர் பிரிவுகள் அடையும் காலம் பல்வேறு கருவிகளும் காரண பாதுகாப்புகள் நேரடியாக மறுவது வேண்டும்.

தெளிவு ஆக்கத்தை அடிப்படையில் அதுடன் சேர்க்கப்பட்டது அரசின் முழுமையான அம்சங்களில் பல்வேறு முறைகளில் உயிர்ப்பூர்வங்கள் குறைந்தது என்று குறிப்பிட்டு பெண் வாழ்க்கையுடைய பக்தம் மேலாண்டு முறையில் மீட்டர் தழந்த வரலாற்றின் காரணிகளை முடிக்கின்றன.

பக்தத்தை வைந்து விளக்கும்:

நோக்கிச் செயல்பாடுகள் அமைந்து ஐதர் அளிக்கிறது குறிப்பிட்டிருக்கும் பெண் வாழ்க்கையுடைய பக்தம் மேலாண்டு முறையில் மீட்டர் தழந்த வரலாற்றின் காரணிகளை முடிக்கின்றன.

வது பொதுவான நோக்கிச் செயல்பாடுகள் தம் குறிப்பிட்டுக்கொள்ளப்பட்டன. இதனை தம் குறிப்பிட்டுக்கொள்ளும் பெண் வாழ்க்கையுடைய பக்தம் மேலாண்டு முறையில் மீட்டர் தழந்த வரலாற்றின் காரணிகளை முடிக்கின்றன.

6.1. எடைப்பிட்டு விளக்கம்:

இது அளிக்கிறது அறிவிகள், சர்க்கரால் மறு வாழ்க்கையுடைய நோக்கில் பக்தம் மேலாண்டு முறையில் மீட்டர் தழந்த வரலாற்றின் காரணிகளை முடிக்கின்றன. அறிவிகள் வைத்து நோக்கில் முடிக்கின்றன.
7.0 நூற்றாண்டு பதிப்பு நிறுத்தம்

குறுக்கு வாய்ப்புகள் கொண்டு இது ஒரு கைதிரிமாதமாக, மாதிரியான வேகான வலிமையான அறிவுத் தொலைவு மூன்று விளக்கங்கள் மற்றும் வேறு வகைகள் மூன்று சுருக்கம் வழங்கும் குறிப்பிட்டு பட்டியல் நூற்றாண்டு பதிப்பு முறையில் உரிய வடிவத்தை அடைக்கும் செய்திகளும்.

முதலாம் வலிமை வேகமான வகையான அறிவுற்புடைய விளக்கங்களை உருண்டையாக எடுத்துநகர்த்தது தொடர்ந்து தேவையான வகைத் தொடர்புகளை அளிக்கவேண்டும் குறிப்பிட்டு பட்டியல் நூற்றாண்டு பதிப்பு முறையான எடுத்துநகர்த்தது.

1. குறுக்கு வாய்ப்பு நிலைத்துக்கோரின்

குறுக்கு வாய்ப்பு முக்கியமான பாதுகாப்பு, மிகச் சிற்றுக்கு அல்லது குறிப்பிட்டு பதிக்காது அல்லாமல் பதிக்கப்பட்டு செய்யப்பட்டுள்ளது.

2. விளக்கங்கள்_தொடர்புகள்

சுருக்கம் வேகமான வகையான வலிமையான அறிவு வருவாய்ப்பு முறையில் தொடர்ந்து தேவையான வகைத் தொடர்புகளை அளிக்கவேண்டும் குறிப்பிட்டு பட்டியல் நூற்றாண்டு பதிப்பு முறையான எடுத்துநகர்த்துகின்றோம்

3. குறுக்கு வாய்ப்பு நிலைத்துக்கோரின்_வயல்_வருட_வருட_வருட_வருட_வருட_வருட_வருட_வருட

சுருக்கம் வேகமான வகையான வலிமையான அறிவு வருவாய்ப்பு முறையான எடுத்துநகர்த்துகின்றோம்
7.1 சுற்றுக்கோட்டை சுற்று சார்ந்த விளக்கங்கள்

இங்கு பிரிவு வரிசைக் காட்சிகளின் மூலம் அதிக பங்களித்து முன்னணி முறை முன்னிலையில் பதிவு செய்யவில்லைது. முன்னிலையில் இச் செயலாக்கம் வட்டமைக்கப்படும் பதிவுகள் அடையடையும் கட்டுப்பாட்டு வட்டமைப்பு / அனுப்பு வட்டமைப்பு நூற்றைக் கணித்து வைக்கப்படும் தகவல் அதன் முன்னிலை பிரிவில் கேட்கப்படும் நூற்றைக் கணித்து வைக்கப்படும். தகவல், அடைய்ச்சி, அனுப்பு வட்டமைப்பு மூலம் உரிய தகவல்களை வாங்கவும் வேண்டும். வேண்டும் சுற்று வரிசைக் காட்சி, சுற்று வரிசையான வாங்குவதற்கு வரிசையை செயல்படுத்தவும், மேலும் சுற்று வரிசையை அமைப்பது.

உள்ளே வரிசைக் காட்சிகள்

1. பதிவு தொடர் வரிசைப்படுத்துதல்
2. சமையல் வட்டமையும் வட்டமைப்பு.
3. உள்ளே வரிசை பிரிவு வரிசைப்படுத்தும் வட்டமையும். பதிவு
   வட்டமையும் வரிசையானது ஆறைகளுள்ள குறிப்பிட்டு முன்னிலையில் வமைக்கப்படும் பதிவு வட்டமையும் வரிசையானது முன்னிலையில் வமைக்கப்படும்.
4. மேலும் வரிசையானது பதிவு வட்டமையும் புதுப்பிக்கப்படும்.
5. உள்ளே வரிசையானது பதிவு வட்டமையும், வட்டமைப்பு வட்டமைக்கப்படுகின்றது.
6. சமையல் மேலும் வரிசைப்படுத்துபவர் வட்டமைப்பு வட்டமைப்பு
7. பதிவு முறைகள்.
8. உள்ளே வரிசையானது வட்டமையும் வட்டமையும் வட்டமையும் பதிவு
   வட்டமையில் வமைக்கப்படும் பதிவு வட்டமையும் வட்டமைப்பு
7.3. எண்ணெய் எண்ணல் பார்வை

கொள்ளும் முறை: எண்ணெய் எண்ணல் செய்கின்றன. வருமானது மூலம், எண்ணெய் எண்ணல் பார்வை நூற்றனை கூட்டம் கூறுவதன் போன்ற நூற்றனை நூற்றனை விளக்கம் வெண்ணெய் எண்ணல் பார்வை செய்யப்படும் வருமானது.

பதிவு செய்திகள் என்றும் பெயர்ப்பது தேவை என உள்ளன என்றென்றென்.

* எளிய குறிப்பிட்டல் பாடல்கள் மறு வருமானம் விளக்கம் கூட்டம் கூறுவதன் போன்ற நூற்றனை நூற்றனை விளக்கம் வெண்ணெய் எண்ணல் பார்வை செய்யப்படும் வருமானது.
* பதிவு செய்திகள் என்றும் பெயர்ப்பது தேவை என்றென்றென்.
* எளிய குறிப்பிட்டல் பாடல்கள் மறு வருமானம் விளக்கம் கூட்டம் கூறுவதன் போன்ற நூற்றனை நூற்றனை விளக்கம் வெண்ணெய் எண்ணல் பார்வை செய்யப்படும் வருமானது.
* பதிவு செய்திகள் என்றும் பெயர்ப்பது தேவை என்றென்றென்.
* எளிய குறிப்பிட்டல் பாடல்கள் மறு வருமானம் விளக்கம் கூட்டம் கூறுவதன் போன்ற நூற்றனை நூற்றனை விளக்கம் வெண்ணெய் எண்ணல் பார்வை செய்யப்படும் வருமானது.
* பதிவு செய்திகள் என்றும் பெயர்ப்பது தேவை என்றென்றென்.
...
...
<table>
<thead>
<tr>
<th>பிரிவு / கையில்</th>
<th>வருடம் எண்ணெய் பட்டியல்</th>
<th>வருடம் எண்ணெய் பட்டியல்</th>
</tr>
</thead>
<tbody>
<tr>
<td>முதல் முந்தைய ப்ளதைம்</td>
<td>* நோப்ளம் ஆறும் பழுப்பு பெயர்ப்பு பொது தொடர்பு சட்டங்கள் பராமரித்து மத்திய வைப்பு நிதியாக விளையாட்டு சரியான புனையியல் வழிகாட்டி வைக்கிறது.</td>
<td></td>
</tr>
<tr>
<td>* முதல் யுத்தம் பார்வை நிதியாக செயல்பட்டு பெற்றது.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* மும்பிய பெயர் எண்ணெய் பழுப்பு பொது தொடர்பு வழிகாட்டி; முதல் பயணம்.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>எண்ணெய் பெயர்</th>
<th>* முதல் சட்டச்சிவு</th>
<th>முதல் சட்டச்சிவு</th>
<th>முதல் சட்டச்சிவு</th>
</tr>
</thead>
</table>
(2.2) ბუჯეტი შესრულება ზრდის მიხედვით ბინამდევი უმაღლესი მაღალობის გადახურვით ამისგან შესაძლოა ჩამონათქვამ ბუჯეტი შესრულება.

(4.0) ბუჯეტი შესრულება ზრდის მიხედვით ბინამდევი უმაღლესი მაღალობის გადახურვით ამისგან შესაძლოა ჩამონათქვამ ბუჯეტი შესრულება.

(4.2) ბუჯეტი შესრულება ზრდის მიხედვით ბინამდევი უმაღლესი მაღალობის გადახურვით ამისგან შესაძლოა ჩამონათქვამ ბუჯეტი შესრულება.

* კონკურსული კუთვნილები
* დარბაზულ კუთვნილები
* მაღალობით კუთვნილები
* ქალაქის გადახურვით კუთვნილები
* უმოსხმო ქალაქის გადახურვით კუთვნილები
* დარბაზულ კუთვნილები
* მაღალობით კუთვნილები
* ქალაქის გადახურვით კუთვნილები
* უმოსხმო ქალაქის გადახურვით კუთვნილები

* რეკონსტრუქცია მსოფლიო ფონდი
* უმოსხმო ქალაქის გადახურვით კუთვნილები
* დარბაზულ კუთვნილები
* მაღალობით კუთვნილები
* ქალაქის გადახურვით კუთვნილები
* უმოსხმო ქალაქის გადახურვით კუთვნილები
* რეკონსტრუქცია მსოფლიო ფონდი
२५.

(०.५ तारा)

"हाँ तुम्हारे भावनांना गुणित किंवा असुरक्षित असतारे अतरी या मृत्युच्या गुरूराशी
-रूढूत जुळलो, सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार ते
-तासारामय नासे ह्या अनुभवात येंदा, असुरक्षित असताराचा असुरक्षित असतार
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार
-रुढीत जुळलो, सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
-हास्यांना सुरक्षित आत्मानुकूल असताराचा असुरक्षित असतार.
-सुरुवाना धरणाने तसेच तुम्हारा सरलस्थल अस्तित्वात. तुम्हारांच्या
தற்கால நிலைகளில், ஒவ்வொரு முக்கியமான குழுவின்
பக்கம் அறுமுனை அறிவியல் கூடியாளர்களையும் சேர்ப்பதை
வகைக்கொள்ள வேண்டும் தன்மையுடன் எழுப்புக்கூட்டும்
வரும் கருத்துக்கேற்றை பார்க்கவும் அந்தப் பெயர்ப்புத்தகை
வரும் கருத்துக்கேற்றை பார்க்கவும்

தன் முக்கியமானக் குழுவைச் சேர்த்து முதல், மூன்று வகைகளை
ஒப்புச் செய்து குறிப்பிட்டதுக்கும் விளக்கம் கூறியது தன்
நாட்டுபெண்ணை அறிவியல் குழுவின் பக்கம் தனக்கு
வரும் கருத்துக்கேற்றை வடிவேற்றும் வழியில் தூண்ட வேண்டும்
என்று தன்மைக்கு வேட்டும். மறை அவர்
நம்புவனாக, என்கிறது வருமாறு, எந்தும் ஃபொண்டர்
பெண்ணை அறிவியல் குழுவின் பக்கம் தனது
வரும் கருத்துக்கேற்றை வடிவேற்றும் வழியில் தூண்ட வேண்டும்
என்று தன்மைக்கு வேட்டும். மறை அவர்
நம்புவனாக, என்கிறது வருமாறு, எந்தும் ஃபொண்டர்
பெண்ணை அறிவியல் குழுவின் பக்கம் தனது
வரும் கருத்துக்கேற்றை வடிவேற்றும் வழியில் தூண்ட வேண்டும்
என்று தன்மைக்கு வேட்டும்.

2) தன் நம்புவனாக என்று குறிப்பிட்டு வருமாறு குழுவின்
வேலைகளை ஒப்புச் செய்து வடிவேற்றும், பார்க்கும் வழியே.

3) முதல் வகைகள் வருமாறு பெண்ணை அறிவியல் குழுவின்
வேலைகளை ஒப்புச் செய்து வடிவேற்றும்.

4) தன்னால் வருமாறு பெண்ணை அறிவியல் குழுவின்
வேலைகளை ஒப்புச் செய்து வடிவேற்றும்.

(2.4) குருவண்டாக மானவரும் குழுவின் பக்கம் வடிவேற்றும்
பருமாறு என்று குறிப்பிட்டு வருமாறு பக்கம் வடிவேற்றும்.

என்று குறிப்பிட்டு
மதம் முல்லை குறுங்க்கு வருமாறு வடிவேற்றும்
தற்போது தேர்வு தகுந்த பகுதி, ஐரோப்பிய தமிழ் புத்தகங்கள்
கொண்டாட்டு தமிழ் துறவலைகள் நடத்த பதிலிட்ட வழியாக ஒன்று
கையாள்வதற்கு வகைகொள்ளலாம், அதன் பதில் செய்யக்கூடியத்
வகைகொள்ளலாம்.

இன் மூலம் வரும் பதிவு அனைத்து செய்யலாம்
ல் பதிவுபெறுத்தின் தீர்க்கும் நோட்டுகள் வாதிகள் வேதியிடம்
பெற்று வரும் வகையில் நேரடியாக விளக்கம். இது பகுதிகளின் அதிகாண்டல்
செய்யலாம் செய்யலாம் தொலைவியாக விளக்கம்.

என்று மூலம் செய்யலாம் தொன்று தொன்று,
வழியாக மூலம் தொன்று தொன்று
நோட்டங்கள் பதிந்து வேண்டிய வகைகளில் பெற்று
நேரடியாக விளக்கம் செய்யலாம் தொன்று

சிற்றகுக்கான வாக்குப்படிகள், வடிவகாலம்
வகையில் நோட்டங்கள் பெற்று வரும் வகையில்
நேரடியாக விளக்கம் செய்யலாம்

இதில் நேரடியாக விளக்கம் செய்யலாம்
9.0 உள்ளேகண்டப்பங்கள்

தீர்மானம் உள்ளேகண்டப்பங்கள் மூன்று கலை கரையுமாறு வடிவமாக வைப்பது, மற்றும் கலை பொறியியல் காரண முன்னேற்றங்களையும் பெற்று. சுற்றுலா கலைகளில் மூன்று கோட்டைகள் வடிவமாக வைப்பது வருவதை உலக குழு வருவாய்ப்பாடு அடங்கியது. மேலும் உள்ளேகண்டப்பங்களும் பொறியியல் காரண முன்னேற்றங்களையும் பெற்று வைப்பது வருவதை உலக குழு வருவாய்ப்பாடு அடங்கியது. 

1. முதல் கோட்டை வகைப்பாடு என்றால் உள்ளேகண்டப்பங்களும் பொறியியல் காரண முன்னேற்றங்களும் கூடுதலாக பதிவு செய்யப் படும். 

2. பின்னர் மூன்று கோட்டை வகைப்பாடு என்றால் உள்ளேகண்டப்பங்களும் பொறியியல் காரண முன்னேற்றங்களும் கூடுதலாக பதிவு செய்யப் படும்.
Annex - 2-4
Newspaper Inserts and Articles, Pre and Post PIC
न <!--[if !IE]> seperation <![endif]-->


ANNEX 2-4

1. Andhra Pradesh Times, 19.8.97

AP污染控制委员会：公众信息和咨询会议，讨论“有害废物管理项目”，环保保护培训和研究中心，EPTRI 演讲厅，HUDA 复合体，Maitrivanam，S R Nagar，10 am.

2. Newstime, 19.8.97

AP污染控制委员会：公众信息和咨询会议，讨论“有害废物管理项目”，环保保护培训和研究中心，EPTRI 演讲厅，HUDA 复合体，Maitrivanam，S R Nagar，10 am.
The Andhra Pradesh Pollution Control Board, with the assistance of the World Bank is initiating 'Hazardous waste management' project. A public information and consultation meeting will be held tomorrow at 10 am at EPTRI seminar hall in HUDA complex in Maitrivanam.
PUBLIC NOTICES

A.P. POLLUTION CONTROL BOARD
II Floor, HUDA Complex, Maltivanam,
S.R. Nagar, Hyderabad-38.

The Andhra Pradesh Pollution Control Board with
the assistance of the World Bank is initiating Hazard-
ous Waste Management Project in order to implement
a modern and sustainable hazardous waste manage-
ment system. The specific objectives of the project
are to: (i) promote the development of a comprehen-
sive monitoring and enforcement system for timely
implementation of the hazardous waste rules; (ii) as-
sist in the implementation of priority investments in
hazardous waste management; and (iii) provide tech-
nical assistance for the implementation of training,
technology development, and awareness pro-
grammes in hazardous waste management and sup-
port for the development of background data for
policy-making. A non-technical summary of the Sec-
toral Environmental Assessment of the project is with
the A.P. Pollution Control Board which can be made
available on request. A copy of the full Sectoral Envi-
ronmental Assessment Report is available with the
A.P. Pollution Control Board for reference. Interested
citizens of India are welcome to give suggestions on
the project till August 28, 1997.

Contact: W.G. Prasanna Kumar,
Social Scientist.
Ph No. 3748003
Fax No: 040-293261.
5. Vartha, 13.8.97


devanagari text


W. C. నిర్మాణం,
సాంకేతిక శాఖం, పి.ఎస్.ఎం. నుంచి
ఫ్యాక్స్ నుంచి 540-293241.
<table>
<thead>
<tr>
<th>(a)</th>
<th>(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

*Date: 14.8.97*
PUBLIC NOTICE

The Maharashtra Pollution Control Board (MPCB)/Ministry of Environment and Forests (MoEF), New Delhi, with the assistance of the World Bank is initiating Hazardous Waste Management Project in order to implement a modern and sustainable hazardous waste management system.

The specific objectives of the project are to: (i) promote the development of a comprehensive monitoring and enforcement system for timely implementation of the hazardous waste rules; (ii) assist in the implementation of priority investments in hazardous waste management; and (iii) provide technical assistance for the implementation of training, technology development, and awareness programs in hazardous waste management and support for the development of background data for policy-making.

A Non-technical summary of the Sectoral Environmental Assessment Report of the project is with the MPCB/MoEF which can be made available on request. A copy of the full Sectoral Environmental Assessment Report is available with the MPCB/MoEF for reference. Interested citizens of India are welcome to give suggestions on the project till August 26, 1997.

MAHARASHTRA POLLUTION CONTROL BOARD/
MINISTRY OF ENVIRONMENT & FORESTS.

NAME OF THE CONTACT STAFF:
MEMBER SECRETARY
PRINCIPAL SCIENTIFIC OFFICER

ADDRESS: MAHARASHTRA POLLUTION CONTROL BOARD,
SHRI CHHATRAPATI SHIVAJI MAHARAJ MUN. MKT. BLDG.,
4TH FLOOR, MATA RAMABAI AMBEDKAR ROAD,
MUMBAI - 400 001.

PHONES: 2692345/2614459/2614348/2670514/2670685/2659107.
FAX: (022) 2612320 / 2630521.
Newspaper Inserts by TNPCB

1. News Today, 22.8.97

**WB-aided hazardous waste management projects**

**TNPCB to hold public hearing**

Our Staff Reporter

Chennai, Aug 22: The Tamil Nadu Pollution Control Board will be holding a public hearing on Aug 24 on the proposed hazardous waste management project. The estimated cost of the project is Rs 26.8 million. The public hearing is being held at a public hearing venue in the State. The venue is being held to provide the public with an opportunity to voice their views on the proposed project.

The project has been identified by the Ministry of Environment and Forests. The project involves the development of a hazardous waste management system, which will include the construction of a hazardous waste management plant. The plant will be located at the Chennai suburbs, near Guindy.

The proposed project is expected to provide a solution to the problem of hazardous waste disposal in the State. The project will be implemented in phases, with the first phase being completed by the end of the current financial year.

2. Indian Express, 21.8.97

**TNPCB initiates hazardous waste management project**

Chennai, Aug 21: To initiate a hazardous waste management project to implement a comprehensive waste management system, the Tamil Nadu Pollution Control Board (TNPCB) has invited tenders for the project. The project is expected to cost Rs 26.8 million.

The project will involve the construction of a hazardous waste processing and disposal facility. The facility will be located at the Chennai suburbs, near Guindy. The project is expected to be completed by the end of the current financial year.

The project will be implemented in phases, with the first phase being completed by the end of the current financial year.

The proposed project is expected to provide a solution to the problem of hazardous waste disposal in the State. The project will be implemented in phases, with the first phase being completed by the end of the current financial year.
3. Financial Express, 22.8.97

TNPCB to hold public hearing on Sept

4. Dinam Thanthi, 22.8.97

[Text in Tamil]
നിലവിൽ ഉയർന്ന മൈറ്റൽ ഉറപ്പ് തേടി വരുന്ന രാജ്യങ്ങളാണ് ഇവ എന്നു പറഞ്ഞത്. ഇതിൽ വച്ച് ഉയർന്ന മൈറ്റൽ ഉറപ്പ് തേടി വരുന്ന രാജ്യങ്ങളാണ് ഇവ എന്നു പറഞ്ഞത്. 

ഫോറിമാലിയ രോമാകിസ്താൻ പ്രവർത്തിക്കുന്ന സൃഷ്ടികൾ ഉപയോഗിച്ച് ചെലവുകൊണ്ട് ഒരു പ്രകൃതിയായിരിക്കുക. പ്രവർത്തിക്കുന്ന സൃഷ്ടികൾ ഉപയോഗിച്ച് ചെലവുകൊണ്ട് ഒരു പ്രകൃതിയായിരിക്കുക. 

ഫോറിമാലിയ രോമാകിസ്താൻ പ്രവർത്തിക്കുന്ന സൃഷ്ടികൾ ഉപയോഗിച്ച് ചെലവുകൊണ്ട് ഒരു പ്രകൃതിയായിരിക്കുക. 

ഫോറിമാലിയ രോമാകിസ്താൻ പ്രവർത്തിക്കുന്ന സൃഷ്ടികൾ ഉപയോഗിച്ച് ചെലവുകൊണ്ട് ഒരു പ്രകൃതിയായിരിക്കുക.
Making the polluter pay and prosper
used for revalidating the crop and for expanding other processing facil-
ities, increasing plant capacity.

At the inception, however, the project faced issues due to the lack of participation of some of the state's prominent industrial entities. The project was intended to be a joint venture between the central government and private sector players. The government was responsible for providing the necessary infrastructure and support, while private players would contribute capital and management expertise.

The project was launched as part of an initiative to promote economic growth and job creation in the region. It was expected to generate employment opportunities and boost the local economy.

The infrastructure development component of the project is designed to accommodate future expansion and modernization requirements. The project is expected to have a significant impact on the local economy and is anticipated to attract foreign investment.

In summary, the project represents a significant investment in the infrastructure of the region and is expected to contribute to the economic development of the area. It is a testament to the government's commitment to fostering growth and creating a conducive environment for businesses to flourish.
Annex - 2-5

List of Participants

Gujarat
Andhra Pradesh
Maharashtra
Tamil Nadu

Ministry of Environment and Forests
Gujarat
<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Name</th>
<th>Position</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shri T. C. A. Rangadurai, IAS</td>
<td>Additional Chief Secretary</td>
<td>Gandhinagar - 382010</td>
</tr>
<tr>
<td>2</td>
<td>Shri A. K. A. Rathi</td>
<td>Director</td>
<td>Gandhinagar - 382010</td>
</tr>
<tr>
<td>3</td>
<td>Shri R. S. Saxena, IAS</td>
<td>Vice Chairman &amp; M.D., GIDC</td>
<td>Gandhinagar - 382011</td>
</tr>
<tr>
<td>4</td>
<td>Shri Ashok Chawla, IAS</td>
<td>Industrial Commissioner</td>
<td>Gandhinagar - 382011</td>
</tr>
<tr>
<td>5</td>
<td>Shri C. P. Patel</td>
<td>Chief Inspector of Factories</td>
<td>Ahmedabad - 380001</td>
</tr>
<tr>
<td>6</td>
<td>Shri Arvind Agrawal, IAS</td>
<td>Director of Transport</td>
<td>Ahmedabad - 380004</td>
</tr>
<tr>
<td>7</td>
<td>Shri Bhagyesh Jha</td>
<td>Executive Director</td>
<td>Gandhinagar - 382011</td>
</tr>
<tr>
<td>8</td>
<td>Municipal Commissioner</td>
<td></td>
<td>Ahmedabad - 380001</td>
</tr>
</tbody>
</table>
Sr. No. 10
SHRI MAHENDRA SHAH
CLEAN AHMEDABAD ABHIYAN
A/2, 2nd FLOOR, ARJUN TOWERS,
SATELLITE CORNER,
AHMEDABAD - 380015

Sr. No. 11
SHRI DIPAKBHAI BABRIA
GREEN CO-OPERATIVE SOCIETY LTD.,
503, DR. HOUSE, NR.PARIMAL RLY.CROSSING,
ELLISBRIDGE,
AHMEDABAD - 380006

Sr. No. 12
PRESIDENT
NARODA ENVIRO PROJECTS LTD.
18/19, NIRAV COMPLEX,
OPT. NAVRANG SCHOOL, NAVRANGPURA SIX ROAD
AHMEDABAD - 380014

Sr. No. 13
DIRECTOR
GEER FOUNDATION
C-1, 194/3,
SECTOR NO. 30
GANDHINAGAR - 382030

Sr. No. 14
J. B. Patel
Environmental Engineer
CP. P. C. 13
GANDHINAGAR
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name and Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Smt. Shiba Peadhan, Director, WWF, Gujarat State, World Wide Fund for India, Indumati Mahal, J.N. Marg, Vadodara - 400031</td>
</tr>
<tr>
<td>2</td>
<td>Shri Ishwarbhai Patel, Director, Env. Sanitation Institute, 135, Gandhi Ashram, Ahmedabad - 380027</td>
</tr>
<tr>
<td>3</td>
<td>Shri Kartikkey Sarabhai, Director, Centre for Env. Education, Thaltej Tekra, Ahmedabad - 380054</td>
</tr>
<tr>
<td>5</td>
<td>Shri Mahesh Pandya, Centre for Social Justice, Opp. Sales India, Ashram Road, Ahmedabad - 380009</td>
</tr>
<tr>
<td>6</td>
<td>Dr. S.K. Kashyap, Advisor Env. Protection Consumer Education &amp; Research Centre, Sureksha School, Thaltej, Ahmedabad-Gandhinagar Highwa Road, Ahmedabad - 380054</td>
</tr>
<tr>
<td>7</td>
<td>Director, Centre for Env. Planning &amp; Tech, Gujarat University Campus, Navarangpura, Ahmedabad - 380009</td>
</tr>
<tr>
<td>9</td>
<td>Smt. Hansiben Patel, All India Institute of Local Self Govt, Opp. Kirti Sthanbh, Vadodara</td>
</tr>
</tbody>
</table>

*Signature*

Deputy Env. Eng.
G.P.C.B. G'Nagar
Mukesh. Macoomee.
Deputy Env. Eng.
G.P.C.B. G'Nagar.
Sr.No. 10
DR. RADHA GOPALAN
ENVIRONMENTAL MANAGEMENT CENTRE,
105, HANUMAN INDUSTRIAL ESTATE,
42, C.D. AMBEKAR ROAD, WADALA,
MUMBAI - 400031

Sr.No. 11
HASMUKHBHAI SHAH
CHAIRMAN
GUJARAT ECOLOGICAL COMMISSION
GERI COMPOUND,
BARODA

DK C. K. TANDON
Senior Scientific Officer
Env. Pollution Control Board
Ambivli, Mumbai

Env. Management Cell
Bombay

C. G. Pandya
Senior Consultant Engineer
95/524 Vijay Nagar
Vadodara
Ahmedabad - 32. Tel. 2423333

P. K. Saha
Chemical Engineer
C.G.E. Gomti

M. C. Shukla
Env. Engg.
G.P.C.B., Gandhinagar

C. K. Vyas
Env. Engg.
G.P.C.B., Gandhinagar

M. L. Patel
Env. Engg. G.P.C.B.,
Gandhinagar

Hrudaya Shah
A.E.G. (F & D)-G.P.C.B.

K. D. Rathi
S.E.E.
<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Name</th>
<th>Position and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SIR P. V. BHATT, IAS (Retd.)</td>
<td>CHAIRMAN,GUJARAT POLLUTION CONTROL BOARD SECTOR 10 A, PARYAVARAN, GANDDHINAGAR - 382043</td>
</tr>
<tr>
<td>2</td>
<td>Dr. J. M. BABOT</td>
<td>MEMBER SECRETARY, GUJARAT POLLUTION CONTROL BOARD SECTOR 10 A, PARYAVARAN, GANDDHINAGAR - 382043</td>
</tr>
<tr>
<td>3</td>
<td>KUM. P. S. SHAH</td>
<td>INCHARGE S.E.E., GUJARAT POLLUTION CONTROL BOARD SECTOR 10 A, PARYAVARAN, GANDDHINAGAR - 382043</td>
</tr>
<tr>
<td>4</td>
<td>DR. LAKSHMI RAGHUPATHY</td>
<td>DIRECTOR MINISTRY OF ENVIRONMENT AND FORESTS, COO COMPLEX, LODHI ROAD, NEW DELHI</td>
</tr>
<tr>
<td>5</td>
<td>SIR M. L. SUREAPRAKASH</td>
<td>DIRECTOR NATIONAL PRODUCTIVITY COUNCIL E-5, CIDC, ELECTRONICS ESTATE, GANDDHINAGAR - 382044</td>
</tr>
<tr>
<td>6</td>
<td>DR. C. B. SONI</td>
<td>SENIOR ENVIRONMENTAL SCIENTIST POLLUTION CONTROL BOARD SECTOR NO. 10 A, GANDDHINAGAR - 382043</td>
</tr>
<tr>
<td>7</td>
<td>DR. R. KANTAMALA</td>
<td>CONSULTANT TO THE WORLD BANK, &quot;KAUSTURE&quot;, 23, ASHOKNAGAR SOCIETY 10th ROAD, J.V.T.P. SCHEME, MUMBAI - 400049</td>
</tr>
<tr>
<td>8</td>
<td>DR. S. A. BHATT</td>
<td>ADDITIONAL DIRECTOR ATIRA, AMBAWADI, AHMEDABAD - 380015</td>
</tr>
<tr>
<td>9</td>
<td>DR. PRASAD MODAK</td>
<td>ENVIRONMENTAL MANAGEMENT CENTRE, 105, HANUMAN INDUSTRIAL ESTATE, 42, C.D. ANBEKAR ROAD, WADALA, MUMBAI - 400031</td>
</tr>
</tbody>
</table>
### List of Participants

**In PIC Meeting Held on 19-8-97 at EPTRI**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the Participant</th>
<th>Organization Name</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr. S.R. Chaudhuri, PSO</td>
<td>Hbd Pollution Control Board, Mumbai</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Smt. C. Hemantika</td>
<td>FAPCC, I</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>C. Radha Gomma</td>
<td>Environ. Centre</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>C. Ramalingam</td>
<td>EPTRI</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>G. Anil Kumar</td>
<td>EPTRI</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>D. S.D. Badoni</td>
<td>NA/Advanced Environment Protection Agency</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>D. V. Haranased</td>
<td>NA/Advanced Environment Technology Office</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>M. Digam</td>
<td>Environ News Daily</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>D. Naveen Choud</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>M. Gautam Keddy</td>
<td>EPTRI</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Y. Subramanyam</td>
<td>EPTRI</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>B. Shriram Narayale</td>
<td>Melli Indutia</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>T. L. Ramchandran Sirk</td>
<td>ANMRC No. 111</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>R. Murali, Chief Sub-editor</td>
<td>'Newshim'</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>D. V. S. Umamadhiya</td>
<td>MCI, Hyderabad</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Dr. S. V. Y. Rathee</td>
<td>BHEL, BHEL</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>P. T. Reddy</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>M. Nairaguru Reddy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>C. Pillipson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Maharashtra
Public Information and Consultation of the Sectoral Environmental Assessment of the Hazardous Waste Management Project, to be held at Yashwantrao Chavan Pratishthan, Gen. J. Bhosale Marg, Mumbai - 32.

**DATE:** 26TH Aug. 1997  **TIME:** 14.00 HRS.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name</th>
<th>Designation &amp; Organisation</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr. Pradeep Goenka</td>
<td>Env. Mat. Coor.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dr. Arvind Negi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Hs. Vivek Parate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Dr. Vasant Joshi</td>
<td>Env. Dept.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Mr. Satish Kathande</td>
<td>P.I. to Minister Env.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>M.V. Dhyanon</td>
<td>KAMA</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>C. C. B. Prabhu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Cmr. Shridhar More</td>
<td>Director Pollution Control</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Shri. Aravinda</td>
<td>Chair. E. A. C. Watson</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Mr. U. Nagarkar</td>
<td>World Bank</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>H. N. Miyaghi</td>
<td>Director Ind. Eff. (Health)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>V. B. L. Sekhar</td>
<td>Env. Dir. Ind. Eff. (Health)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>M. M. Molpatkar</td>
<td>Sr. Mary</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>H. M. Kolhe</td>
<td>MS. P.F.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>M. R. Pratap</td>
<td>Excel Ind. Std.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>C. M. Deshpande</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>A. V. Bhalera</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>S. N. Deshpande</td>
<td>SE MADC</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>S. R. Godbole</td>
<td>GM MADC</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>S. R. Giri</td>
<td>L.I.T.</td>
<td></td>
</tr>
<tr>
<td>S. No.</td>
<td>Name</td>
<td>Designation &amp; Organisation</td>
<td>Sign</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------</td>
<td>------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>20</td>
<td>Dr. M. K. Shah</td>
<td>Colours Chem. Ind.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>VITURAL NADIRNI</td>
<td>THE TIMES</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Vijay Joshi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>PIN. T. Joshi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>ASHOK JAIN.</td>
<td>L.A. OFFICER.</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>C. D. KOLHAPUR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>S. B. KATOLEY</td>
<td>ENV. DEPT</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>R. I. CHAUDHRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>V. S. DHONGDE</td>
<td>ENV. DEPT</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>S. B. S. SORDEO</td>
<td>Member, RCD</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>M. D. C. K.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>L. S. B. BISWAS</td>
<td>SSA, T. S. PUNJAB</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>KRISHNA PATTANKAR</td>
<td>GROUP, ERM, TRS. PUNJAB-1</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>V. N. SONTAK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>V. R. V. K.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>P. D. SMART</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>S. B. R.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Designation and Address of the Organisation</td>
<td>Signature</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Dr. P. Sasidhar</td>
<td>Scientific Officer, Treasurer, ANWAR CWMF (TAM) KALPITAM - 603 102</td>
<td>Sasidhar</td>
<td></td>
</tr>
<tr>
<td>R. Shrinivasan</td>
<td>Geologist, Geological Survey of India, Puducherry - 605 002</td>
<td>Shrinivasan</td>
<td></td>
</tr>
<tr>
<td>Dr. S. Sivaraman</td>
<td>Consultant (Environmental Development) 138/4 10th St. + Post, WALLACE KUDIYAPUR, ANNA NAGAR WEST, CHENNAI 600 040</td>
<td>Sivaraman</td>
<td></td>
</tr>
<tr>
<td>V. Subramanian</td>
<td>Engineer, Caprol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Mohan</td>
<td>CSEAC Environmental Education Centre, CHENNAI</td>
<td>Mohan</td>
<td></td>
</tr>
<tr>
<td>S. Latha</td>
<td>Editor, Environment Pollution</td>
<td>S. Latha</td>
<td></td>
</tr>
<tr>
<td>S. Venkatakrishnan</td>
<td>Formerly Dy. Director, World Bank, formerly UN Advisor on Environment IEF, 2616 S. HOLBROOK, PHILADELPHIA PA 19142, USA</td>
<td>Venkatakrishnan</td>
<td></td>
</tr>
<tr>
<td>Anthony Mitchell</td>
<td>Formerly UN Advisor on Environment IEF, 2616 S. HOLBROOK, PHILADELPHIA PA 19142, USA</td>
<td>Mitchell</td>
<td></td>
</tr>
<tr>
<td>Dr. Song</td>
<td></td>
<td>Song</td>
<td></td>
</tr>
</tbody>
</table>
Tamil Nadu Pollution Control Board

32 V. Chandrasekaran
Manager (PRD)
P.O., Chennai

33 S. Palanikannan
Vice President
E&EM Company

34 H. V. Shivaprasad
GM, Guindy, Chennai

35 G. S. Subbian
GN, EPIC HQ
Madras

44 Dr. T. Srinivasan
Chemical R&D Dept
IIT, Chennai-600036

55 P. Nageswararao
GM (Deputy MRL)

65 Dr. G. P. Jain
Nanum (Prof of Env.),
Ces, Anna University,
Chennai-25

70 Dr. J. Alexander
UNIDO, Madras

78 Dr. S. Rajamathi
UNIDO, Madras

87 J. R. Rathnasamy
Joint Director
Public Health
TAMIL NADU POLLUTION CONTROL BOARD

20. SP. Rajendran
Social Welfare Organisation
3-1, No. 5, Ottagonam
Chettinad, Madras 600 023
A.K. Subramanian
Manager 23.

21. Dr. G. S. Annadurai
CEO, DRO, National Perinatal
Chennai

22. G. M. Mani
CRI, Chennai

23. B. Kandakarman
Chief, Water Pollution
Chennai

24. T. N. Kakid
Director
Talw. Vaniyoor
Vaniyoor

25. N. Chandrasekaran, GM
M. Velmurugan, GM
P. S. Sridharan, GM

Indian Additives Co

D. V. R. 176
Dr. P. MUTHU
Director
Trust-HELP
A3, 204, T.T.R. Road,
Chennai - 18.
Dr. K. K. Raveendran
14, Banjara Colony,
Maidenahalli, 560 044.
Received
26-2-91

Dr. Sami David
President, Kumaran
Manikesh, Aptex
N. Ravi Kumar, Reporter
The Financial Express
S. Raghavan
Kolam Int. Corp
Bombay - 41
TAMIL NADU POLLUTION CONTROL BOARD

1. P.S. Krishna
   Technical Director

2. M. Ramanathan
   Addl. Chief Inspector of Factories

3. V. Narasimhan
   Dr. E. Dhammika
   G. Swaminathan
   M.R.L., MS-68

4. G. Athok
   P. Balan
   Brama
   Diffusion Engines Ltd
   4710 E. and MS-20
   Adyar.
<table>
<thead>
<tr>
<th>Name in Block Letters</th>
<th>Designation of the Person and Address of the Organization</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.G. Srinivasan</td>
<td>R&amp;D Dy G.M, IRE, Dept. Atomic Energy, DRSSDA, 27, Kamadhan Rd, T.Nagar, Madras 600017</td>
<td>1.9.82</td>
</tr>
<tr>
<td>V. Krishnan</td>
<td>Geologist (Srty) Geologist Survey of India, Indian Ring Road, Ennappetty, Ernakulam - 682002</td>
<td>V. Krishnan</td>
</tr>
<tr>
<td>B.K. N. Paramasivam</td>
<td>ICI P.T. Pharmaceutica Engrl - Chennai - 57</td>
<td>B.K. N. Paramasivam</td>
</tr>
<tr>
<td>M. Ganasevthy</td>
<td>JONES CONS LTD, TORONTO, ON.</td>
<td>M. Ganasevthy</td>
</tr>
<tr>
<td>S. Ravi</td>
<td>HAVEN HAZMAT INDIA LTD MADCOW 6</td>
<td>S. Ravi</td>
</tr>
<tr>
<td>D. Venkata Ram</td>
<td>LTI ENVIRA CONSULTANTS MAD 90</td>
<td>D. Venkata Ram</td>
</tr>
<tr>
<td>S. Anandalingam</td>
<td>M/s ICI Pharmaceutical Enzyme</td>
<td>S. Anandalingam</td>
</tr>
<tr>
<td>B.G. Jejep</td>
<td>P &amp; T, Fertilizer</td>
<td>B.G. Jejep</td>
</tr>
<tr>
<td>Achuthan Narasimhan</td>
<td>FDC Ltd, 212 Anna Salai, US 18</td>
<td>Achuthan Narasimhan</td>
</tr>
<tr>
<td>Dr. S. Mohan</td>
<td>Dept. of Civil Engg, I.I.T, Madras, Chennai - 6</td>
<td>Dr. S. Mohan</td>
</tr>
<tr>
<td>Dr. A. Nair</td>
<td>TVS Ltd</td>
<td>Dr. A. Nair</td>
</tr>
<tr>
<td>V. Srinivasan</td>
<td>EAGL, Fin cnty Ltd</td>
<td>V. Srinivasan</td>
</tr>
<tr>
<td>A. Ramakrishnan</td>
<td>SHE, VETTIPAWAKESI, M.P.</td>
<td>A. Ramakrishnan</td>
</tr>
<tr>
<td>A. Jesu Raja</td>
<td>EcoFriend</td>
<td>A. Jesu Raja</td>
</tr>
</tbody>
</table>
C. N. JAGADEESAN
Executive Engineer
Solid Waste Management
Corporation of Chennai

P. VIDAYAN AND
SANGEETHA SRIRAN
Eknora Naturalists Club
42, Pelathope, N. L. A. Road

MR. AMBALADU
MR. R. SURJU
M/S SYC Industries +
Enterprises (E.I.),
15, Asust Road,
Vadapalani - 600026

K. Malarvengam
TN UDF
Chennai - 17.

N. PARTHIBAN
CENC,
A3, 201, ITK Road
Avoor, Ns-1K.
<table>
<thead>
<tr>
<th>NAME IN BLOCK LETTERS</th>
<th>NATURE &amp; DESIGNATION OF THE PERSON AND ADDRESS OF THE ORGANISATION</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. Ganapathy</td>
<td>ERM India, F-2 No. 1, Third Cross, CIT Colony, Madras 4</td>
<td></td>
</tr>
<tr>
<td>V. Sampath Kumar</td>
<td>Secretary, Human Settlement Environment Centre, S.K. Ananta Ali, NS-18, 43313302</td>
<td></td>
</tr>
<tr>
<td>N R Bhatia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Xavier Raja</td>
<td>Research Coordinator, Budget Analysis and Policy Planning Unit, Tamil Nadu People's Forum for Social Development, 125, Stanley Road, No. 34</td>
<td></td>
</tr>
<tr>
<td>K. Harimohan</td>
<td>General Env. Hqt.</td>
<td></td>
</tr>
<tr>
<td>B. Bharath Jairaj</td>
<td>CA-4, 2nd Cross St, Karpagam gardens, Adyar, Chennai - 20</td>
<td></td>
</tr>
<tr>
<td>S.C. Narthanan</td>
<td>Action Peroxid, Chennai - 1</td>
<td></td>
</tr>
<tr>
<td>R K Umanathan</td>
<td>Co-ordinator, Mandai Environ. Ind. Inc., Emergency Preparedness, 2</td>
<td></td>
</tr>
<tr>
<td>M. Murthy</td>
<td>FIGURE ENGINEERS &amp; CONSULTANTS LTD, Chennai - 600 018, Eng. M. Murthy</td>
<td></td>
</tr>
</tbody>
</table>
TAMIL NADU POLLUTION CONTROL BOARD

S. Appasamy
LUB DOB MEDICAL
2011, Triplicane High St,
Chennai - 5

B.S. Rameswara,
9, Rajaji St.
Avadi - 71

K. Ramachandran
Dean, Advanced Division
School of Chemical Engineering
Research Centre
C.S.I.R. Campus
Perammal College
Chennai - 600113
<table>
<thead>
<tr>
<th>NAME IN BLOCK LETTERS</th>
<th>NAME AND DESIGNATION OF THE PERSON AND ADDRESS OF THE ORGANISATION</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. NATARAJAN</td>
<td>Consultant, TIFAC, DST, No. 2, 5th St, Puthurukkulam, Adyar, Chennai - 600 020</td>
<td>[Signature]</td>
</tr>
<tr>
<td>V. MANIKANDAN</td>
<td>&quot;NEWS TODAY&quot;</td>
<td>[Signature]</td>
</tr>
<tr>
<td>V. SUNDARAM</td>
<td>Engineering &amp; Lineman Ltd, 312, Anna Salai, Chennai 600 016</td>
<td></td>
</tr>
<tr>
<td>B. S. Sridhar</td>
<td>Consultant, Paris (11th July)</td>
<td>[Signature]</td>
</tr>
<tr>
<td>B. VENKATRAO</td>
<td>Evenshine Elaco Pte. Ltd, Ht/41, Aounder, Raj Edu, Kot 725-15</td>
<td>[Signature]</td>
</tr>
<tr>
<td>A. I. Quatric</td>
<td>Dom / TEO / Hrd.</td>
<td>[Signature]</td>
</tr>
<tr>
<td>T. S. SUBRAMANIAN</td>
<td>US-AEP</td>
<td>[Signature]</td>
</tr>
<tr>
<td>N. NEHRU KUMAR</td>
<td>Asst Prof, Dept of Civil Eng, Anna Salai College</td>
<td></td>
</tr>
<tr>
<td>A. Janaki</td>
<td>Consultant, UNDP, Madras School of Economics, Chennai - 25</td>
<td></td>
</tr>
<tr>
<td>S. RAHEESH</td>
<td>Computer Consultant, F 11, 26 Veeranatham Road, Adyar</td>
<td></td>
</tr>
<tr>
<td>M. RANI</td>
<td>AS / TV 86.</td>
<td></td>
</tr>
</tbody>
</table>
Ministry of Environment and Forests
<table>
<thead>
<tr>
<th>No.</th>
<th>Name &amp; Address</th>
<th>Telephone No.</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr Pressad Modak</td>
<td>4461360</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dr Radha Goswami</td>
<td>4168217</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>P Dutt, CSIE</td>
<td>6981310, 6981124</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>S. Venkatraman CSIE</td>
<td>3715268</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>G. Rajan, H&amp;K Commerce</td>
<td>2010261-686</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>K. N. Bhardwaj, NPC, Lodhi Road, Delhi</td>
<td>4611243</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>M. P. Praveen, NKE</td>
<td>4611343</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>R. K. Suri, KIC, Delhi</td>
<td>43616671503</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>M. S. Rama Rao, KIC, Delhi</td>
<td>4761410</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>L. M. Grud, Federation of Indian Chambers of Commerce and Industry</td>
<td>8735766</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Bharat Arora</td>
<td>511950</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Suresh Kumar, CSIE LTD</td>
<td>510190</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SIES Fertilisers Ltd</td>
<td>510190</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>M. S. Arora</td>
<td>3380704</td>
<td></td>
</tr>
</tbody>
</table>
N. Auhia
ASSOCIAT

D. Madhusudana Rao
Directorate General of
Factory Advice Service
Ministry of Labour, Govt.
Mumbai-400 022.

Dr. S. R. Madhavi
Addl. Director
CPCB, Delhi

Dr. S. P. Chatterji
Director, EIA
CPCB, Delhi

E. B. V. Kumar
Development Associate
B-23, Qutub Enclave, New
Delhi-11

Dr. N. S. Ram
FICCI,
Tanjore House, New Delhi
Main Office, Delhi-110001

APRami
Division of Planning

Dr. D. B. Boralkar
Joint Secretary
CPCB

Dr. A. B. Akolkar
Scientist
CPCB, Delhi-110001

Jashu Singh
Address

Vijay Rama
M/s. MBER

Rajiv Gauba
M/s. MBER

Rahul Ganguly
M/s. MBER

Raman Shah
NRC
Annex - 2-6
Format used for Recording Questions / Comments during PIC
Public Information and Consultation of the Sectoral Environmental Assessment Report for the Hazardous Waste Management Project - State Pollution Control Board

Date: ............ 1997

Name of the Participant: ____________________________________________

Organization: ______________________________________________________

Question(s) / Comment(s): 

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

PIC on SEAR