

### District - Latur

#### Introduction

As a part of overall preparedness of the state, the GOM has a State disaster management action plan to support and strengthen the efforts of district administration. In this context every district has evolved its own district disaster management action plan (DDMAP). It is expected that these multi-hazard response plans would increase the effectiveness of administrative intervention.

#### Multi-disaster Response Plan

The DDMAP addresses the districts' response to disaster situations such as earthquakes, floods, cyclones, epidemics, off-site industrial disasters and roads accidents and fires. Some of these disasters such as floods and earthquakes affect large areas causing extensive damage to life, property and environment while others such as epidemics only affect large populations. In any case, the management of these disasters requires extensive resources and manpower for containment by remedial action.

The present plan is a multiresponse plan for the disasters and outlines the institutional framework required for managing such situations. However, the plan assumes a disaster specific form in terms of the actions to be taken by the various agencies involved in the disaster. The front-end or local level of any disaster response organisation will differ depending upon the type of disaster, but at the level of the back-end i.e., at the controlling level at the district it will almost remain same for all types of disasters.

#### Objectives

##### The objectives of District Action Plan are:

- To improve preparedness at the district level, through risk and vulnerability analysis, to disasters and to minimise the impact of disasters in terms of human, physical and material loss
- To ascertain the status of existing resources and facilities available with the various agencies involved in the management of disasters in the district and make it an exercise in capability-building of district administration. This enables the district to face a disaster in a more effective way and builds confidence across different segments of society.. It will be a positive factor for long-term development of the district
- To utilise different aspects of disaster mitigation for development planning as a tool for location and area specific planning for development in the district
- To use scientific and technological advances in Remote Sensing, GIS etc in preparation of this plan with a view to ensure their continuous use for development planning
- To develop a framework for proper documentation of future disasters in the district, to have an update on critical information essential to a plan, to critically analyse and appraise responses and to recommend appropriate strategies
- To evolve DDMAP as an effective managerial tool within the overall policy framework of GOM.

Response to disasters, in the absence of a defined plan, would be arbitrary leading to overemphasis of some actions and absence of other actions which could be critical. The objectives of any disaster management plan should be to localise a disaster and to the maximum extent possible contain it so as to minimise the impact on life, the environment and property. A formal plan for managing disasters is therefore necessary. This would include

- a. pre-planning a proper sequence of response actions
- b. allocation of responsibilities to the participating agencies
- c. developing codes and standard operating procedures for various departments and relief agencies involved
- d. inventory of existing facilities and resources
- e. mechanisms for effective management of resources
- f. co-ordination of all relief activities including those of NGOs to ensure a coordinated and effective response.
- g. co-ordination with the State response machinery for appropriate support.
- h. Monitoring and Evaluation of actions taken during Relief and Rehabilitation

“Outline for Vulnerability Assessment”, prepared by CSSD/EMC has been used as the basic instrument to collate district level information to meet the database requirements for the preparation of DDMAP.

#### Policy Statement

The underlying policy of the DDMAP is to protect life, environment and property while ensuring mitigation of the disaster to the maximum extent possible, relief to those affected and restoration of normalcy at the earliest.

Essentially, communities draw their support from the social institutions, administrative structure, and values and aspirations they cherish. Disasters may temporarily disorganise the social units and the administrative system and disrupt their lives built around these values and aspirations. A systematic effort to put back the social life on its normal course with necessary technology support and resources will contribute significantly to the resilience of the community and nation.

This policy forms the basis of the DDMAP. It aims at capacity building and prompt utilisation of resources in a disaster situation through a partnership of the GOM, NGOs, Private initiatives and the community. In pursuance with this policy, DDMAP addresses itself to strengthening the pre-disaster and post-disaster responses of various actors and stakeholders including the “victims” of the disaster.

## Overview of Latur district

### Location

- Geographically, Maharashtra is located 16.40 N to 22.10 N and 72.60 E to 80.9 E
- Latur district is located between 17°45' N to 18°45' N and 76°15' E to 77°15' E which essentially indicates that Latur district is located in the Deccan Plateau.
- The adjoining districts are Nanded on the east, Osmanabad on the south-west, Beed on the north-west and in the north Parbhani. It also shares the boundary with Andhra Pradesh on the south-east.

### Area and Administrative divisions

- The state of Maharashtra, consisting of 31 districts, is divided in six administrative divisions, namely Konkan, Nashik, Pune, Aurangabad, Amravati, and Nagpur. The divisional headquarters for Latur district is located at Aurangabad.
- The district is divided into 7 talukas (administrative units) and two sub-divisions as per details given below
- Latur district covers an area of 7,372 Sq. Kmtr.

Sub-Divisions	Taluka within the sub-division
Latur	Latur, Ausa and Renapur
Udgir	Udgir, Nilanga, Ahmedpur and Chakur

## Physical Features and Land Use Patterns

### Soil

The predominant soil cover in the district is medium black to deep black calcareous formed with varying depth and texture.

### Land Use

Inhabited area :-	320 sq. km (4.3 %)
Agricultural area :-	6674 sq. km (90 %)
Industrial area :-	17.78 sq. km (0.2 %)
Forest Cover :-	37.42 sq. km (0.5 %)
Wastelands :-	233 sq. km (3.1 %)
Drought Prone areas :-	Whole District

## Geology and Geomorphology

### Geology

This entire Latur district is covered by the Deccan Trap lava flows of upper cretaceous to eocene age. The traps are overlain by thin alluvial deposits along the major rivers. The geological succession of the area is given below:

Formation	Age	Lithology
Alluvium	Recent	Sandy, clay in nature
Deccan Trap	Upper Cretaceous to Eocene	Amygdular vesicular zeolitic basalt often separated by red bole.

Deccan Trap : The basaltic lava flows belonging to the Deccan Trap is the only major geological formation occurring in the district. The lava flows are horizontal and each flow has distinct two units. The upper layers consists of vesicular and amygdular zeolitic basalt while the bottom layer consists of massive basalt. The flow

thickness ranges between 15-20 mts. And in all 10 flows have been demarcated which are lying between 510-740 m msl. The flows are generally separated by a red clay bed commonly called as 'Red bole'.

Alluvium : The major rivers of the district viz., Manjara, Tirna and Manar have deposited thin alluvium along their course. The alluvium consists of clay and sand. The thickness of alluvium ranges between 10-15 mtrs. The extension of alluvial belt is confined to 0.5-1 km. Across the river.

Lineaments : Number of lineaments which are fracture zones have been identified on the satellite imagery due to linear pattern, exhibited by darker tone and straight drainage course.

These lineaments are favourable for occurrence of groundwater. The major lineament trends in the district are NW-SE, NE-SW and E-W.

### **Geomorphology**

The Deccan Trap lava flow and alluvium occurring along the major rivers are the only major geological formations in the area. The Deccan Traps have given rise to trappean landforms. While the alluvium is forming the alluvial plain of fluvial origin.

Since the Deccan Trap occupies very large part of the district, the trappean landforms occurring in the district have been divided in two groups according to their origin viz., structural and denudational origin. The plateaus are covering the large area of the district which are subdivided in three groups depending upon the degree of dissection.

The different landforms which have been identified on the satellite imagery are described below.

#### **Highly Dissected Plateau (HDP):**

The higher elevations with steep to moderate slopes often exposed with hard rocks form the highly dissected plateau (HDP) with high drainage density. As per the image characteristics, the western and southern part of the district covering Latur, Ausa, Nilanga and Ahmadpur talukas are forming the highly dissected plateau. The areas covered HDP are mostly scrub land with or without vegetation.

#### **Moderately Dissected Plateau (MDP):**

The areas having moderate slopes with moderate drainage density form the moderately dissected plateau. The large part of the district has this characteristic and thus the moderately dissected plateau is the prominent landform of the district. The soil cover also in this zone is generally moderate with moderately thick weathered zone. The major land use of this landforms is Kharai or Rabi cropping

#### **Slightly Dissected Plateau (SDP):**

The narrow valley along the river Manjara covering small part of Latur and Nilanga taluka is covered by Deccan Trap and has a very gentle slope with low drainage density. Thus these valleys have been classified as slightly dissected plateau.

The area has a good soil cover and thick weathered mantle. The agriculture is the principal land use of the area. The major part of the area has double crop, thus showing intensive agricultural activity.

#### **Denudational Origin**

Denudational and Residual Hills : The small isolated hills which are occurring in the district have steep slope and often exposed with hard rock and thus have been classified as denudational hills. The denudational hills are often occupied by scrubs.

#### **Fluvial Origin :**

Alluvial Plains : The narrow alluvial belt occurring along the major rivers has been classified as alluvial plains. These plains have a very gentle slope with long drainage density. The agriculture is a principal land use of the area and are mostly double cropped.

### **Climate and Rainfall**

#### **Climate**

- Latur faces extreme variations in temperature with very hot summers and very cold winters and a low relative humidity.
- The average maximum temperature is 39.6 degree Celsius
- The average minimum temperature is 13.9 degree Celsius

## Rainfall

- Latur district receives rainfall from the South-westerly monsoons mainly in the months of June, July, August and September.
- July, August and September are the months during which the maximum rainfall as well as maximum continuous rainfall occurs.
- The table below shows the average rainfall data

Rainfall	
Total Annual Rainfall (for 1996)	969.8 mm.
Average Rainfall (over the years)	802.4 mm. (Latur taluka on 29.08.96)
Maximum Rainfall	124 mm.

## Socio-Economic Features

### Demographic Features

According to the 1991 census, the demographic features observed in Latur district are as follows:

Total number of households	:	2,84,000
Total Population	:	16,77,000
Total Male Population	:	8,63,000
Total Female Population	:	8,13,000
Sex Ratio	:	942
Urban Population	:	3,42,000
Rural Population	:	13,35,000
Percentage of Urban population to total population	:	23.31 %
Population density	:	234 per sq. km
Literacy Rate	:	55.57 %
Male Literacy rate	:	70.47 %
Female Literacy rate	:	39.74 %

### SC/ST

[Scheduled Castes/Scheduled Tribes are socially handicapped groups listed in the Schedule of the Indian Constitution]

SC percentage : 19.06%

ST percentage : 2.24%

Literacy rate in SC : 34.15 %

Literacy rate in ST : 33.56 %

Slum Population percentage : 16.72 %

Population below poverty line : 69.11 %

### Urban and Rural Locations

The main urban and rural centres along with their population are given in the tables below

Urban Centres :- (distinct urban characteristics)

Sr No	Name of the Urban Centre	Population	Population Density	Major Occupational Patterns		
				Agri Labors	Trade & Commerce	Other Services
1.	AHAMADPUR	25878	1426	7.75 %	4.98 %	4.47 %
2.	AUSA	23246	4144	8.58 %	4.97 %	5.72 %
3.	LATUR	197408	9400	1.81 %	7.09 %	6.68 %
4.	NILANGA	24883	993	8.75 %	5.19 %	5.06 %
5.	UDGIR	70453	3438	2.91 %	5.41 %	6.57 %

Major Rural Centres (populations more than ( 10,00 0 )

Sr.No	Name of the Rural Centre	Population	Population Density	Major Occupational Patterns		
				Cultivators	Agri Labors	Other Services
1.	AHAMADPUR TAHASIL NALEGAON (125)	11480	337	12.21 %	17.53 %	2.41 %
2.	AUSA TAHASIL KILLARI (132)	13208	612	7.12 %	21.73 %	4.17 %
3.	CHAKUR TAHASIL CHAKUR (205)	12637	496	8.36 %	16.80 %	6.41 %
4.	LATUR TAHASIL MURUD (167)	15260	509	6.65 %	11.24 %	7.56 %
5.	NILANGA TAHASIL AURAD (SHA) (198)	11065	826	3.55 %	14.93 %	6.76 %
6.	RENAPUR TAHASIL RENAPUR (79)	10132	239	9.77 %	17.22 %	3.13 %

Major Rural Centers (populations BETWEEN ( 7,000 to 10,00 0 )

Sr.No	Name of the Rural Centre	Population	Population Density	Major Occupational Patterns		
				Cultivators	Agri Labours	Other Services
1.	AHAMADPUR TAHASIL KINGAON (13)	7061	262	12.22 %	16.73 %	3.52 %
2.	NILANGA TAHASIL HIRUR ANANTPAL	7302	197	10.57 %	17.93 %	3.62 %
3.	RENAPUR AHASIL PANGAON (62)	8415		9.88 %	17.77 %	3.07 %
4.	UDGIR	9564	260	9.24 %	14.29 %	6.47%
I.	TAHASIL DEVANI (BK)					
.II.	WADWANA (BK) (16)	7181	366	9.76 %	16.88 %	3.61%

**Historical and Religious centres**

Information on historical and religious centres is compiled to assess the possible influx of large populations on specific occasions and the service demands generated. This is important specifically with respect to administration's response for management of transport, health services, law and order, facilities for food and sanitation in order to control epidemics, road accidents and fires.

Name of the Historical and Religious centre and nearest Urban or Major Rural Centre listed above	Periods of Festive Occasions, Months	Estimated tourist or visiting population
AUSA TQ. 1. AUSA FORT 2. Nilkatheshwer Mandir (Killari)	October August	5,000 10,000 To 15,000
CHAKUR TQ. 1. Hakani Baba yatra (Chakur)	July-August	20,000
LATUR TQ. 1. Shidheshwar Mandir (Latur)	Feb (Seven Days)	1,00,000
NILANGA TQ. 1. Pirpasha Utsav Nilanga	March-April	10,000
RENAPUR TQ. 1. Renukadevi Mandir (Renapur)	Oct-Nov (15 days)	15,000
UDGIR TQ. 1.Dongarshelki (Dhondu tatya) 2. Hawagiswami (Udhir) 3. Udaygiri Fort (Udgir)	July (One Day) January (3 Days) Gudhi Padawa	20,000 10,000 10,000

### Seasonal Migration

The pattern of migration in the district along with the main reasons for migration is given below.

Purpose	Area (specify Talukas)	Period (calendar months)	Estimated population in migration
Seasonal Labour Work	Chakur	Nov To May	3000-3500
Seasonal Labour Work	Ausa	Nov to May	1000 -1500
Seasonal Labour Work	Latur	Nov to May	3500-4000

### Agriculture and Crop Pattern in the District

Types	Names	Cropping Period in Months	Market (District, State, Export)
Major Crops (Irrigated)	1. Sugarcane	Jan, Feb To Nov, Dec	District
	2. Sun-flower	July To March	"
	3. Wheat	Oct. To March	"
	4. Ground Nut	Jan To May & Jun. To Oct.	"
Major Crops (Non - Irrigated)	1. Jawar	June To Sept.	District
	2. Tur	June To Dec.	"
	3. Mug & Udid	June To Sept.	"
	4. Sunflower	June To Sept.	"
	5. Gram	Oct. To March	"
Major Cash Crops	Cotton	May To Dec.	District
Major Plantations	1. Grapes	Feb To June	District, State & Export
	2. Mango	April To July	District
	3. Ber	Oct To Jan	District & state
	4. Papya	June To March	"

### River Systems and Dams

#### Rivers

The main rivers in Latur district are

- Manjra
- Terna
- Rena
- Manar
- Tawarja
- Tiru
- Gharni

#### Dams and Irrigation Projects

There is at present Manjara dam, a major irrigation project on Manjara river with the catchment area of 2371 sq. km and the target command area is 13625 ha.

Apart from this, the following are the 6 medium projects

Sr No	Location of the project(s)	Taluka	Catchment area, sq. km	Target command area in Ha
-------	----------------------------	--------	------------------------	---------------------------

1.	Whati	Ahamadpur	74.17	1356
2.	Tawarja	Latur	248.6	4040
3.	Aurad	Nilanga	31.45	880
4.	Gharni	Nilanga	243.45	2834
5.	Girakchal	Nilanga	40.50	2140
6.	Tiru	Udgir	269.67	3964

**Details on 47 minor projects is given in Annexure IV.  
Power Stations and Electricity Installations**

There is no power plant in the district. The distribution of power is managed through 220 KV, 132 KV, 110 KV and 33 KV sub-stations.

**Industries**

The extent of industrialisation gets reflected by the number of industrial estate and industrial activity and in terms of movement of cargo.

**Extent of Industrialisation**

- Number of Industrial Estates : 7
- Number of chemical industries/ tank farms : 40
- Total work force in industries : 10025
- Number of pipelines carrying chemicals : 7.
- Number of potentially hazardous locations : Nil
- Number of vehicles carrying hazardous raw materials for industries (during a month) : Nil
- Number of vehicles carrying hazardous products from industries (during a month) : Nil
- Number of vehicles passing through the district carrying hazardous materials for industries (during a month) : Nil
- Number of container terminals : Nil
- Types of Industries : Agrobased, Engineering, Chemical, Sugar factories, Textiles, Food Processing Etc.

The details on each industrial estate and fact sheet on each industry have been attached in Annexure I and Annexure II.

**Transport and Communication Network**

**Road network, Waterways, Railways**

- Number of National Highways --
- Length (in Kms) of National Highways --
- State highways (in Kms) 830.85
- ZP roads (in Kms) 3982.26
- Number of bridges on rivers 27
- Number of ST depots 5
- Numbers of villages not accessible by ST 30
- Number of Ports or jetties --
- Number of boats
- Number of railway stations with mail / express halts 6
- Number of railway bridges 116
- Non-electrified railway routes (in Kms) 117.40
- Electrified railway routes (in Kms) --
- Number of unmanned railway crossings 42
- Number of airports/air strips 1

**Proposed Development**

- New Afforestation : 26.60 sq. Kms area covered
- New area declared as reserved forest/sanctuary : 0.4 (Ausa) sq. Kms area covered

**New Industrial Estates Proposed**

<b>Name of the industrial estate</b>	Addl. MIDC, Latur	Udgir MIDC
<b>Location of the industrial estate</b>	Latur-Barshi road,latur	Udgir-nanded Road, Udgir

<b>Nearest Urban / Major rural centre</b>	Latur City	Udgir
---	------------	-------

**Large industries proposed and set-up  
Industries Set-up**

<b>Name of the industries</b>	<b>Location of the industries</b>	<b>Type of Industries</b>
1. Govt. Milk Scheme	Udgir	Milk Chilling Pant
2. Killari sahakari Sakhar Karkhana Ltd.	Killari Tq. Ausa	Sugar factory
3. Jai jawan jai Kisan sahakari sakhar karkhana Ltd.	Nalegaon tq. Chakur	-do-
4. Manjara shetkari Sah. Sakhar Karkhana Ltd.	Vilasnagar Chincholiwadi, Latur	-do-
5. Mahatma Phule Sah. Soot girni	Coop. Indl. estate, Udgir	Textile Mill
6. Manjara Shetkari Sah. Sakhar karkhana Ltd, Distillary	Vilasnagar Chincholiwadi, Latur	Indl. Alcohol
7. Jawahar Coop. Spg. Mill	Signal camp, Latur	textile Mill
8. Tina Oil & chemicals	G-86 MIDC, Latur	Oil refinery
9. Indira soot girni	MIDC Latur	Textile Mill

**Industries Proposed**

<b>Name of the industries</b>	<b>Location of the industries</b>	<b>Type of Industries</b>
1. Balaghat Sah. Sakhar Karkhana Ltd.	Charwak Nagar, Ahamadpur	Sugar factory
2. Gore Metal Re-rolling Mill Pvt. Ltd.	MIDC Area, Latur	Steel re-rolling Mill
3. Jai jawan jai Kisan sahakari sakhar karkhana Ltd. Distillary	Lal bahadur Shastr nagar Nalegaon tq. Chakur	Indl. Alcohol
4. Priyadarshani shetkari Sah. Sakhar Karkhana Ltd.	Tondar Tq. Udgir	Sugar factory
5. S.M. Dye Chem.	MIDC Ausa	
6. Veronica laboratories ltd.	Mahalangra Tq. chakur	Medicinal Formulation
7. Gopal Agro tech. Pvt. Ltd.	S.No. 151 Ausa	Agrotech
8. Central Railway Line	Latur-Miraj	Railway Line

**Proposed Irrigation Projects  
I. Major Project**

<b>Sr No</b>	<b>Name(s) of the dam(s)</b>	<b>Location of the dam(s)</b>	<b>Capacity of the dam(s) in cusecs.</b>	<b>River(s) on which the dam(s) are proposed</b>	<b>Estimated time of completion</b>
1	Lower	Makni Tq.	101.5	Terna	upto

terna	Omarga			June 1998
-------	--------	--	--	-----------

## II. Medium Projects

Sr No	Name(s) of the dam(s)	Location of the dam(s) Village Taluka	Capacity of the dam(s) in Mcusecs.	River(s) on which the dam(s) are proposed	Estimated time of completion
1.	Upper Manar L.I.S.	Sangvi Ahamadpur	-----	Manar	June 2000
2.	Masalaga	Masalaga Nilanga	13.52	local	June 1997
3.	Renapur	Kamkheda Renapur	20.55	Rena	June 2000
4.	sakol	tipral Udgir	10.95	Local	June 1997
5.	Deverjan	devejan Udgir	18.53	Local	june 1997

## III. Minor Projects (Future Schemes)

Sr No	Name(s) of the dam(s)	Location of the dam(s) Village Taluka	Capacity of the dam(s) in Mcusecs.	River(s) on which the dam(s) are proposed	Estimated time of completion
1.	Ahamadpur	Ahamadpur Ahamadpur	2.300	Local	June 2000
2.	Anadwadi	Anadwadi Ahamadpur	1.760	Local	June 2000
3.	Chera	Chera Ahamadpur	2.350	Local	June 2000
4.	Guttewadi	Guttewadi Ahamadpur	2.290	Local	June 2000
5.	Jadhala	Jadhala Ahamadpur	2.290	Local	June 2000
6.	kaudgaon	Kaudgaon Ahamadpur	2.420	Local	June 2000
7.	kawalwadi	Kawalwadi Ahamadpur	2.260	Local	June 2000
8.	Kharabwadi	kharabwadi Ahamadpur	2.320	Local	June 2000
9.	wanjarwadi	wanjarwadi Ahamadpur	1.640	Local	June 2000
10.	Yeldari	Yeldari Ahamadpur	2.410	Local	June 2000
11.	Yestar	Yestar Ahamadpur	2.340	Local	June 2000
12.	Chincholi	Chincholi AUSA	3.560	Local	June 2000
13.	Shivali	Shivali AUSA	2.110	Local	June 2000
14.	Chakur	Chakur Chakur	2.390	Local	June 2000
15.	Aurad wanjarkheda	Aurad Nilanga	1.810	Terna	June 2000

16.	Dhondwadi	Dhondwadi	Udgir	2.290	Local	June 2000
17.	Dongraj	Dongraj	Udgir	2.210	Local	June 2000
18.	Sindhi kamath	Sindhi Kamath	Udgir	3.300	Manjara	June 2000

## RISK ASSESSMENT AND VULNERABILITY ANALYSIS

### Economic, Occupational, Social and Educational Profile of the Population

#### Economy

- Latur is one of the smaller districts in the state.
- Physical features and land use pattern of the district indicates that agriculture is the main activity of the district. The total agricultural area is approximately 6,674 sq. Km, that is, 90 % of the total area of the district. Latur comes under the low rainfall area with possibilities of drought.
- At the district level major crops consist of cereals (48 %), oilseeds account for 20 %, pulses 12 % and other crops 20 %.
- Grapes are exported whereas other fruits like ber and papaya are sold for district as well as state consumption
- 0.5 % of the total area is under forest cover.
- The distribution of urban and rural population shows that 23.31 % of the population is urban.
- SCs and STs (socially handicapped) account for 19.06 and 2.24 per cent respectively of the total population.
- The overall area for industrial use accounts for only 17.78 sq. km, that is, 0.2 per cent of the total area.
- The number of main urban centres are 5.
- In these urban centres, the main employment activity is in trade and commerce and services. On an average it accounts for 8-10 per cent of the total population of the centre. The urban population consists of mainly the retired, government employees, students, servicing sector and slum dwellers.
- 16.7 % of the urban population is in the slums and 69.11% of the population is below poverty line.
- The total work force in seven industrial estates is just 10,025 clearly indicating that the industries aren't a major employment avenue. However, in recent years there have been two new industrial estates and eight large industries proposed.
- In terms of population density, Latur is the most densely populated area with a density of 9400 per Km<sup>2</sup>.
- In-migration in the district is essentially for manual or skilled labour for agriculture during the harvest
- There are six historical and religious centres.
- There is a continuous influx of tourist population in the range of one lakh in Latur city in February to Siddheshwar temple. All other places receive around 10,000-20,000 visitors.
- The overall literacy per cent of the district is 55.57 % whereas among the SCs and STs, it is around 34 per cent indicating the vulnerability of the group.

#### Building Codes Implementation

- In urban areas, only for new constructions, the building codes are being implemented.
- Care is being taken to construct earthquake proof buildings particularly in civic and industrial zone so as to avoid further damage.
- In rural areas building codes are not being implemented since there is no effective controlling authority. However, in the post-Latur earthquake phase, constructions undertaken by the government as well as the NGOs have adopted earthquake resistant technologies in villages wherever resettlement was required. Efforts to promote retrofitting and replacements are being made.
- Gram Panchayats have no technical staff for ensuring implementation of building codes.

## Disaster specific proneness.

### Floods

Latur district receives very low rainfall and lies in a drought prone area. The frequency of flooding in this district is therefore very low. However, there are two dams Manjara, Terna which have reported flooding in the past through the probability of future occurrence is low. These dams rarely get filled to their storage capacity. In respect to these two dams, Manjara Action Plan and Terna Action Plan have been prepared by the minor irrigation Department. The Villages under the blue zone and red zone have been identified, safe sites for evacuation in case of flooding have been marked and indicated in these plans. Both these plans are in the form of a worst-case Scenario of dam- burst. The action plan is attached to this document. A list of villages close to the banks of rivers is given below. Latur also does not experience any flash flood.

List of villages situated at the bank of rivers in Latur District.

Sr.No	Name of Taluka	Name of River	Name of villages
1.	Latur	1) Terna	-
		2) Manjara	1) Kanadi Borgaon
			2) Sarsa
			3) Wanjarkheda
			4) Ganjur
			5) Karsa
			6) Takli(B)
			7)Jewali
			8) Nagzari
			9) Borwat
			10) Sonwati
			11) Ramjanpur
			12) Dhanegaon
			13) Umbadaga
			14) Shivani(K)
		3) Tawarja	1) Dhakani
			2) Bopali
			3) Ankoli
			4) Dhanori
			5) Shiur
			6) Peth
			7) Chandehwar
			8) Kavha
			9) Sirsi
			10) Selu
			11) Shivani(B)
2.	Ausa	1) Manjra	1) Selu
			2)Shivani(B)
			3) Tondwali
			4) Lodga
			5) Holi
		2) Terna	1) Killari
			2) Mangrul
			3) Sarni
			4) Lohta
			5) Masala(B)
			6) Matola
			7) Kamalpur
			8) Ujani
		3) Tawarja	1) Kavtha
			2) Kalmatha
			3) Uti(B)

			4) Almala
			5) Budhoda
			6) Umbadga
			7) Hasala
			8) Sinadala
			9) Jamalpur
			10) Hipparsoga
			11) Dhanora
			12) Tondwali
			13) Lodga
			14)Holi
			15) Kavtha
3.	Nilanga	1) Manjara	1) Kavtha
			2)Bindgi Hal
			3) Anandwadi
			4)Phakranpur
			5) Wanjarwada
			6) Halki
			7) Dongargaon
			8) Hisamabad
			9) Bibral
			10)Bakli
			11) Baspur
			12) Kolgaon
			13) Sangvi
			14) Ghugi
			15) Shirol
			16) Shiur
			17) Nadiwad
			18) Takli
			19) Chincholi
		2) Terna	1) Aurad (s)
			2) Manejawlga
			3) Sawari
			4) Sonkhed
			5) Chincholi
			6) Jamga
			7) Dadgi
			8) Dhanora
			9) Yelamwadi
			10) Bamni
			11) Pimpal
			12) Ramtirth
			13) Sangvi
			14) Nadihattarga
		3) Gharni	1) Dhamangaon
			2) Lakadjawlga
			3)Shirur(A)
			4) Honmal
			5) Talegaon
			6) Ajani
			7) Sakol
			8) Ghuggi
			9) Sangvi
4.	Udgir	1) Manjara	1) Hisamnagar
			2) Helamb
			3)Dhamngaon
			4) Hanchnal

			5) Takli Bombli
			6) Bolegaon
			7) Anandwadi
			8) Lasona
			9) Batanpur
			10) Gaudgaon
			11) Kumdal
			12) Sindi
			13)Gurnal
			14) Borol
		2) Devarjan	1) Tipral
			2) Sarmapur
			3) Chawan Hipparga
			4) Nagtirthwadi
			5) Kamroddinpur
			6)Nideban
			7) Devani(B)
			8) Sangam
			9) Anchnal
			10)Ajani
			11) Wangdhari
		3) Teru	1) Hali-Handarguli
			2) Tiruka
			3) Shelgaon
			4) Dongraj
			5) Atnoor
5.	Ahmedpur	1) Manyad	1) Khanapur
			2)Kopra
			3) Sonkhed
			4)Mankhed
			5)Wilegaon
			6)Tambat Sangvi
			7) Mawalgaon
			8) Sora
			9) Borgaon
			10) Chisala
			11) Shenkud
			12) Yesta
			13) Takalgaon
			14) Shembi
			15) Shendri
			16) Sonegaon
			17) Ruddha
			18) Rui
			19) Gugdal
			20) Nagdal
			21) Thodga
			22) Tembhorni
			23) Malegaon
			24) Jawalga
		2) Waki	1) Halhani
			2) Nandurga(B)
			3) Kelgaon
			4) Kangavwadi
		3) Gharani	1) Ajansonda
			2) Nalegaon

## Earthquakes

According to the MERI report, Latur is proposed in Zone IV, which indicates a very high probability of earthquake proneness. However, the rezoning proposal is yet to be approved. In the meantime, with the assumption that Latur will be in Zone IV and with the experience of 1993 earthquake, building codes and land use and zoning regulations have been actively pursued.

In Latur district, Ausa and Nilanga talukas which have witnessed a major earthquake of the intensity of 6.3 in 1993 are more at risk than the other talukas primarily because of the active faults and the soil structure.

All new constructions in Latur district since 1993 therefore are according to Zone IV norms. Around 1,00,000 houses in the district have been retrofitted. Around a lakh of houses however are old and still at risk. All Government structures and installations have been retrofitted.

[Case study on Latur earthquake is given in Annexure III]

## Fires

Only three of the five Municipal Councils in Latur have fire-brigade Services. There has been no study to indicate the main areas prone to fires.

In Latur city, the prone areas are Green market, Gandhi market and the slum areas, the main causes being human negligence and short-circuiting.

The table below gives the number of calls attended by Latur fire brigade since 1994 within and beyond municipal limits.

Year	Calls Attended.
1994	136
1995	126
1996	180
1997	110

Majority of the occurrences are during summer season. Rural areas also report incidences of fire which are attended by the municipal fire brigade. Many a times fire brigade has experienced shortage of water in these areas.

## Road Accidents

Due to low traffic volume and absence of heavy chemical tanker traffic (except fuel), road accidents in Latur District are not seen as a major problem. However, the number of recorded road accidents (as given in the table below) with casualties and injuries in the district over the last three years indicate that definite steps will have to be taken to bring down the casualties and the losses.

Year	Casualties	Injured.
1995	141	440
1996	126	588
1997	146	408

The main roads on which these accidents occur along with the accident prone spot have been identified and are given below.

Sr.No	Road	Accident prone area	No. of casualties in 1996
1	Latur-Nanded Road	Ashta near Chakur(river bridge)	23
2	Latur-Umarga Road		16
3	Latur-Nilanga Road	Near Lamjana Near Jau Phata	11
4.	Latur- Barshi Road	Near Ramegaon village Near Manjara Sugar Factory	11
5	Latur-Ambejogai Road	Near Pimpal phata	7
6	Ahmedpur-Udgir Road	Rudha Phata	11
7.	Ausa-Tuljapur Road		8
8	Chakur-Ahmedpur Road		13
9	Nilanga-Ausa Road		8

The main reasons for the accidents have been identified as over-speeding. Majority of accidents have been due to head-on collisions involving jeeps or tourist buses. The PWD has identified road surfaces with improper gradients, roads which need widening and bridges which need strengthening and/or widening.

Road side settlements exist at the following places :

Ahmedpur, Shirur-Tajband, Chakur, Latur, Murud, Nilanga, Killari, Udgir. These areas can be considered as prone due to accidents involving petrol or diesel tankers.

There is also one unmanned railway crossing near Dayanand College in Latur city which is an accident prone spot.

### Epidemics

According to the Maharashtra health directory, Latur district is

- Low endemic for cholera
- High endemic for diarrhea diseases. Latur faces diarrheal epidemics every year with 263 deaths in the last ten years.
- Moderately endemic for infective hepatitis.
- The API for Malaria is below 2.

The high-risk villages for epidemics have been identified according to following criteria.

1) Endemic villages, 2) Riverside villages, 3) Remote(Non approachable) villages

The main Epidemic that occurs in Latur are water-borne diseases – mainly attacks of Gastro. This occurs due to improper use of bleaching powder for disinfection of water source as well as due to leakages in distribution system. The water samples tested at the District Health Laboratory, Latur city show a high rate of bacterial as well as faecal contamination. There have been as many as 2000-3000 sporadic cases of Gastro every year. The high-risk villages in the district have been identified and given below. Food poisoning cases have also been reported in Latur city.

Epidemic	Taluka	High-risk villages
1. Gastro.	Latur	Kharola ; Chincholi (B) ; Renapur ; Harwadi ;
	Ausa	Ausa town
	Nilanga	Kelgaon ; Ambulga BK. ; Mane Jawalga ; Mudgad Ekoji ; Aundha ; Kasarsirshi ;
	Udgir	Udgir (Town) ; Dewani (BK.) ; Kodali ; Dongarshelki ;
	Ahmadpur	Wadarwadi ; Sugaon.
2. Infective Hepatitis	Nilanga	Wadhona (BK)

The Taluka wise list of High Risk Villages (non approachable for S.T. Buses) in Latur District are given below.

#### Latur : 39 villages

Bramwadi ; Hake Tanda ; Basvant Tanda; Sangavi ; Wagholi Wadi ; Andhalgaon ; Indrthana ; Digol Deshpande ; Motegaon ; Lakhamapur ; Davngaon ; Garsuli ; Fardpur ; Tatapur ; Kumbharwadi ; Raywadi; Anandwadi ; Chukarwadi ; Bhandarwadi ; Javilga ; Selu ; Harwadi ; Hanmantwadi ; Pandhari ; Javalga Tanda ; Ramwadi ; Narvatwadi ; Favdewadi ; Bavchi; Bitargaon ; Pimpri; Yeli ; Chikalhana ; Bamni ; Dagadwadi; Ramjanpur ; Aadgaon ; Khopegaon ; Shirshi.

#### Ausa : 23 villages

Maslga ; Ladwadi ; Utka Tonda ; Jau ; Anandwadi ; Shivani ; Chincholi ; Chalburga ; Krjgaon ; Ramegaon ; Umbdga (B) ; Almala ; Satdharwadi ; Kavtha ; Korngla ; Limbla Tanda ; Yekambi ; Ashiv Tanda; Dhanora ; Jamalpur ; Hasala ; Shindala ; Masurdi ;

#### Nilanga : 38 villages

Sirsi ; Aoundha ; Mirgali ; Dongargaon ; Hattrga ; Takli ; Kalmugli ; Tgarkheda ; Shedolwadi; Bhoslewadi ; Sunegaonsangvi ; Ambegaon ; Hanmantwadi ; Bujrugwadi ; Gurhal ; Jainur ; Dapka ; Savngira ; Chinchili (Bhar.) ; Bamni ; Shindala ; Anandwadi ; Sumthana ; Dongargaon; Girakchal ; Channachiwadi ; Lahuwadi ; Reddiwadi ; Honmal ; Umardara ; Dagadwadi; Mamdapur ; Tambalwadi ; Haliali ; Chandori ; Tirupatwadi.

#### Udgir : 47 villages

Dongrwadi ; Waghdi ; Kamalwadi ; Ravangaon ; Neknal ; Shindhi Kumtha ; Batanpur ; Gurnal ; Yenki ; Manki ; Novani ; Honali ; Guttewadi Tanda ; Borgaon ; Nagalgaon ; Tondchir Tanda ; Chilgli ; Bhakaskheda ; Dhotrawadi ; Pendewadi ; Arsnal ; Kumtha ; Shekhapur ; Gangapur ; Dhythna ; Jaknal ; Belskarga ; Nideban ; Netragaon ;

Marsangvi ; Meghapur ; Dhondiwadi ; Waghmaritanda ; Kunnali ; Karanji ; Dhanganarwadi ; Panhipparga ; Kavkhed ; Wadhona (Khu) ; Wadgaon ; Chidrewadi ; Hanmnatwadi ; Rohina ; Sendol ; Mandol.

**Ahmedpur : 52 villages**

Tivghyal ; Tivtghyal ; Mahurwadi ; Kedmulu ; Pimpalwadi ; Takalgaon ; Bhaskarwadi ; Dalwewadi ; Salunkewadi ; Hipparga ; Bramhpuri ; Limbalwadi ; Maharwadi ; Anandwadi ; Bansavargaon ; Ukachiwadi ; Govindwadi ; Nageshwadi ; Hatkarwadi ; Guttewadi ; Kavalewadi ; Narvatwadi ; Borgaon ; Lendegaon ; Vayragad ; Bavalgaon ; Chilka ; Sunegaon ; Bebdewadi ; Kolwadi ; Molvnwadi ; Sirsatwadi ; Hungewadi ; Devkara ; Whatala ; Kalegaon ; Sonkhed ; Mankhed ; Vilegaon ; Makhegaon ; Shindhgi (Bk) ; Mogha ; Ruai ; Sorga ; Vadgaon ; Shindhgi ; Chatewadi ; Sayyadpur ; Kodgaon ; Dongaon ; Hawarga ; Dhorsangavi.

The Talukawise list of High Risk Villages (River Side) in Latur District are given below.

**Latur : 25 villages**

Kanadiborgaon ; Sarsa ; Wanjarkheda ; Ganjur ; Karsa ; Takali ; Jewali ; Nagazari ; Borwati ; Sonvati ; Ramjanpur ; Dhanegaon ; Umbadga ; Shiwani (Kh) ; Dhakani ; Bopala ; Ankoli ; Dhanuri ; Shiur ; Peth ; Chandeshwar ; Kawa ; Sirshi ; Selu ; Shivani (Bk).

**Ausa : 28 villages**

Selu ; Shiwani (Kh) ; Todali ; Lodaga ; Hali ; Killari ; Mangrul ; Sarni ; Lohata ; Masala ; Matola ; Kamalpur ; Ujani ; Kawatha ; Kalmatha ; Utti (Bk) ; Almala ; Budhoda ; Umbadga ; Hasala ; Sindala ; Jamalpur ; Hipparsoga ; Dhanora ; Tondewali ; Lodaga ; Hali ; Kawatha.

**Nilanga : 39 villages**

Bindgihal ; Anandwadi ; Fakranpur ; Wanjarkheda ; Halki ; Dongargaon ; Hisamabad ; Bibral ; Bakali ; Baspur ; Kalga ; Sangwi ; Ghugi ; Shiral ; Shiur ; Nadiwadi ; Takali ; Chinchali ; Aurad ; Mane Jawalga ; Sawari ; Sonkhed ; Jamga ; Dadgi ; Danora ; Yalamwadi ; Bamani ; Pimpala ; Ramtirth ; Nadihattarga ; Shirur Ant. ; Honmal ; Talegaon ; Ajani ; Sakol ; Ghugi ; Sangwi.

**Udgir : 29 villages**

Hisamnagar ; Helamb ; Dhamangaon ; Hanchanal ; Takali Bombali ; Bolegaon ; Anandwadi ; Lasona ; Batanpur ; Gaudgaon ; Kumtha ; Shindi ; Gurunal ; Borul ; Tipral ; Chawanhipparga ; Nagtirthawadi ; Nideban ; Kamrodhinpur ; Deoni (Bk) ; Songaon ; Anchanal ; Ajani ; Wendari ; Tiruka ; Hali Handurguli ; Shelgaon ; Dongaraj ; Atnoor.

**Ahmedpur : 29 villages**

Khanapur ; Kopara ; sonkhed ; Mankhed ; Wilegaon ; Tambatsangavi ; Sora ; Mawalgaon ; Borgaon (Kh) ; Shenkur ; Yestar I ; Takalgaon ; Shembi ; Shendri ; Sunegaon ; Sudha ; Gugadal ; Ruai ; Nagadal ; Thodga ; Temburni ; Malegaon ; Jawalga ; Halani ; Nandurga ; Kalegaon ; Kongalwadi ; Anjansoda ; Nalegaon.

The Taluka wise List of High Risk Villages (River Side) in Latur District is given below.

**Latur : 25 villages**

Kanadiborgaon ; Sarsa ; Wanjarkheda ; Ganjur ; Karsa ; Takali ; Jewali ; Nagazari ; Borwati ; Sonvati ; Ramjanpur ; Dhanegaon ; Umbadga ; Shiwani (Kh) ; Dhakani ; Bopala ; Ankoli ; Dhanuri ; Shiur ; Peth ; Chandeshwar ; Kawa ; Sirshi ; Selu ; Shivani (Bk).

**Ausa : 28 villages**

Selu ; Shiwani (Kh) ; Todali ; Lodaga ; Hali ; Killari ; Mangrul ; Sarni ; Lohata ; Masala ; Matola ; Kamalpur ; Ujani ; Kawatha ; Kalmatha ; Utti (Bk) ; Almala ; Budhoda ; Umbadga ; Hasala ; Sindala ; Jamalpur ; Hipparsoga ; Dhanora ; Tondewali ; Lodaga ; Hali ; Kawatha.

**Nilanga : 39 villages**

Bindgihal ; Anandwadi ; Fakranpur ; Wanjarkheda ; Halki ; Dongargaon ; Hisamabad ; Bibral ; Bakali ; Baspur ; Kalga ; Sangwi ; Ghugi ; Shiral ; Shiur ; Nadiwadi ; Takali ; Chinchali ; Aurad ; Mane Jawalga ; Sawari ; Sonkhed ; Jamga ; Dadgi ; Danora ; Yalamwadi ; Bamani ; Pimpala ; Ramtirth ; Nadihattarga ; Shirur Ant. ; Honmal ; Talegaon ; Ajani ; Sakol ; Ghugi ; Sangwi.

**Udgir : 29 villages**

Hisamnagar ; Helamb ; Dhamangaon ; Hanchanal ; Takali Bombali ; Bolegaon ; Anandwadi ; Lasona ; Batanpur ; Gaudgaon ; Kumtha ; Shindi ; Gurunal ; Borul ; Tipral ; Chawanhipparga ; Nagtirthawadi ; Nideban ; Kamrodhinpur ; Deoni (Bk) ; Songaon ; Anchanal ; Ajani ; Wendari ; Tiruka ; Hali Handurguli ; Shelgaon ; Dongaraj ; Atnoor.

**Ahmedpur : 29 villages**

Khanapur ; Kopara ; sonkhed ; Mankhed ; Wilegaon ; Tambatsangavi ; Sora ; Mawalgaon ; Borgaon (Kh) ; Shenkur ; Yestar I ; Takalgaon ; Shembi ; Shendri ; Sunegaon ; Sudha ; Gugadal ; Ruai ; Nagadal ; Thodga ; Temburni ; Malegaon ; Jawalga ; Halani ; Nandurga ; Kalegaon ; Kongalwadi ; Anjansoda ; Nalegaon.

In these villages, all types of preventive and curative services are provided with special attention towards disinfection of drinking water sources and checking of water samples.

### Industrial and Chemical Accidents

Only one industrial accident has been reported during the last ten years involving only one casualty.

Latur isn't a highly industrialised district. There aren't any hazardous industries present. Only one industry, Tina Oil mill which is an extraction unit having a boiler plant could have an explosion, but since it is in the MIDC industrial estate, no off-site accident can occur.

Even in Udgir, the Maharashtra Dairy Development Board has a huge plant but this is also isolated from residential areas.

There are cotton mills at Latur and Ahmedpur which could lead to fires since the storage is in barracks and therefore a fire could immediately spread. These units in non-industrial estates therefore need to be regulated.

Initially Manjara Sugar Factory did cause some water pollution but a treatment plant has been established now.

1100 ha of land is taken for MIDC area in Barshi which may have chemical and pharmaceutical units.

Most of the industries in Latur are trading units and not much of production activity is taken up. The future growth is expected only of low-polluting plants.

### Disaster Probability

According to district administration, the probability of disaster occurrence and the possible intensity of disasters, based on the earlier history is given below.

The possible effects (intensity) of each of the above disaster event on a scale of High/Medium/Low are:

Damage	Earthquake	Floods	Cyclones	Epidemics	Industrial and Chemical Accidents	Fires	Road Accidents
Loss of Lives	Yes	--	--	Yes	--	--	Yes
Injuries	Yes	--	--	--	--	--	Yes
Damage to and Destruction of Property	Yes	Yes	--	--	--	Yes	--
Damage to cattle and livestock	---	--	--	---	---	--	--
Damage to subsistence and crops	--	Yes	--	--	--	--	--
Disruption of life style	Yes	--	--	--	--	--	--
Disruption of community life	Yes	--	--	--	--	--	--
Loss of Livelihood	Yes	--	--	--	--	yes	--
Disruption of services	Yes	Yes	--	--	--	--	--
Damage to infrastructure and/or disruption of government systems	--		--	--	--	--	--
Impact on National Economy	Yes	--	--	--	--	yes	--
Social and Psychological after-effects	Yes	--	--	--	--	--	--

### Specific Vulnerability of Systems and Services to Disaster Events

Specific Vulnerability of	Vulnerable to						
	Earthquakes	Floods	Cyclones	Epidemics	Fires	Road Accidents	Industrial & Chemical Accidents
Transport systems (road network)	Yes	--	--	--	--	--	--
Transport systems (rail network)	--	--	--	--	--	--	--
Power supply	Yes	Yes	Yes	--	--	--	--
Water supply	yes	Yes	--	yes	--	--	--
Sewage	Yes	--	--	--	--	--	--
Hospitals	--	---	--	Yes	--	--	--
Food stocks and supplies	--	--	--	--	--	--	--
Communication systems (telecommunication)	Yes	Yes	Yes	--	--	Yes	--

### Ranking and Probability of Disaster Episodes in the District

Event	Ranking of events in terms of past occurrence		Probability of future occurrence	
		High	Medium	Low
Earthquake	First	Yes	--	--
Floods	Second		Yes	--
Cyclones	--	--	--	--
Epidemics	Third	--	Yes	--
Industrial and Chemical Accidents	--	--	--	--
Fires	Fifth	--	Yes	--
Road Accidents	Fourth	Yes	--	--

### Annexure I

Information on Industrial estates

Name of the Industrial Estate	Location in the form of an address	No. of industries in the estate	No. of Major Hazardous and Polluting Industries	Total Work Force in Industries
1. Latur MIDC	Latur - barshi Road Latur	210	--	1540
2. AUSA MIDC	Latur-AUSA road, AUSA	--	--	--
3. Nilanga mini MIDC	Nilanga	--	--	--
4. Ahamadpur Mini MIDC	Ahamadpur-nanded Road, Ahamadpur	--	--	--
5. Latur coop. Indl. Estate Latur	Signal Camp Latur	46	--	323
6. Udaygiri coop. Indl. Estate, Udgir	Loni, Udgir	40	--	281
7. Chakur coop. Indl. Estate Chakur	Chakur	7	--	47

### Annexure II Information on major hazardous industries for each industry

1.

- |  |    |  |
|--|----|--|
| I. Factory identity  | :- | Veronica Laboratories Ltd.   |
| II. Address  | :- | W-3 & 4 M.I..D.C.Latur   |
| III. Location (mention the industrial estate if applicable)  | :- | MIDC LATUR   |
| IV. Contact Persons  | :- | Shri Harshad Seth Chapsi, M.D.<br>Chapsi Lane, H.No. 24/52 Latur ph. no. 45715 |
| V. Principle activity(ies) for each plant  | :- | Mfg of Medicinal formulation.  |
| VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes) |    |  |

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Paracetamol	1.5 Ton	RCC Room	15 K.L.
Trimethoprim	100 Kg	"	
Sulfamethoxazole	500 Kg	"	50 Kg
Gentamicin Sulphate	100 Kg	"	
Protine Hydrocortisone	2 Ton	"	

#### VII. Consequences of major hazards from storage for each chemical

NO HAZARDOUS

VIII. Consequences of major hazards from processing

NO HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

NIL      NIL

X. An inventory of personal protective equipment in the factory premises Used the fire fighting equipments and medical first aid.

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri Shivajirao Kamble, PSI MIDC Latur Ph. No. 43199
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. M.L. Sathe, C.S., Civil Hospital, Latur Ph No. 42199
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.
- Shri Deshmukh, Stand Incharge Latur Ph. No. 43015

XII. Estimated Response time

Within 15 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

I. Foodgrain hexane 50 Mtrs. length width 2.5 inch

XV. Transportation : by approved transport- One truck

XVI. Parking :- Open space

### 3.

I. Factory identity :- TINA OIL & CHEMICALS

II. Address :- G-75 to 85 MIDC Latur Ph. No. 42206

III. Location (mention the industrial estate if applicable) :- MIDC Latur

IV. Contact Persons

Shri B.M.Nayar, Factory manager, New Adarsh colony, Latur ph. 45768

V. Principle activity(ies) for each plant

Mfg. of Edible oil & D-oiled cake

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Hexane	80 MT	MS Tank Underground	30 Tons

VII. Consequences of major hazards from storage for each chemical

NO HAZARDOUS

VIII. Consequences of major hazards from processing

NO HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

NIL

NIL

X. An inventory of personal protective equipment in the factory premises Used the fire fighting equipments and medical first aid.XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri Shivajirao Kamble,PSI MIDC Latur Ph. No. 43199
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. M.L. Sathe ,C.S. ,Civil Hospital,Latur Ph No. 42199
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.
- Shri Deshmukh,Stand Incharge Latur Ph. No. 43015

XII. Estimated Response time

Within 20 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

I. Hexane 100 Mtrs. length width 0.75 inch

XV. Transportation : by authorised transporter (8 Trucks)

XVI. Parking :- Open space

4.

I. Factory identity :- MARUTI FERROCHEM FACTORY LTD.

II. Address :- A-71/1 MIDC Latur Ph. 44611

III. Location (mention the industrial estate if applicable) :- MIDC Latur

IV. Contact Persons

Shri Birajdar Ramesh,M.D.New Adarsh Colony, Latur Ph. 42511

V. Principle activity(ies) for each plant

Mfg. of Fertilizers

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
MOP	500 Ton	RCC room	600 Kg
Dia amonium			
Phospet	1000 Ton	-do-	1200 Kg
Urea	1000 Ton	-do-	1200 Kg
Single Super			
Phospet	500 Ton	-do-	600 Kg
Nimcake	50 Ton	-do-	60 Kg

VII. Consequences of major hazards from storage for each chemical

NO HAZARDOUS

VIII. Consequences of major hazards from processing

NO HAZARDOUS

IX. Physical range of consequences

<b>Storage</b>	<b>Manufacturing</b>
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

NIL                      NIL

X. An inventory of personal protective equipment in the factory premises Used the fire fighting equipments and medical first aid.

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri Shivajirao Kamble,PSI MIDC Latur Ph. No. 43199
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. M.L. Sathe ,C.S. ,Civil Hospital,Latur Ph No. 42199
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.
- Shri Deshmukh,Stand Incharge Latur Ph. No. 43015

XII. Estimated Response time

Within 15 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Transportation : by authorised transporter (305 Trucks)

XVI. Parking :- Open space

5.

I. Factory identity :- SHRI CHEM INDUSTRIES

II. Address :- A-4, MIDC Latur

II. Location (mention the industrial estate if applicable) :- MIDC Latur

IV. Contact Persons

Shri Ashok Namdeo badadeA-4,MIDC, Latur

V. Principle activity(ies) for each plant

Mfg. of Paints & Varnish

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

<b>Name of the Chemical</b>	<b>Quantity stored</b>	<b>Storage method and mode</b>	<b>Quantity of chemical in the processing system</b>
Rosine	12000 Kg	RCC Room	100 Kg
Turpentine	12000 Kg	-do-	100 Kg
Color Pigment	600 Kg	-do-	5 Kg
(all)	7200 Kg	-do-	100 Kg
Alkyed Resine	600 Kg	-do-	100 Kg
Titanium Diaoxide			

VII. Consequences of major hazards from storage for each chemical

NO HAZARDOUS

VIII. Consequences of major hazards from processing

NO HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

NIL NIL

X. An inventory of personal protective equipment in the factory premises Used the fire fighting equipments and medical first aid.

XI Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri Shivajirao Kamble, PSI MIDC Latur Ph. No. 43199
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. M.L. Sathe ,C.S. ,Civil Hospital,Latur Ph No. 42199
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case. Shri Deshmukh,Stand Incharge Latur Ph. No. 43015

XII. Estimated Response time

Within 15 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

NIL

XV. Transportation : by Truck (22)

XVI. Parking :- Open space

## 6.

I. Factory identity :-Issulal Panchabhyi Daruwala

II. Address :- S.No. 169 Baroda road AUSA dist Latur

III. Location (mention the industrial estate if applicable) :-

IV. Contact Persons

Shri I.P. Daruwala At. po. AUSA dist Latur

V. Principle activity(ies) for each plant

Mfg. of Autom Bombs,laxmi Tota etc.

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Sodium	1 Ton	Tin Shed	20 Kg
Berium Nitrate	0.75 Ton	-do-	20 Kg
Sulpher	0.50 Ton	-do-	15 Kg
Paro powder	10 Drum	-do-	5 kg
Dicting	150 Kg	-do-	2.5 kg
Iron powder	0.50 Ton	-do-	10 Kg

VII. Consequences of major hazards from storage for each chemical

FIRE HAZARDOUS

VIII. Consequences of major hazards from processing

FIRE HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

10 M.Radius

10 M.Radius

X. An inventory of personal protective equipment factory premises Used the fire fighting equipments and medical first aid.

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri A.D. shirsagar,PSI, AUSA Ph. No. 22036
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. Dudhale ,medical supdt. ,Gramin Rughalaya AUSA Ph No. 22046
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.
- Shri Lakal patil,Depo Maneger,AUSA Ph. 22049

XII. Estimated Response time

Within 20 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

NIL

XV. Transportation : by Trucks (1)

XVI. Parking :- Open space

7.

I. Factory identity :- Manjara Shetkari Sahakari Sakhar karkhana Ltd.

II. Address :- Vilas nagar,Chincholiraowadi tq & dist. Latur

III. Location (mention the industrial estate if applicable) :- IV. Contact Persons

Shri B.B. Thombre,M.D. Ph. 43292

V. Principle activity(ies) for each plant

Mfg. of Sugar

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Lime	50 Ton	AC Shed	5 Ton
Sulpher	50 Ton	-do-	1.5 Ton
Biocide	1 Ton	-do-	25 Ton

VII. Consequences of major hazards from storage for each chemical

NO HAZARDOUS

VIII. Consequences of major hazards from processing

NO HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

NIL

NIL

X. An inventory of personal protective equipment factory premises Used the fire fighting equipments and medical first aid.

Gum Boots,Hand Gloves,mask,Fire fighting equipments,water fire fighting,fire Brigade And ambulance are available with factory.

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.

Shri A.K. Sutar Latur Ph. No. 43101

- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri Shivajirao Kamble, PSI MIDC Latur Ph. No. 43199
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. M.L. Sathe ,C.S. ,Civil Hospital,Latur Ph No. 42199
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.

Shri Deshmukh, Stand Incharge Latur Ph. No. 43015

XII. Estimated Response time

Within 20 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

Lime 40 Mtrs length width 2 inch

sulphur gas 20 Mtrs length width 6 inch

XV. Transportation : by Authorised Transporters (11 Trucks )

XVI. Parking :- Open space

## 8.

I. Factory identity :- Manjara Shetkari Sahakari Sakhar karkhana Ltd.

II. Address :- Vilas nagar, Chincholiraowadi tq & dist. Latur

III. Location (mention the industrial estate if applicable) :-

IV. Contact Persons

Shri S.J. PAWAR, Distilary Incharge, at. Po. Karkhana site Ph. 43292

V. Principle activity(ies) for each plant

Mfg. of Industrial Alcohol

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Sodium meta Bisulphate	1 Ton	AC Shed	50 Kg
Dia amonium Phosphet	1 Ton	-do-	15 Kg
Terkey red oil	2 Ton	-do-	180 Kg

VII. Consequences of major hazards from storage for each chemical

NO HAZARDOUS

VIII. Consequences of major hazards from processing

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

1) If the alcohol tax fires it covers one square Kilo Meter Area.

2) If explosion of gas takes place it covers minimum 2-3 sq mtrs area.

An inventory of personal protective equipment factory premises Used the fire fighting equipments and medical first aid.

Gum Boots, Hand Gloves, mask, Fire fighting equipments, water fire fighting, fire Brigade And ambulance are available with factory.

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101

- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri Shivajirao Kamble, PSI MIDC Latur Ph. No. 43199
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. M.L. Sathe ,C.S. ,Civil Hospital,Latur Ph No. 42199
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.

Shri Deshmukh, Stand Incharge Latur Ph. No. 43015

XII. Estimated Response time

Within 20 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

9.

I. Factory identity :- Killari Shetkari Sahakari Sakhar karkhana Ltd.

II. Address :- Ramanand tirth Nagar, killari ,Tq. ausa dist. Latur Ph. 3525

III. Location (mention the industrial estate if applicable) :-

IV. Contact Persons

Shri A.S. Kadam ,M.D., at. Po. factory Site

V. Principle activity(ies) for each plant

Mfg. of Sugar

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Sulpher	200 Ton	RCC Room	500 Kg
Lime	600 Ton	-do-	2 Ton
Eartho Phosferic	10 Ton	-do-	50 Kg
Hydrosulphic Of soda	1 Ton	-do-	5 Kg

VII. Consequences of major hazards from storage for each chemical

NO Hazardous

VIII. Consequences of major hazards from processing

NO HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.
NIL	NIL

X. An inventory of personal protective equipment factory premises Used the fire fighting equipments and medical first aid.

Gum Boots, Hand Gloves, mask, Fire fighting equipments, water fire fighting, fire Brigade And ambulance are available with factory.

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri B.G. Ingewad, PSI Killari ,Ph. 3573
- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. V.R. Patil ,medical Supdt., Gramin Rugnalaya, Killari ,Ph. 3507

- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.

Shri lakal Patil, Depo Maneger, Ausa, Ph. No. 22049

XII. Estimated Response time

Within 20 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

Lime 40 ft length, width 4 inch

sulphur gas 20 ft length , width 6 inch

XV. Transportation : by Authorised Transporters (85 Trucks )

XVI. Parking :- Open space

#### 10.

I. Factory identity :- Jay Jawan Jay Kisan Shetkari Sahakari Sakhar karkhana Ltd.

II. Address :- S.No. 24 to 26 Lal bahadur Shastri Nagar, nalegaon  
tq. Chakur , dist. Latur Ph. 6526

III. Location (mention the industrial estate if applicable) :-

IV. Contact Persons

Shri S.M. Pulate, Chif Chemist, At.Po. factory Site

V. Principle activity(ies) for each plant

Mfg. of Sugar

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Lime	500 Ton	AC Shed	500 Kg
Sulphur	150 Ton	-do-	50 Kg
Phosphoric Acid	10 Ton	RCC	5 Kg
Anti scalant	4 Ton	Room	5 Kg
Hydrosulphate of soda	1 Ton	-do-	1 Kg
		-do-	

VII. Consequences of major hazards from storage for each chemical

NO HAZARDOUS

VIII. Consequences of major hazards from processing

NO HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.
NIL	NIL

X. An inventory of personal protective equipment factory premises Used the fire fighting equipments and medical first aid.

Gum Boots, Hand Gloves, mask, Fire fighting equipments, water fire fighting, fire Brigade And ambulance are available with factory.

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri G.D. Kolekar , PSI Chakur, Ph. No. 52040

- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. Nelage, PHC nalegaon, Ph No. 6542
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.  
Shri Deshmukh, Stand Incharge Latur Ph. No. 43015

XII. Estimated Response time

Within 20 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

Lime 20 fts length, width 4 inch

sulphur gas 15 fts length, width 4 inch

XV. Transportation : by Authorised Transporters (70 Trucks )

XVI. Parking :- Open space

11.

I. Factory identity :- latur Zilla Sah. Doodh Utpadak & Purvatha Sangh Maryadit, Udgir

II. Address :- P.no. 142/B2 CO-OP.INDL.Estate Loni ,tq. Udgir

III. Location (mention the industrial estate if applicable) :-

IV. Contact Persons

Shri V.R.Patil ,M.D., Coop. Indl. Estate,Loni , Tq. Udgir

V. Principle activity(ies) for each plant

Milk Chilling

VI. Inventory of the hazardous chemicals (raw materials, intermediate products, final products and wastes)

Name of the Chemical	Quantity stored	Storage method and mode	Quantity of chemical in the processing system
Amonia Liquid	300 Kg	MS Tank RCC Room	1 Kg
Sulphuric Acid	1000 kg	RCC Room	3.2 Kg
Anyl Alcohol	50 Ltrs	-do-	0.32 Kg
Absolute Alcohol	5 ltrs	-do-	
Rosalic Acid	1 Ltrs	-do-	
Resorsinal Powder	2 Ltrs		

VII. Consequences of major hazards from storage for each chemical

HAZARDOUS

VIII. Consequences of major hazards from processing

HAZARDOUS

IX. Physical range of consequences

Storage	Manufacturing
The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.	The area of influence (in sq.km) as well as the names of villages within that area for each chemical should be clearly indicated.

Gas Leakage hazardous Udaygiri

C.I.E. Udgir

Gas Leakage hazardous Udaygiri

C.I.E. Udgir

X. An inventory of personal protective equipment factory premises Used the fire fighting equipments and medical first aid.

NIL

XI. Action required

- Fire brigade - action required to be taken by the fire brigade including the names and telephone numbers of contact persons.
- Shri A.K. Sutar Latur Ph. No. 43101
- Police service - action required to be taken by the police including the names and telephone numbers of contact persons.
- Shri S.M. Gute, police Inespector, Udgir Ph. No. 52003

- Medical Services - action required to be taken by the medical services including the names and telephone numbers of contact persons and hospitals.
- Dr. Swami , Medical Supdt. udgir. , Ph No. 52336
- Communication services - action required to be taken by the railways, airports and bus services including the names and telephone numbers of contact persons in each case.
- Shri Mane , depo Manager , Udgir Ph. 52156

XII. Estimated Response time

Within 20 Minutes

XIII. Layouts of the plants (to be updated as and when expansions/modernization occur)

Layout enclosed

XIV. Chemical pipe line

Amonia gas 400 Ft length width 1/2 inch

XV. Trasportation : by Transport dealer (11 Tempos )

XVI. Parking :- Open space

### **Annexure III Case study of Major disaster episodes in the district**

Type of Episode	:	Earthquake					
Location	:	The centre of Earthquake was near Village Killari in Ausa Taluka About 45 Kms from district Headquarters.					
Date	:	30-09-1993					
Reasons assigned for the event	:	Sliding of Rocks of linearments.					
Warning Systems used	:	The incident was not predicted, hence Warning system could not be used.					
Assessment of administrative preparednes:		The Administrative machinery.Machinery was put on the job only after the incidence.					
Area Affected (number of villages)	:	1] Fully -- 27 2] Partly -- 728 Total -- 755					
Extent of Damage –							
1. Houses damaged	:	1,26,701					
2. Loss in Rupees	:	111.40 crores					
Number of lives lost	:	Male : 600 Female : 1092					
Loss of Cattle	:	Ox 408 Cow 607 buffaloes 844 Goat 3840 Sheep 270 Ass 4 Total 5973					

### **Damage to Infrastructure (specify infrastructure)**

Roads admeasuring 16455 Kms length was damaged. In addition to this 802 public Buildings like schools, Gram panchayats, Samaj Mandirs Etc. suffered damage.

Procedures followed for assessing various types of damages and the compensation norms used

Detailed panchnama's specifying damages on various counts were drawn with the help of Revenue machinery.

**Department wise break-up of the expenditure incurred on relief and rehabilitation**

Name of Department	Type of Relief/Compensation and rehabilitation	Expenditure
1. Revenue Department	1. land Acquisition	346.41
	2. temp.water supply	262.47
	3. Repairs & Strenthening of Houses	3175.93
	4. recon. of Houses	340.49
	5. Constructon of Houses	3026.38
	6. Civic amenities	68.04
	7. C.M. Relief fund	1327.55
	8. Misc Expenditure	988.09
2. Zilla parishad	Repairs of wells ued for irrigation	27.77
	Pilot strenthening	11.394
3.Social forestry Dept.	Block plantation	35.70
	Courtyard plantation	2.82
	Roadside plantation	1.18
	Smritiven	1.75
4. Animal husbandry Dept.	Distibution of cattles	206.35
5. M.S.E.B.	Electrification	271.67
6. Env.Engg.dept.	Permanent water supply sc	1627.21
7. Agri Dept.	Distri. of agri. Equipments	518.36
8. Industries Dept.	Distri. of equipments to Artisans & Businessman	73.45
9. P.W.D.	Rep. & Recon. or build-ings	1064.82
	Rep. & Recon of Roads	1179.50
10. Horticulture Dept.	Holticulture developements	10.78
11. Archological Dept.	Rep. of Horti. monuments	11.46
12. Irrigation Dept.	Rep. To the Project &	

**Organizational Structure evolved to manage the emergency – specify the key departments involved**

Revenue machinery was pressed into service for drawing panchnamas of damage on various counts. The armed forces, the police, the Homeguards, etc were Summoned to remove the debris & rescue those who were buried and injured. The health Dept. & various Social organisations volunteered to take care of those injured & needed medical help, officials from agril. industry Dept. were asked to assess & record the damage to standing crops, small scale industries and implements used by the farmers, rural artisans etc. Cattles & treat cattles injured in the earthquake. the staff of PWD, ENE, irrigation Dept. took up the work of restoring electric supply, water supply providing temporary sheds for essential services and infrastructure.

**Nature of support from the State and Central authorities,**

From State Government : the state government has provided all technical, financial personnel support for temporarily settling the people immediately after the earthquake at safer place. now the state government has taken up huge programme of relocation of Villages within were situated on the earthquake prone areas and also repairs & strengthening of houses damaged in the earthquake dated 30-09-1993.

**Methods used for mobilizing resources, NGO/Community Response,**

During the relief and rescue operations various social organisations, Associations, citizens, foreign agencies provide help in term of personal foodgrains, vehicles, daily belongings, money material for temporary settlements etc. Various donor organisations have built & donated houses in consultation with state Govt. for permanent resettlement of the earthquake affected villages. the state Govt. has mobilised loan from various international organisations like world Bank, ODA etc for the same purpose.

**Legal or Procedural bottlenecks experienced in managing the situation,**

Initially it was difficult to evolve uniform criterion for classifying the villages so as to proceed with the permanent resettlement. But in due course after taking guidance from technical experts and after giving serious thought a uniform criterion was evolved. The finalisation of criterion number of villages were selected for consideration. The people in villages which were deleted after verification have approached various courts and was a massive job to defend all those cases in various courts. Actual work had one time look to stand still due to these cases. Then the honorable supreme court was requested to stay all these proceedings till 6/97. Honorable supreme court was convinced and the problem was solved, temporarily at least to 6/96. Now the work is in progress.

The decision about the type, design and implementation. Various alternatives were considered and uniform type needs of the local people was evolved. As regards the liability of grants of houses the criterion was evolved after considering the testing various options. There were no set patterns available on this count.

Lessons learnt by officials and communities in dealing with disaster along with specific suggestions for improving procedures

Lessons Learnt : The earthquake cannot be predicted, there is no area which can be identified as earthquake proof. This natural calamity is not specific in occurrence i.e. no specific time can be given. The earthquake takes place at mid night when people have no chance to defend themselves. The earthquake destroys all infrastructure, houses etc., As the supply of electricity with the water are out of order. It is very difficult to carry out relief operations in these areas.

Suggestions : There is a general and earnest need to create awareness about precautions to be taken before during the earthquake, all the areas where people and cattle live. It is necessary to have relief and rescue machinery always ready at all levels including Village tahasil and Dist. level. Machinery, equipment and trained personnel are necessary for removing debris and rescuing people in earthquake. In the absence of this one cannot save many lives in earthquake loss to infrastructure, houses can be avoided by building them quake proof.

**Annexure IV Minor Irrigation Projects Completed**

Sr No	Location of the project(s) Taluka	Taluka	Catchment area, sq. km	Target command area in Ha
1.	Bhuttekawadi	Ahamadpur	35.74	809
2.	Dhanora Bandra	Ahamadpur	--	253
3.	Dhorsangvi	Ahamadpur	19.04	474
4.	Gotala	Ahamadpur	17.61	701
5.	Mogha	Ahamadpur	70.00	1255
6.	Nagthana	Ahamadpur	69.00	1578
7.	Sonkhed	Ahamadpur	14.17	476
8.	Sukani	Ahamadpur	13.70	793
9.	Apachunda	Ausa	43.65	594
10.	Belkund	Ausa	28.16	486
11.	Chincholi (J)	Ausa	23.75	523
12.	Chincholi (T)	Ausa	75.06	689
13.	Karla	Ausa	11.81	255
14.	Malkondji	Ausa	12.43	378
15.	Nanand	Ausa	16.04	598
16.	Sarola	Ausa	33.79	664
17.	Shivani K.T.W.	Ausa	---	465
18.	Somdurga	Ausa	18.17	388
19.	Tungi	Ausa	62.31	526
20.	Wanwada	Ausa	14.58	289
21.	Bothi	Chakur	---	429
22.	Devangarwadi	Chakur	---	486
23.	Ganjur	Chakur	12.56	350
24.	Shivankhed	Chakur	---	468
25.	Zari	Chakur	10.88	455
26.	Chikurda	Latur	13.30	351
27.	Garsuli	Latur	23.56	489
28.	Gondegaon	Latur	27.65	708
29.	Kasarkheda K.T.W.	Latur	46.45	373

30	Nivali	Latur	---	379
31	Wasangaon	Latur	18.20	445
32	Hadga	Nilanga	9.83	359
33	kasarbalkunda	Nilanga	20.09	668
34	Kedarpur	Nilanga	18.41	364
35	Madansuri K.T.W.	Nilanga	---	289
36	Malegaon	Nilanga	26.94	668
37	Pandharwadi	Nilanga	14.68	385
38	Shedol	Nilanga	16.18	607
39	Sonkhed	Nilanga	---	259
40	Arasanal	Udgir	8.29	365
41	Deoni bandra	Udgir	---	486
42	Ekurka	Udgir	9.84	422
43	Kallur	Udgir	8.42	277
44	Keshkarwadi	Udgir	8.13	268
45	Nagalgaon	Udgir	10.47	303
46	Pimpari	Udgir	18.10	767
47	Takali K.T.W.	Udgir	65.71	337