



# SOLAPUR DISTRICT DISASTER MANAGEMENT PLAN - 2025



District Disaster Management Authority  
OFFICE OF THE DISTRICT COLLECTOR, SOLAPUR

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# 1 INTRODUCTION

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## 1.1 RATIONALE

The section 31 of the Indian Disaster Management Act, 2005 mandates the preparation of a District Disaster Management Plan (DDMP) for each district. The section mandates the District Authority to prepare that plan in consultation with local authorities aligning with the National and State Plans and actions proposed into it. The District Disaster Management Plan (DDMP) for Solapur is important for handling disasters effectively. It focuses on measures for prevention, mitigation, preparedness, and response to various disasters, including identifying vulnerable areas and establishing effective communication. The plan is made for being ready for, responding to, recovering from, and preventing disasters. The plan is required by the Disaster Management Act of 2005 (DM Act) to help reduce risks from disasters. It also encourages teamwork among government agencies, non-government organisations (NGOs), businesses, and local communities to make the district stronger and more prepared for disasters.

## 1.2 VISION

The vision of the DDMP is to empower communities and stakeholders to reduce the existing risks and prevent new risks by implementing comprehensive Disaster Risk Management measures. Through the creation of a robust DDMP, the district aspires to:

- **Be proactive, not reactive:** Moving beyond simply reacting and responding to disasters, the DDMP prioritises disaster prevention, mitigation and preparedness by fostering a culture of resilience.
- **Environmental sustainability as the cornerstone:** Recognising unsustainable development as a root cause of disasters, the plan prioritises environmental protection at all levels.

## 1.3 AIM AND OBJECTIVE

This document aims to create a Disaster Management (DM) plan for Solapur district, integrating the plans of all the villages and municipal bodies, dovetailing with the overall analysis of the hazard, vulnerability, and capacity of the tehsils. It plans to achieve disaster risk reduction (DRR) by preparing a strategy of prevention, mitigation, preparedness and response to minimise damage property and human losses. The objectives are:

- Identify hazards, vulnerabilities, and capacities and estimate risks as they currently exist for each tehsil, giving an overall risk status for each tehsil.
- Identify and describe prevention and mitigation measures for various types of hazards.
- Assess the level of preparedness to rapidly implement tasks that enhance response efforts.

- Identify specific actions for all departments to make contingency plans easy to operationalise and make it convenient for all functionaries to know what to do, when, where, and how.

## 1.4 TERMINOLOGY OF DISASTER MANAGEMENT

**Disaster:** A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic and environmental losses, and impacts.

**Disaster damage:** It occurs during and immediately after the disaster. This is usually measured in physical units (e.g., square meters of housing, kilometres of roads, etc.), and describes the total or partial destruction of physical assets, the disruption of basic services and damages to sources of livelihood in the affected area.

**Disaster impact:** It is the total effect, including negative effects (e.g., economic losses) and positive effects (e.g., economic gains), of a hazardous event or a disaster. The term includes economic, human, and environmental impacts, and may include death, injuries, disease and other negative effects on human physical, mental and social well-being.

**Disaster management:** The organisation, planning and application of measures preparing for, responding to, and recovering from disasters.

**Disaster risk:** The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society, or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability, and capacity.

**Disaster risk management:** Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.

**Disaster risk reduction:** Disaster risk reduction is aimed at preventing new, reducing existing disaster risk, and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

**Early warning system:** An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities, systems and processes that enable individuals, communities, governments, businesses, and others to take timely action to reduce disaster risks in advance of hazardous events.

**Economic loss:** Total economic impact that consists of direct economic loss and indirect economic loss.

**Direct economic loss:** the monetary value of total or partial destruction of physical assets existing in the affected area. Direct economic loss is nearly equivalent to physical damage.

**Indirect economic loss:** a decline in economic value added because of direct economic loss and/or human and environmental impacts.

**Emergency services:** A critical set of specialised agencies that have specific responsibilities in serving and protecting people and property in emergency and disaster situations.

**Capacity:** The combination of all the strengths, attributes, and resources available within an organisation, community, or society to manage and reduce disaster risks and strengthen resilience. It may include infrastructure, institutions, human knowledge and skills, and collective attributes such as social relationships, leadership, and management.

**Coping capacity:** The ability of people, organizations, and systems, using available skills and resources, to manage adverse conditions, risk, or disasters. The capacity to cope requires continuing awareness, resources, and good management, both in normal times as well as during disasters or adverse conditions. Coping capacities contribute to the reduction of disaster risks.

**Capacity assessment:** The process by which the capacity of a group, organisation or society is reviewed against desired goals, where existing capacities are identified for maintenance or strengthening, and capacity gaps are identified for further action.

**Capacity development:** The process by which people, organisations and society systematically stimulate and develop their capacities over time to achieve social and economic goals. It involves learning and distinct types of training but also continuous efforts to develop institutions, political awareness, financial resources, technology systems and the wider enabling environment.

**Contingency planning:** A management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective, and appropriate responses. It results in organised and coordinated courses of action with clearly identified institutional roles and resources, information processes and operational arrangements for specific actors at times of need.

**Critical infrastructure:** The physical structures, facilities, networks, and other assets that provide services that are essential to the social and economic functioning of a community or society.

**Climate change:** (a) The Inter-governmental Panel on Climate Change (IPCC) defines climate change as: “a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.” (b) The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere, and which is in addition to natural climate variability observed over comparable time periods.”

**Environmental degradation:** The reduction of the capacity of the environment to meet social and ecological objectives and needs.

**Environmental impact assessment:** Process by which the environmental consequences of a proposed project or programme are evaluated, undertaken as an integral part of planning and decision-making processes with a view to limiting or reducing the adverse impacts of the project or programme.

**Evacuation:** Moving people and assets temporarily to safer places before, during or after the occurrence of a hazardous event to protect them.

**Exposure:** The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.

**Forecast:** Definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area.

**Hazard:** A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption, or environmental degradation.

**Natural hazards:** They are predominantly associated with natural processes and phenomena.

**Anthropogenic hazards:** They are induced entirely or predominantly by human activities and choices.

**Mitigation:** The lessening or minimising of the adverse impacts of a hazardous event. The adverse impacts of hazards, in particular natural hazards, often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions.

**Preparedness:** The knowledge and capacities developed by governments, response and recovery organisations, communities, and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, or current disasters.

**Prevention:** Activities and measures to avoid existing and new disaster risks. While certain disaster risks cannot be eliminated, prevention aims at reducing vulnerability and exposure in such contexts where, as a result, the risk of disaster is removed.

**Public awareness:** The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

**Reconstruction:** The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities, and livelihoods required for the full functioning of a community, or a society affected by a disaster, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.



**Recovery:** The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural, and environmental assets, systems, and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better,” to avoid or reduce future disaster risk.

**Rehabilitation:** The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.

**Resilience:** The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

**Response:** Actions taken directly before, during or immediately after a disaster to save lives, reduce health impacts, ensure public safety, and meet the basic subsistence needs of the people affected. Disaster response is predominantly focused on immediate and short-term needs and is sometimes called disaster relief.

**Retrofitting:** Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.

**Risk transfer:** The process of formally or informally shifting the financial consequences of risks from one party to another, whereby a household, community, enterprise, or State authority will obtain resources from the other party after a disaster occurs in exchange for ongoing or compensatory social or financial benefits provided to that other party. Insurance is a well-known form of risk transfer, where coverage of a risk is obtained from an insurer in exchange for ongoing premiums paid to the insurer.

**Structural and non-structural measures:** Structural measures are any physical construction to reduce or avoid possible impacts of hazards, or the application of engineering techniques or technology to achieve hazard resistance and resilience in structures or systems. Non-structural measures are measures not involving physical construction which use knowledge, practice, or agreement to reduce disaster risks and impacts, through policies and laws, public awareness raising, training and education.

**Sustainable development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

**Vulnerability:** The conditions determined by physical, social, economic, and environmental factors or processes that increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards.

## **1.5 ALIGNING THE DDMP AS PER POLICY INSTRUMENTS**

In 2015, three important global agreements were made: the Sendai Framework for Disaster Risk Reduction (SFDRR), the Sustainable Development Goals, and the Paris Agreement on Climate Change. These agreements created a significant opportunity to work together to reduce disaster risks, achieve sustainable development, and tackle climate change. They all focus on making development last for the long term. The biggest change with the SFDRR is its focus on managing disaster risks before they happen instead of just dealing with disasters after they occur. These agreements underscore that reducing disaster risks involves many complex factors, including social and economic ones, and is key to sustainable development and becoming more resilient to disasters. Also, managing disaster risks helps achieve sustainable development.

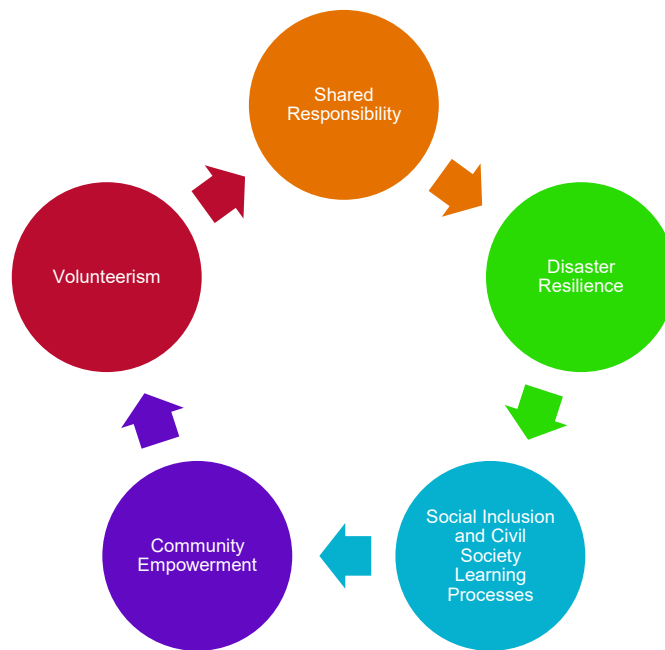
Further along, in 2016, the Prime Minister of India enunciated the Ten-Point Agenda for Disaster Risk Reduction in his inaugural speech at the Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) providing practical guidance and added impetus to implement the SFDRR. It requires action from not only disaster management agencies but also all parts of the government at all levels.

In line with the above international and national policy instruments, the Maharashtra State Disaster Management Plan (SDMP) was revised in 2023 to align with the shift from a relief-focused approach to a proactive, holistic, and integrated approach for DRR. The guiding principles of the SDMP are:

1. Shared Responsibility
2. Disaster Resilience
3. Social Inclusion and Civil Society Learning Processes
4. Community Empowerment
5. Volunteerism

The DDMP has also been aligned as per the above-mentioned policy instruments.

## SDMP Guiding principles



## 2 DISTRICT PROFILE

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Solapur district lies in the southern region of Maharashtra in the Pune Division. It is the fourth largest district in Maharashtra in terms of land area and the seventh largest in terms of population. The present-day Solapur district was previously part of the Ahmednagar, Pune, and Satara districts. In the pre-independence era, it was a sub-district of Ahmednagar from 1838 to 1864, and later, in 1871, it was reformed by joining the subdivisions of Solapur, Barshi, Mohol, Madha and Karmala and two subdivisions of Satara district, i.e. Pandharpur and Sangola, and in 1875, the Malshiras subdivision was also attached. Post-independence in 1956, Solapur was included in the State of Bombay, and it became a full-fledged district of Maharashtra State in 1960.

Solapur boasts a rich tapestry of history, having been governed by various dynasties such as the Andhrabhratyas, Chalukyas, Rashtrakutas, Yadavas, and Bahamanis. Despite its historical significance, it never became a capital city. Under British rule, Solapur was a strategic military base and a vital commercial link to Bombay, also playing a significant role in India's struggle for independence. The ancient name of the town, as revealed by temple inscriptions, evolved from "Sonnalage" to "Sonnalagi" and then to "Sandalpur." During the medieval period, it was known as Sonalpur. Notably, Solapur has a unique place in India's history for experiencing independence briefly from May 9 to 11, 1930, when local Congress leaders, including Shri. Ramkrishna Jaju took charge of maintaining law and order amidst a tumultuous period marked by police firings and public unrest.

### 2.1 AREA AND ADMINISTRATIVE DIVISIONS

The Solapur district is located in the south-central region of Maharashtra state. It covers 14,844.60 square kilometres (4.82% of the state's total area) between latitudes 17.10 degrees to 18.32 degrees North and longitudes 74.42 degrees to 76.15 degrees East.

The adjoining districts are Sangli on the southwest, Satara and Pune on the west, Ahmednagar on the northwest, and Dharashiv on the north and northeast. The district also shares an interstate boundary with Karnataka, Bijapur district in the south and Gulbarga district in the east.

The divisional headquarters is in Pune, and the district headquarters is in Solapur. The administrative hierarchy within a district begins with the District Collector (or District Magistrate), the chief authority responsible for district administration. They are supported by the Resident Deputy Collector (RDC) and Sub Divisional Officers (SDOs) in maintaining law and order. At the tehsil level, the tehsildar holds responsibility for law and order and reports to the SDOs. This creates a structured flow of command and communication from the District Collector to SDOs and then to tehsildars, ensuring efficient governance and coordination at all levels of district administration.

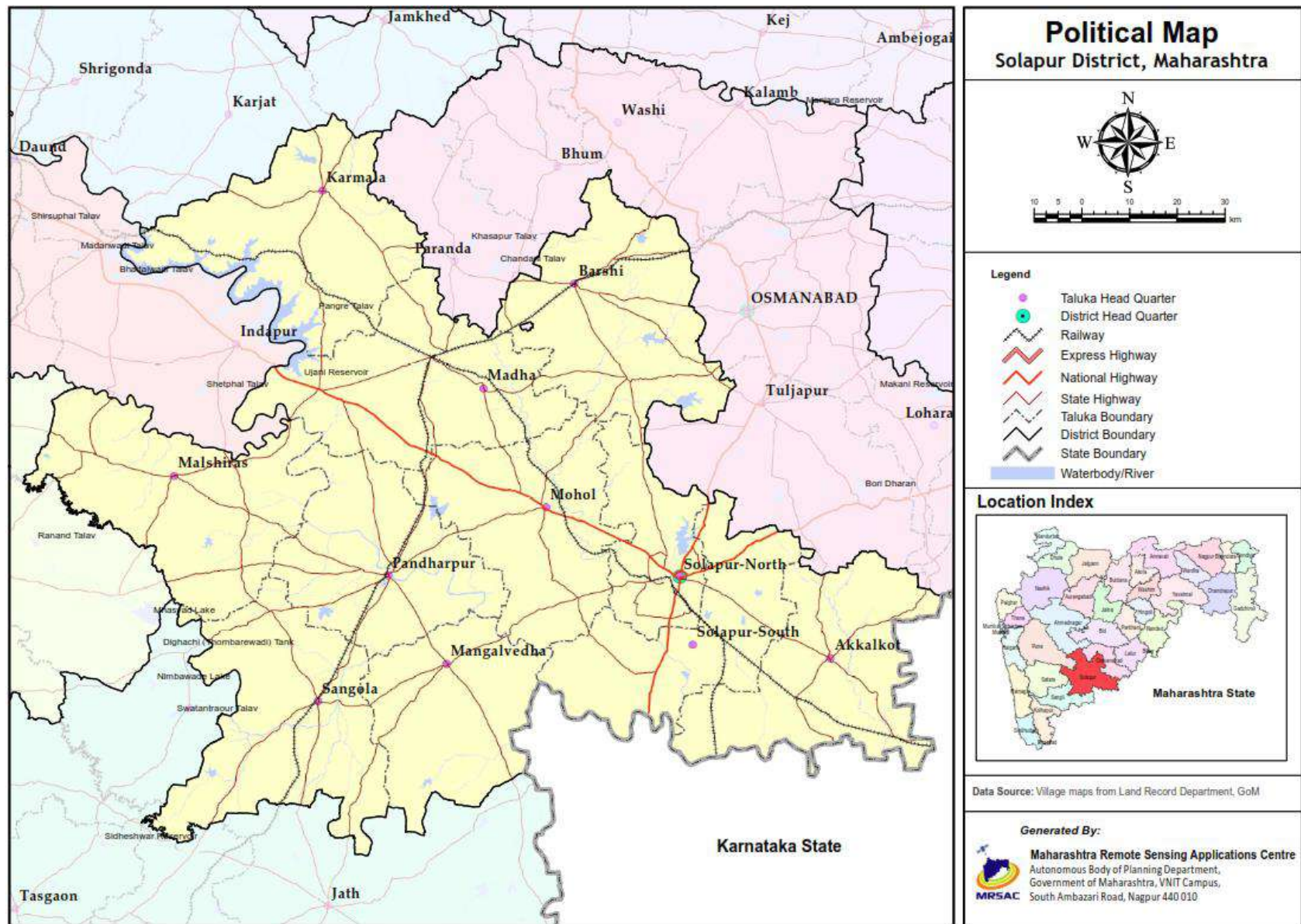


Figure 1: Political map of Solapur district (MRSAC)

Table 1: Administrative Units within Solapur district (Census 2011, Official Solapur District website, DSA 2023-24)

S. No.	Sub-Division	Tehsil	Area (sq. km)	Headquarter	Circles	Villages	Gram Panchayats	Urban Local Bodies	Name of Urban Local Bodies
1.	Solapur-1	North Solapur	516.85	Solapur	5	40	36	1	Solapur
2.		Barshi	1,505.38	Barshi	10	137	128	2	Barshi, Vairag
3.	Solapur-2	South Solapur	1,189.57	Solapur	7	91	83	0	-
4.		Akkalkot	1,406.05	Akkalkot	9	138	109	3	Akkalkot, Maindargi, Dudhani
5.	Pandharpur	Pandharpur	1,275.52	Pandharpur	9	100	94	1	Pandharpur
6.		Mohol	1,324.70	Mohol	8	101	90	2	Mohol, Angar
7.	Kurduvadi	Madha	1,517.38	Madha	9	115	108	2	Madha, Kurduvadi
8.		Karmala	1,588.27	Karmala	8	122	111	1	Karmala
9.	Mangalvedha	Mangalvedha	1,143.67	Mangalvedha	7	81	79	1	Mangalvedha
10.		Sangola	1,498.31	Sangola	9	102	88	1	Sangola
11.	Akluj	Malshiras	1,607.98	Malshiras	10	116	103	4	Natepute, Akluj, Malshiras, Mahalung Shripur
	Total		14,895.00		91	1143	1029	18	



## 2.2 DEMOGRAPHIC PROFILE

Table 2: Major demographic features of Solapur district (Census 2011)

S. No.	Demographic Feature	Total	% to the total population	Male	Female
1.	Population	43,17,756	100.00	22,27,852	20,89,904
2.	Urban Population	13,99,091	32.40	7,09,509	6,89,582
3.	Rural Population	29,18,665	67.60	15,18,343	14,00,322
4.	Scheduled Castes Population	6,49,745	15.05	3,31,960	3,17,785
5.	Scheduled Tribes Population	77,592	1.80	39,785	37,807
6.	Children Population (<6 years)	5,38,453	12.47	2,85,879	2,52,574
7.	Elderly Population (>60 years)	4,71,419	10.92	2,28,422	2,42,997
8.	Persons with Disabilities	1,15,755	2.68	66,569	49,186
9.	Literates	29,10,676	67.41	16,51,266	12,59,410
10.	Population Density	290 sq. km		-	-
11.	Sex Ratio (NFHS 2015-16)	963 females per 1,000 males		-	-

## 2.3 AGRICULTURE AND LIVESTOCK

The primary rainfed Kharif crops in the district include Bajra, Sunflower, Red Gram, Groundnut, Horse Gram, Moth bean, and Black Gram. Conversely, Rabi Jowar, Safflower, and Gram dominate the rainfed Rabi season. Irrigated agriculture includes growing sugarcane, sunflowers, wheat, and summer groundnuts. There is a notable expansion in the cultivation of horticulture crops under irrigation, with Ber, Pomegranate, and Grape leading in coverage, even gaining recognition in national and international markets. Mango, K. Lime, and Sapota also contribute to the district's horticultural diversity. The vegetable production under irrigation includes staples like Onion, Chilli, Brinjal, Tomato, Okra, Bitter gourd, Cucumber, and various leafy vegetables. Additionally, a smaller segment of land is dedicated to floriculture, with Marigold, Chrysanthemum, Tuberose, and Rose being the main flowers cultivated.

Table 3: Agricultural utilisation of land in Solapur district (KVK Solapur)

S. No.	Agricultural Use of Land	Area (in ha)	% against total cropped area
1.	Total cropped area	11,64,000	78.15
2.	Total area under fruit and vegetable crops	29,499	2.53
3.	Total area under cereal crop	8,15,200	70.03
4.	Total area under pulses	1,10,000	9.45
5.	Total area under oilseeds	73,100	6.28
6.	Total area under medicinal plants	90	0.01

Apart from agricultural resources, the district is also rich in animal husbandry resources. According to the 2019 Animal Husbandry Census, the district has 23,33,513 domestic animals (except dogs).

*Table 4: Distribution of domestic animals in Solapur district (DSA 2023-24)*

S. No.	Type of animal	Value
1.	Cow & Bullocks	31.94%
2.	Buffaloes	21.27%
3.	Sheep & Goats	46.62%
4.	Other	0.16%

Under the veterinary institutional setup in the district, there are six hospitals, 120 dispensaries, 83 first aid centres, and six other institutions.

## 2.4 HEALTH PROFILE

*Table 5: Details of Government Health Facilities in Solapur District (DSA 2023-24)*

S. No.	Type of Health Facility	Number
1.	Sub-Centre	427
2.	Primary Health Centres	92
3.	Dispensaries	28
4.	Hospitals	20
5.	Maternity Hospitals	26
	<b>TOTAL</b>	<b>593</b>

The Solapur Civil Hospital, Shri Chhatrapati Shivaji Maharaj Sarvopchar Rugnalaya, is one of the key hospitals in the region as the patients from adjoining districts like Dharashiv, Latur and state of Karnataka, Telangana visit it.

The district's health infrastructure is government-led but strongly augmented by private health infrastructure. There are 423 private hospitals in the district, mainly in Solapur City.

## 2.5 EDUCATION PROFILE

The district has a robust education system with both public and private educational institutions, including schools, colleges, and a university.



Table 6: Details of Education Facilities in Solapur District (DSA 2023-24)

S. No.	Type of Education Facility	Facilities	Students
1.	Primary Schools	4,626	4,50,850
2.	Secondary & Higher Secondary Schools	1,380	2,31,540
3.	Colleges	104	1,05,778
4.	Industrial Training Institutes	37	5,243
5.	Technical Degree & Diploma Institutes	36	10,695
6.	Medical Colleges	15	1,131

## 2.6 INDUSTRY PROFILE

The district is renowned for its handloom and powerloom industry, which employs around 30,000 workers across approximately 6,000 operational units. These industries primarily produce Jacquard chaddars, towels, and napkins, many of which are exported globally. The Beedi industry is another major sector, with 115 units employing over 70,000 women and 1,725 factory workers. Worker welfare is supported by various unions in both industries.

Apart from these two major industries, the district is also home to the depots and bottling plants for petroleum and LPG gas in Pakni village of North Solapur tehsil. The distribution of other industries in the district is summarised below.

Table 7: Details of Industries in Solapur District (DSA 2023-24)

S. No.	Tehsil	MIDC Projects	CIDC Projects	Large Industries	MSMEs
1.	Karmala	8	71	4	385
2.	Madha	88	0	4	599
3.	Barshi	6	241	2	1,144
4.	North Solapur	1,296	0	20	4,893
5.	Mohol	646	65	24	1,643
6.	Pandharpur	0	0	4	821
7.	Malshiras	0	91	10	1,240
8.	Sangola	0	34	2	590
9.	Mangalvedha	12	6	6	390
10.	South Solapur	0	169	10	1,230
11.	Akkalkot	0	16	3	529
	<b>Total</b>	<b>2,056</b>	<b>693</b>	<b>89</b>	<b>13,464</b>

## 2.7 POLICE AND FIRE SERVICE

The Police Department of the district is led by the Superintendent of Police (SP) for rural areas and the Commissioner of Police (CP) for Solapur City.

Table 8: Details of Police in Solapur District (DSA 2023-24)

S. No.	Tehsil	Police Station	Outpost	Police Chowki
1.	Karmala	3	4	0
2.	Madha	1	2	0
3.	Barshi	4	4	0
4.	North Solapur	26	5	0
5.	Mohol	2	2	2
6.	Pandharpur	5	4	5
7.	Malshiras	4	1	0
8.	Sangola	1	1	0
9.	Mangalvedha	1	4	1
10.	South Solapur	1	3	1
11.	Akkalkot	3	7	3
	<b>Total</b>	<b>51</b>	<b>37</b>	<b>12</b>

The 11 fire stations in the district are attached to the urban local bodies in the tehsils. They respond to the fire incidents around the vicinity of the fire stations.

## 2.8 CRITICAL INFRASTRUCTURE

Table 9: Summary of critical infrastructure in Solapur district

S. No.	Sector	Critical Infrastructure	Distribution in district
1.	Transportation	Airport	1 ( <u>Solapur City</u> )
2.		Helipad	1 ( <u>Pandharpur</u> )
3.		<u>Railway Station</u>	51 (Solapur Junction – Grade A)
4.		Roads	20,999.02 km across the district (DSA 2023-24)
5.		<u>Bus Depot</u>	8 (Solapur, Pandharpur, Barshi, Akkalkot, Akluj, Karmala, Sangola, Kurduvadi)
6.	Power	Sub-Station	268 across the district
7.		High Tension Line	25,555.11 km across the district
8.		Low Tension Line	35,158.92 km across the district
9.	WASH (detailed table in Annexure F)	Dams	4 large, 9 medium and 89 small projects
10.		Solid Waste Management Household Assets	1,23,255
11.		Grey Water Management Household Assets	53,501
12.	Telecommunication	<u>Base Transceiver Station</u>	7,280 across the district

## 2.9 LAND USE PATTERN

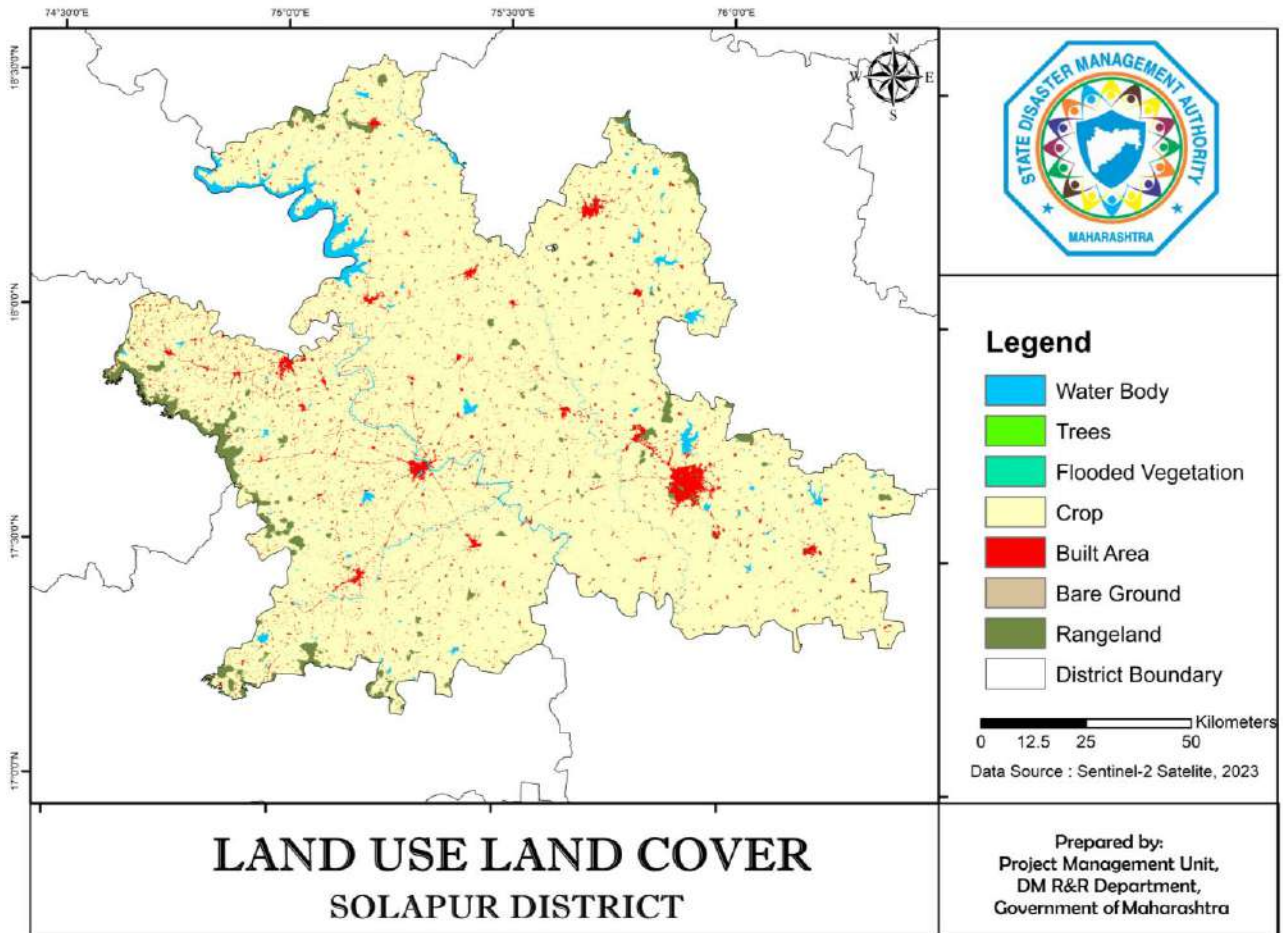


Figure 2: Land Use Land Cover map of Solapur District 2015-16 (Data Source: Sentinel-2 Satellite 2023, Map Prepared By: Project Management Unit, DM R&R Department, Government of Maharashtra)

Table 10: Distribution of land use types in Solapur district (Sentinel-2 Satellite, 2023)

Type of Land Use	Geographical Features	Percentage
<b>Crops</b>	Humans planted/plotted cereals, grasses, and crops not at tree height	91.50401
<b>Built Area</b>	Human-made structures; major road and rail networks; large homogenous impervious surfaces, including commercial and residential buildings	3.556784
<b>Rangeland</b>	Open areas covered in homogenous grasses with little to no taller vegetation	2.468400
<b>Water</b>	Areas where water was predominantly present throughout the year	2.435059
<b>Flooded Vegetation</b>	Areas of any vegetation with obvious intermixing of water throughout the majority of the year	0.019783
<b>Trees</b>	Any significant clustering of tall (~15 feet or higher) dense vegetation, typically with a closed or dense canopy	0.015819
<b>Bare Ground</b>	Areas of rock or soil with very sparse to no vegetation for the entire year	0.000148

## 2.10 CLIMATE

Solapur district has an arid to semi-arid climate, with the temperature spectrum being very widespread between the record highest temperature of 46° C and coldest temperature of 4.4 °C. The district received a mean monthly total rainfall of 706.7 mm with the record highest rainfall of 191.0 mm received on 12 August 1940.

Table 11: Annual climatic conditions in Solapur district (IMD Climatological Tables 1991-2020)

Month	Minimum Temperature (°C)	Maximum Temperature (°C)	Rainfall (mm)	No. of Rainy Days
January	31.7	16.0	3.7	0.2
February	34.4	18.2	2.9	0.2
March	37.9	21.7	10.0	1.0
April	40.2	24.6	17.4	1.8
May	40.4	25.2	35.6	2.5
June	35.2	23.4	111.1	6.8
July	32.1	22.6	121.4	7.8
August	31.6	22.0	122.8	8.8
September	32.2	22.0	154.3	8.3
October	32.9	20.7	106.9	5.7
November	32.2	18.1	17.4	1.1
December	31.3	15.6	3.1	0.3
<b>Annual</b>	<b>34.4</b>	<b>20.8</b>	<b>706.7</b>	<b>44.2</b>

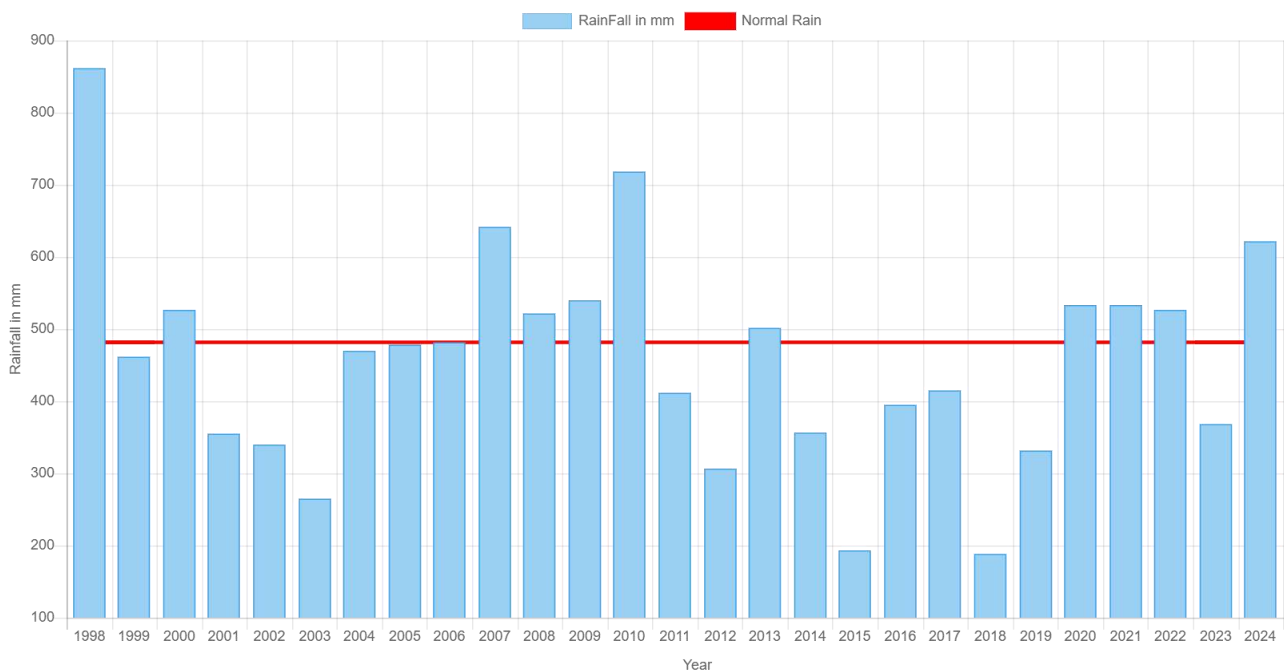


Figure 3: Historical record of annual rainfall in Solapur district from 1998-2024 (Mahaved)

As per IIT Madras' climate modelling of Solapur city, annual rainfall and monthly maximum temperature show an increasing trend while the monthly minimum temperature is showing a slightly negative trend. Statistically, all the trends are significant. The rainfall is decreasing at a rate of about 0.02 mm per year and monthly maximum temperature at a rate of -0.001 °C per year. The minimum temperature is decreasing at a rate of 0.0006 °C per year.

## 2.11 ENVIRONMENT AND NATURAL RESOURCES

Solapur district is characterised by its position within the Bhima and Sina River basins. The entire district's drainage system is dominated by the Bhima River and its tributaries. The topography includes the Balaghat range's spurs traversing Barshi tehsil's northern side, while Karmala, Madha, and Malshiras tehsils feature a mix of low tablelands and small, scattered hills. These geological formations function as a natural watershed, delineating the flow between the Bhima and Sina rivers.

Table 12: Topography of Solapur district (DDMP 2017)

S. No.	Relief Division	Area (sq. km)	Percentage of Total Area (%)
1.	The Hilly Region	497	3.34
2.	The Plateau Region	11,916	80.00
3.	The Lowland Region	2,482	16.66
	<b>Total District</b>	<b>14,895</b>	<b>100.00</b>

Of the district's total area, 3.54 per cent (i.e. 527.18 square km) is forest area. Of this, 2.36 per cent is under the Forest Department's jurisdiction, whereas 1.18 per cent is under the Revenue Department's jurisdiction. All of the forest areas are categorised as sporadic, and there are no dense forests in the district. Apart from this, there are some afforestation works carried out by the Social Forestry Department. There is one bird sanctuary located in the district, i.e. Great Indian Bustard (Maldhok) Sanctuary, headquartered in Nannaj, North Solapur. The major flora found in the sanctuary are Neem, Sissoo, Babul, Bor, Tarwad, Henkal, Dongri, Kusali Pavanya, Sheda, Marvel etc. The major fauna are the Great Indian Bustard, Blackbuck, Wolf, Indian Fox, Jackal etc.

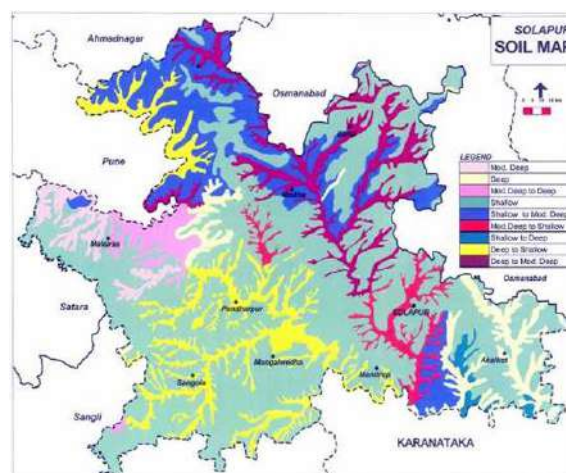
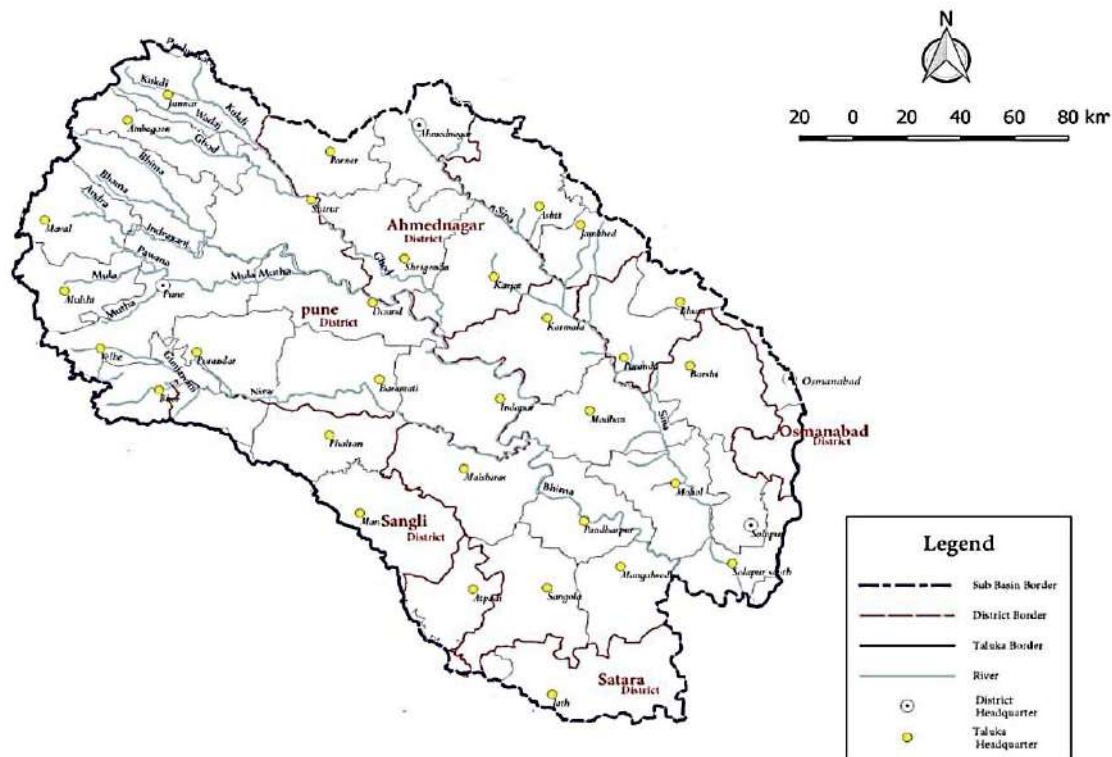
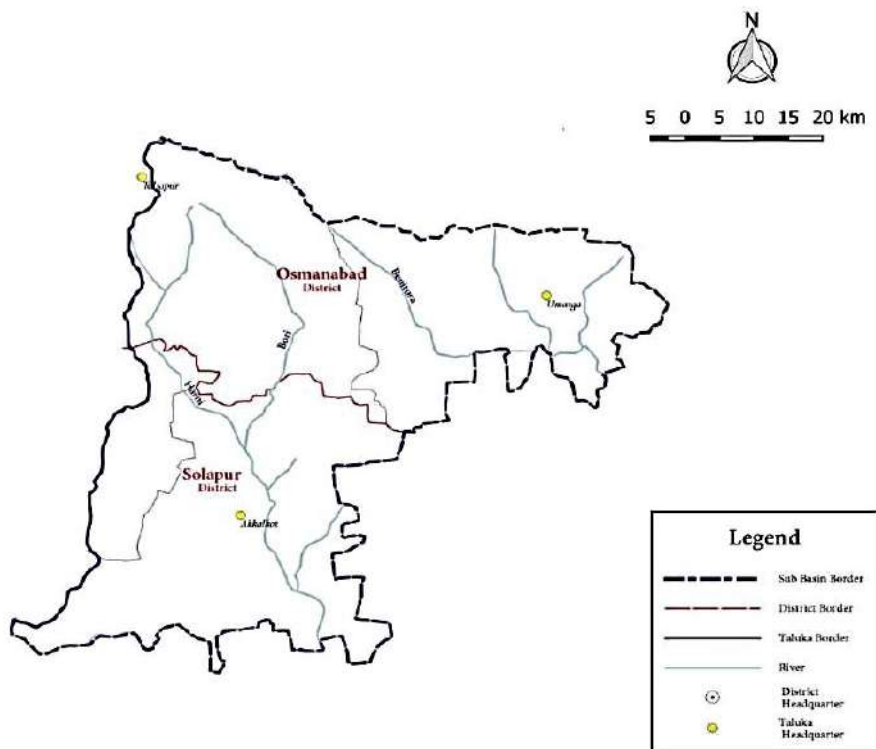


Figure 4: Soil map of Solapur District (National Bureau of Soil Survey & Land Use Planning, Nagpur)

2.12 RIVER SYSTEM AND DAMS



K-5 Upper Bhima sub basin



K-6 Lower Bhima sub basin

Figure 5: Map of Solapur district in Upper & Lower Bhima sub-basins (*Integrated State Water Plan of Maharashtra 2024*)



Bhima is the most significant river flowing through the district. It originates from the Bhima Shankar plateau of Ambegaon tehsil in Pune district. After leaving the Solapur district, it enters Karnataka state and meets with the Krishna River. The right bank tributaries of Bhima are Nira and Mann, while the left bank tributary is the Sina. Besides, a good number of lesser streams in the Solapur district, which form the tributaries of the Bhima and Sina, are the local feeders. The Bhima and the Sina flow roughly in a south-easterly direction, during the Nira east and the Man northeast direction. Most of these rivers are non-perennial in nature and flow only during the rainy season.

The following irrigation projects are located in the district.

*Table 13: List of irrigation projects in Solapur district (DSA 2023-24)*

S. No.	Name of Project	Location	River	Capacity (ten lakhs cubic meters)
1.	Ujani Dam	Madha, Karmala	Bhima	3320.01
2.	Sina-Madha Lift Irrigation	Madha	Sina	0.00
3.	Dahigaon Lift Irrigation	Karmala	Bhima	0.00
4.	Bhima-Sina Link Canal	Karmala, Madha, Mohol	Bhima, Sina	0.00
5.	Hingani	Barshi	Bhogavati	45.51
6.	Javalgaon	Barshi	Nagzari	4.91
7.	Bori	Akkalkot	Bori	23.29
8.	Ekrukh	North Solapur	Adela	61.16
9.	Ashti	Mohol	Ashti	23.01
10.	Bhudihal	Sangola	Belwan	172.00
11.	Tisangi	Pandharpur	Local River	24.47
12.	Pimpalgaon Dhale	Barshi	Sira Nalla	12.66
13.	Mangi	Karmala	Kanola	30.39

The Irrigation Department monitors several locations within the Bhima River basin area for river water level, reservoir water storage, and reservoir water discharge. Of these, the following are the major monitoring locations for river water level in Solapur district.

*Table 14: Details of major river water level monitoring in Solapur district*

S. No.	Monitoring Location	Total Storage (TMC)	Warning Level (m)	Danger Level (m)
1.	Ujani Dam	117.23	496.83	497.58
2.	Bori Dam	0.82	459.10	459.89
3.	Sangam - Bhima River	-	458.40	459.03
4.	Pandharpur - Bhima River	-	443.00	445.40

## 2.13 HISTORICAL AND RELIGIOUS CENTRES

There are several important historical and religious centres in Solapur district. The district is host to several pilgrims and tourists throughout the year.

Table 15: Major historical and religious centres in Solapur District (DDMP 2017)

S. No.	Name	Location
1.	Siddheshwar Temple	Solapur
2.	Revansiddheshwar Temple	Solapur
3.	Hazrat Shah Zahur Dargah	Solapur
4.	Bhuikot Fort	Solapur
5.	Swami Gajanan Maharaj	Gangapur
6.	Swami Samarth Temple	Akkalkot
7.	Akkalkot Rajwada	Akkalkot
8.	Vitthal Rukmini Temple	Pandharpur
9.	Shri Bhagwant Temple	Barshi
10.	Kamla Bhavani Temple	Karmala
11.	Ardhanari Nateshwar Temple	Velapur
12.	Sant Damaji Temple	Mangalvedha
13.	Sai Baba Temple	Hotagi
14.	Shri Dahigaon Jain Tirth	Dahigaon

Due to numerous religious centres being located in the district, there are several religious mass gatherings that take place throughout the year. In addition to the law and order challenges, these also pose a crowd management challenge to the District Administration and requires dedicated planning prior to the conduct of these gatherings.

Table 16: Major religious mass gatherings in Solapur District with >1 Lakh crowd

S. No.	Name	Time of Year	Expected Crowd (in Lakhs)	Location
1.	Siddheshwar Yatra	Jan	1-1.5	Solapur City
2.	Ashadi Yatra	Jun/ Jul	20-22	Pandharpur
3.	Kartiki Yatra	Sep/ Oct	5-6	Pandharpur
4.	Magh Yatra	Feb/ Mar	3-4	Pandharpur
5.	Chaitra Yatra	Apr/ May	2-3	Pandharpur
6.	Shri Mahalingraya Yatra	Nov	4-5	Huljanti, Mangalvedha
7.	Shri Siddheswar Mahadev Yatra	Feb	3-4	Machnur, Mangalvedha
8.	Shri Martuling Ganapati Yatra	Jan	4-5	Sidhapur, Mangalvedha
9.	Shri Lakshmidevi Yatra	May	0.5-1	Lakshmidahivadi, Mangalvedha
10.	Gaubipir Urus	Aug	1-2	Mangalvedha
11.	Shri Swami Samarth Jayanti	Mar/ Apr	1-1.5	Akkalkot City



## **2.14 TRANSPORT NETWORK**

Solapur district is very well-connected to major cities such as Mumbai, Hyderabad, and Bangalore by roadways, railways and an airport. It is also equipped with a helipad near Pandharpur.

Solapur is well connected by road with major cities of Maharashtra, the adjoining state capital of Hyderabad, and important cities in Karnataka by four national highways. Ratnagiri-Nagpur National Highway NH-204 passes through the city, connecting Solapur to other important cities in Maharashtra like Nagpur, Sangli, Kolhapur and Nanded. The four-lane Solapur-Aurangabad national highway project has reduced the time and cost of travelling from Solapur to Aurangabad.

The Solapur Junction railway station is the main railway hub within the district. The Solapur Railway Division is an important division connecting South India to Western & Northwest India.

The Solapur Airport is located to the south of Solapur city. In 2025, one scheduled flight, to and from Goa, has started operating out of Solapur Airport. The other nearest airport to Solapur is Gulbarga Airport, located at a distance of 90 km.

### 3 RISK ASSESSMENT

The hazard, vulnerability, capacity, and risk analysis (HVCRA) were carried out for each tehsil. The methodology used was collecting the data and perceptions of people through a questionnaire survey with key stakeholders of each tehsil. A series of meetings and workshops were conducted to validate the analysis with the administrative officers of each tehsil. Each tehsil has its own disaster management plan prepared. The hazard and vulnerability analysis were also validated with the disaster management plan report of each tehsil.

#### 3.1 HVCRA FOR NORTH SOLAPUR

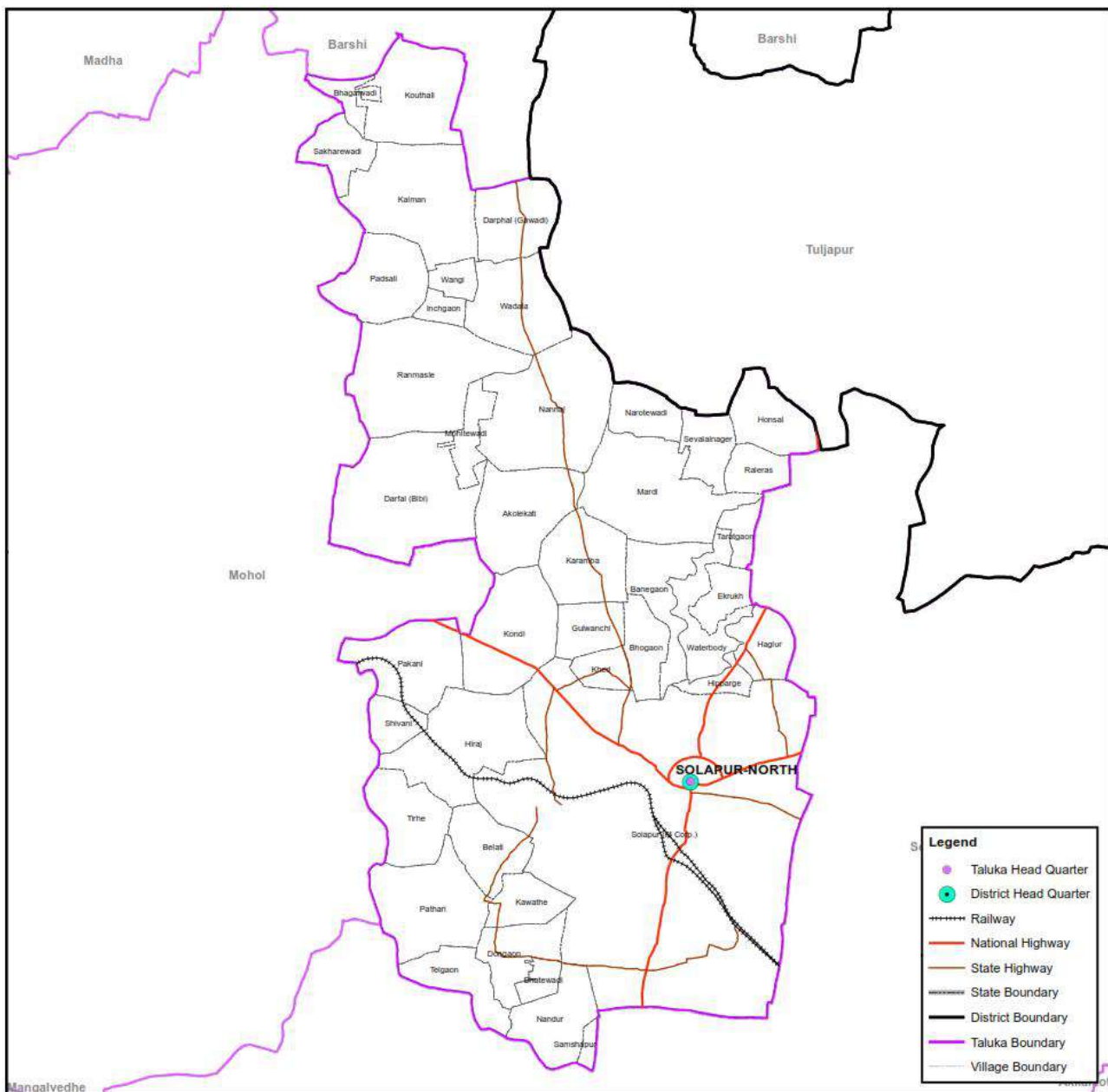


Figure 6: Village map of North Solapur tehsil (MRSAC)

North Solapur is located in the eastern side of district and is bordered by Dharashiv District to the northeast, South Solapur tehsil to the south and east, Barshi tehsil to the north and Mohol tehsil to the west. The tehsil headquarters is located at Solapur, which is also the district headquarters and its largest city.

*Table 17: Hazard and Vulnerability of North Solapur tehsil*

<b>Hazard</b>	<b>History</b>	<b>Vulnerability</b>
<b>Earthquake</b>	The tehsil lies in Zone 3, with a susceptibility of 4 to 7 Richter scale. It witnessed tremors in the 1993 Latur earthquake, but it has no history of earthquakes.	There are pockets of dense population in Solapur city, and the organic development of the city makes it more vulnerable to earthquakes. Most of the structures do not comply with the earthquake-resilient building codes. There is a susceptibility to disrupting critical services like water supply and drainage systems. The damage would be very high at the time of religious festivals like “Wari” when the floating population in North Solapur is more than 15 lakhs.
<b>Flood</b>	In 2020, the flooding in the Sina River damaged cropland and houses on its banks. The villages impacted were Pakhni, Shivni, Tirhe, Pathari, and Telgaon.	The tehsil is flanked by the river Sina, which is prone to flooding if water from released by the Ujani Dam.
<b>Flash Flood</b>	In 2020, flash floods were evident due to heavy precipitation, causing damage to houses in the low-lying areas and dense pockets.	The tehsil is prone to flash floods, especially in the low-lying and dense pockets.
<b>Drought</b>	In 2018, drought conditions damaged the crops.	The tehsil is vulnerable to drought due to high agricultural dependence.
<b>Lightning</b>	Lightning is frequent in North Solapur, with casualties being reported almost every two years.	The susceptibility to lightning is high in the pre-monsoon and monsoon periods every year.
<b>Heat Wave</b>	The average temperature is 40 degrees Celsius, rising to 45 degrees Celsius in peak summers.	Due to a high urban built-up area, the susceptibility to heat waves is high.
<b>Bio-Disasters</b>	There is a high susceptibility to epidemics, mainly air-borne and water-borne. The COVID-19 cases in all three waves were fairly high. It had a devastating impact on the tehsil, and the daily average reached its peak in April 2021.	The vulnerability to communicable diseases is high, especially with the congregation of populations during the religious festivals. The Shree Siddheswar Devasthan Yatra, which starts on the 14th of January, attracts a population of more than 1.5 lakh people to the premises during the 8-day festival. Similarly, the Khandoba Yatra in Bale village and the

<b>Hazard</b>	<b>History</b>	<b>Vulnerability</b>
		Yamai Devi yatra in Madi village in the months of December and April, respectively, attract a population of 20,000 people.
<b>Fire</b>	The events of fire are sporadic, but the scale is low.	The vulnerability of fire is attributed to the storage of firewood and cooking fuel. Though the scale is low, the susceptibility to fire is high, especially in summer months. The vulnerability increases due to a lack of awareness and low capacities.
<b>Accidental Drowning</b>	Accidental drowning is not evident in the North Solapur tehsil.	
<b>Road Accidents</b>	Road accidents are frequent, but the scale is low. In 2022, there was a major accident of a truck and a tractor, leading to four casualties.	The risk of road accidents is high due to high number of road safety rules being flouted.
<b>Others</b>	Other man-made hazards, such as rail accidents, industrial accidents, CBRN, and stampedes, are not evident.	

The major sources of livelihood are farming and employment in the sugarcane factories. There are very few opportunities for other types of employment and enterprise. 28% of the total houses are “kaccha houses.” Transport facilities preferred are mostly private. The city has its own water supply, drainage and waste management system, and a 24/7 electrical supply. The hazardous locations and low-lying areas are comparatively fewer, including very few densely congested areas.

The educational and medical facilities are fairly good but need upgradation. Environmental degradation is evident, with medium levels of air, water, and soil pollution.

The administrative capacities in terms of infrastructure, transport, human resources, training and capacity building are medium and need upgradation. The critical facilities, like the healthcare systems, are fairly good, with more than 20 hospitals, over 100 healthcare centres and polyclinics, and 2 multi-speciality hospitals. Quantitatively, the fire stations and police stations perform well. Qualitatively, these critical services need upgradation in terms of resources and equipment. There are 13 identified emergency shelters all over the tehsil, with the capacity to host approximately 10,000 people in emergency scenarios as per the tehsil Disaster Management Plan 2024 of North Solapur. Also, a task force has been identified for search and rescue, temporary shelter management, transport facilities, a disaster management committee, first aid, water and sanitation facilities, and communication and surveillance teams.

RISK ANALYSIS FOR NORTH SOLAPUR					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	MEDIUM	MEDIUM	MEDIUM	MEDIUM
3	FLASH FLOODS	MEDIUM	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	MEDIUM	MEDIUM	LOW	HIGH
7	HEATWAVE	MEDIUM	LOW	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	HIGH
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	MEDIUM
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	LOW	LOW	MEDIUM	LOW
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	LOW

### 3.2 HVCRA FOR SOUTH SOLAPUR

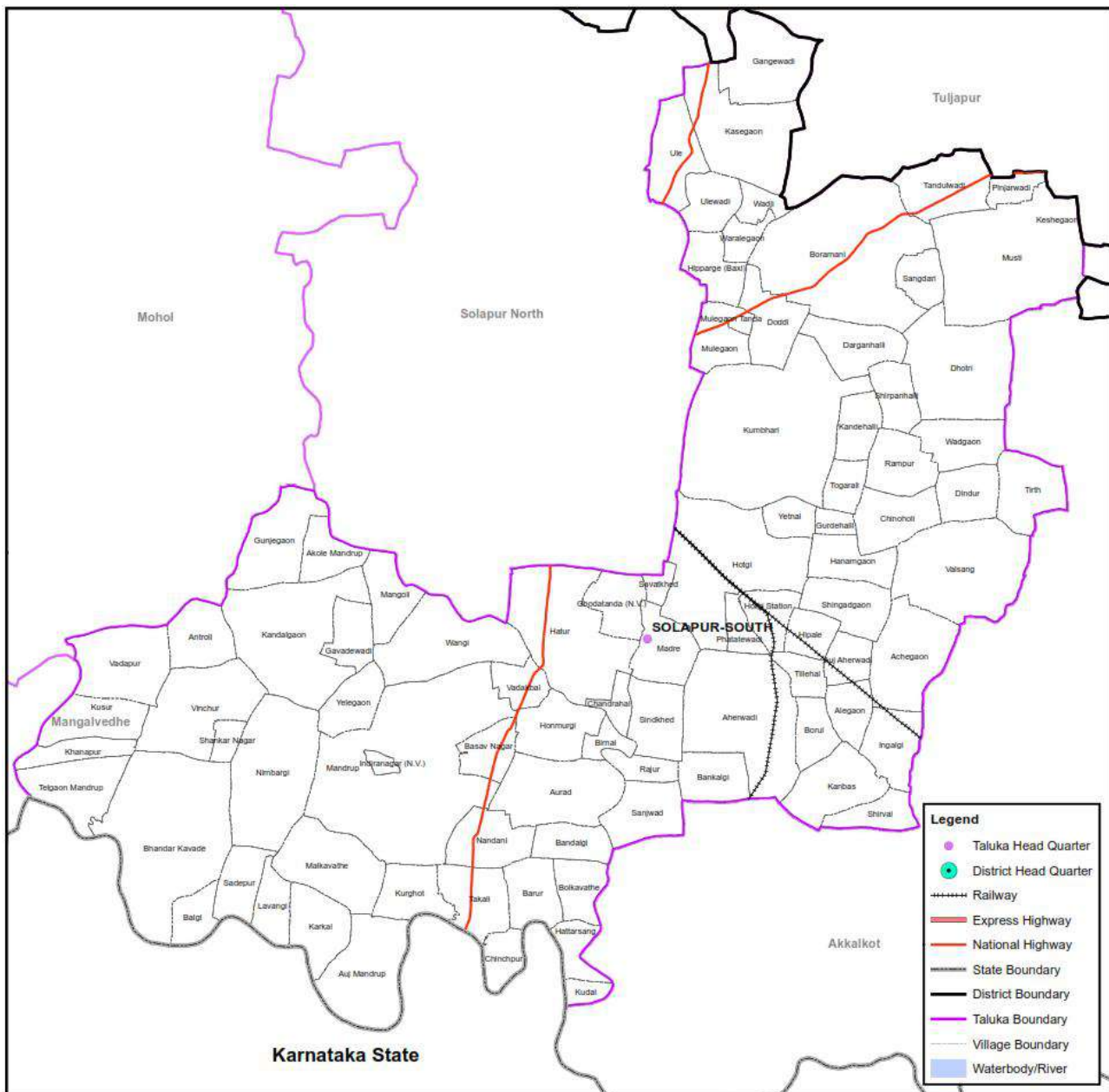


Figure 7: Village map of South Solapur tehsil (MRSAC)

South Solapur tehsil is located in the southeastern side of the district and is bordered by Dharashiv District to the northeast, North Solapur and Mohol tehsils to the north, Akkalkot tehsil to the southeast, Karnataka's Kalaburagi District to the south, and Mangalvedha tehsil to the west. The tehsil headquarters is located at Solapur, which is also the district headquarters. Mandrup, Kumbhari, Valasang, Musti and Boramani are the biggest villages in South Solapur.



Table 18: Hazard and Vulnerability of South Solapur tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	South Solapur lies in zone 3, with a susceptibility of 4 to 7 Richter scale. It witnessed tremors in 1993, but it has no history of earthquakes.	Miscellaneous damages were caused to the houses, and cracks developed on structures. The “kaccha houses,” which constitute 30% of the total built structures in the tehsil, incurred more damage due to the tremors.
<b>Flood/ Heavy Precipitation</b>	Floods were evident in South Solapur in August 2005, September 2006 and also in September 2018 on a small scale.	Every flood has caused damage to cropland on the banks of the Bhima River and destroyed houses situated on the banks. The vulnerability to flooding is consistent, which will keep increasing due to the wet spells caused by climate change impacts.
<b>Flash Flood</b>	The city area is susceptible to flash floods due to heavy precipitation in monsoons.	The city area is vulnerable to waterlogging due to the dense pockets and the lack of surface drainage system.
<b>Drought</b>	The susceptibility to droughts exists due to less rainfall and climate change impacts.	
<b>Lightening</b>	The susceptibility to lightning is high in the months of monsoon, though there are no casualties reported.	
<b>Heat Wave</b>	The threat of heat waves is high in the summer months, particularly from April to May, though the risk is medium.	
<b>Bio-Disaster</b>	Epidemics like malaria, dengue, swine flu and chikungunya have been evident in South Solapur. It has also reported a fair number of COVID-19 cases, with the highest number of cases reported in April 2021 in the Solapur district.	The vulnerability to communicable diseases is high, especially at religious places, where crowds can reach 1 lakh, such as the Harihar Mandir, Kudal Sangam, and Malsiddha Devasthan. In January, more than 50,000 people gathered in the village of Mundruk.
<b>Fire</b>	The incidences of fire are occasional; the causes are usually cooking fuel and electrical short circuits.	
<b>Road Accidents</b>	Road accidents occur on the Pune-Hyderabad Expressway, resulting in casualties and damage to vehicles.	
<b>Others</b>	Other hazards like rail accidents, accidental drowning, CBRN, stampedes and industrial accidents are not very evident.	

In South Solapur, the major source of livelihood is farming and small enterprises. The educational and healthcare facilities are good. There are more than 100 public and private hospitals, healthcare centres and polyclinics and approximately 10 multispecialty hospitals. The healthcare system, though, is not affordable to the general public. The tehsil has 13 clusters of schools with approximately 17 schools per cluster. The total number of schools, pre-primary, primary and high school, exceed 150. The level of pollution is medium, with evidence of water pollution and degradation of ecosystems.

The tehsil has limited administrative capacities in terms of infrastructural facilities, training and capacity building. Medical facilities are good, but the private facilities are unaffordable to many. The capacities of the fire station and police stations are operating with the existing set of tools and resources which requires upgradation with modern techs. As per the tehsil disaster management plan of 2024, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.

RISK ANALYSIS FOR SOUTH SOLAPUR					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	MEDIUM	HIGH	MEDIUM	MEDIUM
3	FLASH FLOODS	LOW	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	MEDIUM	MEDIUM	LOW	MEDIUM
7	HEATWAVE	MEDIUM	LOW	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	HIGH
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	LOW	LOW	MEDIUM	LOW
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	LOW



### 3.3 HVCRA FOR AKKALKOT

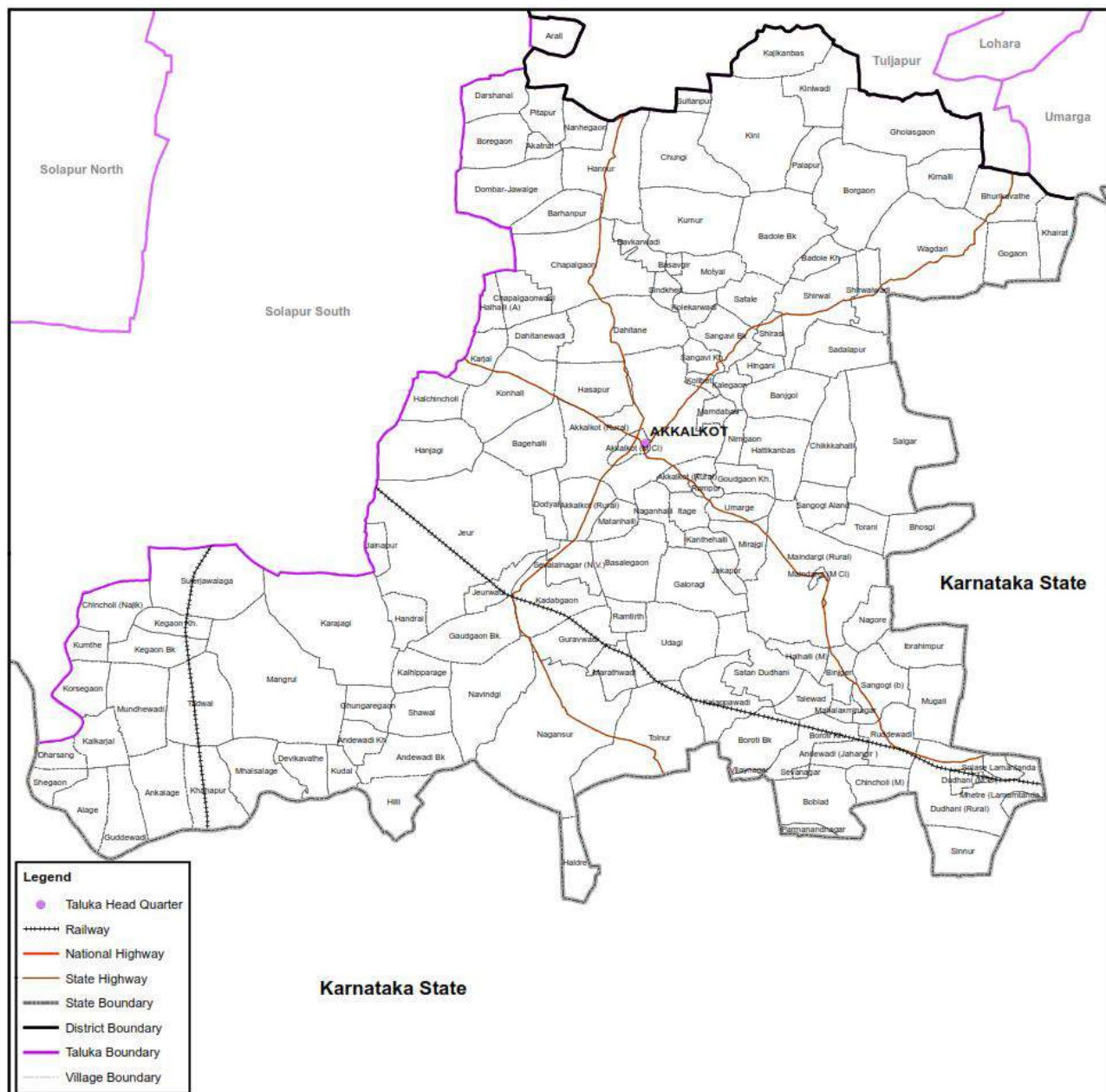


Figure 8: Village map of Akkalkot tehsil (MRSAC)

Akkalkot is highly religiously important in Maharashtra due to the Shri Swami Samarth Temple, a 19th-century saint who is believed by his devotees to be an incarnation of Lord Dattatreya. Akkalkot is a city and municipal council situated 40 km southeast of Solapur and very close to the border between Maharashtra and Karnataka states. The tehsil contains 138 villages in addition to the city.

Table 19: Hazard and Vulnerability of Akkalkot tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Akkalkot lies in zone 2 and 3, with a susceptibility of 4 to 7 on the Richter scale. It witnessed tremors in 1993, but it has no other history of earthquakes.	The built structure is susceptible to damage and failure due to earthquakes, as was evident in 1993 when the buildings developed cracks and the houses were damaged. The building construction and materials add to the vulnerability to earthquakes. There is less awareness regarding earthquake-resistant structures.
<b>Flood</b>	Akkalkot experienced flooding due to heavy precipitation in 2005, 2019, 2020 and 2021.	Due to heavy precipitation, Akkalkot has experienced crop damage, cattle deaths, and damage to houses and other buildings. Due to climate change impacts, the frequency of wet spells has increased, and heavy precipitation has been observed consistently for the past few years. The lack of an early warning system, the lack of awareness among the population, and the building technology add to the vulnerability.
<b>Flash Flood</b>	Flash floods are not very evident in Akkalkot, though there are sporadic incidents of waterlogging in the city.	The threat of flash floods cannot be overruled due to the dense pockets of built structures and the choking of natural surface drainage systems, which add to their vulnerability.
<b>Drought</b>	The susceptibility to droughts exists due to less rainfall and climate change impacts.	
<b>Lightning</b>	The threat of lightning is conspicuous, though the risk is medium.	
<b>Heat Wave</b>	The threat of heat waves is not very evident.	
<b>Bio-Disasters</b>	Epidemics are evident in the tehsil. 2011-12 had peak epidemic cycles, followed by the COVID-19 pandemic in 2019-20 and 2020-21. The highest number of cases registered was in April 2021.	The susceptibility to epidemics will be high in Akkalkot due to the floating population for pilgrimage and the lack of hygiene and sanitation facilities. The communicable diseases would be high due to a lack of awareness and concentration of populations.
<b>Fire</b>	The instances of fire are apparently attributed to cooking fuel and electrical short circuits.	The vulnerability increases due to the density of the population and inaccessibility to fire engines.
<b>Road Accidents</b>	The number of road accidents is high, with the casualties mainly being pilgrims.	In 2022, 16 casualties were witnessed on the highway in the span of 48 hours, mostly by pilgrims. The risk of road accidents is high in Akkalkot.

Hazard	History/ Susceptibility	Vulnerability
<b>Stampede</b>	The susceptibility to stampedes is high owing to the concentration of population in the Shree Swami Samarth Temple, which has more than 50,000 pilgrims per day.	
<b>Others</b>	Other hazards like rail accidents, accidental drowning, CBRN, riots and Industrial Hazards are not very evident.	

In Akkalkot, the major source of livelihood is farming, and the economy is temple-based. There are very few employment opportunities with scope for enterprises. The environmental status is attributed to the climatic conditions, comprising degradation/erosion of soil due to rainfall and mining on a medium scale. The level of pollution of air and water is not very high, and the damage to ecosystems is low, but it can be aggravated by anthropogenic activities. 40% of houses are “kaccha houses”, likely to get damaged by the threat of any hazard. The city has a water supply system, a drainage system and a waste management system. The surface drainage system is insufficient and needs upgradation. The electricity supply is hindered and inconsistent. 5% of the total city has hazard exposure, with 1% in low-lying areas and 10% in densely congested areas. The vulnerability increases as 20% of the area of the city is inaccessible to ambulances and fire engines. The banks of the Bhima River are encroached on, and almost 21,000 people in the tehsil can be impacted by the flooding of the Bhima River.

The tehsil has low administrative capacities in terms of infrastructural facilities, training, and capacity building. The critical infrastructural facilities of the tehsil are good: medical facilities with 9 PHCs, more than 200 hospitals, healthcare centres, polyclinics, one multispecialty hospital, and 236 Asha workers. There are two fire brigades with a staff of 3 firefighting personnel.

There are two police stations with a staff of 45 policemen. There are 2 NGOs working in the tehsil with more than 20 volunteers. The trained volunteers, like swimmers, 5 in nos. 6 “Sarp-Mitra”, 4 “Police-Mitra”, and 4 “Nisarg-Mitra”, are ready for support in emergency scenarios. There are five colleges, 60 schools, 20 Mangal Karyalayas, and 60 open grounds, which could be used for temporary shelter in emergency scenarios.

The capacity for crowd management is very low, and a team of trained experts is needed to maintain law and order in case of emergencies, especially on the Swami Samartha Temple premises. The temple management's capacities are not available, and a joint mechanism is required for the efficient disaster management response in case of emergencies. As per the tehsil's disaster management plan for 2024, a task force has been identified for search and rescue, temporary shelter

management, transport facilities, a disaster management committee, first aid, water and sanitation facilities, and communication and surveillance teams.

RISK ANALYSIS FOR AKKALKOT					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	MEDIUM	HIGH	MEDIUM	HIGH
3	FLASH FLOODS	LOW	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	MEDIUM	MEDIUM	LOW	MEDIUM
7	HEATWAVE	MEDIUM	LOW	LOW	LOW
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	HIGH
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	MEDIUM	MEDIUM	MEDIUM	HIGH
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	LOW



### 3.4 HVCRA FOR BARSHI

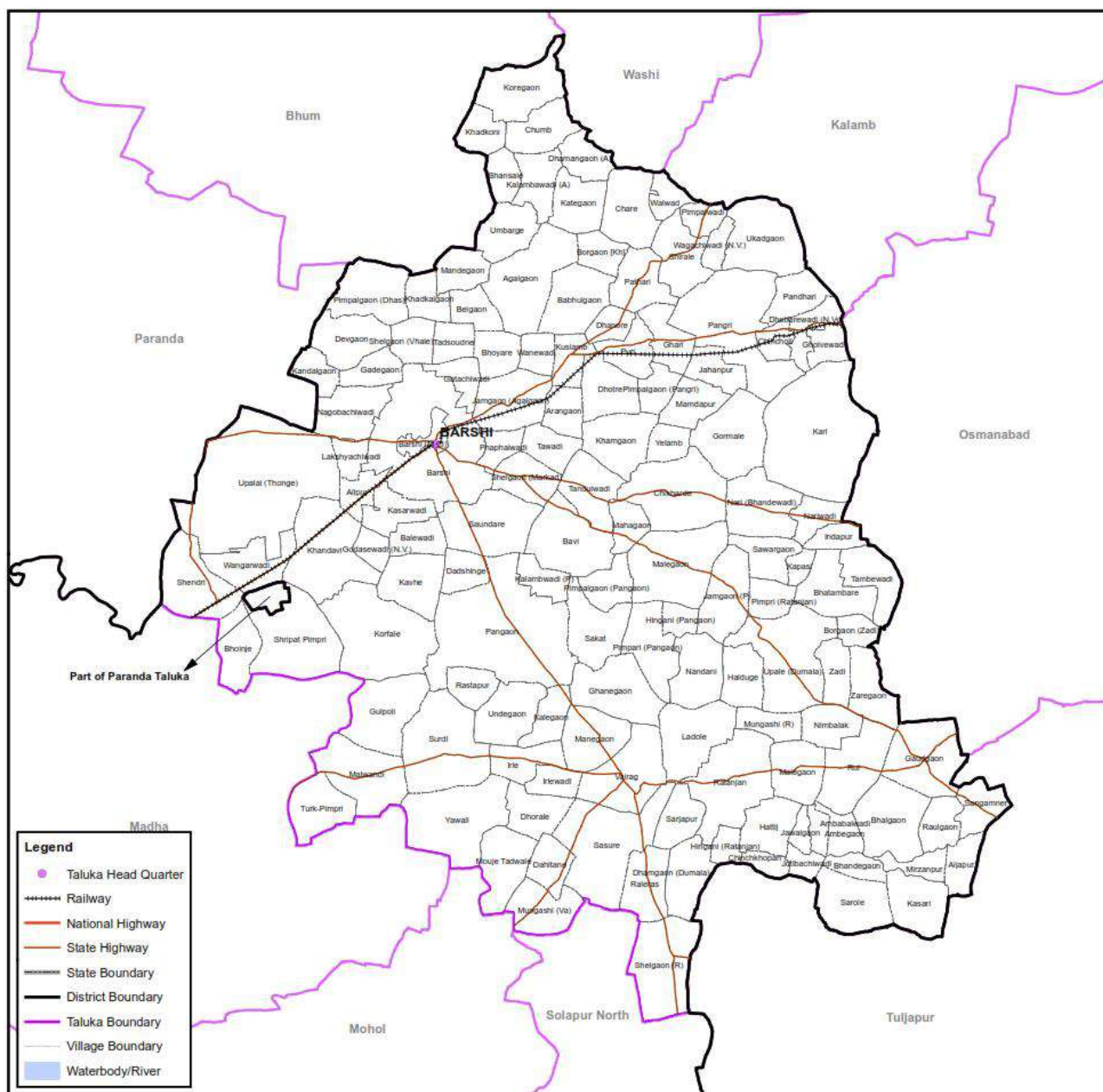


Figure 9: Village map of Barshi tehsil (MRSAC)

Barshi was established in 1865 and is the second-largest city in Solapur District. It is famous for the 'Bhagwant temple', which is dedicated to Shri Vishnu. It is a hub for business, industry and tourism, with a high number of lentil industries in particular. Barshi is forthcoming as a medical, educational and agricultural market centre for the rural masses from the nearby Marathwada region.

Table 20: Hazard and Vulnerability of Barshi tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Barshi lies in zone 3, with a susceptibility of 4 to 7 on the Richter scale. It witnessed tremors in 1993, but it has no history of earthquakes.	Barshi has sporadic pockets of dense housing that are susceptible to damage from earthquakes. Critical services and facilities are also highly susceptible to

Hazard	History/ Susceptibility	Vulnerability
		damage. The number of buildings complying with earthquake-resistant codes is low.
<b>Flood</b>	Floods were evident in 2020 and 2021. The Bhogawati River's vulnerability to floods is low, as it has not reached a high flood level in the past ten years.	The exposure to floods from the Bhogawati River is low.
<b>Flash Flood</b>	Flash floods were evident in 2016 due to heavy precipitation.	The areas vulnerable to heavy precipitation are Vairag, Pangaon, Surdi, Gaundgaon, Agalgaon and the low-lying areas of Barshi City. There was damage to crops and houses.
<b>Drought</b>	A drought was witnessed in 2018, but the impact was low.	
<b>Lightning</b>	There are cases of lightning during the monsoons. At least one lightning strike is witnessed every year, though the risk is medium.	There are cases of mortality of animals and damage to built structures.
<b>Heat Wave</b>	Heat waves are quite evident in Barshi.	
<b>Bio-Disasters</b>	Epidemics are evident during the monsoon months, though the impact is low. COVID-19 created havoc on 24 April 2021, 18 January 2022, and 22 December 2020, with a maximum number of cases reported in a day. This proves that susceptibility to epidemics is high.	Population awareness of epidemics is low. Hygiene and sanitation conditions add to the threat of exposure to bio-disasters.
<b>Fire</b>	There are sporadic cases of fire, mostly accidental.	In most cases, material losses far exceed human life losses. The vulnerability increases due to dense population pockets and inaccessibility to fire brigades.
<b>Road Accidents</b>	There are sporadic road accidents, but the risk of accidents is low.	
<b>Others</b>	The cases of accidental drowning, CBRN hazards, stampedes, riots, and industrial hazards are not very evident.	

Barshi has a fair number of industries, and the livelihood source is farming and industries, with fewer opportunities in any other sector. The educational facilities are good, and the literacy rate is good. The overall living standards are medium. The city has 35% of “kaccha houses”. 5% of the land of the city is exposed to different hazards, with 2% of the area being low-lying. 20% of the city has

densely congested pockets, and almost 13% of the city area cannot be accessed by ambulances and fire engines. The city has its own water supply, drainage and waste management system. The vulnerability to hazards increases as these systems are susceptible to damage and failure in emergencies. It also has a 24/7 electrical supply. The status of environmental issues is good, with low levels of air, water and soil pollution. The flatland geo-morphology reduces the risks from disasters like landslides. There is no forest cover, and a medium quantum of mining is observed.

The administrative capacities are low with respect to infrastructural facilities and capacity building. The tehsil has 297 hospitals, 11 PHCs and 68 other healthcare centres. The city has 11 multispecialty hospitals and 38 ASHA workers. There is one fire station with a staff of 9 personnel and two fire engines. The fire station is equipped with the necessary types of equipment as per the list annexed. There are four police stations with a staff of 200 police. The trained volunteers' task force is adequately resourced, with 35 trained swimmers, 5 "sarp-Mitra", 11 "police-Mitra", and 7 "Nisarg-Mitra" to respond to any emergencies. There are 18 colleges, 59 schools, 13 mangal-karyalas and 25 open grounds, which can be used as temporary shelters in emergency scenarios. There are 6 NGOs working in Barshi with over 100 volunteers who can contribute during emergency scenarios. As per the disaster management plan of 2024 of the tehsil, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.

RISK ANALYSIS FOR BARSHI					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	MEDIUM	MEDIUM	MEDIUM	MEDIUM
3	FLASH FLOODS	MEDIUM	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	MEDIUM	MEDIUM	LOW	HIGH
7	HEATWAVE	MEDIUM	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	LOW	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	LOW

### 3.5 HVCRA FOR MANGALVEDHA

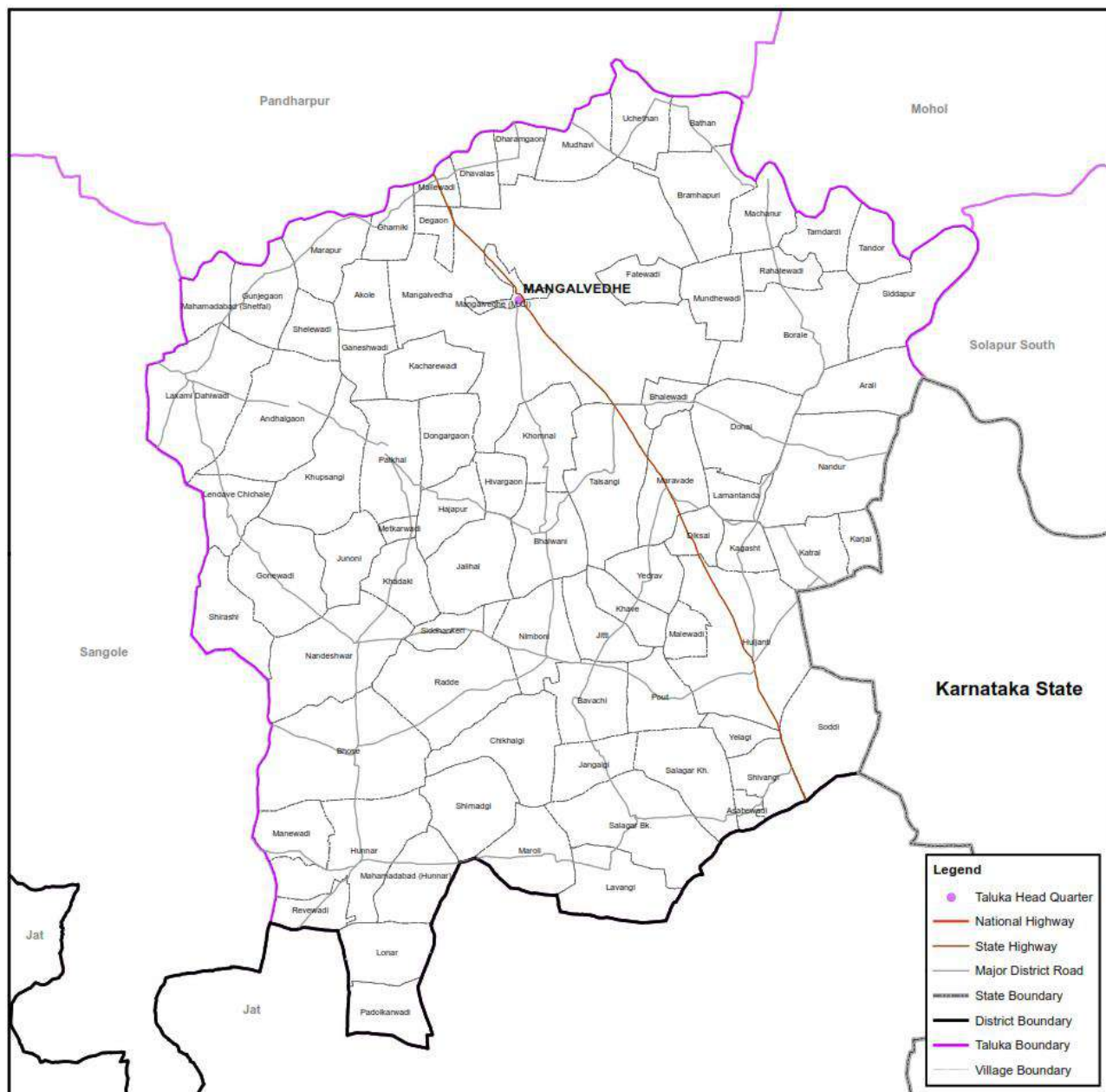


Figure 10: Village map of Mangalvedha tehsil (MRSAC)

Mangalvedha is a religious and spiritual place in Maharashtra. It is famous for the Damajipant Temple. Mangalvedha is also known as the "Land of Saints" as Saint Jayatirtha, Saint Damaji, Saint Kanhopatra, Saint Basaveshwara, and Saint Chokhamela are said to have come from Mangalvedha during the 14<sup>th</sup> century. It is also famous for its Jowar cuisine.

Table 21: Hazard and Vulnerability of Mangalvedha tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Mangalvedha lies in zone 3, with a susceptibility of 4 to 7 Richter scale. It witnessed	The vulnerability to earthquakes is due to densely populated pockets and poor construction practices without knowledge of earthquake-resistant structures.



<b>Hazard</b>	<b>History/ Susceptibility</b>	<b>Vulnerability</b>
	tremors in 1993, but it has no history of earthquakes.	
<b>Flood</b>	Mangalvedha witnessed floods consistently in August 2019 and October 2020.	The vulnerability is due to heavy precipitation and swelling of the rivers Bhima and Mand. The areas impacted by the flood were Mundhavi, Brahmapuri, Bathan, Uchethan, Machanur, Rahatewadi, Taamdardi, Tandor, Sidhapur, Arali, and Borale. These villages are near the river, and their exposure to floods is high in the monsoon months when the precipitation is high.
<b>Flash Flood</b>	Flash floods are apparent during the monsoon months.	The vulnerability of flash floods is due to the congested built structures. However, the frequency and impact are low.
<b>Drought</b>	Mangalvedha experienced droughts in 2017, but the impact was low.	
<b>Lightning</b>	There are sporadic events of lightning, evident with casualties observed.	
<b>Heat Wave</b>	Heat waves are quite evident in Mangalvedha.	
<b>Cyclones</b>	High-speed winds are evident. However, the frequency is low.	The areas susceptible to high winds are Andalgaon, Bhose and Phooljanti.
<b>Bio-Disasters</b>	Along with the cases of epidemics such as dengue, malaria and swine flu, which have taken a toll, COVID-19 also played havoc in April 2021.	Poor hygiene and sanitation, lack of awareness, and inadequate medical facilities make people vulnerable to bio-disasters.
<b>Fire</b>	Sporadic fire events are at a very low and accidental level, though the susceptibility to fire disaster cannot be denied.	
<b>Others</b>	Sporadic cases of accidental drowning, Road Accidents, CBRN, Rail accidents, stampedes and riots are not very evident, and the impact is low.	

Mangalvedha is a town of religious importance. The populations are engaged in farming for livelihoods and, overall, have lower living standards with very few opportunities for employment and

enterprise. The educational facilities are good, with six schools and colleges and a 78% literacy rate. The healthcare facilities are mediocre. Mangalvedha observes degradation and high levels of pollution due to the use of pesticides, fertilisers, and mining. The green cover is comparatively less. The town has its own fire station, police station, public and private hospital and drainage system. There is no surface drainage system, waste management system, or electric supply system in the town, which can make it susceptible to the risk of waterlogging and epidemics.

The administrative capacities are weak in terms of infrastructural facilities and human resources. Training and capacity building of administrative buildings and institutional buildings are required as a top priority. The critical infrastructure facilities, such as three hospitals, healthcare centres, and multi-speciality hospitals, are low in number and require upgrades. There is one fire station that is ill-equipped in terms of equipment, resources, and staff. Mangalvedha has one police station with a staff of 23 personnel. There are identified trained volunteers with 29 swimmers, 3 “Sarpa-mitra”, 9 “police-mitra”, 2 “Nisarg-mitra” and others. It has two colleges, 27 schools, 16 mangal karyalayas and one open ground, which can be used for temporary sheltering in case of emergencies. Mangalvedha has 1 NGO and 42 volunteers who can contribute to and support disaster events. As per the disaster management plan of 2024, of the tehsil, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.

RISK ANALYSIS FOR MANGALVEDHA					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	MEDIUM	MEDIUM	MEDIUM	MEDIUM
3	FLASH FLOODS	LOW	MEDIUM	LOW	LOW
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	MEDIUM	MEDIUM	LOW	MEDIUM
7	HEATWAVE	MEDIUM	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	LOW
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	MEDIUM	MEDIUM	MEDIUM	HIGH
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	LOW

### 3.6 HVCRA FOR PANDHARPUR

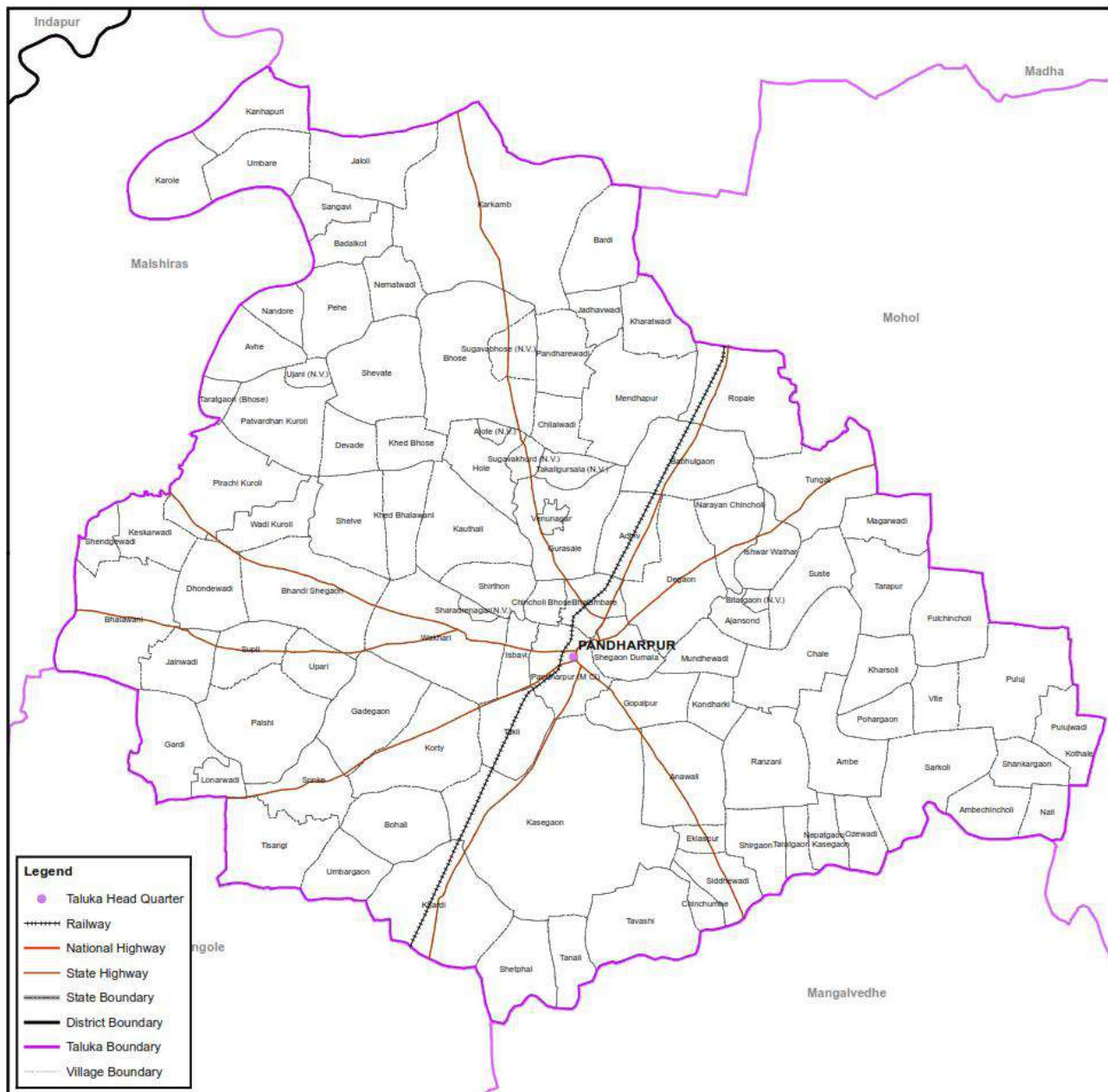


Figure 11: Village map of Pandharpur tehsil (MRSAC)

Pandharpur is the most important religious town in the state. It is also called South Kashi (Dakshin Kashi) in Maharashtra. It is famous for the Lord Vitthal temple situated on the bank of the Bhima River. Bhima River is also known as Chandrabhaga as it takes shape like a crescent moon near the town. There are four yatras (wari- a gathering of pilgrims/devotees) per year, Chaitri, Ashadhi, Kartiki and Maghi, of which Ashadhi and Kartiki are the significant mass gatherings. Devotees come from all over Maharashtra, Karnataka and some parts of Tamil Nadu.

Table 22: Hazard and Vulnerability of Pandharpur tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Pandharpur lies in zone 3 with a susceptibility of 4 to 7 on the Richter scale. It has witnessed tremors in 1993. Other than that, it does not have any history of earthquakes.	There are pockets of dense population in the city, and the organic development of the city makes it more vulnerable to earthquakes. Most of the structures do not comply with the earthquake-resistant building codes. 30% of houses are “kaccha” houses. There is a susceptibility to disrupting critical services like water supply and drainage systems. The damage would be very high at the time of religious festivals like “Wari” when the floating population in Pandharpur is more than 15 lakhs.
<b>Flood</b>	Floods have been evident in 2005, 2019 and 2020. There is a risk of floods from the Chandrabhaga River in the Bhima basin. The susceptibility of low and medium-intensity floods during monsoons.	The low-lying areas of the city like old Pandharpur area, Vitthal mandir temple premises are prone to flooding due to proximity of the river. The slum areas which are exposed to flooding are the Vyas Narayan Zhopadpatti, Ambedkar Nagar, Sant Peth, Kalika Devi Chowk, Chambar Galli and Pradakshina Marg which are in the low lying areas of the river Bhima.
<b>Flash Flood</b>	Flash floods were evident during heavy precipitation in 2019 and 2020, although the frequency of flash floods is lower.	The susceptibility to flash floods increases due to concretisation in the city and the lack of an appropriate surface drainage system. The densely populated areas of Koli Galli, Juni Peth, Temple premises and the old Pandharpur area are susceptible to flash flooding.
<b>Drought</b>	Evidently, they are less frequent and of low risk.	
<b>Lightning</b>	Evidently, they are less frequent and of low risk.	
<b>Heat Wave</b>	Evidently, they are less frequent and of low risk.	
<b>Cyclones</b>	High-speed winds in the months of June, July, August and September but no risk of cyclones as such.	Vulnerability to damage from high winds increases to the kaccha houses and the houses with tin roofs and poor construction practices which could be accidental.
<b>Bio-Disasters</b>	There is a high susceptibility to epidemics, mainly air-borne and water-borne. The Covid cases in all three waves were fairly high.	The susceptibility of communicable diseases is high due to concentration of floating population during events like “waari” and other religious festivals. The vulnerability increases due to insufficient healthcare systems and poor hygiene infrastructure in the city.

<b>Hazard</b>	<b>History/ Susceptibility</b>	<b>Vulnerability</b>
<b>Fire</b>	The cases of fire are high, with one event per month, but the scale is low.	In most cases, material losses by far exceed the human life losses. The vulnerability increases due to dense population pockets and inaccessibility to fire brigades.
<b>Accidental Drowning</b>	Cases of accidental drowning are evident, but the rate of mortality is low.	Most of the religious festivals and public gatherings happen on the banks of the river, which makes accidental drowning cases high.
<b>Road Accidents</b>	The number of road accidents and other transport-related accidents is low.	
<b>Stampede</b>	The susceptibility to stampedes is high due to public gatherings and the high density of floating populations.	
<b>Others</b>	The susceptibility to CBRN disasters is negligent. No cases have been reported of riots or industrial hazards.	

Pandharpur has a water supply system, drainage system, electric supply system, waste management system and fire-fighting system. The fire brigade station needs to be upgraded with firefighting equipment and other rescue equipment. The administrative system needs alternative communication systems in case of mobile network failure in emergency scenarios. The transport facilities in Pandharpur are mostly private, with auto-rickshaws as the main source of transport. The human resources available to volunteer in emergency scenarios are good, with a good literacy rate and physical fitness. However, there is a need for training and capacity building to respond in emergency scenarios. Public awareness of disaster safety is required as a top priority.

The critical infrastructure in Pandharpur requires upgradation. Pandharpur has more than 100 hospitals, healthcare centres and clinics. There are more than 10 multi-speciality hospitals. There are more than 40 Asha workers. There is one fire brigade station with the Pandharpur Municipal Council with only one full-time staff. All the other positions are yet to be recruited. There are two fire engines, a phone tender, a fire tender, a rescue boat, a balloon lamp tower, a woodcutter, B.A. Set and life jackets with the fire station. There are three police stations in Pandharpur. The available trained human resources are low except for volunteers for “police Mitra.” There is a very small number of trained volunteers who can respond in emergency scenarios. There are two colleges and more than 15 schools, more than 25 mangal karyalas, and six open grounds in Pandharpur that could be used in emergency scenarios for temporary shelters. There are a few NGOs working in



Pandharpur. The capacities of the Pandharpur Municipal Council are low and disintegrated. There is a need for training and capacity building in the administrative systems and to create institutional mechanisms for disaster management. As per the disaster management plan of 2024, of the tehsil, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.

RISK ANALYSIS FOR PANDHARPUR					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	HIGH	HIGH	MEDIUM	HIGH
3	FLASH FLOODS	MEDIUM	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	LOW	MEDIUM	LOW	MEDIUM
7	HEATWAVE	LOW	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	MEDIUM	LOW	MEDIUM	MEDIUM
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	MEDIUM
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	LOW	MEDIUM	MEDIUM	MEDIUM

### 3.7 HVCRA FOR SANGOLA

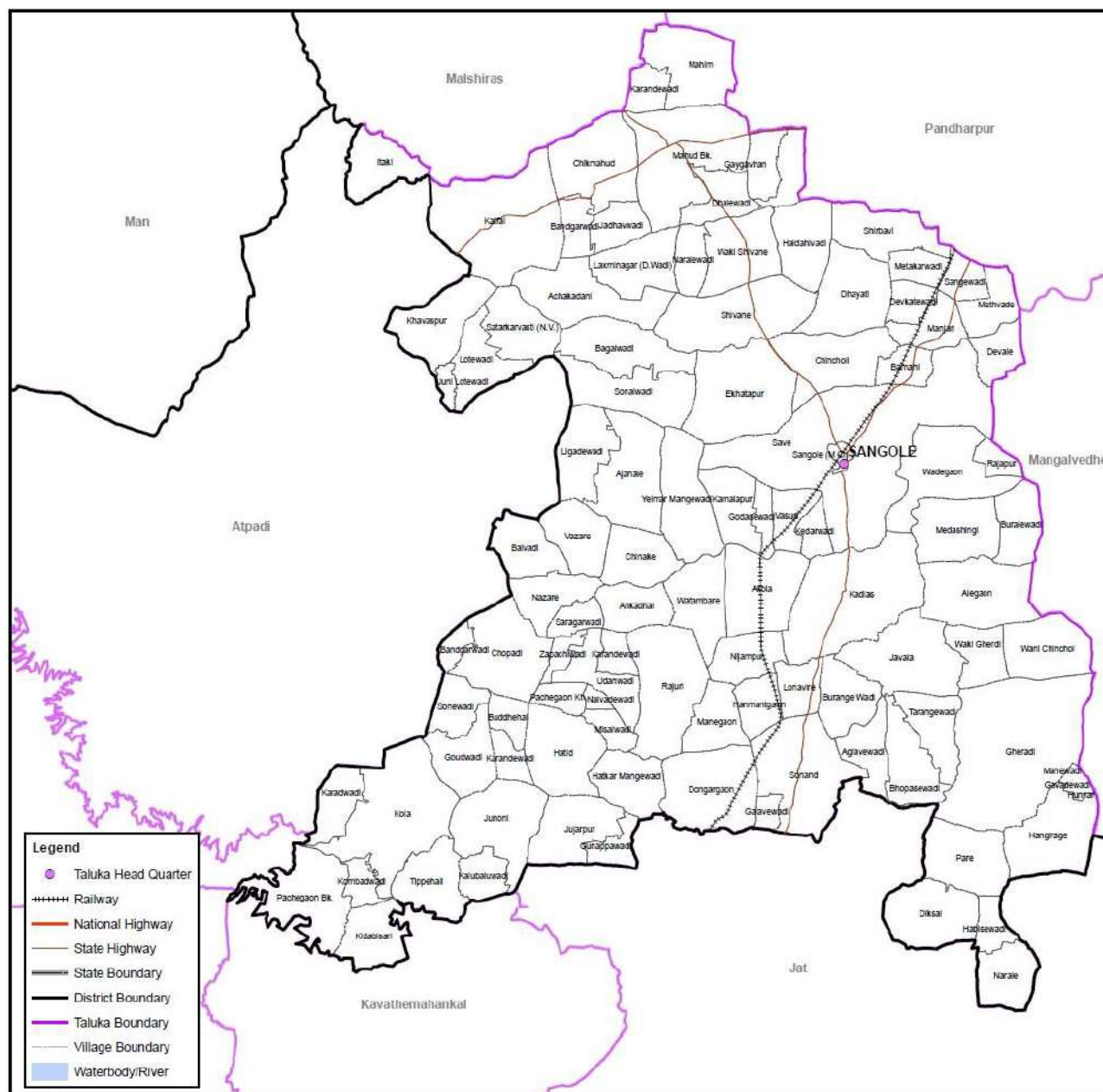


Figure 12: Village map of Sangola tehsil (MRSAC)

Sangola is famous for pomegranate production. Sangola pomegranates are exported to the United States, England, and several Middle Eastern countries. The tehsil economy is primarily driven by agriculture, with textile mills (including cotton), grape processing factories and sugar factories found in the area. It is situated near the holy city of Pandharpur. It is located at the intersection of state highways SH-161, SH-3, and SH-71.

Table 23: Hazard and Vulnerability of Sangola tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Sangola lies in the zone 3 with susceptibility of 4 to 7 Richter scale. It has witnessed	The susceptibility of earthquakes cannot be denied as it lies in the zone 3 of earthquakes.



<b>Hazard</b>	<b>History/ Susceptibility</b>	<b>Vulnerability</b>
	tremors in 1993. Other than that, it does not have any history of earthquakes. There is no history of earthquakes apart from the tremors felt in 1993.	The vulnerability increases due to the construction materials and lack of engineered construction of structures. The risk however is medium.
<b>Flood</b>	The cause of flooding is attributed to riverine flooding of Mann River which was evident in 2018 and heavy precipitation in the months of monsoon.	The vulnerability to flooding is very low as it is a rain shadow area. Hence, the risk of flooding is very low.
<b>Flash Flood</b>	The hazards of flash floods, cyclones and lightening are not very evident, and no such events are reported.	
<b>Drought</b>	The susceptibility to droughts exists due to less rainfall and climate change impacts.	
<b>Lightning</b>	Evidently, they are less frequent and of low risk.	
<b>Heat Wave</b>	The susceptibility of heat wave is high during the summer months April to May when the average temperature is 35 to 40 degrees Celsius, and the climate is very dry.	
<b>Cyclones</b>	Evidently, they are less frequent and of low risk.	
<b>Bio-Disasters</b>	Epidemics are evident in Sangola tehsil with the cases of malaria, chikungunya, dengue and swine flu. COVID-19 cases averaged fairly high in 2019.20 and 2020-21, with the highest number of cases reported on 24th April 2021 at 67,150.	The susceptibility to communicable diseases increases during the religious festivals of Ashadhi and Kartiki Yatra. The vulnerability is also attributed to the poor hygiene and sanitation practices, especially with the influx of floating population during the yatras.
<b>Fire</b>	The instances of fire are apparently attributed to cooking fuel and electrical short circuits. However, no compiled data is available.	
<b>Road Accidents</b>	The road accidents are evident on the Solapur-Pune highway.	The number of road accidents is higher during the Ashadhi and Kartiki Yatra.
<b>Stampede</b>	The susceptibility to stampedes is high due to the Ashadhi and Kartiki yatra and other religious festivals.	

Hazard	History/ Susceptibility	Vulnerability
Others	Other hazards like rail accidents, accidental drowning, CBRN, riots and Industrial Hazards are not very evident.	

The risk of hazards is low, but the vulnerability to hazards exists due to the living conditions and the climatic impacts. The educational and medical facilities are low and inefficient in comparison. There are very few livelihood opportunities, and the infrastructural facilities are medium. The tehsil has a good number of educational and medical facilities. It has 36 identified temporary shelter facilities all over the tehsil. The tehsil has schools, colleges, post offices, fire brigade stations, blood banks, and NGOs to respond in any emergency scenario. As per the disaster management plan of 2024, of the tehsil, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.

RISK ANALYSIS FOR SANGOLA					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	MEDIUM	MEDIUM	MEDIUM	MEDIUM
3	FLASH FLOODS	LOW	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	LOW	MEDIUM	LOW	MEDIUM
7	HEATWAVE	LOW	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	LOW

### 3.8 HVCRA FOR MALSHIRAS

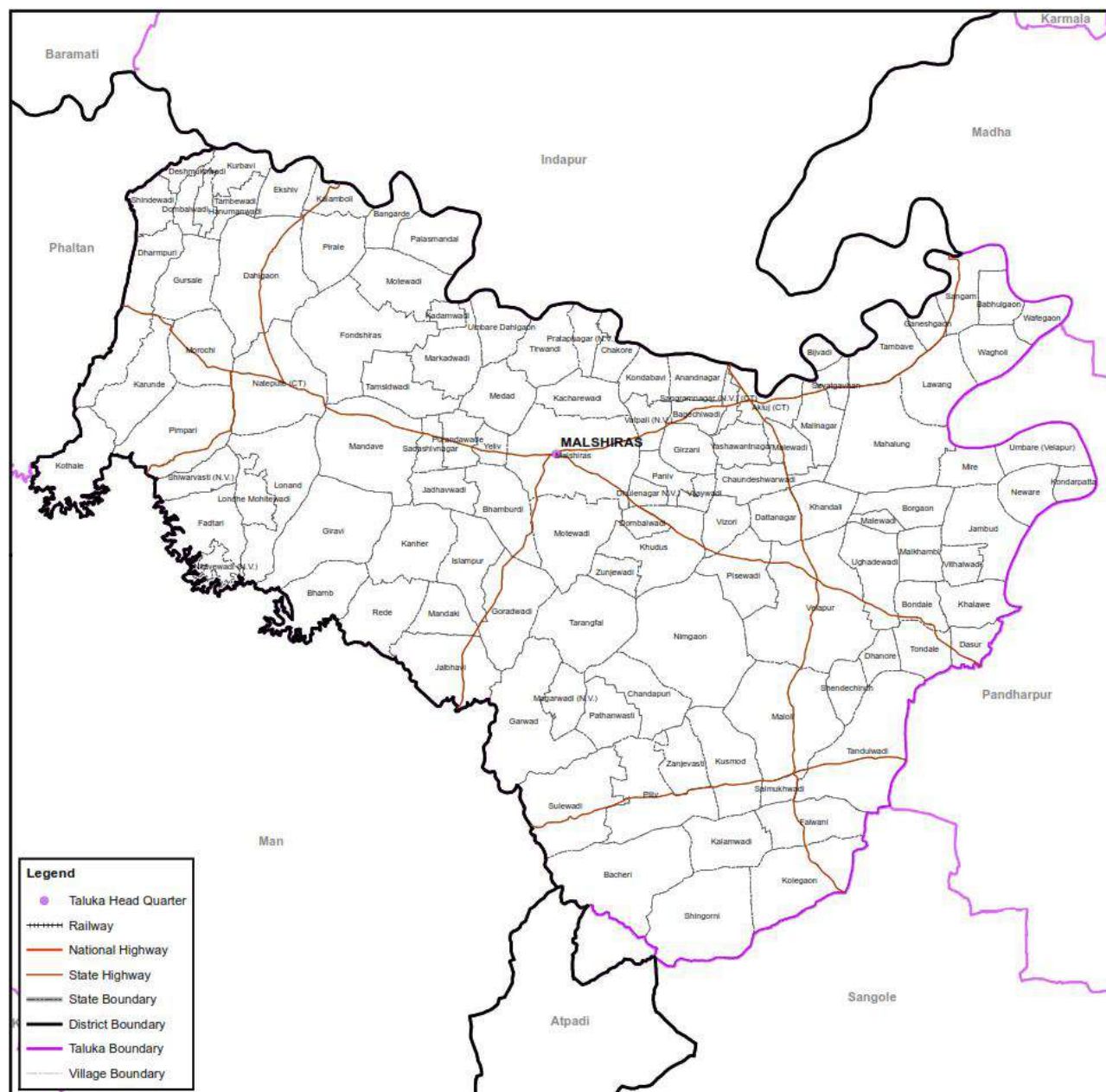


Figure 13: Village map of Malshiras tehsil (MRSAC)

Malshiras has many popular towns such as Akluj, Natepute, Mahalung (for the famous Yamai Devi temple), Malinagar, Velapur (for the famous Ardhnari Nateshwar temple) and villages like Goradwadi, Bhamburdi, Medad and Palasmandal. Sant Dnyaneshwar Maharaj Palkhi which travels annually from Alandi to Pandharpur, has multiple stops here i.e. Malshiras, Natepute and Velapur.

Table 24: Hazard and Vulnerability of Malshiras

Hazard	History/ Susceptibility	Vulnerability
Earthquake	Malshiras lies in the zone 3 with susceptibility of 4 to 7 Richter scale. It has	The building construction and materials add to the vulnerability to earthquakes. There is less awareness regarding earthquake-resistant

Hazard	History/ Susceptibility	Vulnerability
	witnessed tremors in 1993. Other than that, it does not have any history of earthquakes.	structures. The built structure is susceptible to damage and failure due to earthquakes as it was evident in 1993 when the buildings developed cracks, and the houses were damaged.
Flood	The flooding is due to the rivers Bhima and Nira when water was released from the Vir dam in the river Nira. Heavy precipitation in the year 2005, 2006, 2019 and 2020 caused swelling in the river Bhima and caused flooding in 12 villages on the banks of river Bhima and 18 villages on the banks of river Nira.	Due to heavy precipitation, crops were destroyed in 2005, 2006, 2019 and 2020 while there were damages to houses due to flooding in August 2019 and September 2020.
Flash Flood	The susceptibility to flash floods increases during the monsoon months.	There is water logging in the houses on the banks of rivers Bhima and Nira and some sporadic events in the dense pockets of the city.
Drought	The susceptibility to droughts exists, due to less rainfall and climate change impacts.	
Lightning	The threat of lightening is high in the months of monsoon however no casualties are recorded.	
Heat Wave	The susceptibility to heat wave is high during the summer months with average temperature of 45 degree Celsius.	
Cyclones	Cyclones were not very evident; however, in February 2014, high-speed winds and hailstorms were experienced, causing damage to crops, housing and crops.	
Bio-Disasters	Epidemics are evident in Malshiras tehsil. 2011-12 had peak epidemic cycles followed by covid-19 pandemic in 2019-20, 2020-21. Epidemic outbreaks such as malaria, dengue, swine flu, chikungunya etc. The highest number of cases registered was in April 2021 where the daily numbers of cases registered were 68,547 in the district.	The susceptibility to epidemics will be high in Malshiras due to the floating population for pilgrimage and lack of hygiene and sanitation facilities. The communicable diseases would be high due to lack of awareness and concentration of populations. The susceptibility to communicable diseases is high during the religious festivals "jatra" of various deities in the months of February, March, April, June, July and December. The causes of epidemics are also attributed to

Hazard	History/ Susceptibility	Vulnerability
		poor sanitation and hygiene facilities due to the congregation of populations during the religious festivals.
Fire	The instances of fire are apparent attributed to cooking fuel and electrical short circuits. However, there are no casualties reported.	
Road Accidents	Road accidents are infrequent on the national highway, which is 41 km away, and the state highway Kuruduwadi-Mhaswad road. There is a helipad available in Akluj.	
Stampede	There are various “Jatras” all over the year, which have a probability of stampedes due to the congregation of populations.	
Industrial Accident	There are seven industrial establishments comprising sugar factories and mills with a combined workforce of 12,000 labourers. Hence, the probability of industrial accidents cannot be denied. However, no cases or casualties were reported.	
Others	Other hazards like rail accidents, accidental drowning, CBRN, and riots are not very evident.	

Malshiras has good living standards and opportunities for livelihood in farming, employment and enterprise. The educational facilities and healthcare facilities are good in quantum but need upgradation in the quality of services and infrastructural facilities. The levels of pollution are medium due to the release of industrial waste. However, there is no data available on air, water and soil pollution. There are no fire stations in Malshiras, which increases the risk in emergency scenarios. The educational facilities in Malshiras are good, with more than 150 schools in the tehsil. There are five schools and colleges identified as safe temporary shelters with a capacity of hosting over 4000 people. The medical facilities are good quantitatively, with over 20 hospitals, healthcare centres, and polyclinics, but they require qualitative upgrades. The administrative capacities are low in terms of infrastructural facilities, training and capacity building. The city has its own water supply system with a treatment facility of 4 MLD, serving about a population of 17,000. The city has a solid waste management system with a pit composting method for the waste of about 5 tons generated every day. As per the disaster management plan of 2024, of the tehsil, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.



RISK ANALYSIS FOR MALSHIRIS					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	HIGH	MEDIUM	MEDIUM	HIGH
3	FLASH FLOODS	MEDIUM	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	MEDIUM	LOW	LOW	MEDIUM
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	LOW	MEDIUM	LOW	MEDIUM
7	HEATWAVE	LOW	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	MEDIUM	LOW	MEDIUM	MEDIUM

### 3.9 HVCRA FOR MOHOL

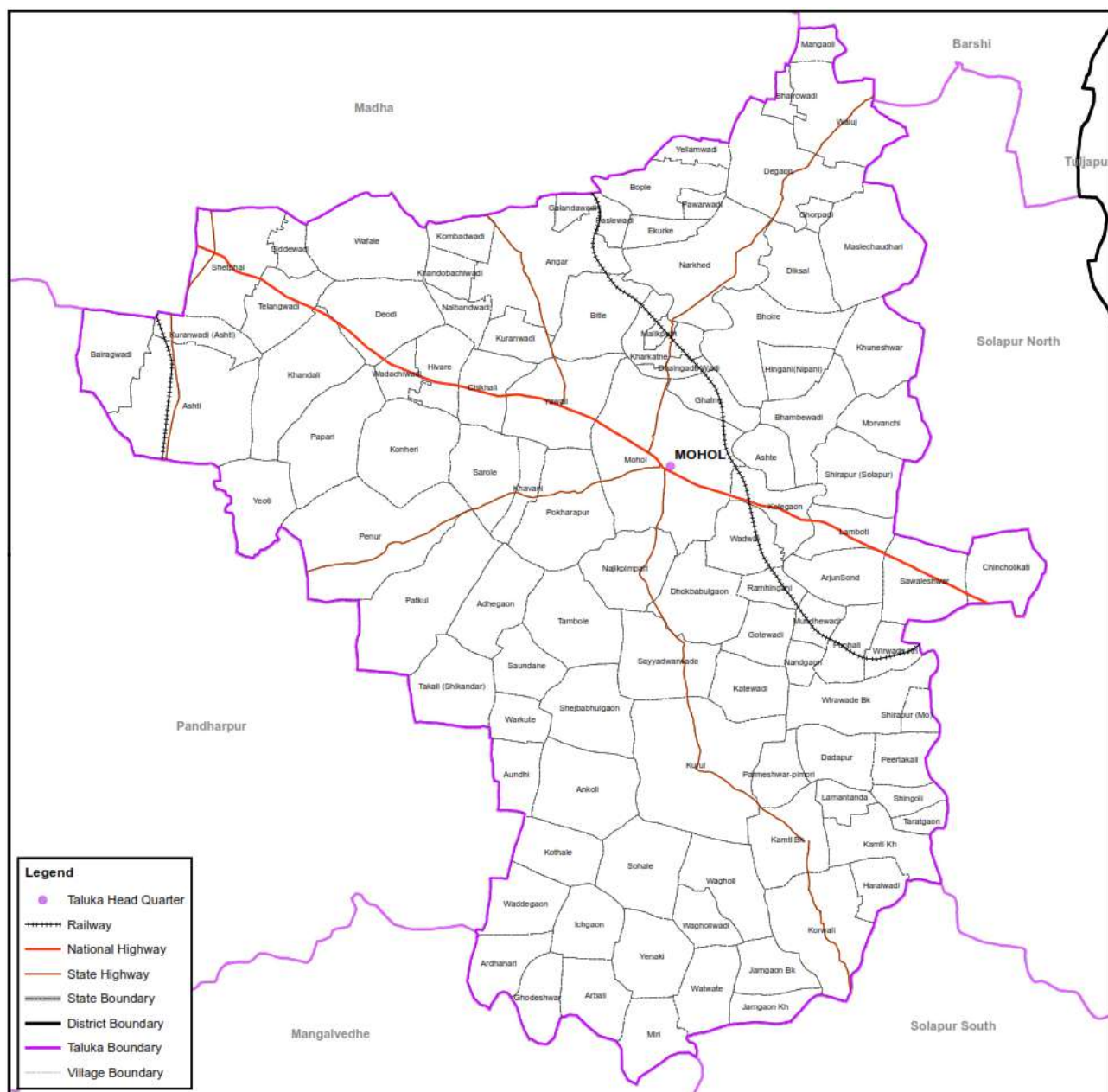


Figure 14: Village map of Mohol tehsil (MRSAC)

Mohol is famous for its Nagnath Temple. Mohol shares its boundaries with Solapur city. It is also famous for its cuisines.

Table 25: Hazard and Vulnerability of Mohol tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Mohol lies in the zone 3 with susceptibility of 4 to 7 Richter scale. It has witnessed tremors in 1993. Other than that, it does not have any history of earthquakes.	Dense pockets of “kaccha houses” and poor construction practices have increased the vulnerability of houses to earthquakes. The built structure is susceptible to damage and failure due to earthquakes, as was evident in 1993 when the buildings developed cracks and the houses were



<b>Hazard</b>	<b>History/ Susceptibility</b>	<b>Vulnerability</b>
		damaged. The building construction and material adds to the vulnerability of earthquakes. There is less awareness regarding earthquakes resistant designs of structures.
<b>Flood</b>	Mohol experienced floods in 2020-21 due to the swelling of the Sina River and in 2005-06, 2019-20 due to the Bhima River.	The houses situated on the banks of the Sina and Bhima Rivers were partially damaged, and there were damages to crops. The risk due to flooding is medium.
<b>Flash Flood</b>	The area is susceptible to flash floods due to flooding in the river or heavy precipitation.	90% of the area is a low-lying area, which makes it vulnerable to flooding. The densely congested areas increase the vulnerability to flash floods due to the lack of an appropriate surface drainage system.
<b>Drought</b>	Mohol has experienced drought in 2004, 2016 and 2021.	The risk of drought is high, as perceived by the administrative system and populations.
<b>Lightning</b>	There are lightning events every year, though the risk of lightning is medium.	
<b>Heat Wave</b>	The susceptibility to heat waves is high during the summer months, with an average temperature of 45 degrees Celsius.	
<b>Cyclones</b>	Cyclones are not very evident in Mohol.	
<b>Bio-Disasters</b>	Epidemics are evident in Mohol tehsil. 2011-12 had peak epidemic cycles followed by covid-19 pandemic in 2019-20, 2020-21. The highest number of cases registered was in April 2021, when the daily number of cases registered was 68,547 in the district.	The susceptibility to epidemics will be high in Mohol due to the floating population for pilgrimage and the lack of hygiene and sanitation facilities. The communicable diseases would be high due to a lack of awareness and concentration of populations.
<b>Fire</b>	The cases of fire hazards are witnessed every year owing to burning fuel and electrical short circuits.	
<b>Accidental drowning</b>	With 2 Rivers, Sina and Bhīma, the cases of accidental drowning are obvious. In the year 2021, the cases of accidental drowning were witnessed.	
<b>Road Accidents</b>	The cases of road accidents form a part of the routine risk with the state highways flanking the tehsil. The risk of road accidents is high.	The speeding of vehicles on the highways, the loitering of cattle on the highways and the parked vehicles on the highway, as well as vehicles with

Hazard	History/ Susceptibility	Vulnerability
		missing tail lamps are some of the causes of the road accidents.
<b>Others</b>	Other hazards, such as rail accidents, CBRN, riots, stampedes, and industrial hazards, are not very evident.	

The main sources of livelihood in Mohol tehsil are agriculture and employment in the industrial sector. There are fewer opportunities for enterprise and other sources of livelihood. The educational facilities are mediocre, while the healthcare facilities are insufficient, which increases the vulnerability of the population. The pollution levels are medium, and the degradation of ecosystems is medium due to the mining activities. 40% of the houses are “kaccha houses”, and building regulations are not followed, further increasing the vulnerability to the built environment. The tehsil has low capacity in terms of educational and healthcare infrastructural facilities. The administrative capacities are average in terms of infrastructural facilities, transport facilities, human resources and capacity building. Mohol has 2 “Garmin Rugnalaya”, 8 PHC and five private hospitals with not more than 15 beds. There are 10 healthcare centres and polyclinics and one multispecialty hospital. There are 210 Asha workers. There is no fire station in Mohol. There are two police stations with 110 police personnel. The task force for responding to emergencies is good, with 21 swimmers, 5 “sarp-mitra”, 550 “police-mitra”, and 2 NGOs with 50 volunteers. There are 15 schools, six mangal karyalayas, one college and one open ground, which could be used as a temporary shelter in case of emergencies. As per the disaster management plan of 2024, of the tehsil, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.

RISK ANALYSIS FOR MOHOL					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	MEDIUM	MEDIUM	MEDIUM	MEDIUM
3	FLASH FLOODS	MEDIUM	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	MEDIUM	MEDIUM	LOW	MEDIUM
6	LIGHTENING	LOW	MEDIUM	LOW	MEDIUM
7	HEATWAVE	LOW	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	LOW

### 3.10 HVCRA FOR MADHA

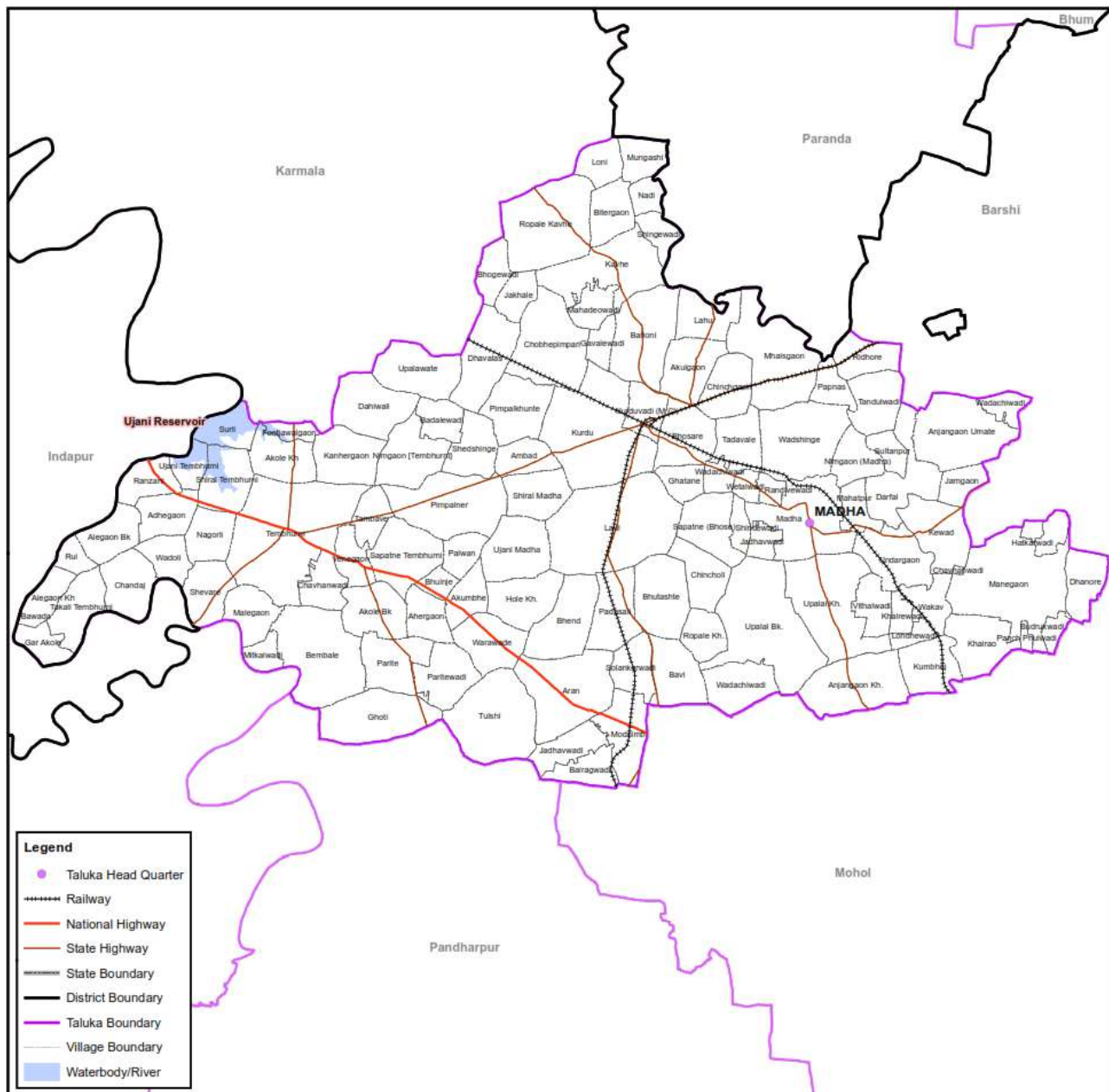


Figure 15: Village map of Madha tehsil (MRSAC)

Madha is located 70 km northwest of the district headquarters in Solapur. It is known for the Madheshawari temple, situated near the Mankarna River. It is famous for Rambhaji Nimbalkar, who lived here and built a fort. The headquarters of the Madha Panchayat Samiti are, however, located at Kurduwadi. Agriculture is the main source of income for the people of Madha.

Table 26: Hazard and Vulnerability of Madha tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Madha lies in zone 3 with a susceptibility of 4 to 7 on the Richter scale. It has witnessed tremors in 1993. Other than	There are pockets of dense population in the city, and the organic development of the city makes it more vulnerable to earthquakes. Most

<b>Hazard</b>	<b>History/ Susceptibility</b>	<b>Vulnerability</b>
	that, it does not have any history of earthquakes.	of the structures do not comply with the earthquake-resistant building codes. 30% of houses are “kaccha” houses. There is a susceptibility to disrupting critical services like water supply and drainage systems.
<b>Flood</b>	Madha is flanked by rivers Bhima and Sina. Floods have been evident in 2020. There is a risk of floods from river Bhima during release of water from Ujani Dam. The average rainfall of Madha is 542MM.	The low-lying areas of the city and on the banks of the river are susceptible to flooding. There are over 15 villages on the banks of the Bhima River and 16 villages on the banks of the Sina River, which are impacted by the release of water from the Ujani Dam. Following are the villages that are susceptible to flooding. Bhima river: Ujjain te, Shevre, Ranzani, Chandaj, Takli te, Malegoan, Phutajawalgoan, Rui, Alegoan Budruk, Alegoan Khurd, Bemble, Garakole and Mitkalwadi. Sina river: Mungshi, Naadi, Lahu, Ridhare, Tandulwadi, Daarphal, Nimgoan, Sultanpur, Kevad, Undargoan, Wakav, Khairav and Kumbhej
<b>Flash Flood</b>	Flash floods were evident during heavy precipitation in 2018 when the average rainfall received was 1239 MM.	The susceptibility of flash floods increases due to concretisation in the city and no appropriate surface drainage system. The densely populated pockets would be more vulnerable to waterlogging due to wet spells caused by climate change impacts.
<b>Cyclones</b>	The risk of cyclones is not very evident in Madha, though high-speed winds are experienced during monsoon months.	Vulnerability to damage from high winds increases to the kaccha houses and the houses with tin roofs and poor construction practices which could be accidental.
<b>Bio-Disasters</b>	There is a high susceptibility to epidemics, mainly air-borne and water-borne. The Covid cases in all three waves were fairly high. Other epidemics like dengue, malaria, chikungunya and swine flu have shown their presence.	The susceptibility to communicable diseases is medium. The vulnerability increases due to insufficient healthcare systems and poor hygiene infrastructure in the city.
<b>Fire</b>	The cases of fire are high, with one event per month, but the scale is low.	In most cases, material losses by far exceed the human life losses. The vulnerability increases

Hazard	History/ Susceptibility	Vulnerability
		due to dense population pockets and inaccessibility to fire brigades.
<b>Others</b>	The other hazards like drought, lightning, heatwave, accidental drowning, road accidents are evident but are less frequent and of low risk. The susceptibility to CBRN disasters is negligent. The susceptibility to stampedes is low. There are no cases reported of stampedes, riots and industrial hazards.	

The most vulnerable villages to flooding in the tehsil are Bemble, Shevre, Mtkalwadi, Garakole, Chandaz, Takli-te, wherein 48 families need to be evacuated in the emergency scenarios. The educational and medical facilities are low quantitatively and qualitatively, which increases the vulnerability of the populations.

Madha has a water supply system, drainage system, electric supply system, waste management system and fire-fighting system. The fire brigade station needs to be upgraded with firefighting equipment and other rescue equipment. The administrative system needs alternative communication systems in case of mobile network failure in emergency scenarios. The transport facilities in Madha are mostly private, with auto-rickshaws as the main source of transport. The human resources available to volunteer in emergency scenarios are good, with a good literacy rate and physical fitness. However, there is a need for training and capacity building to respond in emergency scenarios. Public awareness of disaster safety is required as a top priority.

The critical infrastructure in Madha requires upgradation. Madha has more than 100 hospitals, healthcare centres and clinics. There are more than 10 multi-speciality hospitals. There is one fire brigade station with the Madha Municipal Council. There are two fire engines, a phone tender, a fire tender, a rescue boat, a balloon lamp tower, a woodcutter, B.A. Set and life jackets with the fire station. There are nine boats in the tehsil, and 77 expert swimmers are part of task force teams. The task force team for evacuation, shelter management, water supply and food, healthcare, road repair and transport management, electricity, hygiene and sanitation team, administrative team and early warning team are established, who would be responsible for responding in post-disaster scenarios. The temporary shelters have been identified for each village and the town area, including the transport facility and safe passageway. The capacities of the Madha Municipal Council are, however, low and disintegrated. There is a need for training and capacity building in the administrative systems and to create institutional mechanisms for disaster management.



RISK ANALYSIS FOR MADHA					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	HIGH	MEDIUM	MEDIUM	HIGH
3	FLASH FLOODS	MEDIUM	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	MEDIUM	MEDIUM	LOW	MEDIUM
6	LIGHTENING	LOW	MEDIUM	LOW	LOW
7	HEATWAVE	LOW	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	LOW	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	MEDIUM

### 3.11 HVCRA FOR KARMALA

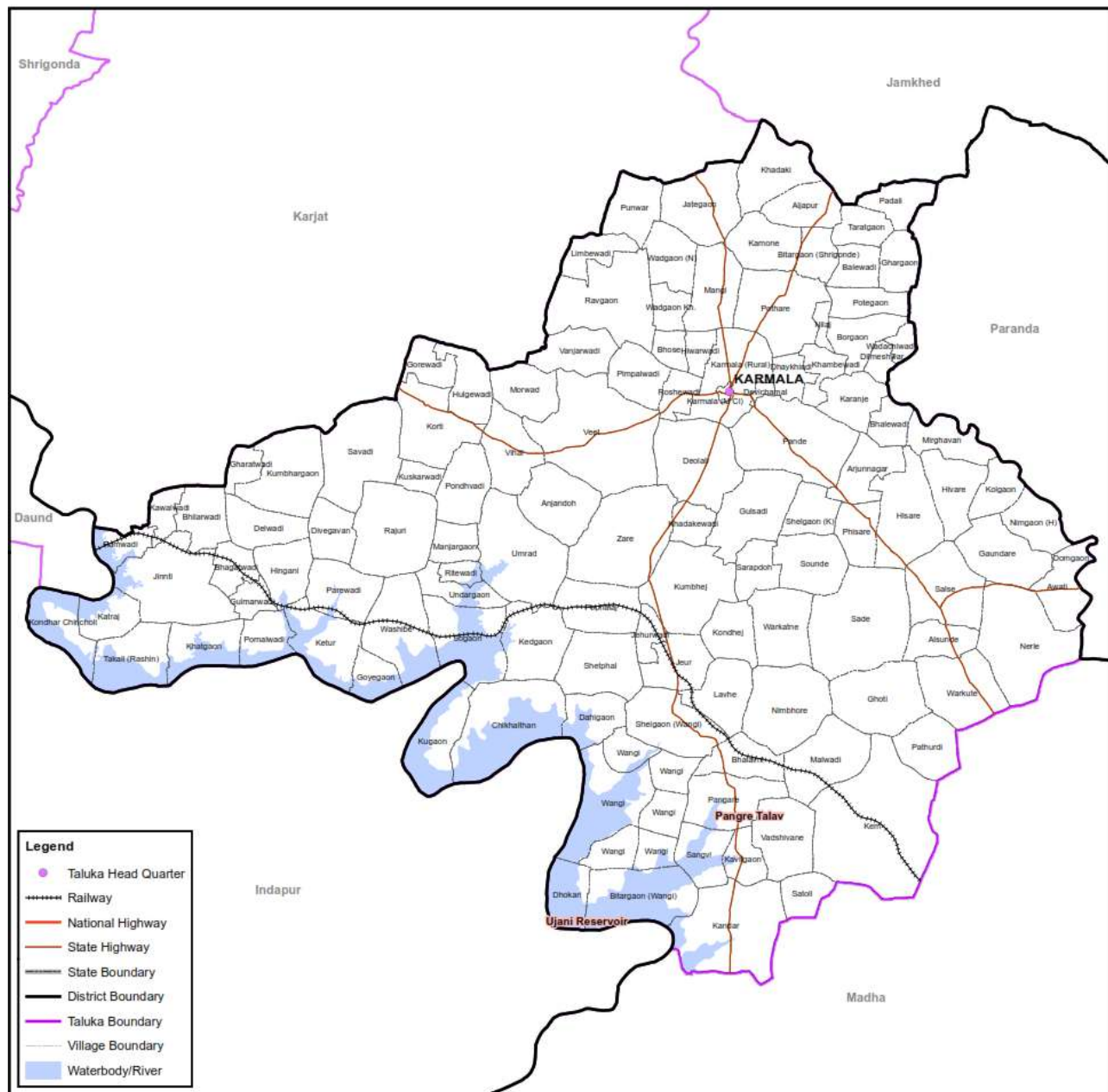


Figure 16: Village map of Karmala tehsil (MRSAC)

Karmala is remote tehsil in Solapur district. It came into the limelight when the film ‘Sairat’ was shot there. There are 123 villages and one town in Karmala tehsil. The total area of Karmala is 1593.01 sq.km with population density of 160 per sq.km.

Table 27: Hazard and Vulnerability of Karmala tehsil

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Karmala lies in zone 3 with a susceptibility of 4 to 7 on the Richter scale. Other than that, it does not have any history of earthquakes.	The vulnerability to earthquakes is high due to 50% of the area being densely populated and congested. The organic growth of the city makes it susceptible to the threats of earthquakes due to the high density and poor construction quality of the built environment.



		50% of the city area cannot be accessed by ambulance or fire engine; however, the development is low.
<b>Flood</b>	The Sina River and the Nira River flank the district of Karmala on its borders.	The vulnerability is quite low due to low exposure to the rivers.
<b>Flash Flood</b>	The area falls under the rain shadow region with an average rainfall of 380mm. Heavy precipitation is sporadic.	The events of flash floods are not very evident; however, susceptibility to flash floods exists due to the density of structures that are built in a haphazard way.
<b>Cyclones</b>	Cyclones are not evident in Karmala.	
<b>Drought</b>	The susceptibility to droughts exists due to less rainfall and climate change impacts.	
<b>Lightning</b>	There are events of lightening in the monsoon months. The awareness and preparedness to the impact of lightening is low.	
<b>Heatwave</b>	The impact of heat waves is noticeable, with temperatures rising to more than 45 degrees in the months of April and May.	The vulnerability to heat wave increases due to the heat gain from roofs which is generally constructed in RCC Slabs or tin sheets. The area has very less green cover which contributes to the heat wave. The concretization is further adding heat to the microclimate.
<b>Bio-Disasters</b>	Epidemics are observed during the summer months and the monsoon months. There are cases of malaria, cholera, gastro-enteritis, jaundice and typhoid. The other diseases observable are chikungunya and swine flu.	The vulnerability of epidemics is due to poor hygiene and sanitation practices and inefficient infrastructural services. The diseases are air-borne and water-borne. The COVID-19 situation was grievous.
<b>Fire</b>	There are rare fire events, mostly due to dry weather.	The vulnerability to fire increases due to the congestion of built structures and the inaccessibility of fire engines. Moreover, the vulnerability to fire increases also due to the ineffective firefighting infrastructure.
<b>Others</b>	There are no conspicuous cases of accidental drowning, road accidents, rail accidents, CBRN hazards, stampedes, riots and industrial hazards.	

Karmala tehsil has a population of 45,000 and is a small place with good education facilities and community structures. The people mostly are working in the nearby industries or employed in small local ventures. It offers fewer opportunities for growth but has a stable community system. Environmentally, the tehsil has low levels of degradation and pollution. The administrative capacities in terms of infrastructure and human resources are low. There is a need for training and capacity building for the administrative setup. The critical infrastructure is good, with almost 51 hospitals, healthcare centres and clinics. There are two ambulances available in the town. Karmala does not have a fire station. The nearest fire station. There is one police station in Karmala. There is no trained volunteer task force. There are two colleges, 17 schools, and 8 Mangal Karyalayas, which can be used as emergency shelters in emergency situations. There are three voluntary groups that can contribute and support in emergency scenarios. As per the disaster management plan of 2024, of the tehsil, the task force has been identified for search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities and communication and surveillance teams.

RISK ANALYSIS FOR KARMALA					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	LOW	MEDIUM	MEDIUM	LOW
3	FLASH FLOODS	LOW	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	MEDIUM	MEDIUM	LOW	MEDIUM
6	LIGHTENING	LOW	MEDIUM	LOW	LOW
7	HEATWAVE	LOW	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	LOW	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	LOW	LOW	MEDIUM	MEDIUM

### 3.12 HVCRA For SOLAPUR CITY

It is the seventh biggest Metropolis Urban Agglomeration and 11th most populated city in Maharashtra. Solapur lies in the basin of river Bhima and the municipal jurisdiction of the city encompasses an area of 178.57 square km. The city is currently sub-divided into eight administrative zones and these eight zones are further sub-divided into 51 wards.

Table 28: Hazard and Vulnerability of Solapur city

Hazard	History/ Susceptibility	Vulnerability
<b>Earthquake</b>	Solapur City lies in zone 3 with a susceptibility of 4 to 7 on the Richter scale. It has witnessed tremors in 1993. Other than that, it does not have any history of earthquakes.	The vulnerability to earthquake is attributed to the lack of risk knowledge, wherein the construction of the built environment does not follow the planning and design measures of earthquake resistant techniques. The city has 40% of kaccha houses which will not withstand the tremors. The vulnerability to earthquakes further increases due to nonadherence of building byelaws and other building compliances.
<b>Flood</b>	Solapur City does not have a river; hence, there is no threat of riverine flooding.	
<b>Flash Flood</b>	The tehsil is prone to flash floods caused by sporadic heavy precipitation and water logging in dense pockets of the old goathan areas.	The vulnerability to flash floods is medium, as heavy rains are sporadic events. Water logging could be an issue with the organic development growth pattern of the city, causing dense pockets. The vulnerability increases due to the inefficient and inappropriate surface drainage system.
<b>Cyclones</b>	Cyclones are not very evident in Solapur city.	
<b>Drought</b>	The Solapur city tehsil is vulnerable to droughts.	The risk of droughts is high as the city lies in a rain shadow with an average rainfall of 200mm.
<b>Lightning</b>	Lightning is frequent in Solapur City, with casualties in the year 2017, 2019 and 2021.	The susceptibility to lightning is high in the monsoon season every year. There were human casualties as well as animal casualties in the year 2017, 2019 and 2021. The risk of lightning is high.
<b>Heatwave</b>	The average temperature is 40 degree Celsius rising to 45 degrees Celsius in peak summers and the susceptibility to heat waves is high.	
<b>Bio-Disasters</b>	There is a high susceptibility to epidemics, mainly air-borne and water-borne. The Covid cases in all three waves were fairly high.	The vulnerability to communicable diseases is high, especially with the congregation of populations during religious festivals. The vulnerability to diseases increases due to the lack of an efficient healthcare system and awareness about health and hygiene among populations. COVID-19 had ill effects on the city, with a high number of cases in all three waves of COVID-19.
<b>Fire</b>	The events of fire are frequent, but the scale is low.	Accidental fires are attributed to cooking fuel and electrical short circuits. The cases are more prevalent

Hazard	History/ Susceptibility	Vulnerability
		in lower economic communities and slums, mostly those that store firewood. The vulnerability to fire increases due to the inaccessibility of fire engines in these dense pockets.
<b>Others</b>	Accidental drowning is not evident in Solapur city. Though there are lakes, the banks are well-guarded. The other man-made hazards such as rail hazards, industrial hazards, and CBRN are not evident.	
<b>Road Accident</b>	Road accidents are frequent, but the scale is low. However, the susceptibility to road accidents is high due to the indiscipline of drivers.	
<b>Stampede</b>	Solapur hosts many religious and political gatherings, like 'Gadda Jatra', Warri, and political rallies, wherein the population's congregation is high, which increases the susceptibility to stampedes.	

The major sources of livelihood are farming and employment in factories and small enterprises. There are very few opportunities for other types of employment and enterprise. 40% of the total houses are 'kaccha houses' in the city area. Transport facilities preferred are mostly private, and the public transport system is ineffective and needs upgrades. The city has its own water supply, but it is old and clogged and needs upgradation. The city has a drainage system, waste management system and 24/7 electrical supply; these critical services need upgradation to withstand emergency situations. The hazardous locations and low-lying areas are comparatively less, including very less densely congested areas. The educational and medical facilities are fairly good but need upgradation. Environmental degradation is evident in the medium levels of air, water, and soil pollution.

The administrative capacities in terms of infrastructure, transport, human resources, training, and capacity building are medium and need upgrades. The critical facilities like the healthcare systems are fairly good with more than 127 hospitals and over 200 healthcare centres and polyclinics and 2 multi-speciality hospitals. Quantitatively the 7 fire stations and 75 police stations perform well. Qualitatively these critical services need upgradation in terms of resources and equipment.

There are 53 identified emergency shelters in the city with the capacity to host more than 5000 people approximately in emergency scenarios as per the disaster management report 2024 of Solapur City. As per the disaster management plan, the task force has been identified as search and rescue, temporary shelter management, transport facilities, disaster management committee, first aid, water and sanitation facilities, and communication and surveillance teams.

RISK ANALYSIS FOR SOLAPUR CITY					
SI	LIST OF HAZARDS	HAZARDS	VULNERABILITIES	CAPACITIES	RISK
1	EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	LOW	MEDIUM
2	FLOODS/ HEAVY PRECIPITATION	LOW	LOW	LOW	LOW
3	FLASH FLOODS	LOW	MEDIUM	LOW	MEDIUM
4	CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW
5	DROUGHTS	LOW	MEDIUM	LOW	MEDIUM
6	LIGHTENING	LOW	MEDIUM	LOW	LOW
7	HEATWAVE	MEDIUM	MEDIUM	LOW	MEDIUM
8	BIODISASTERS-EPIDEMICS	HIGH	MEDIUM	LOW	HIGH
9	FIRE	MEDIUM	MEDIUM	MEDIUM	HIGH
10	ACCIDENTAL DROWNING	LOW	LOW	MEDIUM	LOW
11	ROAD ACCIDENTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
12	OTHER ACCIDENTS	LOW	MEDIUM	MEDIUM	LOW
13	CBRN	LOW	MEDIUM	LOW	LOW
14	STAMPEDES/RIOTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM
15	INDUSTRIAL HAZARDS	MEDIUM	MEDIUM	LOW	MEDIUM

### 3.13 RISK ANALYSIS FOR SOLAPUR DISTRICT

Solapur district has a medium risk of natural and manmade disasters. The risk is attributed hugely to the increasing vulnerabilities and lower capacities more than the exposure to hazards. The threats of natural hazards are less due to the geographical and climatic conditions. However, there are ever-growing vulnerabilities attributed to a lack of appropriate infrastructural facilities, critical services, insufficient healthcare systems and a lack of awareness of populations and institutional mechanisms.

**Hazards** – The district is prone to earthquakes of 4 to 7 Richter scale earthquakes. Floods are infrequent to the rivers Bhima and Sina, the reason being Solapur lies in a rain shadow, but heavy precipitation in catchments of Bhima basin, the release of water from Ujani dam, flood the villages situated on the banks of the river. The tehsil is prone to flooding in South Solapur, Akkalkot, Malshiras, Mangalvedha, Mohol, Pandharpur, and Madha. Bio disasters, mainly epidemics, are frequent in the district. Covid-19 had gripped the district in 2019 and 2020. The other natural hazards



like lightening, droughts and heat wave are evident, but the scale is medium. Manmade disaster, mainly fire and stampedes have more susceptibility.

**Vulnerability** – The vulnerability of the populations is attributed to their socioeconomic conditions. The vulnerability further increases due to in-accessibility to health care services and insufficient critical facilities. Lack of awareness and lack of sensitivity to public issues adds to the vulnerability of disasters.

**Capacity** – Solapur District has capacities to handle disasters, but these capacities need to be upgraded. Capacities are required in the pre-disaster phase for prevention, preparedness, and mitigation needs, as well as a focused and dedicated approach with structural and non-structural measures. Capacities for disaster and post-disaster phases, early warning, search and rescue, response and relief, recovery and rehabilitation need to be strengthened with risk knowledge and resources.

**Risk** - The overall disaster risk to the district is medium.

LIST OF HAZARDS	NORTH SOLAPUR	SOUTH SOLAPUR	AKKALKOT	BARSHI	MANGALVEDHA	PANDHARPUR	SANGOLA	MALSHIRIS	MOHOL	MADHA	KARMALA	SOLAPUR CITY	RISK AGGREGATION
EARTHQUAKES - ZONE III	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	HIGH
FLOODS/ HEAVY PRECIPITATION	HIGH	MEDIUM	HIGH	MEDIUM	MEDIUM	HIGH	MEDIUM	HIGH	MEDIUM	LOW	LOW	LOW	MEDIUM
FLASH FLOODS	MEDIUM	MEDIUM	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
CYCLONE- HIGH WINDS	LOW	LOW	LOW	LOW	LOW	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	LOW
DROUGHTS	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
LIGHTENING	HIGH	MEDIUM	MEDIUM	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	LOW	LOW	LOW	MEDIUM
HEATWAVE	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
BIO-DISASTERS-EPIDEMICS	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
FIRE	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
ACCIDENTAL DROWNING	LOW	LOW	LOW	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	MEDIUM
ROAD ACCIDENTS	HIGH	HIGH	HIGH	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
OTHER ACCIDENTS	MEDIUM	LOW	LOW	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	LOW
CBRN	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
STAMPEDES/RIOTS	LOW	LOW	HIGH	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
INDUSTRIAL HAZARDS	LOW	LOW	LOW	LOW	LOW	MEDIUM	LOW	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	LOW



## 4 INSTITUTIONAL ARRANGEMENTS

The primary responsibility of disaster management lies with the government stakeholders in the immediate jurisdiction where any emergency occurs. In the Solapur district, the institutional arrangements for disaster management are as follows:

1. District Disaster Management Authority
2. Tehsil Disaster Management Committee
3. Village-level Disaster Management Committee
4. Coordination Structure at the district level
5. End-to-End Early Warning Dissemination

### 4.1 DISTRICT DISASTER MANAGEMENT AUTHORITY

The District Disaster Management Authority (DDMA) has been constituted under section 25 (1) of the Disaster Management Act 2005 under the chairmanship of the District Collector (DC) with the following officers as its members:

S. No.	Designation	Role in DDMA
1.	District Collector	Chairperson
2.	Resident Deputy Collector	Chief Executive Officer
3.	Municipal Commissioner, Solapur Municipal Corporation	Member
4.	District Superintendent of Police	Member
5.	Chief Executive Officer, Zilla Parishad	Member
6.	Police Commissioner	Member
7.	Additional Collector	Member
8.	Chief Fire Officer	Member
9.	District Agriculture Officer	Member
10.	District Animal Husbandry Officer	Member
11.	Chief Surgeon	Member
12.	Superintendent Engineer, Public Works Department	Member
13.	Superintendent Engineer, Command Area and Development Authority, Irrigation	Member
14.	Executive Engineer, Ujani Dam Management	Member
15.	Superintendent Engineer, Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)	Member

<b>S. No.</b>	<b>Designation</b>	<b>Role in DDMA</b>
16.	Superintendent Engineer, Maharashtra Jeevan Pradhikaran, Water Supply and Sanitation Department	Member
17.	Deputy Director, Education	Member
18.	Divisional Manager, Railways	Member
19.	Sub-Regional Transport Officer	Member
20.	Divisional Manager, MSEDCL	Member
21.	District Information Officer	Member
22.	District Supply Officer	Member
23.	Director, AIR	Member
24.	Director, Doordarshan	Member
25.	District Coordinator, Home Guards	Member
26.	All Sub Divisional Officers	Member
27.	Asst. Engineer, Posts & Telegraph Department	Member
28.	Divisional Commissioner, MSRTC	Member
29.	Representative of District-Level NGOs	Member
30.	Representative of Mutual Aid & Response Group (MARG)	Member

When a major disaster occurs within the district's jurisdiction, the DC has the legal and executive authority to manage it.

## **4.2 TEHSIL DISASTER MANAGEMENT COMMITTEE**

This committee functions at the tehsil level and is headed by the respective tehsildars of each tehsil. The Natural Calamities wing provides day-to-day administrative support. They prepare and update the tehsil-wise DM plans in accordance with the DDMP. In 2024, all eleven tehsils have prepared and submitted their DM plans to the DDMA.

## **4.3 VILLAGE DISASTER MANAGEMENT COMMITTEE**

This committee functions at the village level and is headed by the Sarpanch of the Gram Panchayat with all the village/Panchayat officers as Members and the Secretary of the Gram Panchayat as Member Secretary. They prepare and update the panchayat-wise DM plans in accordance with the DDMP. This exercise is being planned in the district in the current year i.e. 2025-26.

## **4.4 COORDINATION STRUCTURE AT THE DISTRICT LEVEL**

The figure below represents the coordination structure between the district administration and sub-district levels in Solapur district.

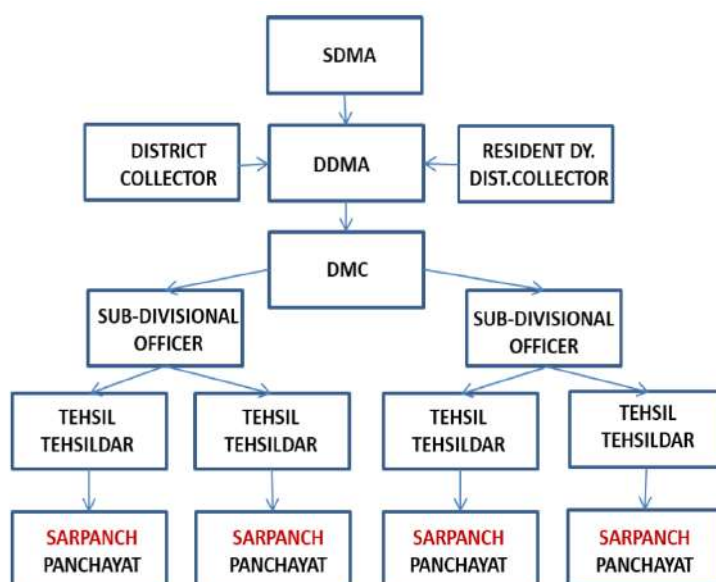


Figure 17: Coordination structure between Solapur District Administration and sub-district levels for Disaster Management

## 4.5 END-TO-END EARLY WARNING DISSEMINATION

The India Meteorological Department (IMD) is the nodal authority that issues weather forecasts and early warnings in the country. The Regional Meteorological Centre, Mumbai (the nearest IMD centre to Solapur district), is responsible for issuing all weather-related forecasts and early warnings for the district and disseminates them via multiple mediums. The IMD weather alerts are categorised into four colour codes:

<b>WARNING ( TAKE ACTION)</b>
<b>ALERT (BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING (NO ACTION)</b>

At the district level, the IMD reports are extracted from the IMD website or mobile applications such as Sachet, Damini, and Mausam. These yellow-orange-red weather alerts are further shared with the concerned officials through the District Administration's WhatsApp Groups and with communities in the district through the Gram Suraksha Yantrana mechanism. Apart from the national and state level early warning tools and services, the DDMA through the concerned stakeholder agency issues regular alerts to the local authorities and the communities overall e.g. the water discharge, the flooding, etc.

## 5 PREVENTION AND MITIGATION

Based on the existing disaster management cycle and the experiences of the humanitarian sector in recent years, the United Nations Office for Disaster Risk Reduction (UNDRR) has developed a framework of DRR components, i.e., as described in the adjacent figure. For the DDMP, the DRR components to be focused upon shall be:

1. Prevention and Mitigation
2. Preparedness
3. Response
4. Recovery and Reconstruction

The intermediate steps are also meticulously considered while drafting the DDMP.

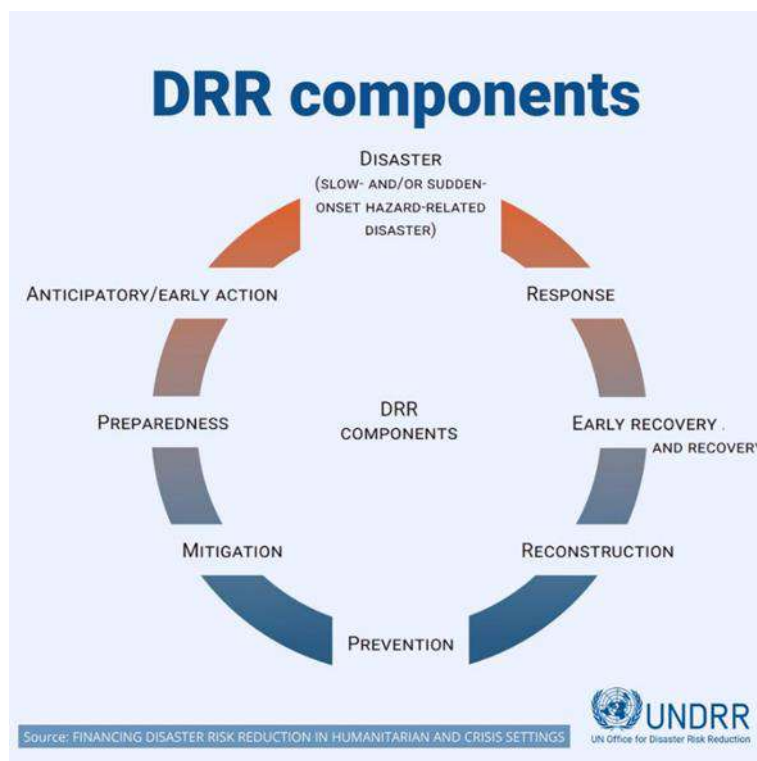


Figure 18: Framework of DRR Components (UNDRR)

### 5.1 PREVENTION AND MITIGATION MEASURES

Prevention of disasters focuses on completely avoid potential adverse impacts of hazardous events. Mitigation refers to lessening or minimizing the adverse impacts of hazardous events. While certain disaster risks cannot be eliminated, various strategies and actions can substantially lessen their scale and severity. The relevance of prevention and mitigation measures in the DDMP are as follows.

1. **Risk Reduction:** These measures aim to reduce the risk of disasters by identifying potential hazards and implementing measures to lessen their impact.
2. **Resource Optimization:** By focusing on the measures, the district optimises the use of resources, reducing the need for costly post-disaster relief, recovery and reconstruction efforts.
3. **Community Resilience:** Measures, such as infrastructure improvements and public education campaigns enhance community resilience by enabling to recover instantly when disasters occur.
4. **Sustainable Development:** Effective prevention and mitigation can contribute to sustainable development by minimising disaster-induced setbacks to the district's economic and social progress.

There are two types of prevention and mitigation measures: structural and non-structural. Structural measures are any physical construction to reduce or avoid possible impacts of hazards or the application of engineering techniques or technology to achieve hazard resistance and resilience in structures or systems. Common structural measures include dams, flood levies, ocean wave barriers, earthquake-resistant construction and evacuation shelters.

Non-structural measures don't include any physical construction and solely use knowledge, practice or agreement to reduce disaster risks and impacts e.g, in particular through policies and laws, public awareness raising, training and education. Common non-structural measures include building codes, land-use planning laws and their enforcement, research and assessment, information resources and public awareness programmes. This is framed in such a way that the whole population of the district will be sensitised to disaster management, and their capacity will be developed to cope with a hazardous situation. The district has a specific plan for capacity building, which is an ongoing process among various stakeholders.

As per the district's HVCRA, it has risk from multiple hazards. Unlike anthropogenic hazards, natural hazards like floods and earthquakes cannot be prevented. However, incorporating mitigation measures in planned development activities can reduce the hazard risks.

## 5.2 HAZARD-SPECIFIC MEASURES

Hazard	Structural Measure	Non-Structural Measure
<b>Earthquake</b>	<ul style="list-style-type: none"> <li>• Earthquake-resistant new construction</li> <li>• Earthquake-resistant retrofitting of older buildings</li> <li>• Demolition of unsafe structures as determined by structural audit</li> </ul>	<ul style="list-style-type: none"> <li>• Enforcement of building code</li> <li>• Structural audit of public buildings</li> <li>• Identification &amp; empanelment of concerned engineers</li> <li>• Training of masons on earthquake-resistant construction and retrofitting</li> <li>• Mass awareness campaign on earthquake-resistant construction and retrofitting</li> </ul>
<b>Drought</b>	<ul style="list-style-type: none"> <li>• Construction of water conservation structures</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of rainwater harvesting</li> <li>• Afforestation</li> <li>• Develop agreements with private borewell owners that may be used for tanker recharge during drought</li> <li>• Promotion of crop insurance</li> <li>• Crop diversification to meet the diversified food requirements during drought</li> <li>• Training of farmers and communities on alternative fodders for cattles, etc.</li> </ul>

<b>Hazard</b>	<b>Structural Measure</b>	<b>Non-Structural Measure</b>
<b>Flood and drowning</b>	<ul style="list-style-type: none"> <li>• Construction and maintenance of flood protection structures at critical spots</li> <li>• Construction of critical infrastructures that can withstand the floods (as per the national and state protocols and guidelines)</li> </ul>	<ul style="list-style-type: none"> <li>• Local planning for flood mitigation incorporating traditional methods</li> <li>• Flood line demarcation of flood-prone villages (Red line – blue line survey)</li> <li>• Capacity building training of locals and responsible stakeholders on Do's and Don'ts about floods</li> </ul>
<b>Unseasonal/ Heavy Rain</b>	<ul style="list-style-type: none"> <li>• Regular maintenance of critical infrastructure</li> <li>• Proper installation of hoardings in public areas</li> <li>• Construction of water diversion structures to prevent waterlogging</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring tree line cover in crop fields</li> <li>• Ensuring the robust early warning system is in place</li> </ul>
<b>Thunderstorm &amp; Lightning</b>	<ul style="list-style-type: none"> <li>• Installation of lightning protection systems in public buildings</li> </ul>	<ul style="list-style-type: none"> <li>• Mass awareness campaign on lightning protection</li> <li>• Promotion of Damini and Aapatti Sahayyak mobile application to receive localized lightning alerts</li> <li>• Mapping of high lightning impact zones in the district</li> </ul>
<b>Heatwave</b>	<ul style="list-style-type: none"> <li>• Setting up community cooling centres for vulnerable populations such as outdoor workers, street vendors, etc.</li> <li>• Setting up cool water tanks in public spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Increase the green cover across the locations including the along roads</li> <li>• Promotion of green infrastructure and cool roof technology</li> <li>• Public awareness campaigns on heatwave management</li> <li>• Implementation of the adaptation plans</li> </ul>
<b>Hailstorm</b>	<ul style="list-style-type: none"> <li>• Installation of shelter belts and windbreakers around orchards</li> <li>• Installation of nylon nets over horticultural crops</li> </ul>	<ul style="list-style-type: none"> <li>• Farmer awareness campaigns on hailstorm management</li> <li>• Training of trainers on disaster and climate resilient farming including cropping pattern and alternative livelihoods</li> </ul>



Hazard	Structural Measure	Non-Structural Measure
<b>Epidemic</b>	<ul style="list-style-type: none"> <li>• Installation of water purification structures</li> <li>• Retrofitting of water storage structures to prevent contamination</li> <li>• System strengthening of public healthcare</li> </ul>	<ul style="list-style-type: none"> <li>• Strict water quality monitoring and remedial actions of all public drinking water supply schemes</li> <li>• Periodic food quality monitoring</li> <li>• Proper sanitation, fecal sludge septage management and waste management measures</li> <li>• Regular vaccination programmes as defined prescribed the health authorities</li> <li>• Training of healthcare functionaries to promote disease prevention measures including communicable and non-communicable diseases</li> </ul>
<b>Road Accident</b>	<ul style="list-style-type: none"> <li>• Installation of adequate signboards, speed-breakers and guard stones at accident-prone spots (black spots)</li> <li>• Set up sufficient traffic aid posts</li> <li>• Use of technically authorized vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of accident-prone spots (black spots)</li> <li>• Awareness generation on safe road use, user mobility, use of safety gears (helmets, seat belts, etc.), speed regulations, reinforcement of laws, and training of general public on first aid and importance of golden hour after road crashes</li> <li>• System strengthening of hospitals and ambulance network for treating the crash victims</li> <li>• Diversion of heavy vehicles through bypass routes of cities</li> <li>• Training of the RTO department on scientific inspection of the vehicle safety, training of PWD officials for construction of technically sound roads along with placing of road signages, training of police personnel on recording the road crashes accurately, training and equipping the health department to treat the crash victims effectively including the young people and adolescents</li> </ul>
<b>Industrial Accident</b>	<ul style="list-style-type: none"> <li>• Installation of auto-activating cooling systems and other safety mechanisms for accident-trigger</li> <li>• Provision of Personal Protective Equipment (PPE) to all industrial employees</li> </ul>	<ul style="list-style-type: none"> <li>• Risk assessment of industrial areas</li> <li>• Development of safety and backup plans to decrease risks identified</li> <li>• Sensitization of industrial employees on the use of PPE</li> <li>• Preparation of the industry/unit specific disaster/emergency management plan</li> <li>• Reinforcement of industry and DM rules and regulations for the industries</li> </ul>

Hazard	Structural Measure	Non-Structural Measure
<b>Fire</b>	<ul style="list-style-type: none"> <li>• Upgradation of firefighting equipment, machinery and vehicles</li> <li>• Installation of firefighting equipment at all critical infrastructure areas</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of all critical infrastructure</li> <li>• Fire audit of public buildings</li> <li>• Promotion and sensitization of the public on fire safety</li> <li>• Enforcement of fire safety byelaws in building codes</li> </ul>
<b>Stampede</b>	<ul style="list-style-type: none"> <li>• Installation of crowd control infrastructure, such as waiting queues equipped with all basic facilities</li> <li>• Preparation of buffer spaces to facilitate medical evacuation</li> </ul>	<ul style="list-style-type: none"> <li>• Coordination mechanisms among the stakeholders to clarify roles and responsibilities</li> <li>• Use of crowd monitoring systems such as CCTV cameras, watchtowers, drone surveillance</li> </ul>

In 2024-25, the DDMA, on behalf of the district-level line departments, submitted over 30 project proposals to the state-level, under the funding window of State Disaster Mitigation Fund. These are currently under consideration and will be taken up once approved by the State. Apart from this, the DDMA in coordination with the Police Department is working on the operationalisation of an AI-based crowd monitoring system at Pandharpur's Vitthal Rukmini Temple. With regards to flood mitigation, the Irrigation Department is currently in the process of establishing the red and blue lines for the rivers in the district. Lightning mitigation measures require greater focus as the impact is quite high across the district.

## 6 PREPAREDNESS

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Despite the implementation of prevention and mitigation measures, residual risks from potential hazards persist. Therefore, it's crucial to undertake certain actions to prepare for these risks. These actions, collectively referred to as 'preparedness measures', serve as a bridge between the pre-impact and post-impact phases of a disaster event. Preparedness is generally understood as a set of measures that enable different entities—individuals, households, organisations, communities, and societies—to respond effectively and recover quickly when disasters strike. These efforts also aim to ensure that the necessary resources for an effective response are in place and that those tasked with responding know how to use these resources. As the district is prone to various hazards, there is a need to develop a preparedness plan for the community and administration itself.

### 6.1 COMMUNITY PREPAREDNESS

The DDMA, in coordination with the responsible authorities has planned to carry out the following activities to prepare the community.

#### **Sensitisation and Awareness Generation**

1. Placement of information boards at strategic public locations with information about dos and don'ts for the public to follow in a disaster, including helpline numbers.
2. Season-wise mass awareness campaigns for relevant hazards through mass media channels such as television, radio, PA system, social media, etc.
3. Public exhibitions in the most vulnerable areas of the district to brief the public on their respective area's hazards and actions to be taken. This can be done through demonstrations, slideshows, and short films.
4. Sector-specific training and mock drills in schools, hospitals, industrial areas, and other critical areas.

#### **Preparation of DM Plans**

Advocate with residential welfare associations, education institutions, corporate offices, government line departments, and industries to prepare their own DM Plans.

#### **Coordination with Community-Based Organisations (CBOs)**

Set up a coordination mechanism with the local administration and local CBOs, such as Ganpati Mandals and Yatra organisers. This will enable the local administration to prepare a calendar of all mass gathering events in their jurisdiction with the details of the festival, type of celebration, number of people, preparation planning, and resources used. Thereafter, DDMA will coordinate with them to ensure that safety audits and mock drills are carried out prior to the mass gathering. Apart from engagement with the CBOs, the DDMA has been exploring opportunities to engage the NGOs as Inter Agency Coordination cell to manage the disasters with social and inclusion lens.

## 6.2 ADMINISTRATIVE PREPAREDNESS

The DDMA, in coordination with the responsible authorities, is in the process of carrying out the following activities to ensure administrative preparedness.

### Control Room/ District Emergency Operations Centre (EOC)

There are 24x7 functional EOCs in the District Collector's Office and all tehsil offices. Staff have been allocated shift-wise for attending to calls received from the public and other stakeholders. Apart from these EOCs, the responsible agencies of emergency support functions, such as Police, Irrigation, MSEDCL, etc., also have their respective Control Rooms. All EOCs in the district have been instructed to share information and coordinate with the District EOC (DEOC). The district control room or DEOC is currently located on the first floor of the New Collector's Office in Solapur. The upgradation of the existing DEOC is being considered under the Maharashtra Resilient Development Program (MRDP).

### DM Plans

The DM plans for the district, all tehsils and vulnerable villages have been prepared and are being revised regularly. The contact diary along with nodal persons for each disaster management-related activity are being updated from time to time. The district is envisioning to integrate and mainstream the DRR into the GPDPs of all the Panchayats in the district. The VDMCs will be empowered to prepare the VDMP and DRR integration into the GPDPs.

### Resource Inventory

Resource inventory refers to listing various useful materials, manpower, vehicles, etc., with their contact details and procurement system. The DDMA has already collated such information from all concerned departments. This is attached in the Annexure B. This inventory is being updated from time to time. It is also updated on the India Disaster Resource Network (IDRN) website for online database management of the district's resource inventory.

### Emergency Response Teams

1. **Police:** The police department in the district are key stakeholders in disaster management and often become the first responders at the site of the emergency. They are trained in disaster management under their annual training calendar. Additionally, they also receive specialised training such as crowd management and flood response, prior to the Yatras and monsoon season respectively. They maintain strict vigilance in hazard-prone areas to undertake anticipatory action in case of any emergency.
2. **Fire Services:** All urban local bodies in the district have a fire station attached to them. They have been prepared with the necessary equipment and personnel to carry out rescue operations as and when needed. As part of the state fire services upgradation exercise, in 2024, new fire equipment and vehicles have been distributed in all fire stations of the district. This includes mini rescue vans and fire bikes, which are appropriate for responding to

emergencies in narrow lanes, congested areas and dense pockets. However, additional personnel are required in the fire services in order to meet the requirement. Also, there is a need of an upgraded fire control room connected to the DEOC and the Police Control Room.

3. **Home Guard:** Every year, under the annual training calendar of the Home Guard, a one-day session on disaster management is being undertaken in the district to sensitize them on their role in it. Thereafter, they are being inducted into the district's Emergency Response Teams. Apart from this, they are also trained under other capacity building programs such as Aapda Mitra and tehsil level search and rescue training sessions. It is being planned to have one team of Home Guards per tehsil that will be kept ready 24x7.
4. **Volunteers/ Aapda Mitra:** Emergency Response Teams have also been formed in all tehsils from among the community volunteers. In the current year, they are being trained under the Aapda Mitra scheme. The training of 300 Aapda Mitras is planned this year in the district. Apart from this, the DDMA has also conducted training of community volunteers in the previous years in Pandharpur and Akkalkot, owing to their flood-proneness. These volunteers will operate in conjunction with the other response teams. A list of such trained and ready volunteers has been prepared and shared with all concerned departments.
5. **Ambulance Services:** In addition to the ambulances available with the government healthcare facilities, there are ambulances under the Maharashtra Emergency Medical Services in the district. They are kept in state of readiness in case of any emergency.

## **Evacuation Routes**

In hazard-prone areas, evacuation routes or channels have been identified and prepared, which can be used for evacuation by response forces.

## **Safe Shelters**

A tehsil-wise identification and preparation of safe shelters has been done for evacuating during any disaster. These are strong and spacious buildings, like marriage halls, schools, and colleges.

## **Alert and Early Warning Dissemination**

To disseminate alerts and early warnings generated by various alert-generating agencies, the DDMA utilises multiple platforms such as news, social media, WhatsApp, and etc. In case of flood alert, the dissemination happens at the Gram Panchayat level through loudspeaker announcements. A proposed upgrade to this, is the automated siren system that needs to be established between the Irrigation Department, DEOC, and the State EOC (SEOC). For other hazards which can occur without any warning, such as earthquakes and industrial accidents, the police siren and hooter systems can be activated and operated through the Police Control Room. In Solapur district, there is already an existing system of Gram Suraksha Yantrana, which is being used to disseminate alerts and early warnings as per necessity. Additionally, the Sachet app is being promoted to the public to receive disaster alerts on their mobile phones directly.

## **CCTV Surveillance System**

In coordination with the police department, the DDMA is planning a centralised CCTV monitoring system. This is primarily aimed for Yatra preparedness, covering all major locations such as railway stations, bus depots, major administrative buildings, major road crossings and public places, major hospitals, major buildings or locations where there is a large congregation of people, such as religious places, procession routes, etc.

## **Medical Preparedness and Mass Casualty Management**

One of the major components of medical preparedness is the preparation and revision of DM plans for health care facilities. The DDMA will support the health department to prepare these plans for all major hospitals in the district. There is also a need to focus on ensuring adequate mortuary facilities.

## **Liaison with External Agencies**

In case there is a need for support from external agencies for disaster response, the DDMA also liaises with them on a yearly basis to establish a single point of contact (SPOC) with these agencies. These agencies include the following.

1. **Military:** Every year, a civil-military liaison meeting is planned to be held to discuss the SPOC and response capacities of the military agencies. This meeting will be attended by the Police Commissioner, Commandant of the Home Guards, Additional Collector, Commandant/ Station Commander of the Military Cantonment (with their staff), the Solapur Municipal Commissioner, District Disaster Management Officer, and Chief Fire Officer. In this meeting, DM Plans under different contingencies and mutual aid schemes will be formulated and discussed.
2. **NDRF:** The NDRF 5<sup>th</sup> Battalion is located closest to the district in Talegaon, Pune district. They conduct Familiarisation Exercises jointly with the DDMA every few years in various locations across the district. In addition, support from NDRF is also sought to facilitate the capacity building of Home Guard Rescue Teams and Community Volunteer Response Teams. There is scope for knowledge and technology transfer between NDRF and DDMA in emergency scenarios.
3. **NGOs:** The Ganesh Mandal volunteers, CBOs, and NGOs in the district also support the District Authorities during disasters. The DDMA has identified and collated the details of such volunteers and organisations and set up a coordination mechanism for them.
4. **Other agencies:** The DDMA also liaises with other agencies, such as BSNL, Petroleum Companies, Railways, and the Solapur Airport Authority, on preparedness measures. They share their DM plans and SPOC with the DDMA and a review meeting is planned with them annually, or as per need.



## 6.3 COMMUNICATION

Timely and reliable communication through state-of-the-art infrastructure is the heart of effective implementation of the disaster management strategy. Hence, ensuring a resilient communications infrastructure is crucial to disaster preparedness. Currently, the district is dependent on the Police Wireless System and telephone communication network to communicate with the various stakeholders. This system is augmented by a walkie-talkie radio communication network in Pandharpur, in preparation for telephone communication network failure during the Waris. Public WiFi connections are also planned for the peak crowd duration in Pandharpur to support data communication.

Reliable, up-to-date, and faster sharing of geospatial information acquired from the field or the affected areas is a prerequisite for effective implementation of disaster management strategies. Efforts are being made to set up infrastructure consisting of required IT processes, architecture, and skills for the quick upgradation of data sets from villages, towns, and cities.

Equipping the EOCs with the latest technologies and communication facilities, and their periodic upgradation, needs to be accorded priority. For last-mile connectivity and control of operations in disaster-hit areas, portable platforms should be made available for the integration of HAM radios and such other innovative facilities into the communication system.

## 7 CAPACITY BUILDING

Capacity building is a key intervention in disaster risk reduction. The DDMA has been facilitating the capacity building of various stakeholders using the following approach.

- Sensitise and train the government stakeholders on their roles and responsibilities
- Prioritise training and public awareness among communities based on their specific multi-hazard vulnerabilities.
- Identify and set up prior agreements with training institutions within the district and nearby districts.
- Conduct table-top exercises, simulations, mock drills, and other practical demonstrations.
- Carry out capacity analysis and, based on the gaps determined, conduct training of the emergency response teams.
- Conduct sector-specific sensitisation on disaster management in educational facilities, health care facilities, and other critical facilities.
- Conduct orientation of professionals like electricians, masons, engineers and architects.

*Table 29: List of planned capacity building activities in Solapur district*

S. No.	Subject	Target Group
1.	Sensitisation on disaster management, roles and responsibilities of each stakeholder	Government officers and staff
2.	Sensitisation on disaster management, dos and don'ts of relevant hazards	Community
3.	Training on First Aid and Search and Rescue	Emergency Response Teams, Police
4.	Orientation on early warning and alert dissemination	Nayab Tehsildar, Natural Calamities (NC) clerk, Talathi
5.	Orientation on Tehsil DM Plan preparation	
6.	Orientation on Village DM Plan preparation	Talathi, Gram Sevak
7.	Orientation on Departmental DM Plans preparation	Heads of Departments/ Disaster Management Nodal Officer
8.	Orientation on Hospital DM Plan preparation	Medical Officers/ Disaster Management Nodal Officer
9.	Orientation on School Safety	Teachers
10.	Training on resilient construction practices	Engineers, Masons, Architects
11.	Crowd Management	Police

In 2024-2025, the DDMA conducted training programmes for various stakeholders in collaboration with colleges and NGOs. The details are attached in annexure A.

## 8 RESPONSE

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Responding quickly and effectively to disasters is crucial to reducing loss of life and property. The DDMA in coordination with the response agencies has been responding to the disasters through reliable reports and communication from the incident site. The response activities are integrating the community empowerment measures aiming to make them well-informed and ready to lessen the impact of disasters. It is also important to consider the special needs of vulnerable groups while planning response activities, as they are often those left behind.

### 8.1 LEVELS OF EMERGENCY

The levels of emergency during any disaster situation have been categorized and disseminated as L0, L1, L2, and L3 based on the ability of various authorities to deal with them (NDMA, 2007).

**L0** denotes normal times that are expected to be utilised for close monitoring, documentation, prevention, mitigation, and preparatory activities. This is the planning stage, where plans at all levels, from community to State, shall be put in place. Training on search and rescue, rehearsals, evaluation, and inventory updation for response activities are carried out during this time.

**L1** specifies disasters that can be managed at the district level, but the state and centre will remain in readiness to assist if needed.

**L2** specifies disaster situations that may require assistance and active participation of the state, and the mobilisation of resources at the state level.

**L3** disaster situations arise from large-scale disasters, where districts and the state may not have the capacity to respond adequately and require assistance from the central government to reinstate the state and district machinery.

### 8.2 KEY STAKEHOLDERS

#### **First and Other Key Responders:**

Local community members are the first to respond to disasters, making their role extremely important. In addition, key responders such as the police, fire, medical services, and emergency response teams provide crucial support. They organise search and rescue teams and medical assistance. If the situation is serious, the NDRF may also be called in. Local volunteers will assist the key responders in their efforts.

#### **Search and Rescue teams:**

As per the Incident Response System, the Incident Commander directs the Operation Section Chief to carry out search and rescue at the disaster site. The search and rescue teams are equipped with

all the required and appropriate resources. In most cases, the fire department carries out search and rescue work depending on the seriousness of the situation. Based on the ground report of the Incident Commander, the District Collector may request the support of NDRF or other external agencies such as the military.

#### **First Aid Team:**

The search and rescue team is always be accompanied by the first aid team comprising doctors, nurses, paramedical staff, medicines, appropriate equipment, and ambulances. The DDMA ensures that the first aid teams are in place and are deployed where necessary.

#### **Local Volunteers:**

During disasters, external support is also be offered by NGOs, NCC and NSS volunteers. The role of such stakeholders is described below.

1. Act as facilitators between the government and the public
2. Help reduce rumours and hoaxes, and help people build confidence
3. Help move people to safe places, build temporary shelters, distribute food, and help with access to medical facilities
4. Help the vulnerable groups such as the differently abled, sick, elderly, women, and children
5. Help guard the property of the affected persons until it is handed over to safe hands

### **8.3 RESPONSE STRUCTURE AND FUNCTIONS**

At the district level, upon receiving an early warning or report of a sudden disaster, the District Administration activates the DEOC to ensure a timely and accurate flow of information between various levels and departments. The following functions are ensured during the response phase.

**Evacuation, Search and Rescue:** Once a disaster occurs in an area, it is crucial to ensure all the people in the affected area are evacuated. For this, an alert is issued in the affected area to ensure all people are aware of the disaster and start moving out immediately to safe locations/ shelters. In case some people are unable to evacuate themselves due to being stuck in an unsafe situation, then the search and rescue operations take place to safely rescue and evacuate them. The DDMA ensures that key stakeholders in this process, i.e. local volunteers, emergency response teams, and police, are deployed in a timely manner.

In case the rescued persons require medical attention, the local task force will evacuate them to the nearest identified hospital. Thus, each task force must have at least one ambulance at the time of response. Other modes of evacuation are made available as soon as possible. The DDMA will ensure that at least 3 to 4 ambulance vehicles are earmarked in each tehsil to respond to any disaster and they must be directed by the DEOC to respond immediately. The fire services also have some troop carrying vehicles that can be used initially for carrying out the injured and later, they can be

used for the disposal of the dead. The other rescued persons who do not require medical attention are immediately evacuated to the safe shelters, away from the incident site.

**Relief:** The DDMA in coordination with the District Supply Officer and other key stakeholders, has developed a strategy for the relief system. Relief entails offering immediate medical aid, provision of food, water and essential commodities to revive the victims from initial shock and restore the physical normalcy in daily life. The immediate relief phase is conducted on the heels of rescue and evacuation. The affected persons may be temporarily placed at safe locations/ relief camps and are given immediate financial compensation.

**Safe Shelter Management:** The DDMA has ensured that all the tehsils have identified safe shelters in case of disasters. The buildings selected for safe shelters are ensured to be resilient with all the facilities to cook food, store water, and have appropriate sanitation facilities, etc. All the information about the temporary shelters has been shared with the DDMA, including the details of nodal persons who will manage the shelter in each location. They are activated as soon as a disaster occurs.

**Animal Shelter Management:** The DDMA ensures the animal shelters are established under the care of Animal Husbandry department, if a disaster-affected area requires evacuation. These shelters should be located at an appropriate location such that it doesn't affect the nearby habitations. Fodder and medical attention is catered for. The major issue that comes up in these camps is the identification of the animals for handover to their owners later. The animals are tagged and photographed, while registering them into the shelter. Further, they are photographed again while handover and photographs will be affixed on a document, for record.

**Law and Order Maintenance:** During disasters, theft and robbery rates tend to increase. Therefore, the police department supports in relocating people to safe shelters to maintain peace. It is also the police's responsibility to protect property and uphold law and order. This approach will facilitate the search and rescue operations. Additionally, the police department supports in securing aid material storage and distribution in safe shelters.

**Dead Body Management:** This is a critical and sensitive issue within the response mechanism. The presence of dead bodies increases the risk of pollution and epidemics. The following considerations are considered when disposing of dead bodies.

1. All the dead bodies should be photographed.
2. Prior to the disposal, informed consent is obtained from the next of kin or relatives, or the body is handed over to the relatives.
3. The Panchanama is done in the presence of responsible and important persons of the community, while ensuring the safety of the officers and volunteers conducting the Panchnama.

**Aid Management:** After a disaster, aid materials from the government or other sources must be stored and distributed efficiently. The DDMA appoints a committee responsible for acquiring and properly distributing the aid, ensuring that beneficiaries receive the right amount at the right time. Special consideration is given to pregnant women, children, the elderly, individuals with disabilities, and those who are sick during the distribution process. The committee collaborates with the police and NGOs to facilitate the distribution of aid.

**Public Grievance Management:** After any disaster, there is a loss of life and property. Hence, it is essential to establish a public grievance cell to compile and provide information about the missing, dead and injured persons to the relatives and to the general public.

**Information and Media Management:** During disasters, it is crucial to disseminate accurate information through electronic and print media. The DDMA deploys a trained official for regular official press briefings as and when necessary. Training in information management and accurate reporting will be conducted at all levels.

## 8.4 INCIDENT RESPONSE SYSTEM

The Incident Response System (IRS) is a management framework designed to organise various emergency functions in a standardised way when responding to disasters. The DDMA will develop a command structure by forming specialised Incident Response Teams (IRTs), which will include an Incident Commander and officers trained in various aspects of incident response, such as logistics, operations, planning, safety, and media management. The focus will be on using technology and modern planning and execution systems to help the IRTs stay connected to the DEOC at all levels.

IRTs will function at the district, sub-division and the tehsil/ block levels. The lowest administrative unit (sub-division, tehsil or block) will be the first responder as the case may be. If the incident becomes complex and is beyond the control of local IRT, the higher level IRT will be informed and they will take over the response management. In such cases the lower level IRT will merge with higher level IRT.

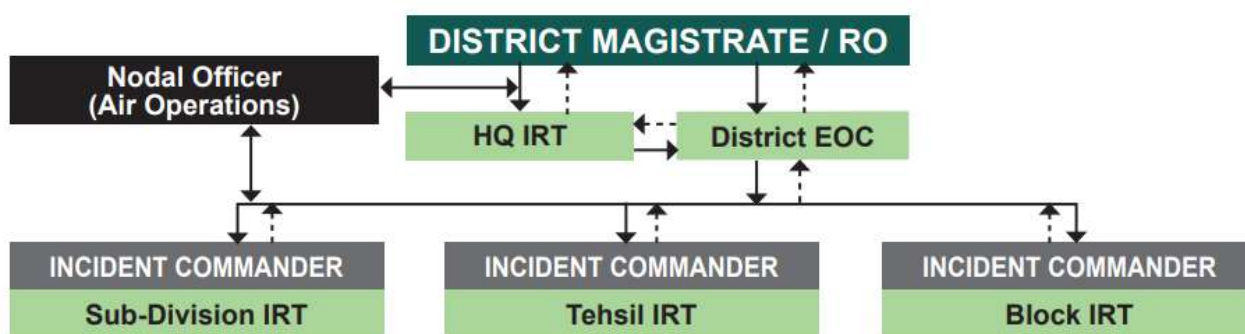


Figure 19: IRTs at district-level (NDMA's Guidelines on Incident Response System)



The District Collector has been designated as the Responsible Officer (RO) in the district. They issue a Standing Order for formation of IRT at district/ sub-division and tehsil/ block levels, ensuring that appropriate and experienced officers are selected for IRTs. Once, the disaster strikes, the steps followed are as follows.

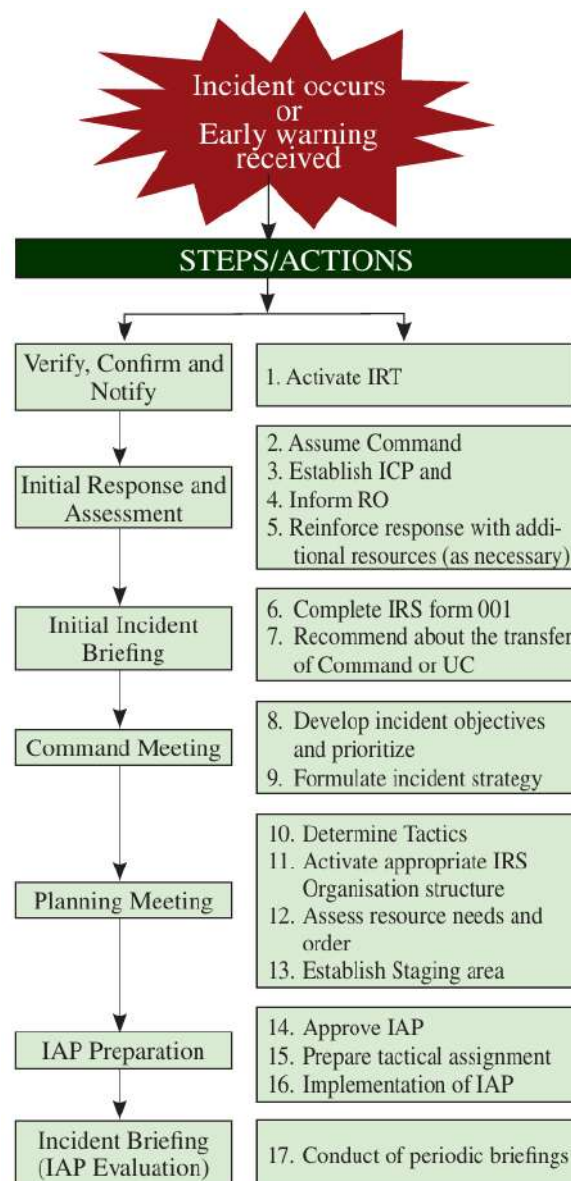


Figure 20: Steps of response under IRS (NDMA's Guidelines on Incident Response System)

## 8.5 MUTUAL AID SCHEME

In a large-scale disaster, it will be essential to coordinate the resources and facilities of various agencies. This coordination can be achieved through mutual aid schemes, which are established separately between the agencies involved. For each such scheme, the following is considered.

1. Manpower availability for rescue and relief.
2. Material and Services to be tied up mutually – Fire Services, Medical Services, Sheltering material, etc.

### 3. Mutual communication for issuance of Early Warning and Coordination.

Under the IRS, mutual aid agencies are always required to be the second responders when called for help. If prepared and well-rehearsed, the mutual aid agency is expected to react immediately and add to the available manpower and material of the 'caller' partner to undertake further rescue, evacuation, and medical aid and relief duties.

All responders maintain a 24x7 vigil, and mutual aid agencies exchange important phone numbers and frequencies (if radio sets are operated) with each other. The railways have a telephone connectivity socket at each kilometre length of railway track and are also connected through an optical fibre communication network. In case of emergency, the same are leveraged. The mutual aid scheme agencies are expected to jointly conduct mock drills and maintain records. The SPOC provided by the parent agency makes a call for help.

**Solapur Municipal Corporation:** When there is an incident within the Solapur city municipal jurisdiction, the mutual aid occurs as follows.

1. The Solapur Municipal Commissioner have a greater role to play.
2. A unified command structure are established (to coordinate the operational issues more efficiently). It is possible that there would be IRTs in multiple places.
3. Resources are likely to fall short, and major resource requirements at all the places will have to be met from outside the city's jurisdiction. The other tehsils may have to be activated for pooling resources. The Municipal Commissioner will logically distribute these resources.
4. Major resource demands will have to be raised on the State machinery through the SDMA.
5. Communication networks will have to be enhanced, and frequency management will have to be worked out.

**Pune District:** As Solapur and Pune are neighbouring districts, there is a mutual aid system established. When areas of both districts are affected by a common disaster, invariably, the District Collectors act as the Responsible Officers, and the Pune Divisional Commissioner acts as the Superior Officer. The concerned Municipal Commissioner/ SDO/ Tehsildar/ BDO act as the Incident Commander within their areas of jurisdiction. In case of an earthquake, there will be a gross shortage of resources and hence, mutual aid between them would be unlikely except for information exchange and traffic control, as the major roads are common and pass through both jurisdictions. Some fringe areas may need support from the other jurisdiction, through coordination at the district level.

**BSNL:** The DDMA and BSNL shall prepare a joint action plan to respond in emergency scenarios. BSNL should share its disaster management plan with the DDMA, which should include the role and responsibilities of each stakeholder, as per the DM act and the NDMA guidelines. There shall be at least one meeting every six months to update and evaluate the situation and action plan.

**Petroleum Companies:** It is mandatory for the petroleum companies to prepare and update their DM plan, as per the situation on the ground. They shall share their emergency response plan with the DDMA for joint response when required. There will be at least one meeting every six months to update and evaluate the situation and action plan.

**MIDC/ MPCB/ DISH:** These autonomous organisations will prepare their own DM plan, considering their susceptible risks and the available resources for response. The database of DM resources and the role and responsibilities of the responsible officer coordinating the DM activities will be shared with the DDMA to plan a joint response in case of a disaster. At least one meeting every six months will update and evaluate the situation and action plan. A joint mock drill exercise is also recommended.

**Indian Railways:** The Solapur Railways Division will prepare its organisational DM plan. The database of DM resources and the role and responsibilities of the responsible officer coordinating the DM activities will be shared with the DDMA to plan a joint response in case of a disaster. At least one meeting every six months will update and evaluate the situation and action plan. A joint mock drill exercise is also recommended.

## 9 RECOVERY, RECONSTRUCTION AND REHABILITATION

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After a disaster, the recovery phase involves rehabilitation and reconstruction to help affected people return to normal life. This includes restoring utility services and transportation routes and providing food and shelter. The focus is on building back better with resilient features. The priority is addressing gaps in infrastructure and supporting livelihoods, education, healthcare, and vulnerable groups. Other important aspects include housing, water sources, sanitary facilities, access to credit, agricultural inputs, and technology upgrades.

### 9.1 POST-DISASTER RECONSTRUCTION AND REHABILITATION STRATEGIES

Post-disaster reconstruction and rehabilitation should focus on the following activities for speedy recovery in disaster-hit areas. The government's and the affected people's contributions are significant to properly dealing with all the issues.

- Damage assessment
- Disposal of debris
- Disbursement of assistance for houses
- Formulation of assistance packages
- Monitoring and review
- Cases of non-starters, rejected cases, non-occupancy of houses
- Relocation
- Town planning and development plans
- Reconstruction as Housing Replacement Policy
- Awareness and capacity building
- Housing Insurance
- Grievance Redressal

The following principles should be considered while carrying out the activities mentioned above.

1. **Build Back Better (BBB):** This principle emphasizes the importance of using the opportunity to rebuild to address development deficits in the affected areas beyond simply restoring them to their pre-disaster conditions.
2. **Participatory Planning:** Recovery programs, along with the increased public awareness and engagement that often follow a disaster, provide a valuable opportunity to develop and implement disaster risk reduction (DRR) measures while applying the BBB principle.
3. **Leave No One Behind (LNOB):** Ensure that the recovery process addresses the needs of women-headed households, artisans, farmers, and individuals from marginalized and vulnerable groups.

### 9.2 POST-DISASTER NEEDS ASSESSMENT

The decision of the District Administration to undertake a Post-Disaster Needs Assessment (PDNA) is based on the situation analysis in consultation with the State Revenue Department, and it is determined that the severity and scope of the disaster necessitates a PDNA to inform of future

recovery and development. In the aftermath of a disaster and once the immediate response period has passed, the District Administration shall mobilise all concerned departments to carry out the damages and losses assessment, based on which the PDNA can evolve, leading to clear priorities for disaster recovery. These priorities are then categorized into short-term and long-term recovery actions. The figure below describes the PDNA summary process at the district level, as per adaptation from the National Institute of Disaster Management's (NIDM) PDNA Manual.

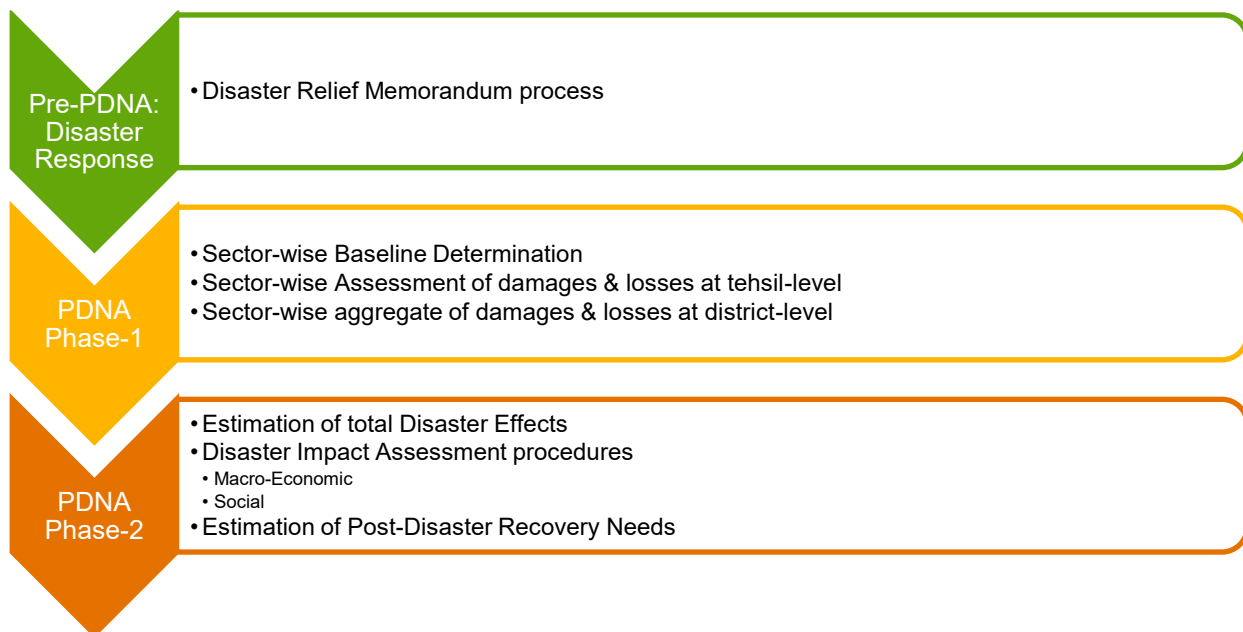


Figure 21: PDNA Summary Process (adapted from NIDM's PDNA Manual)

The broad sectors to be assessed following the abovementioned process have also been specified in the PDNA Manual. They are as follows.

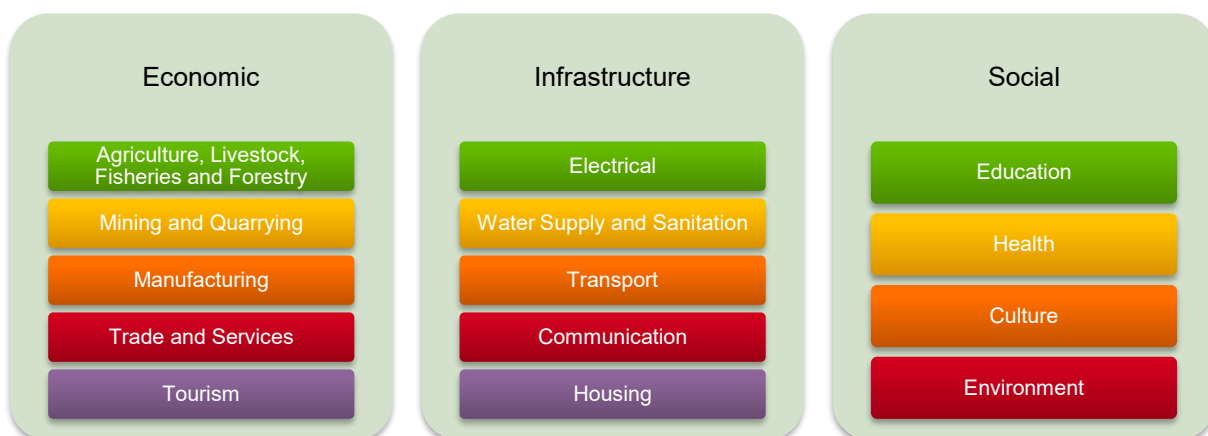
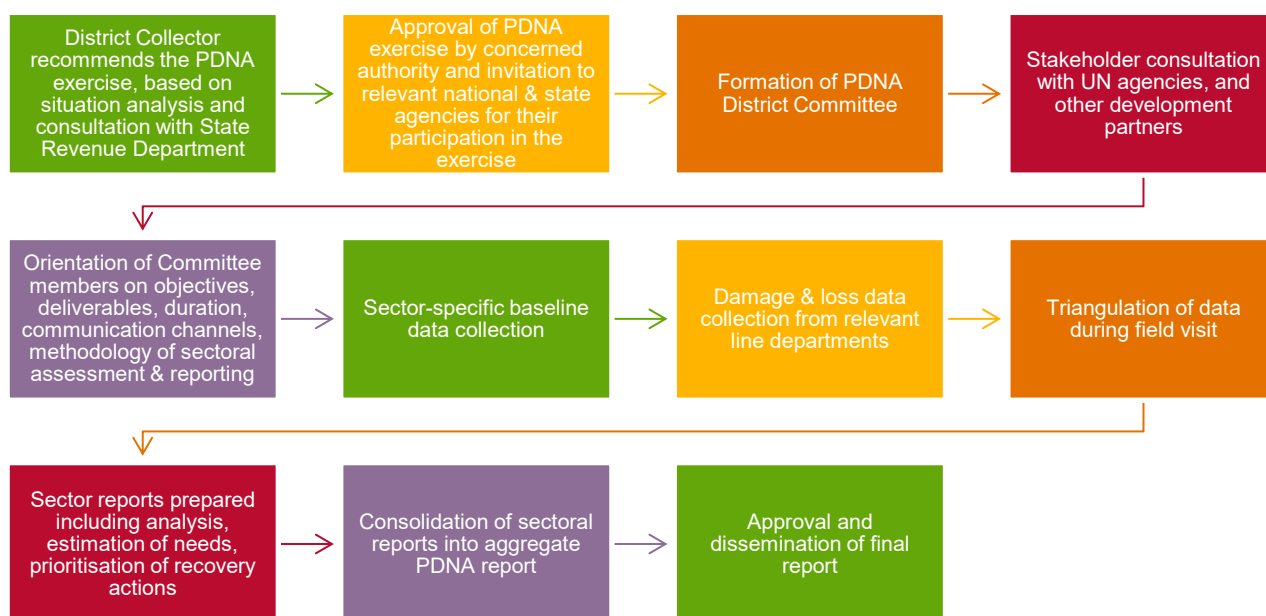


Figure 22: Sectors that can be covered in PDNA exercise (NIDM's PDNA Manual)

The PDNA District Committee, composed of a larger subset of the DDMA, should be well-coordinated, with specific tasks assigned to each member. It should be headed by the DC or assigned OIC. The main subgroups of the Committee should be as follows.

1. **Management Team:** Led by the DC or the assigned OIC, the Management Team shall oversee the PDNA process, provide strategic guidance, make decisions, and ensure that the necessary resources are available for undertaking the evaluation.
2. **Sector Teams:** Once the sectors to be assessed have been identified, each sector will be evaluated by a team of technical personnel from the relevant line departments, along with external experts. These Sector Teams will conduct field visits to the disaster-affected areas and Tehsil Offices to gather baseline data, as well as data on damage and losses. They will validate this data through a process known as triangulation. Following this, the teams will analyze the data, prepare a sector-specific assessment report detailing the damage and losses, and propose priorities for recovery within each sector.
3. **Coordination Team:** The Management Team will assign the necessary number of staff to coordinate communication between the Tehsil Offices and the required logistics. These staff members will be responsible for day-to-day planning and for coordinating with sector team members, district or state government representatives, and donors during the assessment process. They will analyze the data, prepare reports, and develop the recovery framework under the guidance of the Management Team.
4. **Report Preparation Secretariat:** The Coordination Team shall coordinate with the Sector Teams to prepare sector reports, and they will compile and summarize the findings into a consolidated report, with technical support from external experts as necessary.

The process of conducting a PDNA is summarized below.



*Figure 23: Steps to be followed during PDNA exercise*



### 9.3 INFRASTRUCTURE RESTORATION AND RECONSTRUCTION

It includes restoring basic infrastructure and essential services per the relief code, reconstructing lifeline buildings and social infrastructure, and repairing damaged buildings. It also promotes an owner-driven approach to recovery. Recovery measures are generally classified into short-term and long-term.

1. **Short-term:** These activities restore essential life-support systems to minimum operating standards, including debris clearance, temporary housing, utility restoration, transportation reestablishment, and short-term livelihood support like loans or grants. They begin alongside the disaster response phase and continue beyond the immediate aftermath. Additionally, they address societal needs such as enforcing the rule of law and providing psychosocial support, with a focus on securing affected areas and enabling households and businesses to start recovering.
2. **Long-term:** After achieving stability, long-term recovery efforts aim to restore economic activity, public facilities, and individual housing. These efforts can last for several years following a disaster. The goal is to return life to normal or even improved levels. This may include redeveloping damaged areas, providing reconstruction loans, implementing sustainable livelihood programs, offering legal assistance, and engaging in community planning.

### 9.4 PSYCHOSOCIAL SUPPORT

In the aftermath of a disaster, affected individuals often face increased stress and mental health issues. Psychosocial support aims to address these challenges by promoting resilience, restoring social connections, and enhancing coping abilities. Interventions such as counseling, community gatherings, and activities foster emotional healing and help communities regain a sense of normalcy. Ultimately, the goal is to restore well-being in disaster-affected areas by meeting essential needs and promoting mental health.

### 9.5 REHABILITATION

Rehabilitation involves different aspects like shelter, livelihoods, education, health, and infrastructure. This is a long drawn function, within the realm of the Rehabilitation Department in the Office of the District Collector. However, the DDMA can technically advise them on the location for reconstruction. Land acquisition, identification of low risk location and financial impacts must be considered while deciding upon the location and size of the houses offered. Another sensitive issue is about finding means of livelihood for those who have lost it due to the incident. This again is within the realm of the concerned departments of the district.

## 10 SOCIAL INCLUSION IN DRR

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Social inclusion in DRR involves addressing the specific needs of vulnerable populations in all aspects of planning, including response, preparedness, mitigation, recovery, and reconstruction. Disasters often have a discriminatory impact, disproportionately affecting the most vulnerable, particularly the poorest individuals. Therefore, DRR requires the engagement and collaboration of all sectors of society. Governments should involve relevant stakeholders, such as women, children and youth, persons with disabilities, the economically disadvantaged, migrants, SCs, STs, and older adults, in the design and implementation of policies, plans, and standards.

### 10.1 GENDER AND DRR

Gender inequalities in society result in varying impacts during disasters based on gender. Discrimination against women and girls limits their decision-making power and access to resources, increasing their vulnerability during such events. Likewise, societal norms surrounding masculinity can lead to higher mortality rates for men and boys. Women often face greater disaster risks due to intersecting inequalities related to age, disability, ethnicity, and class. Following a disaster, the risk of violence against women may increase, and they may encounter difficulties accessing sanitation, privacy, and relief materials, particularly if they are alone or are heads of households. An intersectional gender analysis needs to inform DRR actions. It is essential to collect and use sex, age, and disability-disaggregated data to better understand the gendered nature of disaster risks and to guide DRR decision-making effectively.

### 10.2 CHILDREN AND DRR

When a disaster strikes, children are at risk of experiencing isolation, anxiety, and trauma. They may become separated from their families, lose one or both parents, or face issues such as gender-based violence and trafficking. In the aftermath of a disaster, children are also at a high risk of dropping out of school and being pushed into child labor. Additionally, the disruption of services may lead to delayed school returns and poor access to food and nutrition. To address these challenges, child-responsive disaster risk reduction must focus on the specific risks that children and young people face. It is essential to involve children in initiatives aimed at reducing disaster risk. Given their unique needs, the disaster management cycle should be crafted to be child-responsive. Solutions must be holistic and inclusive, considering children's exposure and coping capacities to help minimize their vulnerability. Some examples of child-inclusive DRR are as follows.

1. Set up child-friendly spaces such as day centres in disaster-affected areas.
2. Orphaned children may be fostered or transferred to nearby orphanages.
3. Sensitize the public regarding the child helpline number (1098) and how to report it.
4. School safety programmes.

### **10.3 ELDERLY AND DRR**

Elderly persons have distinct requirements that must be understood and addressed in all DRR activities. Their vulnerabilities and capacities are frequently overlooked, so collecting data on age and gender is crucial to ensure that they are recognized and supported in DRR efforts. Additionally, older adults possess years of knowledge, skills, and wisdom, which are invaluable assets in disaster response and recovery. It is important to acknowledge, value, and engage older individuals by encouraging their participation in DRR initiatives.

### **10.4 DISABILITY AND DRR**

Persons with Disabilities (PwDs), or Divyangjans, are often disproportionately affected by disasters and demonstrate varying resilience and recovery capacity levels. Many PwDs face social or logistical isolation and struggle to access evacuation warnings, suitable transportation, and essential medical equipment. Inaccessible disaster preparedness plans, systemic discrimination, and widespread poverty frequently leave persons with disabilities behind during relief and response efforts. Therefore, it is crucial to consult and fully engage persons with disabilities in developing and implementing national and local strategies. As per NDMA's Guidelines on Disability-Inclusive DRR, the DDMA will carry out the certain activities to ensure disability inclusion in DRR. Some prominent ones are listed below.

- Identify and list individual PwDs through community workers, update them annually, and share the list with SDMA and the state government.
- Support the state's undertaking of comprehensive HVCRA covering all types of disabilities.
- Ensure representation of PwDs and Disabled Persons Organisations (DPOs) in DRR Committees.
- Organize consultations with DPOs to develop and implement community-based disaster risk management system on the local need basis.
- Conduct resource mapping of specific requirements of PwDs needed for DRR.
- Undertake incident based survey for assessing the impact of disaster on PwDs.
- Develop effective communication that is accessible to PwDs, such as captioning, sign language, and voice description of all emergency numbers and other information.
- Maintain equipment and essential assistive devices in emergency shelters.
- Create a cadre of community members, PwDs and DPOs trained in disability-inclusive DRR.

### **10.5 MIGRANTS**

Migrants often face significant challenges in accessing essential resources, services, opportunities, and information that are vital for their safety and well-being during disasters. When these challenges are not effectively addressed, migrants can suffer disproportionately from disasters. The impact of

such disasters on migrants also affects their host communities as a whole, threatening the dignity, lives, and assets of all involved. Conversely, when migrants' skills, experiences, and capacities are utilized in DRR efforts, it can enhance the resilience of their host communities. Migrant-inclusive DRR should focus on identifying the barriers that migrants encounter and implementing proactive, targeted strategies to address these barriers appropriately.

# 11 DRR FINANCING

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Disaster management in the present form is a new subject for both the government and the general public. The already existing financial arrangements at the Central and State levels and the other allocations were nominal to cater to the need of increasing devastation. The DM Act has provisions for the constitution of several funds under the subject, such as the National Disaster Response Fund, National Disaster Mitigation Fund, State Disaster Response Fund, State Disaster Mitigation Fund, District Disaster Response Fund and District Disaster Mitigation Fund. The concept has further developed so that the Finance Commission has conceptually agreed to have an exclusive mechanism to fund and monitor the financial arrangements of disaster management.

## 11.1 FINANCE COMMISSION RECOMMENDATIONS

The 13<sup>th</sup> Finance Commission (2010-2015) responded very positively to the long pending request for greater allocation of funds for disaster management. This included merging the National Calamity Contingency Fund (NCCF) into the National Disaster Response Fund (NDRF) and the Calamity Relief Fund (CRF) into the State Disaster Response Funds (SDRFs) of the respective states. Additionally, the Commission recommended that the review of the provisions of District Disaster Response Funds (DDRFs) and their setting up be left to the discretion of the individual states.

The 14<sup>th</sup> Finance Commission (2015-2020) recommended the development and scientific validation of the states' Hazard Vulnerability Risk Profiles to build a more rational basis for the allocation of funds state-wise. Additionally, it is recommended that a state use up to 10% of the SDRF for "local" disasters that are not notified under the Ministry of Home Affairs list of disasters but have been notified by the state.

The coverage of the funds recommended by the 15<sup>th</sup> Finance Commission (2021-2026) went beyond NDRF and SDRF. The Commission recommended the creation of funds for disaster mitigation along with disaster response, which will together be called the National Disaster Risk Management Fund (NDRMF) and State Disaster Risk Management Funds (SDRMFs). The Commission has also recommended an allocation of INR 1,60,153 crores in the SDRMF for 2021-26, out of which 80% is for SDRF, and 20% is for the State Disaster Mitigation Fund (SDMF). For the first time, funds were allocated exclusively for mitigating disaster risks to help states carry out risk reduction activities. For the year 2023-2024, Maharashtra state has the highest share of SDMF allocation in the country, with INR 947.20 crore, out of which INR 433.80 crore was released by 31<sup>st</sup> March 2024.

## 11.2 SDRF AND SDMF GUIDELINES

The guidelines on the constitution and administration of the SDRF are instrumental in providing a structured approach towards disaster management at the state level. These guidelines, issued under

the Disaster Management Act of 2005, delineate the period of operation, funding allocations, calamities covered, constitution of the fund, contributions, release mechanisms, and other administrative aspects essential for effective disaster response and relief efforts.

The MHA issued the guidelines on the constitution and administration of SDMF in 2022, considering the provision for mitigation activities in the DM Act and the recommendations of the 15th Finance Commission. The NDMA has issued the technical guidelines separately within the broad framework of these guidelines in concurrence with the MHA.

The MHA has evolved a web-based application, the National Disaster Information System (NDMIS), to share real-time information with the state governments about the availability of SDRF and SDMF funds. The district must provide details of expenditures from SDRF and SDMF as per the State Government's requirements for NDMIS reporting.

### 11.3 FUND OUTLAY

The outlay of SDRMF allocated to Maharashtra for the duration of the financial years 2021-22 to 2025-26 is as below.

*Table 30: Financial outlay of SDRMF to Maharashtra state for 2021-26 (MHA)*

Financial Year	SDRF allocation (INR Crores)	SDMF allocation (INR Crores)	Total SDRMF allocation (INR Crores)
<b>2021-22</b>	3,436.80	859.20	4,296.00
<b>2022-23</b>	3,608.80	902.20	4,511.00
<b>2023-24</b>	3,788.80	947.20	4,736.00
<b>2024-25</b>	3,978.40	994.60	4,973.00
<b>2025-26</b>	4,176.80	1,044.20	5,221.00
<b>Total</b>	18,989.60	4,747.40	23,737.00

The DDMA receives an annual fund under the “Preparedness and Capacity Building” window. Using this fund, the DDMA conducts several activities related to preparedness for response, such as training, capacity building, SAR equipment procurement, and public awareness generation.

### 11.4 GOVERNMENT SCHEMES SUPPORTING DRR

Section 49 of the DM Act mandates that every Ministry or Department of the Government of India allocate funds in its annual budget to implement the activities or programs outlined in its DM Plan. In addition to the various schemes and programs established by the NDMA and the SDMA, several other government development schemes—both direct and indirect—also support DRR. Some of these schemes are discussed below.



- The **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** creates community assets like water conservation and flood protection structures while providing a safety net that helps reduce the vulnerability of the poorest populations in disaster situations.
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)** focuses on infrastructure developments that include disaster-resilient features like flood management, improved drainage, and construction standards to reduce risks from natural hazards in urban areas.
- **Pradhan Mantri Awas Yojana (PMAY)** addresses the physical vulnerability of the rural poor by prioritizing affordable housing solutions for socially marginalized sections.
- **Swachh Bharat Mission (SBM)** encourages communities to adopt sustainable sanitation practices and facilities by creating awareness and providing health education, thereby reducing health hazards and risks.
- **Pradhan Mantri Fasal Bima Yojana (PMFBY)** aims at providing financial support to farmers suffering crop loss/damage arising out of natural calamities like hailstorm, drought, floods, cyclones, heavy and unseasonal rains, attack of disease and pests etc.

## 11.5 OTHER FINANCING OPTIONS

DRR can be financed through various means beyond government schemes. Corporations often contribute through CSR initiatives, while PPPs facilitate collaboration between governments and the private sector to fund DRR projects. Crowdfunding platforms allow individuals and communities to raise money for specific DRR efforts, including disaster shelters and early warning systems. Additionally, disaster-specific campaigns can quickly mobilize funds during emergencies. Philanthropic foundations provide grants for DRR initiatives, and some establish endowments for sustained support. Grant programs from international organizations and aid agencies also help finance a wide range of DRR activities, encompassing preparedness training and infrastructure development.

## **12 MONITORING, EVALUATION, UPDATE, MAINTENANCE AND DISSEMINATION**

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To manage disasters effectively, a clear plan is needed for monitoring, evaluating, updating, maintaining, and sharing the DDMP. This approach helps ensure the district's strategies are relevant and can respond to changing risks. By monitoring and evaluating the plan, the district can see how well it works, spot areas that need improvement, and make necessary updates. Keeping the plan well-maintained guarantees that it stays useful and prepared. Sharing information with the community helps keep everyone informed, builds resilience, and improves the District Administration's ability to respond together. These steps are essential for enhancing safety and preparedness in the district.

The DDMP for the district is a public document. The underlying principle of disaster management is that it has to be part of all departments, and none can fold fingers against it. The preparation of DDMP is the ultimate responsibility of the DDMA or the sub-committee appointed by the DDMA in the district. The first draft plan is to be discussed in the DDMA, and later, the Chairman of the DDMA shall ratify it. The same procedure is to be followed when updating the plan. A copy of the updated document shall be circulated to each stakeholder of disaster management in the district.

### **12.1 DDMP MONITORING AND EVALUATION**

The DDMP's monitoring and evaluation aim to assess resource effectiveness, agency coordination, community involvement, and NGO partnerships. Key elements include the plan's clarity and usability. Regular monitoring and evaluation will ensure updates are made in response to organizational shortcomings, technological advancements, and feedback from mock drills. Adaptation and optimization will support continuous improvement in disaster planning. Assigned individuals and agencies must develop supporting plans and SOPs, regularly review alert protocols, and maintain preparedness. Both district and state evaluations of the DDMP will enhance disaster response and management effectiveness.

Lessons learned from disasters can enhance future risk planning. The DDMA Chairperson shall arrange to collect data on any disaster, regardless of size. A post-disaster evaluation mechanism will be set up with qualified professionals, ensuring the data is cross-checked and documented in the DEOC. After relief activities conclude, an evaluation will assess key areas, including, state intervention and support, organizational structure, institutional arrangements, SOPs, monitoring mechanisms, information tools, equipment, and communication systems. Impact studies will also be conducted to inform long-term prevention and mitigation efforts.

At the community level, evaluation exercises may be undertaken to assess the reactions of the community members at various stages in the DM cycle to understand their perceptions of disaster response in terms of adequacy of training, alert and warning systems, control room functions, communication plans, security, containment, recovery procedures, monitoring.

## 12.2 DDMP UPDATE AND MAINTENANCE

The DDMP is a “living document” that the DDMO will update every year under the guidance of the District Collector, along with YASHADA's resource requirements, considering updates on human resources, technology to be used, and coordination issues. An annual conference for DDMP updation shall be organized, in which all concerned departments and agencies will participate and give recommendations on specific topics.

It is recommended that a DDMP be **internally reviewed yearly and either updated or reaffirmed**. The updated or reaffirmed document may also summarize the accomplishments of the past year and help the administration prioritize mitigation goals for the next year. It should be mandatory to consider reviewing and updating the plan after the following events.

- A major incident.
- A change in operational resources (e.g., policy, personnel, organizational structures, Management processes, facilities, equipment).
- A formal update of planning guidance or standards.
- Each activation.
- Major exercises.
- A change in the district's demographics or hazard or threat profile.
- The enactment of new or amended laws or ordinances.

## 12.3 DDMP DISSEMINATION

For the DDMP to be effective, it must be disseminated at two levels, i.e. for implementation involving district authorities, government departments, NGOs and other agencies and institutions within the district, and for general public awareness to citizens. Effective dissemination of the plan requires well-designed and focused training and awareness programmes. The responsibility for disseminating the plan is vested with the DDMA at the Collector's Office.

After the DDMP is disseminated, the Heads of concerned departments must train their personnel so that they have the knowledge, skills and abilities needed to perform the tasks identified in the Plan. Personnel should also be trained on the organization-specific procedures necessary to support those tasks.

In addition to disseminating the DDMP, mock drills should be conducted regularly, especially in hazard-prone areas, to maintain the readiness of communities and departments regarding operational procedures, personnel and equipment, and orderly response. The objectives of a full-scale drill include the evaluation of the following:

- practicality of the plan (structure and organisation)
- adequacy of communications and interactions among agencies and the public
- emergency equipment effectiveness
- adequacy of first aid and rescue procedures
- adequacy of emergency personnel response and training
- public relations skills
- evacuation and count procedures

# ANNEXURES

## A. CAPACITY BUILDING ACTIVITIES 2024

The Solapur District Disaster Management Authority (DDMA) carried out awareness activities at various locations in Solapur district during the International Day of Disaster Risk Reduction (IDDRR) 2024. Commemorating the occasion, the DDMA, in partnership with the Family Planning Association of India (FPAI), Solapur Branch and Ikon College of Fire Engineering & Safety Management, Solapur, conducted these sessions to orient and build the capacities of Solapur's youth regarding disaster management. The following topics were covered in the sessions:

- Basic concepts and Institutional Arrangements of Disaster Management
- Role of Youth and Civic/ Emergency Services in Disaster Management
- Dos and Don'ts in various disasters
- Popularisation of DM Apps such as SACHET, Mausam, Damini, Bhookamp, etc.
- Communication Strategies in Disaster Management
- Fire Safety Demonstration

The schedule of the awareness activities was as follows:

S. No.	Date	Location	Participants	Trainers
1.	15-10-2024	SVCS High School & Junior College, Solapur	300 Junior College Students	<ul style="list-style-type: none"><li>• Dr Rajiv Pradhan, Chairman, Indian Red Cross Society, Solapur Branch</li><li>• Raosaheb Salgar, Fire Brigade Officer, Solapur Municipal Corporation</li><li>• Archana Bisoi, District Disaster Management Support (DDMS), DDMA Solapur</li><li>• Prof. Dr N. B. Teli, Chairperson, FPAI Solapur Branch</li></ul>
2.	16-10-2024	Police Training Centre, Solapur	Police Trainees	<ul style="list-style-type: none"><li>• Shaktisagar Dhole, District Disaster Management Officer (DDMO), DDMA Solapur</li><li>• Prof. Satyam Dudhankar, Ikon College of Fire Engineering &amp; Safety Management, Solapur</li></ul>
3.	17-10-2024	Police Training Centre, Solapur	Police Trainees	<ul style="list-style-type: none"><li>• Shaktisagar Dhole, DDMO, DDMA Solapur</li><li>• Sugatratna Gaikwad, Branch Manager, FPA</li><li>• Virendra Pardeshi, Program Officer, FPA</li></ul>
4.	21-10-2024	Chhatrapati Shivaji Night College of Arts and Commerce, Solapur	College Students	<ul style="list-style-type: none"><li>• Shaktisagar Dhole, DDMO, DDMA Solapur</li><li>• Archana Bisoi, DDMS, DDMA Solapur</li><li>• Prof. Satyam Dudhankar, Ikon College of Fire Engineering &amp; Safety Management, Solapur</li></ul>
5.	22-10-2024	N. K. Orchid College of Engineering & Technology, Solapur	College Students	<ul style="list-style-type: none"><li>• Shaktisagar Dhole, DDMO, DDMA Solapur</li><li>• Prof. Satyam Dudhankar, Ikon College of Fire Engineering &amp; Safety Management, Solapur</li></ul>



*Figure 24: Fire Safety Demonstration at SVCS High School and Junior College, Solapur*



*Figure 25: Orientation of students of SVCS High School and Junior College, Solapur on DM*



*Figure 26: Orientation of Police Trainees at Police Training Centre, Solapur on DM*





Figure 27: Awareness of DM Apps such as SACHET at the Police Training Centre, Solapur



Figure 28: Orientation of students of Chhatrapati Shivaji Night College, Solapur on DM



Figure 29: Orientation of students of N. K. Orchid College of Engineering and Technology, Solapur on DM

## B. RESOURCE INVENTORY (AS ON 30 APRIL 2025)

S. No.	Name of Equipment	Quantity	Procured by State/ District	Status Functional/ Non-Functional	Location of the equipment
1	Boat	8	STATE	7 FUNCTIONAL	TAH PANDHARPUR-3, TAH MADHA-1, TAH APPAR MANDRUP-1, TAH MOHOL-1, ULB PANDHARPUR-1, ULB AKLUJ-1
2	Boat	1	DISTRICT	FUNCTIONAL	ULB BARSHI-1
3	Tent (4x4 m)	16	STATE	FUNCTIONAL	TAH PANDHARPUR-3, TAH AKKALKOT-1, TAH APPAR MANDRUP-1, TAH MANGALWEDHA-1, TAH MOHOL-1, ULB PANDHARPUR-1, ULB BARSHI-1, ULB AKKALKOT-1, ULB MANGALWEDHA-1, ULB DUDHANI-1, ULB MOHOL-1, ULB MAINDARGI-1
4	Tent (10x5 m)	10	STATE	FUNCTIONAL	TAH PANDHARPUR-1, TAH AKKALKOT-1, TAH MADHA-1, SOLAPUR MUNICIPAL CORPORATION-5
5	Life buoy	36	STATE	FUNCTIONAL	TAH PANDHARPUR-10, TAH AKKALKOT-3, TAH MALSHIRAS-5, TAH BARSHI-3, TAH MADHA-2, TAH APPAR MANDRUP-2, TAH MANGALWEDHA-2, TAH MOHOL-2, TAH SANGOLA-2, TAH SOUTH SOLAPUR-3, TAH NORTH SOLAPUR-2
6	Life jacket	608	STATE	FUNCTIONAL	TAH PANDHARPUR-11, TAH AKKALKOT-8, TAH MALSHIRAS-7, TAH BARSHI-7, TAH MADHA-8, TAH APPAR MANDRUP-9, TAH MANGALWEDHA-7, TAH MOHOL-20, TAH SANGOLA-7, TAH SOUTH SOLAPUR-9, TAH NORTH SOLAPUR-9, TAH KARMALA-8, ULB PANDHARPUR-498
7	Walkie Talkie	8	STATE	FUNCTIONAL	DISTRICT CONTROL ROOM SOLAPUR
8	Rescue Van (Devduti)	1	STATE	FUNCTIONAL	SOLAPUR MUNICIPAL CORPORATION
9	MFS Fire Rescue Sheet	18	STATE	FUNCTIONAL	ULB PANDHARPUR-1, ULB BARSHI-1, ULB AKKALKOT-1, ULB MANGALWEDHA-1, ULB DUDHANI-1, ULB MOHOL-1, ULB MAINDARGI-1, ULB KURDUWADI-1, SOLAPUR MUNICIPAL CORPORATION-10
10	Megaphone	9	STATE	FUNCTIONAL	TAH PANDHARPUR-5, DISTRICT CONTROL ROOM SOLAPUR-2, ULB PANDHARPUR-1, ULB BARSHI-1
11	Rappelling/Static rope	19	STATE	FUNCTIONAL	TAH PANDHARPUR-6, TAH AKKALKOT-1, TAH MALSHIRAS-1, TAH BARSHI-1, TAH MADHA-1,

S. No.	Name of Equipment	Quantity	Procured by State/ District	Status Functional/ Non-Functional	Location of the equipment
					TAH APPAR MANDRUP-1, TAH MANGALWEDHA-1, TAH MOHOL-2, TAH SANGOLA-1, TAH SOUTH SOLAPUR-1, TAH NORTH SOLAPUR-1, TAH KARMALA-1, ULB PANDHARPUR-1
12	Search light	3	STATE	FUNCTIONAL	TAH PANDHARPUR-2, DISTRICT CONTROL ROOM SOLAPUR-1
13	Torch	10	STATE	FUNCTIONAL	TAH PANDHARPUR
14	Light Baton	2	STATE	FUNCTIONAL	DISTRICT CONTROL ROOM SOLAPUR-2, ULB PANDHARPUR-1
15	Laser Pointer	3	STATE	FUNCTIONAL	DISTRICT CONTROL ROOM SOLAPUR
16	Portable Generator	1	STATE	FUNCTIONAL	TAH BARSHI-1
17	Fire Ball	3	STATE	FUNCTIONAL	DISTRICT CONTROL ROOM SOLAPUR
18	Hand Gloves	60	STATE	FUNCTIONAL	TAH PANDHARPUR-8, TAH AKKALKOT-5, TAH MALSHIRAS-4, TAH BARSHI-5, TAH MADHA-4, TAH APPAR MANDRUP-4, TAH MANGALWEDHA-4, TAH MOHOL-8, TAH SANGOLA-4, TAH SOUTH SOLAPUR-5, TAH NORTH SOLAPUR-5, TAH KARMALA-4
19	First Aid kit	130	STATE	FUNCTIONAL	TAH PANDHARPUR-10, TAH AKKALKOT-10, TAH MALSHIRAS-10, TAH BARSHI-10, TAH MADHA-10, TAH APPAR MANDRUP-10, TAH MANGALWEDHA-10, TAH MOHOL-20, TAH SANGOLA-10, TAH SOUTH SOLAPUR-10, TAH NORTH SOLAPUR-10, TAH KARMALA-10
20	Whistle	300	STATE	FUNCTIONAL	TAH PANDHARPUR-179, TAH AKKALKOT-10, TAH MALSHIRAS-10, TAH BARSHI-10, TAH MADHA-10, TAH APPAR MANDRUP-10, TAH MANGALWEDHA-10, TAH MOHOL-20, TAH SANGOLA-10, TAH SOUTH SOLAPUR-10, TAH NORTH SOLAPUR-10, TAH KARMALA-10, DISTRICT CONTROL ROOM SOLAPUR-1
21	Scuba kit	2	STATE	FUNCTIONAL	TAH AKKALKOT-1, TAH KARMALA-1
22	Proximity Suit	66	STATE	FUNCTIONAL	ULB PANDHARPUR-6, ULB BARSHI-6, ULB AKKALKOT-6, ULB MANGALWEDHA-6, ULB DUDHANI-6, ULB KURDUWADI-6, ULB MOHOL-6, ULB MAINDARGI-

S. No.	Name of Equipment	Quantity	Procured by State/ District	Status Functional/ Non-Functional	Location of the equipment
					6, ULB KAMALA-6, ULB-SANGOLA-6, ULB AKLUJ-6
23	Mini Rescue Van (Gurkha)	5	STATE	FUNCTIONAL	ULB BARSHI-1, ULB PANDHARPUR-1, ULB AKKALKOT-1, ULB AKLUJ-1, SOLAPUR MUNICIPAL CORPORATION-1
24	Fire bike (Cafe Type Bike)	12	STATE	FUNCTIONAL	ULB PANDHARPUR-2, ULB BARSHI-4, ULB AKKALKOT-2, ULB MOHOL-1, ULB AKLUJ-2, ULB NATEPUTE-1
25	Fire bike (Water Mist Rapid Fire Bike)	4	STATE	FUNCTIONAL	ULB MANGALWEDHA-1, ULB KURDUWADI-4, ULB KARMALA-1, ULB SANGOLA-1

## **C. SOP FOR DEOC/ DISTRICT CONTROL ROOM**

Instructions regarding the duties to be performed by the employees working for phone duty

1. The staff whose duty is assigned in the DEOC should enter their name, designation, parent office name, time of arrival, time of departure, telephone number, etc., in the attendance register kept in the DEOC and sign it.
2. The staff should inform the DEOC Manager about their presence in the DEOC through SMS.
3. When a call is received in the DEOC, a note should be made in the register regarding the reason for the call, such as any disaster or incident that has occurred. While making the note, the place where the incident has taken place, the nature of the incident, the name and telephone number of the person who reported the incident should be taken and entered in the register.
4. After receiving information about the incident, the government department to which the incident is related should be immediately called by verifying the phone number from the contact diary installed in the DEOC, informing them and recording it in the register.
5. If the DEOC receives a call from the Office of the Hon'ble Divisional Commissioner, Pune Division, Pune, regarding a disaster that has occurred in Solapur district, they should be provided with information about the disaster or if no disaster has occurred, they should be informed that the information is null and void.
6. The staff present on phone duty in the DEOC should call all the Tehsildars regarding the disaster situation, and the incident should be recorded in the register.
7. The staff present on phone duty in the DEOC should call the staff assigned to the next phone duty shift, two hours before the end of their phone duty shift and remind them that they should be present in the DEOC for their duties as per their shift.
8. If any staff assigned to phone duty in the DEOC is found to have committed any misconduct in the performance of their duties, action will be taken against them under the Disaster Management Act 2005.

## **D. SOP FOR DISSEMINATION OF INFORMATION AND COMMUNICATION TEAM**

Dissemination of Information and Communication (DIC) teams will be formed in all the tehsils. The composition of the DIC teams will be as follows.

1. Residential Nayab Tehsildar (RNT)
2. Senior Revenue Clerk
3. Clerk



All members of the DIC Teams must register themselves on the Gram Suraksha Yantrana and familiarise themselves with its working.

All members of the DIC Teams must install Sachet and Damini mobile applications on their phones and familiarise themselves with the weather alert and other information on them.

All members of the DIC Teams will monitor the Sachet and Damini apps daily at 11:30 AM, 3:30 PM and 6:30 PM between 1 March and 30 September or as directed by senior officials.

When an alert is issued by either Sachet or Damini app, then one member of the DIC Team will issue the weather alert message to the citizens through the Gram Suraksha Yantrana, at least once in 24 hours.



 महाराष्ट्र शासन महसूल व वन विभाग	<b>तहसिल कार्यालय, उत्तर सोलापूर</b> जुने कंकुबाई पेठ कार्यालय, श्री. छत्रपती शिवाजी महाराज सर्वोपचार कार्यालय जवळ, सोलापूर		 फॅक्स क्र. - २१७-२७३१०१४ ई-मेल - tahuttarsolapur@gmail.com
	दुरध्वनी क्रमांक- २१७-२७३१०१४ ई-मेल - tahuttarsolapur@gmail.com	जा.क्र.जबाब्यो/कार्य/ २१७/२०२५ दि. ३१/०५/२०२५	

प्रति,

१. मंडळ अधिकारी, सर्व  
ता. उत्तर सोलापूर
२. ग्राम महसूल अधिकारी, सर्व  
ता. उत्तर सोलापूर

विषय - दामिनी व सचेत ॲप वापराबाबत

संदर्भ - मा. निवासी उपजिल्हाधिकारी सो. तथा मुख्य कार्यकारी अधिकारी जिल्हा आपत्ती व्यवस्थापन प्राधिकरण सोलापूर यांचेकडील आदेश जा.क्र.२०२५/मशा/कार्या-४ नैआ/जिनिक/प्र.क्र./आरआर-६६२ दिनांक २८/०५/२०२५

उपरोक्त विषयास अनुसरून आपणास कळविण्यात येते की, मान्सून कालावधीत विशेषतः जून ते ऑक्टोबर च्या महिन्यात विज पडून हानी होत असते, खीज पडून जीवित हानी होऊ नये याकरिता प्रतिबंधात्मक उपाययोजना म्हणून पृथ्वी मंत्रालय भारत सरकार नवी दिल्ली यांनी दामिनी ॲप तयार केले असून सदरचे ॲप Google Play Store वर उपलब्ध आहे.

(<https://play.google.com/store/apps/details?id=com.lightening.live.damini>) तसेच नैसर्गिक आपत्तीबद्दल रिअल टाईम, जिओ टॅग केलेले अलर्ट देण्यासाठी राष्ट्रीय आपदा प्रबंधन प्राधिकरण यांनी सचेत ॲप तयार केले असून सदरचे ॲप Google Play Store वर उपलब्ध आहे.

दामिनी ॲप GPS लोकेशनने काम करीत असून विज पडण्याच्या १५ मिनिटांपूर्वी सदरच्या ॲप मध्ये स्थिती दर्शविण्यात येते, यामुळे मोठी जीवित हानी टाळता येते तसेच सचेत ॲप नैसर्गिक आपत्तीबद्दल रिअल टाईम, जिओ टॅग केलेले अलर्ट देण्यासाठी वापरात येते त्यानुषंगाने आपलेकडून आपल्या गावातील नागरिक यांना सदरचे ॲप डाऊनलोड करण्यास व वापरण्यास प्रवृत्त करावे याबाबत गावपातळीवर योग्य तो जाहीर प्रसिद्धी करावी.

(निलेश माटील)

तहसिलदार उत्तर सोलापूर

प्रत - मा. निवासी उपजिल्हाधिकारी सो. तथा मुख्य कार्यकारी अधिकारी जिल्हा आपत्ती व्यवस्थापन प्राधिकरण सोलापूर यांना माहितीस्तव सविनय सादर.

प्रत - मा. उपविभागीय अधिकारी सोलापूर क्रमांक १ सोलापूर यांना माहितीस्तव सविनय सादर.

प्रत - गटविकास अधिकारी, पंचायत समिती. उत्तर सोलापूर / तालुका कृषी अधिकारी उत्तर सोलापूर यांना आवश्यक त्या कार्यवाहीस्तव.

२/- तालुक्यातील सर्व ग्रामविकास अधिकारी/ कृषी सहाय्यक यांना गावातील नागरिकांना सदरचे ॲप डाऊनलोड करण्यास व वापरण्यास प्रवृत्त करणेबाबत आवश्यक त्या सूचना आपलेस्तरावरून देण्यात याव्या.



Scanned with OKEN Scanner

Figure 30: Order issued by North Solapur Tehsildar to all Circle Officers and Talathis regarding DIC Team

## E. TEHSIL DM PLANS



तालुक्याचे नाव : पंढरपूर

पंचायत समिती : पंढरपूर

तहसिल कार्यालयाचे नाव : तहसिल कार्यालय पंढरपूर

पत्ता : शासकीय धान्य गोदाम परिसर, पंढरपूर

जिल्हा : सोलापूर

तहसिलदार यांचे नाव : श्री. सचिन लंगुटे

पत्ता : पंढरपूर

दूरध्वनी क्रमांक : 02186 - 223556

मोबाईल क्रमांक : 7387433462

गटविकास अधिकारी : श्री. सुशिल संसारे

दूरध्वनी क्रमांक : 02186 - 223146

मोबाईल क्रमांक : 8805163684

## तालुका आपत्ती व्यवस्थापन आराखडा

सन - २०२४

तालुक्याचे नांव :- उत्तर सोलापूर

तहसिल कार्यालयाचे नाव :- तहसिल कार्यालय उत्तर सोलापूर

पंचायत समिती :- उत्तर सोलापूर

जिल्हा :- सोलापूर

तहसिलदार यांचे नाव - श्री. निलेश पाटील

पत्ता/दूरध्वनी क्र. - तहसिल कार्यालय उत्तर सोलापूर

०२१७-२७३१०१४

मोबाईल क्र. :- ९६२३४५८७१५

गटविकास अधिकारी - श्री. महेश पाटील

यांचा दूरध्वनी क्रमांक - ०२१७-२७२७०१६

आणि मोबाईल क्रमांक :- ९९७२८१९६८१

North solapur Aapat Aarkhada-2024 1

### तालुका आपत्ती व्यवस्थापन आराखडा

तालुक्याचे नाव : माळशिरस

पंचायत समिती : माळशिरस

तहसिल कार्यालयाचे नाव : तहसिल कार्यालय माळशिरस

जिल्हा : सोलापूर

तहसिलदार यांचे नाव : श्री. सुरेश विठ्ठलराव गेंजूळ,

पत्ता : तहसिल कार्यालय माळशिरस

दूरध्वनी क्रमांक : ०२१८५-२३५०३६

मोबाईल क्रमांक : ९८६०३३७०१

गटविकास अधिकारी : श्री विनायक गुळवे

मोबाईल क्रमांक : ९४०४९९९२०२

मुख्याधिकारी

नगरपरिषद अकलूज : श्री दयानंद गोरे

मोबाईल क्रमांक : ९६६५०६३७३७

नगरपंचायत माळशिरस : श्री माधव खांडेकर

मोबाईल क्रमांक : ९४२१३३२३९८

नगरपंचायत महाळुंग-श्रीपूर : श्री. चरण कोल्हे

मोबाईल क्रमांक : ८४२१०२५३१६

नगरपंचायत नातेपुते : श्री माधव खांडेकर

मोबाईल क्रमांक : ९४२१३३२३९८

**पोलीस निरीक्षक**

माळशिरस पोलीस ठाणे : श्री . नारायण पवार

मोबाईल क्रमांक : ९७६३५२३८४९

अकलूज पोलीस ठाणे : श्री . निवाळकर,

मोबाईल क्रमांक : ९८२३५११४३४

**सहाय्यक पोलीस निरीक्षक**

नातेपुते पोलीस ठाणे : श्री. परजाणे,

मोबाईल क्रमांक : ९७०२६०७९३९

वेळापूर पोलीस ठाणे : श्री गोसावी

मोबाईल क्रमांक : ९७३०४४४७१०

## तालुका आपत्ती व्यवस्थापन आराखडा (2024)

तालुक्याचे नांव :- बाश्नी

पंचायत समिती :- बाश्नी पंचायत समिती बाश्नी

तहसिल कार्यालयाचे नांव :- बाश्नी

जिल्हा :- सोलापूर

तहसिलदार यांचे नाव :- श्री. एफ.आर.शेख

व पत्ता, दूरध्वनी क्र. :- शिवाजी नगर रोड, बाश्नी

02184 - 222213

आणि मोबाईल क्र. :- 9423150916

गट विकास अधिकारी यांचे नांव :- श्री. माणिकराव बिचुकले

दूरध्वनी क्र. :- 02184-222364

मोबाईल क्र. :- 9423214723

Figure 31: Tehsil DM Plan

## F. WASH INFRASTRUCTURE IN SOLAPUR DISTRICT

S. No.	Tehsil	Villages	Total Household Assets	No of SWM Household Assets					No of GWM Household Assets				
		Total	(SWM+GWM)	No of Compost Pits	No of BioGas Plants	No of Feeding to Cattle	No of Household Bins	Total	No of Leach Pits	No of Magic Pits	No of Soak Pits	No of Kitchen Garden	Total
								(SWM)					(GWM)
1	Akkalkot	129	21,855	844	131	316	13,437	14,728	98	98	6,837	94	7,131
2	Barshi	136	12,085	490	93	428	7,962	8,973	45	46	2,928	93	3,112
3	Karmala	121	15,469	321	106	106	8,967	9,500	21	23	5,837	88	5,970
4	Madha	115	14,304	292	5	320	9,124	9,741	22	14	4,420	107	4,564
5	Malshiras	113	17,150	1,309	69	55	10,978	12,411	42	32	4,618	47	4,740
6	Mangalvedha	82	13,769	372	6	143	9,787	10,308	3	1	3,442	15	3,461
7	Mohol	95	10,337	154	49	39	6,379	6,621	42	42	3,587	45	3,716
8	Pandharpur	101	22,957	511	5	61	14,213	14,790	84	40	7,736	307	8,167
9	Sangola	103	11,609	340	91	105	8,499	9,035	57	43	2,389	85	2,576
10	North Solapur	40	20,103	947	45	87	13,886	14,965	174	58	4,848	58	5,139
11	South Solapur	90	17,107	1,183	123	341	10,536	12,183	148	79	4,508	189	4,925
<b>Total</b>		<b>1,125</b>	<b>1,76,745</b>	<b>6,763</b>	<b>723</b>	<b>2,001</b>	<b>1,13,768</b>	<b>1,23,255</b>	<b>736</b>	<b>476</b>	<b>51,150</b>	<b>1,128</b>	<b>53,501</b>

	विभाग	आपत्ती व्यवस्थापन - विभाग प्रमुख, जबाबदार अधिकारी व विभागीय नोडल अधिकारी								
अ. क्र.	विभागाचे नाव	विभाग प्रमुखाचे नाव	विभाग प्रमुखाचे पद	विभाग प्रमुखाचे संपर्क क्र.	जबाबदार अधिकाऱ्याचे नाव	जबाबदार अधिकाऱ्याचे पद	जबाबदार अधिकाऱ्याचे संपर्क क्र.क	विभागीय नोडल अधिकाऱ्याचे नाव	विभागीय नोडल अधिकाऱ्याचे पद	विभागीय नोडल अधिकाऱ्याचे संपर्क क्र.
1	जिल्हाधिकारी कार्यालय	कुमार आशीर्वाद	जिल्हाधिकारी	9871017596	श्री. गणेश निराळे	नी. उपजिल्हाधिकारी	9422295175	श्री शक्तीसागर ढोले	जि. आ. व्य. अधिकारी	9822515601
2	पोलीस आयुक्त कार्यालय सोलापूर	श्री. एम राजकुमार	आयुक्त	02172744601	श्री. अजित बो-हाडे	उपयुक्त (मुख्यालय)	9604436789	श्री. शिवाजी राऊत	पोलिस निरीक्षक सुरक्षा (आपत्ती)	9552527292
3	पोलीस अधिक्षक सोलापूर ग्रामीण	श्री. अतुल कुलकर्णी	पोलिस अधीक्षक	02172732001, 9176514589	श्री. प्रितम यावलकर	अपर पोलीस अधीक्षक	0217-2732000, 9923473155	श्री. भीमराव खणदाळे	पोलिस निरीक्षक सुरक्षा (आपत्ती)	9822503818
4	मुख्य कार्यकारी अधिकारी, जिल्हा परिषद	श्री. कुलदीप जंगम	मुख्य कार्यकारी अधिकारी	9705916513	श्रीमती स्मिता पाटील	उपमुख्य कार्यकारी अधिकारी जि. प.	9834021120	श्री वैभव अहाळे	सहा.	9423325110
5	आयुक्त, महानगर पालिका सोलापूर	श्री सचिन औबासे	आयुक्त	02172740300	श्री.एस.बी.कारंजे	अतिरिक्त आयुक्त	9923752375	श्री. राकेश साळुंखे	मुख्य अग्निशमन अधिकारी	9422457936
6	डॉ. वैश्यपायन स्मृती वैद्यकिय महाविद्यालय सोलापूर	डॉ. संजीव ठाकूर	अधिष्ठाता	9823013042	डॉ. आर डी जयकर	उप अधिष्ठाता	9822325737	डॉ. चंद्रकांत जाधव	वैद्यकीय अधीक्षक	9423328064
7	उपविभागीय अधिकारी सो. वि. क्र. 1	सदाशिव पडटूणे	उपविभागीय अधिकारी	9890613907	श्री रियाज कुरणे	ना. तहसिलदार	9881899292	श्री सुरेश स्वामी	महसूल सहाय्यक	9422181996
8	उपविभागीय अधिकारी सो. वि. क्र. 2	श्री. सुमित शिंदे	उपविभागीय अधिकारी	7507244569	श्री. अजय गेंगाने	ना. तहसिलदार	7504111717	श्री राना वाघमारे	अ. का.	8830026251
9	उपविभागीय अधिकारी माळशिरस वि. अकलूज	श्रीमती विजया पांगारकर	उपविभागीय अधिकारी	8600015796	श्री. किरण कदम	ना. तहसिलदार	8605637959	श्री. एस एम चंदनशीवे	अ. का.	92884589855
10	उपविभागीय अधिकारी माढा विभाग कुईवाडी	श्री. बी. आर. माळी	उपविभागीय अधिकारी	9860951642	श्री. अनिल मधुकर ठोंबरे	ना. तहसिलदार	7499212317	श्री. देव कांबळे	अ. का.	9765768840
11	उपविभागीय अधिकारी पंढरपूर विभाग पंढरपूर	श्री सचिन इथापे	उपविभागीय अधिकारी	9881002321	श्री. असवले	ना. तहसिलदार	9588469793	श्रीमती सारिका जाधव	अ. का.	9763946047, 9834627208
12	उपविभागीय अधिकारी मंगळवेढा विभाग मंगळवेढा	श्री. बी. आर. माळी	उपविभागीय अधिकारी	9860951642	श्री. बाळासाहेब मोरे	ना. तहसिलदार	9665656546	श्री. कैलाश शिरसागर	महसूल सहाय्यक	8275202885
13	लाभक्षेत्र विकास प्राधिकरण सोलापूर (सिंचन व्यवस्थापन)	श्री. खांडेकर	अधीक्षक अभियंता व प्रशासक	9921228881	श्रीमती वैशाली कोरे	उपअभियंता व जनसंपर्क अधिकारी	8796160455	श्रीमती एस. ए. कांबळे	उपअभियंता व सहा. प्रशासक	7083848202
14	उजणी धरण व्यवस्थापन विभाग भीमानगर	श्री. आर पी मोरे	कार्यकारी अभियंता	9860607542	श्री. एन खडतरे	उप कार्यकारी अभियंता	9860605861	श्री. प्रशांत माने	कनिष्ठ अभियंता	7757853504
15	भीमा विकास विभाग क्र.2. सोलापूर	श्री. संभाजी माने	कार्यकारी अभियंता	9967493691	श्रीमती अलझेडे	उप कार्यकारी अभियंता	8975751034	श्री. एस एस पाटील	शाखा अभियंता	9423330856
16	भीमा पाटबंधारे विभाग पंढरपूर	श्री. हरसुरे	कार्यकारी अभियंता	9422433411	श्रीमती इंगोले	उप कार्यकारी अभियंता	9404026056	श्री. सोनवणे	शाखा अभियंता	9922660478
17	सोलापूर पाटबंधारे विभाग सोलापूर	श्री. जाधवर	कार्यकारी अभियंता	7038556699	श्री. खंबद	उप कार्यकारी अभियंता	9423301943	श्री. शेवळे	शाखा अभियंता	9260439861
18	भीमा कालवा मंडळ (बांधकाम)	श्री. धिरज साळे	अधीक्षक अभियंता	9689999800	श्री. नागेंद्र ताठी	सहाय्यक अधिकक्षक अभियंता	9860848093	रोहित जगताप	कनिष्ठ अभियंता	7875294940
19	लघु पाटबंधारे विभाग क्र.1. सोलापूर	श्री संजय पारसे	कार्यकारी अभियंता	9881325077	एम आर जमादार	जलसंधारण अधिकारी	9850277262	आर डी खिष्टे	जलसंधारण अधिकारी	8446970694
20	उजणी कालवा विभाग क्र. 8 सोलापूर	श्री. कोंडेकर	कार्यकारी अभियंता	9284939472	श्री. मुजावर	उप अभियंता देगांव	99751 83653	श्री. पेटकर	उप अभियंता	820 848 2878
21	उजणी कालवा विभाग क्र. 9 मंगळवेढा	श्री. जोशी	कार्यकारी अभियंता	9922457999	श्री. कोकरे	कार्यकारी अभियंता मंगळवेढा	88057 75455	श्री. नागेंद्र ताठी	सहाय्यक अधिकक्षक अभियंता	9860848093
	निरा नदी	श्री. पृथ्वीराज	अधिकक्षक अभियंता	9960012347	श्री शिवाजी जाधव श्री. राहुल दुबळ	कार्यकारी अभियंता	9545754609 8010785793	श्री. मिसाळ	शाखा अभियंता	9890082654
22	व्यवस्थापक, भारत संचार निगम लि.सोलापूर	श्री. एस. एस. बाबरुखने	महा प्रबंधक	9420490999	प्रशांत कावडे	सह. महाप्रबंधक	9423589300	अभिनंदन आहिरकर	क. दूरसंचार अधिकारी	9404828280
23	जिल्हा अधिक्षक कृषी अधिकारी सोलापूर	श्री शुक्राचार्य भोंसळे	जिल्हा अधिक्षक कृषी अधिकारी	7219121200	श्री अभिजीत धेडे	उपअधीक्षक कृषि	7588574625	श्री सतीश देशमुख	समन्वयक स्कायमेट / पीक विमा	7588692759
24	कृषि विकास अधिकारी, जिल्हा परिषद, सोलापूर	श्री. हरिदास हावळे	कृषि विकास अधिकारी	9503587117	श्री. सागर बारवकर	जिल्हा कृषि अधिकारी (सामान्य)	9404317800	श्री. उमाकांत कोळी	कनिष्ठ प्रशासन अधिकारी	9309956730
25	जिल्हा पशुसंवर्धन अधिकारी	डॉ. एन. एल. नरळे	जिल्हा पशुसंवर्धन अधिकारी सोलापूर	9067422142	डॉ. अ डी चिखलीकर	पशुधन विकास अधिकारी	9028501183	डॉ. प्रशांत देशमुख	पशु वैद्यकीय अधिकारी	9505857225
26	उपायुक्त पशुसंवर्धन अधिकारी	डॉ. विशाल येवले	उपायुक्त	8454947691	डॉ. डी ए. गिड्डे	पशु वैद्यकीय अधिकारी	9309131647	डॉ. अ डी चिखलीकर	पशुधन विकास अधिकारी	9028501183
27	सहाय्यक आयुक्त मत्स्यव्यवसाय, सोलापूर	श्री. रत्नाकर राजन	सहाय्यक आयुक्त मत्स्य व्यवसाय, सोलापूर	9421264438	रेखा रावणगावकर	सहा. मत्स्यव्यवसाय विकास अधिकारी	8308174706	निलेश महामुरे	अ. का.	9404351671

	विभाग	आपत्ती व्यवस्थापन - विभाग प्रमुख, जबाबदार अधिकारी व विभागीय नोडल अधिकारी								
अ. क्र.	विभागाचे नाव	विभाग प्रमुखाचे नाव	विभाग प्रमुखाचे पद	विभाग प्रमुखाचे संपर्क क्र.	जबाबदार अधिकाऱ्याचे नाव	जबाबदार अधिकाऱ्याचे पद	जबाबदार अधिकाऱ्याचे संपर्क क्र.क	विभागीय नोडल अधिकाऱ्याचे नाव	विभागीय नोडल अधिकाऱ्याचे पद	विभागीय नोडल अधिकाऱ्याचे संपर्क क्र.
28	जिल्हा पुरवठा अधिकारी सोलापूर	श्री. संतोष सरडे	जिल्हा पुरवठा अधिकारी	8329512907	श्री. प्रवीण घम	सहा. जिल्हा पुरवठा अधिकारी (इन-चार्ज)	9049001455	वैशाली जमदाडे	क. लि.	9823648381
29	उपजिल्हाधिकारी रोहयो	श्रीमती अंजली मरूड	उपजिल्हाधिकारी रोहयो	9921948007	श्रीमती पंचे	ना. तहसिलदार	9767485973	श्री गायकवाड	अ. का.	8830125235
30	पुनर्वसन विभाग	श्री. सुशांत बनसोडे	उपजिल्हाधिकारी पुनर्वसन	9850133799	श्रीमती सरस्वती पाटील	तहसिलदार	9226342943	श्री. प्रशांत बडकोम्बे	अ. का.	7620144634
31	जिल्हा शल्य चिकित्सक	डॉ. सुहास माने	जिल्हा शल्य चिकित्सक	9404009000	डॉ. श्रीकांत कुलकर्णी	नी. वै. अधिकारी	9422460362	डॉ. रोहन वायचल	वै. अधिकारी	9850978572
32	जिल्हा आरोग्य अधिकारी, जिल्हा परिषद सोलापूर	डॉ. संतोष नवले	जिल्हा आरोग्य अधिकारी	9326874228	डॉ. नंदकिशोर घाडगे	अती. जिल्हा आरोग्य अधिकारी	9834782650	डॉ. शेगर	IDSP विभाग अधिकारी	9850362991
33	आरोग्याधिकारी, मनपा सोलापूर	श्रीमती राखी सुहास माने	आरोग्याधिकारी	9404653535	डॉ. मंजरी कुलकर्णी	आरोग्याधिकारी	9423590932	डॉ. हरळकर	आरोग्याधिकारी	9923002722
34	सार्वजनिक बांधकाम मंडळ सोलापूर	श्री संजय माळी	अधीक्षक अभियंता	8421524098	श्री. मनोज ठाकरे	कार्यकारी अभियंता	9960995062	गायत्री मुळे	क. अभियंता	8421782095
35	सार्वजनिक बांधकाम विभाग, क्र. 1 सोलापूर	श्री मनोज ठाकरे	कार्यकारी अभियंता	9960995062	श्री दराडे	क. अभियंता	9270094405	श्री पाटील	पर्यवेक्षक	9960106955
36	सार्वजनिक बांधकाम विभाग, क्र. 2 सोलापूर	श्री. भोसले	कार्यकारी अभियंता	9850327766	श्री यादव	कार्य. अभियंता	7385074280	श्री चौगुले	कार्यकारी अभियंता	8551999917
37	सार्वजनिक बांधकाम विभाग, अकलुज	श्रीमती. सुनीता पाटील	कार्यकारी अभियंता	8888196789	श्री. ए. पी माळी	कार्य. अभियंता	9850327766	श्रीमती कोमल माने	कार्यकारी अभियंता	8999552355
38	सार्वजनिक बांधकाम विभाग, पंढरपूर	श्री. अमित निमकर	कार्यकारी अभियंता	9623650630	भिमाशंकर मिटकरे	उपअभियंता सा.बा. उपविभाग पंढरपूर	8275462700	प्रवीण पवार	कनिष्ठ अभियंता	7499606095
39	सार्वजनिक बांधकाम विभाग विद्युत सोलापूर	श्री. गुजरे	उप. कार्यकारी अभियंता	9867308181	प्रवीण खुने	सहा. अभियंता	8600906391	प्रमोद खोत	क. अभियंता	7507026360
40	सार्वजनिक बांधकाम विभाग नॅशनल हायवे सोलापूर	श्री कदम	प्रकल्प संचालक	9921240909	श्री. अनील वीपत	सहा. अभियंता	9422457934		शाखा अभियंता	
41	नॅशनल हायवे	श्री. राकेश जावडे	प्रकल्प संचालक	8130006204	श्री. अमित पांडे	उप संचालक	8077964621	श्री. धोरबोले	सावळेश्वर टोल प्लाझा व्यवस्थापक	9028313100
42	जिल्हा माहिती अधिकारी	श्री. सुनील सोनटक्के	जिल्हा माहिती अधिकारी	9420337881	श्री मिलिंद भिंगारे	लिपिक	9881614273	श्री मिलिंद भिंगारे	लिपिक	9881614273
43	जिल्हा सूचना विज्ञान अधिकारी	श्री. रवी पवार	प्र. जिल्हा सूचना विज्ञान अधिकारी	9671924566	श्री. विजय महिंदरकर	सहाय्यक	8856885591	श्री. प्रवीण सेतासंदि	सहाय्यक	825368448
44	महाराष्ट्र राज्य परिवहन महामंडळ सोलापूर	श्री. अमोल गोंजारे	विभाग नियंत्रक	9890255418	श्री. अजय पाटील	विभागीय वाहतूक अधिकारी	8554935906	श्रीमती सुवर्ण नाईक	वाहतूक पर्यवेक्षक	9011957840
45	उपप्रादेशिक परिवहन अधिकारी सोलापूर	श्री. गजानन नेर पगार	उपप्रादेशिक परिवहन अधिकारी	9822874210	श्री शिवाजी सोनटक्के	निरीक्षक	9604914230	श्री वैभव अडके	लिपिक	8329844588
46	उपप्रादेशिक परिवहन अधिकारी अकलूज	श्री. अमर सिंह गवारे	उपप्रादेशिक परिवहन अधिकारी (addl. charge)	9421672999	श्री टी. डी. मखरे	सहा. निरीक्षक	9665470608	श्री. रणदिवे	लिपिक	9763224261
47	जिल्हा समादेशक होम गार्ड	श्री. प्रीतम यावलकर	जिल्हा समादेशक	9923473155	श्री. ए.बी. माळी	प्रशासकीय अधिकारी	7350950505	श्री. सुतार	नोडल अधिकारी	9011639436
48	महाराष्ट्र जीवन प्राधिकरण	श्री. पी. व्ही. पाटील	कार्यकारी अभियंता	9403944429	श्री. चौधरी	उपकार्यकारी अभियंता	9850401873	श्री. पी. एस. हरिसंगम	शाखा अभियंता	7517451072
49	मृद व जलसंधारण विभाग	श्री. दयासागर योगिराज दामा	जिल्हा जलसंधारण अधिकारी	9423326408	श्री. चंद्रकांत दिलीप माने	जलसंधारण अधिकारी	9933662001	श्री. राजीव शाशिकांत कुलकर्णी	सहा. जिल्हा जलसंधारण अधिकारी	9850016232
50	वरिष्ठ भूवैज्ञानिक भूजल सर्व्हेक्षण आणि विकास यंत्रणा सोलापूर	श्री मुस्ताक शेख	मुख्याधिकारी	9975268550	श्री बबळेश्वर	तंत्रज्ञ	9996616079	श्री बबळेश्वर	तंत्रज्ञ	9996616079
51	ग्रामीण पाणीपुरवठा विभाग, जि. प.	श्री. अमोल जाधव	उपमुख्य कार्यकारी अधिकारी जि. प.	8983160601	श्री. संजय धनशेट्टी	कार्यकारी अभियंता	9834216208	श्री. संजय धनशेट्टी	कार्यकारी अभियंता	9834216208
52	अग्निशामक दल सोलापूर महानगरपालिका	श्री राकेश साळुंके	प्र. मुख्य अग्निशमन अधिकारी	9422457936	श्री अच्युत दुधाळ	प्र. सहा. अधीक्षक	9922762602	श्री समीर पाटील	अग्निशामक	7387991433
53	भारतीय रेल्वे, सोलापूर	डॉ. सुजीत मिश्रा	Divisional Railway Manager	7219614000	Jewel Mackenzie	सुरक्षा अधिकारी	7219614730	-	Engine Control Room	7219614295
54	साखर आयुक्त	प्रकाश अष्टेकर	प्रादेशिक सह संचालक	9422004558	श्री. पी. ए. साठे	प्रादेशिक उपसंचालक	9822827173	श्री. आर. एल. राठोड	सहकार अधिकारी श्रेणी-2	9637621046

	विभाग	आपत्ती व्यवस्थापन - विभाग प्रमुख, जबाबदार अधिकारी व विभागीय नोडल अधिकारी								
अ. क्र.	विभागाचे नाव	विभाग प्रमुखाचे नाव	विभाग प्रमुखाचे पद	विभाग प्रमुखाचे संपर्क क्र.	जबाबदार अधिकाऱ्याचे नाव	जबाबदार अधिकाऱ्याचे पद	जबाबदार अधिकाऱ्याचे संपर्क क्र.क	विभागीय नोडल अधिकाऱ्याचे नाव	विभागीय नोडल अधिकाऱ्याचे पद	विभागीय नोडल अधिकाऱ्याचे संपर्क क्र.
55	समग्र शिक्षा अभियान, जिल्हा परिषद	श्री. मदन पितळे	कार्यकारी अभियंता	9922111870						
56	तहसील कार्यालय अक्कलकोट	श्री विनायक मगर	तहसिलदार	9922963026	श्री विकास पवार	नी. ना. तहसिलदार	88788132381	श्री पंकज गुरव	लिपिक	9970201309
57	तहसील कार्यालय बारशी	श्री एफ आर शेख	तहसिलदार	9423150916	श्री. बंदे	नी. ना. तहसिलदार	7498878518	श्री संदीप नालपे	लिपिक	8208131865
58	तहसील कार्यालय दक्षिण सोलापूर	श्री किरण जमदाडे	तहसिलदार	9850762034	श्री राजेंद्र भंडारे	नी. ना. तहसिलदार	9730724814	श्रीमती इंजेवाड	लिपिक	7385112900
59	तहसील कार्यालय उत्तर सोलापूर	नीलेश पाटील	तहसिलदार	99623458715	चंद्रकांत हेडगिरे	नी. ना. तहसिलदार	9423035406	श्री सम्राट कोळी	लिपिक	8855969768
60	तहसील कार्यालय माळशिरस	श्री सुरेश शेजुळ	तहसिलदार	9860373301	श्री अमोल कदम	नी. नायब तहसिलदार	9096969892	श्री खैरे	लिपिक	9767670400
61	तहसील कार्यालय करमाळा	श्री.शिल्पा ठोकडे	तहसिलदार	8080030979	श्री.विजय लोकरे	नि. ना. तहसिलदार	9421721670	श्री समीर पटेल	लिपिक	9763635623
62	तहसील कार्यालय माढा	श्री.विनोद रणवरे	तहसिलदार	9657107747	श्री. विजय कवडे	नि. ना. तहसिलदार	9823158003	श्री सूर्यवंशी	लिपिक	9922787936
63	तहसील कार्यालय पंढरपूर	श्री. सचिन लंगुटे	तहसिलदार	7387433462	श्री. बालाजी पुदळवाद	नि. ना. तहसिलदार	9960002001	श्री. परळकर	लिपिक	9595751459
64	तहसील कार्यालय मोहोळ	सचिन दासु मुळीक	तहसिलदार	9021384696	श्री.संदेश भोसले	नि. ना. तहसिलदार	9405409881	श्री गणेश सगेल	लिपिक	9860255143
65	तहसील कार्यालय सांगोला	श्री. संतोष कणसे	तहसिलदार	9527941369	श्री. सोमनाथ सदाशिव साळुंखे	नि. ना. तहसिलदार	9907077575	श्री. कदम	लिपिक	8421912824
66	तहसील कार्यालय मंगळवेढा	श्री मदन जाधव	तहसिलदार	9960400077	श्री. शुभांगी जाधव	नि. ना. तहसिलदार	9309787095	श्री अलिप सुतार	लिपिक	9112866980
67	जिल्हा प्रशासन अधिकारी सोलापूर	वीणा ज्ञानेश्वर पवार	जिल्हा प्रशासन अधिकारी सोलापूर	9420696778	नितेश सोनवणे	कार्यालयीन अधीक्षक तथा कर निरीक्षक	919284066548	श्री. मलिक बागवान	Technical Officer	8530518699
68	ब. नगरपरिषद बारशी	श्री.बाळासाहेब गर्जेद्र चव्हाण	मुख्याधिकारी	02184-222218, 8605719713	श्री. गजानन गायकवाड	उपमुख्याधिकारी	9503816814	वसंत पिचारे	अग्निशमन अधिकारी	8308464795
69	ब. नगरपरिषद पंढरपूर	डॉ. श्री. प्रशांत जाधव	मुख्याधिकारी	02186-223013, 9158522522	श्री. वाळूजकर	उपमुख्य अधिकारी	9850380030	श्री. नेताजी पवार	City Engineer	8468930401
70	क. नगरपरिषद सांगोला	डॉ. सुधीर हरिभाऊ गवळी	मुख्याधिकारी	02187-220018, 9604290090	श्री.सचिन दगडू पाडे	कर निरीक्षक	8668435130	श्री संभाजी कार्ले	अग्निशमन अधिकारी	9028111319
71	ब. नगरपरिषद अक्कलकोट	श्री. रमाकांत डाके	मुख्याधिकारी	02181-220253, 7774070200	नितीन शेंडगे	स्वच्छता निरीक्षक	8329003238	श्री नितीन सुरेश शेंडगे	अग्निशमन अधिकारी	8329003238
72	क. नगरपरिषद मंगळवेढा	श्री. चरण सहदेव कोल्हे	मुख्याधिकारी	9730562586	श्री. सचिन मारुती मिसाळ	कार्यालय अधीक्षक	9373374737	श्री. प्रशांत सोनटक्के	अग्निशमन अधिकारी	9673739733
73	क. नगरपरिषद मैदर्गी	श्री. अर्जुन सुरवसे	मुख्याधिकारी	02181-255025, 7588676122	श्री. प्रकाश मनिकडे	कर लिपिक	9970798110	श्री भागवत पवार	अग्निशमन अधिकारी	8459524292
74	क. नगरपरिषद कुर्दूवाडी	श्री. प्रशांत भोसले	मुख्याधिकारी	02183-223272, 9970080610	अतुल शिंदे	स्वच्छता निरीक्षक	9423329510	श्री अतुल शिंदे	अग्निशमन अधिकारी	8862078891
75	क. नगरपरिषद मोहोळ	डॉ. योगेश अशोक डोके	मुख्याधिकारी	02189-232050, 7391809598	श्री. रणजीत कांबळे	प्रशासकीय अधिकारी	9637282922	श्री. गणेश बागल	City Engineer	7037059009
76	नगरपंचायत माळशिरस	श्री.सुमित जाधव	मुख्याधिकारी	8087164032	विशाल सावंत	कार्यालय अधीक्षक	9824992996	विशाल सावंत	अग्निशमन अधिकारी	9824992996
77	क. नगरपरिषद करमाळा	श्री. सचिन तपसे	मुख्याधिकारी	02182-220315, 9594958999	विपुल पुजारी	स्वच्छता निरीक्षक	9975769679	शीतल बहाड	अग्निशमन अधिकारी	9172423351
78	नगरपंचायत माढा	श्रीमती नेहा कंठे	मुख्याधिकारी	02183-234062, 7387039059	प्रदिप शिंदे	कार्यालयीन अधीक्षक	9022993840	श्री पंडीत भोरे	अग्निशमन अधिकारी	8080415515
79	नगरपंचायत नातेपुते	श्री. माधव लक्ष्मण खांडेकर	मुख्याधिकारी	02185-262338, 9421332398	अनिल गुणावरे	कार्यालयीन अधीक्षक	9370925556	श्री ओम भिंगे	अग्निशमन अधिकारी	8381083723
80	नगरपरिषद अकलूज	श्री. दयानंद गोरे	मुख्याधिकारी	02185-222592, 9665063737	श्री. राजाराम नरुटे	कर निरीक्षक	9860456421	श्री राजाराम नरुटे	अग्निशमन अधिकारी	9860456421
81	नगरपंचायत वैराग	श्री. चरण कोल्हे	अति.मुख्याधिकारी	02184-299604, 9730562586	श्री. योगीराज खुसपे	City Engineer	8329634143	श्री. हर्षल पवार	स्वच्छता निरीक्षक	9637748337
82	नगरपंचायत अनगर	श्री. सुरेश भादर	मुख्याधिकारी	02189-248523, 8999031373	राजेंद्र गुंड	कार्यालय अधीक्षक	9860890385	श्री राजेंद्र गुंड	अग्निशमन अधिकारी	9860890385



	विभाग	आपत्ती व्यवस्थापन - विभाग प्रमुख, जबाबदार अधिकारी व विभागीय नोडल अधिकारी								
अ. क्र.	विभागाचे नाव	विभाग प्रमुखाचे नाव	विभाग प्रमुखाचे पद	विभाग प्रमुखाचे संपर्क क्र.	जबाबदार अधिकाऱ्याचे नाव	जबाबदार अधिकाऱ्याचे पद	जबाबदार अधिकाऱ्याचे संपर्क क्र.क	विभागीय नोडल अधिकाऱ्याचे नाव	विभागीय नोडल अधिकाऱ्याचे पद	विभागीय नोडल अधिकाऱ्याचे संपर्क क्र.
83	क. नगरपरिषद दुधनी	श्री. लक्ष्मीकांत कहार	मुख्याधिकारी	83799 71318	श्री. शुभम राजमाने	कर लिपिक	9730006027	विनोद राकुंडे	अति.कार्यालयीन अधिकक्ष	9028562679
84	नगरपंचायत महाळुंग श्रीपूर	श्री. चरण सहदेव कोल्हे	अति.मुख्याधिकारी	9730562586	शेखर भोसले	कर लिपिक	9665881203	श्रद्धा मोटे	City Engineer	8530558990
85	गटविकास अधिकारी, पंढरपूर	श्री. सुशील संसारे	गटविकास अधिकारी	8805163684	श्र. एस. डी. कदम	विस्तार अधिकारी	9421063899			
86	गटविकास अधिकारी, कुर्दवाडी	श्री. महेश सुळे	गटविकास अधिकारी	9762631091	श्री. ए. टी. शिंदे	विस्तार अधिकारी	9423526887			
87	गटविकास अधिकारी, बार्शी	श्री. महेश सुळे	प्र. गटविकास अधिकारी	9762631091	श्री. वाघमारे नितीन	विस्तार अधिकारी	9657203834			
88	गटविकास अधिकारी, मोहोळ	श्री. विवेक जमदाडे	गटविकास अधिकारी	9405676967	श्री. एस. आर. ठक्का	विस्तार अधिकारी	8830026291			
89	गटविकास अधिकारी, करमाळा	डॉ. अमित कदम	गटविकास अधिकारी	9156230290	श्री. भोंग	सहा. गटविकास अधिकारी	7387686295	श्री. प्रकाश दास	विस्तार अधिकारी	9011335922
90	गटविकास अधिकारी, उ. सोलापूर	श्री. राजाराम भोंग	गटविकास अधिकारी	8668429127	श्री. एस. एम. शिंदे	विस्तार अधिकारी	8767559929			
91	गटविकास अधिकारी, द. सोलापूर	श्री. शंकर कवितके	गटविकास अधिकारी	9766021201	श्री. एस. एस. खरवस	विस्तार अधिकारी	9822668991			
92	गटविकास अधिकारी, अक्कलकोट	श्री. शंकर कवितके	गटविकास अधिकारी	9766021201	श्री. ए. आर. दोडमणी	विस्तार अधिकारी	9922826294	श्री. पी. एल. कोळी	विस्तार अधिकारी	9850862366
93	गटविकास अधिकारी, माळशिरस	श्री. एच. एच. पवार	गटविकास अधिकारी	9421131306	श्री. पी. आर. लोंढे	विस्तार अधिकारी	9881657900			
94	गटविकास अधिकारी, सांगोला	श्री. उमेशचंद्र कुलकर्णी	गटविकास अधिकारी	9763715367	श्री. अमोल तोडकरी	विस्तार अधिकारी	9637802822			
95	गटविकास अधिकारी, मंगळवेढा	श्री. योगेश कदम	गटविकास अधिकारी	7387794058	श्री. ए. व्ही. नलावडे	विस्तार अधिकारी	9767407900			
96	जिल्हा औद्योगिक सुरक्षा व आरोग्य	श्री. ओंकार चौरे	उप-संचालक	8329968853	श्री. आदित्य वकील	सहा. संचालक	9270103896	श्री. नदाफ	अ. कां.	9975878786
97	बी.पी.सी.एल. बॉटलींग प्लांट, सोलापूर							श्री. शानमुराज मदासमी		9442260001, 7042545252
98	बी.पी.सी.एल. पाकणी डीपोट							श्री. अनुराग सिंग	Senior Manager HSSE	9987137480, 9414057587
99	एच.पी.सी.एल बॉटलींग प्लांट, सोलापूर	Nikhil Niranjana Warkar			श्रीमती आकांक्षा नलवडे	सुरक्षा अधिकारी	9373867325	श्री. पंकज अंबळढगे	वरिष्ठ प्लांट मॅनेजर	9594820610, 7030060700
100	एच.पी.सी.एल. पाकणी डीपोट									
101	आय.ओ.सी.एल. पाकणी डीपोट							श्री. अक्षय वर्मा	प्रबंधक (ऑप्स-सुरक्षा)	8806753328
102	एनजीओ फॅमिली प्लॅनिंग असोसिएशन, सोलापूर ब्रांच	प्रॉ. डॉ. एन. बी. तेली	Chairperson		श्री. सुगतरत्न गायकवाड	शाखा अधिकारी	9011907001	श्री. विरेन्द्र परदेशी	कार्यक्रम अधिकारी	9860670715
103	एनजीओ रेड क्रॉस इंडिया, बार्शी ब्रांच	डॉ. रामचंद्र जगताप	CMO	9011095652, 9822340969						
104	एनजीओ रेड क्रॉस इंडिया, सोलापूर ब्रांच	डॉ. येळेगावकर	Chairperson	9923477386	श्री. जयेश पटेल	Secretary	9823562303			
105	अश्विनी ग्रामीण रुग्णालय व संशोधन केंद्र, सोलापूर	डॉ. प्रशांत औरंगाबादकर	वैद्यकीय अधिकक्ष	9545550135	श्री. सचिन बिराजदार	प्रशासकीय अधिकारी	955255020	नियंत्रण कक्ष		9552555038
106	Indian Army Support	Neeraj khajuria	major	9682671527	विक्रम सिंह	subedar	7424890877	sushil kumar	hawaladar	9816443892
107	NDRF	कंट्रोल रूम	5	9422318427						
108	SDRF	कंट्रोल रूम	धुळे	9607081077						
111	श्री. विठ्ठल रुक्मिणी मंदिर समिति, पंढरपूर	श्री. राजेंद्र शळके	कार्यकारी अधिकारी	8926695555	श्री. मनोज श्रोत्रि	मंदिर व्यवस्थापक	9822191932	श्री. ढगे	सुरक्षा अधिकारी	9923874872
112	श्री. स्वामी समर्थ मंदिर समिति, अक्कलकोट	श्री महेश कल्याणराव इंगळे	Chairperson	9822633707	श्री आत्माराम मारुती घटगे	Secretary	8087407745	श्री महेश व्यंकटेश गोगी	खजिनदार	7588020085
113	श्री. कमलादेवी मंदिर समिति, करमळा	श्री. घाटे		9404708924						

	विभाग	आपत्ती व्यवस्थापन - विभाग प्रमुख, जबाबदार अधिकारी व विभागीय नोडल अधिकारी								
अ. क्र.	विभागाचे नाव	विभाग प्रमुखाचे नाव	विभाग प्रमुखाचे पद	विभाग प्रमुखाचे संपर्क क्र.	जबाबदार अधिकाऱ्याचे नाव	जबाबदार अधिकाऱ्याचे पद	जबाबदार अधिकाऱ्याचे संपर्क क्र.क	विभागीय नोडल अधिकाऱ्याचे नाव	विभागीय नोडल अधिकाऱ्याचे पद	विभागीय नोडल अधिकाऱ्याचे संपर्क क्र.
114	श्री. भगवंत मंदिर समिति, बारशी	श्री. दिलीप चंद्रकांत बुडूख	अध्यक्ष	9767723001	श्री. विजयाकेशोर मोतीलाल सोमाणी	Secretary	9422644174	श्री. नाना सुरवसे डा. बाबन यादव	खजिनदार	9422069021 9850283608
115	श्री. महालक्ष्मी मंदिर समिति, पिलीव, माळशिरस	श्री. बाबासा उर्फ संतोष कुमार गोविंदराव पाटील	Chairperson	9922569622	श्री नवनाथ रामचंद्र पाटील	Vice Chairperson	9511790078	श्री विश्वास श्रावण जावळे	खजिनदार	
116	मौसम विज्ञानी सोलापूर	श्री बोर्डकर		9225513712						