REPORT

Local Government Self- Assessment Tool

UNDERSTNAING EXISITNG GAPS AND CHALLENGES IN DISASTER RISK REDCUTION, SHIMLA

UNDP INDIA

2019

Abbreviation and Acronyms: -

LGSAT	Local Government Self- Assessment Tool
CCA	Climate Change Adaptation
UNISDR	United Nations International Strategy for Disaster Reduction
TCP	Town and Country Planning
CDP	City Development Plan
GHG	Green House Gas Emissions
SMC	Shimla Municipal Corporation
GoHP	Government of Himachal Pradesh
SPA	Shimla Planning Area
IMD	Indian Meteorological Department
EOC	Emergency Operation Centre
CMC	Central Water Commission
SIRD	State Institute of Rural Development
HIPA	Himachal Pradesh Public Administration
UNDRR	United Nations Disaster Risk Reduction
UNDP	United Nations Development Programme
MHA	Ministry of Home affairs
MOU	Memorandum of Understanding
SFDRR	Sendai Framework of Disaster Risk Reduction

1. Introduction

This report presents the experience and findings that have come out of applying the United Nations International Strategy for Disaster Reduction (UNISDR) Local Government Self-Assessment Tool (LGSAT) in two cities SHIMLA AND VIJAYAWADA. The report has been planned and thought on the basis of requirement put forward in the TOR and knowledge and information gather during the field visits, stakeholder's interaction and literature survey. Overall report revolves around on following factors

- Information about the city and municipal corporation
- General gaps and challenges of city in terms of DRR
- Key shocks and stress affecting city
- Plan policies, roles, responsibility and regulation of DRR
- Budget and Finance
- Town planning and building byelaws
- Early Warning System
- Training and Capacity Building
- Investment in risk reducing infrastructure
- Mainstreaming with SFDRR
- Key Challenges and Recommendation

Key Objective

- To map and understand existing gaps and challenges in disaster risk reduction in the selected cities. This would be in the form of a multi-stakeholder consultation process which will include local government authorities, civil society organisations, local academia, the business community and community-based organisations etc.
- To facilitate the administration of a questionnaire survey (in line with the UNISDR LGSAT tool and feedback mechanism) that can highlight the gaps and challenges in disaster risk reduction

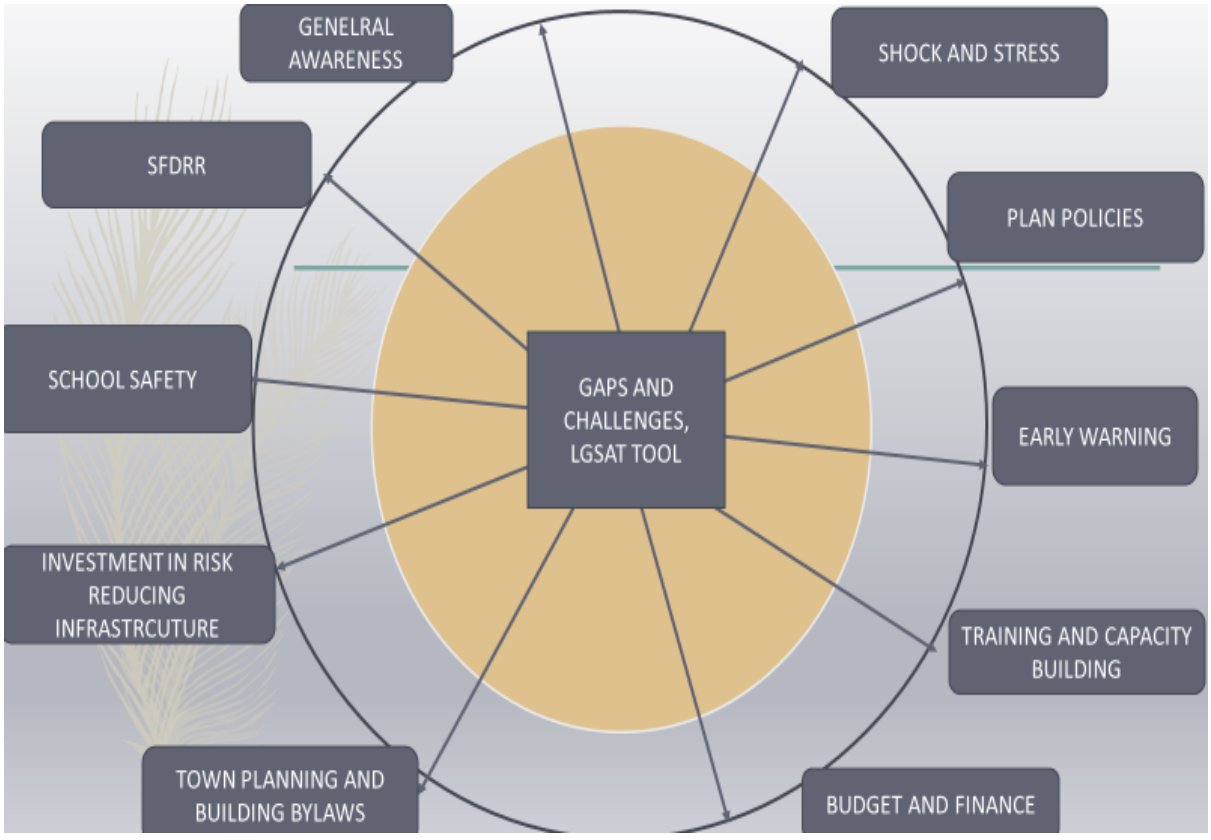
2. Methodology

- Literature review of the existing material available through online search was conducted. Some of the previous study conducted under the aegis of UNDP before was also consulted. Five days field visit was conducted to the city of Shimla.
- During the visit relevant department, institutions and human resource were called for brief discussion to know and aware about the current situation on gaps and challenges exist in the city.
- Further phone calls and meeting with UNDP India officials dealing with project was conducted to know and understand their point of view.

About LGSAT-UNISDR now UNDRR developed the Local Government Self-Assessment Tool (LG-SAT), a self-assessment tool and feedback mechanism offered to local and city governments that can facilitate the understanding of gaps and challenges in disaster risk reduction

3. Reporting Framework

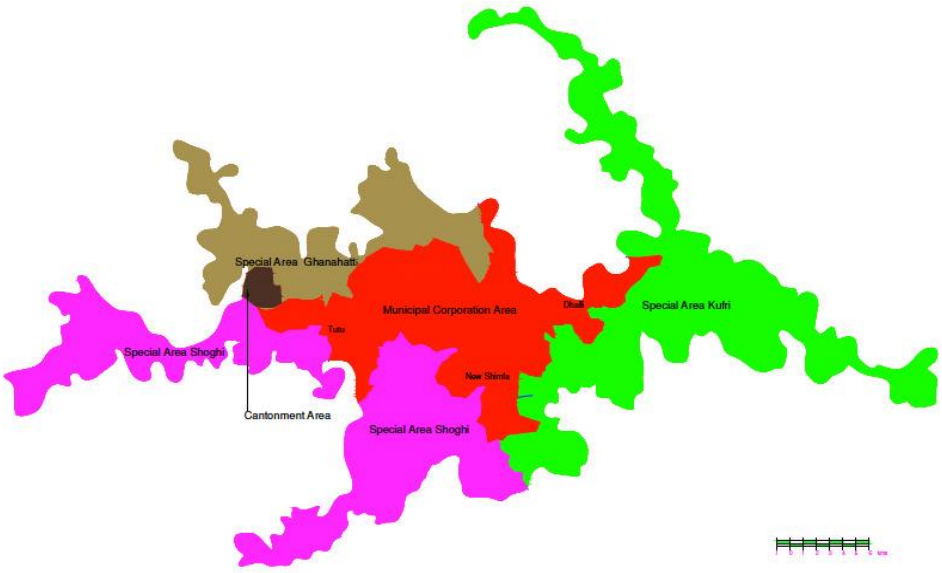
On the basis of initial understanding a reporting framework has been conceptualised which is combination of several factors under the broad frame work of LGSAT tools.



4. About Shimla

The hill town of Shimla- the capital of the state of Himachal Pradesh and the former summer capital of India during British period is one of the largest hill towns in India. The hill town is located at an elevation of 2130 m above mean sea level on the ridge, and it is one of the best and the unique example of colonial hill architecture and townscape in India.

As per the 2011 Census, Shimla had a population of 169,578. Figure 1 shows the population change of Shimla city over the decades. However, while the absolute population is growing, percent decadal change shows a declining trend. It is the only Class-I urban centre (population over 100,000) in the state, with about 25 percent of the state's urban population living in the city. The city is governed by a municipal corporation and has an area of around 35.34 sq. km. The density of population is 47.98 persons per sq. km. The city is built on top of seven hill ranges and has 25 percent of land under forests and 41 natural springs that gives it a unique natural setting. The city has 82 listed heritage sites, six demarcated heritage zones, one ASI protected monument, and a museum. The Kalka–Shimla railway line built by the British is a UNESCO world heritage site.



5. Shimla Municipal Corporation

Shimla Municipal Corporation [the official name is "Municipal Corporation Shimla" or "Shimla

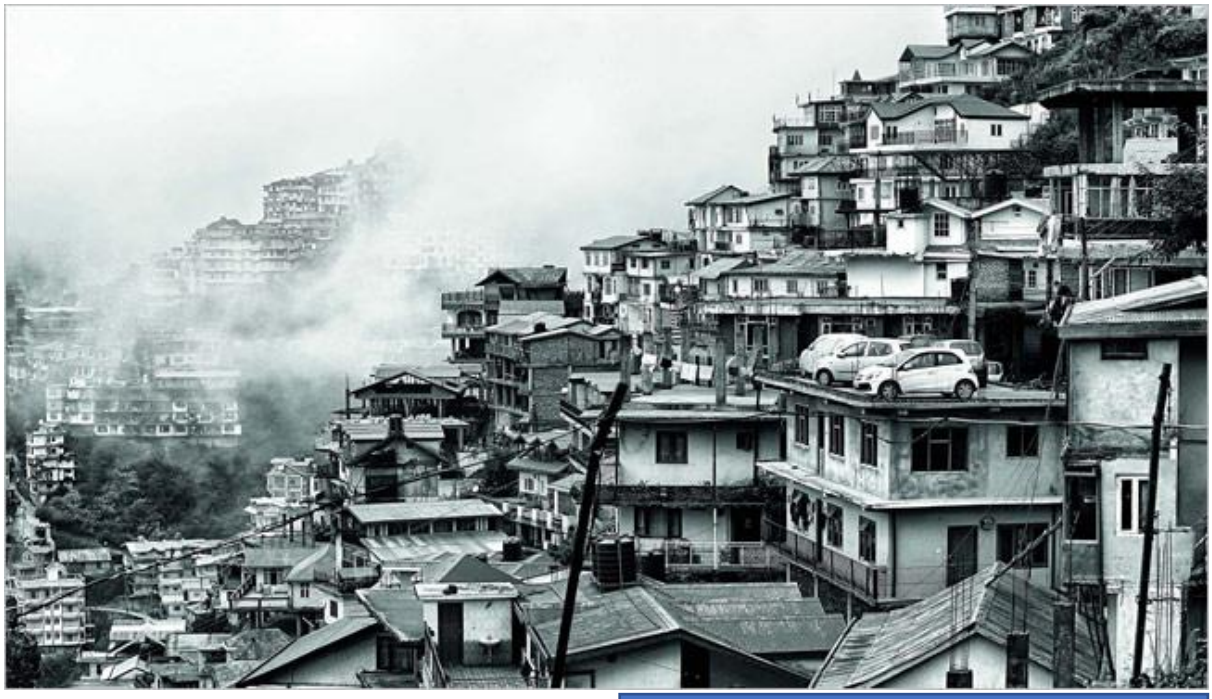


Photo source-indiatoday.in

Municipal Corporation"] is one of the oldest municipalities of India and has passed through many slings and arrows during its last one hundred and forty-five years of existence. Shimla was first constituted as a municipal committee in 1851 and became class I municipality in 1871. In 1874, it was brought under the Punjab Municipal Act, 1873. After Shimla becoming part of Himachal Pradesh on reorganization of Punjab, pursuant to the Himachal Pradesh (Development and Regulation) Act, 1968, the Shimla Municipal Committee was converted into a corporation in 1969. With the promulgation of the Himachal Pradesh Municipal Corporation Act, 1994, the government revised the delimitation of wards into 21 and conducted election. In 2012, the ward boundaries have been extended to 25 wards.

Vulnerability and Risk Zone of Himachal Pradesh

Shimla Planning Area is the region delineated by the Town and Country Planning (TCP), which had been considered for the preparation of the City Development Plan (CDP) of Shimla City. With the passing of the Himachal Pradesh Municipal Corporation Act, 1994 the government delineated the Shimla Municipal Corporation Area into 21 wards with 9.55 Sq. km and further in 2001 into 25 wards with 13.67 Sq. km14. The SPA represents an area of potential urbanization, comprising the core urban area of Shimla, its peri-urban fringe and the rural hinterland that is expected to urbanize in due course, with the development of the urban core.

6. Gaps and Challenges SHIMLA- General Perspective

Once an idyllic summer retreat favoured by the British for its 'England-like weather', the erstwhile summer capital, designed originally for 16,000 residents, has swelled a hundred-fold to become what may be the ugliest urban sprawl in the Himalayas. The city, India's most celebrated summer destination since the 1980s, straddles one of the most tectonically mobile regions in the Himalayas, making it susceptible to high-intensity seismic events. Located within Seismic Zone IV-V, there is the real and present threat of a mega temblor.

Due to constraints of topography, slope morphology and other geo-environmental factors, it is not feasible to construct new buildings in all areas or sites. The land divisions or plots available for development are irregular in shape, which further reduce the land available for urbanization in the town and intensifies the pressure of development on suitable sites or areas. As a

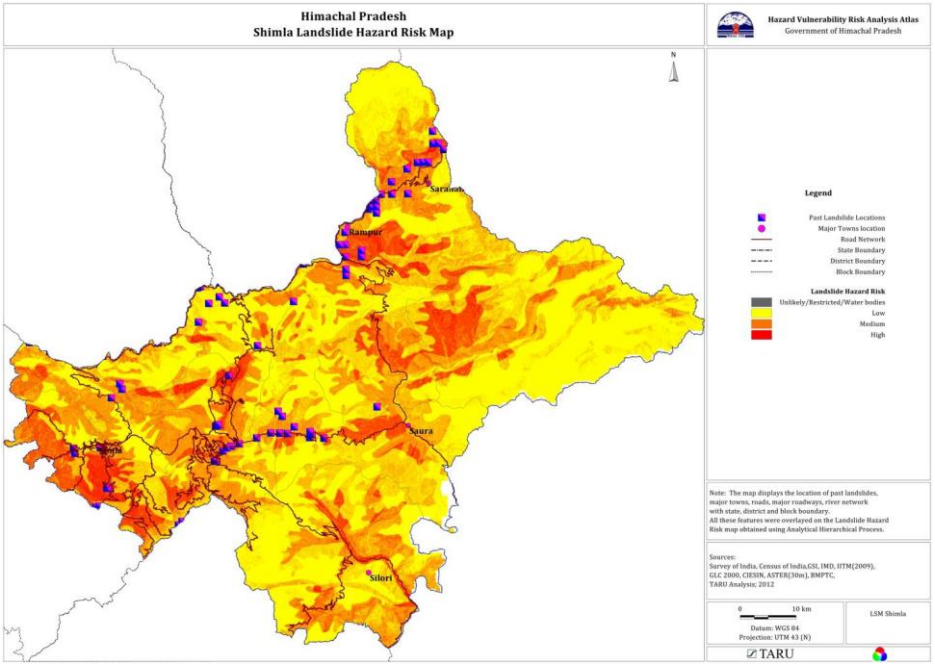
consequence of these issues, there is a shift from the low-rise development to the mid-rise high-density development in the town. But, a lot of development has taken place to fulfil the needs of permanent as well as tourist population. New construction/ building built according to existing building regulations, do not contribute to the sustainability and leads to environmental degradation. Moreover, existing regulations applicable at the town level i.e., same rule applicable for particular use without any respect to topographical and geographical location, slope angle and direction, hazard vulnerability, existing infrastructure and inadequate setback conditions, result in inappropriate development/- growth pattern and form.

The city lies in Seismic Zone IV (high-damage risk zone). Due to construction on hilly terrain and steep slopes, Shimla is extremely vulnerable to natural hazards such as landslides, sinking of land and earthquakes. Several areas of the city are in sinking zones. About 25 percent of the old town is in the sinking zone, and unless improvements are made in the drainage and sewerage systems of the upper reaches, more areas will become prone to sinking, thus endangering life and property.

7. Shock and Stress in the town, knowing hazard and vulnerabilities

Earthquake -The North-Western fringe of Himalayas is bounded by two major thrusts namely Main Central Thrust and Main Boundary Fault running parallel to the axis. Himachal State, therefore, falls in most active seismic zones-IV and V. Shimla city and the region have experienced various earthquakes causing damage to the city infrastructure and further leading to other disasters like landslides and Fire.

Floods/ Flash Flood-Shimla district has faced numerous flash floods in the past. These floods have resulted in major losses in the area. They cut the communication channels of the area to the outside world. They resulted in loss of infrastructure, life and livelihood, caused various health issues and left the people in a state of horror. Some of the major floods that have affected the area in the past are August 1997 flood and July 2005 flood.



Landslides-Landslide is the most common disaster in Himachal Pradesh and Shimla, which causes immense loss of infrastructure, property and life. The fragile nature of rocks forming the mountains along with the sub-tropical highland climate and various anthropogenic activities has made the city vulnerable to the landslides

Sinking Zone-Roughly 25% of the old town is in the sinking zone. Geologically weak areas, identified as highly sinking areas, which include the northern slope of the Ridge extending upto Grand Hotel in the west, covering Lakkar Bazaar, Central School upto Auckland Nursery School, Dhobi Ghat below Eidgah electric sub-station and sliding areas including Ladakhi Mohalla, the spur below the office of the Director of Education and surrounding areas of Clark's Hotel are also integral parts of green areas

8. Plan Policies and Legislation, Roles and Responsibilities

- State has taken several important steps in the direction of development of plan polices and legislation. Some of them are
- Constituted State Council for Climate Change under the Chairpersonship of Worthy Chief Secretary, Himachal Pradesh and Notified vide Notification Number STEF (1)-12/2008-I
- Set up a State Centre on Climate Change in Himachal Pradesh under the aegis of the State Council for Science Technology & Environment.
- State Strategy and Action Plan for Climate Change through vulnerability assessment of various sectors at the tehsil level.
- Climate change cell formulated in Irrigation and Public Health department.
- Carbon intensity of the state evaluated and published.
- Greenhouse Gas (GHGs) Emissions Inventory of the State.

The City Disaster Management Plan has been prepared but not approved by the district authority. There is no provision of resource allocation in the city disaster management plan as the in the current situation MCD has poor resource generating capacity there is little scope to allocate some resources for disaster mitigation purpose by the MCD. Although first item MCD has allocated Rs 3.5 Lakh to work on the Disaster Management activities, there is no vision exercise in the city administration to raise the find for disaster management interventions. The DDMA in the city is advisory body and there is no real authority in the city administration to oversee and supervise the DRM interventions.

- In 2012 first state level disaster management plan was developed. The plan was updated in the year 2017. The department has also urged the respective line department of the Himachal state to develop their department plan of disaster risk reduction. The training need assessment was conducted in the state in the year 2012 and 2017.
- Both the district administration and city municipality are facing the coordination problem to effectively deal with the disaster management**.**

9. Budget and Financial Incentive

For the budgetary provision state is dependent upon the resource allocation from the 14-finance commission. State has also been supported by the UNDP in terms of provision of human resource and technical support at state and district level. The Disaster Management and Revenue Department of the state had MOU signed with UNDP under which provision was made to provide resources to UNDP to get the human resource and technical support for effective management and implementation of Disaster Management plan.

14th Finance commission: Government of India, Ministry of Home Affairs (MHA)has sanctioned grant under State Disaster Response Fund (SDRF) to the tune of Rs. 1304 Crores both as central

and State share in the ratio of 90:10. The grant includes provision of 5% for capacity building over a period of five years (2015-2020). Revenue Department has incurred a sum of 5, 89, 82,126/- upto 31-12-2017for financial year 2017-18.1

10. Town Planning and Building Bylaws

Shimla Planning Area (SPA) comprise of following:

- Shimla Municipal Corporation (SMC)
- Recently merged Special Areas of Dhalli, New Shimla, and Tutu
- Special Areas of Kufri, Shoghi and Ghanahatti

Shimla is not only expanding horizontally, but it has recorded high density of population in various pockets, which is not causing undue stress on nearby vegetation but is detrimental in view of the high-risk earthquake ZONE-IV and sinking zone. As against the recommended density of 450persons per hectare in hill settlements, the town's localities have densities ranging from 2,500 to 3,500 persons per hectare for the same area. According to the Geological Survey of India, slope more than 250 is not conducive to urban use. However, as per the slope analysis of Shimla Planning Area based on 30-meter ASTER data, most of the land falls above 250. Although Shimla Municipal Corporation has quite belatedly prohibited any construction on slopes steeper than 45 degrees, the damage has already been done. As per one estimate, some 90 percent of central Shimla is built on 60 degrees slope and is covered with buildings which are four to five storeys high.

Slope	**Stability**
00-150	Most stable for urban use
150-300	May be utilized for urban development
300-450	Small sized construction where there are in sites rock exposure
450-600	Should not be normally used without exceptionally sound protective measures
Source- Geological Survey of India	

- In the event of an earth tremor, devastation could be enormous with buildings on slopes steeper than 45 degrees collapsing like a house of cards
- To ensure planned and regulated growth, the Government of Himachal Pradesh constituted Shimla Planning Area (SPA) through notification in 8 November 1977. The SPA comprises the following:

Area details of Shimla Planning Area

Settlement	Area (in Hectare).	% of Total
Shimla Municipal Corporation	1367	13.74
New Shimla	388	3.90
Dhalli	253	2.54
Tutu	199	2.00

1 Annual report Himanchal Pradesh Disaster Management Authority 2017-18

ADA Ganapati	1647	16.55
SADA Kufr	3173	31.89
SADA Shoghi[3]	2923	29.38
Total SPA Area	9950	100.00
		Source – Shimla Municipal Corporation

The geographical spread of the SPA is roughly 100 sq. km, in which approximately 32 sq. km falls under the municipal limit, including newly added areas of New Shimla, Dhalli and Tutu.

At present, Shimla City is divided into 25 wards. MC Shimla covers the urban core and urban fringes, while Shimla Planning Area (SPA) represents the settlements and rural hinterland having potential for urbanisation.

8.1 Building Bylaws-

Shimla Town and Planning Department have the mandate to develop building by laws, whereas Municipality Corporation of Shimla has own laws on building by laws. Subsequently amendment has been made in the building by laws of the city in the year of 2002,2011,2015 etc.

In 2002 the construction in the Core area of Shimla city was restricted, which is also called the old Shimla town. According to this restriction construction activity couldn't go beyond the two and half story including the parking provision. The structural design method and certification of structure was also notified under this amendment.

Challenges-

- As told by there is no mechanism available at municipal corporation to monitor and certify the structural design of the building. The authentication of structure has been done by private engineers and architect based on their enrolment at the municipality corporation of Shimla. This has started from the year of 2015-16.
- Because of challenge in the topography of the state there is always a question of certifying the building by structural engineers in the city. As per the expert construction of building must have taken place on the even place.
- Slope violation is a regular occurrence in Shimla Planning Area. Construction on slopes higher than 45 degrees has been observed in many areas. Therefore, risk analysis based on slope is important and a prerequisite for planning process in any.

11. EARLY WARNING

11.1. Emergency Operation Centre-

The current status and position of city EOC is quite vulnerable and pose serious question about the existence of centre if any impacted by natural hazard. EOC (Emergency Operation Centre) has been working in the state since 2014. Over all 8 people are working four are supervisors and

four are data entry operators. though designed to act on the event of natural disaster, the current EOC in the district has been working on several front including removing the road block, water shortage in the city, electricity, natural disaster related work, and along with other development related work that come to their notice. The EOC receives the information about water level from Rampur Sutlej River basin and from Rohru for Pamban river basin.

The EOC also receives the daily weather condition information from the IMD centre of Shimla state. Infrastructure wise EOC is equipped with TV, computer, Fire extinguishers, Satellite phone, VHF set, 1077 toll free number to receive the communication from general masses connected with landline. The centre is also equipped with optical fibre from BSNL. Power backup generator and LCD projector.

11.2. IMD-

IMD (Indian Meteorological Department) Shimla does the weather forecast for the state and plays a big role in overall early warning communication dissemination. Infrastructure wise they have - six surface observatory functioning whereas 10 part time observatory is being manned by other institutions like agriculture universities, etc but supervised by the IMD officials. IMD has maintained 23 rain gauges stations, 71 automatic rain gauge stations are installed in Himachal, whereas in Shimla they installed 9 rain gauge weather stations.

One of the important functions of IMD is to coordinate with institutions like Central Water Commission, Bhakra Beas Management Board, Agriculture Universities from Solan, Palampur etc) these universities have their own observatories. 12 Krishi Vigyan Kendra situated in Himachal Pradesh have also installed their weather rain gauge stations.

- Two types of forecasts are being generated- Extended Forecast and Seasonal Forecast at national level
- Medium range Forecast- For seven to 10 days
- Whereas short range forecast for 2 to 3 days
- Now Cast- For 3 to 6 hours

The IMD Shimla also have weather group running on What's app through they which weather related information is being disseminated to the general community. IMD also provide agriculture related weather information to the farming community of state with the help of

scheme “Grameen Krishi Mausam Seva”. Further the agriculture university of the state also provide agro- advisory to the people twice in a week.

Flood- There is no flood forecast monitoring agency situated in Himachal or Shimla as they receive the forecast of flood directly from the IMD New Delhi.

- For enhance weather forecast in the state three Doppler radar has been proposed by IMD at Shimla, Dalhousie and Kullu region of the state.
- Role of IMD in Disaster Risk Reduction in the state is advisory in nature only. They have been invited by the city and state administration to participate in the disaster management authority meeting organised in the state and district.
- State government is contemplating to develop an Earthquake warning system for the state with the help of IIT Roorkee in next few months. One meeting regarding this has conducted by the district administration.
- State has several automatic weather stations installed to monitor the weather forecast as per the information provided some of the automatic weather stations are not in functional conditions and need immediate repair.

Automatic Weather Stations Installed in Himachal Pradesh

S. No.	District	AWS Location	Status
1	Kullu	BAJAURA	Defunct
2	Bilaspur	BILASPUR_HP	Defunct
3	Shimla	CHELSEA	Defunct
4	Chamba	DALHOUSIALHA	Functional
5	Kangra	DHARMSHALA	Defunct
6	Hamirpur	HAMIRPUR	Defunct
7	Solan	KASAULI	Defunct
8	Lahaul&Spiti	KEYLONG	Defunct
9	Shimla	KOTKHAI	Functional
10	Shimla	KUFRI	Functional
11	Lahaul&Spiti	KUKUMSHERI	Defunct
12	Mandi	MANDI	Functional
13	Shimla	MASHOBRA	Defunct
14	Sirmaur	NAHAN	Defunct
15	Shimla	NARKANDA	Defunct
16	Solan	NAUNI	Defunct
17	Kangra	PALAMPUR	Functional
18	Kinnaur	RECKON	Defunct
19	Kullu	SAINJ	Defunct
20	Kullu	SEOBAGH	Defunct
21	Shimla	SHIMALA_CPRI	Functional
22	Chamba	UDAIPUR	Functional
23	Una	UNA	Functional

Source- IMD Shimla

Challenges

- The current structure of district EOC is seems to quite vulnerable and not been constructed and designed as per the standard of seismic design.
- The centre lacks the dedicated staff to monitor the EOC as most of the staff are project based and being supported under UNDP supported fund.
- The satellite phone at the district and city level has been given but the availability of these phone beyond the state and district level is highly restricted, making it difficult for administration to connect with last mile in case of communication cut off due to any eventualities. Challenges at several level, in terms of equipment, training, social training, communication infrastructure, weather stations, community resource centre, rescue operation in the town is a difficult preposition.
- The installation of Doppler radar in the state is still in the discussion state, though installation has been proposed at three locations within the state

12. Training and Capacity Building

The state has training and capacity building policy, which explicitly recognizes the need for training and capacity enhancement ever since it formulated in 2009. The Policy enjoins upon the government "a duty to ensure that it makes all efforts to improve the competence of its employees who are the principal agents of delivering all that the State strives to achieve for its people. Some of the training institutions associated with the training and capacity development on DRR and CCA are, HIPA- Disaster Management Cell. Revenue Training Institute, Joginder Nagar, SIRD- State Institute of Rural Development, Government College of Teacher's Education, Himachal Pradesh Panchayati Raj Training Institute, Atal Vihari Vajpayee Institute of Mountaineering and Allied Sports, Manali, State Fire Training Centre, Baldayen at a distance of 22 kms from Shimla

Training needs assessment in Disaster Risk Reduction and Climate Change adaptation was conducted by UNDP before.

There are nomination challenges from the respective department. It was realised that most often department send the complacent or an average officer to attend the training. The performance of the officer's received training doesn't count in the performance enhancement.

The Disaster Management Cell at Himachal Pradesh Institute of Public Administration (HIPA), Shimla has been conducting a number of training programmes in the State to build capacities of government officials and other stakeholders. It was shared that the efficient trainers and resource persons are unwilling to provide training on behalf of HIPA due to inadequate remuneration policy by the state. As indicated rate of per training sessions to resource person by HIPA is Rs 600 only for 75 minutes of training and 1200 for half a day of training to the internal person.

Often the training agenda and action plan on the subject are not given to the HIPA by respective departments, leading to HIPA himself prepared the training and capacity building plans for the respective department as the plan prepared without a consultation may not serve the objective of the department or trainee who receives the training.

During the visit, training on Psychosocial care within Departments in collaboration with NIMHANS having been undertaken. It was realised that some of the departments have already under taken some trainings at their own level within their departments. From February 2018 after the ToT at Shimla till end of August 2019 the number of trainings having under taken are 929 (M=606, F= 323). As of the Departmental trainings being conducted under Municipal Corporation and UNDP fund is under process and will be completed by October 2019.

Municipal corporation of Shimla has conducted several training and capacity building program under Building Urban Action for Resilience in Emergencies. Some of the training and capacity building measures were training to community volunteers on community-based disaster risk management program, Training on 'First Aid' for Volunteers of Shimla City, Training of Trainers Programme on Incident Response System (IRS)Basic & Intermediate Course, TRAINING PROGRAM FOR SCHOOL TEACHERS ON PSYCHOSOCIAL CARE FOR CHILDREN IN DISASTERS etc in the year 2013 -14. The program left a good impact over the community and there is need to implement the phase II of the programme to bring the continuity and raise the level of awareness among common masses about the issue of DRR and CCA.

12.1. School Safety

As per the guideline issued by Department of Revenue and Disaster Management, Himachal Pradesh, dated 19th August 2019 under the Government of India and UNDP Disaster Risk Management Program extensive disaster management training were conducted for school teachers, student and volunteers all over the state and 125817 teachers were trained. Where programme reached to the 4105 number of schools. Government of Himachal as State Education Code 2013 has issued a circular to all the school to prepare the disaster management plan. State has also implemented the National School Safety Programme under which school falling under zone 1V and zone V had given priority mainly in Kangra and Kullu district. SCERT – State Nodal Agency &implementing agency for 6 districts namely, Solan, Shimla, Kinnaur, Sirmour, Bilaspur, and Una. As per the guideline government has intended to start the School Safety Program in all the 12 districts of state.

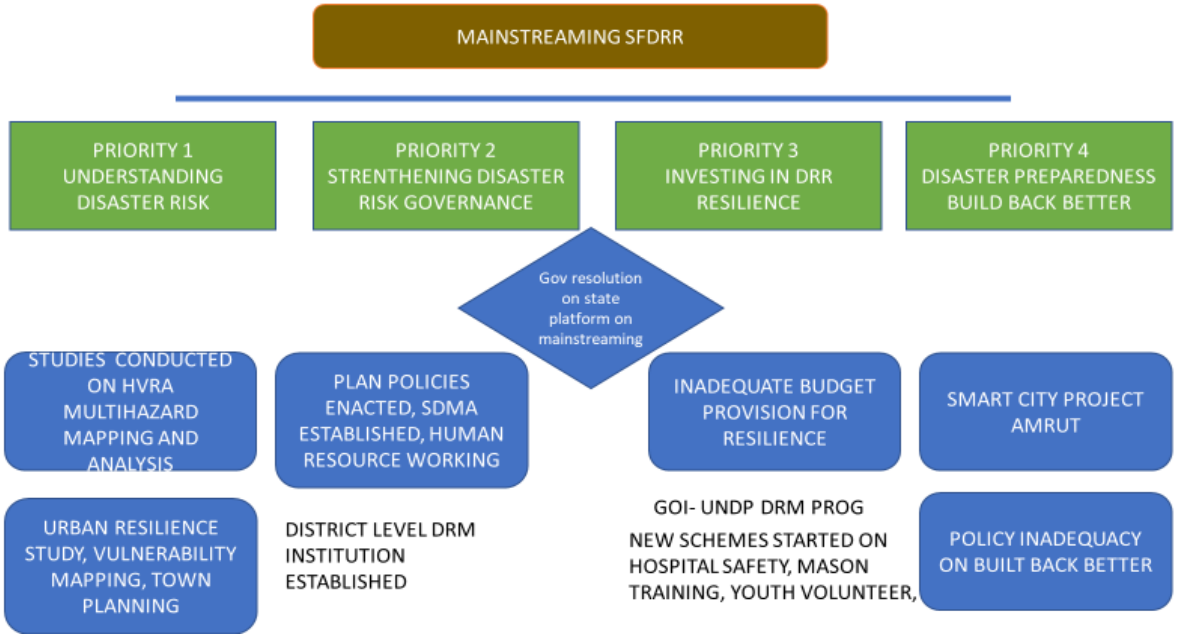
13. Investment in Risk Reducing Infrastructure

City has taken some steps in terms of investment in risk reducing infrastructure on the basis of Hazard and Vulnerability report submitted by UNDP with collaboration of some other agencies. Based on the feedback The Rapid Visual Exercise of selected building has been initiated by the municipal administration with the help of Disaster Management Department of Himachal Pradesh. State government has also launched a scheme for Hospital Safety. Under this scheme Rapid Visual Screening, structural audit and retrofitting, non-structural mitigation of hospitals and health institutions would be carried out the city municipal corporation with the help of state Disaster Management Department. State has also conducted training of trainers to architect and planner on Rapid Visual Screening of Building in the year 2012.

14. Mainstreaming with SFDRR

The Government of Himachal Pradesh has constituted a multi-stakeholder State Level

Platform for Disaster Risk Reduction (SPDRR) vide Government's resolution no.- Rev (DMC) (F) 11-45/2016 dated 24th February 2016. The SPDRR has been constituted with the hon'ble Chief minister as Chairperson, Hon'ble Revenue Minister as Vice Chairperson, Additional Chief Secretaries/Principal Secretaries/Secretaries of various government departments as representatives of the State Government Departments, ex-officio members, heads of educational institutions, industry, media, civil society and international organization representatives, with the Additional Chief Secretary (Rev- DM) as the convener2.



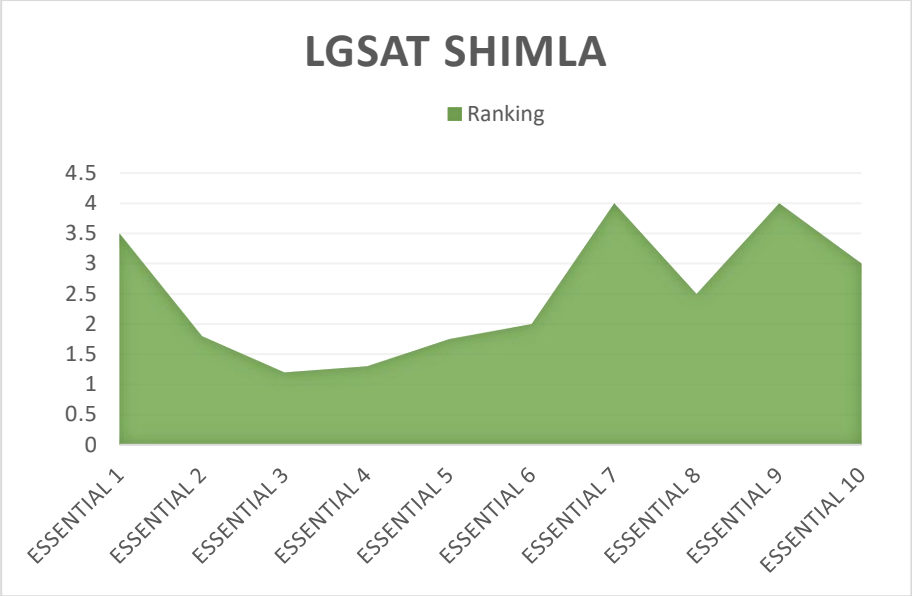
15. LGSAT TEN ESSENTIALS

An attempt has been made to know and understand the ten essentials of LGSAT during the assignment. As defined in the tools itself each essential has been defined by indicators. Which can be ranked on the from the range to 1 to 5. Rank five indicating the most comprehensive and well prepared whereas score one considered to the lowest in overall ranking. During the interaction with stakeholders in the city it was realised that some of the essentials were not thought by the DRR practitioners having an unrealistic chance to score or rank them in order to find out the result.

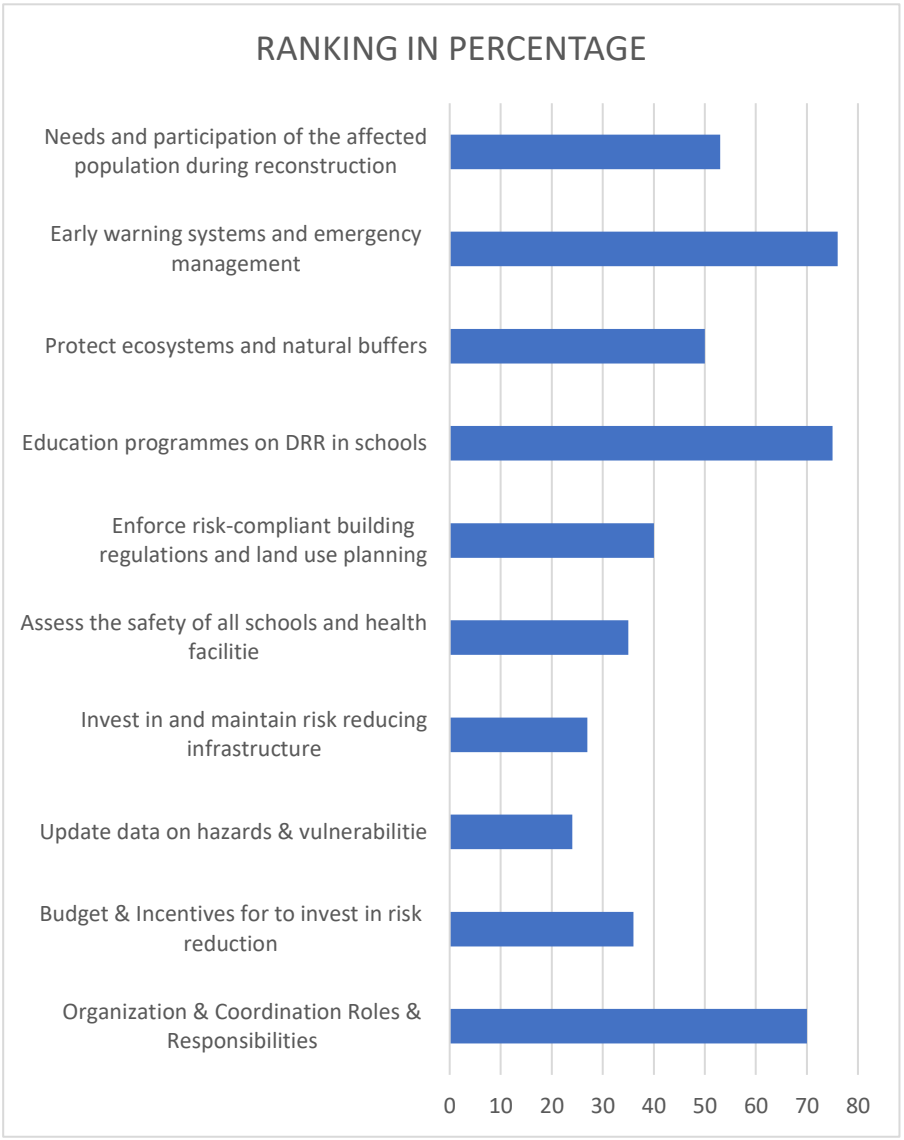
DESCRIPTION OF PROGRESS LEVELFOR OVERALL RANKING FOR EACH QUESTION				
1- LOW	**2- BELOW AVERAGE**	**3- AVERAGES**	**4 - MEDIUM HIGH**	**5 - HIGH**
Achievements are minor and there are few signs of planning or forward action to improve the situation	Achievements have been made but are incomplete, and while improvements are planned, the commitment and capacities are limited	There is some institutional commitment and capacities to achieving DRR, but progress is not comprehensive or substantial	Substantial achievement has been attained, but with some recognized deficiencies in commitment, financial resources or operational capacities	Comprehensive achievement has been attained, with the commitment and capacities to sustain efforts at all levels

2https://www.ndmindia.nic.in/state-platform-for-disaster-risk-reduction-spdrr

TEN ESSENTIALS	Ranking
ESSENTIAL 1	3.5
ESSENTIAL 2	1.8
ESSENTIAL 3	1.2
ESSENTIAL 4	1.3
ESSENTIAL 5	1.75
ESSENTIAL 6	2
ESSENTIAL 7	4
ESSENTIAL 8	2.5
ESSENTIAL 9	4
ESSENTIAL 10	3



TEN ESSENTIALS	RANKING IN PERCENTAGE
Organization & Coordination Roles & Responsibilities	70
Budget & Incentives for to invest in risk reduction	36
Update data on hazards & vulnerabilities	24
Invest in and maintain risk reducing infrastructure	27
Assess the safety of all schools and health facilities	35
Enforce risk-compliant building regulations and land use planning	40
Education programmes on DRR in schools	75
Protect ecosystems and natural buffers	50
Early warning systems and emergency management	76
Needs and participation of the affected population during reconstruction	53



LGSAT ESSENTIALS	SHIMLA
ESSNETIAL 1	Robust institutions for addressing DRR and translating national policy objectives to provincial and local levels exists. There is need to promote the partnership between city level government institutions and private sectors like FICCI, ASSOCHAM local business association in this effort. However, structures to support work on climate change and climate change adaptation are relatively week and do not have strong mechanisms for supporting local activities.
ESSENTIAL 2	Resources for DRR are directly comes from the 14th Finance commission recommendations. However, the level of funding is quite low and may not be sufficient to initiate the pre disaster work. Available funds are also being spent on awareness generation and capacity building, conducting hazard and vulnerability assessments. Stakeholders' city highlighted lack of good post-disaster business recovery support for small and medium enterprises.
ESSENTIAL 3	Multiple studies have been conducted in the city by several institutions in the city at government level supported by development agencies like UNDP etc to assess vulnerability to disasters. However, there is no robust mechanism to update and monitor the data of most of the natural hazard may affect the city. The wide spread role and responsibility of urban institutions with different mandate also prohibits the sharing and analysing of data required for vulnerability analysis.
ESSENTIAL 4	Most of the city-based infrastructure are age old and exist from the British era including the district collectorate, town hall, heritage buildings. Some of the government institutions are also situated near the sinking area of city which makes it more hazardous. Though the state government has recently launched rapid visual survey of key infrastructure and hospital contingency plan. Overall, there is little investment made in upgradation of physical infrastructure.
ESSENTIAL 5	There has been continuous investment in city-based schools to educate and aware the children about the impact of natural hazard into the city. Numerous training and capacity programme have been launched this includes national school safety programme promoted by the NDMA New Delhi. However, there is little attention paid to upgrade, access and secure the existing health facility in the city from DRR point of view.

ESSENTIAL 6	City is considered to be one of the oldest in terms of town planning and land regulation. But over the years effective land use policy and planning is a serious concern, while there are some regulations and laws to promote these activities, they are weak and enforcement is even weaker. Continuous change and chop in the building by laws by the respective government has encourage the bigger floor ratio construction without realising the loading capacity of the land. There is serious concern of monitoring and supervision of implementation of building bylaws and codes in the city. Development is happening in such a way that itis increasing and redistributing risks
ESSENTIAL 7	Most of the schools have educational programme running on DRR and Climate Change issues. On the directive from the government, they also conduct the mock drills against natural hazard within their premise.
ESSENTIAL 8	Environmental projects addressing management, conservation and rehabilitation are being dealt by the separate ministry and department at the city level. Primarily the department of Forest and environment and Disaster management works parallelly at the state city level that makes the mainstreaming or streamlining of DRR more demanding. However, partly because of the gaps in existing DRR policies and strategies, there are no clear linkages between these efforts and either DRR or CCA. Coordination is also required from several hydro projects functional in the around the city and its impact scenario.
ESSENTIAL 9	City has made early warning systems and emergency management capacities, but there is still significant room for improvement. The Emergency Operation Centre functions at regularly basis and staff are placed to communicate and receive the information from the public at regular basis. The early warning system about weather forecast is being managed by the IMD and its branches that provide the forecast on medium and long-range basis. However, there was no plan found at the city level to have its own early warning system. City has conducted the vulnerability assessment on earthquake with the help of external agency under UNDP programme.
ESSENTIAL 10	Local institutions need to have good access to resources and expertise to connect to and support victims of disasters. There are fewer formal mechanisms for feeding the experiences of affected populations into planning, but ad-hoc discussions and institutional knowledge provides some ways for these needs to be considered. However, the Build Back Better policy in terms of thinking and action is still to be planned in the DRM plan and policy of the city.

14. Key Recommendations

14.1. Understanding Risk

In recent times City has conducted number of studies to understand related with different types of natural hazard that may cause a risk i.e., earthquake, review of early warning system of Shimla, city resilience system, study on Climate Change resilience study with the help of ICLEI local governments for sustainability, mock exercise on earthquake on 19th July 2019 under the directive of NDMA Gov of India. All these efforts led to have good understanding of knowing the risk city possess from different natural hazard and its likely impact. However, the coordinated effort from all the institutions or department to know and understand the likely risk from natural hazard and consequence action should be developed by the city. The state, district and city municipal disaster management cell should work on this agenda together.

14.2. Town Planning

Efforts should be made to decongest the core areas through selective relocation of non-conforming activities like timber market, transport hub, wholesale grain market, wholesale vegetable market, bus stand. SMC/GoHP would need to identify land in the peripheral areas and provide space for relocation.

Himachal Pradesh Housing Development and Urban Development Authority (HIMUDA) is mainly engaged in the housing construction activity. It should also actively participate in the urban land regulation and planning status of the city.

14.3. School Safety

- DRR program implementation in city-based schools have gained attention in recent times but there is lack of continuous intervention on DRR and Climate Change adaptation. The Central Board for Secondary Education in India has introduced Disaster Management as a separate curriculum for standard VIII from the academic year 2003-2004, IX from 2004-2005 and standard X from 2005-2006. For the Primary classes DM has been integrated in form of extra-curricular activities.
- The training and capacity building measures in the school should emphasise on functional concepts related with natural and man-made hazard like practice of dos and don'ts on fire, gas burst, accident, swimming, basic first aid activities, rule and regulation related with road safety. These issues are found to be missing during the training which mostly devote on theory of DRR and conducting mock drills.
- City can come out with schools building code at the time of their construction in order to make them more resilient against natural and man-made hazard. For an ex, many older school buildings might not meet earthquake protection standards. Seeking out an architect to evaluate the building and point out areas that could be reinforced.

14.4. Training and Capacity Building

Training and Capacity building measures have been often viewed in an isolation by most of the department/institutions in the state. Often the human resource take part in the training tend to take up another assignment as directed by his seniors. Neither the increase level if knowledge and awareness among the trainee leads to development of formulation more inclusive plan policy and action to incorporate the DRR concern. An annual action training plan on covering important issues of DRR should be developed and implemented with sufficient budget allocation.

Benchmarking of training institutions imparting training should be also be started in order to achieve the accepted quality. There is a dearth of good resource person in the state who could impart the training. An attempt to develop the set of trainers having robust knowledge and understanding**.**

Training duplication- the duplication of training based on subject is also cause of concern. Several departments at the state level conducts training on the issues related with DRR.

14.5. Early Warning

Application and re-deployment of retired army personnel in disaster management force at the state and city level can be used for search and rescue operation. The district welfare board of the city can be coordinated for these efforts.

The number of helipads in the Himachal state is 23 out of that only 12 are operational in nature. The building bylaws of the state needs to be reviewed construction up to seven stories, 21 meters from the ground floor has been permitted. The parking construction in the city is challenging preposition, parking in the midst of the city creates traffic jam and dilute the purpose of traffic management

- The micro zonation and micro mapping work of Shimla city is required.
- IMD is also facing the problem of land availability to install the sensors
- Coordination and dissemination of several stakeholders to information and dissemination is major hurdle. The sensitivity involved during information dissemination is also a cause of concern for the organisation.
- Number of workshops to generate the community level awareness about the weather forecast and understanding the importance of weather-related information can be initiated by the IMD and city municipal corporation.
- Propagation of mobile SEWA app by Government of India is still to reach among the population
- Data and information related with crop loss for insurance purpose can be shared.

14.6. Budget and Finance-

- Local level financing, transparency and accountability, and integration of nongovernment finance all need significant improvement.
- City should come out for innovative schemes like tax rebate shops to promote the investment and budget flow in development planning.
- City stakeholders should also have a deliberation for advocating the budget allocation on selected national and state level development schemes for mainstreaming.
- Planning and budgetary analysis at the city level about the requirement of budget and finance to meet the need of DRR is missing. A vision planning exercise can be initiated by the municipal stakeholders to conduct this exercise.
- The city municipal corporation also find new ways to cess tax on certain subjects (Public health, roads, bridges and ferries, inland waterways, agriculture and land of development comes under their jurisdiction in the time of crisis. The added tax can be utilised during reconstruction phases after the disaster.

14.7. Plan Policies Role and Responsibility

City has adequately well planned and policies, role and responsibility put in place. The development of city disaster management plan, demarcating role and responsibility to different department within the system and conducting mock drills has been happening on regular basis. The State Disaster Management Authority, State Disaster Management Plan and other details also institutionalised and incorporated well within the system.

14.8. Investment in Risk Reducing Infrastructure

Resilience is an attribute of a smarter city, and it requires planning and adapting ahead of peril. When communities and organizations alike are resilient, they're made to withstand, recover quickly and prosper from increasing impacts of natural and manmade hazards or disasters, such as chronic stresses from climate change.

- Encourage the public and private investments in risk investment infrastructure to produce structures and environments that are designed to withstand current potential for acute shocks and chronic stresses,
- Activities such as low- or no-interest loans or tax incentives for those who retrofit infrastructure, or the use of 'resilience or green bonds' to finance risk-reducing interventions are important offerings.
- Targeted investment of risk reduction in key public buildings or sectors like road, water or drainage should be initiated at the pilot basis.
- A systematic application of technology. Items and strategies such as early warning systems, resilience analytics and innovative regulation in the form of updated building codes are needed and must be enforced.

Selected References

- Anuradha Yagya, Making a Smart City in a Fragile Ecosystem: The Case of Shimla- ORF Special Report September 2017
- Ashwani Kumar, Pushplata, Problems and prospects of building regulations in Shimla, India – A step towards achieving sustainable development, International Journal of Sustainable Built Environment, (2017) 6, 207–215
- Climate Resilience Strategy Shimla, A report by report by ICLEI, Local Governments for Sustainability, South Asia, 2013
- District Disaster Management Plan (2017) by DISTRICT DISASTER MANAGEMENT AUTHORITY SHIMLA O/o Deputy Commissioner, Shimla
- REVIEW OF EARLY WARNING SYSTEM, SHIMLA, A report by TARU Leading Edge Private Ltd
- TRAINING NEEDS ASSESSMENT Report Disaster Risk Reduction and Climate Change Adaptation by UNDP and Himachal Pradesh State Disaster Management Authority
- Shashi Shekhar- Urban Sprawl and other Spatial Planning Issues in Shimla, Himachal Pradesh, Institute of Town Planners, India Journal 8 - 3, July - September 2011, 53 - 66