



7. ADDITIONAL STUDIES

7.1 General

A major emergency is one, which has the potential to cause serious injury or loss of life. It may cause extensive damage to property and serious disruption, both inside and outside the premises, if not managed. It would require the assistance of outside emergency service agencies to handle it effectively. Although, the emergency may be caused by a number of different factors, e.g. earthquake, Tsunami,

Department of Fisheries with complete liaison and co-ordination with outside agencies will work to manage and minimize the effect of disaster / emergency. The major function of the plan is to formulate a procedure for:

- Controlling accidental events with minimum damage to men, material and machine
- Rescuing victims and treating them suitably
- Identifying the persons affected
- Informing relatives of the casualties
- Providing authentic information to news media and others
- Preserving relevant records and equipment needed as evidence in any subsequent enquiry
- Rehabilitating the affected area.

The plan also delegates specific assignments to available manpower within or outside the villages in exigencies with a view to avoid over-lapping of activities between various groups.

7.2 Risk Analysis and Management Plan

Risk Assessment

The proposed Permanent Stability of Bar mouth will encounter risks like any other existing training wall. In order to mitigate and reduce such risks it is proposed to the Department of Fisheries/Contractor and their personnel, during construction period to ensure that HSE (Health Safety and Environment) risks to personnel or assets are minimized.

- Identify hazards and Risk factors for the construction period, both Fisheries and Biodiversity changes Pulicat village.
- Analyze and evaluate the risk associated with the hazard to productivity changes for Pulicat Lake.



Construction of Training Walls for Permanent Stability of Bar Mouth at Pulicat village, Ponneri Taluk, of Thiruvallur District.

- Determine appropriate ways to eliminate the hazard, or control the risk when the hazard cannot be eliminated.

Important Risk Assessment

Risk assessments are very important as they form an integral part of an occupational health and safety management plan. They help to:

- Create awareness of hazards and risk.
- Identify who may be at risk (e.g., employees, cleaners, visitors, contractors, the public, etc.).
- Determine whether a control program is required for a particular hazard.
- Determine if existing control measures are adequate or if more should be done.
- Prevent injuries or illnesses, especially when done at the design or planning stage.
- Prioritize hazards and control measures.
- Meet legal requirements where applicable.

HSE Management System

In order to ensure an effective HSE it is suggested that proper attention is to be paid to the health and safety of individuals working for construction of training walls as well as the protection of the environment from the environmental impacts associated with construction activities. It is recommended that the construction of training walls should have an HSE policy and perform all work under a formal HSE Management system. This system should be adequately documented within a HSE Manual and be shown to be effective in implementing the aims and objectives of the Permanent Stability-HSE Policy.

In order to ensure that the HSE system is able to achieve the goals of safety there should be a design that will be ideally behavior based and designed to deliver continual improvement utilizing the following rationale:

- Plan the process,
- Do the work,
- Measure the outcome,
- Review the lessons learned,
- Improve the process

The system should additionally:



Construction of Training Walls for Permanent Stability of Bar Mouth at Pulicat village, Ponneri Taluk, of Thiruvallur District.

- Incorporate measures to demonstrate that all workers/labourers are medically fit and competent to perform their tasks safely.
- Ensure that all personnel are conversant with the working conditions at the worksite, the rules and standards related to the working environment and the HSE hazards and risks associated with the work programme.
- Provide means whereby hazards have been identified, assessed and eliminated where possible, or are being controlled / mitigated through formal planning methods and procedures.
- Allow for periodic review triggered by site or system changes that may affect the HSE risk of the work programme.
- Ensure that all sub-contractors understand the principles and requirements of the system.
- Require sub-contractors to have an equivalent HSE standard.
- Contain a written HSE plan

The management of the Training wall should make all personnel fully aware that they are empowered and expected, to bring all health, safety and environmental risks which they believe not to be under adequate control to the immediate notice of their Supervisor so that prompt action may be taken to prevent injuries or other losses and provide a safe and healthy workplace.

7.3 Disaster Management Plan

The aim of disaster management is concerned with preventing accidents through good design, operation, maintenance and inspection. In this way, it is possible to reduce the risk of accidents, but it may not be possible to fully eliminate them.

An important element of mitigation is emergency planning i.e. recognizing that accidents are possible, identifying the types of accidents which may occur, assessing the consequences of such accidents and deciding on the emergency procedures, both on-site and off-site, that would need to be implemented in the event of specific type of emergency.

Emergency planning is just one aspect of safety and cannot be considered in isolation. In particular, it is not a substitute for maintaining good standards within Harbor operations. Before starting to prepare the plan, Harbor Management should ensure that the necessary basic standards and safety precautions are administered.

Emergency plans are likely to be separate for on-site and off-site, but they must be consistent with each other i.e. they must be related to the same assessed emergency conditions.



Construction of Training Walls for Permanent Stability of Bar Mouth at Pulicat village, Ponneri Taluk, of Thiruvallur District.

The on-site plan is called Disaster Management Plan (DMP) and the off-site plan is called Emergency Preparedness Plan (EPP).

7.3.1 Objectives

The overall objectives of an emergency plan are:

- To have advance planning, for each possible emergency scenario, to combat and minimize the adverse effect
- To know initial actions to be taken like warnings, evacuation of surrounding personnel, etc.
- To rescue, provide relief and assist affected people
- To localize the emergency and, if possible, eliminate it; and
- To minimize the overall and long term effects of the accident on people and property.

Minimizing the effects will include rescue, first-aid, evacuation, rehabilitation and giving information promptly to people living nearby.

7.3.2 Identification of Hazard

This stage is crucial for both on-site and off-site emergency planning and requires to systematically identifying the potential emergencies at the site. These could range from small events, which can be dealt without outside help to the largest event conceived in the site to have a plan. Experience has shown that for every occasion that the full potential of an accident is realized, there are many occasions when some less severe event occurs or when a developing incident is mitigated before reaching full potential.

7.3.3 Assessment of Hazards

The assessment of potential incidents should include:

- The worst events considered
- Likely other failure cases
- The relative likelihood of occurrence of events and
- The consequences of each event.

7.3.4 Emergency Preparedness Plan

Seismic factor should be taken into account while designing the infrastructure facilities for the proposed Training wall.

- Early warning message will be sent through radio communication to all vessels particularly those engaged in fishing as well as through public address system to the fishermen. Warning messages will also be sent through the local cable TV network.



Construction of Training Walls for Permanent Stability of Bar Mouth at Pulicat village, Ponneri Taluk, of Thiruvallur District.

- Appropriate medical services and effective rescue operations are required on war footing to limit post incident casualties as also to combat epidemics (through mass immunization particularly against water borne diseases) and evacuate the marooned / trapped individuals to safer places.
- Proper steps are required to salvage the properties damaged from the debris and to protect the personal properties of the affected fishermen.
- Suitable steps on war footing need to be adopted to restore all the essential services like electricity, water supply, telecommunication, transportation, etc.
- Water quality monitoring mechanisms will have to be set up to prevent outbreak of epidemics.
- Damage to road access due to land subsidence (secondary effects) should be immediately repaired and debris cleared with the help of PWD and local bodies.
- In case of accidents, arrangement should be made with the local police, transport and taluk administration for extending support with the necessary mechanical devices like cranes, gas cutters, etc required for rescue operation as well as for clearing of the accident site.

7.3.5 Community Involvement and Awareness

The nearest settlements and it is necessary to appraise the local communities about the activities involved in the Construction of the project. The following information would be listed in the project site:

- Providing general information on the nature and extent of off-site affects in the event of unforeseen circumstances.
- Details of the safety measures to be adopted in tackling the hazards in the event of any disaster.
- Involving the community members and developing awareness in them regarding emergency preparedness and disaster management.
- Record keeping.

7.3.6 Recommendations for the Implementation of the Off-site Emergency Plan

- The emergency control centre will be the focal point to co-ordinate emergency activities. The emergency control centre would be equipped with an adequate number of equipment mentioned under heading 'Emergency Control Centre'.



Construction of Training Walls for Permanent Stability of Bar Mouth at Pulicat village, Ponneri Taluk, of Thiruvallur District.

- Succession or second-line controllers would be named for assuming responsibilities in case disaster occurs in absence of principal co-ordinators.
- Department of Fisheries would make arrangement for coded siren system or through some other suitable means to alert people in surrounding areas in case of off-site crisis.
- A summarised version of action procedures detailing the "Role of Essential Staff in Major Emergency" would be issued in a flip chart like booklet form to all concerned persons (officers and supervisors) at the berths and also to senior officers of the civic administration.

7.4 Conclusion

The Disaster Management Plan is prepared in conjunction with and taking into consideration all technical reviews and suggestions as per acceptable norms and hence, will meet with any eventuality.