



State Integrated Disaster Control Centre (SIDCC)

Lucknow, Uttar Pradesh



Standard Operating Procedure (SOP)

for Earthquake response

Relief Commissioner's Office,
Government of Uttar Pradesh

Technical Support: UNICEF, Uttar Pradesh



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1. Introduction

➤ **This SOP**

- Identifies district level government agencies/entities engaged in dealing with earthquake response.
- Lists the roles and responsibilities of identified agencies in earthquake response and related standards/guidelines.
- Lays down the sequence of actions for earthquake response.
- Spells out the coordination mechanism.

- This SOP does not include roles and responsibilities related to long-term risk reduction measures such structural mitigation, infrastructure resilience, construction practices, nonstructural mitigation measures, awareness generation, revision of building codes related to earthquake risk mitigation, construction of dams, improvement of solid-waste management and power infrastructure, installation and monitoring of tremor data etc. It is important to emphasize that these mitigation measures are extremely important; however, scope of this SOP is limited to immediate earthquake response and related to preparedness measures.

➤ **Duration**

- Perennial – with half yearly review in Zone IV and Zone III and annual review in Zone II geographies in Uttar Pradesh.

➤ **Key Considerations**

- Vulnerable groups (Children, People with Disability, Women (especially pregnant and lactating mothers) and Elderly) have special needs and response should be informed of it.
- COVID-19 Dos and Don'ts require social distancing, facemask and regular washing of hands/sanitization and it should be integral part of all earthquake response measures.
- Coordination is key to response including earthquake response.
- Saving and protection of lives is a priority.

2. List of District Level Agencies/Entities related to Earthquake Response

S. No.	Lead Agency	Response Actions
1	SDMA	Prepare Earthquake Risk Assessment Reports and conduct regular monitoring of tremors.
		Review State level Earthquake preparedness and build preparedness and response capacities.
2	SIDCC	Disseminate earthquake preparedness information to line departments, DDMA and public.
		Coordinate state level earthquake response and reporting.
3	DDMA	Ensure district level earthquake preparedness actions based on zonation.
		Disseminate earthquake response mobilization and information to agencies and public.
		EOC/Control Room coordinates earthquake response.
		Review Earthquake Preparedness in the District.
4	Revenue Department	Coordination with concerned departments for earthquake response.
		Identification of sites for temporary shelter camps for an earthquake scenario.
		Information dissemination with concerned departments regarding earthquake preparedness
		Rescue Preparation
5	Health Department	Provision primary medical response during the earthquake scenario (as prescribed in the Minimum Standards for Relief by NDMA).
		Ensure special arrangements for the management of critical medical attention requirements (Heart Attacks, Dialysis, Pregnancies and Institutional Deliveries).
		Monitor water and food quality, and disposal of waste in transit and relief camps, feeding centres and affected areas.
6	Home and Confidential Department (Police)	Deploy trained police personnel and PAC personnel for carrying out search, rescue and evacuation of the earthquake-affected people.

		Deploy Police personnel and PAC personnel for maintenance of law and order in the event of earthquake.
		Make security arrangements for relief materials in transit and in camps etc.
7	Transport	Requisition of vehicles, trucks especially for carrying the rescue teams and relief supplies.
		Coordination with railway authorities for carrying the rescue teams and relief supplies.
8	PRI	Clearance of blocked drains and roads, including tree removal in the villages.
		Identify the school building, community centres and operationalize them into emergency relief centres and emergency shelters.
		Make necessary arrangements for sanitation, drinking water and medical aid.
		Support in search, rescue and first aid activities.
		Participate in post impact assessment of emergency.
9	Energy	Disconnect electricity after receipt of warning.
		Attend to sites of electrical accidents and assist in undertaking damage assessment.
		Inspection and repair of high tension lines/substations/transformers/poles etc.
		Replacement/restoration of damaged poles/salvaging of conductors and insulators.
10	Irrigation Department	Inspection of bunds of dams, irrigation channels, bridges, culverts, control gates and overflow channels in the immediate aftermath of an earthquake.
		Monitoring flood situation in the immediate aftermath of an earthquake and dissemination of flood warning.
		Inspection and repair of pumps, generators, motor equipment and station buildings.
11	Animal Husbandry	Ensure adequate availability of personnel and mobile teams.
		Eradication and control of animal diseases, treatment of injured animals.
		Supply of medicines and fodder to affected areas.

12	Jal Nigam	Disinfections and continuous monitoring of water bodies.
		Ensuring provision of water to hospitals and other vital installations.
		Carrying out emergency repairs of damaged water supply systems.
13	Food and Civil Supplies	Supply food grain and fuel based on the requirement raised by Revenue Department.
		Ensure that food items supplied comply by the minimum standard on food (NDMA), which prescribe provisioning of 2,400 Kcal/day/person for men and women and 1,700 Kcal/day/person for infant and children.
14	Civil Defense	Act as support agency for provision of first aid, search and rescue services to other emergency service agencies and the public.
		Act as support agency for movement of relief items.
		Help the Police for traffic management and law and order.
15	Fire Services	Rescue of persons trapped in burning, collapsed or damaged buildings, damaged vehicles, including motor vehicles, trains and industries, boilers, trenches and tunnels.
		Protection of property and the environment from fire damage.
16	Public Works Department	Restoration of roads & bridges owned by UPPWD.
		Identification of alternative routes to strategic locations.
17	Forest Department	Assist in road clearance.
		Provision of building materials such as bamboos etcetera for construction of shelters.
18	Information and Public Relation	Keep the public informed about the updates on emergency (area affected, lives lost etc.)
		Keep the public informed about various post disaster assistances and recovery programmes.

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3. Earthquake Coordination Mechanism

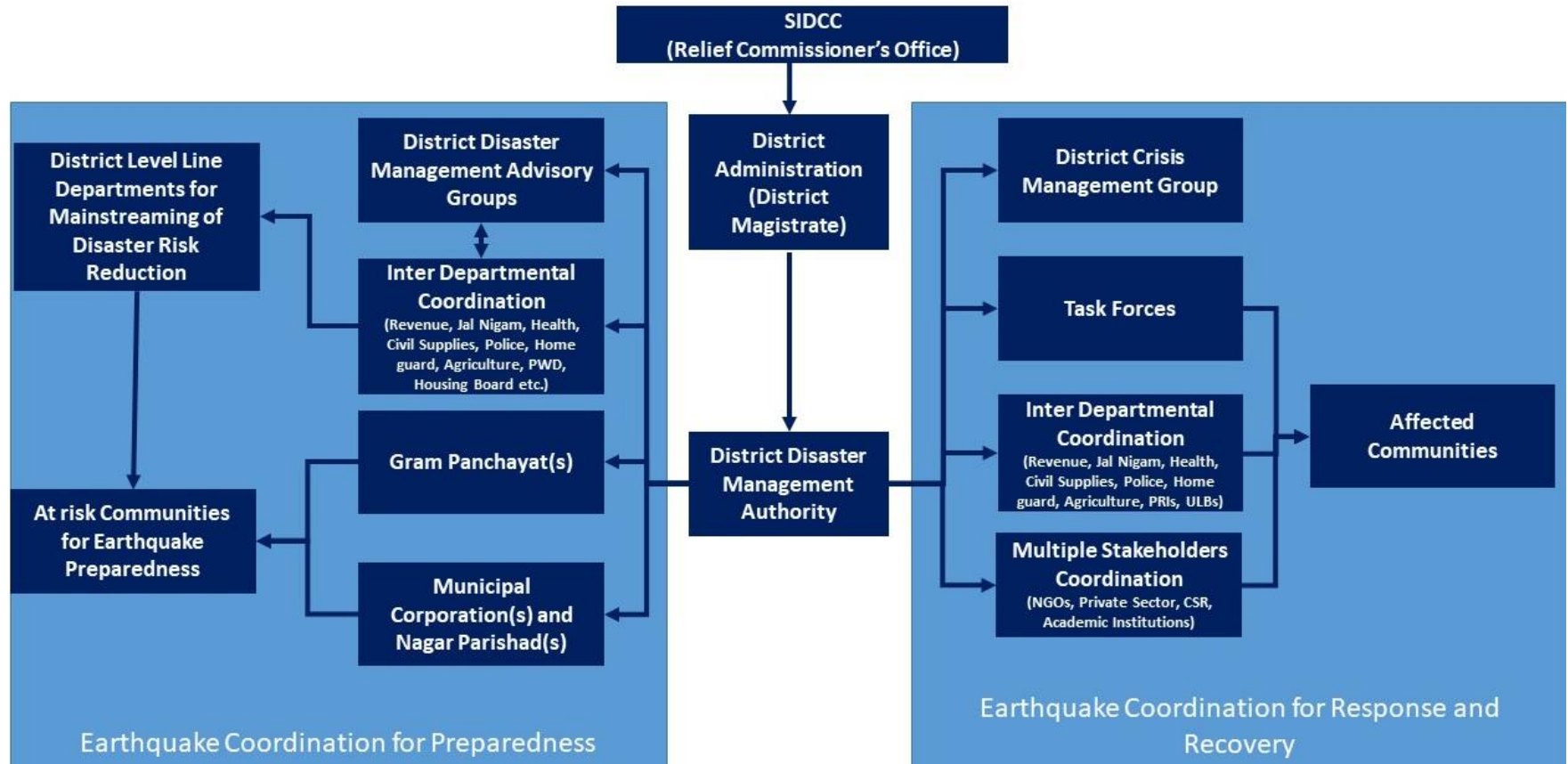


Figure 1: District Disaster Management Coordination Mechanism

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4. Roles and Responsibilities of Departments in Earthquake Response

The following section lists down major tasks, actions to be undertaken (during preparedness phase and response phase) and Responsible Partner Authority/Agency.

4.1.SDMA: Role and Responsibility

Focal Point: Name and Contact Details

S. No.	Action	Operating Procedure	Coordinating Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1.	Conduct Earthquake Risk Assessment and Classify Zones	<ol style="list-style-type: none"> 1. SDMA to form a Technical Group for undertaking earthquake risk analysis for the state of UP. 2. Analysis of earthquake risk assessment should include vulnerability/capacity (zonation, socio-economic data, population data, housing typology, vulnerable occupation pattern¹, chronic disease, health facility, heavy and small infrastructure, accessibility), past earthquake history, data and 	<ol style="list-style-type: none"> 1. Revenue Department 2. Health & Family Welfare Department 3. Panchayati Raj and Rural Development Department 4. Public Works Department 5. Police 6. Fire Service Department 7. Social Welfare Department 8. Empowerment of Persons with Disabilities Department 9. Labour Department 	<ol style="list-style-type: none"> 1. Section 2 of NDMA, Guidelines for Management of Earthquakes (2007) 2. Section 7 of NDMA, Guidelines for Management of Earthquakes (2007)

¹ Rickshaw puller, auto driver, bus driver, beggars, coolies, street hawker, security staff, traffic police

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S. No.	Action	Operating Procedure	Coordinating Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>impact projections for urban and rural geographies.</p> <p>3. Drawing on the analysis, to develop scenario based plans for earthquake contingency and preparedness.</p> <p>4. SDMA to share earthquake risk analysis to districts and DDMA.</p>	<p>10. Housing and Urban Development Department</p> <p>11. Civil Defense Department</p> <p>12. Uttar Pradesh Power Corporation Ltd. (UPPCL)</p> <p>13. Irrigation Department</p> <p>14. Transport Department</p> <p>15. University/Academia</p> <p>16. UN, NGOs, CSR</p>	
2.	Review State-level Earthquake Preparedness and Build Preparedness and Response Capacities	<p>1. SDMA to organize state level meeting to review preparedness for earthquake response on half yearly basis for Zone IV and Zone III, and annually for Zone II.</p> <p>2. SDMA meeting should review earthquake contingency plans, coordination mechanisms with SIDCC and response protocols.</p> <p>3. SDMA to conduct awareness on Dos and Don'ts related to earthquake through TV, radio,</p>	<p>1. Health and Family Welfare Department</p> <p>2. Public Works Department</p> <p>3. Animal Husbandry Department</p> <p>4. Jal Shakti Department</p> <p>5. Fire Services Department</p> <p>6. Labour Department</p> <p>7. Uttar Pradesh Power Corporation Ltd. (UPPCL)</p> <p>8. Transport Department</p>	<p>1. DM Act (2005) Section 18 (e) State Authority shall coordinate the implementation of the state Plan, <i>Monitor the implementation of Disaster Management Plan prepared by the departments of Government at the district level.</i></p> <p>2. DM Act (2005) Section 18 (g) State Authority shall Review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government</p>

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S. No.	Action	Operating Procedure	Coordinating Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>social media, newspaper, social event and public discussion.</p> <p>4. SDMA to prepare State level earthquake preparedness and response guidelines.</p> <p>5. SDMA to review stock and repositioning plan of relief items for earthquake response.</p> <p>6. SDMA to review preparedness and mitigation plan of Health and Family Welfare, Jal Shakti, Urban Development, Animal Husbandry, Fire Services, Power, Labour, Traffic Police, Social Welfare and Education Department for earthquake response.</p> <p>7. SDMA to review preparedness of SIDCC on coordination of earthquake response.</p>	<p>9. Education Department</p> <p>10. Panchayati Raj Department</p> <p>11. Traffic Police</p> <p>12. Urban Development Department</p> <p>13. Social Welfare Department</p> <p>14. Information and Public Relations Department</p> <p>15. SIDCC</p> <p>16. Forest Department</p> <p>17. Relief/response related NGOs</p>	<p>of the State and issue such guidelines as may be necessary.</p>

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S. No.	Action	Operating Procedure	Coordinating Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>8. SDMA to ensure DDMA(s) develops and updates district earthquake response plans.</p> <p>9. SDMA to provide capacity building for earthquake preparedness to different departments and agencies.</p> <p>10. SDMA should organize a lesson learnt workshop on earthquake response and preparedness, as emergent, to guide updating of State plans.</p> <p>11. SDMA to document good practices on earthquake preparedness and response. The learnings shall be widely shared including with NIDM and NDMA.</p>		

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4.2.SIDCC: Role and Responsibility

Focal Point: **Name and Contact Details**

S. No.	Action	Operating Procedure	Coordinating Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Disseminate Earthquake Preparedness Information to Line Departments DDMA and Public	<ol style="list-style-type: none"> 1. SIDCC to monitor district data on earthquake patterns and inform SDMA and DDMA for preparedness drills. 2. SIDCC to trigger emergency response in case of a tremor and ensure full scale of response in coordination with departments. 3. SIDCC to monitor tremor history and trends in the state. 4. SIDCC to prepare/update list of focal points for earthquake preparedness and response of line departments, DDMA and cities/municipal corporations. 5. SIDCC to disseminate earthquake preparedness and response information to line departments, DDMA and cities². 	<ol style="list-style-type: none"> 1. All Essential Services Departments 2. Fire Services Department 3. Uttar Pradesh Power Corporation Ltd. (UPPCL) 4. Transport Department 5. Panchayati Raj Department 6. Police Department 7. Urban Development Department 8. Information and Public Relations Department 9. SDMA and SDRF 10. Inter-Agency Group of CSOs in Uttar Pradesh 11. ATIs of Uttar Pradesh 12. City/Municipal Corporations 	<ol style="list-style-type: none"> 1. Section 6 of NDMA Guidelines for Management of Earthquakes (2007) 2. Section 4 & 5 of NDMA, Guidelines for Management of Earthquakes (2007)

² This shall include dos and don'ts related to earthquake preparedness and response.

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S. No.	Action	Operating Procedure	Coordinating Agencies	Reference (Legislation/Standard/Guideline)
		<ol style="list-style-type: none"> 6. SIDCC to disseminate earthquake awareness to public through TV, radio, social media, newspaper, SIDCC/ government website, etc. 7. SIDCC to periodically update SDMA on earthquake preparedness and response plans. 8. SIDCC to maintain 24*7 communication with line department(s) and DDMA for all disasters including earthquakes. 9. SIDCC to activate/enhance capacity of its public grievance redressal call center during earthquake response. 		
2.	Coordinate State-level Earthquake Response and Reporting	<ol style="list-style-type: none"> 1. SIDCC to prepare roster of staffs for surge capacity during earthquake response. 2. SIDCC to compile earthquake risk assessment reports and response plans in support of and in coordination with SDMA and DDMA and line departments. 3. SIDCC to create user chat group for coordinating earthquake response. 	<ol style="list-style-type: none"> 1. All Essential Services Departments 2. Fire Services Department 3. Uttar Pradesh Power Corporation Ltd. (UPPCL) 4. Transport Department 5. Panchayati Raj Department 6. City/Municipal Corporations 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Action	Operating Procedure	Coordinating Agencies	Reference (Legislation/Standard/Guideline)
		<p>4. SIDCC to work closely with SDMA to organize the earthquake preparedness and response drills including capacity building on assessment, reporting and delivery of assistance.</p> <p>5. SIDCC to create a database of relief related CSOs and volunteers at state and district level.</p> <p>6. SIDCC to activate surge capacity by drawing staffs from other departments and volunteers, in case of an earthquake.</p> <p>7. SIDCC to activate system to manage requests received from DDMA and Municipal corporations for swift response to earthquake.</p> <p>8. SIDCC to prepare daily report on status of earthquake response received from line departments DDMA, Municipal corporations and NGOs.</p> <p>9. SIDCC to activate public grievance redressal system using multiple communication channel to receive</p>	<p>7. Police Department</p> <p>8. Information and Public Relations Department</p> <p>9. SDMA, SDRF and NDRF</p> <p>10. Inter-Agency Group of CSOs in Uttar Pradesh</p> <p>11. ATIs of Uttar Pradesh</p>	

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S. No.	Action	Operating Procedure	Coordinating Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>public calls on earthquake response.</p> <p>10. SIDCC to participate in review of experiences and learning from earthquake response and drills for preparedness with SDMA.</p>		

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4.3.DDMA – District Disaster Management Authority

Focal point: Name and Contact details

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
1	Risk Analysis	<ol style="list-style-type: none"> 1. Map all areas vulnerable to Earthquakes as per NDMA guidelines on model DDMP. 2. Conduct Risk analysis of the Earthquake prone areas at the village level. 3. Ensure risk analysis at the village level is led by the elected members under the PRIs and Gram Panchayat Secretary. 	<ol style="list-style-type: none"> 1. Panchayati Raj Department 2. Elected Members of Gram Panchayat 3. Gram Panchayat Secretary 	<ol style="list-style-type: none"> 1. Section 6 of NDMA Guidelines for Management of Earthquakes (2007) 2. Section 4 & 5 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Task Force Formation	<ol style="list-style-type: none"> 1. Ensure community based task force is formed. 2. Conduct mock drills for Task forces. 3. Facilitate conduct of awareness session on Earthquake Response and Management by Task Force. 4. Organize training programmes on search, rescue and evacuation for the members of the Ward and Village Disaster Management Committees and 	<ol style="list-style-type: none"> 1. Panchayati Raj Department 2. Elected Members of Gram Panchayat 3. Gram Panchayat Secretaries 4. Community based organizations (Self Help Groups, Farmers' producer groups, Youth Groups) 	<p>Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)</p>

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		NGOs of the areas falling in the Earthquake Damage Risk Zone IV & III.	5. Frontline Workers 6. Civil Defense	
3	Ration Pre-positioning	1. Ensure adequate storage of dry food, ready to eat food at district headquarter and ensure adequate stock piling.	1. Food and Civil Supplies Department 2. DFSO	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)
4	Shelter Location and Material Pre-positioning	1. Ensure stockpiling of tarpaulins at district headquarter in coordination with Revenue Department. 2. Identify places with adequate water sanitation for establishing temporary camps. 3. Identify safe structures for temporary housing in case of earthquakes	1. Revenue Department 2. ADM 3. Panchayati Raj Department	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)
5	Health Facility and Hygiene	1. Ensure adequate storage of medicines, water-chlorinating agent at PHC, CHC level as per the norms in coordination with H&FW Department. 2. Ensure that all the staff including community health workers are trained on health and hygiene in Earthquake response.	1. Health and Family Welfare Department 2. CMO	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)
6	Rescue Preparedness	1. Ensure availability of adequate number of equipment and material are available at Panchayat office for search and	1. Revenue Department 2. ADM 3. Civil Defense	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		<p>rescue and coordinate with Task Forces.</p> <p>2. Ensure that all village level functionaries and panchayat members know emergency contact numbers and control room details.</p>	4. Police Department	
7	Coordination	<p>1. Conduct periodic DDMA meeting to review preparedness and response planning.</p> <p>2. Ensure district and block level control rooms have adequate equipment and human resource.</p>	<p>1. Revenue Department</p> <p>2. Home and Confidential Department (Police)</p> <p>3. Agriculture Department</p> <p>4. Health and Family Welfare Department</p> <p>5. Irrigation Department</p> <p>6. Animal Husbandry Department</p> <p>7. Jal Nigam</p> <p>8. Food and Civil Supplies Department</p> <p>9. Education Department</p> <p>10. Panchayati Raj/Rural Development</p> <p>11. Fire Services Department</p>	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
			12. Women and Child Development Department	

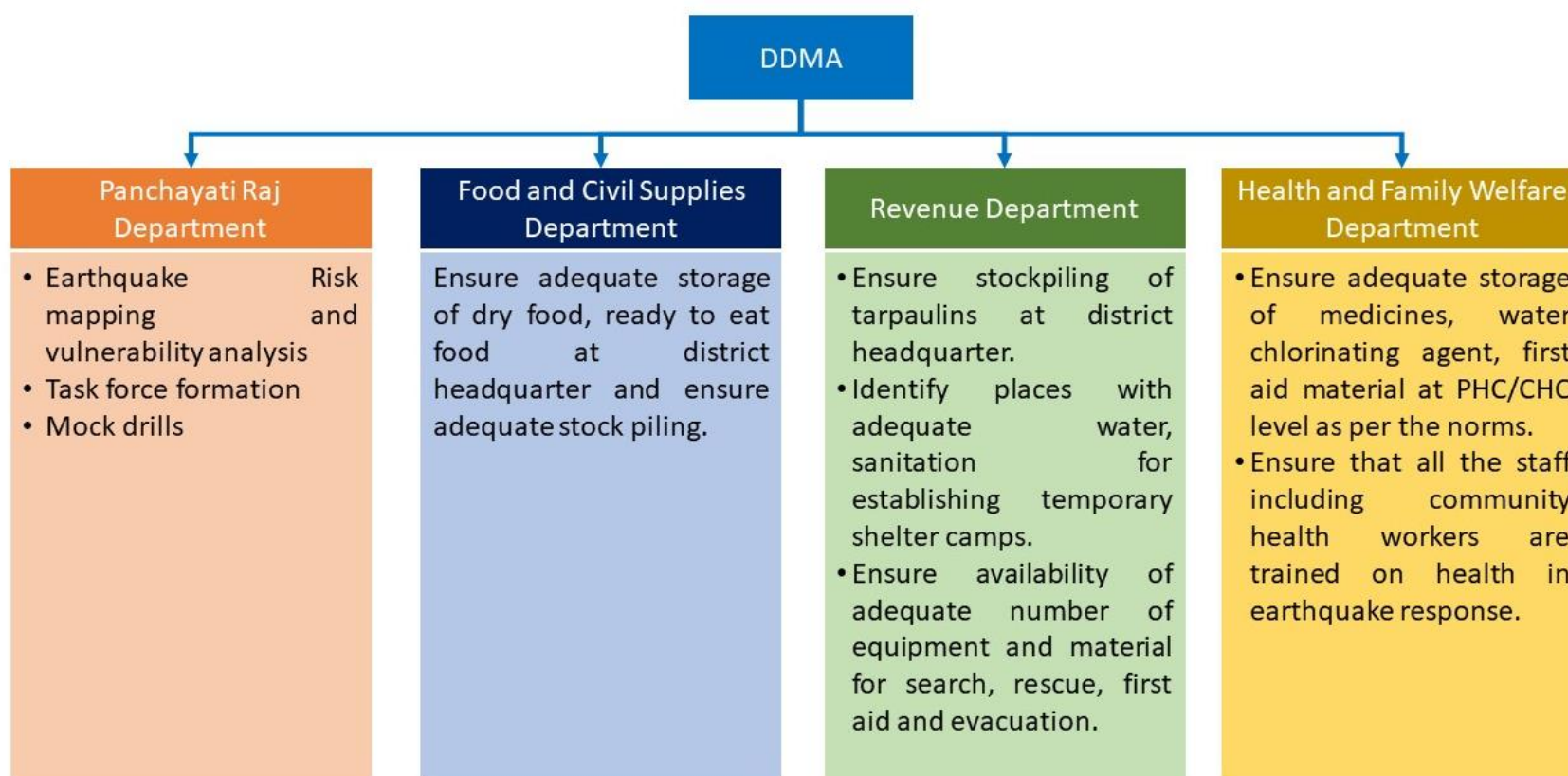


Figure 2: Common Minimum Actions to be undertaken by DDMA for ensuring Earthquake Preparedness

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Response

S. No	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
1	Coordination	<ol style="list-style-type: none"> 1. Ensure activation of multiple stakeholders' coordination for response in case of earthquake. 2. Ensure district level control room actively collecting, coordinating and disseminating information about disaster impact and access, affected areas, nature of damage, needs for evacuation and temporary camps. 3. Manage earthquake relief and response in coordination with District Crisis Management Group, District Disaster Management Committee and Task Forces. 	<ol style="list-style-type: none"> 1. Revenue Department 2. Home and Confidential Department (Police) 3. Agriculture Department 4. Health and Family Welfare Department 5. Irrigation Department 6. Animal Husbandry Department 7. Jal Nigam 8. Food and Civil Supplies Department 9. Education Department 10. Panchayati Raj/Rural Development Department 11. Fire Services Department 12. Women and Child Development Department 13. NGOs 14. CSR firms for relief 	Section 8 of NDMA Guidelines for Management of Earthquakes (2007)

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S. No	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
2	Rescue	<ol style="list-style-type: none"> 1. Initiate search, rescue and evacuation with the help of State Disaster Response Force, National Disaster Response force, community based task forces and Police forces. 	<ol style="list-style-type: none"> 1. Revenue Department 2. Home and Confidential Department (Police) 	Section 8 of NDMA Guidelines for Management of Earthquakes (2007)
3	Relief	<ol style="list-style-type: none"> 1. Facilitate management of temporary shelter camps and provision of essential services of health, water, sanitation and food. 2. Initiate damage assessment as per the state government norms in coordination with revenue department. 	<ol style="list-style-type: none"> 1. Revenue Department 2. Home and Confidential Department (Police) 3. Health and Family Welfare Department 4. Irrigation Department 5. Agriculture and Animal Husbandry Department 6. Jal Nigam 7. Food and Civil Supplies Department 8. Education Department 9. Panchayati Raj/Rural Development 10. Women and Child Development Department 	Section 8 of NDMA Guidelines for Management of Earthquakes (2007)

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4.4.Revenue Department

Focal point: Name and Contact details

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Coordination	<ol style="list-style-type: none"> 1. Appoint Nodal Officer for the coordination of earthquake emergency response with other departments. 2. Ensure district and block level control rooms have adequate equipment and human resource. 	<ol style="list-style-type: none"> 1. Tehsildar(s) 2. Zila Panchayat CEO 3. BDO(s) 4. Panchayati Raj Department 5. Health and Family Welfare Department 6. Women and Child Development Department 	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Shelter Location and Material Pre-positioning	<ol style="list-style-type: none"> 1. Identify locations and buildings for setting up temporary relief camps. 2. Ensure identification of areas and buildings for rescue and temporary shelter at block level as well as sub-block level. 	<ol style="list-style-type: none"> 1. ADM 2. Gram Panchayat(s) 3. Frontline workers and patwari(s) 	<ol style="list-style-type: none"> 1. Section 6 of NDMA, Guidelines for Management of Earthquakes (2007) 2. Guidelines on Minimum Standards of Relief (NDMA)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		<ol style="list-style-type: none"> 3. Ensure that minimum standards for relief³ (as prescribed by NDMA) are followed in the identified areas and locations. 4. Ensure stockpiling of tarpaulins at district headquarter in coordination with District Administration. 		
3	Information Dissemination	<ol style="list-style-type: none"> 1. Disseminate information on risk profile of the district and awareness on earthquake prevention (Dos and Don'ts) to the state media as well as to the private media. 2. Ensure conduct of talk show on audio and video media in collaboration with DDMA on earthquake prevention measures and management in the district on All India Radio, Doordarshan and 	<ol style="list-style-type: none"> 1. Prasar Bharti 2. DDMA 3. Private News Media 4. Universities/Academia 	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)

³ <https://ndma.gov.in/images/guidelines/guideline-on-minimum-standard-of-relief.pdf>

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		other private television channels.		
4	Rescue Preparedness	<ol style="list-style-type: none"> 1. Stock-check on availability and functionality status of rescue equipment. 2. Based on stock availability and functionality status of rescue equipment, ensure repair or purchase of rescue equipment. 3. Pre-position available rescue equipment at tehsil level under Tehsildar(s). While deciding take earthquake vulnerability of the tehsil into account. 	<ol style="list-style-type: none"> 1. DDMA 2. SDRF 3. Civil Defence/Fire Services/Homeguards 	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)

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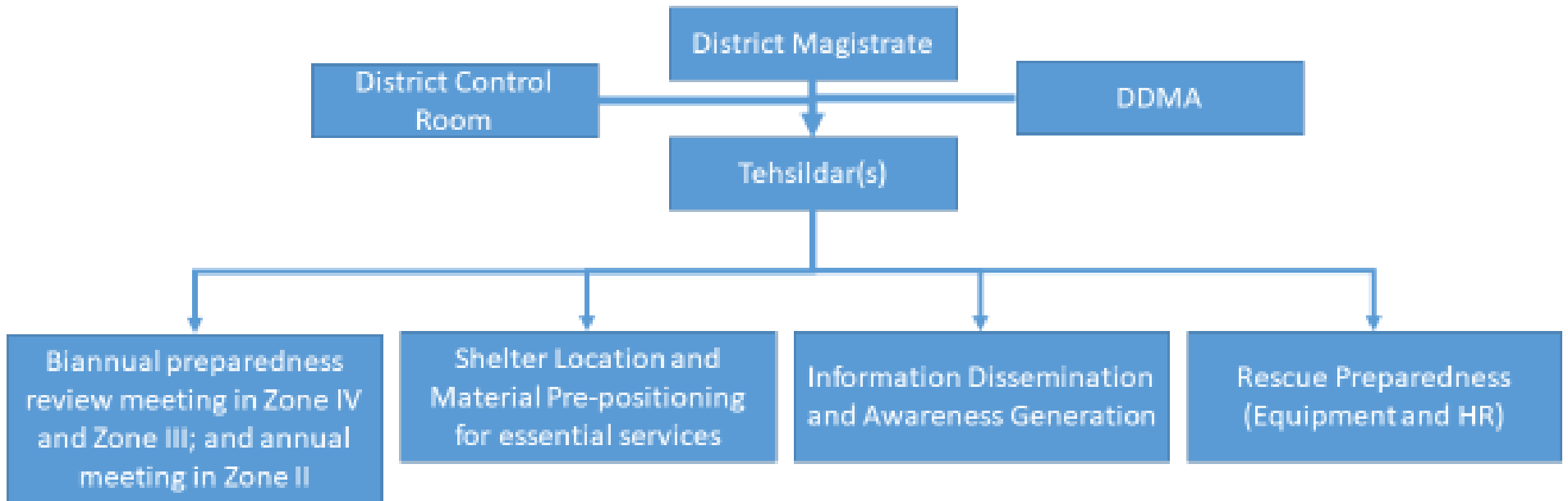


Figure 3: Common Minimum Actions to be undertaken by Revenue Department for Earthquake Preparedness

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Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Coordination	1. Activate district level control room for collecting, coordinating and disseminating information about early warning, affected areas, nature of damage, needs for evacuation and temporary camps.	<ol style="list-style-type: none"> 1. DDMA 2. Home and Confidential Department (Police) 3. Health and Family Welfare Department 4. Irrigation Department 5. Animal Husbandry Department 6. Jal Nigam 7. Food and Civil Supplies Department 8. Education Department 9. Panchayati Raj/Rural Development Department 10. Fire Services Department 11. Women and Child Development Department 12. NGOs/CSR firms for relief 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Rescue	1. Initiate evacuation with the help of State Disaster Response Force, National Disaster Response force,	<ol style="list-style-type: none"> 1. DDMA 2. Home and Confidential Department (Police) 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		community based task forces and Police forces.	<ol style="list-style-type: none"> 3. SDRF 4. NDRF 5. Task Forces 6. Home Guard(s)/Civil Defence 	
3	Information Dissemination	<ol style="list-style-type: none"> 1. Ensure regular dissemination of earthquake related information to public through newspaper, radio, TV and internet based media. 2. Ensure information on the precautions and preventive steps people can take on their own through the media. 	<ol style="list-style-type: none"> 1. Prasar Bharti 2. DDMA 3. National Centre for Seismology 4. IMD 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
4	Relief	<ol style="list-style-type: none"> 1. Set up temporary shelter camps with adequate food, water and sanitation facilities for the affected people. 2. Ensure minimum standard on food (NDMA) prescribing provisioning of 2,400 Kcal/day/person for men and women and 1,700 Kcal/day/person for infant and children is followed. 	<ol style="list-style-type: none"> 1. DDMA 2. Home and Confidential Department (Police) 3. Health and Family Welfare Department 4. Animal Husbandry 5. Jal Nigam 6. Food and Civil Supplies Department 7. Education Department 8. Panchayati Raj/Rural Development 	<ol style="list-style-type: none"> 1. Section 8 of NDMA, Guidelines for Management of Earthquakes (2007) 2. Guidelines on Minimum Standards of Relief (NDMA)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>3. Ensure minimum standard on food (NDMA) prescribing provisioning of milk and dairy products for the children and lactating mothers is followed.</p> <p>4. Ensure minimum standard on drinking water (NDMA) prescribing provisioning of at least 3 Litre/person/day drinking water is ensured.</p> <p>5. Ensure minimum standard on sanitation (NDMA) prescribing provisioning of minimum of 1 toilet for 30 persons with separate facility for men and women. Further 15 liters of water/person/day for toilet/bathing purposes is followed.</p> <p>6. Ensure due care is given to the gender and age of the affected people for shelter and sanitation.</p> <p>7. Ensure adherence to protection related aspects in the shelter camps.</p>	9. Women and Child Development Department	

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>8. Provide awareness and needed preventive measures on water borne diseases, social distancing in Covid-19 scenario/ILIs scenario in temporary shelters.</p> <p>9. Ensure health services facility for the management of critical medical attention requirements (Heart Attacks, Dialysis, Pregnancies and institutional Deliveries) in the temporary shelter.</p> <p>10. Ensure basic health facilities are provisioned through mobile medical team (as prescribed in the Minimum Standards for Relief by NDMA) to the earthquake affected people in the temporary shelter.</p>		

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

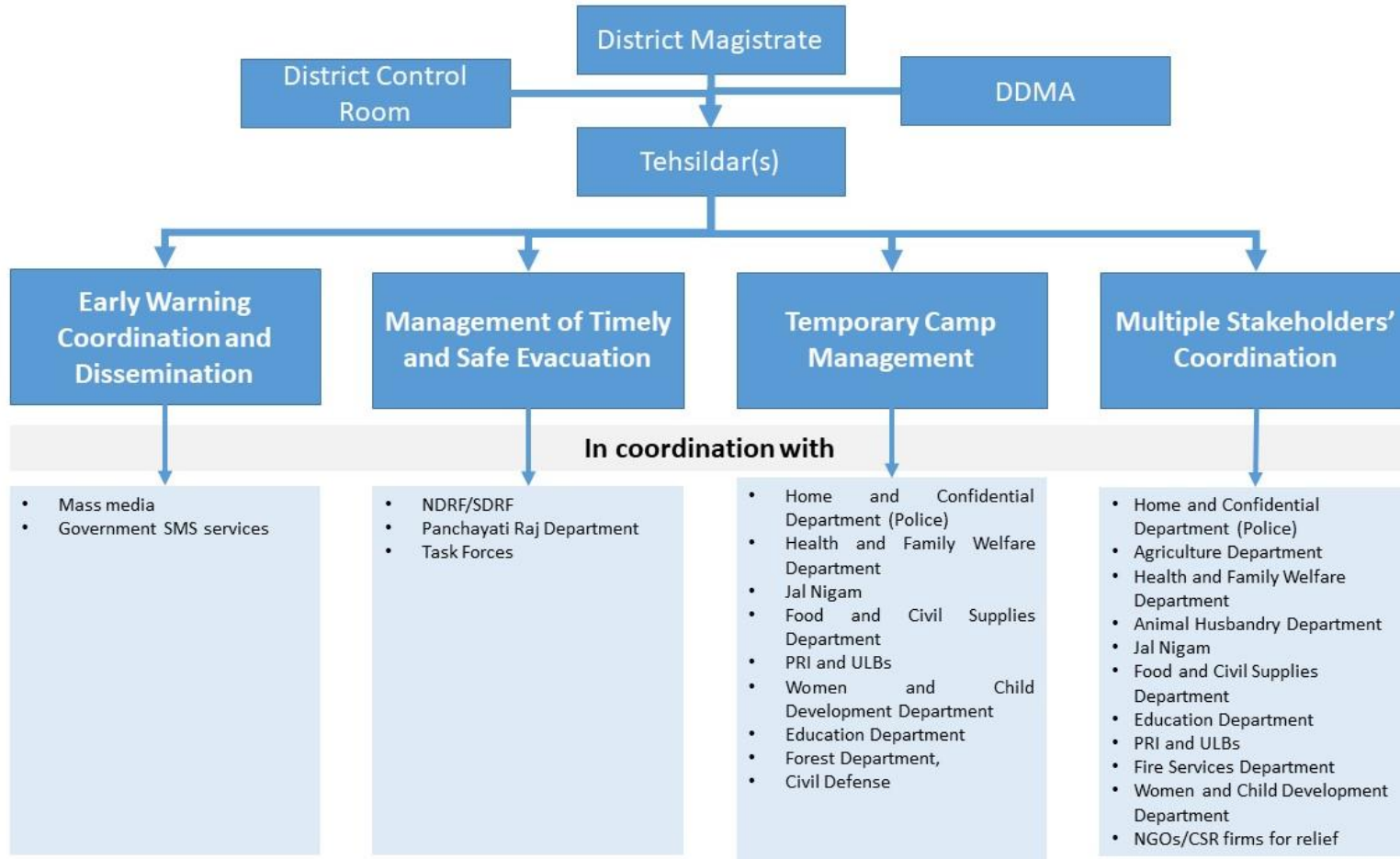


Figure 4: Common Minimum Actions to be undertaken by Revenue Department for Earthquake Response

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

4.5. Health and Family Welfare Department

Focal point: Name and Contact details

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Health Facilities' Preparedness	<ol style="list-style-type: none"> 1. Assess readiness of the PHCs/CHCs/DHs for earthquake response. 2. Conduct stocktaking of critical infrastructure, essential medicine and adequate human response for earthquake preparedness. 3. Take remedial actions for ensuring critical infrastructure, essential medicine and adequate human resource is intact for earthquake response. 4. Strengthening of Primary Health Centres with network of para-professionals to improve the capacity of surveillance and control of epidemics 5. Arrangement of standby generators for every hospital. 	<ol style="list-style-type: none"> 1. Social Welfare Department 2. Women and Child Development Department 3. Revenue Department 4. DDMA 	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<ol style="list-style-type: none"> 6. Listing of vehicles, repair of departmental vehicles that will be requisitioned during emergencies for transport of injured. 7. Listing and networking with private health facilities. 8. Conduct sensitization and training (Basic and Advance) on Psychosocial Support and Mental Health Services across identified departments, sectors and levels. 		
2	Capacity Building	<ol style="list-style-type: none"> 1. Formation of adequate number of mobile units with trained personnel, testing facilities, communication systems and emergency treatment facilities. 2. Ensure that number of Mobile Health Units is proportional to number of people going to be affected due to earthquake and number of planned temporary shelter. 3. Conduct Mock Drills of MHUs on primary medical response 	<ol style="list-style-type: none"> 1. DDMA 2. Social Welfare Department 3. Women and Child Development Department 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>during the earthquake scenario in association with DDMA.</p> <p>4. Capacity building of District Counselling Centres under Department of Social welfare/Women and Child Development (WCD).</p> <p>5. Training of members of Village Disaster Management Committees (VDMCs) and NGOs of the villages (falling in Earthquake Damage Risk Zone IV & III) on first aid of earthquake victims.</p> <p>6. Training of field personnel, Traditional Birth Attendants, community leaders, volunteers, NGOs and CBOs in first aid, measures to be taken to control outbreak of epidemics during and after a disaster, etc.</p> <p>7. Awareness generation about do's and don'ts regarding first aid to earthquake victims in the immediate aftermath of an earthquake.</p>		

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
3	Health and Hygiene Promotion	<ol style="list-style-type: none"> 1. Conduct dissemination of IEC material⁴ on diseases during the earthquake in collaboration with Revenue Department, Panchayati Raj Department and Housing & Urban Development Department. 2. Conduct training for para-professionals (ASHA/ANM/MPW) on surveillance and epidemic control. 3. Conduct training of community leaders, volunteers, NGOs and CBOs on first aid measures to be taken for controlling epidemic outbreak. 	<ol style="list-style-type: none"> 1. Revenue Department 2. Panchayati Raj Department 3. Housing & Urban Development Department 4. DPRO 5. Municipal Commissioner(s) 6. BDO(s) 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
4	Identification emergency operation locations	<ol style="list-style-type: none"> 1. Identification of locations in probable disaster sites for emergency operation camps 2. Identification of areas prone to endemic and epidemics in the aftermath of earthquakes 	<ol style="list-style-type: none"> 1. Revenue Department 2. Panchayati Raj Department 3. Housing & Urban Development Department 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

⁴ Dos and Don'ts during the Earthquake and information on health facilities

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
			4. Municipal Commissioner(s) 5. BDO(s)	

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Provision of Health Facilities	1. Provision primary medical response during the earthquake scenario (as prescribed in the Minimum Standards for Relief by NDMA). 2. Ensure adequate availability of personnel at disaster site. 3. Ensure special arrangements for the management of critical medical attention requirements (Heart Attacks, Dialysis, Pregnancies and institutional Deliveries). 4. Ensure arrangement for referral and transportation of critically ill people, pregnant women and lactating women to the First	1. Revenue Department 2. DDMA 3. Panchayati Raj Department 4. Housing & Urban Development Department 5. Municipal Commissioner(s) 6. BDO(s)	1. Section 8 of NDMA, Guidelines for Management of Earthquakes (2007) 2. Guidelines on Minimum Standards of Relief (NDMA)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		Referral Units or tertiary facilities in the district. 5. Ensure disinfection of water bodies and drinking water sources. 6. Opening up of site operation camps in the affected areas. 7. Stock piling of life-saving drugs, de-toxicants, anaesthesia, Halogen tablets in vulnerable areas. 8. Immunization and Quarantine, if necessary. 9. Immunization against infectious diseases.		
2	Monitoring	1. Monitor water and food quality, and disposal of waste in transit and relief camps, feeding centres and affected areas.	1. Revenue Department 2. DDMA 3. Municipal Commissioner(s) 4. BDO(s)	1. Section 8 of NDMA, Guidelines for Management of Earthquakes (2007) 2. Guidelines on Minimum Standards of Relief (NDMA)
3	Reporting	1. Situational assessment and reviewing the status of response mechanisms in known vulnerable pockets. 2. Regular reporting to control rooms. 3. Review and update precautionary measures and procedures, and	1. Revenue Department 2. DDMA	1. Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		apprise the personnel who will be implementing those. Ensure continuous flow of information		

Recovery

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Epidemic Prevention	<ol style="list-style-type: none"> 1. Identification of appropriate locations and setting up of site operation camps for combating epidemics. 2. Continuation of disease surveillance and monitoring. 3. Continuation of treatment, monitoring and other epidemic control activities until the situation is brought under control and the epidemic eradicated. 4. Establishing procedures and methods of coordination with local authorities/departments. 5. NGOs to ensure that adequate prevention and preparedness measures have been taken to 	<ol style="list-style-type: none"> 1. Revenue Department 2. DDMA 3. Panchayati Raj Department 4. Housing and Urban Development Department 5. Municipal Commissioner(s) 6. BDO(s) 7. NGOs 	<ol style="list-style-type: none"> 1. Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		prevent and /or minimize the probable outbreak of epidemics.		
2	Post Disaster Support	<ol style="list-style-type: none"> 1. Trauma counselling. 2. Treatment and socio-medical rehabilitation of injured or disabled persons. 3. Immunization and nutritional surveillance. 4. Long term plans to progressively reduce various factors that contribute to high level of vulnerability of disaster affected population to diseases. 	<ol style="list-style-type: none"> 1. Revenue Department 2. DDMA 3. Panchayati Raj Department 4. Housing and Urban Development Department 5. Municipal Commissioner(s) 6. BDO(s) 7. NGOs 	<ol style="list-style-type: none"> 1. Section 8 of NDMA, Guidelines for Management of Earthquakes (2007) 2. Guidelines on Minimum Standards of Relief (NDMA)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

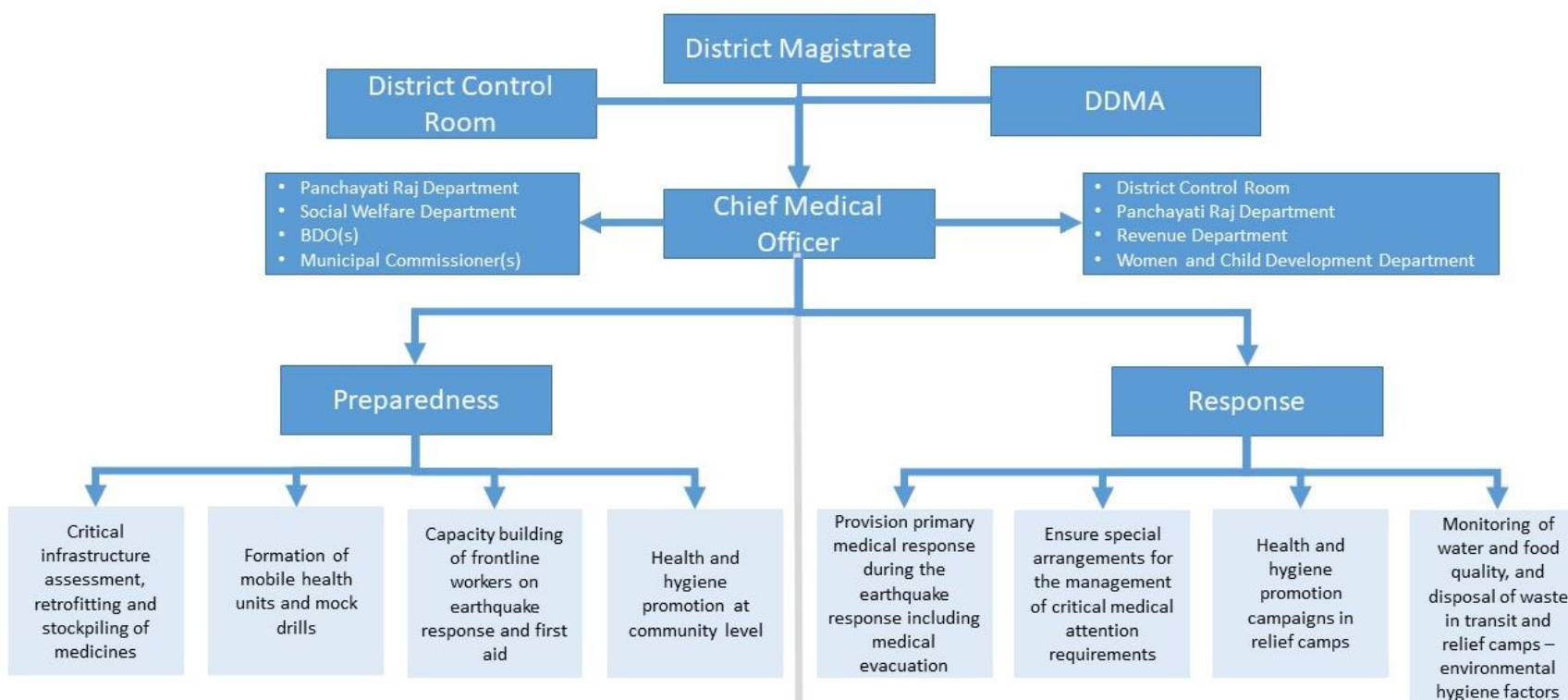


Figure 5: Common Minimum Actions to be undertaken by Health and Family welfare department for Earthquake Preparedness and Response

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

4.6.Home and Confidential Department (Police)

Focal point: Name and Contact details

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Capacity Building	<ol style="list-style-type: none"> 1. Keep the force in general and the PAC in particular fighting fit for search, rescue, evacuation and other emergency operations at all times through regular trainings and mock drills. 2. Organize training programmes on search, rescue and evacuation for the members of the Ward and Village Disaster Management Committees and NGOs of the areas falling in the Earthquake Damage Risk Zone IV & III. 	<ol style="list-style-type: none"> 1. DDMA 2. Revenue Department 3. Panchayati Raj Department 4. Housing and Urban Development Department 5. Civil Defense 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Communication	<ol style="list-style-type: none"> 1. Keeping close contact with the District Administration & District Control Room. 	<ol style="list-style-type: none"> 1. DDMA 2. Revenue Department 	Section 6 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
3	Protective Gear and Equipment	<ol style="list-style-type: none"> 1. Procurement and deployment of modern emergency equipment while modernizing existing infrastructure and equipment for disaster response along with regular training and drills for effective handling of these equipment. 2. Ensure that all communication equipment including wireless are regularly functioning and deployment of extra wireless units in vulnerable pockets. 	<ol style="list-style-type: none"> 1. DDMA 2. District Administration 3. Revenue Department 4. Civil Defense 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Evacuation	<ol style="list-style-type: none"> 1. Deploy trained police personnel and PAC personnel for carrying out search, rescue and evacuation of the Earthquake affected people. 2. Ensure emergency traffic management particularly, arrangement for the safe passage to the ambulances carrying the injured persons. 	<ol style="list-style-type: none"> 1. Revenue Department 2. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Maintenance of Law and Order	<ol style="list-style-type: none"> 1. Deploy police personnel and PAC personnel for maintenance of law and order in the event of Earthquake. 2. Assist district administration for taking necessary action against hoarders/black marketers etc. 3. Make security arrangements for relief materials in transit and in camps etc. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

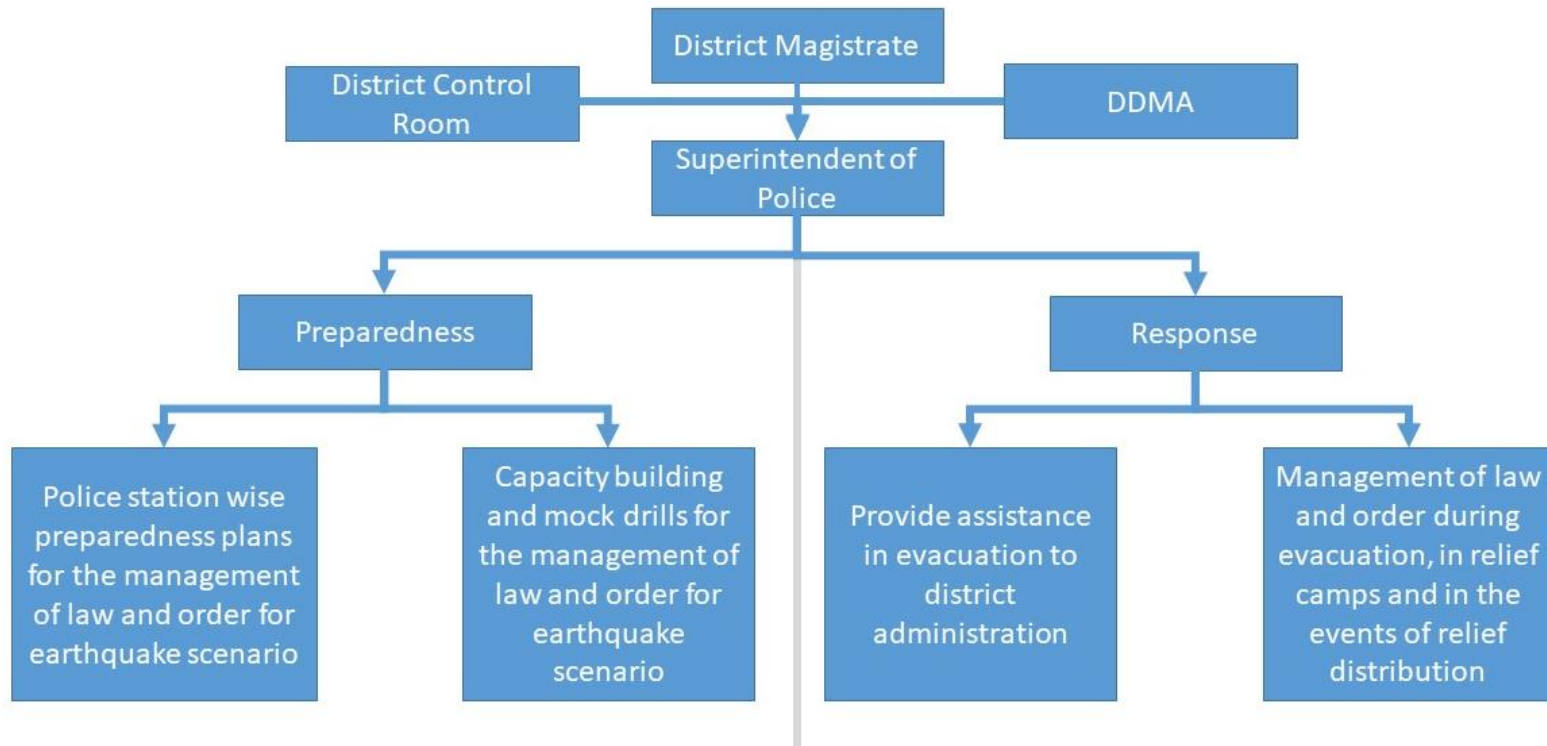


Figure 6: Common Minimum Actions to be undertaken by Police for Earthquake Preparedness and Response

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

4.7.Panchayati Raj/Rural Development

Focal point: Name and Contact details

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Strategy Development	<ol style="list-style-type: none"> 1. Training of elected representatives on various aspects of disaster management. 2. Public awareness on various aspects of disaster management through training programs to be organized at the Gram Panchayat level on pre during and post-earthquake dos and don'ts. 3. Organize mock drills to respond to the earthquake disaster in the areas of Earthquake Damage Risk Zone IV & III. 4. Facilitate the Village Disaster Management Committees of the areas falling in the (Earthquake Damage Risk Zone IV & III) in preparing their community disaster management plan. 5. Support strengthening response mechanisms at the Gram 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>Panchayat level (e.g. better communication, local storage, search & rescue equipment, etc.). It is suggested that there should be a policy through which Gram Panchayats may be authorized to use funds at their disposal from any source for the emergency purposes.</p> <p>6. Ensure alternative routes/means of communication for movement of relief materials and personnel to marooned areas or areas likely to be marooned.</p> <p>7. Assist all the government departments to plan and prioritize prevention and preparedness activities while ensuring active community participation.</p>		
2	Community Capacity Building	<p>1. Facilitate the Village Disaster Management Committees of the areas.</p> <p>2. Form task groups comprising of active and abled community</p>	<p>1. Revenue Department</p> <p>2. District Administration</p> <p>3. DDMA</p> <p>4. Civil Defense</p> <p>5. SDRF</p>	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		<p>members and elected representatives.</p> <p>3. Conduct training of task groups on:</p> <p>3.1. Search & Rescue</p> <p>3.2. First Aid.</p> <p>3.3. Evacuation Equipment Usage</p> <p>4. Ensure training courses are based on as per the Training Regime for Disaster Response – Volume I (NDMA, GoI, 2008)⁵.</p> <p>5. Facilitate community participation on planning, prioritizing prevention and preparedness activities conducted by different government departments.</p>		

⁵ <https://ndma.gov.in/images/reports/training-regime.pdf>

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

Response				
S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Restoration	<ol style="list-style-type: none"> 1. Clearance of roads, including tree removal in the villages. 2. Construct alternative temporary roads to restore communication to the villages if Gram Panchayats are given funds or they are given the authority to use existing funds without obtaining the sanction 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 4. PWD Department 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Arrangements for Emergency Life Support	<ol style="list-style-type: none"> 1. Identify the school building, community centers and operationalise them into emergency relief centers and emergency shelters. 2. Make necessary arrangements for sanitation, drinking water and medical aid. 3. Support in search, rescue and first aid activities. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 4. Civil Defense 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
3	Assessments	<ol style="list-style-type: none"> 1. Participate in post impact assessment of emergency situation 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

			3. DDMA	
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Recovery

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Repair/Restoration of Services	<ol style="list-style-type: none"> 1. Repair/ restoration of infrastructure e.g. roads, bridges, public amenities however adequate funds, manpower and resources should be provided. Gram panchayats to use funds in such emergent situations available with them from any sources, including government schemes. 2. Supporting the Gram Panchayats in development of storage houses for food stocks. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

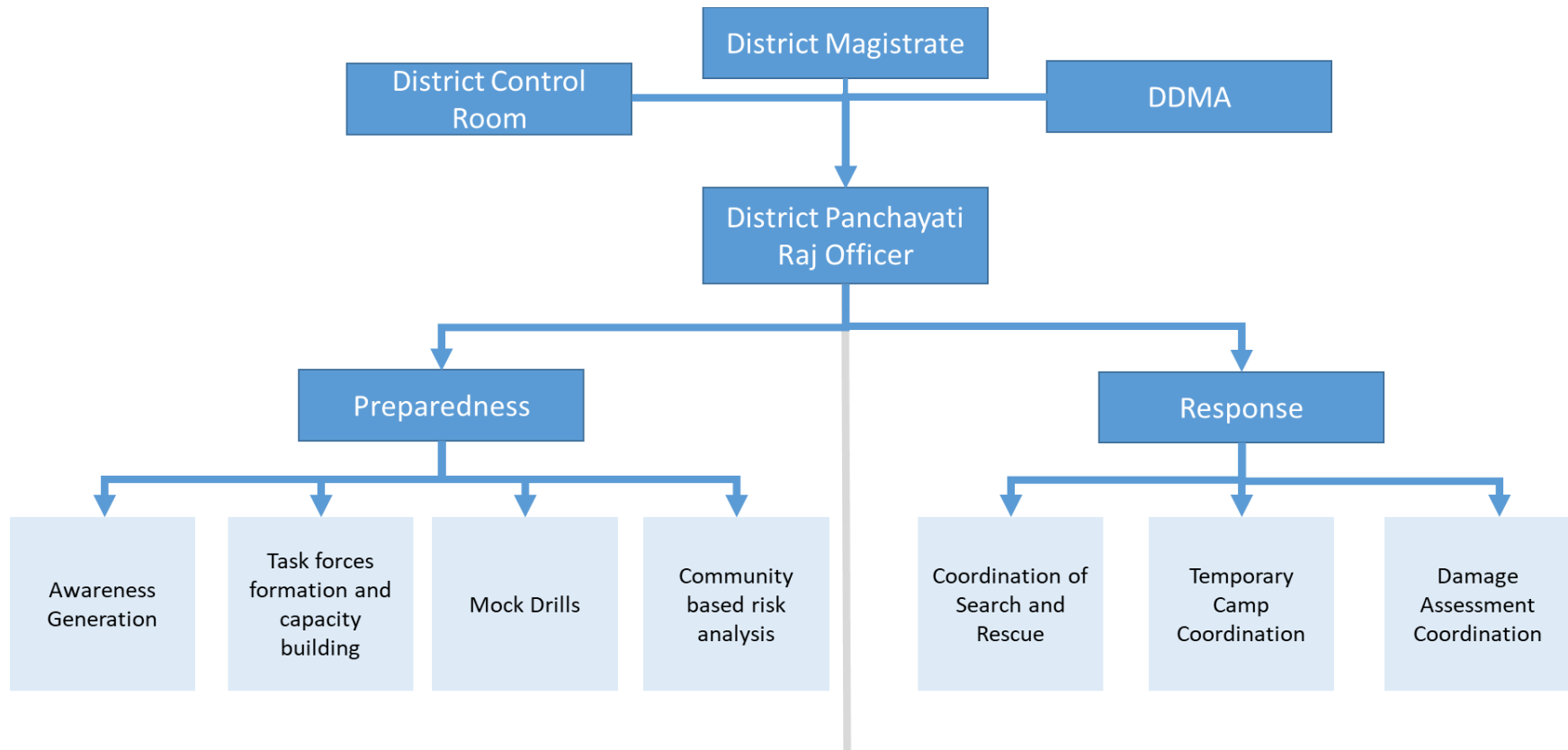


Figure 7: Common Minimum Actions to be undertaken by Panchayati Raj for Earthquake Preparedness and Response

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

4.8. Public Works Department

Focal point: Name and Contact details

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Repair and Retrofitting	<ol style="list-style-type: none"> 1. UPPWD may ensure repair of infrastructure under its control. Repair of structures owned by other departments may be entrusted to the concerned department. However technical guidance / supervision can be provided by UPPWD 2. UPPWD would prepare the inventory of equipment available with registered class-I contractors of UPPWD but acquisition and mobilization of equipment in case of any disaster may be done by District Administration. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 4. Panchayati Raj 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Restoration	<ol style="list-style-type: none"> 1. Restoration of roads & bridges owned by UPPWD. 2. Facilitate movement of heavy vehicles carrying equipments and materials 3. Identification of alternative routes to strategic locations. In case it is needed, Notification of alternative routes to strategic locations should be done by the Transport Department in consultation with district administration. 4. Filling of ditches 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

Recovery

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Capacity Building	1. Strengthening and restoration of infrastructure with an objective to eliminate the factor (s) which caused the damage	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

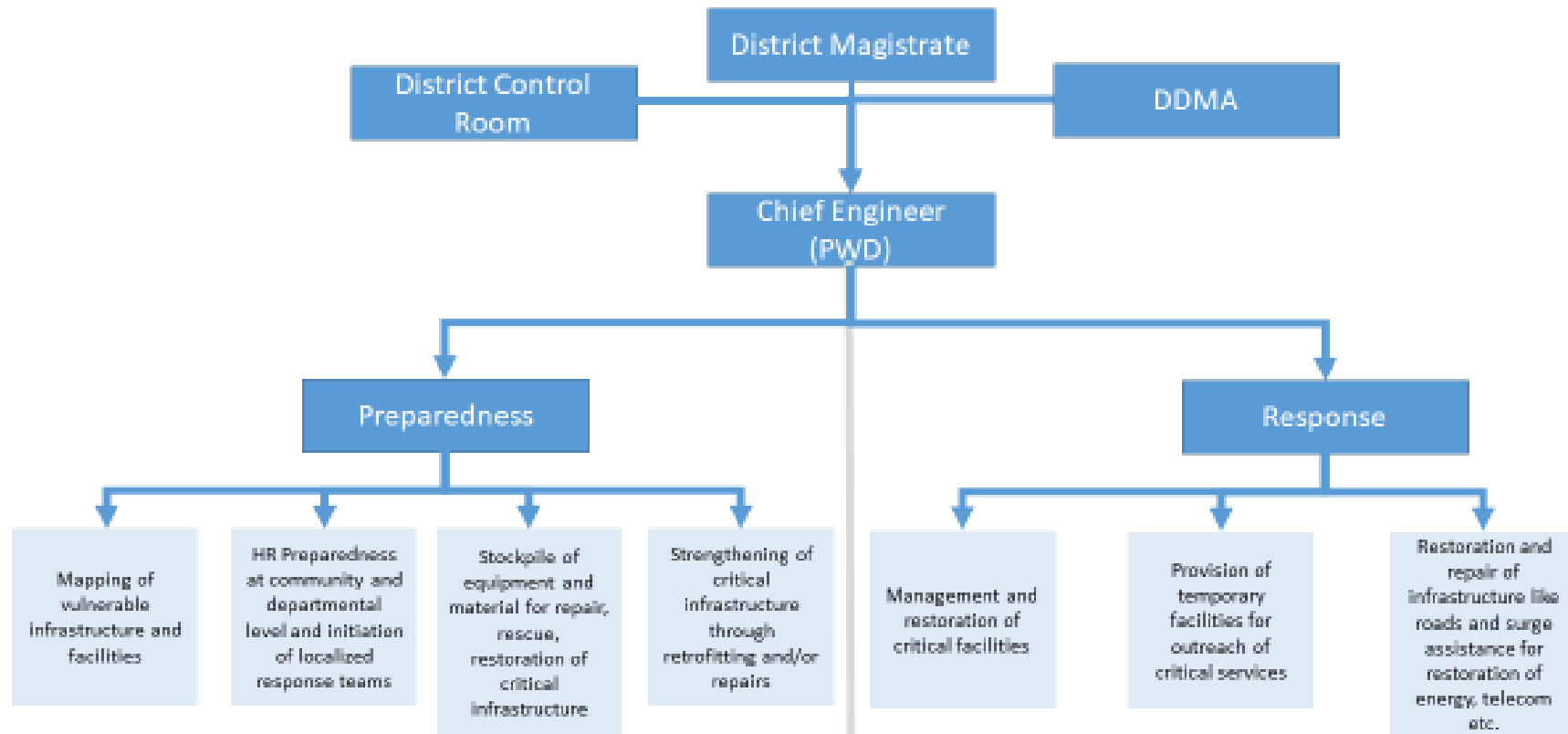


Figure 8: Common Minimum Actions to be undertaken by PWD for Earthquake Preparedness and Response

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

4.9. Fire Services Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
1	Communication	<ol style="list-style-type: none"> 1. Designate a Nodal Officer for emergency response who will act as the contact person for the Department 2. Ensure establishment of failsafe two-way communication with the State, District and other emergency control rooms and within the organization 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Protective Gear	<ol style="list-style-type: none"> 1. Modernization of fire-fighting equipment and strengthening infrastructure. 2. Procurement of search and rescue equipment viz. gas cutters, drillers and human sensors etc. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
3	Capacity Building	<ol style="list-style-type: none"> 1. Development /enforcement of relevant legislations and regulations to enhance adoption of fire safety measures 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		<ol style="list-style-type: none"> 2. Educate people to adopt fire safety measures in the immediate aftermath of earthquakes. 3. Conduct training and drills for use of various fire protection and preventive systems in order to ensure higher level preparedness in the community. Training the communities to handle fire emergencies more effectively. 		
4	Vulnerability Assessment	<ol style="list-style-type: none"> 1. Identification of pockets of industrial, commercial or residential area which are highly susceptible to fire accidents in the event of building collapse due to earthquake. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Rescue	<ol style="list-style-type: none"> 1. Rescue of persons trapped in burning, collapsed or damaged buildings, damaged vehicles, including motor vehicles, trains and industries, boilers, trenches and tunnels 2. Control fires and minimize the resultant damages 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 4. Police Department 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Protection	<ol style="list-style-type: none"> 1. Protection of property and the environment from fire damage. 2. Support to other agencies in the response to emergencies. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 4. Police Department 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
3	Investigation	<ol style="list-style-type: none"> 1. Investigation into the causes of fire and assist 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 4. Police Department 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

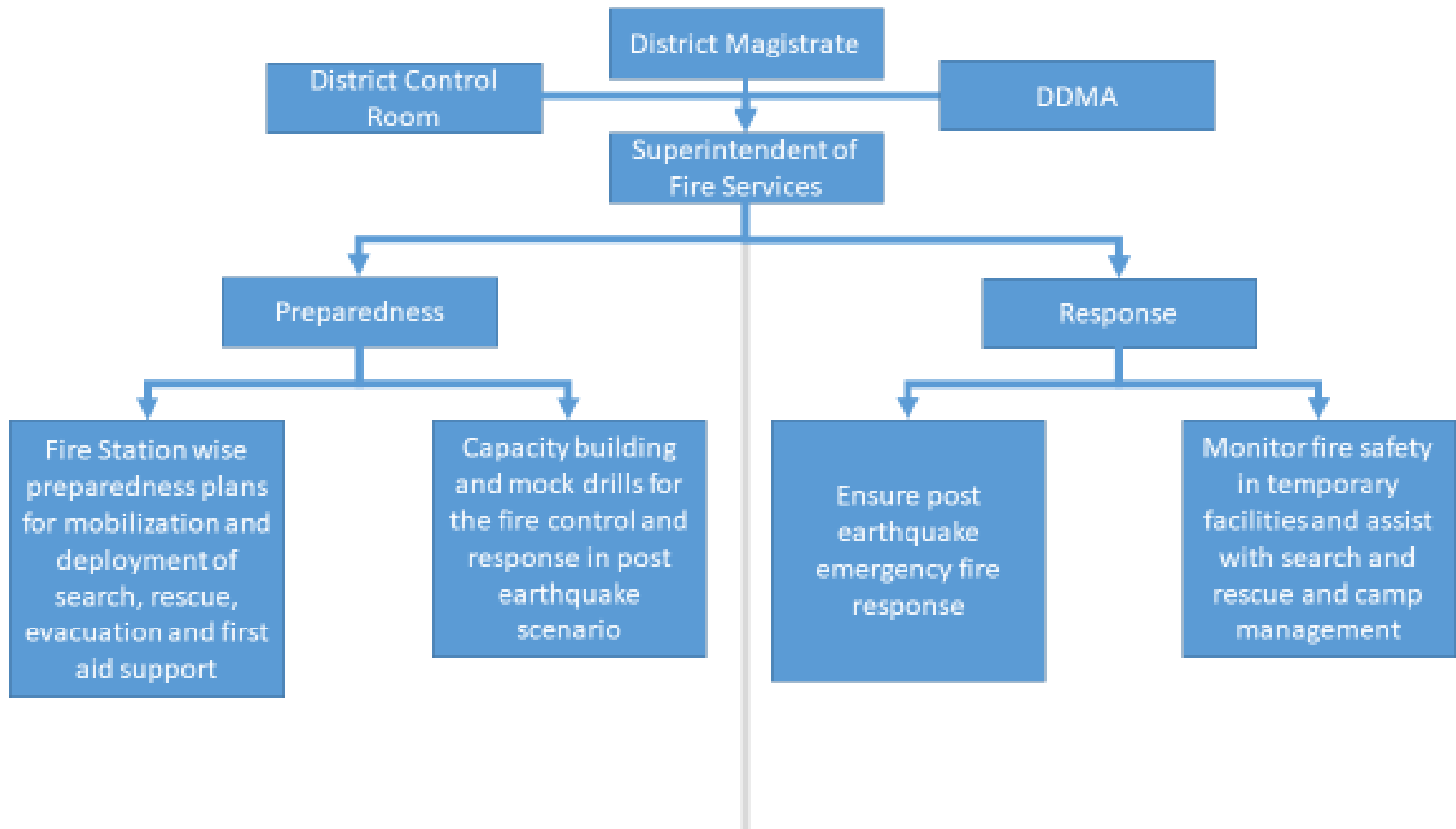


Figure 9: Common Minimum Actions to be undertaken by Fire Services Department for Earthquake Preparedness and Response

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

4.10. Animal Husbandry Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Livestock Vaccination	<ol style="list-style-type: none"> 1. Prepare category-wise listing of animal population in the district. 2. Identify Earthquake vulnerable livestock, especially in the Earthquake prone areas of the district on priority basis. 3. Identify safer areas and make necessary arrangement for sheltering livestock in the event of Earthquakes. 4. Conduct vaccination of the livestock in phase-wise manner (to be completed before the onset of monsoon season). 5. Identify campsites for large scale vaccination and disseminate information regarding vaccination dates and time to people. 6. Promote and conduct animal insurance and tagging of animals. 7. Make provisions for stockpiling fodder, animal feed and water for Earthquake scenario. 	<ol style="list-style-type: none"> 1. Revenue Department 2. Panchayati Raj Department 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		8. Listing and identification of vehicles to be requisitioned for transport of injured animals		
2	Veterinary Facility Preparedness	<ol style="list-style-type: none"> 1. Form mobile teams comprising of Veterinary Officer, Medical Compounder and Driver for primary veterinary medical response during earthquakes. 2. Ensure that number of mobile teams is proportional to livestock likely to be affected and number of planned temporary shelters in the earthquake scenario. 3. Conduct mock drills for mobile teams on primary medical response during the earthquake scenario. 4. Pre-position inventory of necessary medicines and surgical equipment for treatment of livestock and other infrastructure (standby generator) in the critical veterinary hospitals. 5. Construction of mounds for safe shelter of animals. 6. Identification of various water sources to be used by animals in case of prolonged hot and dry spells 	<ol style="list-style-type: none"> 1. Revenue Department 2. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

STANDARD OPERATING PROCEDURES (SOP) FOR EARTHQUAKE RESPONSE

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
3	Community Capacity Building	1. Conduct training for community members on animal carcass disposal methods as detailed in the Guideline for Disposal of Animal Carcass ⁶ in the National Guidelines for Management of Dead in the Aftermath of Disasters (NDMA, 2010).		Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
1	Veterinary Facility	<ol style="list-style-type: none"> 1. Ensure adequate availability of personnel and mobile teams 2. Eradication and control of animal diseases, treatment of injured animals 3. Protection of abandoned and lost cattle 4. Supply of medicines and fodder to affected areas 5. Disposal of carcasses ensuring proper sanitation to avoid outbreak of epidemics 	<ol style="list-style-type: none"> 1. Revenue Department 2. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

⁶ <https://ndma.gov.in/images/guidelines/management-of-Dead-in-the-Aftermath-of-Disasters.pdf>

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		<p>6. Establishment of public information centre with a means of communication, to assist in providing an organized source of information.</p> <p>7. Mobilizing community participation for carcass disposal</p>		
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Recovery

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Assessment	<p>1. Assess losses of animals' assets and needs of persons and communities</p> <p>2. Establishment of animal disease surveillance system</p>	<p>1. Revenue Department</p> <p>2. DDMA</p>	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Financial Support	<p>1. Play a facilitating role for early approval of soft loans for buying animals and ensuring insurance coverage and disaster-proof housing or alternative shelters/mounds for animals for future emergencies</p>	<p>1. Revenue Department</p> <p>2. DDMA</p>	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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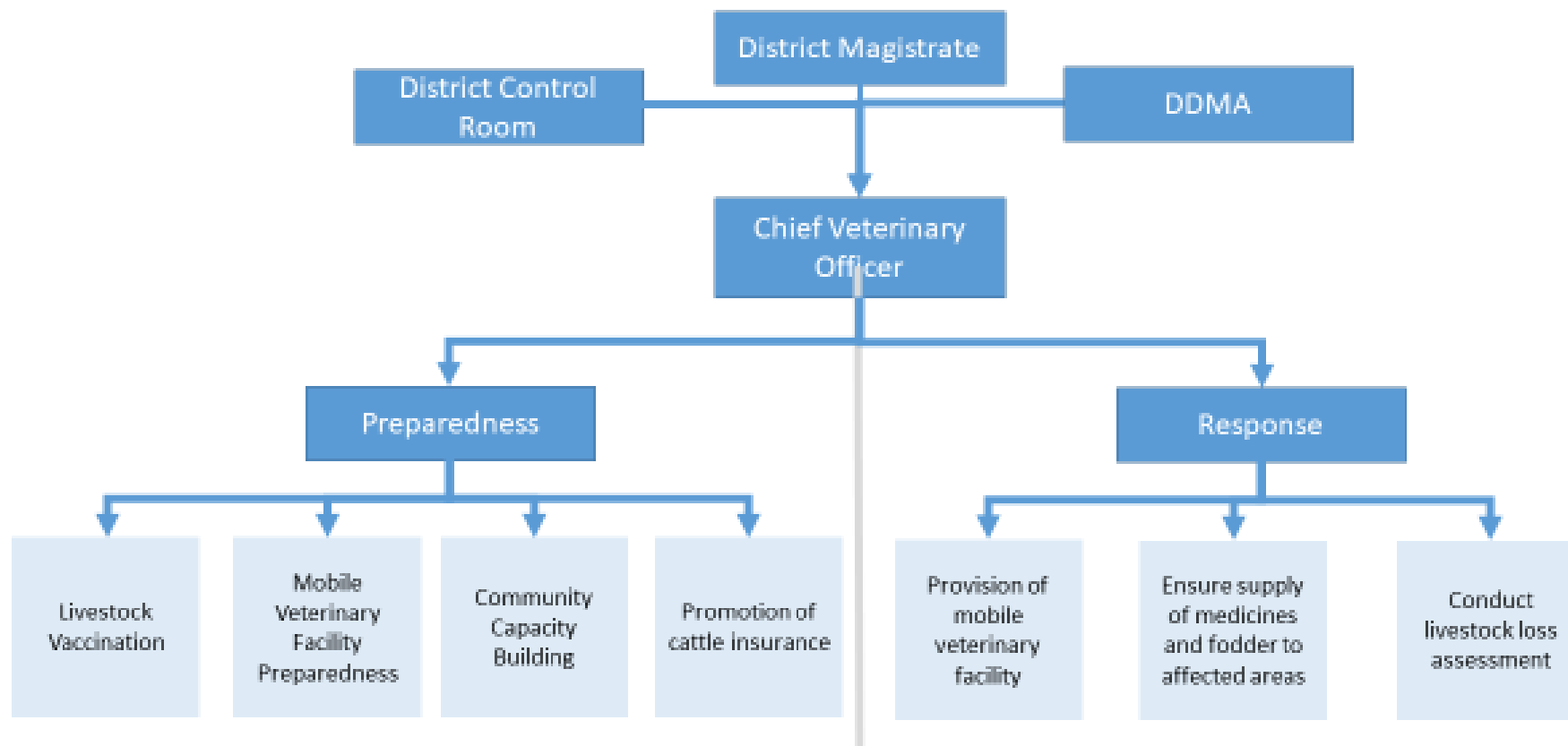


Figure 10: Common Minimum Actions to be undertaken by Animal Husbandry Department for Earthquake Preparedness and Response

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4.11. Food and Civil Supplies Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Food Grain and Fuel Stockpiling	<ol style="list-style-type: none"> 1. Construction and maintenance of storage go downs/warehouses at strategic locations. 2. Stock piling of food reserves and essential commodities in anticipation of disaster. 3. Details of each of the warehouse connected to the base warehouse and its distance from the base warehouse, capacity in number of bags. Similarly, detailed database of all the public distribution shops connected to each of the warehouse including distance of each of the public distribution shop from the warehouse and capacity in number of bags. As this information can be utilized for safely stockpiling the food gains received from various sources in the immediate aftermath of a disaster e. g. earthquake. 4. Take appropriate preservative measures to ensure that food and other relief 	<ol style="list-style-type: none"> 1. Revenue Department 2. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		stocks are not damaged during storage, especial precautions against moisture, rodents and fungus infestation.		
2	Infrastructure	<ol style="list-style-type: none"> 1. Construct/repair storage godowns/warehouses at strategic locations. 2. For seamless stockpiling/distribution of food grains in the aftermath of Earthquake, undertake following actions: <ol style="list-style-type: none"> 2.1. Maintain details of each of the warehouse connected to the base ware house and its distance from the base warehouse, capacity in number of bags. 2.2. Maintain detailed database of all the public distribution shops connected to each of the warehouse and distance of each of the public distribution shop from the warehouse and capacity in number of bags. 		Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

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Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guide line)</i>
1	Food Grain and Fuel Supply	<ol style="list-style-type: none"> 1. Supply food grain and fuel based on the requirement raised by Revenue Department. 2. Ensure that food items supplied comply by the minimum standard on food (NDMA), which prescribe provisioning of 2,400 Kcal/day/person for men and women and 1,700 Kcal/day/person for infant and children. 3. Management of procurement 4. Management of material movement in close coordination with Transport department and Railways for transportation of relief supplies. 5. Inventory management 	<ol style="list-style-type: none"> 1. Revenue Department 2. Transport Department 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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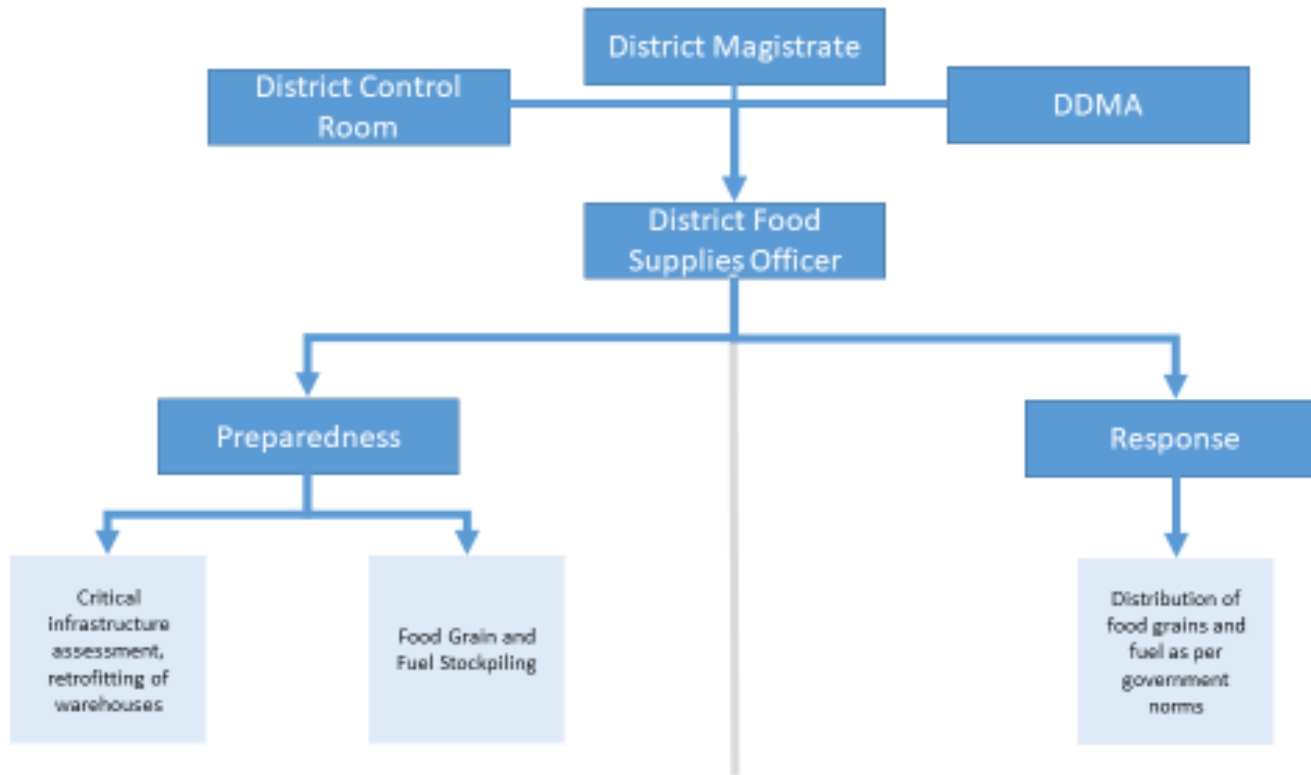


Figure 11: Common Minimum Actions to be undertaken by Food and Civil Supplies Department for Earthquake Preparedness and Response

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4.12. Jal Nigam Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Risk Analysis	1. Conduct risk analysis of water supply infrastructure (hand pumps etc) in villages with specific reference to impact of Earthquakes on water supply.	1. Revenue Department 2. Transport Department	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Infrastructure Measures	2. Provision of safe water to all habitats 3. Prior arrangement of water tankers and other means of distribution and storage of water 4. Prior arrangement of stand by generators 5. Adequate prior arrangements to provide water and halogen tablets at identified sites to be used as relief camps or in areas with high probability to be affected by natural calamities 6. Raising of tube-well platforms, improvement in sanitation structures and other infrastructural measures to	1. Revenue Department 2. Transport Department	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		ensure least damages during future disasters 7. Clearance of drains and sewerage systems, particularly in the urban areas		

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Safe Water Supply	1. Disinfections and continuous monitoring of water bodies 2. Ensuring provision of water to hospitals and other vital installations 3. Provision to acquire tankers and establish other temporary means of	1. Revenue Department 2. Panchayati Raj Institutions	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
		distributing water on an emergency basis 4. Arrangement and distribution of emergency tool kits for equipments required to dismantle and assemble tube wells, etc. 5. Carrying out emergency repairs of damaged water supply systems		

Recovery

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Capacity Building	1. Strengthening of infrastructure 2. Review and documentation 3. Sharing of experiences and lessons learnt 4. Training to staff Development of checklists and contingency plans	1. Revenue Department 2. Panchayati Raj Institutions	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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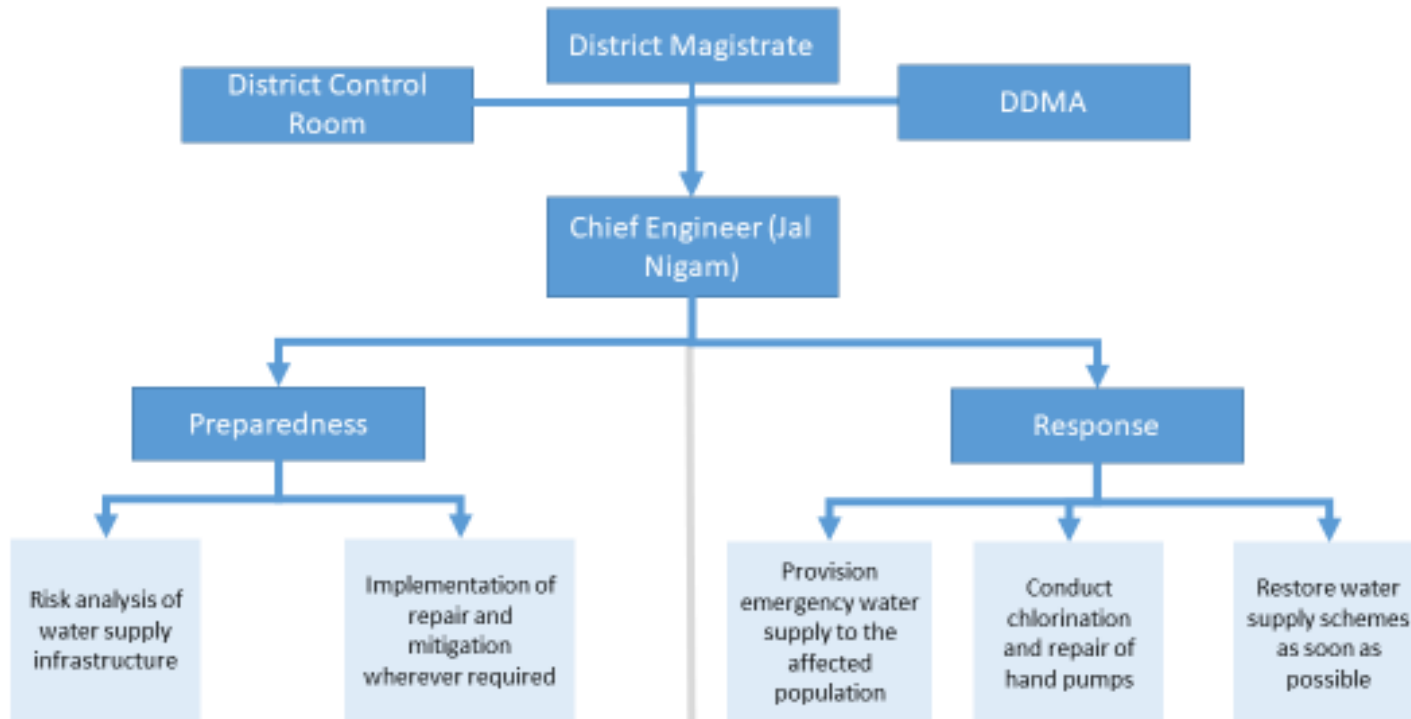


Figure 12: Common Minimum Actions to be undertaken by Jal Nigam Dept. for Earthquake Preparedness and Response

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4.13. Irrigation Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
1	Infrastructure	<ol style="list-style-type: none"> 1. Identify earthquake prone rivers and segments of embankments along them which can witness cracks or seepage in the event of an earthquake. Strengthening of such segments of embankments and formulation of emergency plans for such areas 2. Identification and maintenance of materials/tool kits required for emergency response cracking or breaching of embankments in the event of an earthquake. 3. Stock-piling of sand bags and other necessary items for breach closure. 4. Development of checklists and contingency plans 	<ol style="list-style-type: none"> 1. Revenue Department 2. Panchayati Raj Institutions 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Resource Readiness	<ol style="list-style-type: none"> 1. Deploy staff (for watch) at sensitive locations (Water reservoirs/river stretches, bunds of dams, irrigation channels, bridges, culverts, control 	<ol style="list-style-type: none"> 1. Panchayati Raj Department 2. DPRO 3. BDO(s) 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		<p>gates and overflow channels which are sensitive to cause Earthquake).</p> <p>2. Conduct inspection and repair of pumps, generator, motor equipment and station buildings.</p> <p>3. Ensure formation of village-wise Earthquake Protection committees comprising of 10 members⁷ in the villages settled around embankments.</p> <p>4. Ensure regular monitoring of the sensitive areas by the committee members. In case of any emergency (damage to reservoir/embankment by anti-social persons) committee members shall handle the situation.</p>		

⁷ Part C, Para 2 (Directive for Earthquake Preparedness, 2019) http://idup.gov.in/site/writereaddata/siteContent/pre-Earthquake-2019/201904121436257335File_5.pdf

Committee composition - JE of the area, Gram Pradhan, Gram Up-pradhan, Village Development Officer, Representative of Youth Group, Chairperson of Mahila Mandal/representative of Mahila Mandal, Accountant, Village-Watchman/Home-guard/personnel of police station, NGO representative and Multi-purpose Worker

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Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guidelines)
1	Monitoring and Inspection	<ol style="list-style-type: none"> 1. Inspection of bunds of dams, irrigation channels, bridges, culverts, control gates and overflow channels in the immediate aftermath of an earthquake. 2. Monitoring and protection of irrigation infrastructures 3. Monitoring earthquake situation in the immediate aftermath of an earthquake and dissemination of earthquake warning 4. Inspection and repair of pumps, generators, motor equipments and station buildings 5. Community mobilization in breach closure 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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Recovery

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Resource Strengthening	1. Strengthening infrastructure and human resources 2. Documentation	1. Revenue Department 2. District Administration 3. DDMA	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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4.14. Transport

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Safety Compliance	<ol style="list-style-type: none"> 1. Safety accreditation, enforcement and compliance 2. Ensuring vehicles follow accepted safety standards 3. Build awareness on road safety and traffic rules through awareness campaign, use of different IEC strategies and training to school children. 4. Ensure proper enforcement of safety regulations 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Emergency Operations	<ol style="list-style-type: none"> 1. Listing of vehicles which can be used for emergency operation especially for carrying the rescue teams and relief supplies 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

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Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Requisition and Coordination	<ol style="list-style-type: none"> 1. Requisition of vehicles, trucks especially for carrying the rescue teams and relief supplies 2. Coordination with railway authorities for carrying the rescue teams and relief supplies 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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4.15. Energy Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Infrastructural Preparedness for service continuity	<ol style="list-style-type: none"> 1. Identification of materials/tool kits required for emergency response 2. Ensure the minimum safety standards to be adopted for electrical installation and equipments and organize training of electricians 3. Develop and administer regulations to ensure safety of electrical accessories and electrical installations 4. Preparation of a contingency plan to ensure early electricity supply to essential services during emergencies and restoration of electric supply at an earliest 5. Develop and administer code of practice for power line clearance to avoid electrocution due to broken / fallen wires. 6. Strengthen high-tension cable towers, modernize electric installation, strengthen electric distribution 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		system to ensure minimum damages during an earthquake		
2	Public Awareness Generation	1. Conduct public/industry awareness campaigns to prevent electrical accidents during normal times and during and after a natural disaster	1. Revenue Department 2. District Administration 3. DDMA	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
1	Damage Control	1. Disconnect electricity after receipt of warning 2. Attend sites of electrical accidents and assist in undertaking damage assessment 3. Standby arrangements to ensure temporary electricity supply 4. Inspection and repair of high tension lines /substations/transformers/poles etc 5. Ensure the public and other agencies are safeguarded from any	1. Revenue Department 2. District Administration 3. DDMA	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference (Legislation/Standard/Guideline)
		<p>hazards, which may have occurred because of damage to electricity distribution systems</p> <p>6. Restore electricity to the affected area as quickly as possible</p> <p>7. Replacement/restoration of damaged poles/ salvaging of conductors and insulators</p>		

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4.16. Forest Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Improving Forest Cover	<ol style="list-style-type: none"> 1. Promotion of shelter belt plantation 2. Provision of seedling to the community and encourage plantation activities, promoting nurseries for providing seedlings in case of destruction of trees during natural disasters. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
2	Dissemination of Information	<ol style="list-style-type: none"> 1. Information, Education and communication (IEC) activities for greater awareness regarding the role of trees and forests for protection during emergencies and eco-friendly utilization of trees for rehabilitation activities in the aftermath of an earthquake. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)
3	Community Involvement	<ol style="list-style-type: none"> 1. Increasing involvement of the community, NGOs and CBOs in plantation, protection and other forest protection, rejuvenation and restoration activities. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

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Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Institutional Support	<ol style="list-style-type: none"> 1. Assist in road clearance 2. Provision of tree cutting equipment Provision of building materials such as bamboos etc for construction of shelters 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

Recovery

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Creation on Livelihood	<ol style="list-style-type: none"> 1. Take up plantation to repair the damage caused to tree cover and provide employment to the members of affected families. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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4.17. Information and Public Relation Department

Focal point: **Name and Contact details**

Preparedness

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Reference <i>(Legislation/Standard/Guideline)</i>
1	Dissemination of Information	<ol style="list-style-type: none"> 1. Creation of public awareness regarding various types of disasters (including earthquakes) through media propagation. 2. Dissemination of information to public and others concerned regarding do's and don'ts of various disasters including earthquakes.. 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 6 and 7 of NDMA, Guidelines for Management of Earthquakes (2007)

Response

S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Responsible Partner Authority/Agencies
1	Dissemination of Information	<ol style="list-style-type: none"> 1. Setting up of a control room to provide authentic information to public regarding impending emergencies 2. Keep the public informed about the updates on 	<ol style="list-style-type: none"> 1. Revenue Department 2. District Administration 3. DDMA 	Section 8 of NDMA, Guidelines for Management of Earthquakes (2007)

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S. No.	Major Task	Action to be Undertaken	Responsible Partner Authority/Agencies	Responsible Partner Authority/Agencies
		emergency situation (area affected, lives lost etc.) 3. Keep the public informed about various post disaster assistances and recovery programmes		

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5. Actions for District Earthquake Response

Coordination Mechanism

1. At district level there is a three-layered mechanism for Earthquake response i.e. district/municipal corporation, municipality/block and ward/village. The Disaster Management Committee has been established at each level and it is overall coordinating body for disaster/Earthquake response.

- District Earthquake Response in-charge : District Magistrate
- Municipal Corporation Earthquake Response in-charge : Municipal Commissioner
- Municipality Earthquake Response in-charge : Chief Officer
- Block Earthquake Response In-charge : Block Development Officer
- Ward Earthquake Response In-charge : Ward Officer
- Village Earthquake Response In-charge : Village Headman/Sarpanch

(Refer Section V on Coordination for details).

Annual Review of Earthquake Preparedness (Zone II) and Biannual Review (Zone III and IV)

2. District, Municipality, Block and Village shall organize meeting of the Disaster Management Committee on Earthquake preparedness in March/April. The meeting shall review/update the following

- Updated Earthquake/Disaster Response Plan and Operating Procedure for Earthquake response
- Review any recent tremor history and impact
- Updated Earthquake prone areas and likely impact including impact on vulnerable groups
- Earthquake rescue and evacuation mechanism which include panchayat/ward wise plans, communication channel, in-charges, etc.
- Earthquake response coordination mechanism and focal points with contact details
- Emergency Operation Centre/Control Room at district/municipality and block levels/departments
- Evacuation plan (Temporary shelter, evacuation team, WATSAN, special needs of vulnerable groups, basic medicines)

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- Earthquake Response: search and rescue response team, equipment, transportation, protocol for deployment, traffic management in city, relief material, medical response, transport, etc.
 - Essential services response plan (Health, Water supply, Food supply, sanitation, Veterinary services, Electricity, Telecommunication/Mobile, Roads/Bridges, etc.)
 - Quick assessment mechanism
 - Management and Disposal of debris
 - District Website and social media platform for Earthquake related information dissemination
 - Structural measures for Earthquake risk mitigation (dam/barrage, sluice gate safety check; structural reviews, facilities review, access roads, critical infrastructure review etc.)
3. Municipal and Block Disaster Management Committee shall submit report on Earthquake preparedness on above-mentioned issues to the DDMA by 31st January and 31st July of every year based on zonations.
 4. Prepare/Update a directory of Earthquake focal points at all three levels and share with DDMA and EOC/Control Rooms at different levels annually by 31st January.
 5. Prepare/update inventory of materials stocked by line department at district/municipality and block levels and share with DDMA and Municipal Corporation by 31st January and 31st July based on zonations.
 6. Create/update a database of private sector and Civil society organizations which has expertise and indicated willingness to support Earthquake response. Details include names, addresses, telephone numbers and the names of their representative functionaries', type of expertise, area of operation, etc. shall be included in the database.
 7. Activate District Emergency Operation Centre, concerned (district to identify) department Municipal and Block EOC/Control Room 24X7 when an earthquake strikes.
 8. EOC shall have multiple communication means as telephone/mobile can be disrupted during Earthquake. HF/UHF/VHF, HAM radio and Satellite phone shall be identified for back-up communication.
 9. District EOC to alert concerned line department, municipality and blocks in case of earthquake tremors.
 10. On receipt of Earthquake alert, all agencies (the line departments, municipality, block, ward and village) shall discharge their following stipulated responsibilities related to Earthquake response.
 - Search and Rescue
 - Evacuation

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- Temporary/rescue shelter management
 - Medical response
 - Relief distribution
 - Restoration/Continuity of essential services
 - Rapid damage assessment
11. DDMA shall widely disseminate post-earthquake warnings and guidance to general public through FM/radio, local cable television, social media, newspaper and other communication channel.
 12. On the notification of Earthquake alert, the identified public agencies personnel shall immediately report to their assigned workstations and remain on duty throughout the alert period. All non-medical leave of such personnel will stand automatically cancelled and no non-medical leave will be sanctioned during the alert period.
 13. District level line Department, Municipality and Block EOC/Control Room shall submit daily report post-earthquake and depending on severity of impact and scale of response this may be twice a day too.
 14. District EOC shall prepare daily district Earthquake situation report and submit to the State EOC.
 15. All district level line departments, municipality/block and village shall take response and relief duties (*Refer Section IV on Roles and responsibilities*).
 16. District DMA shall prepare an Earthquake damage and needs assessment report and submit to the State Disaster Management Authority.
 17. After the response phase, DDMA, district level line departments, municipality/block and village shall conduct an Earthquake response review exercise to draw good practices and areas of improvement. Agencies should update the Earthquake/disaster management plan and Operating procedure based on the review exercise.

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6. Annexures

6.1. Earthquake Incident Reporting Format

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6.2. Government of India and/or Uttar Pradesh Government Relief Norms

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6.3.Important Contact Details

S. No.	District Name	Department	Officer Name	Contact Number

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6.4. Earthquake Prone Blocks Profile

Earthquake Risk Analysis						
1	Background					
1.1	Name of the District					
1.2	Number of Blocks					
1.3	Total Population					
1.4	Total number of Gram Panchayats					
1.5	Total number of Villages					
1.6	Total number of ULBs (Nagar Panchayat/Nagar Parishad)					
1.7	Total number of Municipal Corporations					
1.8	Percentage of Urban Population					
1.9	Percentage of Rural Population					
Section 2: Earthquake History						
S. No.	Name of the Block		Years with Earthquake			Please mention years of major Earthquakes in the blocks to identify the history and frequency
1)						
2)						
3)						
4)						
5)						
6)						
Section 3: Earthquake Risk Ranking						
S. No.	Name of the block		Possibility	Intensity	Total	The risk ranking is done in DDMA/DDMP Planning committee meeting. The scale of ranking to determine possibility is : Almost Certain (4): A regular event, on an average at least once in a 2-3 year period Possibly Occur (3): Will occur
1)						
2)						
3)						
4)						

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5)						at least once every 5 years
6)						Remote Possibility (2): Will occur at least once every 10 years
7)						Unlikely (1): Will occur sometime in a 25 years period
8)						<p>The Intensity (potential magnitude) is also further classified into four levels, similar to that of the possibility - Severe, High, Moderate. The scale to determine intensity is</p> <p>Severe (4): Massive insecurity, substantial loss of life likely. Large and generalized assistance urgently needed for large segments of the population. Additional management, administrative, and technical expertise urgently needed. Large volumes of materials inputs needed.</p> <p>High (3): Security threatened for large segment of the population; substantial impact on vulnerable groups likely. Some loss of life likely. Lifesaving programs likely needed to handle the impact of the emergency situation. Large volumes of material inputs and additional administrative staff and technical expertise likely to be needed.</p> <p>Moderate (2): Security is threatened for potential target groups, some interventions may be needed, particularly for groups who likely face an increase in vulnerability. The organization can likely respond with existing country/regional management structure.</p> <p>Minimal (1): Momentary insecurity. Local groups able to respond adequately to those in</p>

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						need. Some technical assistance by the organization may be helpful to local respondents, although not urgently needed. By multiplying the above two scores of possibility and magnitude, the Vulnerability Ranking is obtained
Section 4: Risk to Lifeline Services						
4.1	Risk to Water Supply					
S. No.	Block	Number of PWSS which may get damaged	Number of hand pumps which may get submerged	Total		Piped Water Supply Schemes (PWSS) may get damaged due to damage to motor pumps, distribution network (pipeline), storage tanks and damage to the tap stands. Damage to PWSS takes few days to week for recovery.
1)						Submergence of hand pumps results into contamination of water and cannot be used till appropriate and adequate chlorination and water testing.
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						
12)						
13)						
14)						
15)						

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4.2 Risk to Crops							
S. No.	Block	Total area under cultivation (Ha)	Total crop which may get damaged due to Earthquakes (Ha)	% of crop land at risk due to Earthquakes		The data about crop loss can be gathered from the Earthquake history and the area of crop damage. The agriculture department at district level also has district contingency plans. The data can be gathered from these contingency plans as well.	
1)							
2)							
3)							
4)							
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							
4.3 Housing at Risk							
S. No.	Name of the block	% of population with vulnerable housing				Earthquake Vulnerable housing includes population residing in the Earthquake line / low lying areas, with past Earthquake history and the kaccha houses. The damage assessment reports of past Earthquakes can give this	

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1)						information which can be further added with the data from census.
2)						
3)						
4)						
5)						
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8)						
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10)						
11)						
12)						
13)						
14)						
15)						
4.4	Livestock at Risk					
S. No.	Most vulnerable block to Earthquakes	Big Cattle	Small Cattle	Poultry farms		For filling this matrix please identify most vulnerable blocks to the Earthquakes according to the section 3 of risk ranking. Please get the data of the livestock from animal husbandry department and fill the matrix. Big cattle include cow, buffalo, small cattle include donkey, goat and sheep
1)						
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						

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12)						
13)						
14)						
15)						
4.4	Health Infrastructure at Risk					
S. No.	Name of the block	PHCs at risk of damage	Total PHCs	CHCs at risk of damage	Total CHCs	The PHCs and CHCs at risk due to Earthquakes can be identified from the past damage data as well as from the health department reports indicating: 1) PHCs and CHCs requiring major repair 2) PHCs and CHCs located in high risk areas 3) Building with the age more than 25 years
1)						
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						
12)						
13)						
14)						
15)						
4.5	ICDS Infrastructure at Risk					

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S. No.	Name of the block	ICDS Centres at the risk of getting damaged					ICDS centres which may get damaged due to impact of shaking in Earthquake prone areas with vulnerable buildings	
1)								
2)								
3)								
4)								
5)								
6)								
7)								
8)								
9)								
10)								
11)								
12)								
13)								
14)								
15)								
4.6	School Infrastructure at Risk							
S. No.	Name of the block	Schools at the risk of getting damaged					Schools which may get in Earthquake prone areas with vulnerable buildings	
1)								
2)								
3)								
4)								
5)								

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6)						
7)						
8)						
9)						
10)						
11)						
12)						
13)						
14)						
15)						
5	Capacity Assessment					
	5.1 Search and rescue, Safe evacuation					
S. No.	Name of the block	Number of villages with task forces	Total number of villages	Total number of boats with trained boatmen	Total requirement from GPs	
1)						
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						

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11)						
12)						
13)						
14)						
15)						
5.2 Stock piling at Block Level						
S. No.	Name of the block	Number of dry food packets procured and stored	Number of tarpaulins procured	Number of chlorination tablets procured	Estimated families which may require shelters in camps	
1)						
2)						
3)						
4)						
5)						
6)						
7)						
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11)						
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13)						
14)						
15)						

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5.3 Disaster Management Training of Frontline Workers and GPs						
S. No.	Name of the block	Number of Anganwadi workers trained	Number of ASHAs and USHAs trained	Number of village water persons trained	Number of Gram Panchayat members trained	
1)						
2)						
3)						
4)						
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14)						
5)						

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For further information, please contact:

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