

# **Environmental Assessment Document**

# Initial Environmental Examination

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Project Number: 49108-002  
January 2017

## India: Himachal Pradesh Skill Development Project

Sub-projects – City Livelihood Center at Nahan, and Rural Livelihood Centers at Pragati Nagar and Chopal Under Shimla Zone - Package No. XXX

Prepared by the Government of Himachal Pradesh for the Asian Development Bank

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## ABBREVIATIONS

ADB	-	Asian Development Bank
ASI	-	Archaeological Survey of India
CPCB	-	Central Pollution Control Board
CLC	-	City Livelihood Centre
CPR	-	Common property resources
DOLE	-	Department of Labor and Employment
DOTE	-	Department of Technical Education, Vocational and Industrial Training
DOP	-	Department of Planning
DOT	-	Department of Tourism
EA	-	Executive Agency
DOUD	-	Department of Urban Development
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
FSI	-	Forest Survey of India
GOHP	-	Government of Himachal Pradesh
GOI	-	Government of India
HPSDP	-	Himachal Pradesh Skill Development Project
IEE	-	Initial Environmental Examination
IA	-	Implementing Agency
ITI	-	Industrial Training Institute
IUCN	-	International Union for Conservation of Nature
MOEFCC	-	Ministry of Environment, Forests and Climate Change
MCC	-	Model Career Center
NP	-	National Park
OM	-	Operations Manual
PA	-	Protected area
PD	-	Project director
PIU	-	Project Implementation Unit
PMC	-	Project Management Consultant
PMU	-	Project Management Unit
PUC	-	Pollution under Control
PWD	-	Public Works Department
RLC	-	Rural Livelihood Centre
REA	-	Rapid Environmental Assessment
SEIAA	-	State Environment Impact Assessment Authority
SLEC	-	State-level Empowered Committee
SPCB	-	State Pollution Control Board
SPM	-	Suspended Particulate Matter
SPS	-	Safeguard Policy Statement 2009
UNESCO	-	United Nations Educational Scientific and Cultural Organization
WLS	-	Wildlife Sanctuary

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## **CURRENCY EQUIVALENTS**

(As of January 2017)

Currency unit – Indian rupee (Rs)

Rs1.00 = \$0.014706

\$1.00 = Rs 68.00

## **WEIGHTS AND MEASURES**

dB (A) A-weighted decibel

ha - hectare

km-kilometer

km<sup>2</sup>-square kilometer

µg-microgram

m - Meter

m<sup>2</sup>-square meter

MW (megawatt) - megawatt

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## EXECUTIVE SUMMARY

1. At the request of the Government of India and the Government of Himachal Pradesh (GOHP), ADB will offer \$80 million in loan assistance to modernize and reform Himachal Pradesh's technical and vocational education and training (TVET) programs, and scale up training capacity. The Department of Planning (DOP), GOHP, will be the executing agency for the proposed Himachal Pradesh Skill Development Project (HPSDP). The Himachal Pradesh *Kaushal Vikas Nigam* (HPKVN), the Department of Technical Education, Vocational & Industrial Training (DOTE), Department of Higher Education (DOHE), and the Public Works Department (PWD) will be the implementing agencies. HPKVN will also operate as the project management unit (PMU) for HPSDP. For the civil works component, it will be assisted by PWD officials who are well aware of the state and India's building codes and environmental regulations.

2. The impact of HPSDP will be a more productive work force in Himachal Pradesh equipped with market-relevant technical and vocational skills created, in alignment with the Himachal Pradesh Skill Development Policy (*Him Kaushal*), 2016. The outcome will be improved employment and livelihood development opportunities for those trained under the project. This will be achieved through the following outputs:

- Output 1: TVET in Himachal Pradesh modernized, expanded, and aligned to national standards
- Output 2: Market-aligned skills ecosystem created
- Output 3: Access to quality training institutes improved.
- Output 4: TVET institutional structure reformed and improved.

3. Output 3 of the Project will involve construction of new training facilities and upgrading of some existing buildings to improve the access of TVET programs across Himachal Pradesh.<sup>1</sup> The new facilities include construction of 7 city livelihood centers (CLCs), 7 rural livelihood centers (RLCs), and 1 Polytechnic for women. Eleven employment exchanges will be upgraded into model career centers (MCCs). On average, the CLCs and RLCs will have 3 to 4 floors, and occupy about 900 m<sup>2</sup>. The MCCs will have 3 to 4 floors on average, and occupy around 400 m<sup>2</sup> each. **The Department of Urban Development (DOUD), Department of Rural Development(DORD), and the Department of Labor and Employment(DOLE) will help HPKVN in running livelihood development and counseling programs at the proposed CLCs, RLCs, and MCCs respectively.**

4. GOHP has assured ADB that the proposed new infrastructure will be built, either within premises owned by the government, or on vacant and unencumbered land owned by the government. No new land will be acquired, nor will anyone be displaced in anticipation of ADB funding. Sites located within or near environmentally-sensitive areas and tribal areas of Himachal Pradesh will not be considered. No project related activity will have any adverse impact on indigenous peoples or impede their cultural and human rights. Hence, from a safeguards perspective, the Project is categorized as 'B' for environment, 'C' for involuntary resettlement, and 'C' for indigenous peoples. The proposed project categorization has been reconfirmed by an experienced ADB environment and social safeguards consultant, who has already visited 15 sites identified by GOHP to date.<sup>2</sup>

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<sup>1</sup>A detailed Environmental and Social Management Framework (ESMF) has been prepared in line with ADB's Safeguards Policy Statement (SPS), 2009, to guide the executing agency and implementing agencies in mainstreaming environmental and social concerns into the design and implementation phases of HPSDP.

<sup>2</sup>In addition to the Environment and Social Safeguards consultant, other experts including an Architect, a Labor Economist / Gender specialist) plus relevant consultants from the consulting firm

5. **Three sub-projects have been planned under Shimla Zone under the advance contracting.** These sub-projects include establishment of a CLC at Nahan in existing ITI Campus, one RLC at Pragati Nagar in the existing ITI Campus and one RLC at Chopal on an unencumbered land owned by GOHP. The CLC Nahan site is in Sirmaur district and RLCs sites at Chopal and Pragati Nagar are in Shimla district. The establishment of these CLC and RLCs will provide the needy urban youth of Sirmaur and Shimla districts with skill development opportunities for gainful employment. The CLC Nahan and RLC Pragati Nagar will be established on land owned by DOTE and RLC Chopal on land owned by DORD. Each CLC and RLC building will be a three floor building including ground floor with a total built up area of about 800 m<sup>2</sup>. On the ground floor, there will be a reception cum display area, 2 class rooms for practical vocational training, computer laboratory, a counseling cum placement room, and a staff room. On the first floor, there will be space for the CLC (or RLC) Manager's room, computer lab, and a hostel for 14 male trainees. On the second floor, there will be a hostel for 14 female trainees, the hostel warden's room, a pantry, and an open terrace. This layout ensures that the female trainees will have an independent floor, along with the warden's room. The building is designed to cater for 24 by 7 occupancy. By locking certain doors, the hostel sections can be sealed off from the learning and administration areas.

6. The architectural expression of the building is in harmony with the local style of Himachal Pradesh - suitable for cool weather, with a long rainy season, and light snowfall. The building aims to evoke a learning-friendly atmosphere which will attract the trainees. The CLC and RLCs will be barrier-free. There will be ramps and specially designed toilets to make it easy for people with disabilities. The CLC and both RLCs buildings will have adequate number of modern sanitation and drinking water facilities. Concrete gutters at the end of steel sheeting roofs will direct the rain water to underground rain water harvesting tanks. The clean rainwater runoff can be re used for horticultural purposes and recharging the ground water.

7. The proposal includes for the provision of solar power panels at each of the CLC and RLC, for which a budget of \$15,215 has been allocated. The system is expected to generate about 6 KVA which will meet the CLC or RLC demand for lighting and running the computer laboratories. **A preliminary estimate has been approved by the State Government for a sum of \$557,000/- which includes taxes, contingencies and administrative charges. The construction period will be 2 years. The preliminary estimate also budgets for a 10.5% cost escalation on this basis.**

8. The enclosed **initial environment examination (IEE) report** provides details about the site, the potential environmental impact of the civil works, and suggests ways of mitigating and addressing these.<sup>3</sup> Since all the three sites are in urban areas, there is no protected or reserved forest area nearby. There is no natural stream or river near the sub-project sites. The sub-project sites are on a plain terrain. There are no protected areas (national parks, bird sanctuaries, tiger reserves, etc.), wetlands, mangroves, or estuaries in or near the sub-project locations. The sites are relatively open areas at the respective locations. Therefore, there are no ambient air quality and noise level issues.

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engaged under the project preparatory technical assistance project (IND TA 8760), have also screened these sites.

<sup>3</sup>Local stakeholders were involved in developing the IEE through discussions on-site and public consultation. Their views were incorporated into the IEE, and the design of the sub-project. The IEE will be made available at public locations in the town such as Municipal office building, district administration office. It will be disclosed to a wider audience via the ADB, DOUD, and HPKVN websites.

9. Since the CLC and RLC buildings will be in small size for vocational training and livelihood development, construction of these buildings and their operations are unlikely to cause any significant impacts. These routine and localized effects associated with construction and operation of the new building can be mitigated easily by following the measures laid down in the **Environment Management Plan (EMP)** included in the IEE. The EMP will be included in civil work bidding and contract documents. **The IEE confirms that each of sub-project as environment category “B”.** No further special study or detailed environmental impact assessment (EIA) needs to be undertaken to comply with ADB SPS, 2009 or Government of India EIA Notification, 2006.

10. HPKVN and PWD will be responsible for overall planning and implementation of the civil works. They will ensure that the ESMF is followed during project implementation. The Project Management Consulting (PMC) firm to be engaged under the proposed loan will have experienced Environment and Social Safeguards specialists. They will assist HPKVN and PWD in supervising the civil works, ensuring that the IEEs and EMPs are prepared for all sub-projects, and preparing semi-annual safeguards monitoring reports as required by ADB. HPKVN will consolidate the semi-annual reports, and submit them to ADB. ADB will post the environmental monitoring reports on its website.

## I. INTRODUCTION

### A. Background

1. **Location.** The Shimla construction package comprises of establishment of one CLC at Nahan in Sirmaur district of Himachal Pradesh and two RLCs at Chopal and Pragati Nagar of Shimla district. The latitude and longitude of the proposed CLC and 2 RLCs are given below:

Sl. No.	Name of Facility	Latitude	Longitude
1	CLC at Nahan	30.568242 N	77.295621 E
2	RLC at Chopal	30.949464 N	77.591591 E
3	RLC at Pragati Nagar	31.120034 N	77.493922 E

2. The nearest rail head at Shimla is 52.5 km and 87.2km away from CLC Pragati Nagar and RLC Chopal. The nearest rail head from Nahan is Ambala at about 64.3 km. All the three locations are well connected to important destinations such as Shimla, Chandigarh and Delhi. The distances of important destinations is given below:

Sl. No.	CLC or RLC Location	Altitude (m)	District	Distance from site (km)
1.	CLC Nahan	790	Sirmaur	Nahan : 1.6 km Chandigarh Airport : 87 km New Delhi : 271 km Shimla : 132 km Ambala : 66 km Deharadun : 94 km
2.	RLC Chopal	2254	Shimla	Chopal : 0.5 km Chandigarh Airport : 193 km Shimla : 88 km Ambala : 43.4 km Rohru : 107 km Rekong Peo : 271 km Chamba : 428 km
3.	RLC Pragati Nagar	1495	Shimla	Chandigarh Airport : 163 km Shimla : 57 km Ambala : 183 km Rekong Peo : 237 km Chamba : 299 km Theog : 23 km Rohru : 58 km

3. The proposed CLC site at Nahan and RLC site at Pragati Nagar are proposed in the vacant land of respective ITI campuses. The Nahan town is the district headquarters of Sirmaur district. The district lies between the parallels of 31°2' to 32°5' N and 75° to 77°45' E. The Pragati Nagar and Chopal sites are located in Shimla district. The Shimla district geographically lies between the longitude 77°-0" and 78°-19" east and latitude 30°-45" and 31°-44" north.

4. **Present Status of Site.** The sub project sites at Pragati Nagar and Nahan are located in a plain terrain, whereas Chopal RLC site is located in an undulating terrain. The sites at Nahan and Pragati Nagar are located in ITI campuses and these have ownership of



**Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal**

Department of Technical Education (DOTE), Government of Himachal Pradesh. The sub project site at Chopal has ownership of Department of Rural Development (DORD). There are no permanent or temporary structures on any of the sites. There are also no trees at these sub-project sites. The photographs of respective sites are shown below.



**Photographs of CLC Nahan Site**





**VIEW OF RLC CHOPAL SITE FROM HIGHEST POINT- KUCHA ROAD AND STAFF RESIDENCES**



**VIEW FROM RLC CHOPAL SITE TOWARDS KUCHA ROAD**









Photographs of RLC Pragati Nagar Site



## B. Compliance with India's Environmental Regulatory Framework

5. India's environmental rules and regulations, as relevant for the sub-projects of Shimla package, are shown in **Table 1**. The Environmental Impact Assessment (EIA) notification, 2006 by the Ministry of Environment, Forests and Climate Change (MOEFCC, GOI) specifies the requirements for mandatory environmental clearances. All projects and activities are broadly categorized into two categories—category 'A' and category 'B', based on the spatial extent of potential impacts on the environment, human health, and natural and man-made resources.<sup>4</sup> However, MOEFCC's Office Memorandum (F. No. 19-2/2013-IA- III), dated June 09, 2015, and exempts all educational and training institutes from obtaining prior environmental clearance. Since all the training facilities to be constructed or upgraded under HPSPDP, including these sub projects under Shimla package, are meant for educational and training purposes, they will not require any prior environmental clearances according to the environmental rules and regulations of India. Further, as shown in Table 1, most other rules pertaining to India's Ancient Monuments and Archaeological Sites and Remains Act, 1958; the Wildlife Conservation Act, 1972, amended in 2003 and 2006; and the Forest (Conservation) Act, 1980, will not apply to Shimla Package. Only some clearances will be required from the Himachal Pradesh State Pollution Control Board for the construction phase of the sub-projects under the Shimla construction package.

**Table 1: Environmental Regulatory Compliance**

Sub-Project	Applicability of Acts/Guidelines	Compliance Criteria
Construction of RLCs at Chopal and Pragati Nagar and CLC at Nahan	The EIA notification, 2006 (and its subsequent amendments till date) provides for categorization of projects into category 'A' and 'B', based on extent of impacts.	The sub-projects are not covered in the ambit of the EIA notification (amended till date), either as a Category 'A' or Category 'B' project. As per the Office Memorandum dated June 09, 2015 of MOEFCC, educational and training institutions are exempted from prior environmental clearance. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the GOI, are not triggered.  <b>Not Applicable</b>

<sup>4</sup> All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, will require prior environmental clearance from the Central Government in the Ministry of Environment, Forests and Climate Change (MoEFCC) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification; All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfill the General Conditions stipulated in the Schedule, will require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In addition, General Condition (GC) of the notification specifies that any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries

Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal

Sub-Project	Applicability of Acts/Guidelines	Compliance Criteria
	The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the rules, 1959 provide guidance for carrying out activities including conservation, construction and reuse in and around the protected monuments.	The sites of CLC (at Nahan) and RLCs (at Chopal and Pragati Nagar) are not close to any monument which is protected by the Archaeological Survey of India (ASI). Hence, no clearance is needed from ASI.  <b>Not Applicable</b>
	Water (Prevention and control of pollution) Act, 1974 and Air (prevention and control of pollution) Act, 1981	Consent for Establishment (CFE) and Consent for Operation (CFO) from the State Pollution Control Board will be required during construction for installation of diesel generator set, hot mix plant, and concrete batching plant. For the operation phase, no CFO or CFE will be required.  <b>Applicable for Construction phase</b>
	The Wildlife Conservation Act, 1972, amended in 2003 and 2006, provides for protection and management of Protected Areas.	No wildlife protected areas nearby.  <b>Not Applicable</b>
	Forest (Conservation) Act, 1980	This act provides guidelines for conservation of forests and diversion of forest land for non-forest use. It describes the penalties for contravention of the provisions of the Act. If forest land has to be acquired for the project, clearance is required from the Forest Department. No forest land is required for sub-projects under Shimla package. Hence, this is not applicable.  <b>Not Applicable</b>

### C. Asian Development Bank's Environmental Safeguard Policy Principles

11. Since the proposed HPSPDP is being funded by the ADB, it has to comply with ADB's SPS, 2009, in addition to the India's own environmental laws and regulations. The environmental safeguard policy principles embodied in SPS, 2009 aim to avoid adverse impacts on the environment and on affected people or communities; minimize, mitigate and/or compensate for adverse project impacts, if unavoidable; help borrowers to strengthen their safeguard systems and to develop their capacity in managing the environmental and social risks. The SPS, 2009 categorizes all projects into 3 environmental categories (A, B or C) based on their potential impacts.<sup>5</sup> Similarly, ADB's REA checklist method was followed to assess the potential impact of the proposed sub-projects under Shimla package. As explained below, all the three the sub-projects have been categorized as 'B'. Accordingly,

<sup>5</sup> As per SPS 2009, projects are assigned to one of the following four categories: (i) **Category A.** A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required. (ii) **Category B.** A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination is required. (iii) **Category C.** A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed (iv) **Category FI.** A proposed project is classified as category FI if it involves investment of ADB funds to or through a FI (paras. 65-67).

this IEE has been prepared to address the potential impacts in line with the requirements for category B projects. The IEE was based mainly on baseline data generation on environmental parameters and secondary sources of information and field reconnaissance surveys. Stakeholder consultations at the three sites were an integral part of the IEE. An Environmental management plan (EMP) outlining the specific environmental measures to be adhered to during implementation of the sub-projects is included in the IEE.

#### **D. Review and Approval Procedure**

6. For Category 'B' projects, the draft environmental status report is reviewed by the relevant ADB Departments and the Executing Agency (EA). Additional comments are incorporated into the final documents as relevant. These are reviewed by the EA and ADB safeguards team. The Executing Agency then officially submits the IEE report to ADB for consideration by the Board of Directors. The final report is made available worldwide by ADB, via the depository library system and the ADB website.

#### **E. Report Structure**

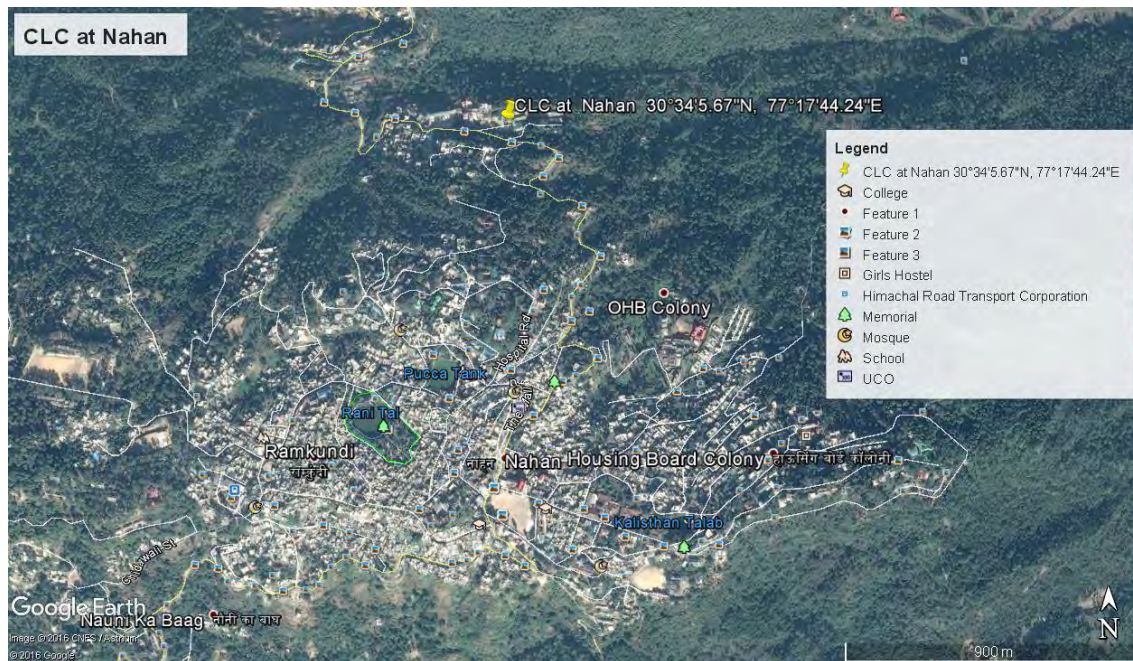
7. This Report contains eight sections including this introductory section: (i) Introduction; (ii) description of project components; (iii) description of the existing environment around the sub-project; (iv) environmental impact and mitigation measures; (v) EMP; (vi) processes for public consultation and information disclosure; (vii) findings and recommendations; and (viii) conclusions.

## II. DESCRIPTION OF THE PROJECT COMPONENTS

### A. Components of the Sub-project

8. The locations of the sub-project sites and surroundings are shown in **Figures 1 and 2**. **Table -2** summarizes the need for the sub-project, and is proposed components.

**Figure 1 (a): Location of CLC Site at Nahan**





**Figure 1 (b): Location of RLC Site at Pragati Nagar**



**Figure 1 (c): Location of RLC Site at Chopal**

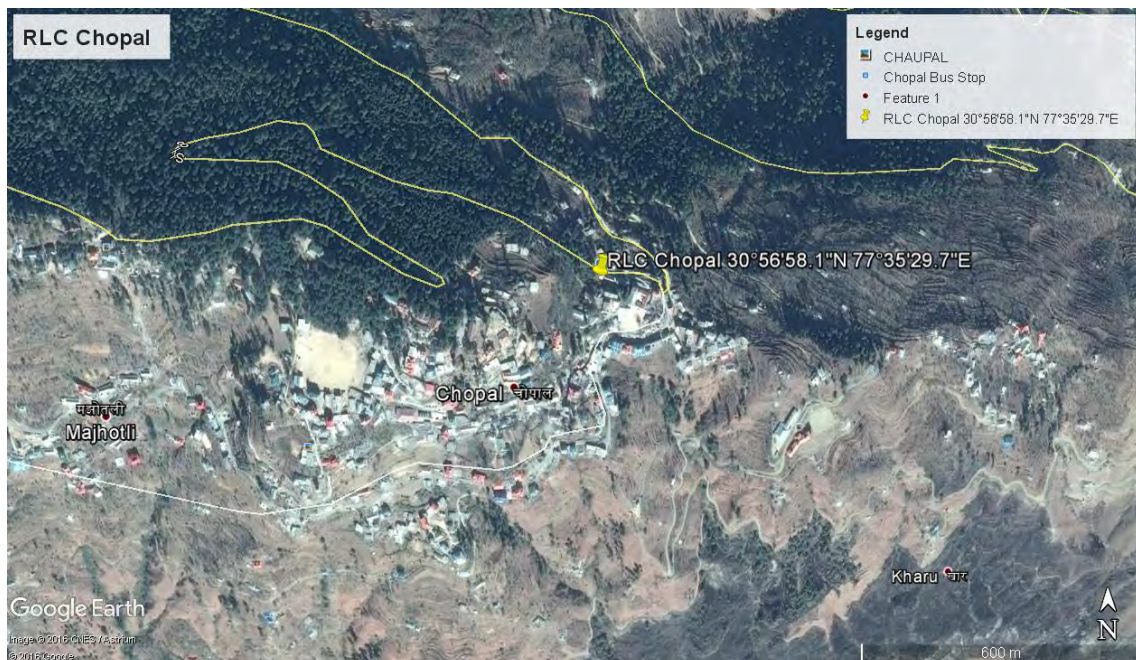


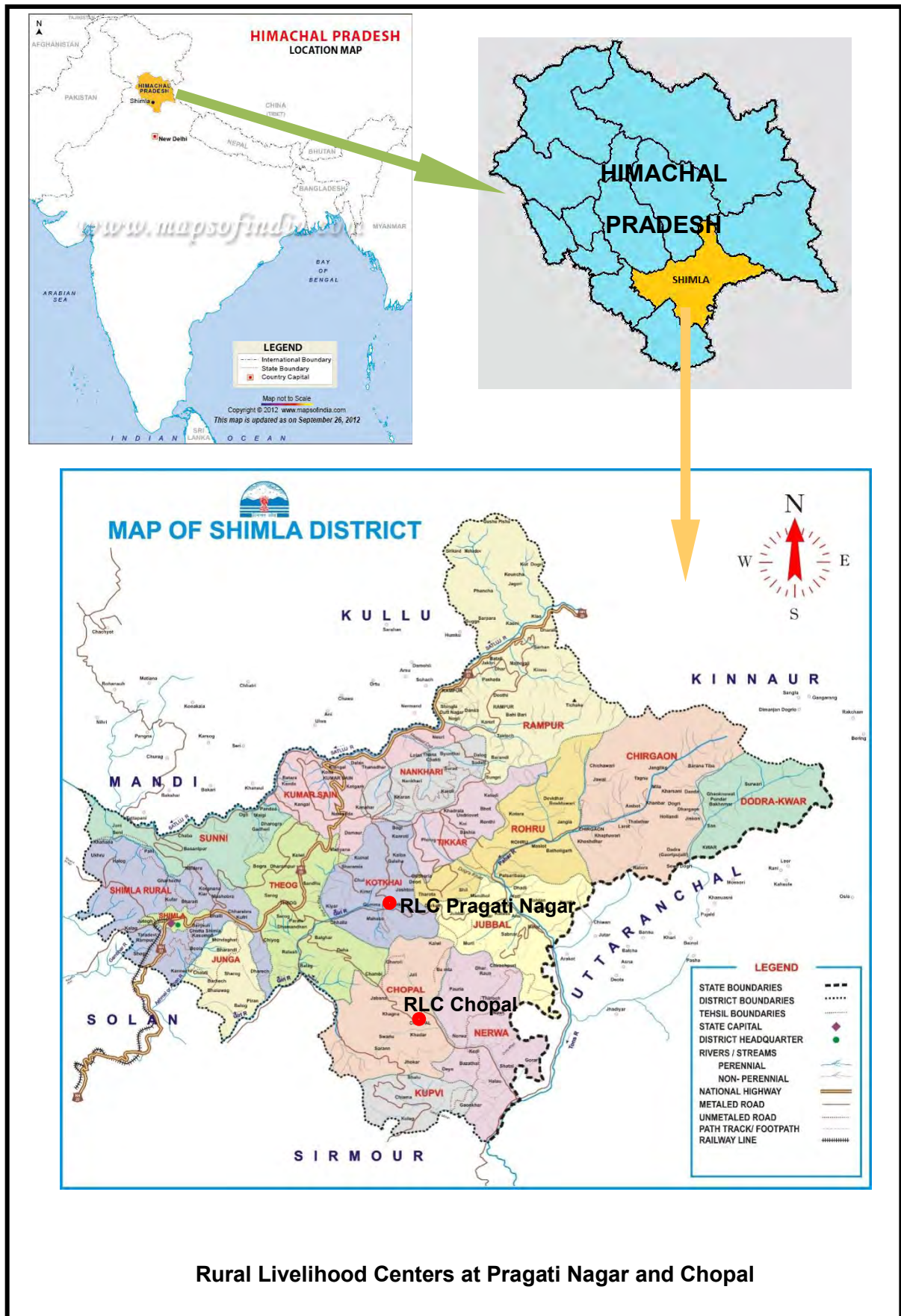
Figure 2: Locations of Sub Project Sites



City Livelihood Center at Nahan



Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal



**Table 2: Description of the Sub-project Components**

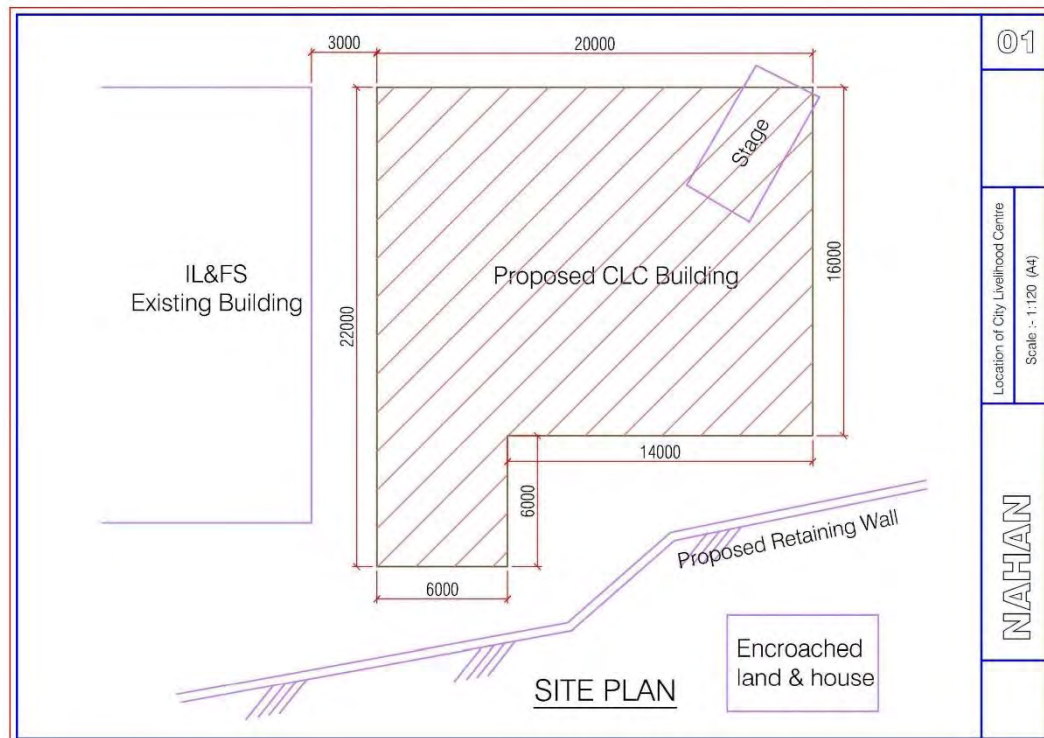
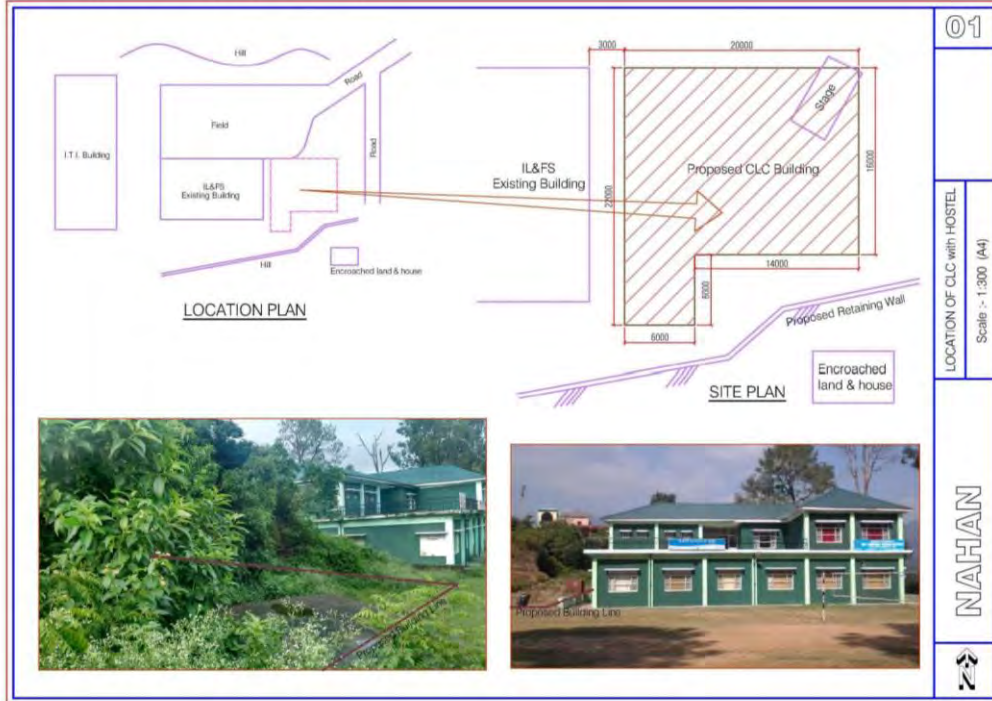
Description	Need of the Project	Proposed Components
CLC at Nahan and RLCs at Pragati Nagar and Chopal are proposed under the Shimla package.	<ul style="list-style-type: none"> <li>✓ Himachal Pradesh lacks the required number of good quality facilities for imparting technical and vocational education training (TVET) to the <i>Himachali</i> youth.</li> <li>✓ The proposed CLC and RLCs will provide the needy urban youth of the Shimla and Sirmaur districts with good quality skills training and livelihood development opportunities. The hostel facilities will enable out-station trainees from small towns and remote villages to enroll for residential programs at these proposed RLCs and CLC .</li> </ul>	<p>The main sub-project components include:</p> <ul style="list-style-type: none"> <li>i. The CLC and RLCs will have a three storey building for accommodating training facilities. It will have a lobby cum waiting area on the ground floor</li> <li>ii. There will be a computer laboratory and training class rooms on the first floor</li> <li>iii. There will be a small production center for making saleable products from local produced fruits and vegetables at Pragati Nagar site.</li> <li>iv. There hostel will be on the first and second floors</li> <li>v. Sanitation facilities have been planned on all floors.</li> <li>vi. A septic tank will be provided for 50 users.</li> <li>vii. Solar panels will be installed on the roof. They will have the potential to generate 3 kVA of power.</li> <li>viii. The total electricity load has been estimated as 25 kW at CLC Nahan and RLC Chopal, whereas electricity load at Pragati Nagar has been estimated as -----kW.</li> <li>ix. Water consumption has been estimated as 8280 liters per day. Water source will be from the municipal supply.</li> <li>x. The solid waste generated will be integrated with the waste disposal system at the respective locations of RLCs and CLC.</li> </ul>

9. The layout plan of CLC at Nahan is shown below in **Figure-3**. The layouts of RLCs at Pragati Nagar and Chopal have been shown in **Figure -3 and Figure-4** respectively.



Figure 3: Layout Plan of CLC at Nahan

**NAHAN IN SIRMAUR DISTRICT**  
(30.568242 77.295621)  
DEPARTMENT OF TECHNICAL EDUCATION



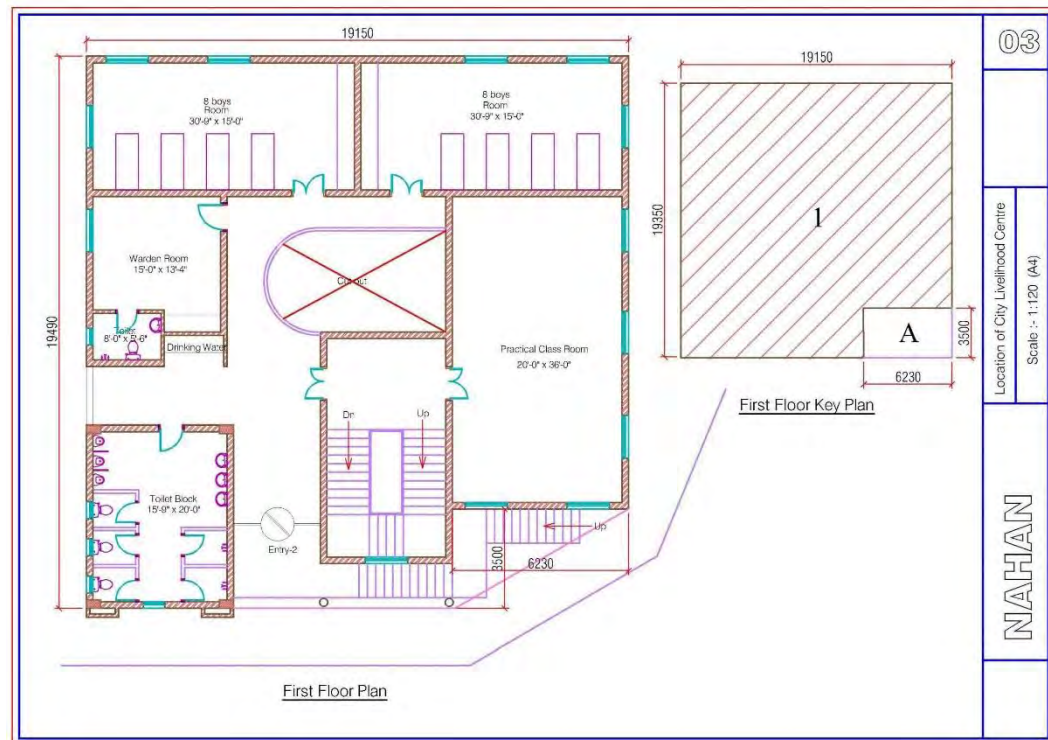
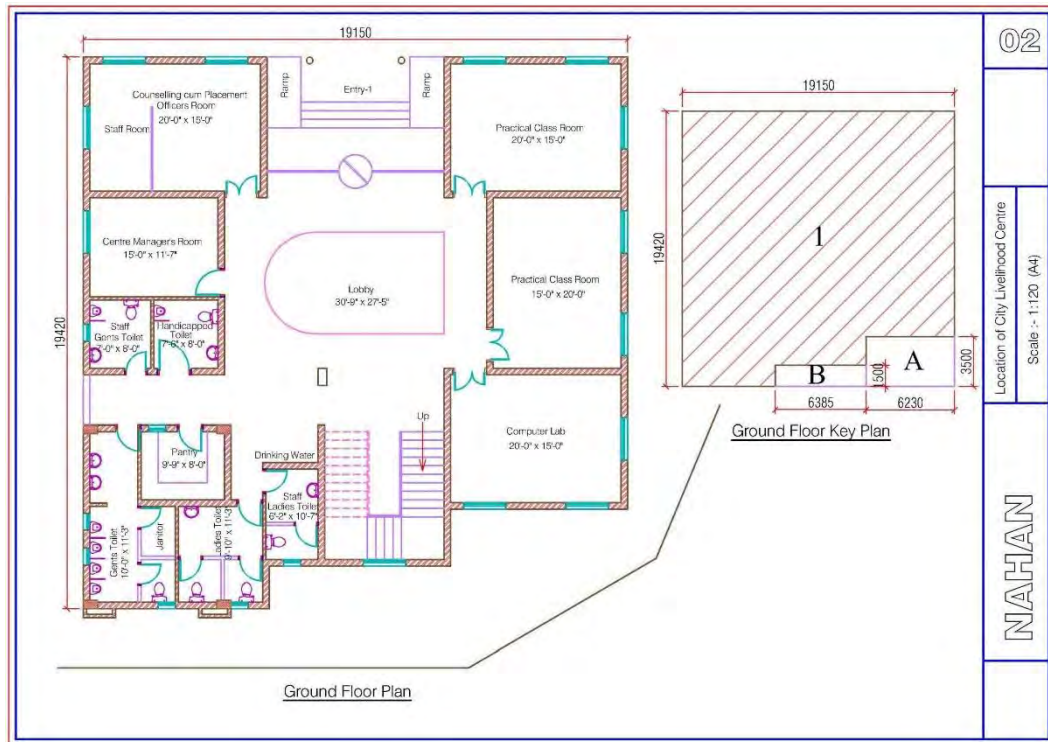




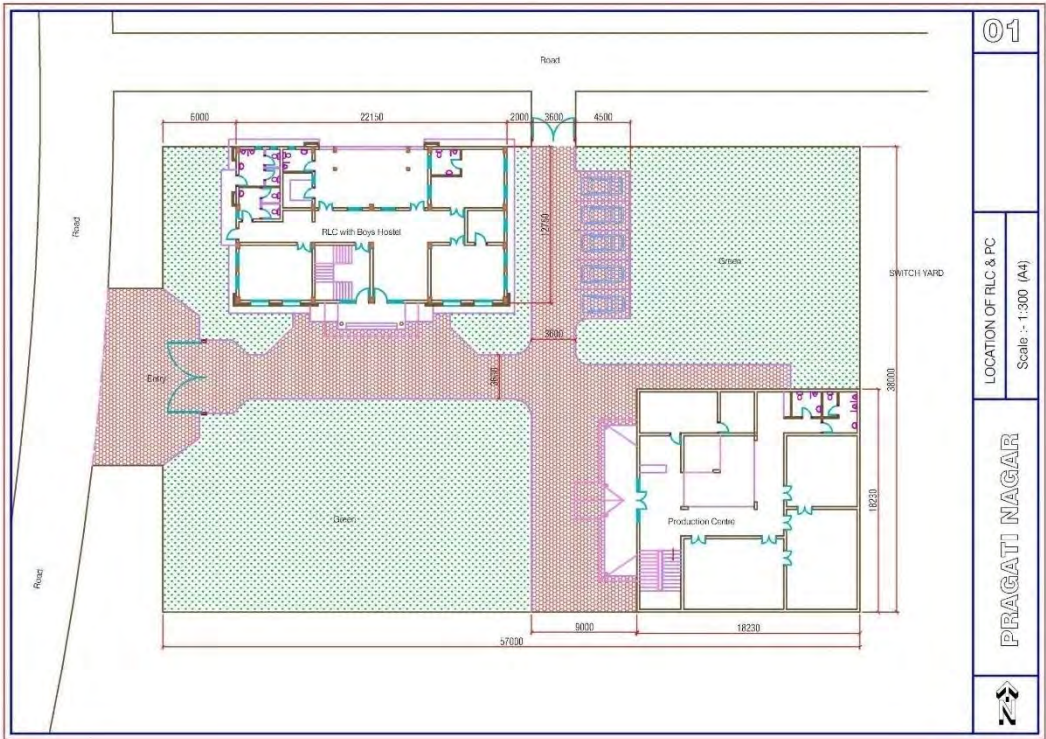


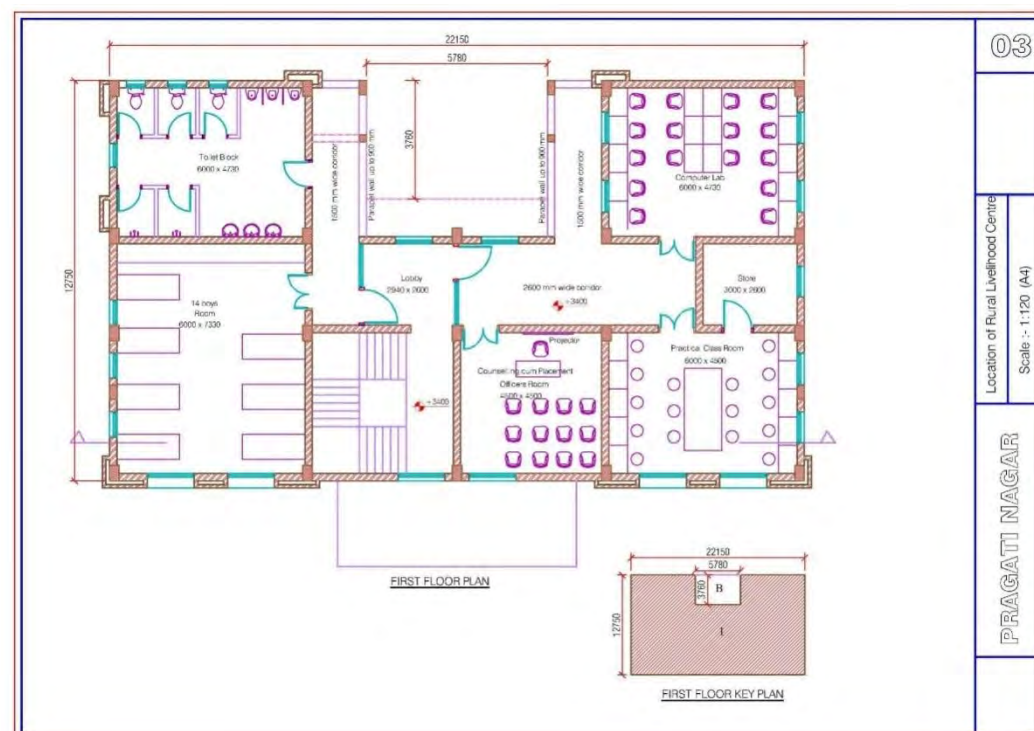
Figure 4: Layout Plan of RLC at Pragati Nagar

PRAGATI NAGAR AT PRAGATI NAGAR ITI IN SHIMLA DISTT  
(31.120034 77.493922)  
DEPARTMENT OF TECHNICAL EDUCATION

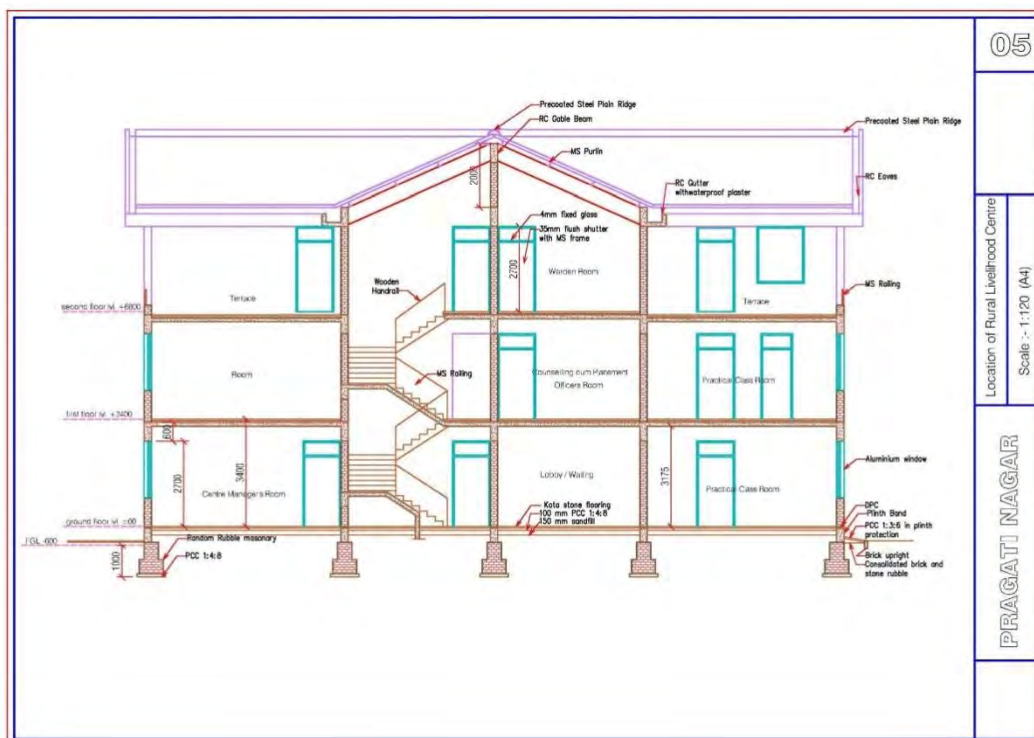
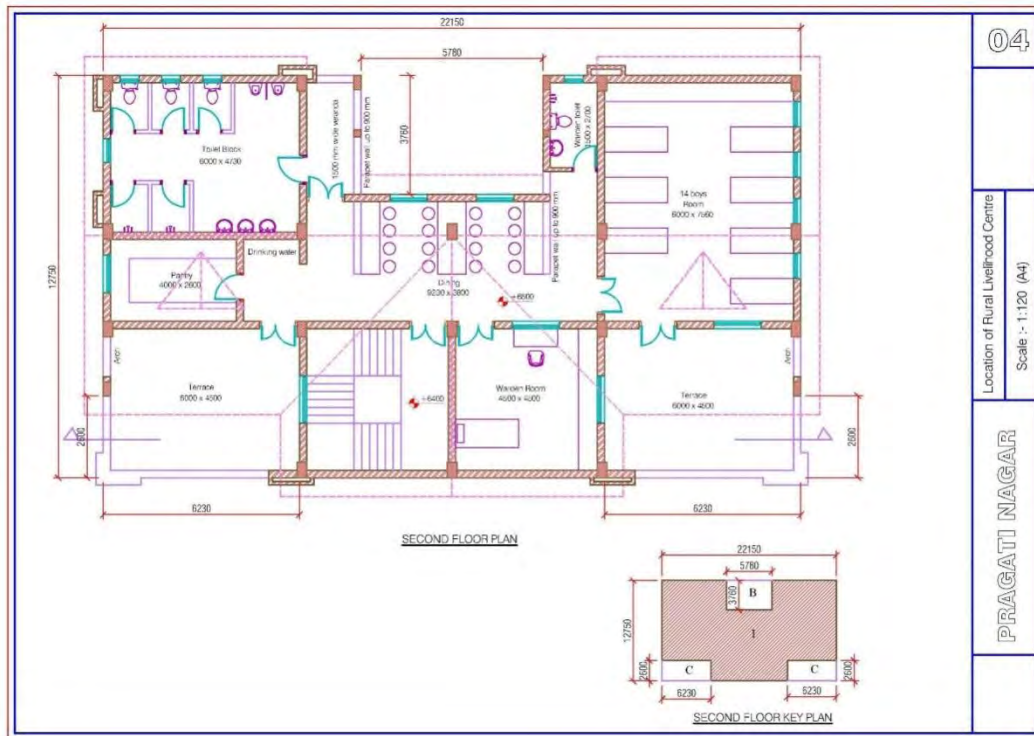


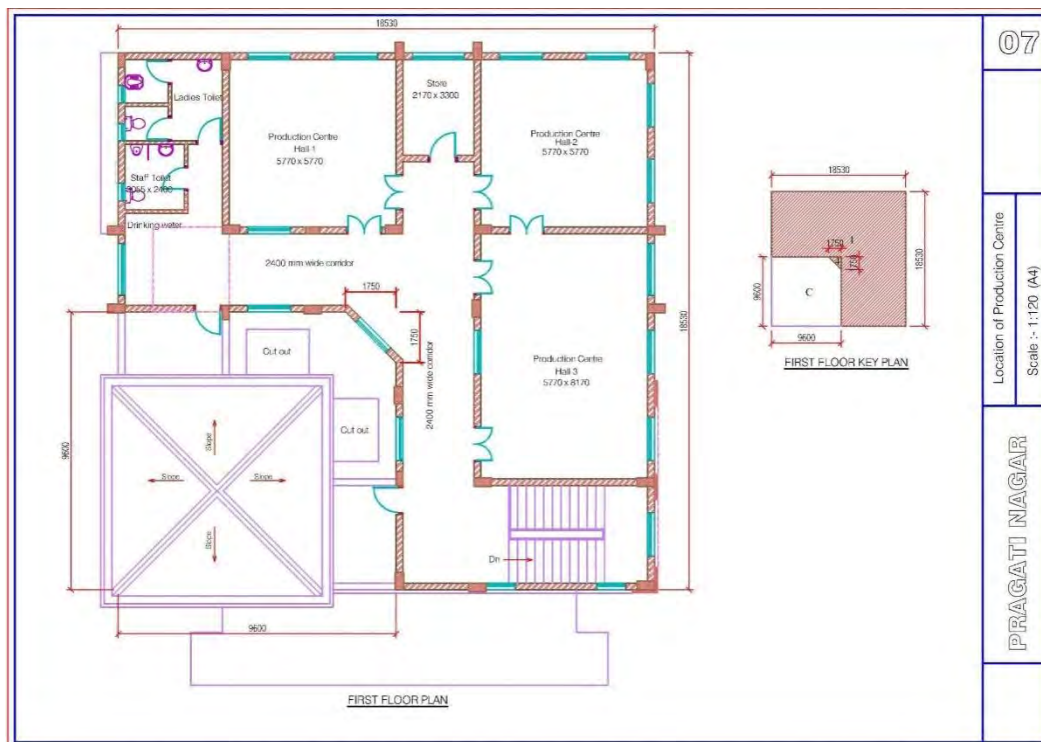
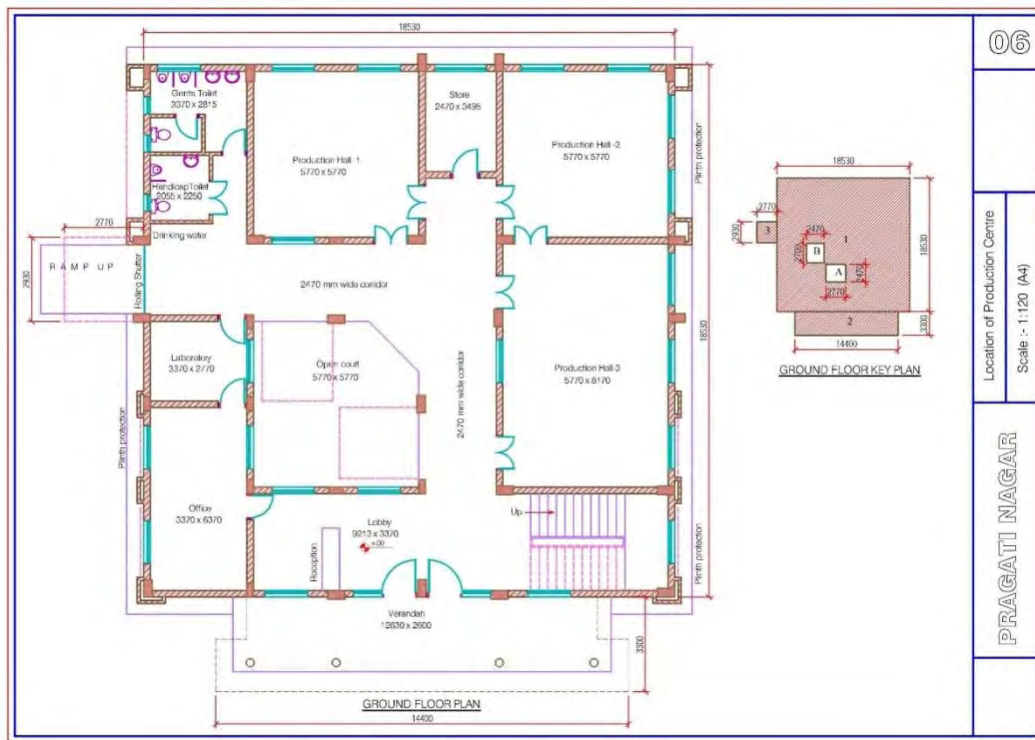
LOCATION MAP SHOWING PROPOSED SITE















3D SITE VIEW



RLC 3D VIEW



PC 3D VIEW

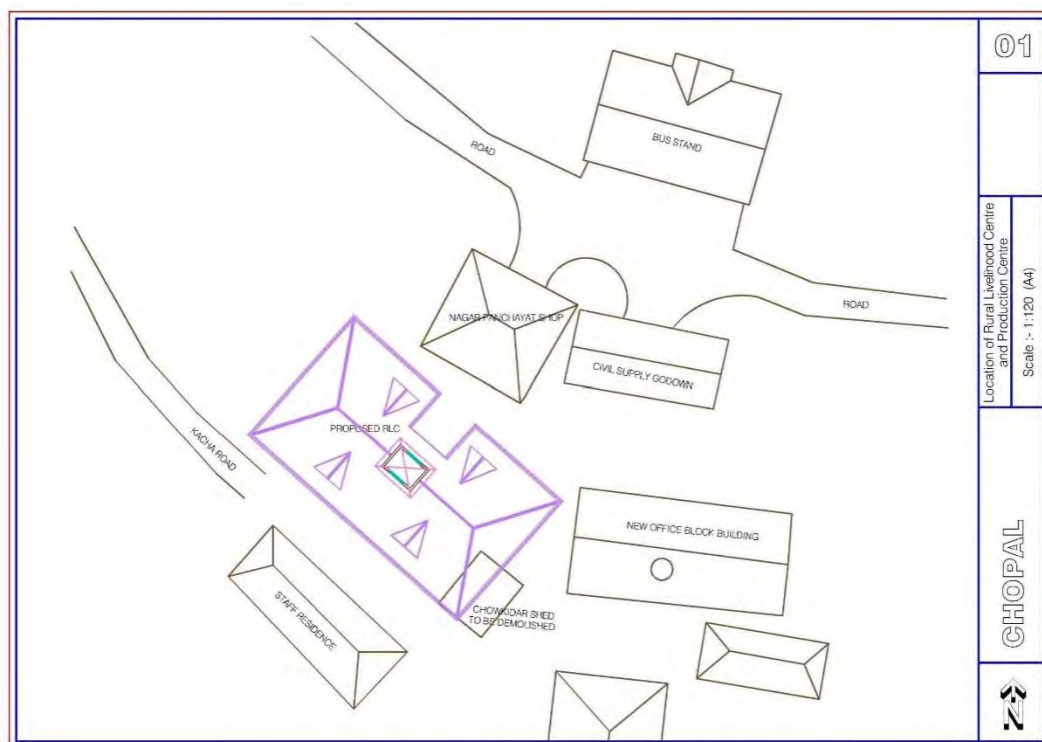


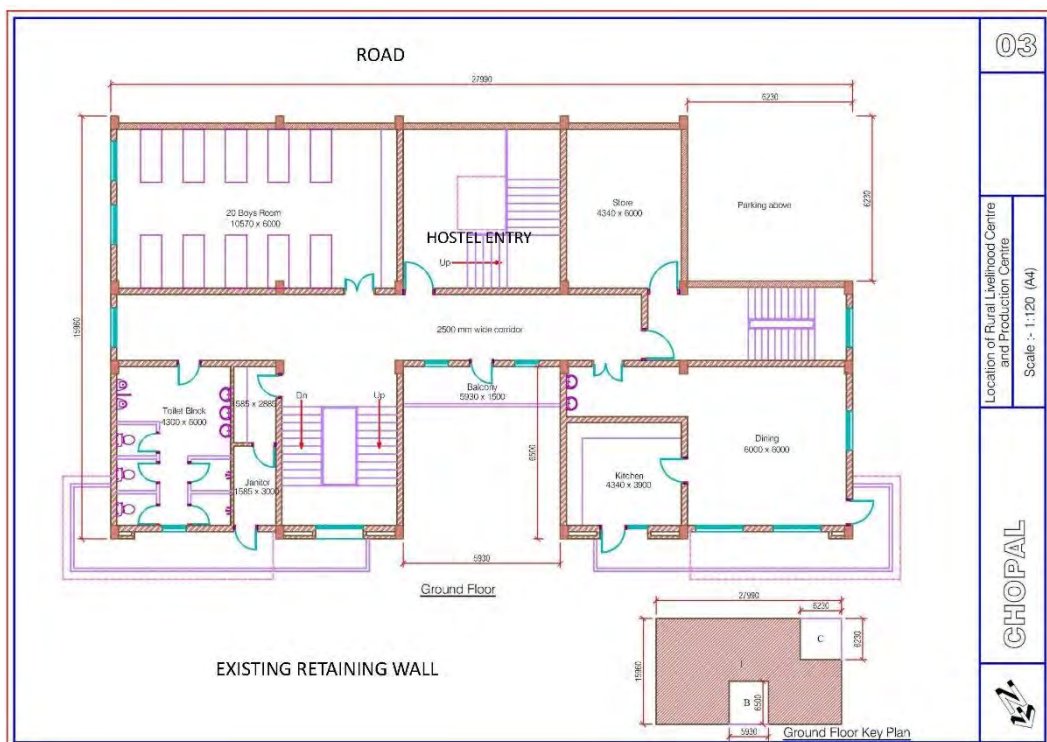
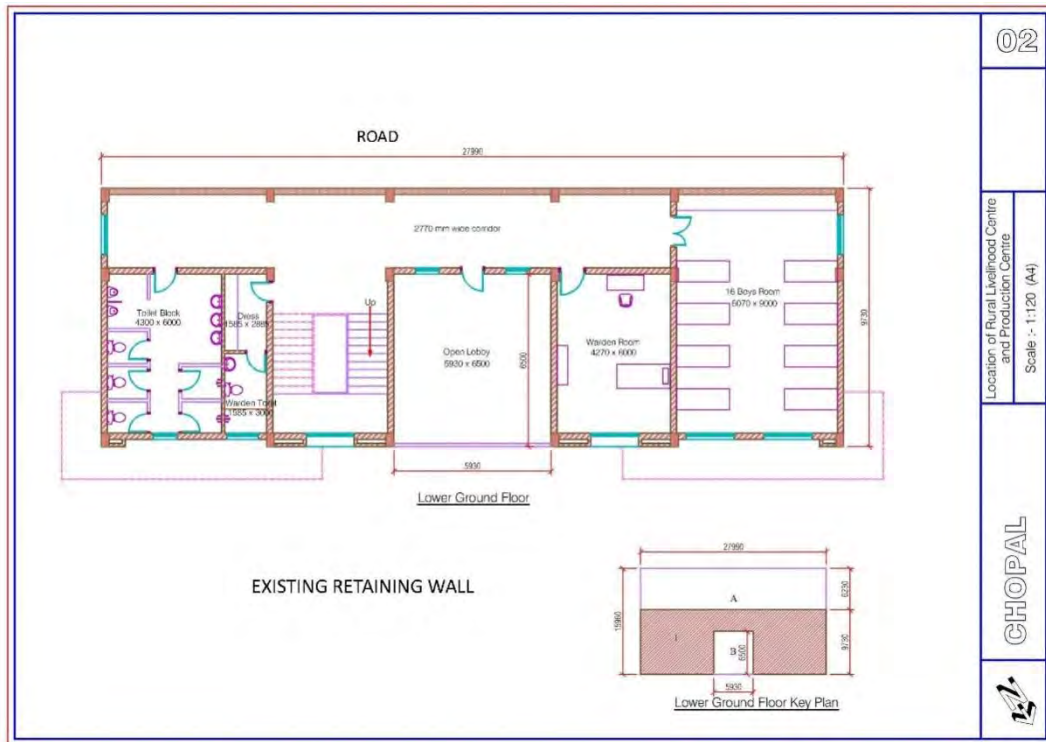
**Figure 5: Layout Plan of RLC at Chopal**

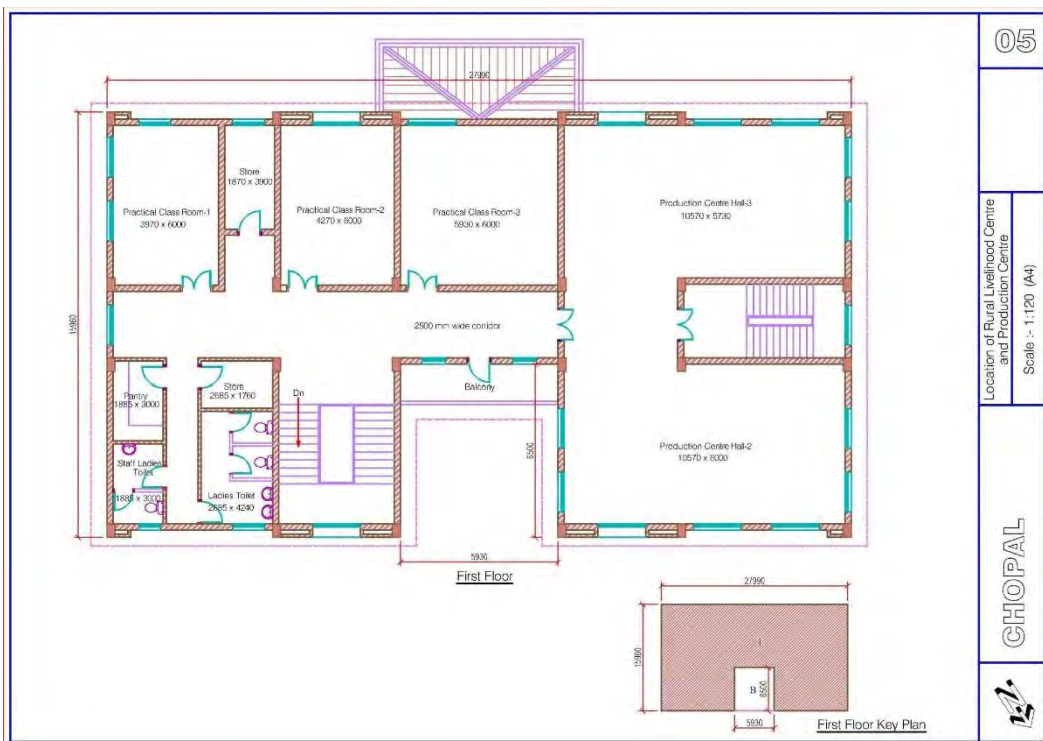
**CHOPAL IN SHIMLA DISTRICT**  
(30.949464 77.591591)  
DEPARTMENT OF RURAL DEVELOPMENT



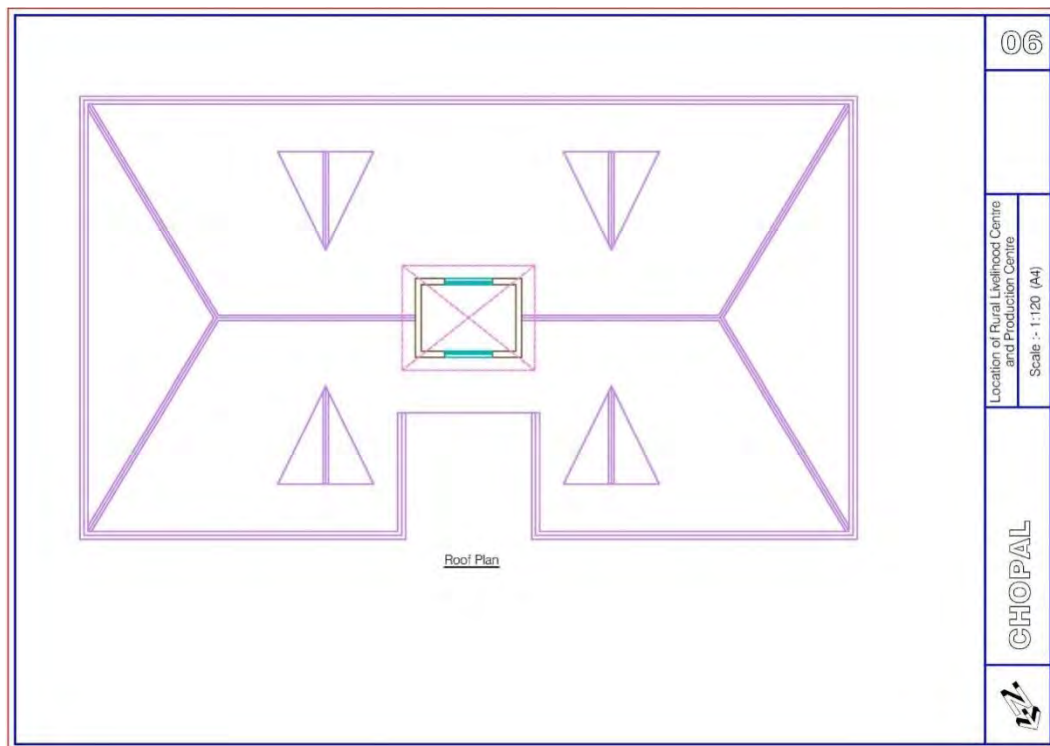
LOCATION MAP SHOWING PROPOSED SITE

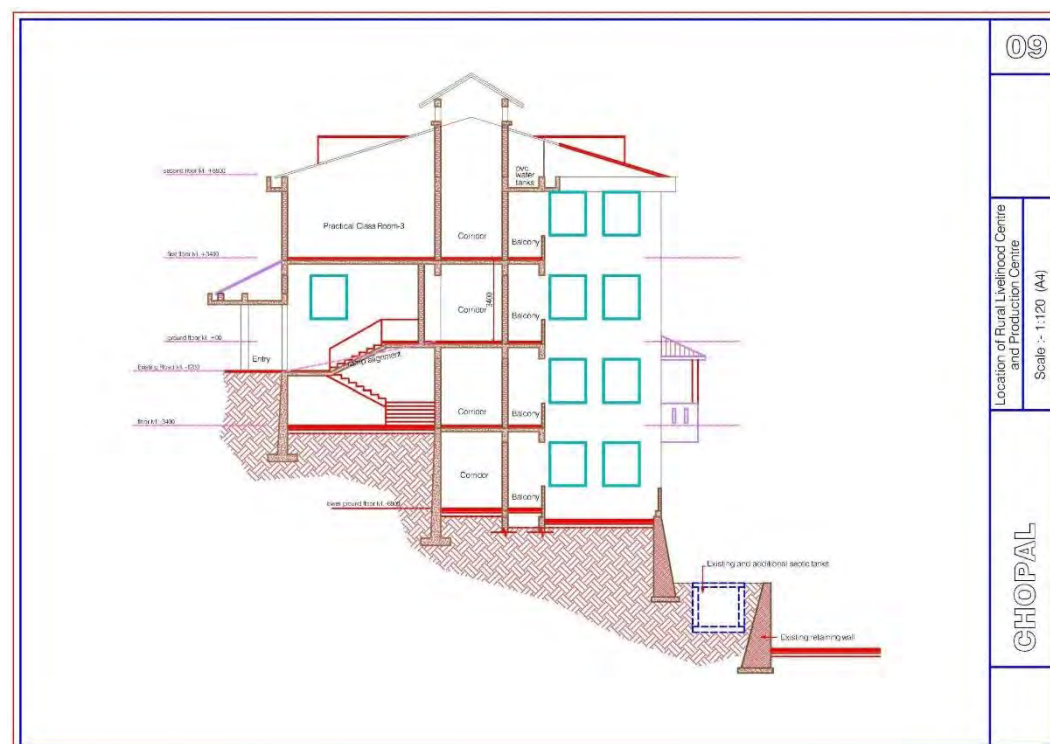
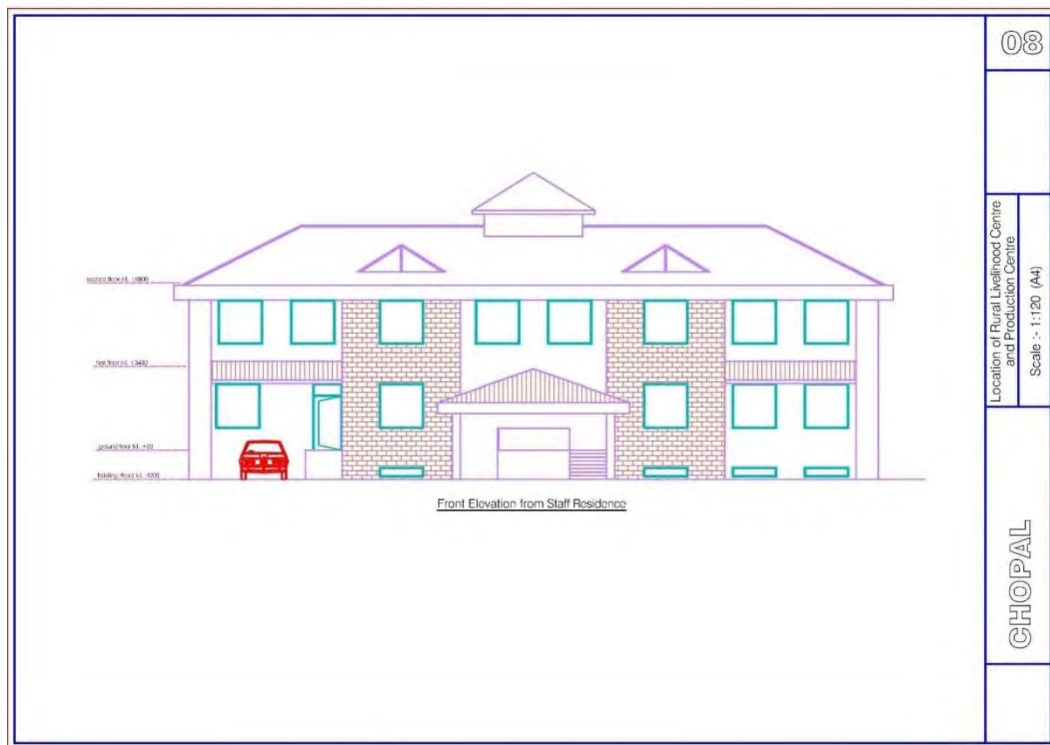














RLC 3D VIEW FROM STAFF RESIDENCE



RLC 3D VIEW FROM BUS STAND

## **B. Executing and Implementing Agencies**

10. The Department of Planning (DOP), GOHP, will be the executing agency for the proposed HPSPDP. The *Himachal Pradesh Kaushal Vikas Nigam* (HPKVN), the Department of Technical Education, Vocational & Industrial Training (DOVE), Department of Higher Education (DOHE), and the Public Works Department (PWD) will be the implementing agencies. HPKVN will also operate as the project management unit (PMU) for the overall project. For the civil works component, it will be assisted by PWD officials who are well aware of the state's and India's building codes and environmental rules and regulations. HPKVN and PWD will be responsible for overall planning and implementation of the civil works. They will ensure that the ESMF is adhered to during project implementation. The Project Management Consulting (PMC) firm to be engaged under the proposed loan will have experienced Environment and Social Safeguards specialists. They will assist PWD and HPKVN in supervising the civil works, ensuring that the IEEs and EMPs are prepared for all sub-projects, and preparing semi-annual safeguards monitoring reports. HPKVN will consolidate the semi-annual reports, and submit them to ADB. ADB will post the environmental monitoring reports on its website.

## **C. Implementation Schedule**

11. The implementation period for each of the proposed sub-projects is 24 months. The preliminary drawings for CLC Nahan and both RLCs have been prepared for approval and these have been approved. The bidding process for the sub-projects will be started by January 2017. The sub-projects will be awarded for construction by April 2017. The contractor(s) is expected to be mobilized to site by May 2017 and construction works of sub-projects will begin in June 2017, and work will be completed by November 2019.

### III. DESCRIPTION OF THE EXISTING SUB-PROJECT ENVIRONMENT

12. This section presents a brief description of the existing environment around the sub-project sites under the Shimla package, including its physical resources, ecological resources, socio-economic development and social and cultural resources. Broad aspects on various environmental parameters such as geography, climate and meteorology, physiographic, geology, seismology, ecology, socio-cultural and economic development parameters that are likely to be affected by the proposed sub-projects are presented. Secondary information was collected from relevant government agencies like the Forest Department, State Environment Department, and State Pollution Control Board, and Meteorological Department.

#### A. Environmental Profile

##### *Air and Noise Quality*

13. No air pollution sources (point or non-point) have been seen in the surroundings of influence area of all three sub- project sites. The CLC site at Nahan is located in ITI Nahan adjacent to National Highway. The CLC location is within vacant land in ITI campus. The proposed location is near the entrance gate. The RLC sites at Pragati Nagar and Chopal are not close to any State Highway or National Highway. Traffic on the road connecting to all the three sites is low. Hence, insignificant vehicular emission is expected. There are no industrial areas close to RLC sites at Chopal and Pragati Nagar. There is no industrial area close to CLC site at Nahan, but there are Industrial areas at Paonta Sahib and Kala Amb. The distances of these industrial areas are about 17 km for Kala Amb and about 43 km for Paonta Sahib. The ambient air quality and noise data for the sub-project sites are not available. The data from secondary sources has been obtained for Shimla and Sirmaur districts. The ambient air quality data has been given below:

**Table 3: Ambient Air Quality Data for Project Area**

Sl.No.	Location	Date	Parameter		
			SO2	NOx	PM <sub>10</sub>
1	Kala Amb (Sirmaur district)	15-10-2014	BDL*	12	78
		23-10-2014	6	20	108
2	Shimla	15-10-2014	BDL	12	58
		23-10-2014	BDL	10	94
* BDL- Below Detection Limit Source: Ambient Air Quality and Noise Levels. Published by CPCB					

**Table 4: Ambient Noise Levels in Project Area**

Sl. No.	Location	Noise Levels dB(A)	
		Day	Night
1	Shimla	49	67
Source: Ambient Air Quality and Noise Levels, Published by CPCB			

14. However, the levels are expected to be well within the stipulated limits since there are no sources of air or noise pollution near the sites. Ambient air quality monitoring and noise level monitoring will be conducted by the contractor(s) prior to start of construction works with the aim of establishing baseline conditions.



15. It was observed that ambient air quality is well within the limits for all parameters except PM<sub>10</sub> at Kala Amb. The levels at Kala Amb are higher because it is an industrial area. The values at sub-project locations are expected to be within limits as there are no commercial or industrial areas near the sites. The noise level data for sub-project sites is not available. The data for Shimla shows that 'Day' levels are well within limits, but night time levels are exceeding the limits. Ambient air quality Noise level monitoring will be conducted by the Contractor(s) prior to start of construction prior to establish baseline conditions.

16. **Climate.** There are four broad seasons in project area. Winter normally starts from mid-November and continues till mid-March. December, January and February are severe cold months, when the winter season is at its peak. The upper reaches, have snow and sleet while the rains are frequent in the lower areas and snow may fall as early as the beginning of October but usually the areas have snow fall from the later part of December and continues till mid of March. The higher peaks experience heavier.

17. Snowfall starts melting from March. From mid-March to mid-May, climate in most parts of the district is at its bloom because of the delightful spring. The nights are colder. The climate is comparatively hot from mid-May to mid-July. The places situated in the lower reaches on the banks of rivers and streams are as hot as plains. Rainy season generally starts from mid-July and extends up to the mid-September. Autumn season is generally very small from mid-September to mid-November. The extended rainy season and early setting of winter are the reasons for its short duration.

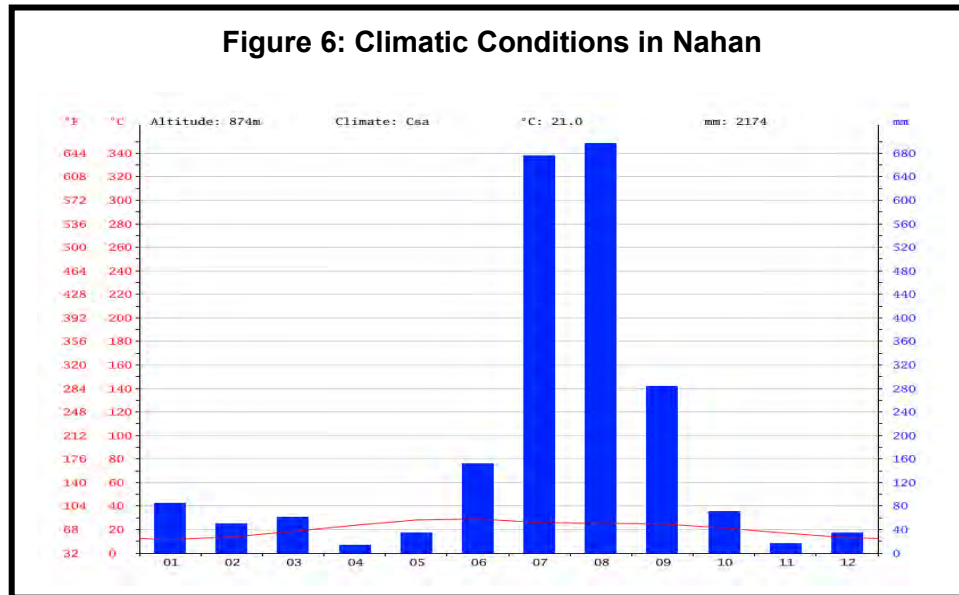
18. **Temperature.** The temperature exhibits seasonal variation with minimum during the winter and higher during the summer. April, May, June and July are the hottest months while January, February and December are the cold months. The maximum temperature rises to about 35°C and the minimum temperature falls to about -12.0°C at higher heights in the project districts. The **Table-5** below shows month wise weather in Shimla.

**Table 5: Average, Maximum and Minimum Temperature at Shimla**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<b>Record high °C (°F)</b>	21.4 (70.5)	22.6 (72.7)	25.8 (78.4)	29.6 (85.3)	32.4 (90.3)	31.5 (88.7)	28.9 (84)	27.8 (82)	28.6 (83.5)	25.6 (78.1)	23.5 (74.3)	20.5 (68.9)	32.4 (90.3)
<b>Average high °C (°F)</b>	9.3 (48.7)	10.3 (50.5)	14.5 (58.1)	19.8 (67.6)	23.0 (73.4)	23.8 (74.8)	21.3 (70.3)	20.5 (68.9)	20.4 (68.7)	18.9 (66)	15.4 (59.7)	11.9 (53.4)	17.5 (63.5)
<b>Average low °C (°F)</b>	1.7 (35.1)	2.4 (36.3)	6.1 (43)	10.8 (51.4)	13.6 (56.5)	15.1 (59.2)	14.6 (58.3)	14.2 (57.6)	12.9 (55.2)	10.5 (50.9)	7.0 (44.6)	4.0 (39.2)	9.5 (49.1)
<b>Record low °C (°F)</b>	-10.6 (12.9)	-8.5 (16.7)	-6.1 (21)	-1.3 (29.7)	1.4 (34.5)	7.8 (46)	9.4 (48.9)	10.6 (51.1)	5.0 (41)	0.2 (32.4)	-1.1 (30)	-12.2 (10)	-12.2 (10)
<b>Average <u>Precipitation</u> mm (inches)</b>	53.0 (2.087)	63.8 (2.512)	68.9 (2.713)	61.3 (2.413)	83.8 (3.299)	185.3 (7.295)	333.0 (13.11)	296.7 (11.681)	148.7 (5.854)	36.3 (1.429)	22.5 (0.886)	21.4 (0.843)	1,374. (54.118)
<b>Average snowfall cm (inches)</b>	42 (16.5)	43 (16.9)	7 (2.8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (2.8)	99 (39)
<b>Average rainy days</b>	4.5	5.3	5.9	4.6	6.3	10.1	17.2	16.2	8.8	2.2	1.5	1.8	84.5
<b>Average snowy days</b>	4.2	4.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	11.2

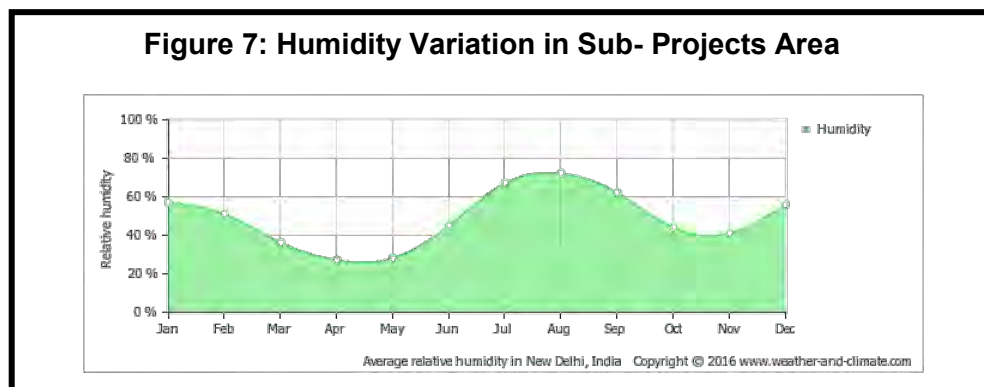
*Source: India Meteorological Department (record high and low up to 2010, snow, 1990–2010)*

19. **Rainfall.** The sub-project area experiences maximum rainfall during Monsoon season from June to September while as least Rainfall is received in November and December. There is snow fall in winter months in Shimla district in sub-project area. The monthly average rainfall and snow fall in Shimla district have been given in Table-5 above. The climatic conditions for Nahan have been depicted in **Figure-6** below:



20. It is clear from Figure-6 that rainfall at Nahan is higher than Shimla and monthly average temperatures are also higher at Nahan.

21. **Humidity.** Based on long-term climatologically data of the Shimla and Nahan districts, it is found that relative humidity increases rapidly with the onset of monsoon and reaches maximum ( around 80% in the morning and 70% in the evening) during August, when peak monsoon period sets in. Relative humidity is the minimum during the summer months (from April to June) with May being the driest month (20% in morning and 30% in evening). Skies are heavily clouded during the monsoon months and for short spells when the project area is affected by Western Disturbances. The monthly humidity variation for project districts is given below in **Figure-7**.



22. **Wind Speed and Directions.** Two broad wind patterns are observed in the project area viz. South-East to North-West (January to May) and south westerly to north easterly (June to October). The average wind speed is in the range of 0.30- 3 m/s in Nahan and 1.3-4 m/s in Pragati Nagar and Chopal sites. The wind speed in Shimla district sub -project sites is higher due to higher elevation.



### Topography and Soils

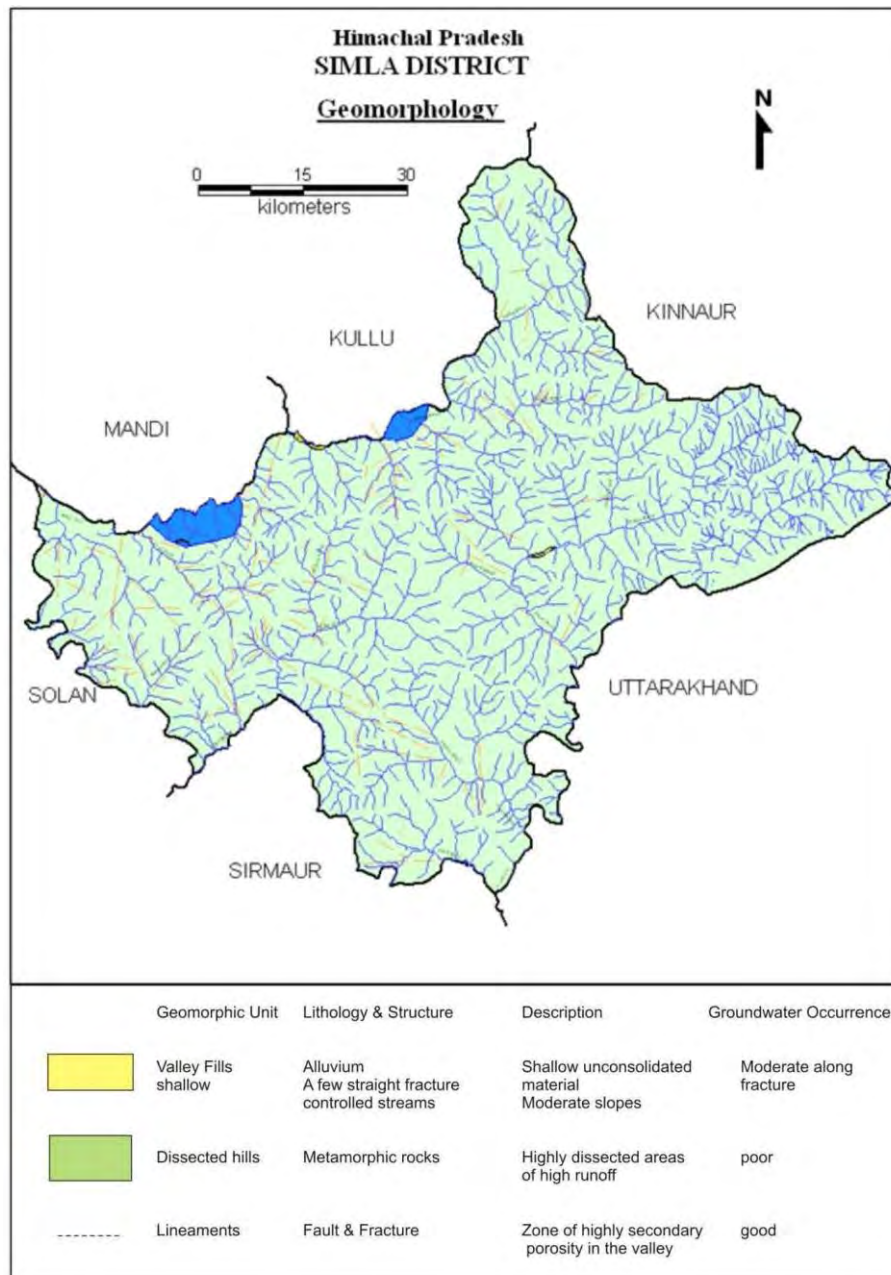
23. Both the districts where sub- projects are located have mountainous topography. The elevation of Shimla district ranges from 600 -900 m in deep valley and gorges and 1600 -3000 m above mean sea level in high structural hills and mountains. Sirmaur district presents an intricate mosaic of high mountain ranges, hills and valleys with altitude ranging from 300 to 3000 m above MSL. There is general increase in elevation from south to north and from east to west. In general terrain Giri terrain exhibits highly rugged mountain terrain. The highest peaks in Chaur dhar remain snow bound throughout the year. Low denuded hill ranges of Siwalik represent the southwestern part of the district. In the areas underlain by high hill ranges of Himalayas, the valleys are narrow and deep with steep slopes. The elevation of sub-project. The elevation of sub-project sites are as follows:

**Table 6: Elevation of Sub-Project Sites**

Sl. No.	Name of Sub- Project Site	Elevation(m)
1	CLC Nahan	790
2	RLC Chopal	2254
3	RLC Pragati Nagar	1495

24. Soils generally sandy loam in valley areas of the Shimla district and in rest of the hilly and mountainous areas soil is skeletal. The soil depth is generally shallow except in areas having good vegetative cover. It is generally dry, shallow and deficient in organic matter. Landslides are the common features in mountainous terrains. Soils are rich in nutrients and thus are fertile. The soils are generally brown, alluvial and grey brown Podzolic. The soils are light textured with neutral pH and good fertility status. Both the sub-project sites in Shimla district are having hilly terrain so soil depths are shallow at both locations. The soil in the Sirmaur district vary from thin and bare soil of high mountains to rich deep alluvial soil of the valleys. In the hilly area i.e. northern part soils are veneer and brown in color, these are high base status soil of humid regions. In the southern part, combination of shallow black, brown and alluvial soils are found. The soil and geomorphology map of subproject region is given below in **Figure-8**.

**Figure 8: Soils and Geomorphology Map of Sub-Project Area**



### ***Surface water and Ground water***

25. The sub project site at Nahan is located in catchment area of Yamuna River. There is no river in close vicinity of Chopal and Pragati Nagar sites. One seasonal stream flows close to Nahan site. To establish baseline scenario, ground water quality data was obtained from the Central Ground Water Board. The water quality data for the sub -project sites is given below in **Table-7**:

**Table 7: Ground Water quality in Sub-Project Area (Nahan)**

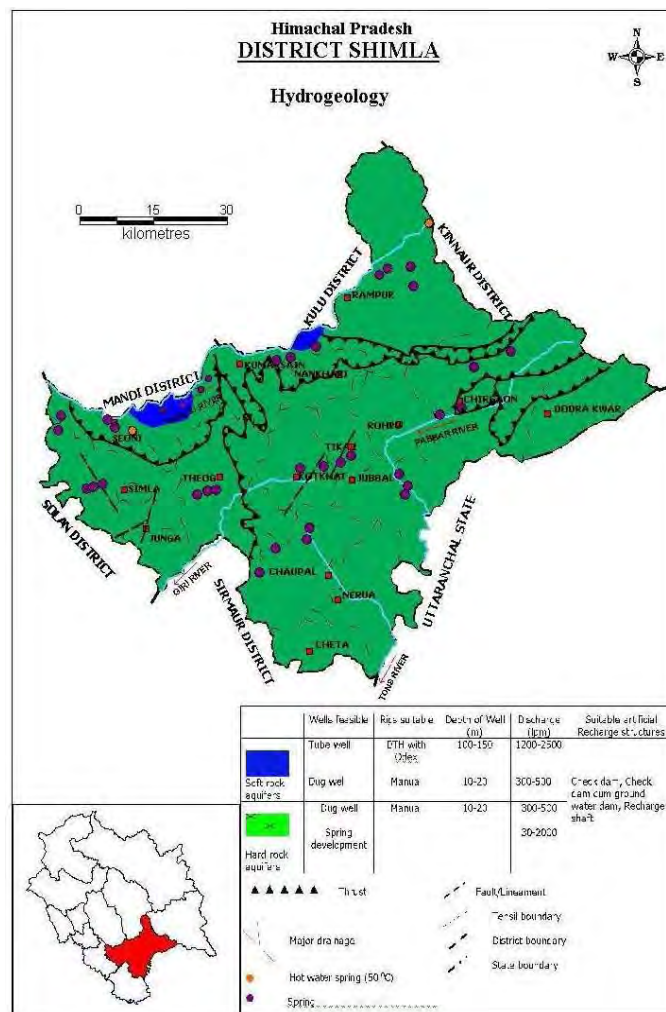
		EC μS/cm at 25°C	HCO <sub>3</sub>	Cl	NO <sub>3</sub>	F	Ca	Mg	Na	K	K Total Hardness as CaCO <sub>3</sub>
Parameter	pH	in ( mg/l)									
Min	7.23	328	277	22	2.1	0.26	36	8.5	18	2.3	59
Max	8.00	816	499	159	88	0.78	104	27	294	8.2	634

Source: Central Ground Water Board.

26. Due to the absence of any water polluting sources in the sub project sites and surroundings, it is clear that all parameters of water quality are within the permissible limits, specified by Bureau of Standards (BIS), for drinking and irrigation. The ground water quality of Shimla district has also been verified from the Central Ground Water Board. The water quality monitoring will be conducted by the contractor(s) prior to the start of construction works.

27. Based on 2012 data, the depth of water level during pre-monsoon months, at Nahan, ranged from 3.76 to 43.98 m below ground level (bgl). During post- monsoon months, it ranged from 2.98 to 37.35 m bgl. The variation of ground water table depth has been shown in **Figure-9** for Shimla district. The stage of ground water Kala Amb valley area (Nahan CLC site) of Sirmaur district is 56.46% and falls in the exploited category.

**Figure 9: Hydrogeology and Ground water Depth Map**



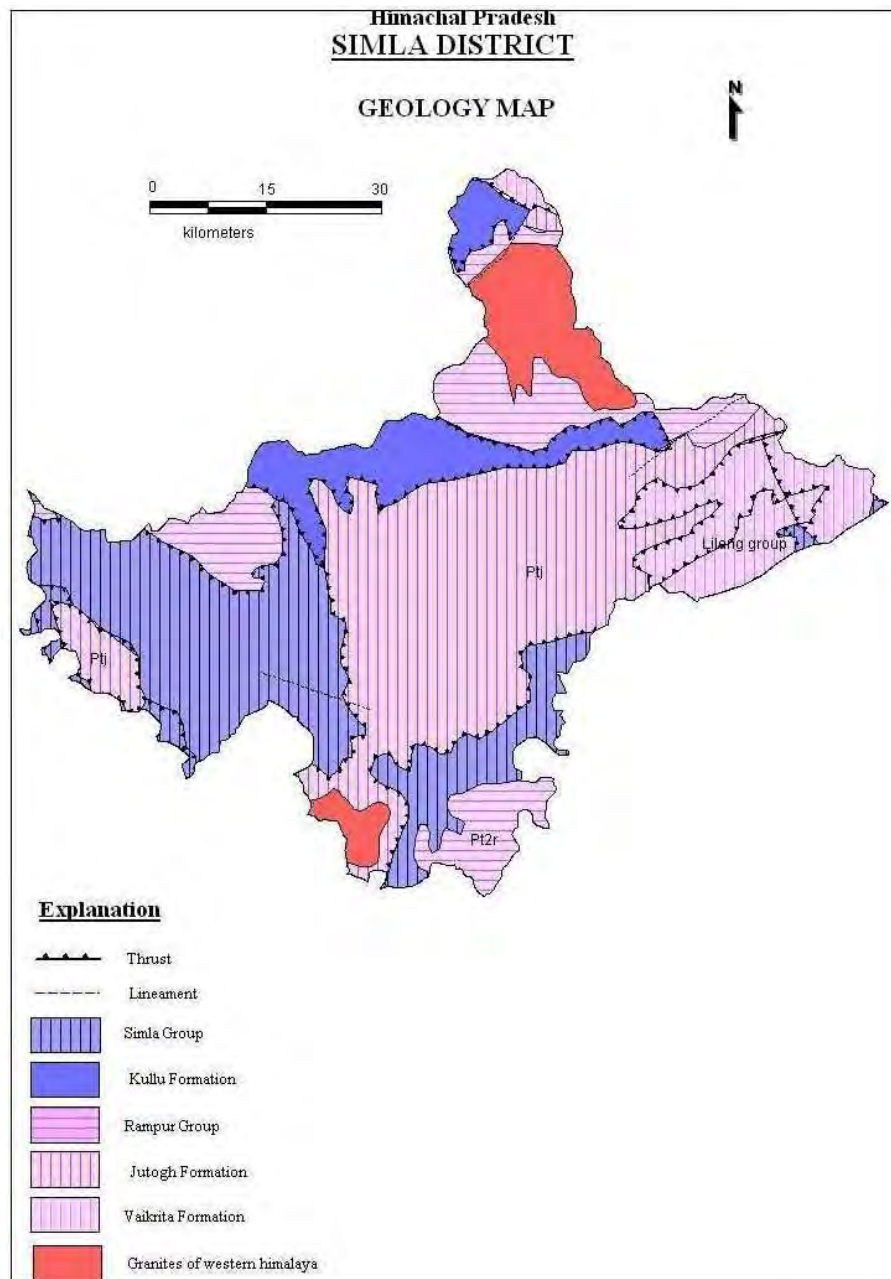


### ***Geology and Seismology***

28. In Himachal Pradesh, geological history goes back to the Archaean Proterozoic transition although the actual Himalayan Mountain building took place only during Cenozoic era. The Himalayas are a classic example of continent and continent collision due to convergent movement of Indian plate towards the Eurasian plate. It comprises two contrasting tectogens with their own distinctive geological history. The dividing lines between these two tectogens represent a major tectonic discontinuity and are designated by several local names. However, it can be collectively refer to as a main central thrust and on either side of this thrust the tectogens display contrasting stratigraphic and tectonics features indicating convergence of two alien blocks. These are the lesser Himalayan tectogens and the Tethys Himalayan tectogen.

29. The Siwalik Group in the Himachal Himalaya forms a parallel foot- hill belt in the sub-Himalayan zone, extending along the southern margin of the Palaeogene Sirmour group belt from the Ravi to the Yamuna. Within Himachal Pradesh, the Himalaya has maximum width between Hoshiarpur and Jogindernagar. The Siwalik sediments, though occurring as an independent structural belt, are also seen to overlie the Muree in the Jammu sector of the Kashmir Himalaya and the Kasauli in the Himachal Himalaya. Pilgrim (1910) recorded a gradual transition from Muree beds to Lower Siwalik in the Rawalpindi and Jhelum districts of Pakistan and from Kasauli to Lower siwalik (Nahan) in the Himachal Himalaya. This fact assumes importance because there is a tendency to ignore this normal relationship between the Siwalik and Sirmour Groups at Dharamsala, Sarkaghat and Nalagarh. At Haritalyangar near Bilaspur, the Lower Siwalik is seen resting on the Dagshai with an unconformity, which is described as the most striking discordance in the whole sequence of fresh water deposits and evidently representing a period of considerable earth movements (Pascoe, 1964). The main tectonic elements of the project region include the central thrust, and boundary fault. Several NE-SW lineaments are also known from the area and these traverses across different tectonic zones. Seismically, the State constitutes one of the most active domains of the Himalayan region. The geological formations in both the project districts are similar in nature. The geological map of project region has been given in **Figure-10** below:

**Figure 10: Geological Map of Shimla District**



Source: Government of India, Ministry of Water Resources, Central Ground Water Board. Ground Water Information Booklet Shimla District.

30. India's seismic code divides the country into five seismic zones (I to V). The sub-project stretch comes under seismic zone V as defined by Urban Earthquake Vulnerability Project (UEVP) and the Atlas prepared by the Building Materials Promotion and Technology Council (BMTPC), Government of India and UNDP [IS 1893 (Part I : 2002)]. All structures will be designed considering seismic zone V.

31. Soils in the sub-projects sub- project districts are generally sandy loam in valley areas and in rest of the hilly and mountainous areas soils are skeletal. The soil depth is generally shallow except in areas having good vegetative cover. The soils are generally dry, shallow and deficient in organic matter. Landslides are the common features in mountainous

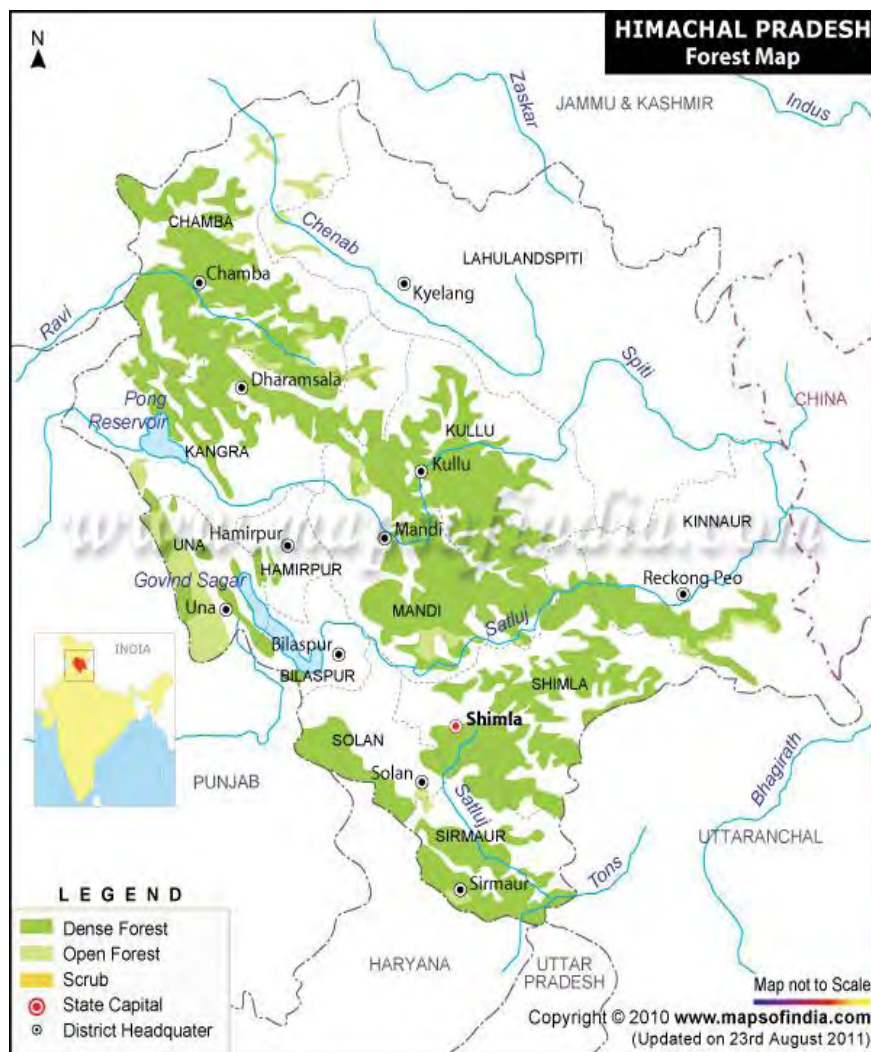
terrains. Soils are rich in nutrients and thus are fertile.

## B. Ecological Resources

### Forests

32. Forests in Himachal Pradesh currently cover an area of nearly 37,691 square kilometers (14,553sq.miles), which is about 38.3% of the total land area of the state. The variation in the landscape has created great diversity of flora and fauna. From the snowbound peaks of the Himalayas to the moist Alpine scrub, sub Alpine forests, dry - temperate and moist- temperate forests to moist deciduous forests, the state possesses a wide biodiversity that in return nurtures a large multiplicity of floral and faunal forms. Reserve Forests constitute 71.11%, Protected Forests 28.52% and Un-classed forests constitute 0.35% of the total forest area. Kangra district has about 66.23 % of its geographic area under forests and most of it is managed by the Forest Department. The forests of the district can be classified into six main categories namely: (1) the tropical dry deciduous forests, (2) the sal forests (3) the chir forests, (4) the oak forests, (4) the deodar, fir and spruce forests, and (5) the Alpine pastures. Forest cover map is shown in **Figure -11**.

**Figure 11: Forest cover Map of Himachal Pradesh**



Source: State Forest Department



33. The sub-project sites do not fall within any reserved, protected, or revenue forest. The complete vegetation of Himachal Pradesh relies on two factors - height and rainfall. The southernmost part of the state is at a lower altitude level and it contains both humid and subtropical dry broadleaf woodlands, along with subtropical moist broadleaf forests. The majority of area is covered by Himalayan subtropical broadleaf forests. Apart from this, the state has some of the vegetation which is abundant with sal, sisham, and chirpine, dry deciduous and moist broad-leafed forests. The landscape which falls in temperate regions has trees like oak, deodar, blue pine, fir and spruce. The trees found in higher elevations include Alders, birches, rhododendrons and moist alpine scrubs.

34. Himachal Pradesh has abundant growth of fruits like apple, peaches, plums and berries. It is rightly called the 'fruit bowl of India'. There are plenty of fruit orchards and fruits are exported to various parts of the country and abroad. The pleasant climate also helps numerous flower varieties like gladiolas, lilies, chrysanthemums, roses, marigolds, carnations, etc. to grow in abundance.

35. Himachal Pradesh is home to approximately 1200 birds along with 359 animal species. This includes leopards, ghoral, snow leopard, musk deer (state animal), and Western Tragopan (state bird). The state is an ideal tourist destination for animal lovers as it hosts 12 main national parks and sanctuaries. It has two major national sanctuaries -the Great Himalayan National Park and the Pin Valley National Park.

36. Since the entire three sub -project sites are located in the urban habitations, therefore, there are no protected areas in 10 km radius. Around the sub-project sites, one only finds domesticated fauna and common trees such as shisam, mango, neem, and sal.

37. The water bodies around sub project sites are seasonal in nature because of swift flow. There is not much presence of aquatic life in the water bodies close to the sub-project sites.

### ***Protected Areas***

38. The list of protected areas (National Parks and Wildlife Sanctuaries) in Himachal Pradesh is given in **Table 8**. Two protected areas are there in each Shimla and Kinnaur districts, but they are located more than 20 km away from the proposed sub -project sites.

**Table 8: Protected Areas in Himachal Pradesh**

Sl. No.	Sanctuaries	District	Area (km <sup>2</sup> )
1	Bandli	Mandi	32.11
2	Chail	Solan	16
3	Chandra Tal	Lahaul & Spiti	38.56 +(11.53 for Consideration)
4	Churdhar	Sirmour	55.52
5	Daranghati	Shimla	171.50
6	Dhauladhar	Kangra	982.86
7	Gamgul-Siyabehi	Chamba	108.40
8	Kais	Kullu	12.61
9	Kalatop-Khajjar	Chamba	17.17
10	Kanawar	Kullu	54.27
11	Khokhan	Kullu	14.94

Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal

Sl. No.	Sanctuaries	District	Area (km <sup>2</sup> )
12	Kibber	Lahaul & Spiti	2220.12
13	Kugti	Chamba	379
14	Lipa Asrang	Kinnaur	31
15	Majathal	Solan	30.86
16	Manali	Kullu	29
17	Nargu	Mandi	278
18	Pong Dam Lake	Kangra	207.59
19	Rakchham-Chitkul	Kinnaur	304
20	Renuka	Sirmour	4
21	Rupi-Bhaba	Kinnaur	503
22	Sechu-Tuan Nalla	Chamba	390.29
23	Sainj	Kullu	90
24	Shikari Devi	Mandi	29.94
25	Shimla Water Catchment	Shimla	10
26	Simbalbara	Sirmour	27.88
27	Talra	Shimla	46.48
28	Tirthan	Kullu	61
29	Tundah	Chamba	64
30	Water Supply Catchment	Shimla	10
<b>National Parks</b>			
1	Great Himalayan National Park	Kullu	765
2	Pin Valley National Park	Lahaul & Spiti	675
<b>Conservation Areas</b>			
1	Shilli Conservation Reserve	Solan	1.49
2	Shri Naina Devi Conservation Reserve	Bilaspur	17.01
3	Darlaghat Conservation Reserve	Solan	0.67

Source: Himachal Pradesh State Forest Department

## C. Economic Resources

### Industries

39. Being a hilly state, Himachal Pradesh has few large industrial units. As shown in **Table-9** for Sirmour district and **Table -10** for Shimla district below, both the project districts have micro, small, and medium enterprises focusing on agro-products, leather, textiles, wood, etc.:

**Table 9: Details of Existing Micro and Small Enterprises and Artisan Units in Sirmaur District**

NIC Code No	Type of Industry	Number of Units	Investment (Lakh Rs.)	Employment
20	Agro based	5	902.16	66
22	Soda water	-	-	-
23	Cotton textile	-	-	-
24	Woolen, silk & artificial Thread based clothes.	-	-	-
25.	Jute & jute based	-	-	-
26.	Ready-made garments & embroidery	-	-	-
27.	Wood/wooden based furniture	-	-	-
28.	Paper & Paper products	-	-	-
29.	Leather based	13	1171.04	569
31.	Chemical/Chemical based	41	19202.56	1206
30.	Rubber, Plastic & petro based	4	812.28	86
32.	Mineral based	-	-	-
33.	Metal based (Steel Fab.)	1	842.41	42
35.	Engineering units	9	2127.82	260
36.	Electrical machinery and transport equipment	7	399.76	73
97.	Repairing & servicing	-	-	-
01.	Others	109	7749.63	997

Source: DIC, Sirmaur

**Table 10: Details of Existing Micro and Small Enterprises and Artisan Units in Shimla District**

NIC Code No	Type of Industry	Number of Units	Investment (Lakh Rs.)	Employment
20	Agro based	884	1261.88	2315
22	Soda water	-	-	-
23	Cotton textile	-	-	-
24	Woolen, silk & artificial Thread based clothes.	7	3.5	18
25.	Jute & jute based	2	1.00	8.0
26.	Ready-made garments & embroidery	150	75.00	315.0
27.	Wood/wooden based furniture	350	580.00	931
28.	Paper & Paper products	65	145	140
29.	Leather based	6	1.80	140
31.	Chemical/Chemical based	8	8.40	24
30.	Rubber, Plastic & petro based	-	-	-
32.	Mineral based	7	70	35
33.	Metal based (Steel Fab.)	435	912	35
35.	Engineering units	7	10.0	21
36.	Electrical machinery and transport equipment	-	-	-



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NIC Code No	Type of Industry	Number of Units	Investment (Lakh Rs.)	Employment
97.	Repairing & servicing	900	489.25	1850
01.	Others	161	320.0	372

Source: DIC, Shimla

### Transportation

40. All the three sub- project sites are well connected with Shimla, Chandigarh, and other destinations in Himachal Pradesh. The nearest rail head for Chopal and Pragati Nagar is Shimla at a distance of 87.2 km and 52.5 km respectively. For CLC Nahan site, nearest rail head is at Yamuna Nagar at a distance of 68.3km. The nearest operating airport is Chandigarh from the entire three sub -project sites.

### Land Use

41. A study of the land use (**Table-11**) shows that majority of the area of both the districts is under forest cover and land under cultivation. The land under permanent pastures and grazing is also significant. The barren land area in both districts is quite low. The land use of Chopal site is urban area and at Nahan and Pragati Nagar under educational institutes. If land use of sub project sites is to be seen in terms of classification of **Tables 11**, it will fall 'non cultivation category'.

**Table 11: Land use pattern of Project Districts**

Land use	Area (In 000' hectare)	
	Shimla	Sirmaur
Geographical Area	507.37	224.80
Net Area Shown	67.301	40.80
Forests	129.177	48.30
Land under non cultivation	146.60	37.30
Permanent Pastures and other Grazing land	249.092	57.0
Culturable waste land	13.50	15.90
Land under Miscellaneous use, tree, crop, etc.	3.47	10.50
Barren and unculturable land	21.10	8.50
Current Fallows	11.75	3.90
Other fallows	5.6	2.5

Source: District Statistical Handbooks

42. **Agricultural Development.** Agriculture is the main occupation of the people in both districts. However, intensive cultivation is not possible as significant part of both districts is mountainous. Agricultural activities are common on the gentle hill slopes and in relatively plain, broad river valleys. Fruits and cash crops are a major source of income. The chief food crops cultivated include wheat, maize, rice, barley, seed-potato, ginger, vegetables, vegetable seeds, mushrooms, chicory seeds, hops, and fig. There is intense apple production in Shimla district in Pragati Nagar and Chopal site surroundings.

### Electrification

43. There is 100 % rural electrification in both the districts where sub-projects are located.

## **Social and Cultural Resources**

### ***Population and Communities***

44. As per 2011 census, population of the Sirmaur district is 5,29,855 persons with 188 person per sq. km density of population. The rural & urban population is 4,72,690 (89%) & 57,165 (11%) respectively. The schedule caste and schedule tribes population in the district is 30.34 (%) & 0.02 % respectively. Male female sex ratio is 1000: 981.

45. The local inhabitants mainly depend on agriculture for their subsistence and adopt several traditional practices conducive for farming in sloping terrains. Large and small scale industrial units however have come up at Paonta valley. The sub project site at Nahan is located in Nahan Tehsil of Sirmaur district.

46. Administratively, Shimla is the capital of Himachal Pradesh State and Head Quarter of Shimla district. The district comprises of 7 Sub-Divisions viz., Shimla Urban, Shimla Rural, Theog, Rampur, Chopal, Rohru and Dodra Kwar and has 12 Tehsils viz., Shimla Urban, Shimla Rural, Suni, Theog, Kotkhai, Rampur, Kumarsain, Chopal, Rohru, Jubbal, Chirgaon, and Dodra Kwar & 6 Sub-Tehsils viz., Junga, Nankhari, Nerwa, Cheta (Kupwi) and Tikkar. For development purpose, the district has been divided into 10 Community Development blocks viz., Mashobra, Theog, Narkanda, Rampur, Jubbal, Rohru, Chhohara, Chopal, Nankhari and Basantpur, 363 Gram Panchayats, 3213 Villages. Important towns in the district are Rampur, Rohru, Jubbal, and kothai, Chopal, Kumarsain, Theog, Shimla and Kasumpti etc. The population of the district is 8,14,010 (2011 census), of which 4,25,039 (52 %) are males and 3,88,971 (48 %) females. The rural & urban population is 6,12,659 (75%) and 2,01,351 (25 %) respectively. The sub-project sites at Chopal and Pragati Nagar are located Chopal and Kotkhai Tehsil of the district.

### ***Health facilities***

47. There are good health facilities in both the districts in which sub projects are proposed. The Sirmaur district has 3 Government General Hospitals, 38 Primary Health Centers and one ESI Hospital. The Shimla district being bigger in geographical area has 14 Government General Hospitals, 7 Community Health Centers, 92 Primary Health Centers, 01 ESI Hospital and 5 Tuberculosis hospitals. At the locations of all three sub- project sites good government owned and private health facilities are available.

### ***Education facilities***

48. Both the districts have good educational facilities. In Shimla district there are 1612 primary schools and 906 secondary whereas Sirmaur district has 280 primary schools and 120 secondary schools. There are many number of education and technical training institutes in both the districts. The current HSDP project will also contribute towards skills development and employability of Himachali youth.

### ***Archaeological Resources***

49. There are no heritage sites notified by Archaeological Survey of India (ASI) within or near the sub-project area. Similarly, no common property resources such as public wells, water tanks, play grounds, common grassing grounds or pastures, market areas and community buildings will be affected by the proposed sub-projects.

#### IV. ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

##### A. Environmental Impacts

50. Any project creating physical infrastructure will cause some minor impacts on the environment. This IEE examines the potential impacts anticipated during the construction and operation of the all the three sub-projects proposed in Shimla and Sirmour districts, including:

- (i) **Location impacts:** Impact associated with site selection including effect on the environment and resettlement or livelihood related impacts on communities;
- (ii) **Design impacts and Pre-Construction Impacts:** Impact arising from project design, including the technology used, scale of operations, discharge standards, topographic survey, geotechnical survey, etc.;
- (iii) **Construction impacts:** Impact resulting from construction activities including site clearance, earthworks, civil works, etc.; and
- (iv) **Operation and Maintenance impacts:** Impact associated with the operation and maintenance of the infrastructure built in the sub-project.

51. ADB's REA checklist for Buildings was used while screening the site and recommending mitigation measures.

##### B. Location Impacts

52. All the three sub-project sites are located on unencumbered land owned by the Government of Himachal Pradesh. The Nahan CLC and RLC Pragati Nagar sites are located in the respective ITI campuses, whereas RLC site at Chopal is on the land owned by Department of Rural Development (**Annexure- 2**). No new land has been acquired for any of the sub-projects, nor has anyone been displaced in anticipation of the proposed ADB project. There are no significant ecological resources in the surroundings sub projects sites as these are located in urban habitations. There are no heritage sites notified by Archaeological Survey of India (ASI) or state archaeological department within the respective sub- project areas or in the immediate surroundings. No significant impacts can arise due to sub-project location as CLC and RLC buildings components will not impinge upon any area of ecological, archaeological or historical importance. None of the sub-project sites will require change in land use as two are proposed within the existing ITI campuses(Nahan CLC and Pragati Nagar RLC) and third one for RLC **Chopal is located in the land owned by Chopal municipal council.**

**53. All three sub- project sites are located within seismic zone V and even a small magnitude earthquake may damage CLC and RLC buildings.**

##### C. Impacts during Design and Pre-Construction Phase

54. As noted above, the proposed sites are owned by GOHP. There are no issues arising due to land acquisition or involuntary resettlement. No tree cutting is anticipated at any of the sites except clearing of the shrubs. Based on the environmental screening of the respective sites, there are no significant adverse environmental impacts during the design and Pre-construction phases.

##### D. Impacts during Construction Phase

55. All construction activities to be undertaken at the respective sites of sub- projects will be approved by the PMU. The construction stage impacts due to the proposed project

components are generic to the construction activities. The EMP emphasizes on the construction impacts and necessary mitigation measures to be strictly followed by the contractor(s) and supervised by the PWD and PIUs. The key potential impacts are covered in the following paragraphs.

56. **Impact due to stock piles of construction materials.** Improper stockpiling of construction materials in and around the sites could obstruct movement along access roads and functioning of ITIs at Pragati Nagar and Nahan. Hence, due consideration will be given for proper materials storage on construction sites. Stockpiles will be covered to protect from dust and erosion. Waste materials will be disposed at identified and approved locations.

57. **Disposal of construction waste.** The construction waste could lead to untidy conditions at sites and may find its way to local drains and smaller local streams and siltation and obstruction to natural flow in these drains and streams. In the proposed sub-projects, it shall be mandatory for the contractor(s) to ensure proper disposal of the construction waste at the disposal site(s) as designated by the PWD.

58. **Quarry and Borrow pits operations.** Since the civil works are of a small size, all construction material will be procured from market. There will not be any need for direct procurement of stones and building material from quarries.

59. **Increase in noise levels.** Noise levels in the immediate proximity of sub-project sites are expected to increase somewhat during construction. However, these will be largely imperceptible as civil works will be confined to relatively small areas. The duration of construction will also be relatively brief. Transportation of construction materials will be confined to day-time, depending upon extent of construction activity. The increase in noise levels is expected to be between 5 - 10 % of ambient noise levels. This increase will be felt up to a distance of 200-300 m only. This noise will be intermittent in nature, and will last only during the construction phase. The construction noise will be felt by the residential houses located close to RLC site at Chopal. At ITI campuses at Pragati Nagar and Nahan construction noise will be felt by class rooms close to these sites. It may be mentioned that construction noise will be intermittent in nature and at these locations noise levels are not anticipated to exceed the stipulated limits of Residential areas. But necessary monitoring of noise levels will be taken up as part of environmental monitoring plan.

60. **Impacts on biodiversity during construction phase.** No major impacts are expected on the biodiversity during the construction phase as the sites of sub-projects are open, and no trees will have to be cut. There will be removal of some shrubs for the construction of CLC and RLCs buildings.

61. **Disturbance to traffic during construction phase.** At the time of construction, there will be some temporary inconvenience due to transportation of building material and clearance of debris by trucks. However, since the scale of civil works is relatively small, the inconvenience caused will be relatively minor and limited only to the construction phase. A sample Traffic Management plan is attached in **Annexure- 3**.

62. **Impact on cultural properties.** The proposed sub-projects will not have any impact on any religious structure or any other structure of historical and/or cultural significance.

63. **Ground Water.** Ground water will not be extracted and used for construction purposes. The contractor will arrange for water from the market. It will be supplied by water tankers. The problem of ground water contamination is also not anticipated during the construction phase since there will be proper disposal of the waste water.

64. **Ambient Air Quality.** Generation of dust is anticipated during transportation, excavation, and construction activities. Some dust and gaseous emissions will also be



generated during the construction period from machines such as mixers, and vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include respirable and suspended Particulate Matter (RSPM) and gaseous emissions ( $\text{NO}_x$ ,  $\text{SO}_2$ ,  $\text{CO}$ , etc.). However, transportation of construction materials will be confined to a few trips per day depending upon extent of construction activity. Therefore, impact at this stage will be temporary and restricted to the close vicinity of the construction sites only.

65. All vehicles and construction equipment operating for the contractor(s) and the consultant will obtain and maintain "Pollution under Control" (PUC) certificates. To control dust emissions, vehicles deployed for borrow materials, sand and aggregate haulage, will be covered with tarpaulins to be prevent spillage. Regular sprinkling of water during excavations, loading, unloading, vehicular movement, and raw material transport will prevent spread of dust and other contaminants. Periodic air quality monitoring will be conducted to ensure that emissions to comply with standards. The contractors will submit emission monitoring results as a compliance with environmental monitoring plan.

66. **Construction Waste.** Some waste will be generated due to excavated earth material and waste from construction. Debris and excavated earth material can be reused subject to the approval of the PWD Engineer during the construction. Waste generated during construction and demolition will be disposed off as per law to the satisfaction of the Engineer. The clean-up and restoration operations will be implemented by the contractor(s) prior to demobilization. The contractor will clear all temporary structures and dispose off all garbage from construction site(s). All construction zones used and affected by the sub-projects will be left clean and tidy, at the contractors' expense as per the satisfaction the Engineer.

67. The contractors are likely to engage local labor for various construction activities. However, in case of migrant labor has to be engaged, the contractor will establish properly designed labor camps with all basic amenities such as potable drinking water supply and sanitation facilities (septic tanks and soak pit). Dust bins will be placed in adequate numbers. The EMP lays down some measures to address likely adverse impacts associated with the labor camps.

## **E. Environmental Impacts during Operation Phase**

68. Since only vocational training and counseling will be undertaken at the proposed RLCs and CLC, there will not be any adverse environmental impact during operation. The CLC and RLC designs provide for adequate parking, accommodation, and safe disposal for waste water and solid waste. Toilet blocks with septic tank and soak pits have been included in the respective design. The solid waste generated at CLC and RLCs during operation phase will be segregated. Its disposal will be integrated with Nahan waste disposal for CLC Nahan, Pragati Nagar town waste disposal for RLC Pragati Nagar and Chopal town waste disposal for RLC waste disposal. The Pragati Nagar production center waste will be organic in nature. This waste will be used for making compost for use in local farming.

69. Given the relatively small size of the CLC and RLCs, there will not be any significant vehicular increase on account of their operations at their respective locations. Most students and staff will be using public transport. A diesel generator will be required, but only during power cuts. The generator will be of the silent type, and will comply with the levels stipulated by Central Pollution Control Board.

70. **Safety Measures.** The designs of the CLC and RLCs include structural and seismic safety measures required by India's latest building codes (in seismic zone V). The other safety features are explained below:

- The CLC and RLCs will be equipped with fire-fighting systems with portable fire extinguishers and smoke detectors. The staircase will have adequate width to allow for people to exit the CLC and RLC buildings during any fire-related or other eventuality.
- During natural calamities, the operations will be stopped. The trainees and staff will be safely evicted as per Disaster Management plan of Himachal Pradesh.
- Necessary first aid facilities will be provided at the CLC and RLCs buildings.

71. **Socioeconomic Impacts.** The CLC and RLCs will have a positive development impact since it will provide market-relevant vocational training to the needy urban youth, and help them in improving their livelihoods and / or getting formal jobs.

72. **Flora and Fauna.** Since the CLC and RLCs will be located within the habitation areas of Nahan, Chopal and Pragati Nagar towns, no adverse impact on fauna and flora is anticipated due to operations of CLC and RLCs. Further, to enhance the natural look of the CLC and RLCs buildings and premises, plantation of shrubs and landscaping will be taken up along the pathways and vacant space.

#### **F. Description of Planned Mitigation Measures**

73. Screening of environmental impacts is based on the magnitude and duration of the impact. **Table-12** provides the potential environmental impacts and the mitigation measures including the institutional responsibilities for implementing the same. The sub-project site is located sufficiently away from protected areas and the components proposed will not impact any environmentally sensitive or protected areas. All sub-project activities including construction and operation will take place within available government lands.

**Table 12: Summary of Environmental Impacts and Planned Mitigation Measures**

Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
<b>1</b>	<b>Location Impacts</b>				
<b>1.1</b>	Lack of sufficient planning to assure long term sustainability of the CLC and RLC buildings and ensure protection specially from earthquake and other natural disasters	Permanent	Major	<p>The designs of CLC and RLCs building have been completed considering earthquake coefficient of zone V.</p> <p>The sites of planned RLCs and CLC in Shimla construction package are not on the bank of any river or major streams.</p>	PMU and PWD
<b>2</b>	<b>Design and Pre-construction Impacts</b>				
<b>2.1</b>	Consents, permits, clearances, no objection certificates (NOC), etc.	Permanent	Major	<p>Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works.</p> <p>Acknowledge in writing and provide report on compliance on all obtained consents, permits, clearance, NOCs, etc.</p> <p>Include in detailed design drawings and documents all conditions and provisions if necessary</p>	PIU and PWD
<b>2.2</b>	Layout of components to avoid impact on the aesthetics of the sites	Permanent	Major	The sub-projects components at respective locations will not have any adverse impacts on aesthetics of sites as these involve construction of buildings within existing ITI campuses at Nahan and Pragati Nagar and near already existing rural training center at Chopal. Hence, no mitigation measures are warranted.	Not Applicable
<b>2.3</b>	Slope stability related issues	Permanent	Minor	The CLC site at Nahan and RLC site at Pragati Nagar are on plain land. No stability issue is involved for these two sites. At these two sites, no slope protection measures are	Not applicable

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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				warranted. The RLC Chopal site is on slope. In design of this RLC necessary slope protection measures have been adopted as part of building design.	PMU and PWD
2.4	Increased storm water runoff from alterations of the site's natural drainage patterns due to landscaping, excavation works, construction of parking lots, and addition of paved surface.	Permanent	Moderate	Design of proposed CLC and RLCs will allow efficient drainage at the sites and maintain natural drainage patterns.	PMU and PWD
2.5	Integration of energy efficiency and energy conservation programs in design of CLC and RLCs	Permanent	Moderate	Following measures have been included in the design to enhance energy efficiency: <ul style="list-style-type: none"> <li>• Usage of recyclable materials like wood substitutes.</li> <li>• Installation of BEE certified equipment</li> <li>• Usage of energy efficient lighting fixtures (LED and solar).</li> <li>• Provision of Solar power generation</li> </ul>	PMU and PWD
3	<b>Construction Impacts</b>				
3.1	Construction Camps - Location, Selection, Design and Layouts	Temporary	Moderate	Construction camps at the respective locations of sub-projects will be located within the sites as far as possible. These construction camps at the respective locations of sub- projects will not affect the day-to-day activities of local residents and functioning of ITIs at Nahan and Pragati Nagar. Adequate sanitation facilities shall be provided at camp sites and no waste water will be discharged outside.	Contractor(s) and PIU
3.2	Traffic circulation plan during construction	Temporary	Moderate	Prior to commencement of site activities and mobilization on ground, the contractor(s) will prepare a traffic circulation plan for safe passage of local traffic during construction	Contractor(s), and PWD



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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				<p>stage. This will include alternative access routes, traffic regulations, Signages, etc. The contractors will get these plans approved from the PWD (the Engineer),</p> <p>The contractor(s) will disseminate the traffic circulation plan around the sub-project site(s).</p>	
3.3	Impacts on flora and fauna	Temporary	Moderate	<p>Conduct site induction and environmental awareness programs at the respective locations of sub-projects sites. Limit activities within the work areas. Storage of construction materials within the sub-project site limits.</p> <p>Prepare site landscape and shrubs and tree plantation plans at the end of construction period and necessary landscape, tree plantation and shrubs plantation should be carried out.</p>	Contractor(s) and PWD
3.4	Site clearance activities, including delineation of construction areas	Temporary	Moderate	<p>The commencement of site(s) clearance activities will be undertaken with due permission from the Environment Specialist of the PWD/HPKVN to minimize environmental impacts.</p> <p>All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures.</p>	Contractor(s) and PWD
3.5	Drinking water availability	Temporary	Major	Sufficient supply of potable water will be provided and maintained at the respective sites of sub-projects. If the drinking water is obtained from an intermittent public water supply, then storage tanks will be provided.	Contractor(s) and PWD
3.6	Waste disposal	Permanent	Major	Location of disposal site for construction	Contractor(s) and PWD

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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				waste will be finalized by the Environmental Specialist of the PWD and HPKVN for each sub-project site. He will confirm that disposal of the material will not impact the water body or environmentally sensitive areas. He will also ensure that no endangered or rare flora is impacted by such materials.	
3.7	Stockpiling of construction materials	Temporary	Moderate	Stockpiling of construction materials should not impact or obstruct the local drainage and Stockpiles will be covered to protect from dust and erosion.	Contractor(s) and PWD
3.8	Soil Erosion	Temporary	Moderate	There may be requirement for temporary slope protection during construction at the excavated areas. These requirements should be met. The slope protection measures at Chopal site should be constructed as per drawings. Adequate measures will be taken up at this site so that there is no soil erosion causing risks in the vicinity.	Contractor(s) and PWD
3.9	Soil and Water Pollution due to fuel and lubricants, construction waste	Temporary	Moderate	The fuel storage and vehicle cleaning area at each sub-project site will be stationed such that water discharge does not drain into the local drain. Soil and water pollution parameters will be monitored as per monitoring plan.	Contractor(s) and PWD
3.10	Siltation of water bodies due to spillage of construction wastes	Temporary	Moderate	No disposal of construction wastes will be carried out into any streams near the sub-project sites. Extraneous construction wastes will be transported to the pre-identified disposal sites for safe disposal.	Contractor(s) and PWD
3.11	Generation of dust	Temporary	Moderate	The contractor(s) will take every precaution to reduce the levels of dust at construction sites of sub-projects.	Contractor(s) and PWD
3.12	Emission from Construction Vehicles, Equipment and	Temporary	Moderate	Vehicles, equipment and machinery used for construction will conform to the relevant	Contractor(s) and PWD

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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
	Machinery			Standard and will be regularly maintained to ensure that pollution emission levels comply with the relevant requirements.	
3.13	Noise Pollution	Temporary	Moderate	Noise limits for construction equipment used in this project will not exceed 75 dB (A).	Contractor(s) and PWD
3.14	Material Handling at Site	Temporary	Moderate	Workers employed on mixing cement, lime mortars, concrete, etc., will be provided with protective footwear and protective goggles. Workers, who are engaged in welding works, will be provided with welder's protective eye-shields. Workers engaged in stone breaking activities will be provided with protective goggles and clothing. The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The Engineer will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor(s).	Contractor(s) and PWD
3.15	Disposal of Construction Waste	Temporary	Moderate	Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed off around the sub-project site and especially in vacant plots in the locality.	Contractor(s) and PWD
3.16	Safety Measures During Construction	Temporary	Moderate	Adequate safety measures for workers during handling of materials at the sub-project sites will be taken up. The contractor(s) have to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from fire, accidental injury, etc. First aid treatment will be made available for	Contractor(s) and PWD

Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal

Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				all injuries likely to be sustained during the course of work. The Contractor(s) will conform to all anti-malaria instructions given to him by the Engineer.	
3.17	Clearing of Construction of Camps and Restoration	Temporary	Major	Contractor(s) at the respective sub-project sites will prepare site restoration plans for approval by the Engineer. These camp site restoration plans are to be implemented by the contractor(s) prior to demobilization. On completion of the works, all temporary structures will be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Engineer	Contractor(s) and PWD
4	<b>Operation and Maintenance impacts</b>				
4.1	Environmental Conditions	Temporary	Moderate	Air, water, and noise levels will be monitored periodically as per the Environmental Monitoring Plan prepared.	DoUD for CLC Nahan, and DORD for RLC Pragati Nagar and Chopal
4.2	Safety risks	Temporary	Major	(i) All safety features provided as part of CLC and RLC building constructions will be maintained.	DoUD for CLC Nahan, and DORD for RLC Pragati Nagar and Chopal
4.3	Unhygienic conditions due to poor maintenance of sanitation facilities and irregular solid waste collection	Temporary	Severe	The implementing agencies will carry out maintenance of the toilets, and carry out the regular collection and disposal of wastes to the local disposal sites. The septic tanks will be emptied regularly.	DoUD for CLC Nahan, and DORD for RLC Pragati Nagar and Chopal



## **G. Land Aquisition and Resettlement**

74. The proposed CLC at Nahan and RLC at Pragati Nagar are planned on ITI campuses and RLC Nahan is planned on the land owned by DORD. All the three sub-projects are on the land owned by GOHP. Hence, there will not be any acquisition of private land. Since all the three proposed sites have unencumbered land, therefore, there is no acquisition any private assets. At the sub-project sites, there are no squatters or encroachers. Hence, there is no requirement of any rehabilitation and resettlement for constructing the CLC and RLCs.

## **V. ENVIRONMENT MANAGEMENT PLAN (EMP)**

### **A. Institutional Arrangements for Project Implementation**

75. *The Government of Himachal Pradesh through DOP is the executing agency. The executing agency (i) assumes overall responsibility for the execution of the Project and reporting; (ii) engage adequate permanent or fixed-term staff to implement the Project; (iii) setup a state-level project management unit (PMU) and project implementation units (PIUs) at local sub-project level; (iv) provides overall strategic guidance on technical supervision and project execution; and (v) ensures overall compliance with the loan covenants.*

76. *The implementing agencies in the project are HPKVN, DOTE, DOHE and PWD. The implementing agency responsibilities include (i) project planning and budgeting; (ii) day-to-day assistance, supervision and guidance for the project implementation units and their consultants; (iii) review sub-projects for due diligence requirements and approve sub-project proposals; (iv) bidding, evaluation and contract award; (v) managing and disbursing funds; (vi) review compliance with loan covenants, contract specifications, work plans and quality control; and (vii) consolidate and submit progress reports, finance and accounting / audit reports, and matters requiring higher level decision to state-level empowered committee (SLEC) and ADB.*

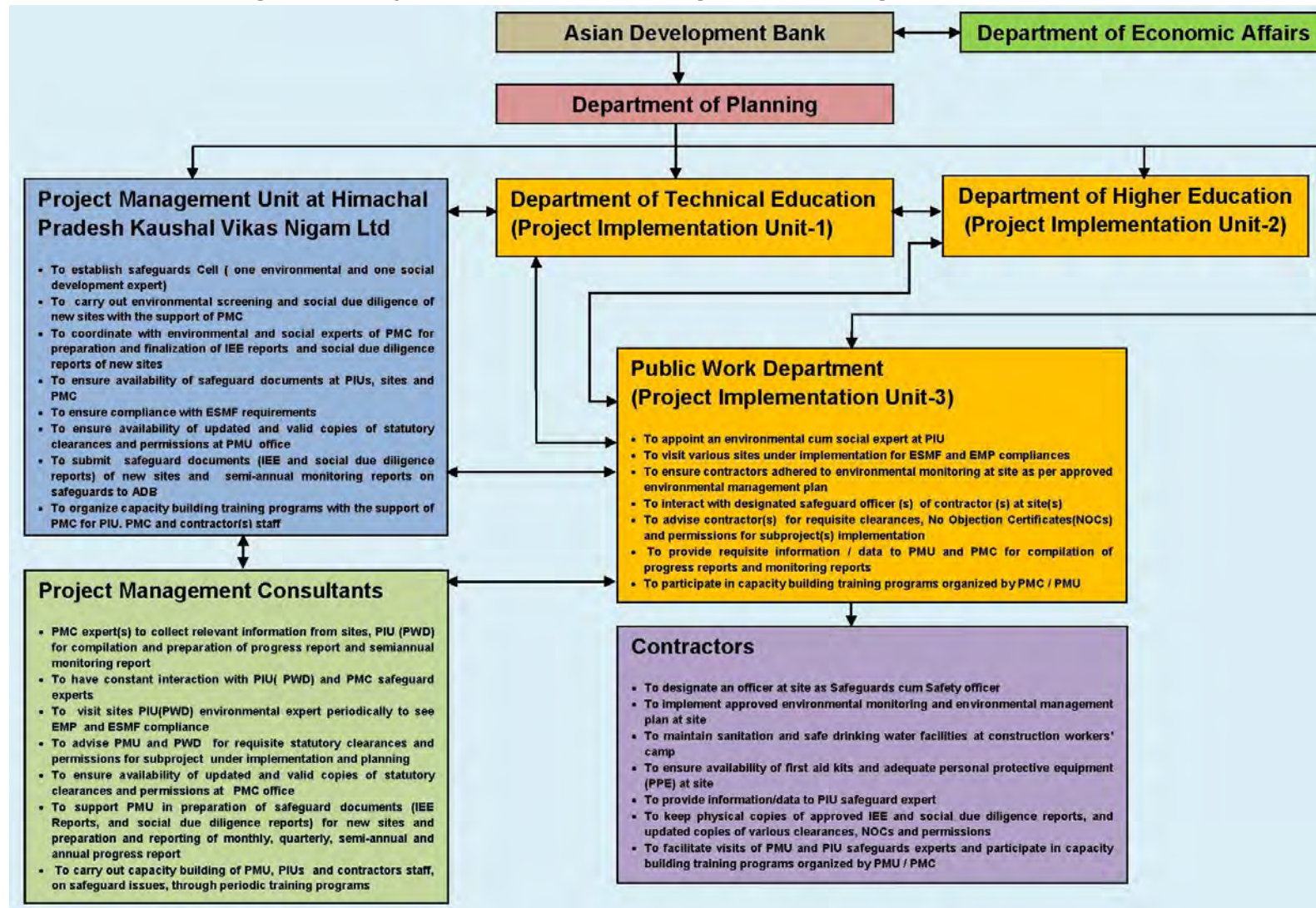
77. *A State-level empowered committee (SLEC) has been established in Himachal Pradesh, chaired by State's Chief Secretary, with Principal Secretary/Secretary of the Department of Planning as Member Secretary and comprised of Secretaries from relevant line departments ( PWD, DoUD, DoRD, DoLE, HPKVN MD). The SLEC has been empowered to take all decisions on behalf of the State and will (i) act as a policy making body, (ii) provide overall advice and guidance to the State's executing agency and PMU, and (iii) accord all approvals under the Project.*

78. *DoP will establish a PMU, headed by a full-time Project Director (PD) at HPKVN, and consisting of personnel drawn from relevant line departments and market. This PMU will also have safeguards expert (social and environment). The PMU will be supported by the Project Management Consultants (PMC). The PMU will be the nodal agency for overall management of all program activities and will be responsible for: (i) project planning and budgeting; (ii) providing day-to-day assistance, supervision and guidance for the PIUs and PWD; (iii) reviewing sub-projects to satisfy ADB's due diligence requirements and approving sub-project proposals submitted by PIUs and line departments; (iv) bidding, evaluation and contract award; (v) managing and disbursing funds; (vi) reviewing compliance with loan covenants, contract specifications, work plans and quality control; (vii) consolidating and submitting progress reports, finance and accounting/audit reports, and matters requiring higher-level decision, to the SLEC and ADB.*

79. *The sub-projects will be implemented by the Project Implementation Units (PIUs) at local level, comprising of personnel drawn from relevant line departments on deputation and outside of government and will be headed by a Project manager. The PIUs will be responsible for: (i) prioritizing and preparing sub-project proposals; (ii) providing day-to-day assistance, supervision and guidance to the PWD and an agency to be hired for quality check; (iii) conducting detailed assessments and surveys including public consultation and input from stakeholders; (iv) preparing detailed designs, specifications, schedule of quantity, bidding documents, and related documentation; (v) implementing civil works and related activities; (vi) reporting to PMU; (vii) preparing regular progress reports for the SLEC, the executing agency and ADB through PMU; and (viii) supervising construction, conducting quality control, approving progress payments to contractors; and (ix) maintaining records and accounts on an up-to-date basis and making these available to ADB, its missions, or auditors for inspection.*

80. *The Project Management Consultant (PMC) is proposed to be engaged to provide support to the PMU in overall planning, risk management, implementation, monitoring and evaluation of projects under the HPSPDP. The PMC will also assist the PMU and PIUs in meeting the relevant requirements of ADB, Government of Himachal Pradesh, and Government of India for project implementation. The PMC will report to and work under the overall guidance of the PMU. The scope of services of the PMC's will include but not necessarily be limited to: (i) planning, reporting, and communication; (ii) establishment of procedures and systems; (iii) review and preparation of plans, manuals and reports; (iv) overall project management, monitoring and implementation of MIS; and (v) social, environmental, archaeological, occupational health and safety, community participation and gender action compliance monitoring.*
81. *The executing agency will engage one agency for the quality check and to meet timeline requirements. This agency will work under the PMU. The scope of services of the agency will include but not necessarily be limited to: (i) surveys, verification of feasibility studies and base maps; (ii) project planning and management support to the PIU; (iii) finalization of design criteria, preparation of manuals, guidelines and systems; (iv) preparation of detailed design and bid documents; and (v) construction management and contract administration.*
82. *In order to ensure effective implementation of safeguard related components in the project PIU at PWD will include a safeguard expert (an environmental cum social expert) in the team. This safeguard expert will ensure compliance with ESMF requirements, and implementation of environmental management plans of sub-projects at sites through contractor(s).*
83. *The PMC will also have safeguard experts in their team to support PMU in reporting, safeguards related documents preparation, disclosure and capacity building of PIUs, PMU and contractor(s). The PMU at HPKVN will establish a safeguard cell comprising of an environmental expert, and a social development expert.*
84. *The contractor(s) at sub-project site(s) will designate one officer as safeguard cum safety officer for the implementation of ESMF and EMP requirements at sites. The project implementation arrangement for safeguard compliance has been shown below in **Figure -12***

Figure 12: Project implementation arrangement for safeguard compliance





**B. Responsibility for updating IEE during Pre-Construction and Construction**

85. **Responsibility for monitoring.** During construction, the Environmental Specialist of the Safeguards cell at HPKVN and the designated representative engineer of the PWD will monitor the contractor's performance. During the operation phase, monitoring will be the responsibility of the PMU. The Environmental specialist will prepare semi-annual reports.

86. **Responsibility for Reporting.** HPKVN will submit semi-annual reports on the implementation of the EMP to ADB. It will permit ADB to field environmental review missions to examine in detail, the environmental aspects of the project. Any major lapses in adhering to the ESMF and IEE and / or EMPs for specific sub-projects, should be reported to ADB immediately. The PMC's Environment Safeguard Specialist will assist the PMU in finalizing the semi-annual and annual progress reports.

**Table 13: Pre-Construction Phase Environmental Management Plan**

Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
1	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created.	Design has included provisions for ensuring effective maintenance and protection of the assets to be created so as to ensure the long term sustainability. The long term sustainability has been ensured by taking into consideration appropriate Bureau of Indian Standards Codes (BIS) for design, Seismic Zone V coefficient, appropriate wind load factor (corresponding to 39 m/s wind speed), and detailed design after carrying geotechnical investigations and topographic survey.	Verification of design parameters	PWD	PMU and PMC	Review after completion of DPR	Part of PWD and PMC Professional Fee
2	Layout of components to avoid impacts on the aesthetics of the sites	Locating sub-projects components at all the three sites will avoid impacts on the aesthetics and surroundings and CLC and RLC buildings will very well mix with local buildings. The exterior designs of CLC and RLCs take care of this issue.	CLC and RLCs building's exteriors	PIUs and PWD	PMU and PMC	Review after completion of detailed design	Part of PWD and PMC Professional Fee
3	Slope stability related issues	The plot areas for CLC and RLC buildings at all the three locations are flat, however, during construction any	Slope protection measures on side slopes of access path,	PIU and PWD	PMU and PMC	Review of recommended slope protection measures	Part of PWD and PMC Professional Fee

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		exposed slopes at excavated areas will be covered and slope protection measures will be provided specially at side slopes of internal roads.	internal roads, etc.				
4	Increased storm water runoff from alterations of the site's natural drainage patterns due to landscaping, excavation works, construction of parking lot, and addition of paved surfaces	Design of proposed CLC (at Nahan) and RLCs (at Chopal and Pragati Nagar) buildings enables efficient drainage of the plot and maintains natural drainage patterns. The storm water generated will be diverted to local drains through a properly constructed drainage system. Since all the three sites are in hilly regions, therefore, there is swift flow and drainage is not an issue.	Arrangement for proper diversion of storm water runoff	PIU and PWD	PMU and PMC	After mobilization of contractor (s) at the respective sites and during establishment of construction camps at sites	Incidental to construction cost
5	Integration of energy efficiency and energy conservation programs in design of sub-projects components	The detailed designs for the sub-projects have ensured that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, etc. The design considers the following energy efficiency measures: <ul style="list-style-type: none"> <li>• Usage of recyclable materials like wood substitutes.</li> <li>• Installation of BEE certified equipment</li> </ul>	Specifications of rain water harvesting structures, electrical fixtures, details of water heating system	PIUs and PWD	PMU and PMC	During finalization of detailed design	Part of project cost

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		<ul style="list-style-type: none"> <li>Usage of energy efficient lighting fixtures (LED )</li> <li>Provision of P-V cells on roof for solar power.</li> </ul>					
6	Consents, permits, clearances, no objection certificate (NOC), etc.	<p>Obtain all necessary consents, permits, clearances, NOCs, etc. prior to start of civil works.</p> <p>Acknowledge in writing and provide report on compliance all obtained consents, permits, clearances, NOCs, etc.</p>	Consents, permits, clearance and NOCs Records and communications	PIU	PMU	check consent for establishment of construction camps at respective sites , approval from civic authorities for CLC and RLCs construction at all three locations	Project cost
7	Establishment of baseline environmental conditions prior to start of civil works	Conduct documentation of location of components, areas for construction zone (Camp, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates	Records and Photographs	Contractor(s)	PIU and PWD	Once prior to start of construction works	Contractor(s)
8	Utilities	1. The locations and operators of utilities to be impacted should be identified and documented in detailed design documents to prevent unnecessary disruption of services during the	<p>List and maps showing utilities to be shifted</p> <p>Contingency plan for services disruption</p>	<ul style="list-style-type: none"> <li>PWD will prepare preliminary list and maps of utilities to be shifted</li> <li>During detailed design phase,</li> </ul>	PIUs and PWD	Pre-Construction Phase	Contractor(s)



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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		<p>construction phase.</p> <p>2. Require contractor(s) to prepare a contingency plan to include actions to be done in case of unintentional interruption of services.</p> <p>3. Obtain from the PIUs and/or PWD the list of affected utilities and operators;</p> <p>4. If relocations are necessary; contractor will coordinate with the providers to relocate the utility.</p>		contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan			
9	Social and Cultural Resources	<p>1. Consult Archaeological Survey of India (ASI) or Himachal Pradesh State Archaeology Department to obtain an expert assessment of the archaeological potential of sites.</p> <p>2. Consider alternatives, if the sites, are found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be</p>	Chance find protocol	<ul style="list-style-type: none"> <li>• PMC to consult ASI or HP State Archaeology Department</li> <li>• PMC to develop protocol for chance finds</li> </ul>	PMU	Prior to start of construction activities	PMC

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		made available. 3. Develop a protocol for use by the contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved.					
10	Construction Camps - Locations, Selection, Design and Layout	Sitting of the construction Camps, at the respective sub- project sites, shall be as per the guidelines below and details of layout to be approved by PWD. The potential sites at the respective sub-project locations will be selected for labor camps and these shall be visited by the environmental expert of PMU safeguards cell along with environmental expert of PWD and one having least impacts on environment will be approved by the PWD and PMU. As far as possible, construction camps will be established at vacant land near the CLC and RLC plots to avoid impact on other land. Locations for storage of construction materials shall	Construction Camp sites, and locations of material storage areas, sanitation facilities	Contractor(s)	PWD and PIU	At the time of construction camps establishment and finalization of storage areas	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		be identified at the respective plots of the sites or at any suitable buildings close to sub-project sites. Sanitation facilities at construction camps shall be adequately planned.					
11	Sources of construction materials	Use quarry sites and sources licensed by the GOHP.  Verify suitability of all material sources and obtain approvals from PIUs.  If additional quarries are required after construction has started, obtain written approval from PIU. Submit to PWD on a monthly basis documentation of sources of materials.	Permits issued to quarries and sources of materials	Contractor(s)  PMC and PWD to verify sources (including permits) if additional is requested by contractor(s)	PMU and PIU	Upon submission by contractor(s)	PMC and PWD as part of consultancy fee
12	Access for Construction material transportation	Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of sub-project sites.  Schedule transport and hauling activities during non-peak hours.  Locate entry and exit points in areas where there is low potential for traffic	Traffic management plan	Contractor(s)	PIU and PWD	During Delivery of construction materials	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		<p>congestion.</p> <p>Keep the sites free from all unnecessary obstructions.</p> <p>Drive vehicles in a considerate manner. Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours.</p>					
13	Occupational health and safety	<p>Comply with IFC EHS Guidelines on Occupational Health and Safety. Develop comprehensive site-specific health and safety (H&amp;S) plans. The overall objective is to provide guidance to contractor(s) on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project. Include in H&amp;S plan</p>	Health and safety (H&S) plan	Contractor(s)	PMU and PMC, PIU and PWD	During construction phase	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		measures such as: (i) type of hazards at CLC and RLCs construction sites; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents.  Provide medical insurance coverage for workers.					
14	Stakeholder consultations	Continue information dissemination, stakeholder consultations, and involvement/participation of stakeholders during project implementation.	-Disclosure records - Consultations	PMU,PMC PIU,PWD and Contractor(s)	PMU and PMC	<ul style="list-style-type: none"> <li>• During updating of IEE Report</li> <li>• During preparation of site- and activity-specific plans as per EMP</li> <li>• Prior to start of construction</li> <li>• During construction</li> </ul>	PMU and Contractor(s)



**Table 14: Construction Phase Environmental Management Plan**

Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
1	Sanitation and drinking water facilities at construction Camps of sub-projects	The contractor(s) shall provide sanitation facilities at the respective camp sites of all the three sub-projects. These facilities will include dust bins in adequate numbers for solid waste collection, drinking water facilities, and separate toilets for male and females. These toilets facilities shall be maintained and septic tanks/soak pits shall be provided at the toilets. The dust bins shall be regularly emptied and waste from camp site shall be disposed off at designated locations.	Construction camp sanitation and drinking water facilities	Contractor(s)	PWD and PIU	Regularly during construction phase	Contractor
2	Traffic Circulation plan during construction phase	Prior to commencement of site activities and mobilization on ground ,the Contractor(s) will prepare and get approved from the Engineer (PWD),circulation plan during construction for safe passage of public vehicles so that locals are not at inconvenience. The Contractor(s) with support of the PIU will carry out dissemination of these	Safe movement of Traffic	Contractor	PWD and PIU	Every day during construction phase	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		information and circulation plan at sites and at key access roads to the sub-project sites.					
3	Site clearance activities, including delineation of construction areas	Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Experts of PWD and PMC. All areas used for temporary construction operations will be subjected to complete restoration to their former conditions with appropriate rehabilitation procedures. The photographic records shall be maintained for the temporary sites used for construction. These will help in proper restoration.	Pre-construction records of sites and vegetation in area of construction	Contractor(s)	PWD and PIU	Duration of site preparation	PWD and PIU
4	Drinking water availability at Construction camp and construction sites	Sufficient supply of cold potable water to be provided and maintained. If the drinking water is obtained from an intermittent public water supply then storage tanks will be provided. For this contractor(s) will submit plans how availability of drinking water shall be assured. In case it is	Water supply source and availability of water , permission of local authority if obtained from local spring	Contractor(s)	PWD and PIU	During Construction phase regularly	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		obtained from the natural spring then permission from local authorities shall be obtained.					
5	Waste disposal	The pre-identified disposal location shall be part of Comprehensive Waste Disposal Plan. Solid Waste Management Plan to be prepared by the Contractor(s) in consultation with local civic authorities. The Environmental Specialist of PWD shall approve these disposal sites after conducting a joint inspection on the site with the Contractor(s). Contractor shall ensure that waste shall not be disposed off near natural streams in the surroundings of site and along the access path.	Waste Disposal sites, waste management plan	Contractor(s)	PWD and PIU	Regularly during construction phase	Contractor(s)
6	Stockpiling of construction materials	Stockpiling of construction materials will be done in such a way that it does not impact and obstructs the drainage. The stockpiles will be covered to protect from dust and erosion.	Stockpiling sites at sub-projects	Contractor(s)	PWD and PIU	Regularly during construction phase	Contractor(s)
7	Arrangement for Construction Water	(i) The Contractor(s) shall provide a list of locations and type of sources from where	Water availability at identified water source locations	Contractor(s)	PWD and PIU	Regularly during construction	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		water for construction shall be acquired. (ii)The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department. (iii)To avoid disruption/ disturbance to other water users, the Contractor shall arrange water from market or from local municipality and consult PWD before finalizing the source.				phase	
8	Soil Erosion	Slope protection measures will be undertaken as per design to control soil erosion especially on side slopes of access and internal roads. Side slopes protection shall specifically be taken care at Chopal RLC site as this site is undulating.	Locations of slope protection	Contractor(s)	PIU and PWD		Contractor(s)
9	Water Pollution from Construction Wastes	The Contractor(s) shall take all precautionary measures to prevent entering of wastewater into any local stream during construction.	Sub-project sites	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor(s)
10	Water Pollution from Fuel and Lubricants	The Contractor(s) shall ensure that all construction vehicle parking locations, fuel/ lubricants storage sites,	Vehicle parking, refueling sites, Oil interceptor functioning	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		vehicle, machinery and equipment maintenance and refueling sites shall be located at least 500 m away from the natural streams. Contractor(s) shall ensure that all vehicle/machinery and equipment operation, maintenance and refueling shall be carried out in such a manner that spillage of fuels and lubricants does not contaminate the ground. Waste water from vehicle parking, fuel storage areas, workshops, wash down and refueling areas shall be treated in an oil interceptor before discharging it on land or into surface water bodies or into other treatment system.					
11	Soil Pollution due to fuel and lubricants, construction wastes	The fuel storage and vehicle cleaning area will be stationed such that spillage of fuels and lubricants does not contaminate the ground. Soil and pollution parameters will be monitored as per monitoring plan.	Vehicle maintenance and parking area, soil quality monitoring results	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor(s)
12	Siltation of water bodies due to spillage of construction wastes	No disposal of construction wastes will be carried out into the surface water bodies. Extraneous	Water bodies specially natural streams near sub project sites	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor(s)



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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		construction wastes will be transported to the pre-identified disposal sites for safe disposal.					
13	Generation of dust	The contractor(s) will take every precaution to reduce the levels of dust at construction sites. All filling works to be protected/ covered in a manner to minimize dust generation.	Sub-project sites, air quality monitoring results	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor(s)
14	Emission from Construction Vehicles, Equipment and Machinery	All vehicles, equipment and machinery used for construction shall conform to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The silent/quiet equipment available in the market shall be used in the sub-projects. The Contractor(s) shall maintain a record of PUC for all vehicles and machinery used during the contract period which shall be produced for verification whenever required.	PUC certificates of vehicles and machinery	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor
15	Noise Pollution	The Contractor(s) shall	Certificates of	Contractor(s)	PWD and PIU	Regularly	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		confirm that all Construction equipment used in construction shall strictly conform to the MoEFCC and CPCB noise standards and all vehicles and equipment used in construction shall be fitted with exhaust silencers. At the construction sites noisy construction work such as crushing, operation of DG sets, use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am. Noise limits for construction equipment used in this project will not exceed 75 dB (A).	vehicles conforming noise standards, noise monitoring results			during construction phase	
16	Impacts on flora and fauna	Minimize impacts on flora and fauna during construction phase by limiting site clearance bare minimum and limiting all types of pollution generation	Environmental monitoring reports, Trees and shrubs planted at sub-project sites	Contractor(s)	PWD and PIU	Regularly during construction phase	Contractor(s)
17	Material Handling at Sub-Project sites	Workers employed on mixing cement, lime mortars, concrete, etc., will be provided with protective footwear and protective goggles. Workers, who are engaged	Data on available personal protective equipment	Contractor(s)	PWD and PIU	Regularly during construction phase	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		<p>in welding works, will be provided with welder's protective eye-shields.</p> <p>The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The PWD will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor(s).</p>					
18	Disposal of Construction Waste, Debris and surplus cut	The Contractor(s) shall confirm that safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed of around the sub-project sites indiscriminately.	Disposal sites	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor(s)
19	Safety Measures During Construction	Adequate safety measures for workers during handling of materials at sub-project sites will be taken up. The contractor(s) has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the	Records of availability of personal protective equipment, availability of first aid kits	Contractor(s)	PIU and PWD	Regularly during construction phase	Contractor(s)

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		workers from accidental injuries, fire, etc. First aid treatment will be made available for all injuries likely to be sustained during the course of work. The contractor(s) will conform to all anti-malaria instructions given to him by the Engineer.					
20	Clearing of Construction of Camp and Restoration	Contractor(s) to prepare site restoration plans for approval by the Engineer (PWD). The plan is to be implemented by the contractor(s) prior to demobilization. On completion of the works, all temporary structures will be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the PWD	Restoration plan, and records of pre-construction of temporary sites	Contractor(s)	PIU and PWD	End of construction phase	Contractor(s)

**Table 15: Operation Phase Environmental Management Plan**

Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
1	Environmental Conditions	The periodic monitoring of the ambient air quality, noise level, surface water quality, soil quality in the sub-project areas as suggested in the monitoring plan through an approved monitoring agency.	Monitoring results and relevant standards	DOUD(for CLC Nahan), and DORD(for RLCs at Pragati Nagar and Chopal) through Pollution Monitoring Agency	PIU	As per monitoring Plan	DOUD, DORD and PMU
2	Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection	The DOUD and DORD will carry out maintenance of the toilets at CLC and RLCs, and carry out the regular collection and disposal of wastes to a designated waste treatment sites. The solid waste disposal will be integrated with Nahan city waste disposal for CLC Nahan, Chopal town waste disposal for RLC Chopal and Pragati Nagar waste disposal for RLC Chopal. Septic tanks will be regularly emptied. Any solid waste generated from production center at Pragati Nagar will also be disposed off.	Maintenance schedule of CLC and RLC buildings and facilities created	DOUD and DORD	PIUs	Every Quarter	DOUD, DORD and PMU
3	Natural Disasters	Necessary procedures to be followed by the visitors, CLC and RLCs staff and trainees during the natural disasters shall be written at prominent locations.	Warnings of disasters by Meteorological Department	District Administration	PIUs	During Disasters	Government of Himachal Pradesh



**C. Environmental Monitoring Plan**

87. *Environmental monitoring will be undertaken during construction at three levels. The Environment and Social Safeguards Specialists of the PMC will ensure that IEEs and EMPs are prepared for each construction package in accordance with ADB's and GOHP's requirements. These PMC staff will also coordinate between PWD, HPKVN, and the user department – DOUD in the case of the Nahan CLC, and DORD in the case of Pragati Nagar and Chopal RLCs – to ensure that all the provisions of the EMP are being adhered to by the contractors. Relevant staff from the PWD will monitor the contractors and ensure that the EMP and all of GOHP's rules with respect to the environment, and handling of solid and liquid waste are being followed.*

88. To ensure the effective implementation of mitigation measures and EMP during construction and operation phase of the sub-projects, it is essential that an effective Environmental Monitoring Plan be followed as given in **Table 13**. The proposed monitoring of all relevant environmental parameters, with a description of the sampling stations, frequency of monitoring, applicable standards and responsible agencies are presented in this table.

**Table 16: Monitoring Plan for Sub-Projects (CLC at Nahan, and RLCs at Pragati Nagar and Chopal) in Shimla Zone Construction Package for Preconstruction, Construction and Operation Phases**

Sl. No.	Field (Environmental Attribute)	Phase	Parameters to be Monitored	Locations	Frequency	Responsibility	Cost (INR/US\$)
1	Air Quality	During pre-construction phase	CO, NOx, PM <sub>10</sub> , PM <sub>2.5</sub> , and SO <sub>2</sub>	CLC construction site at Nahan, RLC construction sites at Pragati Nagar and Chopal	Once in the pre-construction phase to establish baseline	Contractor(s), PWD, PMU, DORD ( for RLCs at Nahan and Pragati Nagar) and DOUD( for CLC Nahan) through approved Monitoring Agency	INR390,000/ US \$ 6000
		During Construction Phase			Once in every three months (except monsoon season) during construction phase (24 months construction phase)		
		Operation Phase			Once in season except monsoon season for initial 2 years		
2	Water quality	During pre-construction phase	TDS, TSS, pH, Hardness, BOD, Faecal Coli form	Ground water close to CLC and RLCs construction sites	Once in pre-construction phase to establish baseline	Contractor(s), PWD, PMU, DORD ( for RLCs at Nahan and Pragati Nagar) and DOUD( for CLC Nahan) through approved Monitoring Agency	INR390,000/ US \$6000
		During Construction Phase			Once in every three months (except monsoon season) during construction phase		
		Operation Phase			Once in season except monsoon season for initial 2 years		
3	Noise Levels	During pre-construction phase	Noise quality as per National Ambient Noise Standards on dB(A) scale	Noise levels at CLC and RLC construction sites	Once in pre-Construction phase to establish baseline	Contractor(s), PWD, PMU, DORD ( for RLCs at Nahan and Pragati Nagar) and DOUD( for CLC Nahan) through approved Monitoring Agency	INR 117,000/ US \$ 1800
		During Construction Phase			Once in every three months (except monsoon season) during construction phase		
		Operation Phase			Once in season except monsoon season for initial 2 years		

**Summary of Site- and Activity-Specific Plans as per EMP**

89. **Table-17** summarizes site- and activity-specific plans to be prepared as per EMP tables.

**Table 17: Site- and Activity-Specific Plans/Programs as per EMP**

To be Prepared During	Specific Plan/Program	Purpose	Responsible for Preparation	Responsible for Implementation
Pre-Construction phase	Environmental monitoring program as per detailed design	Indicate sampling locations, methodology and parameters	PMU, PIU, PMC and PWD	Contractor(s)
Pre-Construction phase	List and maps showing utilities to be shifted	Utilities shifting	PWD during preliminary design and pre construction phase	Contractor(s)
Pre-Construction Phase	Contingency plan	Mitigate impacts due to interruption of services during utilities shifting	Contractor(s)	Contractor(s)
Pre-Construction	Chance find protocol	Address archaeological or historical finds	PMU and PMC	Contractor(s)
Pre-Construction Phase	List of pre-approved sites for construction camp, stockpiles, and waste disposal sites	Location/s for construction camp, areas for stockpile, storage and disposal for minimization of impacts	PMC, PMU, PWD and PIU	Contractor(s)
Pre-Construction phase	Waste/Spoil management plan	Mitigate impacts due to waste generation	Contractor(s)	Contractor(s)
Pre-Construction phase	Spill prevention and containment plan	Mitigate impacts of accidental spills of oil, lubricants, fuels, concrete, and other hazardous materials	Contractor(s)	Contractor(s)
Construction phase	Traffic management plan	Mitigate impacts due to transport of materials and project related traffic movement	Contractor(s)	Contractor(s)
Construction phase	Health and Safety (H&S) plan	To comply with IFC EHS Guidelines on Occupational health and safety	Contractor (s)	Contractor(s)
Construction phase	Erosion control and re-vegetation plan	Mitigate impacts due to erosion and vegetation removal at sub-project sites	Contractor(s)	Contractor(s)
Construction Phase	Environmental Monitoring Plan Implementation	To check efficacy of mitigation measures	PMC, PMU, and PWD	Contractor(s)
Operation Phase	Maintenance of sub- project site	To maintain CLC and RLCs plantation and to	PMU,DORD ( for RLC sites at	DOUD for CLC Nahan and

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To be Prepared During	Specific Plan/Program	Purpose	Responsible for Preparation	Responsible for Implementation
	landscape, and plantation and environmental monitoring plan	carry out environmental monitoring to check environmental conditions at site	Chopal and Pragati Nagar) and DOUD (for CLC Nahan)	DORD for RLCs at Pragati Nagar and Chopal sites

90. The guidelines for preparation of site specific traffic management plans have been provided in **Annexure-3**.

#### D. Capacity Building

91. In addition to the primary objective of skills enhancement of Himachali youth, the CLC and RLCs sub-projects will also raise awareness about environmental conservation amongst trainees, implementing agencies, and local communities. The project will have the opportunity to build capacity in environment protection for the above mentioned stakeholders.

92. The Environmental Specialists at PMC and safeguards cell at PMU will provide the basic training required for environmental awareness. Specific modules customized for the available skill set will be devised after assessing the capabilities of the members of the Training Program and the requirements of the project. The training would cover basic principles of environmental assessment and management; mitigation plans and programs, implementation techniques, monitoring methods and tools. The proposed training program along with the frequency of sessions is presented in **Table 18** below.

**Table 18: Training Modules for Environmental Management**

Program	Description	Participants	Duration	Training Conducting Agency
<b>A. Pre-Construction Stage</b>				
Sensitization Workshop on Environment	Introduction to Environment: environmental assessment and social due diligence requirements in the project, Regulatory Clearances, and permission requirements in the project, and EMP Implementation, Introduction of ADB SPS 2009, and ADB Guidelines on Environmental considerations in planning, design and implementing projects	DoUD and DORD officials, Environmental specialist of PWD and other Engineering staff associated with the sub- projects, PIU staff and HPKVN PMU staff	½ Working Day	Environmental Specialist of the PMC
Session 1	Environmental impacts due to sub-projects in construction and operation phases, pollution generation activities during pre-construction and construction phases Environmental Management, Environmental Mitigation Provisions in the Contract, Implementation Arrangements, Methodology of Assessment Good engineering practices to be integrated into contract documents	All PIUs, HPKVN, and PWD Staff associated with sub projects at Pragati Nagar, Chopal and Nahan	½ Working Day	Safeguards Specialist of the PMC

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Program	Description	Participants	Duration	Training Conducting Agency
<b>B. Construction Stage</b>				
Session 2	<b>Roles and Responsibilities-</b> Roles and Responsibilities of Implementing Agencies officials, associated contractors and consultants towards protection of environment. Implementation. Arrangements for EMP and Environmental Monitoring during construction phase	Engineers and staff of line departments of the Government of GOHP, PIUs, PMC, PMU and HPKVN	½ Working Day	Safeguards Specialist of the PMU
Session 3	Monitoring and Reporting System	Engineers and staff of implementing agencies , and PMU/PIU (including the ES)	¼ Working Day	Safeguards Specialist of PMU

DOUD = Department of Urban Development, DORD= Department of Rural Development, ES = Environment Specialist, HPKVN= Himachal Pradesh Kaushal Vikas Nigam Limited, PIU = Project Implementation Unit, PMC = Project Management Consultant, PMU = Project Management Unit, PWD = Public Works Department.

### E. Environmental Budget

93. Most of the mitigation measures require the contractors to adopt good site practices, which should be part of their normal procedures already, so there are unlikely to be major costs associated with compliance. Only those items not covered under budgets for construction are included in the IEE budget. The IEE costs include mitigation, monitoring and capacity building costs. The summary budget for the environmental management costs for the sub-projects under Shimla Zone construction package is presented in **Table 19**.

**Table 19: Environmental Management and Monitoring costs (INR)**

Monitoring Component	Rate	Amount (INR)	Source of Fund
<b>Pre-Construction and Construction Phase</b>			
Air Quality - one location at each construction site ( CLC Nahan, RLC Pragati Nagar and RLC Chopal), thrice a year (one sample pre construction and 6 samples during construction phase; total 21 samples)	10,000	210,000	Contractor(s)
Water Quality- One ground water sample from each construction site ( CLC Nahan, RLC Pragati Nagar and RLC Chopal), thrice a year (one sample pre construction and 6 samples during construction phase; total 21 samples)	10,000	210,000	Contractor(s)
Noise Quality-One location at project site ( CLC Nahan, RLC Pragati Nagar and RLC Chopal), thrice a year (one sample pre construction and 6 samples during construction phase; total 21 samples)	3000	63,000	Contractor(s)
Training for Capacity Building of stakeholders	Covered in the consultancy cost of PWD and PMC		
Total Construction Phase Monitoring Cost (A)		<b>483,000</b>	<b>Contractor(s)</b>



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Monitoring Component	Rate	Amount (INR)	Source of Fund
<b>O &amp; M Phase</b>			
Air Quality -one location at CLC Nahan, RLC Pragati Nagar, and RLC Chopal, thrice a year at each location, for initial 2 years ( 3 samples per site per annum, total 18 samples)	10,000	180,000	PMU, DOUD (for CLC Nahan) and DORD (for RLC Chopal and Pragati Nagar)
Water Quality -one ground water sample at CLC Nahan, RLC Pragati Nagar, and RLC Chopal, thrice a year at each location, for initial 2 years ( 3 samples per site per annum, total 18 samples)	10,000	180,000	PMU, DOUD (for CLC Nahan) and DORD (for RLC Chopal and Pragati Nagar)
Noise Quality- one location at CLC Nahan, RLC Pragati Nagar, and RLC Chopal, thrice a year at each location, for initial 2 years ( 3 samples per site per annum, total 18 samples)	3000	54,000	PMU, DOUD (for CLC Nahan) and DORD (for RLC Chopal and Pragati Nagar)
Total O&M Phase Monitoring Cost (B)		<b>414,000.00</b>	PMU, DOUD (for CLC Nahan) and DORD (for RLC Chopal and Pragati Nagar)
Total Cost (A+B)		<b>897,000.00</b>	
Contingencies @ 5 %		<b>44,850.00</b>	
<b>Total Budgeted Cost</b>		<b>941,850 (Say 800, 000)</b>	

## F. Environmental Monitoring and Reporting

94. *The PMU with the assistance of PMC will monitor and measure the progress of EMP implementation during construction phase. During operation phase PMU safeguard cell will take care EMP implementation. PWD environmental cum social expert will undertake site inspections and document review to verify compliance with the EMP and progress toward the final outcome. PWD will submit monthly monitoring and implementation reports to PMU at HPKVN and to the concerned departments (DORD and DOUD), who will take follow-up actions, if necessary. PWD will also submit quarterly, semiannual and annual monitoring and implementation reports to PMU. The PMU will submit semi-annual monitoring reports to ADB. Monitoring reports will be posted in a location accessible to the public.*

95. *ADB will review project performance against the EA's commitments as agreed in the legal documents. The extent of ADB's monitoring and supervision activities will be commensurate with the Project's risks and impacts. Monitoring and supervising of social and environmental safeguards will be integrated into the project performance management system. ADB will monitor projects on an ongoing basis until a project completion report is issued.*

## VI. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

### A. Process For Consultations Followed

96. This sub-project does not involve any elements, which could have an adverse impact on the community. There is no deprivation of any sort for the residents or displacement of any groups. Particularly, with regard to environmental impacts the sub-project can be characterized as innocuous.

97. In view of this, the need for holding a public hearing(as defined in EIA Notification 2006 of Government of India) is not perceived at this stage. However in compliance with the ADB's guidelines, focused public consultations were undertaken during the site visits in sub-projects areas. Residents of the areas were informed about the proposed sub-project in their area and their views were obtained. During the preparation of this IEE, consultations have been held with the officials of Department of Planning, HPKVN, Forest Department, DoUD, and other stakeholders such as Municipal Councils at Chopal and Pragati Nagar, local farmers at Pragati Nagar and ITI Officials at Nahan and Pragati Nagar.

98. The process of consultations was taken up, as an integral part of the sub-projects design and environmental assessment, in accordance with ADB Guidelines and following objectives:

- To educate the general public, specially potentially impacted or benefited communities, individuals and stakeholders about the proposed sub-projects activities;
- To familiarize the people with technical and environmental issues of the sub-projects for better understanding;
- To solicit the opinion of the communities and individuals on environmental issues and assess the significance of impacts due to the proposed development;
- To foster co-operation among officers of EA and IAs, the community and the stakeholders to achieve a cordial working relationship for smooth implementation of the sub- project and
- To identify the environmental issues relating to the proposed activity.

99. During the consultations local residents opined that there is need to develop skills of local youth as there are limited employment opportunities in the state. The sub-project building construction will lead to infrastructure creation for skill development. They demanded fast implementation of the sub-project. The dates of consultations and stakeholders consulted have been summarized below in **Table 20**. The views, comments and suggestions of stakeholders and their incorporation in project design are presented in **Tables 21 and 22**. The records of consultations (list of participants with signatures) and consultation photographs are given in **Annexure- 4**.

**Table 20: Dates and Stakeholders Consulted**

Sl. No.	Stakeholders Consulted	Dates of Consultations
1	Himachal Pradesh Forest department	23 December 2015
2	Department of Rural Development, Department of Labor and Employment and Department of Higher Education	21 December 2015, May 10, 2016
3	Himachal Pradesh Pollution Control Board	23 December 2015
4	State Department of Environment, GOHP, HPKVN and DOP	14 and 15 March 2016

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Sl. No.	Stakeholders Consulted	Dates of Consultations
5	Department of Technical Education, GOHP	12 December 2015 and, 16 and 17 March 2016
6	Local Public at CLC Nahan Site	06 August 2016
7	Local Public at RLC Chopal Site	09 September 2016
8	Local Public at RLC Pragati Nagar Site	09 May 2016

100. It is clear that most of the suggestions of stakeholders have been taken care in the project design.

**Table 21: Views, Comments, and Suggestions of Stakeholders at sub-Project Sites and Addressed in Project Design**

Sl. No.	Place	Date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
1	CLC Site, Nahan	06/08/2016	With local Public, and ITI Officials	CLC proposal, project benefits, implementation schedule, environmental and social impacts during project implementation etc.	<ol style="list-style-type: none"> <li>1. Participants welcomed the project as they told that there is urgent need of skilled manpower in the area as there are industrial areas in the district nearby at Kala Amb and Paonta Sahib.</li> <li>2. The participating ITI officials suggested that there should be focus on placement on completion of training at CLC.</li> <li>3. The participants suggested the training courses should be finalized in consultation with industry associations in the districts.</li> <li>4. The ITI staff suggested proper design measures for slope protection on the back side as there are some private houses. The consultants replied that necessary measures will be built in design for slope protection.</li> <li>5. The CLC site being in ITI Campus under ownership of one of the IAs (DOTE), so no issue of any rehabilitation and resettlement or land transfer.</li> </ol>
2	RLC Site Chopal	09/09/2016	District Panchayat Officials, Local Apple farmers, DORD officials and Local shop owners	RLC proposal, project benefits, implementation schedule, environmental and social impacts during project implementation, etc.	<ol style="list-style-type: none"> <li>1. The environmental safeguard expert enquired about climatic conditions during winter months at Chopal. Will the RLC be operational during this period? The participants replied that there is frequent snow fall in Chopal, but RLC can function as other activities in the region also continue.</li> <li>2. The consultants' team enquired about domestic waste water disposal in private houses and buildings so that RLC waste water issue may be taken up accordingly. The locals informed the consultants that for sanitation waste disposal there are septic tanks.</li> <li>3. The participants welcomed the establishment of RLC and suggested that Skill Development at RLC should focus on enterprises development based on agriculture produces.</li> <li>4. The environmental safeguards expert enquired</li> </ol>

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Sl. No.	Place	Date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
					<p>about land ownership details of proposed RLC site. The DORD officials told that land is under the ownership of DORD.</p> <p>5. The participants enquired about RLC building features. The architect in the consultant's team explained the salient features of RLC building.</p> <p>6. The participants suggested that RLC building during operation phase should have a DG set as there is frequent power supply failure during winter month. The consultants replied that one DG set will be planned for installation. In addition there will be installation of solar panel on roof top to harness solar power for lighting.</p>
3	RLC Site Pragati Nagar	09/05/2016	ITI Officials, Local farmers, and DORD officials	RLC proposal, project benefits, implementation schedule, environmental and social impacts during project implementation, potential for production center, etc.	<p>1. The environmental expert informed the participants that in addition to RLC, there is planning to have a production center small in size to promote agro products from the region.</p> <p>2. The local participants and ITI officials welcomed the project and said that it should start as early as possible. For production center they suggested products related to apple fruit, walnut and almonds may be considered. The project region is famous for apple production. The consultants noted the suggestion.</p> <p>3. The environmental safeguard expert enquired about waste water discharge from the campus. The ITI principal informed that there are septic tanks for waste water disposal.</p> <p>4. The participants suggested that locals should be given preference for running production center. The consultants replied that after establishment of production center, DORD will operate RLC and production Center and it will take assistance from locals for running the facilities.</p>



**Table 22: Summary of Stake Holder Consultations at Institutional Level**

Sl. No.	Place and date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
1	Shimla, 23/12/2015	Conservator Forest Cum Nodal Officer CAMPA, State Forest Department	Clearances, permissions and No Objection Certificates (NOCs) - requirements from the State Forest Department and suggestions for the project	<ol style="list-style-type: none"> <li>1. The ADB Environment and Social Safeguards consultant briefly explained the project concept to the state department officials.</li> <li>2. It was informed by the officials that for any site falling under forest land, clearance is required either under the 'Forest (Conservation) Act, 1980 or under the 'Schedule Tribe and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.</li> <li>3. For vocational training purposes, GOHP can give clearance up to 1.0 hectare land. If application is submitted under the Forest (Conservation) Act, 1980, then the net present value (NPV) of the land and cost for compensatory forestation are to be paid by the State Government.</li> <li>4. If the application is submitted under Forest Rights Act 2006, then for educational institutes, payment of NPV and compensatory afforestation costs are exempted for the land up to 1.0 hectare. The clearance can also be issued at Divisional Forest Officer level.</li> <li>5. The Forest Officials suggested that application may be made under Forest Rights Act for faster clearance if any site falls under the forest.</li> <li>6. The ADB Environmental consultant assured everyone that sites on forest land will not be considered to the extent feasible. However, under unavoidable situations, applications for clearances will be submitted as suggested.</li> <li>7. Only the proposed Women's Polytechnic site at Rehan in Kangra district falls on forest area. For this site, NOC from Forest Department has been received. The land transfer in DOTE name is in progress.</li> </ol>
2	Shimla, 23/12/2016	Senior Environmental Engineer, Himachal Pradesh Pollution Control Board	Clearances and Permissions required from Himachal Pradesh Pollution Control Board (HPPCB) and Department of Environment	<ol style="list-style-type: none"> <li>1. The ADB Environmental consultant provided an overview on HPSPD.</li> <li>2. He enquired about the types of permissions and clearances required from the HPPCB and State Department of Environment.</li> </ol> <p>The senior Environmental Engineer, Department of Environment, replied that educational and training institutes are exempted from the environmental clearance process. Therefore, there is no</p>

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Sl. No.	Place and date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
				<p>requirement for prior environmental clearances for CLCs, RLCs, MCCs and the Women's Polytechnic planned under HPSDP. He explained that Consent to establish and Operate has to be obtained from HPPCB only if a residential complex is planned at any of the sites. In case hazardous waste is generated, then a management proposal has to be submitted to the HPPCB for Hazardous waste authorization and disposal.</p> <p>The ADB Environment and Safeguard consultant replied that none of the planned training facilities will generate hazardous waste, either during construction or operation.</p>
3	Sunder Nagar, 22/12/2015, 14/03/2016, and 15/03/2016	Director, DOTE, and other officials	ITI selected for upgradation, locations of RLCs and CLCs selected at ITI campus and site of proposed Women Polytechnic at Rehan in Kangra district	<ol style="list-style-type: none"> <li>1. The ADB Environment and Safeguard consultant enquired whether any of project sites under DOTE are planned in forest areas or within buffer or core zones of national park or bird sanctuary. Director, DOTE, replied that CLC/RLC sites planned are within the vacant sites within the premises of existing industrial training institutes. Only the site for the Women's Polytechnic in Kangra falls within revenue forest land. For this site NOC from Forest Department has been received.</li> <li>2. The ADB Environment and Safeguard consultant suggested that DOTE should submit land ownership details/revenue records for all sites planned under the ADB funding for due diligence. He noted that DOTE should also start the process of getting NOC from the Forest Department and land transfer in DOTE name for the site in Rehan, Kangra, where the Women's Polytechnic is planned.</li> </ol>
4	Shimla, 21/12/2015	Department of Labor and Employment (DOLE)	Locations of MCCs planned, approximate area required for MCCs	<ol style="list-style-type: none"> <li>1. The ADB Environment and Safeguard consultant enquired about the proposed locations of MCCs. The officials replied that with ADB assistance, 11 MCCs planned. The planned locations are Hamirpur, Shimla, Bilaspur, Kullu, Dharamsala, etc. As per Government of India guidelines, the built up area of around 3,000 sq.feet is needed for MCCs.</li> <li>2. The ADB Environment and Safeguard consultant noted that the revenue record of land ownership should be provided to the ADB team for due diligence.</li> </ol>

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Sl. No.	Place and date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
5	Shimla, 21/12/2015	Department of Rural Development (DoRD)	Locations of proposed RLCs, environmental and social safeguard issues, tree cutting, etc.	<ol style="list-style-type: none"> <li>1. The ADB Environment and Safeguard consultant enquired about probable locations of RLCs planned.</li> <li>2. The environmental expert suggested that no sites with temporary or permanent occupation should be identified and revenue records showing ownership details should be provided for the social due diligence. Further, any site involving tree cutting, necessary tree cutting permission should be obtained.</li> <li>3. The environmental expert also suggested that sites should be at least 300 m away from buildings/monuments of heritage importance and those declared as protected monuments by the State Archaeological Department or by the Archaeological Survey of India (ASI). The officials noted the suggestions.</li> </ol>

## **B. Future Consultation And Information Disclosure**

101. To ensure continued public and stakeholder participation in the sub-projects life cycle, periodic consultations and focus group discussion should be continued. A grievance redressal committee will be formed within the PIU (at PWD) and also at PMU Level to register grievances of the people regarding technical, social and environmental issues. This participatory process will ensure that all views of the people are adequately reviewed and suitably incorporated in the design and implementation process. Further, to ensure an effective disclosure of the sub-projects proposals to the stakeholders and the communities in the vicinity of the individual sub-project location, an extensive project awareness campaign will be carried out.

### ***Information disclosure***

102. Electronic version of the IEE will be placed in the official website of the DORD, DOUD, HPKVN, GOHP and the website of ADB after approval of the documents by the GOHP and ADB. On demand, any person seeking information can obtain a hard copy of the complete IEE document by paying cost of photocopy from the office of the PMU and PIU, on a written request.

103. The PMU will issue notification on the disclosure mechanism in local newspapers, ahead of the initiation of implementation of the CLC and RLC sub-projects, providing information on the project, as well as the start dates, etc. The notice will be issued by the PMU in local newspapers one month ahead of the implementation works. This will create awareness of the project implementation among the public.

## **C. Grievance Redress Mechanism**

104. The affected person(s)/aggrieved party can give their grievance verbally or in written to the local site office(s) of sub-project(s). Grievances of affected person will first be brought to the attention of the site in charge, who can resolve the issue at the site level. If the matter is not solved within 7 days period by the site in charge, it will be brought to the Grievance Redress Committee constituted for the purpose in PIU (PWD). This GRC shall discuss the issue in its monthly meeting and resolve the issues within one month of time after receiving the grievance. If the matter is not resolved by GRC at PIU level within stipulated time, it shall be referred to GRC at PMU level by Project Manager of PIU.

105. GRC at PMU shall discuss the issue and try to resolve it and inform the PIU accordingly. If the matter is not resolved by the GRC at PMU level within one month of time, the aggrieved person/party can bring the matter to The Court of Law. The PIU and sub-project site office shall keep records of all grievances received including contact details of complainant, date of receiving the complaint, nature of grievance, agreed corrective actions and the date these were affected and final outcome. For this a complaint register will be maintained at each sub-project site. The grievance redress process is shown below.

### **Composition and functions of GRC**

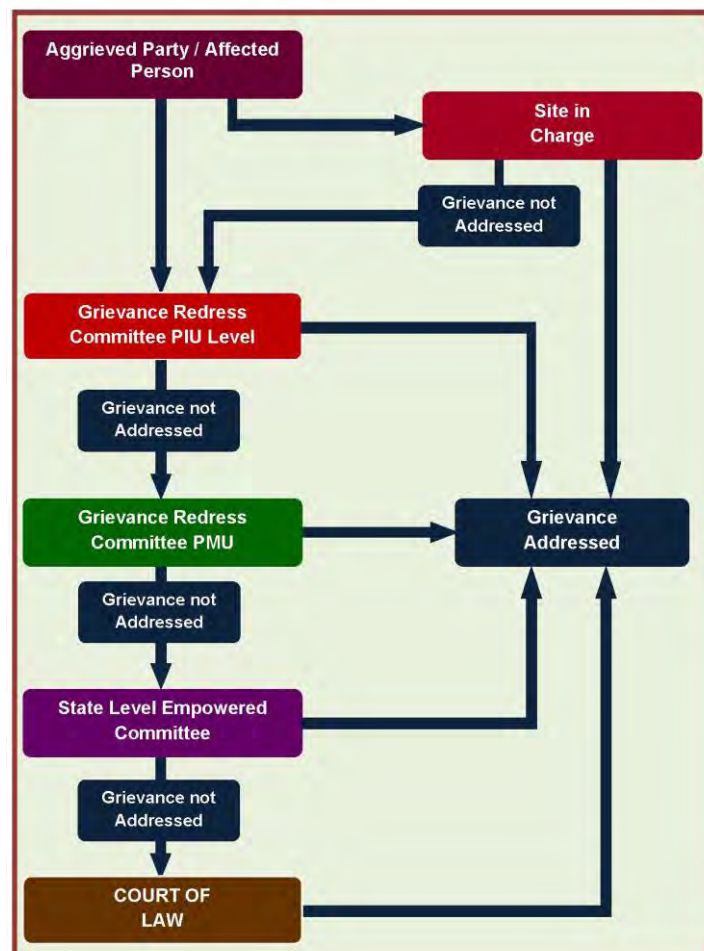
106. PIU Level Grievance Redress Committee (GRC- PIU) – This committee will comprise of Project Manager, Site In charge and one officer from contractor team. The GRC- PIU will be headed by Project Manager (PIU). It will meet at least once a month. The agenda of the meeting will be circulated to all the members and the affected persons/aggrieved party along with venue, date and time at least a week prior to the meeting. The matters shall remain with GRC at PIU level for one month. If the grievance is not resolved within this time period, then it will be referred to GRC at PMU.

107. **GRC at PMU.** There shall be one GRC in PMU. The matters not resolved by the GRC at PIU level within one month shall come under GRC at PMU. GRC at PMU will include the Managing Director, HPKVN, and Project Manager PIU (PWD), safeguard specialists (Environmental and Social) of the PMU, and one representative from concerned Department (DOTE/DOLE/DOHE). The Committee shall be headed by the Managing Director, HPKVN. This committee shall look into the matters, which are referred to and not resolved by GRC at PIU level. If the matter is not resolved by the GRC at PMU level within one month of time, then the aggrieved person or party can bring the matter to State Level Empowered Committee (SLEC) which is in-charge of the overall HPSPDP. In case grievance is not readdressed by the SLEC, then complainant can reach to the court of law.

108. **Approach to GRC.** Affected person or aggrieved party can approach the GRC for redress of his/their grievances through any of the following modes:

- Web based: A separate corner will be developed at the HPKVN website so that public and affected person can register their complaints in the online column.
- Telecom based: A telephone number will be displayed at the web site of HPKVN and the construction site (s) sub projects so that general public can register their complaint through telephone and mobile phone to the PIU and PMU office. One complaint register will also be maintained at sub-project construction site. The grievance redress mechanism for the HPSPDP for safeguards related issues has been shown below in **Figure-13**:

**Figure 13: Grievance Redress Mechanism (HPSPDP Project)**





## **VII. FINDINGS AND RECOMMENDATIONS**

109. The proposed sub-projects components do not involve any interventions in and around the natural and cultural heritage destinations and have less significant (direct and indirect) environmental impacts. It is expected that the proposed sub-projects will enhance economic growth and employability of local Himachali youth through development of skills.

110. This IEE has identified minor likely impacts on water, air and noise during construction and operation period and has defined mitigation measures. Those mitigation measures will be implemented and monitored during the sub-projects execution. The overall environmental quality of sub-projects surroundings will not be affected as a result of operating the CLC as adequate sanitation facilities have been planned.

111. The specific management measures laid down in the IEE will effectively address any adverse environmental impacts due to the sub-projects. The effective implementation of the measures proposed will be ensured through the building up of capacity towards environmental management within the PMU supplemented by the technical expertise of Safeguards Specialists of the PMC. Further, the environmental monitoring plans provide adequate opportunities towards course correction to address any residual impacts during construction or operation stages.

## **VIII. CONCLUSIONS**

112. On the basis of the IEE, it is expected that the proposed sub-projects components have only minor, localized, temporary and insignificant environmental impacts. These can be easily mitigated through adequate mitigation measures and regular monitoring during the design, construction and post construction phases of the sub-project. Negative impacts on water, air quality and noise levels during civil works & operation phase, which will be appropriately monitored and adequately mitigated. This report has not identified any comprehensive, broad, diverse or irreversible adverse impacts caused by the sub project. Based on the findings of the IEE, the classification of the sub-project as Category “B” is confirmed. No further special study or detailed EIA needs to be undertaken to comply with ADB SPS (2009).

### Annexure-1: Rapid Environmental Assessment (REA) Checklist

**Instructions:**

- (i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by Director, RSES and for approval by the Chief Compliance Officer.
- (ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.
- (iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

**Country/Project Title:** India/ Supporting Skill Development in Himachal Pradesh

**Sector Division:** SAHS

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the project area adjacent to or within any of the following areas:			Under the Shimla Zone construction package, there is proposal to establish one CLC at Nahan ITI Campus and Two RLCs, one each at Pragati Nagar ITI campus and Chopal.  The sites of all the three sub-projects are located beyond 25 km distance from the (a) core and buffer zones of national parks, sanctuaries, tiger reserves, and biosphere reserves, etc. There are no structures or monuments of archaeological importance in the vicinity of proposed sub- project sites.
<ul style="list-style-type: none"> <li>▪ Underground utilities</li> </ul>		√	All the three sub projects are proposed on vacant land owned by GOHP. There are no underground utilities at any of the sub-project sites.
<ul style="list-style-type: none"> <li>▪ Cultural heritage site</li> </ul>		√	No cultural heritage site within 25 km distance from the sub-project sites.

Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal

Screening Questions	Yes	No	Remarks
▪ Protected Area		√	No protected areas within 25 km distance from the sub-project sites.
▪ Wetland		√	
▪ Mangrove		√	
▪ Estuarine		√	
▪ Buffer zone of protected area		√	
▪ Special area for protecting biodiversity		√	
▪ Bay		√	
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ Encroachment on historical/cultural areas?		√	
▪ Encroachment on precious ecology (e.g. sensitive or protected areas)?		√	
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems?		√	The sanitation facilities will be self-sustained (septic tanks planned at respective CLC and RLC locations) and solid waste collection and disposal will be integrated with the respective localities waste disposal facilities.
▪ Dislocation or involuntary resettlement of people?		√	The proposed sites for CLC and RLCs are on Government owned land( CLC Nahan in ITI campus, RLC Pragati Nagar in ITI Campus and RLC Chopal on DORD owned land) so no Involuntary Resettlement issues.
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		√	

Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> <li>Accident risks associated with increased vehicular traffic, leading to loss of life?</li> </ul>		√	<p>The proposed CLC and RLC sites are within inhabited areas and on well-connected roads. Since all the three sub-projects involve construction of buildings in &lt;1000 m<sup>2</sup> area, therefore, traffic increase during construction will be insignificant. During operation also traffic increase is not anticipated as students will be local and hostel facilities are planned at all the three locations.</p> <p>However, to rule out any accident due to project related vehicular traffic, if required, flagmen will be deployed near the sub-projects construction sites to regulate the traffic. Traffic Management Plan will be prepared for the construction phase.</p>
<ul style="list-style-type: none"> <li>Increased noise and air pollution resulting from increased traffic volume?</li> </ul>		√	<p>Since increase in the traffic is not anticipated, therefore, no increase in air and noise pollution.</p>
<ul style="list-style-type: none"> <li>Occupational and community health and safety risks?</li> </ul>		√	<p>The CLC and RLCs activities will not cause any occupational and community health and safety risks.</p>
<ul style="list-style-type: none"> <li>Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?</li> </ul>		√	<p>No such risks are anticipated</p>
<ul style="list-style-type: none"> <li>Generation of dust in sensitive areas during construction?</li> </ul>		√	<p>No generation of dust during the operation phase. Minor dust generated during construction activities will be controlled through dust suppression measures and through implementation of Environmental Management Plan (EMP).</p>



**Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal**

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> <li>Requirements for disposal of fill, excavation, and/or spoil materials?</li> </ul>		√	The proposed sites for CLC and RLCs is on plain land. No filling is required. Minor excavations for foundations will be done. Any spoil generated will be utilized in construction and remaining, if any, will be disposed off at the identified sites. The sites for disposal will be identified during the construction phase.
<ul style="list-style-type: none"> <li>Noise and vibration due to blasting and other civil works?</li> </ul>		√	No blasting is planned. The noise due to construction activities will be controlled within the stipulated limits through implementation of EMP.
<ul style="list-style-type: none"> <li>Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction?</li> </ul>		√	No requirement for draining of water from any of the sub-project sites. None of the sub-project site is sub-merged under the water.
<ul style="list-style-type: none"> <li>Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?</li> </ul>		√	The proposed built up area of CLC and RLCs is around 900 m <sup>2</sup> and this small area will not cause any impact on local hydrology. Further, sites are already in inhabited areas. So construction of buildings of CLC and RLCs is of no consequence from hydrology point of view.
<ul style="list-style-type: none"> <li>Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</li> </ul>		√	<p>Since CLC and RLCs buildings to be constructed are small in size, so construction force will not exceed 50 at any of the sub-project site. The construction workers will be mainly locals so no influx is anticipated during the construction.</p> <p>During operation phase also all trainees will be accommodated in Hostels at the respective locations of CLC and RLCs under the package, so no influx and impacts on social infrastructure are anticipated.</p>

**Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal**

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> <li>Social conflicts if workers from other regions or countries are hired?</li> </ul>		√	Preference will be given to locally available labor. The construction activities are limited in nature. In case workers are hired from other regions, requisite awareness programs and consultations with the locals will be organized to avoid social conflicts.
<ul style="list-style-type: none"> <li>Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation?</li> </ul>		√	Since proposed CLC and RLCs buildings are new, the safety measures are being planned in the building design as per national and state level requirements.
<ul style="list-style-type: none"> <li>Risks to community health and safety caused by management and disposal of waste?</li> </ul>		√	During construction phase waste collection and disposal system will be planned by the contractor(s) and it will be approved by the implementing agency (PWD). For operation phase adequate provisions have been made in the building design to take care disposal of waste water and other solid waste generated. The waste disposal will be integrated with the local disposal systems.
<ul style="list-style-type: none"> <li>Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</li> </ul>		√	The proposed CLC and RLCs sites are within the built-up areas of respective localities. Specific community risks are not foreseen due to operation as such as all the three sub project sites have good connectivity through National and State Highways. The CLC and RLCs buildings are being designed following applicable seismic coefficient for Himachal Pradesh to build safety in structural design. There will be periodic maintenance of buildings during the operation phase.

### A Checklist for Preliminary Climate Risk Screening

**Country/Project Title:**

**Sector:**

**Subsector:**

**Division/Department:**

Screening Questions		Score	Remarks <sup>6</sup>
<b>Location and Design of project</b>	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?	0	The proposed CLC and RLCs buildings are plain land, away from river and streams and not likely to be affected by floods, drought, storms and landslides.
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc.)?	0	Not Applicable
<b>Materials and Maintenance</b>	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?	0	Weather conditions at proposed sites of CLCs and RLCs do not demand usage of any specific construction material to counteract weather phenomenon.
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?	0	No, weather conditions at selected sites do not require specific scheduling for maintenance.
<b>Performance of project outputs</b>	Would weather/climate conditions and related extreme events likely affect the performance (e.g. annual power	0	Not Applicable

<sup>6</sup> If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Development of City Livelihood Centre at Nahan and Rural Livelihood Centers at Pragati Nagar and Chopal

	production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?		
--	--	--	--

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low\_risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response will be categorized as high risk project.

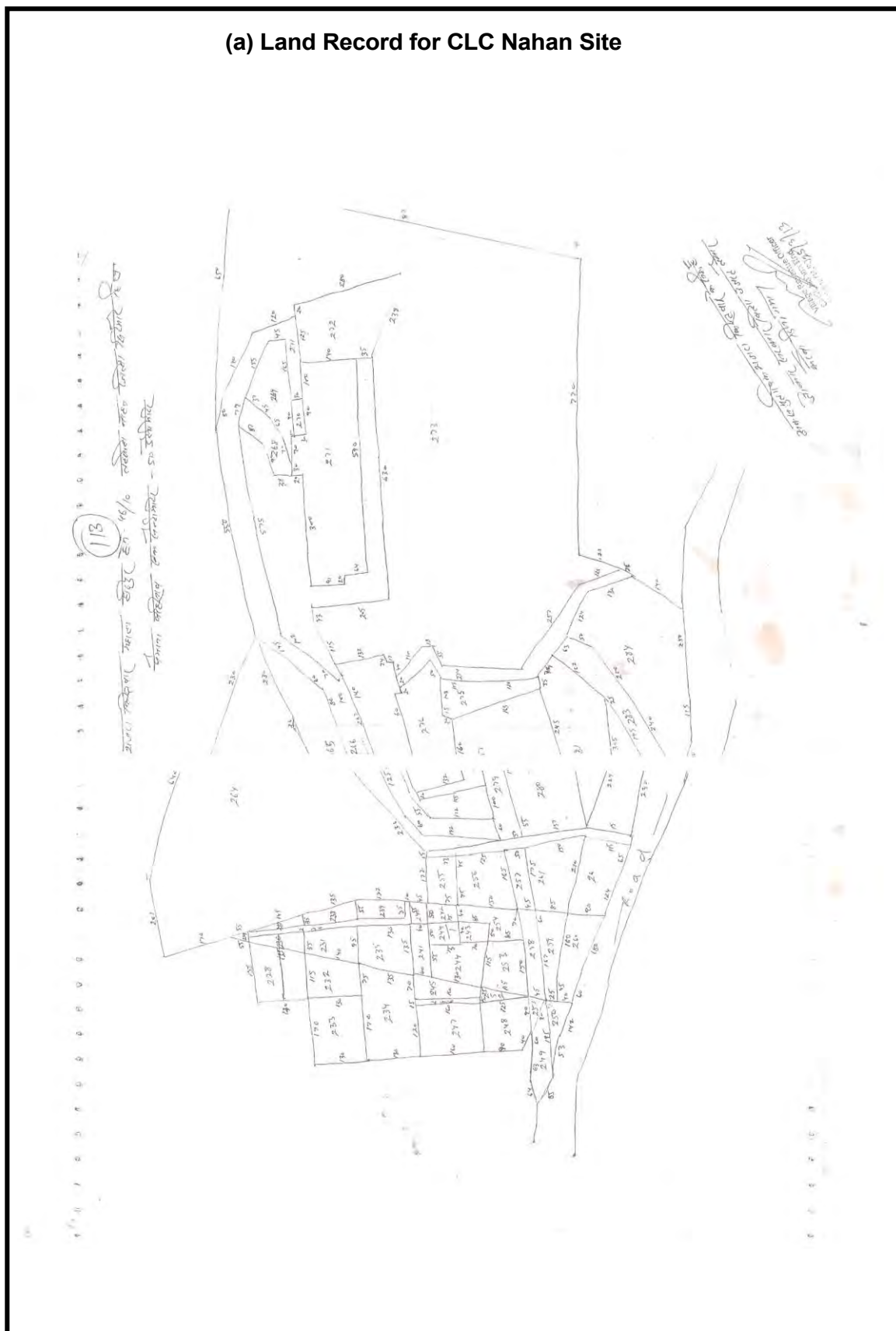
**Result of Initial Screening (Low, Medium, High): Low Risk**

**Other Comments:** None

**Prepared by:** Shreeniwas Verma, Environmental Safeguard Specialist

## Annexure -2: Land Records Certified by the Revenue Department Officials Showing GOHP Ownership

(a) Land Record for CLC Nahan Site

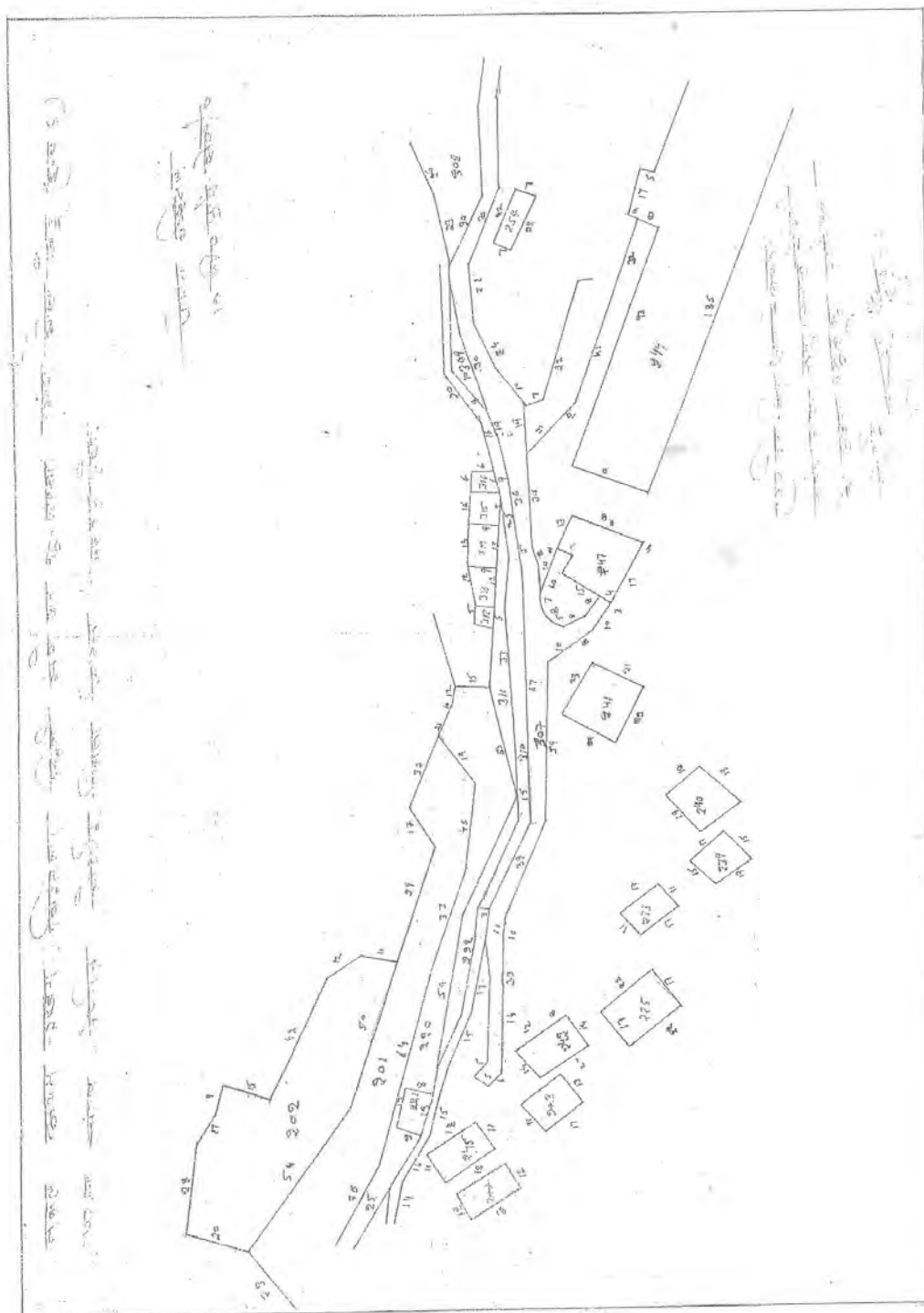


Form No. 64



$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

(b) Land Record for RLC Pragati Nagar Site





D.L.R. Form No. 12.

[illegible]

Sl. No.	Name of the Project	Location	Area (Hectare)	Investment (Rs. Lakhs)	Employment (No. of persons)	Beneficiaries (No. of persons)	Remarks
1	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
2	Chopal	Chopal	10.00	10.00	100	1000	
3	Nahan	Nahan	10.00	10.00	100	1000	
4	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
5	Chopal	Chopal	10.00	10.00	100	1000	
6	Nahan	Nahan	10.00	10.00	100	1000	
7	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
8	Chopal	Chopal	10.00	10.00	100	1000	
9	Nahan	Nahan	10.00	10.00	100	1000	
10	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
11	Chopal	Chopal	10.00	10.00	100	1000	
12	Nahan	Nahan	10.00	10.00	100	1000	
13	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
14	Chopal	Chopal	10.00	10.00	100	1000	
15	Nahan	Nahan	10.00	10.00	100	1000	
16	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
17	Chopal	Chopal	10.00	10.00	100	1000	
18	Nahan	Nahan	10.00	10.00	100	1000	
19	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
20	Chopal	Chopal	10.00	10.00	100	1000	
21	Nahan	Nahan	10.00	10.00	100	1000	
22	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
23	Chopal	Chopal	10.00	10.00	100	1000	
24	Nahan	Nahan	10.00	10.00	100	1000	
25	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
26	Chopal	Chopal	10.00	10.00	100	1000	
27	Nahan	Nahan	10.00	10.00	100	1000	
28	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
29	Chopal	Chopal	10.00	10.00	100	1000	
30	Nahan	Nahan	10.00	10.00	100	1000	
31	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
32	Chopal	Chopal	10.00	10.00	100	1000	
33	Nahan	Nahan	10.00	10.00	100	1000	
34	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
35	Chopal	Chopal	10.00	10.00	100	1000	
36	Nahan	Nahan	10.00	10.00	100	1000	
37	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
38	Chopal	Chopal	10.00	10.00	100	1000	
39	Nahan	Nahan	10.00	10.00	100	1000	
40	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
41	Chopal	Chopal	10.00	10.00	100	1000	
42	Nahan	Nahan	10.00	10.00	100	1000	
43	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
44	Chopal	Chopal	10.00	10.00	100	1000	
45	Nahan	Nahan	10.00	10.00	100	1000	
46	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
47	Chopal	Chopal	10.00	10.00	100	1000	
48	Nahan	Nahan	10.00	10.00	100	1000	
49	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
50	Chopal	Chopal	10.00	10.00	100	1000	
51	Nahan	Nahan	10.00	10.00	100	1000	
52	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
53	Chopal	Chopal	10.00	10.00	100	1000	
54	Nahan	Nahan	10.00	10.00	100	1000	
55	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
56	Chopal	Chopal	10.00	10.00	100	1000	
57	Nahan	Nahan	10.00	10.00	100	1000	
58	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
59	Chopal	Chopal	10.00	10.00	100	1000	
60	Nahan	Nahan	10.00	10.00	100	1000	
61	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
62	Chopal	Chopal	10.00	10.00	100	1000	
63	Nahan	Nahan	10.00	10.00	100	1000	
64	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
65	Chopal	Chopal	10.00	10.00	100	1000	
66	Nahan	Nahan	10.00	10.00	100	1000	
67	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
68	Chopal	Chopal	10.00	10.00	100	1000	
69	Nahan	Nahan	10.00	10.00	100	1000	
70	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
71	Chopal	Chopal	10.00	10.00	100	1000	
72	Nahan	Nahan	10.00	10.00	100	1000	
73	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
74	Chopal	Chopal	10.00	10.00	100	1000	
75	Nahan	Nahan	10.00	10.00	100	1000	
76	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
77	Chopal	Chopal	10.00	10.00	100	1000	
78	Nahan	Nahan	10.00	10.00	100	1000	
79	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
80	Chopal	Chopal	10.00	10.00	100	1000	
81	Nahan	Nahan	10.00	10.00	100	1000	
82	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
83	Chopal	Chopal	10.00	10.00	100	1000	
84	Nahan	Nahan	10.00	10.00	100	1000	
85	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
86	Chopal	Chopal	10.00	10.00	100	1000	
87	Nahan	Nahan	10.00	10.00	100	1000	
88	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
89	Chopal	Chopal	10.00	10.00	100	1000	
90	Nahan	Nahan	10.00	10.00	100	1000	
91	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
92	Chopal	Chopal	10.00	10.00	100	1000	
93	Nahan	Nahan	10.00	10.00	100	1000	
94	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
95	Chopal	Chopal	10.00	10.00	100	1000	
96	Nahan	Nahan	10.00	10.00	100	1000	
97	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	
98	Chopal	Chopal	10.00	10.00	100	1000	
99	Nahan	Nahan	10.00	10.00	100	1000	
100	Pragati Nagar	Pragati Nagar	10.00	10.00	100	1000	



पदारी को चाहिए कि इस मौके से धाक करे ताकि यह वक्त जमावन्दों के साथ आसानी से लिहवन्दों को मेल

॥ ॐ नमो भगवते वासुदेवाय ॥

15.  $\frac{1}{2} \log_2 \frac{1}{2} = -\frac{1}{2} \log_2 2 = -\frac{1}{2} \cdot 1 = -\frac{1}{2}$

D.L.R. Form No. 12.

**(c) Land Record for RLC Chopal Site**

### **Annexure-3: Sample Traffic Management Plan**

#### **A. Principles**

1. Since the scale of construction work at the sub-projects sites is relatively small, there will not be any major or prolonged disruption of local traffic. Nevertheless, it is good to prepare a traffic management plan (TMP) to minimize and avoid public inconvenience to the extent feasible. This indicative TMP will ensure the safety of all the road users along the work zone and minimize public inconvenience. It addresses the following issues:

- (i) The safety of pedestrians, bicyclists, and motorists travelling through the construction zone;
- (ii) Protection of work crews from hazards associated with moving traffic;
- (iii) Avoiding traffic congestion and
- (iv) Maintenance of access to adjoining properties.

#### **B. Operating Policies for TMP**

2. The following principles will help to promote safe and efficient movement for all road users (motorists, bicyclists, and pedestrians, including persons with disabilities) through and around work zones while reasonably protecting workers and equipment.

- (i) Make traffic safety and temporary traffic control an integral and high-priority element of every project from planning through design, construction, and maintenance.
- (ii) Inhibit traffic movement as little as possible.
- (iii) Provide clear and positive guidance to drivers, bicyclists, and pedestrians as they approach and travel through the temporary traffic control zone.
- (iv) Inspect traffic control elements routinely, both day and night, and make modifications when necessary.
- (v) Pay increased attention to roadside safety in the vicinity of temporary traffic control zones.
- (vi) Keep the public well informed.
- (vii) Make appropriate accommodation for abutting property owners, residents, businesses, emergency services, railroads, commercial vehicles, and transit operations.

#### **C. Analyze the impact due to street closure, if required**

3. A final decision to close a particular street and divert the traffic should involve the following steps:

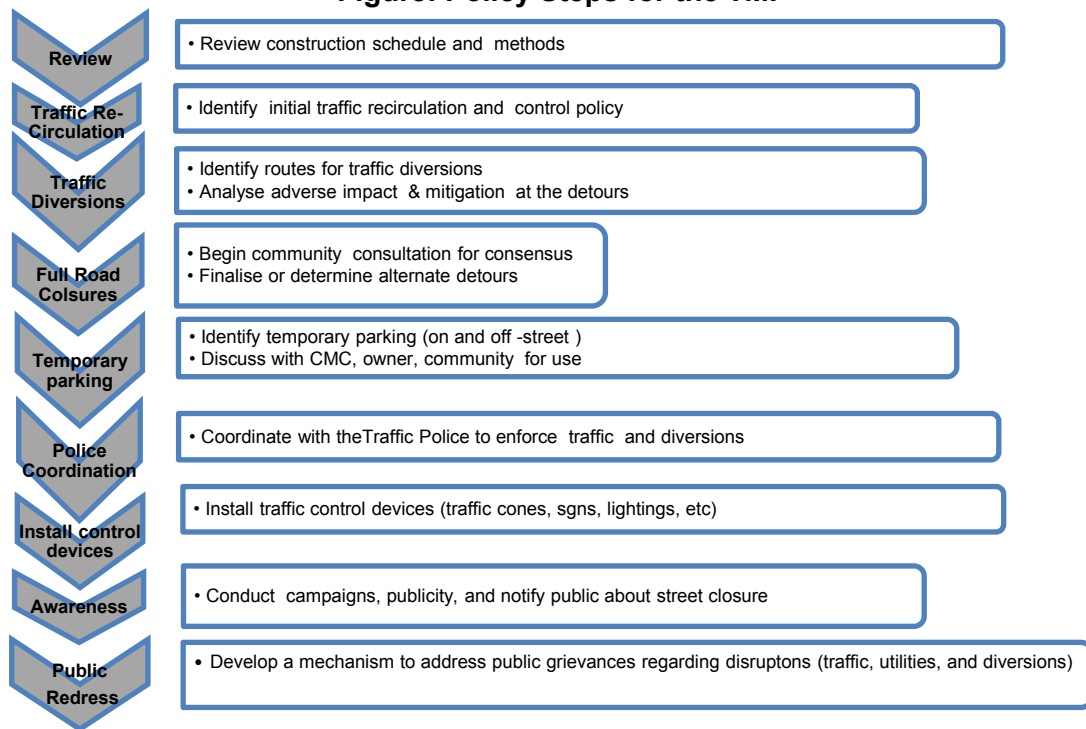
- (i) approval from the PIU and local administration to use alternative local streets as detours;
- (ii) consultation with businesses, community members, traffic police, PWD, etc, regarding the mitigation measures necessary at the detours where the road is diverted during the construction;
- (iii) determining of the maximum number of days allowed for road closure, and incorporation of such provisions into the contract documents;
- (iv) determining if additional traffic control or temporary improvements are needed along the detour route;
- (v) considering how access will be provided to the worksite;
- (vi) contacting emergency service, school officials, and transit authorities to determine if there is any effect on their operations; and



- (vii) Developing a notification program to keep the public informed. As part of this program, the public should be advised of alternate routes that commuters can take or will have to take as result of the traffic diversion.

4. If full road-closure of certain streets within the area is not feasible due to inadequate capacity of the detour streets or public opposition, then full closure can be restricted to weekends with the construction commencing on Saturday night and ending on Monday morning prior to the morning rush hour traffic.

**Figure: Policy Steps for the TMP**



#### D. Public awareness and notifications

5. The PWD and the contractors will issue timely notifications to inform the public about the following issues:

- (i) Road blockages and alternative routes along with the duration (as applicable)
- (ii) Traffic control devices placed around the construction zones (signs, traffic cones, barriers, etc.);
- (iii) Reduced speed limits to be enforced at the work zones and traffic diversions.

8. It may be necessary to conduct an awareness campaign on road safety during construction. It will target relevant groups i.e. children, adults, and drivers. Therefore, these campaigns will be conducted in schools and community centers. In addition, the project will publish a brochure for public information. These brochures will be widely circulated around the area and will also be available at the PIU, and the contractors' site office. The text of the brochure should be concise to be effective, with a lot of graphics. It will serve the following purpose:

- (i) Explain why the brochure was prepared, along with a brief description of the project;
- (ii) Advise the public to expect the unexpected;

- (iii) Educate the public about the various traffic control devices and safety measures adopted at the work zones;
- (iv) Educate the public about the safe road user behaviour to emulate at the work zones;
- (v) Tell the public how to stay informed or where to inquire about road safety issues at the work zones (name, telephone, mobile number of the contact person; and
- (vi) Indicate the office hours of relevant offices.

#### **E. Vehicle Maintenance and Safety**

10. A vehicle maintenance and safety program shall be implemented by the construction contractor(s). The contractor(s) should ensure that all the vehicles are in proper running condition, and comply with roadworthy and meet certification standards of GOHP. All vehicles should be in good condition and meet the pollution standards of Government of India and GOHP. The drivers will follow the special code of conduct and road safety rules of GOHP. They will ensure that all loads are covered and secured. Vehicles will be cleaned and maintained in designed places.

#### **F. Install traffic control devices at the work zones and traffic diversion routes**

10. The purpose of installing traffic control devices at the work zones is to delineate these areas to warn, inform, and direct the road users about a hazard ahead, and to protect them as well as the workers. As proper delineation is key for achieving the above objective, it is important to install good traffic signs at the work zones. The following traffic control devices will be used in work zones:

- Signs
- Pavement Markings
- Channelizing Devices
- Arrow Panels
- Warning Lights

11. Procedures for installing traffic control devices at any work zone vary depending on road configuration, location of the work, construction activity, duration, traffic speed and volume, and pedestrian traffic. Work will take place along major roads, and the minor internal roads. As such, the traffic volume and road geometry vary. However, regardless of where the construction takes place, all the work zones should be cordoned off, and traffic shifted away at least with traffic cones, barricades, and temporary signs (temporary “STOP” and “GO”).

12. The work zone should take into consideration, the space required for a buffer zone between the workers and the traffic (lateral and longitudinal) and the transition space required for delineation, as applicable. For the works, a 30 cm clearance between the traffic and the temporary STOP and GO signs should be provided. In addition, at least 60 cm is necessary to install the temporary traffic signs and cones.




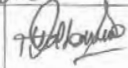


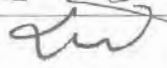


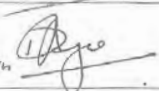
13. Traffic police should regulate traffic away from the work zone and enforce the traffic diversion result from full street closure in certain areas during construction. Flaggers or personnel should be equipped with reflective jackets at all times and have traffic control batons (preferably the LED type) for regulating the traffic during night time.

14. In addition to the delineation devices, all the construction workers should wear fluorescent safety vests and helmets in order to be visible to the motorists at all times. There

should be provision for lighting beacons and illumination for night constructions. The PIU and contractor will coordinate with the local administration and traffic police regarding the traffic signs, detour, and any other matters related to traffic. The contractor will prepare the traffic management plan in detail and submit it along with the EMP for the final approval.

#### Annexure 4 Photographs and Attendance Sheet of consultations

Attendance Sheet of the meeting held on 18-3-2016 at 11.00 AM in Conference Hall Yojna Bhawan, Shimla-2 with ADB consultants regarding Himachal Pradesh Skill Development Project.

Sr. No.	Name of the Officer and Designation	Mobile No. / e-mail address.	Signature
1	Krishan Sharma Deputy Dir Employment	94184-50437 dde-lep-hp@nic.in	
2	Dr. D.K. Sharma, Sr. Engr. Engineer	9418027098 pcbseeshimla@gmail.com	
3	Dr. H.K. Gupta, IFS Chief Scientific Officer Deptt. of Envr. S&T & MS of Science & Technology	9418020469 hernan@ifs@gmail.com	
4	En. Umesh Pathania Technical Officer & Estimator State Council, Science Tech & DST.	9418310231 umeshpathania@hotmail.com	
5	Dr. Dharmu Sharma, Project Director HPS & M. Deptt of Rural Development (H.P.)	94186-70335 h4m hp@gmail.com	
6	SN Verman ADB Consultant Environment	0984224458 stundia2@gmail.com	
7	Rajesh Kumar, IFS	9418000751	
8	J. Balasubramanian Prominent	9600044487	
9	Basab Borepee TVET Expert	7838577785	
10	DEEPAK ANGRA HOD(CE) DTE Sundernagar	9418107688 angradeepak@yahoo.co.in	

### Photographs and Attendance Sheets of consultations of Nahan



**Stakeholders Consultation at Nahan**

IND 49108-002: Supporting Skill Development in Himachal Pradesh

Stakeholder Consultations

Date : 06/08/16

Location: Nahan

Planned Facility: CLCCTI, <sup>Nahan</sup> ~~Pragati Nagar~~

S. No.	Name	Designation	Phone Number	Signature
1	S.K. Gupta	Principal	0172-222319	
2	C.K. Kaushik	G.I.		
3	Madan Mohan	Supdt.	94180-79033	
4	Taranjeet Singh	Sr. Asst H.	94184-55197	
5	Anil Dutt Sharma	Sr. Asstt	94180-35693	
6	BHUPENDER SINGH	D.C.O	98166-49312	
7	Ravinder Prakash	D.E.O.	98165-69444	
8	Shreeniwas	ADP Council	9811224455 9811224455	
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### Photographs and Attendance Sheets of consultations of Chopal



**Stakeholder Consultation at Chopal**

Stakeholder Consultations - RLC Chopal  
Dated: 11/9/2016

NO.	NAME	OCCUPATION	CONTACT NO.
1.	Manishak Sharma	BDC Member	098164 64634
2.	Pagdish Khogla	Vice-President	098056 67088
3.	Dhan Singh Khogla	Agriculture	9805790755
4.	Shamsher Singh	Member Ward	9805730770
5.	Kuldeep Sharma	Driver + Agriculture	98161 36621
6.	Har Ram Chauhan	Agriculture Kotali	9805038305
7.	Rakesh Kumar	Agriculture Chopal	98058 98165 28382
8.	Relu Ram	Agg - Chopal	98164 15838
9.	Surender Singh	Agg - Lakhwli Chopal	98164 98803
10.	Ram Lal Chauhan	Agg - Chopal	86290 77121
11.	Parvish Negi	Agg - Chopal	8894478366
12.	Udender Negi	Agg - Lakhwli	9805860372
13.	Jeelender Negi	Agg - Lakhwli	88940 28793
14.	Sikander Negi	Agg - Lakhwli	88949 34654
15.	Ramesh Kumar	Police - Chopal	88946 25744
16.	Dev Dutt Punaik	Agg - Chopal	98162 01944
17.	Pran Lal	Ward Member Lakhwli	8988126912
18.	Usha Gazta	Paradham G.P. Chauhan	9805827266
19.	Champa Sharma	Ward Member Chopal	8894972107
20.	Rup Lal Pafli	Agg - Manu Bhabiya	98058 27741
21.	Ashok Sharma	Sac. Panchayat Chauhan	98166 94432
22.	Ramesh Nehla	ex. Paradham Chopal	94594 38453
23.	Parveen Gazta	Farmer Chopal	88944 01062
24.	Govind Gazta	Farmer Chopal	98167 34257
25.	Pushpa Devi	Bamrao - Chopal	98164 91608
26.	Neelam	Farmer - Chopal	9805834387
27.	Sumitra Chauhan	Farmer - Lal Puni	9805476330
28.	Satya Devi	Farmer Chaudhary	8828864754
29.	Vinla Devi	Housewife Badna	9459747487
30.	Narindra Devi	Housewife Chotkiya	9816475095
31.	Krishna Negi	Housewife Badna	8988008694
32.	Sudeeksha Negi	Ward member Chopal	8894137556



33	Urmila Chauhan	House wife Chopal	9805650245	Urmila
34	Amrit Sharma	Agg + Hali: Chopal	8627852150	Amrit
35	Meera Sharma	House wife Chopal	9418439982	Meera
36	Shashi Chauhan	BDC member Chopal	9882481940	Shashi
37	Shruti Vana	ADB consultant Delhi	9811224458	Shruti

**Photographs and Attendance Sheets of consultations of Pragati Nagar**



**Stakeholders Consultation at Pragati Nagar**

**IND 49108-002: Supporting Skill Development in Himachal Pradesh**

**Stakeholder Consultations**

Date : 09/05/16

Location: I T I Pragati Nagar

Planned Facility: BLRC

S. No.	Name	Designation	Phone Number	Signature
1	Shash Nith Singh	Principal (Polytechnic)	9418488787	
2	Tara Chand Dhillon	Gr. I.	9418151132	
3	Rishabh Vardhan	JE Civil	8629861521	
4	Mohinder Chaudhary	Clerk	9736184093	
5	Kapil Sharma	Clerk	985711007	
6	Sandeep Kumar	Instructor MMV	9418966765	
7	Govardhan Singh	Asst. Instructor	9459366612	
8	Sanjeev Kumar	Instructor Fitter	9625773250	
9	Vinay Sharma	Instructor Electronics Mech.	9469741993	
10	Sonali Vardhan	Instructor Engg. Dgt. Work	8788465260	
11	Tapender Singh	Asst. Electrician	9418455082	
12	Preeti Kumari	Trainer Technician	7807084267	
13	Tara Chaudhary	Asst. Vardhan		
14	Ashtok Chaudhary	(Asst. Vardhan)		

15	ANURAG SHARMA	AP CSE	9816999530	Anurag
16	Shree niwara	ADB Comm	9811224488	SE
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