1. STATE PROFILE

1.1 General\(^1,2,3\)

The state of Jammu & Kashmir is strategically located in the north-west corner of India. It shares its borders with China in the east, Pakistan in the West, Afghanistan and Russia in the North and plains of Punjab and Himachal in the south and south-east. The state of Jammu & Kashmir stretches between 32° - 17' N to 37° - 05' North latitude and 72° - 31' E to 80° - 20' East longitude. From North to South, it extends 640 kms in length and from East to West over 480 kms in breadth.

The total area of state is 2,22,236 sq. kms. But the area under actual control is 1,01,387 sq. kms only, as the great chunk of the territory is under illegal occupation of Pakistan and China.

Lying in the northern most part of the country, the state of Jammu and Kashmir formed on 26\(^{th}\) October, 1947. The state enjoys special status on account of Article 370 of Indian Constitution. It has its own Constitution and various provisions of Acts. Laws and Regulations enforced by Government of India are enforced in the state only after they are
ratified by the state legislature. The latest administrative setup of the state consists of twenty two districts, eighty two tehsils, one hundred forty two blocks, four thousand one hundred twenty eight panchayats and seven urban agglomerations.

The Jammu & Kashmir is divided into 22 districts: Jammu, Kathua, Udhampur, Poonch, Rajouri, Doda, Kishtwar, Ramban, Reasi, and Samba in Jammu Division and Srinagar, Budgam, Anantnag, Pulwama, Baramulla, Kupwara, Bandipora, Ganderbal, Kulgam and Shopian in Srinagar Division and Kargil and Leh in Ladakh Region.

**Jammu & Kashmir at a glance**

<table>
<thead>
<tr>
<th>Description</th>
<th>As per Census, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Districts</td>
<td>22</td>
</tr>
<tr>
<td>No of Tehsils</td>
<td>82</td>
</tr>
<tr>
<td>No. of Blocks</td>
<td>143</td>
</tr>
<tr>
<td>No. of Panchayats</td>
<td>4128</td>
</tr>
<tr>
<td>No. of Towns</td>
<td>86</td>
</tr>
<tr>
<td>Number of Cities with Million Plus</td>
<td>2 (Srinagar &amp; Jammu)</td>
</tr>
<tr>
<td>Population</td>
<td></td>
</tr>
<tr>
<td>Total Area</td>
<td>2,22,236 sq. Kms</td>
</tr>
</tbody>
</table>

1.2 **Demography**

It consists of three distinct regions – Kashmir valley, Jammu, and Ladakh. The area and population of the three regions is –

<table>
<thead>
<tr>
<th>Region</th>
<th>Areas (Sq. Miles)</th>
<th>Population (2011 census) (Provisional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashmir Valley</td>
<td>8,639</td>
<td>5,35,081</td>
</tr>
<tr>
<td>Jammu Region</td>
<td>12,378</td>
<td>69,07,623</td>
</tr>
<tr>
<td>Ladakh Region</td>
<td>33,554</td>
<td>2,90,492</td>
</tr>
<tr>
<td>Total</td>
<td>54,571</td>
<td>1,25,48,926</td>
</tr>
</tbody>
</table>

1.3 **Physiography**

The state of Jammu and Kashmir is bestowed with lofty snow mountains, fascinating valleys, sparkling streams, rushing rivers and emerald forests. The state is blessed with diverse ecosystem. In the south lies the Jammu region the lower portion of which is essentially hot in summer and cold in winters, bearing broad leaved forests at lower altitudes in plains and Siwaliks. The middle part of Jammu region support mostly Chirpine forests where as higher reaches are temperate and support luxuriant coniferous forests, the northwest region between Pir Panjal and Zojila is the Kashmir Valley considered the "paradise on earth". This fascinating valley enticing the visitors is a museum of nature and scenic beauty. To the north east lies the great landscape of Ladakh bound by snow peaks and friendly people. It is a place of innumerable attractions. The state of Jammu & Kashmir  is having the unending varieties
of its landscape, the magic of natural scenery, the vivid cultural life, the unmatched glaciers, rushing torrent, sparkling springs, the cool shade of Chinars, wealth of its famous health resorts and the last but not least its traditional hospitality which attracts any tourist.

The state of Jammu & Kashmir is drained by the mighty Indus and its tributaries like Kishanganga, Jhelum, Chenab and Ravi and their tributaries. Out of these, the Indus and the river Chenab have their origins to the north of the greater Himalayas and they pierce through the main ranges of Himalayas.

1.4 Climate

The regions of state Jammu, Kashmir and Ladakh have distinct agro climatic characteristics and cultural identity.

Jammu region has two different climatic zones depending primarily on altitude. Lower hills & plains bear subtropical climate with hot dry summer lasting from April to July. The summer monsoons coming around middle of July and fading away in early September. This is followed by dry spell from September to November. Winter is mild and temperature seldom touches freezing point. In the high reaches of Chenab valley, the climate is moist temperate, winter are severe and varied quantity of snow is received.

The Kashmir valley with Pir Panjal Mountains on its south and Karakoram on its north receives precipitation in the form of snow due to western disturbances. The winter is severely cold and temperature often goes below 0°C. Spring is pleasantly cold. Summers are warm and dry and autumn is again cool and sometimes wet.

Ladakh is situated in eastern mountain range of Kashmir. This is one of the highest ranges in the world. It is cold desert receiving very little precipitation. The temperature remains below the freezing point during winter due to its high altitude when people often remain indoors. Drass in Ladakh is the coldest place of the state. It has recorded the temperature of -50°C during winter. During the short period of summer season, the scorching heat of sun often causes sunburns.

1.5 Agro-climatic zones

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Agro-climatic zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZ1</td>
<td>Low Altitude Subtropical</td>
</tr>
<tr>
<td>AZ2</td>
<td>Intermediate</td>
</tr>
<tr>
<td>AZ3</td>
<td>Valley temperate</td>
</tr>
<tr>
<td>AZ4</td>
<td>Dry Temperate</td>
</tr>
<tr>
<td>AZ5</td>
<td>Cold Arid</td>
</tr>
</tbody>
</table>

1.6 Soil

The soil of Kashmir is generally classed as clayey, loamy rich and light, peaty and low lying swamps and is of alluvial origin but quite fertile. In the semi-mountainous tracts the soil is
indeed coarse. The underlying rocks in this area are loose boulders. The Kandi tracts have a stony soil and give a dry look even during the rainy season. The soil of Ladakh is bare and rocky with bare gravel slopes.

1.7 Biodiversity

The state of Jammu & Kashmir has been regarded as heaven on earth, and is also called the biomass of state of India. The biodiversity of the rich area of Jammu & Kashmir happens to be one of the 26 hotspots in India with high endemicity. The whole Himalayan belt is one hotspot mega centre having 8 critical areas which includes two regions from the state viz Ladakh and Kashmir. The state of Jammu & Kashmir has fairly rich diversity of plant life and on this people depend for their daily needs of food, medicine, fuel, fiber etc. The varied plant life also contributes to food and habitat needs of wild and domesticated in the state. The environments, social and economic value of plants are very well known. On the other hand, the faunal component of biodiversity of the state is rich with interesting and unique forms both in the forest zone and above forest line. The variety of animal forms ranges from higher groups like vertebrates, including mammals, birds, reptiles, amphibians and lower groups like invertebrates including insects and even unicellular micro organisms.

The flora of Himalayan Kashmir comprises about 3054 species. About 880 species are found in Ladakh and 506 species found in Jammu. The faunal diversity of Jammu & Kashmir is diverse due to its unique location and climatic condition. 16% of Indian mammals are present in state including birds, reptiles, amphibians and butterflies. 75 species of mammals belonging to 54 genera, 21 families and 8 orders. Carnivores represents 32% of the total mammalian fauna of the state. The total of 19 species of ungulates are reported from the state, 13 have been listed as globally threatened.

1.8 Geology

The Kashmir valley comprises of sedimentary, metamorphic and igneous rocks ranging in age from Salkhala (Precombrian) to Recent. Outer Hill Division covering Jammu, comprises of Siwaliks, Murrees and Dogra Slates types of Geological Formations. Indus valley (Ladakh) Comprises Crystalline complex of rocks ranging in composition from sedimentary igneous and metamorphic in characteristics.
1.9 **Socio-Economic conditions**

According to Census of India 2011, the state accommodates a population of 1.25 crore (12,548,926), registering a population density of 124 persons per sq.km and sex ratio of 883. A decrease in the decadal population growth rate of the region has been observed during 1991-2001 (29.4 percent) and 2001-2011 (23.7 percent).

Jammu & Kashmir is basically an agrarian state. Agriculture occupies an important place in the economy of the state. The share of agriculture and allied sectors in the Gross state Domestic Product (at 1999-2000 prices) for the year 2010-11 as per preliminary estimates stands at 20.59%. On the other nearly 70% of the population in the state derives its livelihood directly or indirectly from agricultural sector. Agriculture is the main stay of the state’s economy.

The state of is predominantly a mono cropped and rain fed with about 40% of the area in Jammu division and 60% in Kashmir Division having assured means of irrigation. Irrigation is crucial input for development of agriculture in the state. The major area in the state falls under the command of canal irrigation.

Rice, Maize and Wheat are the major crops in the state, while in Kashmir region Wheat, Oil Seeds and Fodder is being introduced as the secondary crop. In Jammu farmers are raising paddy as an additional crop. The production level of paddy adds about 40 quintals per hectare in Kashmir Valley and is highest in the country.
Land use statistics is available for 2416 thousand hectares. Over the year land use statistics has not undergone any significant change. The total reporting area as per revenue papers is 2416 thousand hectares for the year 2011-12.

The crop yield for the year 2011-12 regarding principal agriculture crops was estimated to be 1.6 metric tonnes per annum for maize, 2.078 metric tonnes per annum for rice and 1.68 metric tonnes per annum for wheat, which are the major crops of the state.

**Socio-Economic profile**

<table>
<thead>
<tr>
<th>Description</th>
<th>As per Census, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>12541302</td>
</tr>
<tr>
<td>Population size (Males)</td>
<td>6640662</td>
</tr>
<tr>
<td>Population size (Females)</td>
<td>5900640</td>
</tr>
<tr>
<td>Population size (Rural)</td>
<td>9108060</td>
</tr>
<tr>
<td>Population size (Urban)</td>
<td>3433242</td>
</tr>
<tr>
<td>Population size (Rural Males)</td>
<td>4774477</td>
</tr>
<tr>
<td>Population size (Rural Females)</td>
<td>4333583</td>
</tr>
<tr>
<td>Population size (Urban Males)</td>
<td>1866185</td>
</tr>
<tr>
<td>Population size (Urban Females)</td>
<td>1567057</td>
</tr>
<tr>
<td>Population density (Total, Persons per sq km)</td>
<td>124</td>
</tr>
<tr>
<td>Sex ratio (Females per 1000 males)</td>
<td>889</td>
</tr>
<tr>
<td>Sex ratio (Rural)</td>
<td>908</td>
</tr>
<tr>
<td>Sex ratio (Urban)</td>
<td>840</td>
</tr>
<tr>
<td>Percentage of Literacy</td>
<td>68.74%</td>
</tr>
<tr>
<td>GDP at constant (2004-05) prices</td>
<td>17.10% (2012-13)</td>
</tr>
</tbody>
</table>

2. **DISASTER RISK PROFILE**

2.1 **Vulnerability of the State**

The State of Jammu and Kashmir has a long history of natural disasters. The State has witnessed many natural disasters especially in the 19th and early 20th centuries. Owing to its peculiar topography, rugged terrain, extreme weather conditions and underdeveloped economy, the State has suffered a lot on account of natural disasters. Hazards like earthquakes, floods, fires, droughts, avalanches and landslides often convert into disasters leading to loss of human lives as well as public and private property. Enhanced vulnerabilities of the built environment make the State highly prone to natural disasters.

The state is a multi hazard prone region with natural disasters like earthquakes, floods, landslides, avalanches, high velocity winds, snow storms, besides manmade disasters including road accidents and fires etc. Human activities disturbing the ecological balance in most of the case directly results in disastrous event or exacerbate the natural disaster. Observation exhibited that construction of road under Pradhan Mantri Gram Sadak Yojana (PMGSY) schemes or railway track has altered stream course, discharge areas and closed
aquifers due to lack of geo-hydrological assessments while sanctioning or developing the projects. Moreover the unauthorized and unplanned construction on the river banks has disturbed the river ecosystem. Sand and gravel dredging or top soil denudation for brick industry to support growing real estate industry have significantly enhanced the human induced disaster risk in the eco sensitive zones of the State. With projected increase in the frequency and intensity of extreme events including cyclones, droughts, and floods, disaster management seeds greater attention. The projected increase in the occurrence of extreme events is likely to include:

- Increase in areas affected by drought
- Increase in areas affected by heavy precipitation and floods
- Areas affected by earthquakes, landslides, soil creeps and avalanche falls

Apart from the projected hydro-meteorological hazards viz. floods, droughts and cloud-bursts there are likely scenarios of natural hazards such caused due to earthquakes, landslides and snow avalanches.

**Disaster and Hazard profile of Jammu & Kashmir State**

<table>
<thead>
<tr>
<th>Natural Disaster</th>
<th>Man-made Disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incessant Rainfall</td>
<td>Urban fire-house &amp; Forest</td>
</tr>
<tr>
<td>Flash Flood</td>
<td>Village fire-house &amp; Forest</td>
</tr>
<tr>
<td>Hailstorm, Snow Avalanches &amp; Snow Tsunami</td>
<td>Road accidents</td>
</tr>
<tr>
<td>Earthquake</td>
<td>Communal disturbances</td>
</tr>
<tr>
<td>Landslide</td>
<td></td>
</tr>
<tr>
<td>Drought</td>
<td></td>
</tr>
<tr>
<td>Wind Storm</td>
<td></td>
</tr>
</tbody>
</table>

**Hazards and the corresponding areas covered in the State of Jammu & Kashmir**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Hazard</th>
<th>Areas Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Earthquakes</td>
<td>Most parts of the Kashmir Valley (11% of the area of the state) covering the Districts of Srinagar, Ganderbal, Baramulla, Kupwara, Bandipora, Budgam, Anantnag, Pulwama, Doda, Ramban, Kishtwar come under Seismic Zone V, where around 50% of the population of the State lives. Rest of the State including whole of Ladakh region and Jammu Division (90% of the total area of the state) are under the Seismic Zone IV.</td>
</tr>
<tr>
<td></td>
<td>Floods</td>
<td>Low-lying areas of the Kashmir Valley, especially Sonawari, Awantipora, Srinagar, alongwith parts of Jammu are prone to floods. Upper catchments of all the tributaries of the Jhelum, Indus, Chenab and Tawi rivers are prone to flash floods.</td>
</tr>
<tr>
<td></td>
<td>Avalanches &amp; Snow Blizzards</td>
<td>Higher reaches of Kashmir including Anantnag, Kulgam, Gurez, Kargil, Leh, Doda, Ramban, Kishtwar, Banihal etc. face avalanches.</td>
</tr>
<tr>
<td></td>
<td>Landslides</td>
<td>Areas along major highways particularly Ramban, Panthial,</td>
</tr>
<tr>
<td>Natural Disaster</td>
<td>Affected Areas</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>Banihal, Doda, Kishtwar, Gulmarg, Dawar, Gurez, Tangdhar, Rajouri etc.</td>
<td>are landslide prone.</td>
<td></td>
</tr>
<tr>
<td><strong>Drought</strong></td>
<td>Most parts of Jammu division including Doda, Udhampur, Kathua, Jammu etc. are drought prone.</td>
<td></td>
</tr>
<tr>
<td><strong>Wind storm</strong></td>
<td>Occasional wind storms destroying crops, horticulture and roof-tops of houses. Ladakh has been identified as prone to high speed winds but there are hardly any damages due to wind storm, perhaps due to the sparse population and traditional house construction practices.</td>
<td></td>
</tr>
<tr>
<td><strong>Fires</strong></td>
<td>All District Headquarters/ densely populated towns and especially Gurez, Doda, Kishtwar and other inaccessible areas are prone to fire incidents. However, incidents of fires are equally high in the plains as well as in Srinagar city.</td>
<td></td>
</tr>
<tr>
<td><strong>Rail &amp; Road Accidents</strong></td>
<td>Hilly roads especially in Doda, Ramban, Udhampur, Rajouri, Reasi, Poonch, Kishtwar, Ramban, Baramulla, Anantnag, Pulwama, Budgam, Jammu, Kathua, Zojila, Kargil, Leh etc. are prone to road accidents.</td>
<td></td>
</tr>
<tr>
<td><strong>Cloudbursts</strong></td>
<td>All hilly areas of the State are prone to cloudbursts.</td>
<td></td>
</tr>
<tr>
<td><strong>Human induced disasters</strong></td>
<td>All Districts are vulnerable to man-made disasters</td>
<td></td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>Several parts of the state face hazards like thunderstorms, cloud burst, hailstorms, forest fires, dam bursts, heavy snowing, human epidemics and livestock epidemic, etc. from time to time; few of which occasionally convert into situations like disaster.</td>
<td></td>
</tr>
</tbody>
</table>
Map showing landslide hazard zonation (Source: BMTPC)

Map showing earthquake hazard distribution (Source: BMTPC)
2.2 Major Disaster Events

i. Snow Blizzard at Waltengu Nad (Kulgam district) February, 2005

On 18th Feb 2005 a snow blizzard occurred in villages Waltengu Nad, Pachgam and Nigeenpora affecting 128 families consisting of 618 souls. During the incident 175 lives (54 men, 48 women and 73 children) were lost. In many cases full families were wiped out. 183 sheep/goats, 308 cows, 54 buffaloes and 5 horses perished.

ii. Kashmir Earthquake, October, 2005

On 8th October, 2005 a devastating earthquake of magnitude 7.6 resulted in 953 deaths and 418 injuries in Jammu & Kashmir (also more than 80,000 deaths in PoK). This was one of the deadliest earthquakes in the sub-continent. 23,782 houses were fully damaged in the quake in the State. 40.3% of the deaths comprised children below 10 years of age, thereby depicting their vulnerability and signifying the importance of school safety. The presence of Army in the affected areas proved to be a great healer for the people, as Army was among the first responders who, with the help of IAF, managed to airlift hundreds of injured people to different hospitals in Srinagar and Baramulla.

iii. Leh Cloudburst and Flash floods, August 2010

On the intervening night of August 5 - 6, 2010, Leh witnessed a devastative cloudburst followed by flashfloods. The unprecedented event resulted in the death of over 250 people and damage worth crores of rupees. The areas in and around Leh, especially Choglamsar, where people had constructed houses along the dry water course had no idea that the stream could get flooded and wash away everything whatever came in its way. The Relief and
Rehabilitation activities carried out in the affected villages by the Army, Civil Administration and the NGOs were appreciable, as there was total harmony and no duplication of activities. The courage, dedication and zeal of the local community including the Ladakh Buddhist Association and the Islamic Trust revealed that human relations were at its peak during the disaster. However, the need for greater cooperation between Army and Civil Administration was felt during search and rescue operations. The traditional village-level institutions through the village-head played a crucial role in the recovery of the affected areas.

iv. Cloud burst at Bagger (District Doda), June 2011

A cloud burst occurred at Bagger in District Doda on 8th June 2011, where 17 structures got washed away and three people died. The dead bodies got washed away and have not been traced till date.

v. Traffic Accidents

In the recent years Jammu & Kashmir has recorded more deaths in traffic accidents than due to militancy. The death toll in road mishaps is almost double the number of people killed in militancy last year. In the year 2011 alone 889 people died and 7,178 were injured in 5,053 accidents (till ending July 2011). A large number of traffic violations have also taken place for which 3,29,651 vehicles have been fined for violations this year.

3. INSTITUTIONAL SETUP 14

3.1 Introduction 14, 17

The State of Jammu and Kashmir was amongst the first few states of the Union to enact legislation for natural calamities. The Jammu & Kashmir Natural Calamities Destroyed Areas Improvement Act 1955 was enacted for improvement of towns, villages and other areas destroyed by natural calamities in the State. However, not much mileage was achieved through the availability of the Act. After the enactment of the National Disaster Management Act, 2005, many initiatives have been launched in the State to minimize damage to life and property due to natural disasters.

3.2 State Level Institutional Mechanism for Disaster Management 14

As per the provisions of Disaster Management Act, 2005, the Government of Jammu and Kashmir has already notified and constituted the State Disaster Management Authority (SDMA), the State Executive Committee (SEC) and the District Disaster Management Authorities. However, considering the special character of the State, there shall be Divisional Disaster Management Authorities, as well. The State Disaster Management Authority has been constituted under the chairpersonship of Hon’ble Chief Minister. Similarly, the State Executive Committee under the Chief Secretary has also been constituted. The State Disaster Response Force (SDRF) has been formulated and has two Companies (Coys) are being prepared for field duties and deployment. Existing facilities of the Fire & Emergency Services (F&ES) and SDRF shall be strengthened by provision of capacity-
building in terms of equipment and training. The District Disaster Management Authorities under the respective Deputy Commissioners too have been formulated.

### 3.3 State Disaster Management Authority\(^{14}\)

In the present form, SDMA in Jammu & Kashmir is only a de-facto Committee and is not a continuing autonomous Institution involved in the day-to-day work connected with policy, planning, oversight, implementation, coordination, quality control and activities connected with monitoring, evaluation, documentation etc. One of the full time members shall be appointed as Vice Chairperson. Chief Secretary shall be the Ex-officio Secretary General of SDMA and FCR shall be the Executive Secretary. The SDMA shall lay down policies, plans and programmes for disaster risk reduction and management in the State. It will approve the State-level plans in accordance with the guidelines of NDMA, coordinate the implementation of plans, and recommend the provision of funds. The SDMA shall be made functional by appointment of several full-time professional members. One of the full-time members shall be designated as Vice Chairperson of the SDMA. SDMA shall be assisted by the State Executive Committee (SEC) headed by the Chief Secretary. SEC shall also function as the link between NDMA, MHA and other national and international agencies.

### 3.4 Divisional and District Disaster Management Authorities\(^{14}\)

The Divisional Disaster Management Authority (Div DMA) shall be created and will be headed by the Divisional Commissioner in both the Divisions of the State. Additional Commissioner will be the Chief Executive Officer of the Divisional DMA. Divisional DMA shall act as the planning, coordinating and implementing body for disaster risk reduction and management at the Divisional level and provide guidance for the purpose of disaster management to the DDMAs in accordance with the guidelines laid down by the NDMA and SDMA.

The District Disaster Management Authority (DDMA) headed by the Deputy Commissioner has been constituted in all the districts. ADC of the district concerned is the Chief Executive Officer of the DDMA. DDMA shall act as the planning, coordinating and implementing body for disaster management at the District level in consultation with the Divisional DMA and take all necessary measures for the purpose of disaster management in accordance with the guidelines laid down by SDMA.

Divisional DMA and DDMA shall activate Divisional Disaster Management Plan, District Disaster Management Plan, Incident Response System, Division and District Emergency Operation Centre, Departmental Plans and Standard Operating Procedures. The divisional administration shall carry out evacuation, search, rescue and relief activities with the help of the concerned District Administration. The Divisional Commissioner on the recommendation of the Deputy Commissioner of a district shall declare an event as a disaster. The Divisional Commissioner shall coordinate with SDMA and FCR Office for additional resources.

### 3.5 Local Authorities\(^{14}\)
The Urban Local Bodies and PRIs shall work in close coordination with respective Nodal Department and Divisional and District Disaster Management Authorities in performing key activities of this phase. All facilities of such organizations shall be at the disposal of Divisional and District Disaster Management Authorities. ULB and PRIs shall be strengthened and given role as first responders.

3.6 Civil Society Organizations and Self-Help Groups

The CBDM system established during the pre-disaster phase shall encourage Civil Society Organizations, Self-Help Groups and Local community to undertake relief operations immediately. Such agencies shall cooperate with district administration in the conduct of a preliminary damage assessment and to provide inputs to relevant authorities as to the magnitude of the effect of the disaster, need for additional resources, etc.

3.7 State Institute of Disaster Management

The existing centre for disaster management at Jammu & Kashmir IMPA is highly deficient to fulfil the needs of capacity-building in the domain of DRR. An autonomous Institute of Disaster Management linked with the existing Administrative Training Institute (Jammu & Kashmir IMPA) shall be set up in the State. This Institute, Jammu & Kashmir State Institute of Disaster Management (Jammu & Kashmir SIDM), shall function as a nodal technical, planning, analysis and training wing of the State Disaster Management Authority. The Institute shall be responsible for capacity-building, research and documentation, development of State-level information base, development of strategy for state-specific prevention and mitigation measures, generation of technical data-banks, carrying out hazard, vulnerability and risk assessment studies and for imparting appropriate training to the State-and district-level personnel. This Institute would promote sharing and dissemination of specialized knowledge related to disaster management among various governmental agencies, NGOs, public/private sector and the community at large. Institutional linkages for research-based resources, particularly in aspects like mitigation and adaptation shall be established. Action research shall be an important activity of the Institute to develop risk reduction strategy.

3.8 Emergency Operation Centres

There shall be Emergency Operation Centres (EOCs) in each district under State Disaster Management Authority, Divisional Disaster Management Authorities and District Disaster Management Authorities shall coordinate in pooling resources and synchronize the disaster response under the guidance of SDMA. The systems and procedures of EOC shall be designed in such a way that information can be promptly accessed and relayed to concerned quarters. Rapid dissemination contributes to quick response and effective decision-making during emergencies. EOC would ideally be the meeting place of SEC and would act as master coordination and control point for all disaster management efforts, as the place of decision-making and effective implementation under a unified command. Manuals and Standard Operating Procedures (SOPs) for the operation of EOCs shall be prepared.

3.9 Framework for Mainstreaming Disaster Management in the State

Page 14 of 21
It shall be ensured that State Government, Divisional and District Administration, local authorities and departments take into account disaster risks and provide for suitable prevention, mitigation and preparedness measures in their regular developmental/planning activities. The State Disaster Management Authority shall form a framework for mainstreaming disaster risk mitigation and management integrating performance indicators for key elements and include it as an integral part of development plans. DRR activities shall be integrated into development framework of the State with budgetary commitment of the State Government and shall be introduced as a mandatory requirement for all development and infrastructure projects and programmes at the state level. Disaster Risk Reduction (DRR) shall be introduced in the school curricula of the State Education Department at all levels. School Disaster Safety Programmes shall be promoted by the State. Universities and self-financing colleges shall also be encouraged to conduct specialized courses in DRR.

3.10 The Nodal Departments

There shall be a separate Department styled as Disaster management Dept in the State Secretariat for management of all types of natural disasters that include water and climate related disasters and geological disasters. The office of the Financial Commissioner, Revenue, Relief and Rehabilitation (FCR) shall be re-designated as FC(R&DM) i.e. Financial Commissioner (Relief & Disaster Management). FC (R&DM) shall also be ex-officio Principal Secretary to Government, Disaster Management Dept. The post of FC(R&DM) should be manned an officer just below the Chief Secretary in seniority and rank. The scope of FC(R&DM) shall be enhanced to include prevention, mitigation and preparedness aspects of disaster management apart from its traditional responsibility of relief and rehabilitation. The Financial Commissioner (Relief & Disaster Management) shall also act as the State Disaster Management and Relief Commissioner. Divisional Commissioners will be Jt. Disaster Management and Relief Commissioners. The organizational structure of the FC(R&DM) Office shall be so tailored as to reflect the change in focus from post-disaster relief and rehabilitation to prevention, mitigation and preparedness in addition to relief and rehabilitation. The Policy assigns different departments to handle various types of disasters falling under their jurisdiction with the overall responsibility and supervision of FC(R&DM).

Various departments handling different types of disasters shall be as follows:

- Department of Home shall be the nodal department for management of manmade and human-induced disasters including air, train, road, rail accidents, fires, chemical, biological & radiological, nuclear disasters;
- Department of Health & Medical Education shall be the nodal department for health-related disasters;
- Agricultural & Horticulture Departments shall be the nodal department to deal with Pest attacks & Hailstorms;
- Animal & Sheep Husbandry Department shall be the nodal department to handle livestock epidemics;
- Irrigation & Flood Control (IFC) Department shall be the nodal departments for disasters related to Floods and Dam bursts;
Public Works Departments (R&B) shall be the nodal departments for disasters related to infrastructure damage;
Forest Department shall be the nodal department for disasters related to forest fire.
Power Development Dept (PDD) shall be the nodal agency for management of disasters related to Electric power plants, Grid network, transmission lines etc.
Revenue Dept shall be the nodal department for disasters related to avalanches and landslides, droughts, windstorms and earthquakes.
The concerned nodal department shall prepare plans for handling these disasters and shall regularly update the plans. The nodal department can seek assistance from any other department, agency/organization etc. as and when required.

3.11 Early Warning
SDMA shall ensure a mechanism aligned with overall disaster management plan of the State to receive forecasting and early warning from the nodal agencies like Indian Meteorological Department (IMD), Snow and Avalanches Study Establishment (SASE), etc. The modern gadgets like Doppler Radars and satellite based information shall form the basis of accurate forecasting and early warning. The available information shall be disseminated to vulnerable communities to the last mile. Early warning mechanisms shall be instituted by the FCR Office to give advance warning and alerts for floods, cloudbursts, snowstorms etc. An alternative wireless-based communication mechanism shall be introduced for communication from State to districts and from districts to blocks and villages. State, Divisional, District & local administration will communicate with community through media in order to prevent panic reaction and get feedback on relief measures and urgent needs of various agencies involved in emergency relief measures.

3.12 Incident Response System
SDMA shall establish a proper chain of command for effective management of disasters and coordination of all agencies responsible for disaster management in the State. The Incident Response System will provide combination of facilities, equipments, personnel, procedures and communications operating within a common organizational structure, with a clear responsibility for the management of resources to effectively accomplish the stated objectives pertinent to an incident.

3.13 Community Based Disaster Management
Experiences from past disasters indicate that reaching out to the affected community within the critical period following a disaster is a major challenge in the efforts to protect human lives and assets. Communities being the first responders have more contextual familiarity with the local hazards and the available resources. They are also in a better position to plan and execute activities related to disaster management at the local level. SDMA shall develop mechanisms to manage disasters at the grass-root level through Community participation. The Policy envisages leveraging and capitalizing the existing social capital and traditional wisdom in management of disasters. The Policy visualizes a need for a culture of prevention,
mitigation, preparedness, quick response and strategic thinking to be incorporated into the minds of the vulnerable communities. SDMA shall encourage PRIs/ULBs to work out Community Based Disaster Management Plans to safeguard lives, livelihood and property, to prevent losses and, at the same time, enable a faster recovery in the event of a disaster. Involvement of multilateral aid agencies and civil society organizations shall be encouraged to put the CBDM system into practice in the State. While developing CBDM, due recognition shall be given to most vulnerable groups like women, children, elders and differently-abled persons. SDMA, with the help of line departments, shall periodically conduct social audits to ensure appropriate participation of all vulnerable groups.

3.14 Stakeholders in Disaster Risk Reduction and Management

The State Government acknowledges the following set of institutional stakeholders that play key roles in disaster risk reduction and management and calls for a well laid-down framework of operation under the leadership of Jammu & Kashmir State Disaster Management Authority (SDMA): All concerned departments of the State Government and Central Government agencies present in the State; State, Divisional & District Disaster Management Authorities; Local authorities such as ULBs, PRIs; Fire & Emergency Services; State Police & Central Para Military Forces; Voluntary and Civil Society organizations; Indian Red Cross Society, Multilateral aid agencies and UN agencies; Public sector undertakings, Corporate Sector, Hoteliers & other allied organizations; Armed Forces; Indian Air Force; Airport Authority of India; Indian Railways; National Disaster Response Force, State Disaster Response Force; Community; Print & Electronic Media; & Others.

4. INITIATIVES

4.1 State Disaster Management Policy

The State Policy recognizes that hazards are inevitable but these need not convert into disasters. The State DM Policy envisages a pro-active, holistic, comprehensive, multi-hazard approach towards disaster risk reduction and management. The Policy is based on the twin principles of minimizing human suffering during disasters and reduction of financial losses through integration of disaster risk reduction activities into development planning.

The Policy has envisioned establishing a strong institutional mechanism at the State level. The policy has highlighted the need for effective and functional disaster management authorities at State, Division and District levels. The Policy has also envisaged the establishment of the Emergency Operation Centres at different levels (State, Division and District) for an effective management of disaster situations. The Policy has given high priority to capacity-building of all stakeholders including the community which is also the first responder to any disaster situation. Research and documentation in the area of disaster risk mitigation and management has been given due importance in the Policy. For achieving the objective of having well-trained official machinery, a state-of-art State Institute of Disaster Management (SIDM) has been proposed. The overall capacity-building of the Fire
and Emergency Services and SDRF in all possible areas necessary for effective disaster management has been given due recognition in the Policy. The Policy has indeed taken due consideration of all stages of disaster management cycle encompassing pre-disaster management phase, situation during the time of disaster as well as the post-disaster management phase including the long-term recovery and reconstruction. F&ES along with the SDRF/NDRF and Armed Forces will assist the civil administration at the time of an emergency. Corporate sector and civil society organizations have been given specific roles in all the stages of disaster management.

4.2 Strengthening Institutional Mechanisms and Capacity Building\textsuperscript{14}

The Policy shall aim at strengthening the capacity of all institutions concerned with disaster management and the community in order to mitigate the impact of disasters. The State Government shall establish mechanisms for empowering the Disaster Management Institutions to effectively manage disasters and to work in conjunction with other State-and Central Government-sponsored policies, programmes and schemes.

The State will within 2 years create sufficient pool of trainers and resource persons for carrying out the task of training/ capacity building etc. on a sustained basis. Adequate measures to strengthen Fire and Emergency Services, Revenue Training Institute, State Disaster Response Force and Civil Defence Institute in the State with the support of Government of India, National Institute of Disaster management (NIDM) and National Disaster Management Authority shall be taken up on priority.

4.3 State Disaster Management Plan\textsuperscript{14}

SDMA shall ensure preparation of disaster management plans such as State Disaster Management Plan, Divisional Disaster Management Plans (Divisional DMP) and District Disaster Management Plans (DDMP). Wherever required, professional assistance shall be taken from NIDM/SIDM. All line departments at the State, Divisional and District levels shall also have their plans customized to cater to the DRR needs. District DM Plans shall include plans for cities specifically.

The guidelines for such plans shall be developed by SDMA. The plans so developed shall be operational, regularly reviewed and updated. The SDMA shall prepare and constantly update State Disaster Management Plan for the State. This plan shall be reviewed each November and updated every year.

The State experiences certain typical winter-related seasonal disasters such as snow avalanches and landslides. Disaster-specific crisis management plans by various departments shall also be prepared in the State. Measures to address issues arising out of global warming and climate change which have increased the risk of the State due to natural disasters shall be given highest priority in the risk reduction activities.

Standard Operation Procedures (SOP), for every department, relief manuals/ codes etc. shall be developed/reviewed and updated by relevant government departments under the overall
guidance of the SDMA. The DDMP shall spell out strategy for mitigating the impact of disasters on women and children and shall prepare specific plans for disbursement of speedy relief to them. Specific plans shall be prepared for safety and protection of animals as well.

The DM Act promulgated by Parliament in 2005 ushered in a strategic shift in both the content and process of Disaster Management by mandating a holistic, integrated approach to the Disaster Management function of the state and creating a distinct structure for delivering it. A paradigm shift has now taken place from the relief centric syndrome to holistic and integrated approach with emphasis on prevention, mitigation and preparedness. These efforts are aimed to conserve developmental gains as also minimize losses to lives, livelihood and property. A typical Disaster Management continuum comprising six elements i.e., Prevention, Mitigation, Preparedness in pre-disaster phase, and Response, Rehabilitation and Reconstruction in post-disaster phase, defines the complete approach to Disaster Management. For efficient execution of the State Disaster Management Plan, the Plan has been organized as per these four stages of the Disaster Cycle.

![Disaster Cycle and Plan Structure](image)

Showing Disaster Cycle and Plan Structure

### 4.4 Disaster Management Information System

SDMA shall ensure development of a State-specific Disaster Management Information System (JKDMIS). JKDMIS shall include a comprehensive repository of available manpower, machinery and other resources available at the state level. The JKDMIS will ensure easy accessibility to all relevant authorities at all times to facilitate quick contact with people and availability of resources on the onset of a disaster. The JKDMIS shall be made available through a web-based technology.
SDMA shall, at the beginning of each financial year, enter into pre-contract with the agencies concerned for speedy procurement and delivery of equipments needed for management of disasters, wherever necessary.

4.5 **Strengthening of Lifeline Infrastructure**

Facilities like hospitals, fire services, police, schools, water supply, bridges, flyovers and underpasses, electricity, grid stations, houses of VVIPs are critical in nature for post-disaster management. To ensure functioning of critical facilities, buildings occupying such facilities and falling in Seismic Zone-V shall be retrofitted. SDMA shall develop a clear cut retrofitting strategy at State level for this purpose. Safety audit of all existing Government buildings shall be done within one year.

Schools shall be developed into multipurpose permanent community shelters in vulnerable areas with due provisions for accommodating displaced families. Provisions in the Calamity Relief Fund shall be utilized to procure equipments necessary for different departments, subject to needs assessment and the availability of funds.

4.6 **Publications**

[www.kashmirdivision.nic.in/disaster_management_policy-2012.doc](http://www.kashmirdivision.nic.in/disaster_management_policy-2012.doc)

[http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm](http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm)

Guidelines for safe constructions in Seismic Zone V.  
[http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm](http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm)

Safety measures in Houseboats & Shikaras.  
[http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm](http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm)

Fire mock drill.  
[http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm](http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm)

Hospital Emergency preparedness.  
[http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm](http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm)

Role of NGOs in Disaster Management.  
[http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm](http://kashmirdivision.nic.in/Disaster_Management/DM_Main.htm)

State action plan on Climate Change, Jammu & Kashmir.  

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3. Jammu & Kashmir Division, http://www.mha.nic.in/more3#b


11. http://www.jkenvis.nic.in/agriculture_introduction.html


15. http://www.jkenvis.nic.in/disaster_profile_jk.html


17. http://www.jkenvis.nic.in/disaster_management_principles.html