

Environmental Assessment Document

**Initial Environmental Examination (IEE)
Project Number:**

August 2016

Himachal Pradesh Skill Development Project

**Sub Project – City Livelihood Centre (CLC) at Mohal Sidhbari, Kangra District
(Himachal Pradesh)- Package No.**

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

This initial environmental examination is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

ABBREVIATIONS

| | |
|--------|---|
| ADB | - Asian Development Bank |
| ASI | - Archaeological Survey of India |
| CPCB | - Central Pollution Control Board |
| CPR | - Common property resources |
| DOT | - Department of Tourism |
| EA | - Executing Agency |
| EIA | - Environmental Impact Assessment |
| EMP | - Environmental Management Plan |
| FSI | - Forest Survey of India |
| Gol | - Government of India |
| IA | - Implementing Agency |
| IEE | - Initial Environmental Examination |
| IUCN | - International Union for Conservation of Nature |
| MoEFCC | - Ministry of Environment, Forests and Climate Change |
| 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 |
| 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 |

CURRENCY EQUIVALENTS

(As of July 2016)
Currency unit – Indian rupee (Rs)
Rs1.00 = \$0.014925
\$1.00 = Rs 67.00

WEIGHTS AND MEASURES

dB (A) A-weighted decibel
ha - hectare
km- kilometer
km²- square kilometer
µg- microgram
m - meter
m²- square meter
MW (megawatt) - megawatt

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

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EXECUTIVE SUMMARY

1. **Background:** The Himachal Pradesh Skill Development Project (HPSDP) will build Himachal Pradesh Kaushal Vikas Nigam Ltd.'s (HPKVN) institutional capacity so that it can deliver the challenging mandate of the Himachal Pradesh Skill Development Mission (HP SDM). It will help HPKVN in preparing a TVET results-framework for HP as a whole, taking into account, the programs and targets of all departments. All ongoing TVET programs will be rationalized and integrated to reduce duplication. The Project will add value by supporting HPKVN and other relevant departments namely, Labor and Employment (DoLE); Department of Higher Education (DoHE); Department of Technical Education, Vocational & Industrial Training (DoTE); Department of Rural Development (DoRD); and Department of Urban Development (DoUD) in (i) providing NSQF-aligned training to 60,000 needy youth over 2017–2021; (ii) expanding HP's annual TVET training capacity by 13,250; (iii) extending the reach of quality training facilities to hitherto under-served parts of HP; (iv) strengthening the capacity to undertake as TVET quality assurance skills certification, skill-gap and aspiration surveys, industry engagement, monitoring and evaluation (M&E); and (iv) building up institutional processes to handle financial management, procurement, and safeguards functions effectively.
2. Construction and operation of a City Livelihood Centre (CLC) at Mohal Sidhbari is one of the subproject. This CLC will provide the Himachali youth from region skill development opportunities for gainful employment. The CLC site is located near the village Mohal Sidhbari in Kangra District at N 32°18'38.35" latitude and E 76°36'15.44" longitude. The elevation of the site is 846 m above MSL.
3. **Executing and Implementing Agencies:** The Executing Agency(EA)of the sub project is Department of Planning (DoP), Govt. of Himachal Pradesh, while Department of Urban Development (DoUD) is the Implementing Agency (IA). A team of technical, administrative and financial officials, including safeguards specialists, is being provided at the Project Management Unit (PMU) at HPKVN to implement, manage and monitor project implementation activities. The PMU will be assisted by Project Management Consultants (PMC), Project Implementation Units (PIUs) and PWD. The PWD will carry out detailed design, bids evaluation, award of construction contracts and also construction supervision. The PIUs with requisite, qualified and experienced officers for the day-to-day activities of

subproject implementation in the field will be established in the DoUD and this will be under the direct administrative control of the PMU. Consultant teams are responsible for subproject planning and management and assuring technical quality of design and construction; and designing the infrastructure and supervising construction; and safeguards preparation.

4. **Categorization:** Development of CLC at Mohal Sidhbari is classified as Environmental Category B as per the SPS, 2009 as no significant impacts are envisioned. Accordingly this Initial Environmental Examination (IEE) report prepared, assesses the environmental impacts and provides mitigation and monitoring measures to ensure no significant impacts as a result of the subproject implementation.
5. **Subproject Scope:** The main objectives of the sub-project are to, (a) to construct a building for the CLC, (b) Involve local urban Himachali youth for skill development, and c) Improve employability and economic condition of local communities.

The major scope of this subproject as per DPR are: CLC building will be a three floor building and will consist of Computer Laboratory, Lobby cum waiting area, Practical Class Room, and Hostel facilities for 28 trainees. In addition to this the CLC building will have sanitation and drinking water facilities as part of building. The solar power generation of 3 kVA planned through installation of solar power panels. The total built up area of the CLC building will be 758 m².

6. **Description of the Environment:** Subproject is located at Mohal Sidhbari area near Dharamshala and site is a vacant plot under the ownership of Department of Urban Development. There are residential houses in the surroundings of proposed CLC site. There are no trees at the site. Since site is in the urban residential area, there is no protected or reserved forest area. Since the site is relatively in an open area, therefore, there are no ambient air quality and noise level issues. There is no natural stream or river in the surroundings of site. The subproject site is on a plain terrain.
7. . There are no protected areas (national parks, bird sanctuaries, tiger reserves, etc.), wetlands, mangroves, or estuaries in or near the subproject location.
8. **Environmental Management Plan:** An environmental management plan (EMP) is included as part of this IEE, which includes (i) mitigation measures for environmental impacts during implementation; (ii) an environmental monitoring program, and the responsible entities for mitigating, monitoring, and reporting; (iii) public consultation and

information disclosure; and (iv) a grievance redressal mechanism. A number of impacts and their significance have already been reduced by amending the designs. The EMP will be included in civil work bidding and contract documents.

9. Locations and siting of the proposed CLC were considered to further reduce impacts. The concepts considered in design of the subproject are (i) design, material and scale will be compatible to the local architectural, physical, cultural and landscaping elements; (ii) preference will be given to the use of local material and labour as best as possible; (iii) for conservation, local construction material available in the nearby region as best as possible suiting to those in existence; (iv) all painting (interior and exterior) will be with environment-friendly low volatile organic compounds paints; (v) earth backfill, if any will be done from the site excavated material; and (vii) ensuring all planning and design interventions and decisions are made in consultation with local communities and reflecting inputs from public consultation and disclosure for site selection.
10. During the construction phase, impacts mainly arise from the need to dispose of moderate quantities of excavated soil, construction waste and from the intermittent noise due to construction. These are common impacts of construction, and there are well developed methods for their mitigation. Measures such as conducting work in lean tourist season and minimizing inconvenience by best construction methods will be employed. In the operational phase, all facilities and infrastructure will operate with routine maintenance, which should not affect the environment. Facilities will need to be repaired from time to time, but environmental impacts will be much less than those of the construction period as the work will be infrequent, affecting small areas only.
11. Mitigation measures have been developed to reduce all negative impacts to acceptable levels. Mitigation will be assured by a program of environmental monitoring to be conducted during construction. The environmental monitoring program will ensure that all measures are implemented, and will determine whether the environment is protected as intended. It will include observations on- and off-site, document checks, and interviews with workers and beneficiaries. Any requirements for corrective action will be reported to the ADB.
12. The stakeholders were involved in developing the IEE through discussions on-site and public consultation, after which views expressed were incorporated into the IEE and in the planning and development of the subproject. The IEE will be made available at public locations in the town such as Municipal office building, district administration office and will

be disclosed to a wider audience via the ADB, DoUD and HPKVN websites. The consultation process will be continued and expanded during project implementation to ensure that stakeholders are fully engaged in the project and have the opportunity to participate in its development and implementation.

13. After the construction of CLC building start of CLC functioning, the local youth will gain through skill enhancement. The skill enhancement will result in employability and self-employment activities and ultimately economic development in the region.
14. **Consultation, Disclosure and Grievance Redress:** Public consultations were done in the preparation of the project and IEE. On-going consultations will occur throughout the project implementation period. A grievance redress mechanism is described within the IEE to ensure any public grievances are addressed quickly.
15. **Monitoring and Reporting:** The PMU, PIU, PMC and implementing agency will be responsible for environmental monitoring. The PIU with support from the PWD and PMC will submit monthly, quarterly, semi -annual monitoring reports to the PMU. The PMU will consolidate the semi- annual report and will submit to ADB. ADB will post the environmental monitoring reports on its website.
16. **Conclusions and Recommendations:** The proposed subproject is unlikely to cause significant adverse impacts. The potential impacts that are associated with design, construction and operation can be mitigated to standard levels without difficulty through proper engineering design and the incorporation or application of recommended mitigation measures and procedures. Based on the findings of the IEE, there are no significant impacts and the classification of the subproject as Category “B” is confirmed. 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.

I. INTRODUCTION

A. Background

1. The HPSPDP will build HPKVN's institutional capacity so that it can deliver the challenging mandate of the HP SDM. It will help HPKVN in preparing a TVET results-framework for HP as a whole, taking into account, the programs and targets of all departments. All ongoing TVET programs will be rationalized and integrated to reduce duplication. The Project will add value by supporting HPKVN and other relevant departments namely, Labour and Employment (DOLE); Higher Education (DOHE); Technical Education, Vocational & Industrial Training (DOTE); Rural Development (DORD); and Urban Development (DOUD) in (i) providing NSQF-aligned training to 60,000 needy youth over 2017–2021; (ii) expanding HP's annual TVET training capacity by 13,250; (iii) extending the reach of quality training facilities to hitherto under-served parts of HP; (iv) strengthening the capacity to undertake as TVET quality assurance skills certification, skill-gap and aspiration surveys, industry engagement, monitoring and evaluation (M&E); and (iv) building up institutional processes to handle financial management, procurement, and safeguards functions effectively.
2. The proposed ADB support reflects the priorities of the India Country Partnership Strategy, 2013–2017 which aims to support India's efforts in facilitating inclusive growth. It notes that skill development is a priority of the Government of India, and a key instrument for empowering people.¹ The proposal is aligned with the mid-term review of Strategy 2020 which requires ADB to focus on post-basic education and TVET to promote human capital development, and facilitate public–private partnerships to leverage and improve results. As part of increasing quality training Facilities City Level Livelihood Centre (CLC) is proposed at Mohal Sidhbari in Kangra District.
3. **Location:** The subproject site at Mohal Sidhbari is situated at a distance of about 14 km from Gaggal airport at Dharamshala. It is in Dharamshala Tehsil of Kangra district of Himachal Pradesh. The latitude and longitude of the sub project site are 32°18' 38" N and 76°36' 15 " E respectively. The site is about 5 km from Dharamshala town. The nearest rail head is at Pathankot and it is 89km away. It is well connected by roads with all the important places in Himachal Pradesh like Shimla (234 km), Palampur (27.4 km), and Hamirpur (90 km). The Kangra district is the most populous district of Himachal Pradesh. The elevation of project site is about 1139m above mean sea level. Beas is the major river of the district and contributes to the fertility of plains in the district. Kangra's neighboring districts are Gurudaspur district of Punjab in the West, Lahaul Spiti in North, Una and Hamirpur in south and Kullu in the east. The district lies between the parallels of 31°2 to 32°5' N and 75° to 77°45' E. Total area of the district is 5739 sq. km. The district headquarters is located at Dharamshala at distance of about 5 km from the project site.

¹ ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila.

4. **Present Status of Site:** The subproject site at Mohal Sidhbari is a plain land. There are small shrubs at site which have grown over the time due to plot being vacant. In the surroundings of the site there are residential houses. The site is in possession of Department of Urban Development, Government of Himachal Pradesh.
5. Since the plot size is quite big, the subproject will use part of the plot to the extent of 971 sq m.
6. There are no permanent or temporary structures on the site. There are also no trees at the site.





7. As per the ADB's Environmental Assessment Guidelines, and in line with the Environmental and Social Management Framework (ESMF) for the project, the sub-project namely 'CLC at Mohal Sidhbari' is categorized as 'B' and an Initial Environmental Examination (IEE) is prepared. This IEE assesses the environmental impacts due to the proposed development works and specifies measures towards addressing the impacts. The IEE is based on a review of sub-project site plans and reports; field visits, and secondary data to characterize the environment and identify potential impacts; and interviews and discussions with stakeholders. Based on the findings of the IEE, an Environmental Monitoring Plan has been prepared, outlining the specific environmental measures to be adhered to during implementation of the sub-project. The REA checklist has been given in **Annexure-1** at the end of the report.

B. Purpose of the IEE

8. This IEE assesses the environmental impacts due to the proposed subproject and specifies measures towards addressing the impacts. Based on impact assessment the IEE provides mitigation measures for adverse impacts related to location and design, construction, operation, and maintenance. An Environmental Management Plan (EMP) outlining the specific environmental mitigation measures to be adhered to during implementation of the subproject has been prepared.

C. Environmental Regulatory Compliance

9. The realm of environmental regulations and mandatory requirements for the proposed subproject is shown in **Table 1**. The Environmental Impact Assessment (EIA) notification, 2006 by the Ministry of Environment, Forests and Climate Change (MoEFCC, GoI) specifies the mandatory environmental clearance requirements. Accordingly, all projects and activities are broadly categorized into two categories²- Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man-made resources. Given that the sub-project is not covered in the ambit of the EIA notification, Environment clearance requirements from the GoI are not triggered.

²All 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 fulfil the General Conditions (GC) 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

Table 1: Environmental Regulatory Compliance

| Sub-Project | Applicability of Acts/Guidelines | Compliance Criteria |
|---|---|---|
| Construction and operation of CLC at Mohal Sidhbari | 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-project is not covered in the ambit of the EIA notification (amended till date) this is not covered either under Category A or Category B of the notification. This is because educational institutes as per Office Memorandum dated June 09, 2015 of MoEFCC exempts educational institutes from prior environmental clearance. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the Gol is not triggered. Not Applicable |
| | 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 site of CLC site at Mohal Sidhbari is not close to any ASI protected monument. Hence no permission is needed from ASI. Not Applicable |
| | 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 required for construction duration for installation of DG Set, Hot Mix Plant, and Concrete Batching Plant. For operation phase no CFO and CFE required. Applicable for Construction phase |
| | The Wildlife Conservation Act, 1972, amended in 2003 and 2006, provides for protection and management of Protected Areas. | No wildlife protected areas nearby. Not Applicable |
| | Forest (Conservation) Act, 1980 | This act provides guidelines for conservation of forests and diversion of forest land for non-forest use. The law also states guidelines on de-reservation of various categories of forests for diversion of forest land. This law describes the penalty for contravention of the provisions of the Act. Restriction on the de-reservation of forests or use of forest land for non-forest purpose. If forest land is to be acquired for the project, the Forestry Clearance needs to be taken. In the current case no forest land diversion needed for CLC construction. Hence, this is not applicable. Not Applicable |

| Sub-Project | Applicability of Acts/Guidelines | Compliance Criteria |
|-------------|--|--|
| | | |
| | ADB's Safeguard Policy Statement, 2009 | Categorization of sub-project components into A, B, C FI and developing required level of environmental assessment for each component. Project is categorized as B(Ref: REA Checklist Annexure-1) |

10. The above Table indicates that the proposed CLC does not need to go through a full-scale environmental assessment process; as the scale of impacts and categorization of the sub-project components will not require clearances from Competent Authorities. Therefore, any further approvals or environmental clearances from the GoI or GoHP are not envisaged.
11. The ADB guidelines, stipulate addressing environmental concerns, if any, of a proposed activity in the initial stages of Project preparation. For this, the ADB Guidelines categorize the proposed components into categories (A, B or C) to determine the level of environmental assessment³ required to address the potential impacts. The Rapid Environmental Assessment (REA) checklist method was followed as per ADB requirement to assess the potential impacts of the project in planning phase. The REA checklist is attached as **Annexure-1** with this report. The sub-project has been categorized as 'B'. Accordingly this IEE is prepared to address the potential impacts, in line with the recommended IEE content and structure 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 consultation was 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-project has been prepared.

³As 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).

Review and Approval Procedure

12. For Category B projects the Draft Environmental Status report is reviewed by ADB's Regional Department sector division and Environment and Social Safeguards Division, and by the Executing Agency, and additional comments may be sought from project affected people and other stakeholders. All comments are incorporated in preparing the final documents, which are reviewed by the Executing Agency and ADB safeguards team. The EA then officially submits the IEE report to ADB for consideration by the Board of Directors. Completed report is made available worldwide by ADB, via the depository library system and the ADB website.

D. Report Structure

13. This Report contains eight (8) sections including this introductory section: (i) Introduction; (ii) Description of Project Components; (iii) Description of the Existing Environment; (iv) Environmental Impacts and Mitigation Measures; (v) Environmental Management Plan; (vi) Public consultation & Information Disclosure; (vii) Findings and Recommendations; and (viii) Conclusions.

II. DESCRIPTION OF THE PROJECT COMPONENTS

A. Components of the Subproject

14. **Table 2** provides a summary of existing conditions, need for the subproject and components of the subproject. Location of the CLC site and its surroundings are shown in Figure-1.

Figure- 1: Location of CLC Site

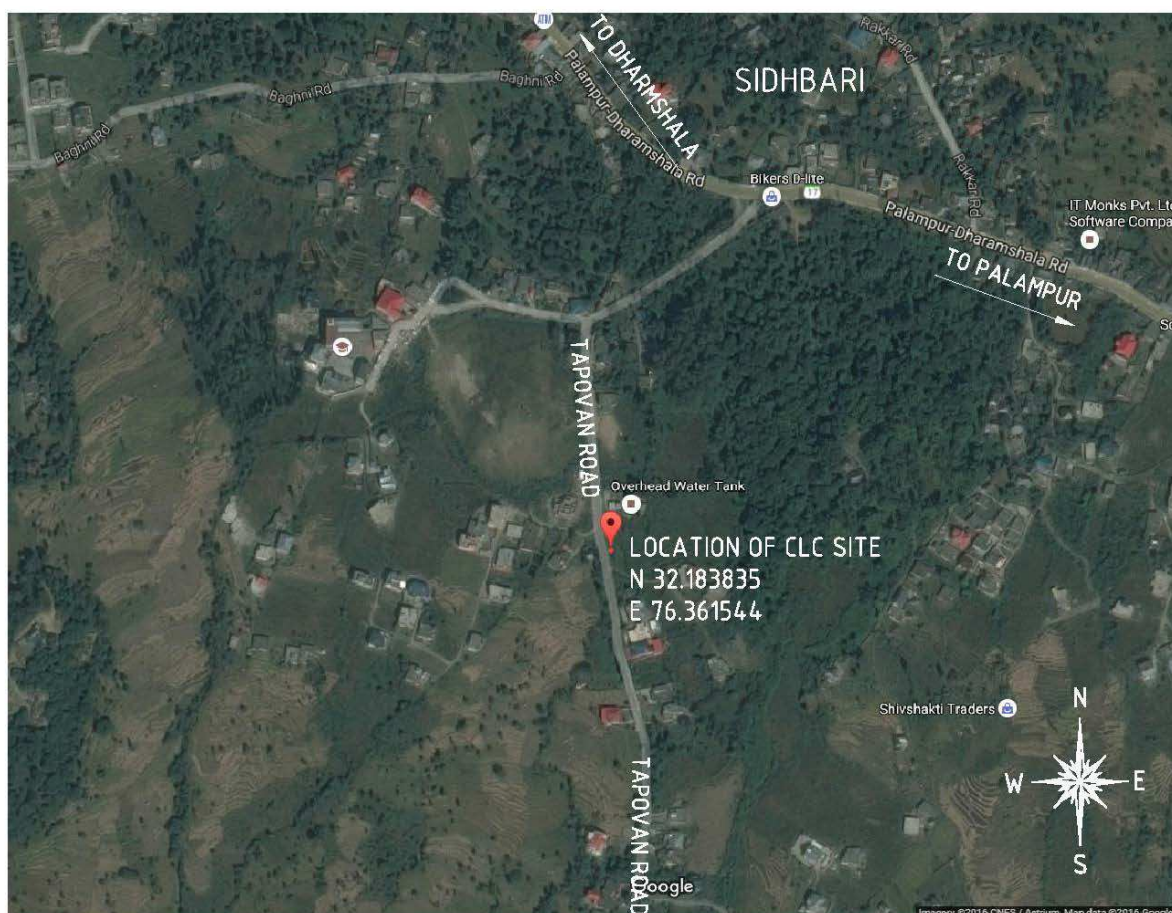


Figure-2: Location of Sub Project Site

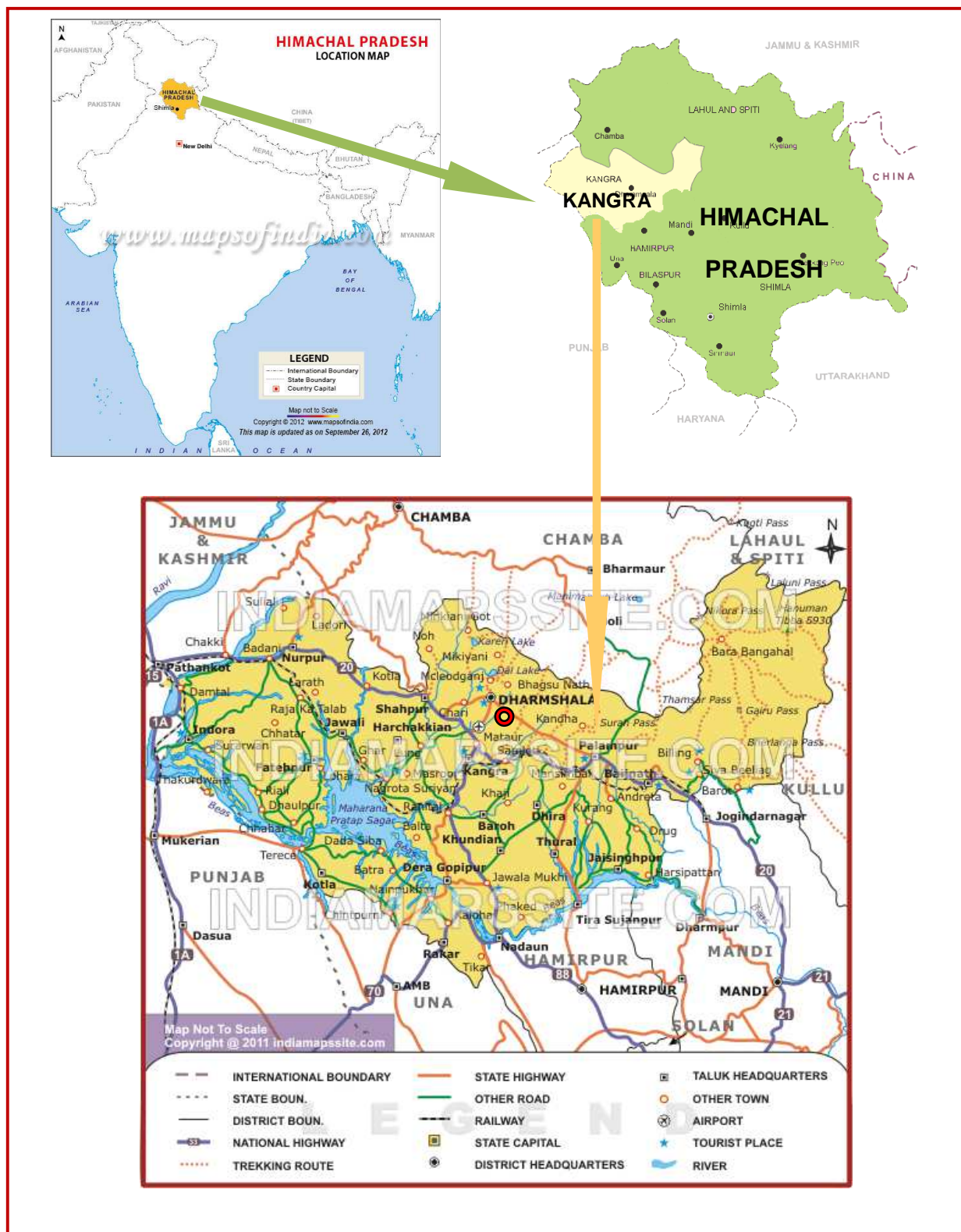


Table 2: Description of the Subproject Components

| Description | Need of the Project | Proposed Components |
|---|---|---|
| The CLC is proposed at Mohal Sidhbari village near Dharamshala town. As part of HPSPDP it is planned to construct CLCs, RLCs and MCCs. This infrastructure is being created TVET capacity of the state, | <ul style="list-style-type: none"> ✓ At present Himachal Pradesh lacks the facilities in the area of Technical and vocational Education Training (TVET) for the Himachali youth. The facilities in TVET in the hinter land are sparse and lack in preparation of young population for the market demand. ✓ The proposed HPSPDP will increase state's TVET annual capacity by 17000 and will produce around 60,000 youth trained in the span of 4 years (2017-2021). ✓ The proposed CLC is part of HPSPDP and will cater urban youth from Dharamshala town and surroundings. ✓ The CLC will provide industry aligned skill enhancing training programs which will increase employability. ✓ Due to increase in employability there will be overall economic growth in the state. ✓ As discussed above the requirement of the CLC is the need of hour to engage young population in gainful employment. | <p>The main sub-project components include the following:</p> <ul style="list-style-type: none"> i. The CLC will operate from a from the new building to be constructed as part of the project. ii. The CLC building will be a three storey building. iii. CLC will have a Lobby cum waiting area on ground floor iv. There will be computer Lab and Practical Class Rooms on First Floor v. The Hostel will be on First and second Floors vi. The sanitation facilities have been planned on all floors. vii. Septic tank capacity has been designed for 50 users. viii. Roof Top solar panel planned for 3 kVA power generation. ix. Total electricity load has been estimated as 25 kW x. Water consumption has been estimated as 8280 Liters per Day. xi. Water source will be from the municipal supply. xii. The solid waste generated will be integrated with waste disposal system of Dharamshala city. |

The layout plan of CLC is shown below in Figure-3.

Figure-3 : Layout Plan of CLC

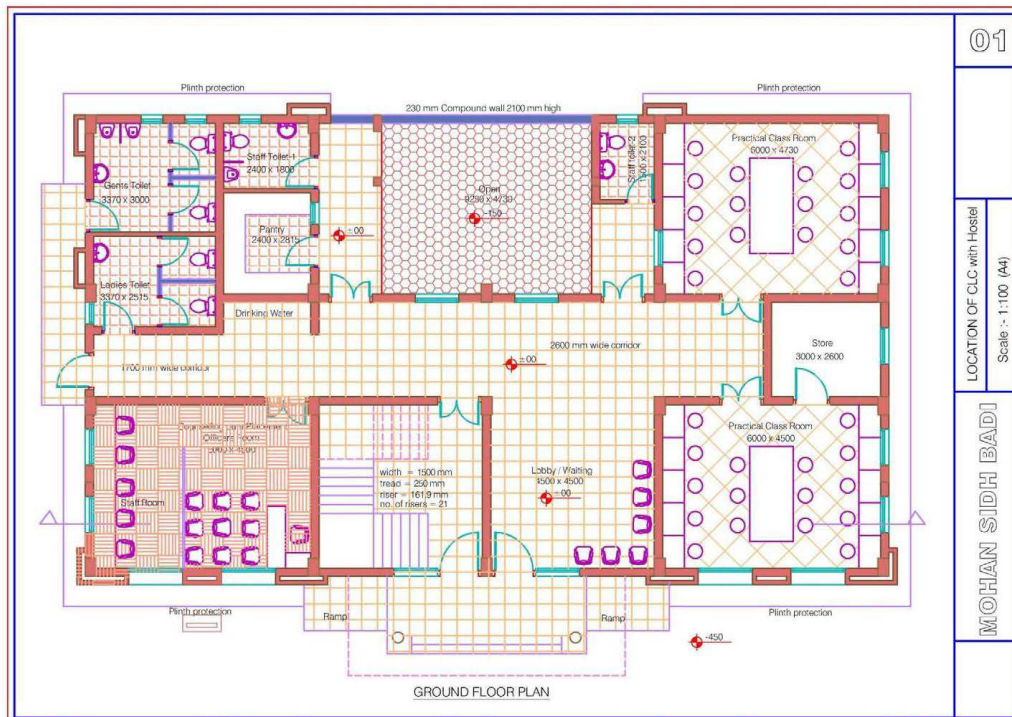


Site Plan of CLC Building

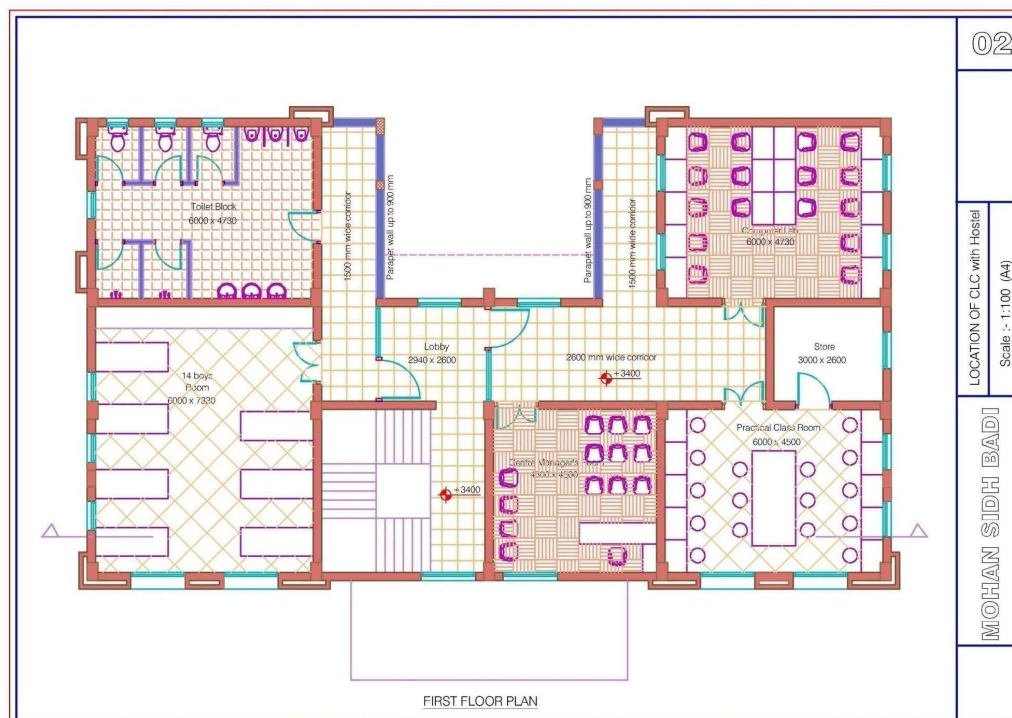


3D View of CLC Building

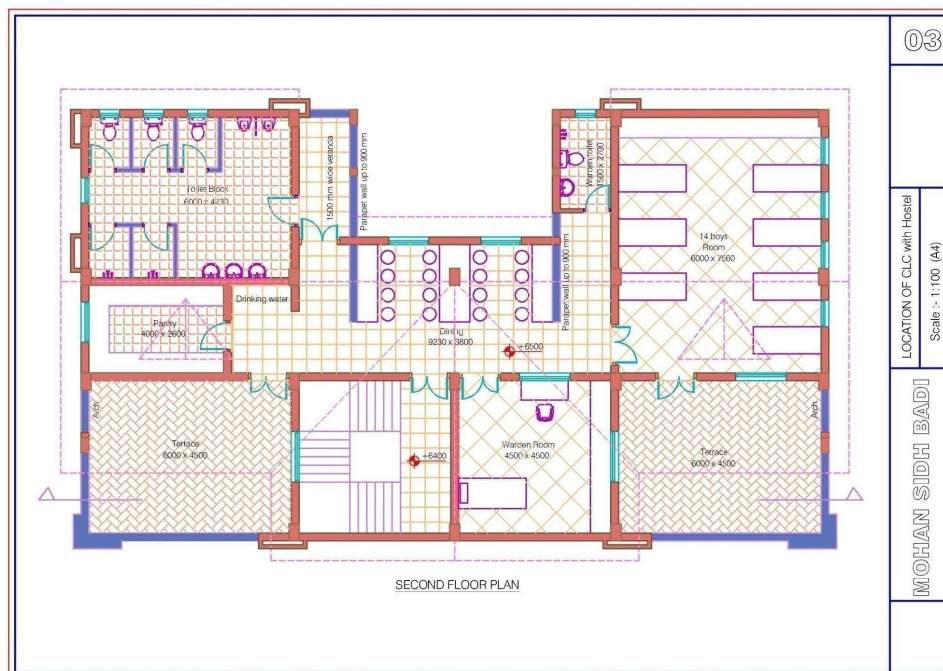
**Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari**



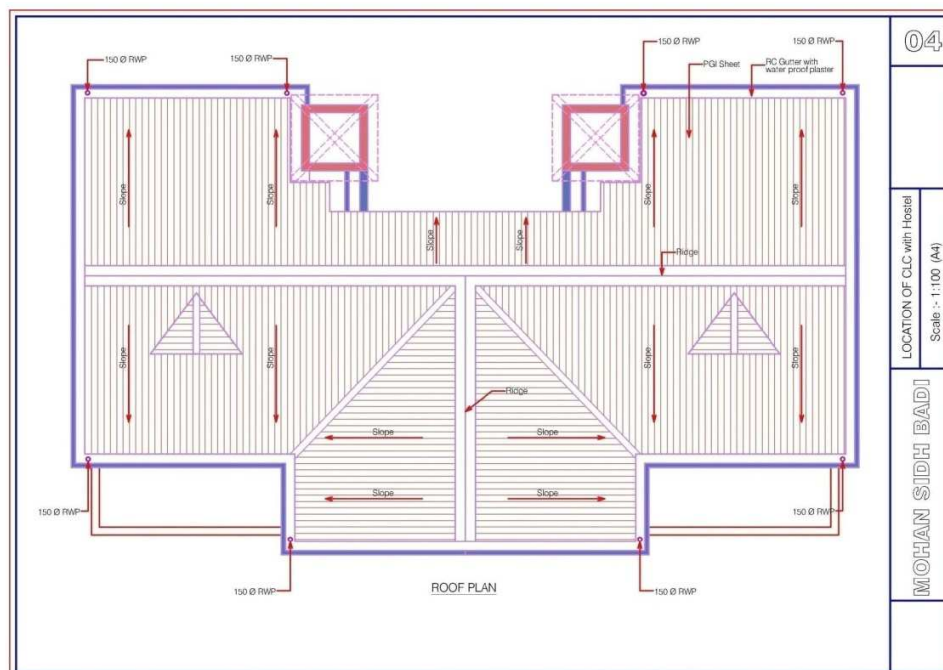
Ground Floor Plan of CLC Building



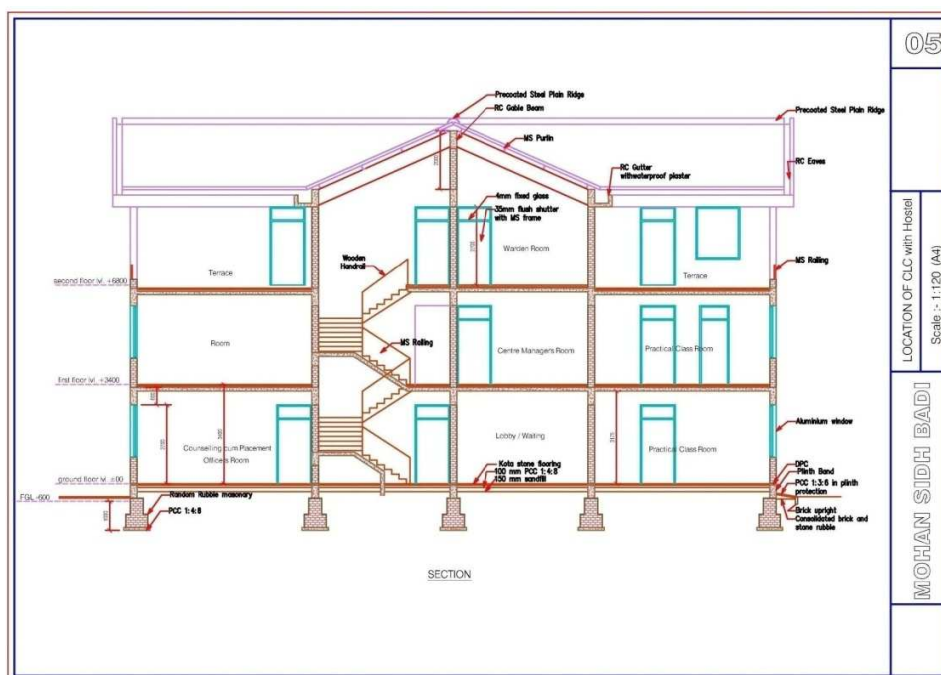
First Floor Plan of CLC Building



Second Floor Plan of CLC Building



Roof Plan of CLC Building



Sectional View of of CLC Building

B: Project Category

15. The subproject is unlikely to cause significant adverse impacts. The potential adverse impacts that are associated with design, construction, and operation can be mitigated to standard levels without difficulty through proper engineering design and the incorporation or application of recommended mitigation measures and procedures. Based on the findings of the IEE, the classification of the Project as Category “B” is confirmed, and no further special study or detailed EIA needs to be undertaken to comply with ADB SPS (2009) or GoI EIA Notification (2006).

C: Executing and Implementing Agencies (EA and IAs)

16. The Executing Agency for the HPSPDP is Department of Planning (DOP), Government of Himachal Pradesh and Implementing Agencies are HPKVN, DoRD for RLCs, DoUD for CLC and DoLE for MCCs. The Public Works Department (PWD), Government of Himachal Pradesh is also an Implementing Agency and has been given responsibility for construction of infrastructure for the HPKVN (all buildings for CLCs, MCCs, and RLCs). The DoTE is implementing agency for the proposed Women Polytechnic at Rehan in Kangra district.

Project Location

17. The subproject site at Mohal Sidhbari is located in Kangra district at a distance of about 5 km from Dharamshala town. The site is in Dharamshala Tehsil of Kangra district. The nearest rail head is at Pathankot and it is 89 km away and nearest airport is at Dharmshala which is 14 km away from the site. It is well connected by roads with all the important places in Himachal like Hamirpur (90 km), Shimla (234 km), and Palampur (27.4 km). The location of sub project site has been given in **Figure-1** above. Site photographs are attached in **Annexure 2**.

B. Implementation Schedule

18. The implementation period for the proposed subproject is 30 months. The preliminary drawings for CLC have been prepared for approval and these have been approved. The bidding process for the subproject will be started by December 2016. The subproject will be awarded for construction by March 2017. The contractor is expected to be mobilized to site by April 2017 and construction works of CLC will begin in May 2017, and work will be completed by November 2019.

III. DESCRIPTION OF THE EXISTING ENVIRONMENT

19. This section presents a brief description of the existing environment, 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 subproject are presented. Secondary information was collected from relevant government agencies like the Forest Department, State Environment Protection, and Pollution Control Board, and Meteorological Department.

A. Environmental Profile

Air and Noise Quality

20. No air pollution sources (point or non-point) have been seen in the surroundings of sub project influence area. The sub project site is at the outer skirts of Dharamshala town. The subproject site is not on the National or State Highway. It was observed that the traffic on the road connecting to the site is too low, hence insignificant vehicular emissions is expected. There are no industrial establishments at sub project area and surroundings. The ambient air quality and noise data for the sub project is not available. But the levels are expected to be well within the stipulated limits due to no major source of air and noise pollution at the site. Ambient Air quality Monitoring and noise level monitoring will be conducted by the Contractor prior to start of construction works with an aim to establish baseline conditions.
21. It was observed that ambient noise scenario in the study area is quite low in general. There are no industrial establishments in and around the project area. As the traffic density is very low, the noise either from point or nonpoint sources is not expected in the project area. Moreover, there will be not much rise in the noise impacts due to the proposed activities as CLC activities are teaching activities and CLC will have hostel facilities. There is no noise baseline data available for the sub project site. But the levels are expected to be well within the stipulated limits due to no major source of noise pollution at the site. Noise level monitoring will be conducted by the Contractor prior to start of construction prior to establish baseline conditions.
22. **Climate:** The climate in Kangra district varies from cold temperate, tropical to sub-tropical.

Summer season extends from March to mid-September. The winter is mild and starts from mid-December till mid-March. The monsoon season starts June end lasts till September end. October and November are transition months and winter season starts December and ends in February month.

23. **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 38°C and the minimum temperature falls to about -1.9°C. The **Table-3** below shows month wise weather in Dharamshala.

Table 3: Average, Maximum and Minimum Temperature at Dharamshala

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Maximum °C | 23.1 | 28 | 31.4 | 35.3 | 38.6 | 38.3 | 35.3 | 31.5 | 30.6 | 30.5 | 26.6 | 22.9 |
| Minimum °C | -1.9 | -1.6 | 2.4 | 7.3 | 8.8 | 12.8 | 15.4 | 16.0 | 11.2 | 8.0 | 4.8 | -1.0 |

Source: IMD, New Delhi

24. **Rainfall:** The area experiences maximum rainfall during Monsoon season from June to September while as least Rainfall is received in November and December. The monthly average rainfall (in millimeters) observed in last two decades is presented in **Table-4** below.

Table 4: Average Monthly Rainfall (mm) at Dharamshala

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
|----------|-------|-------|------|------|------|-------|-------|-------|-------|-----|------|------|------|
| Rainfall | 114.5 | 100.7 | 98.8 | 48.6 | 59.1 | 202.7 | 959.7 | 909.2 | 404.8 | 37 | 66.3 | 16.7 | 54.0 |

Source: Indian Meteorological Department

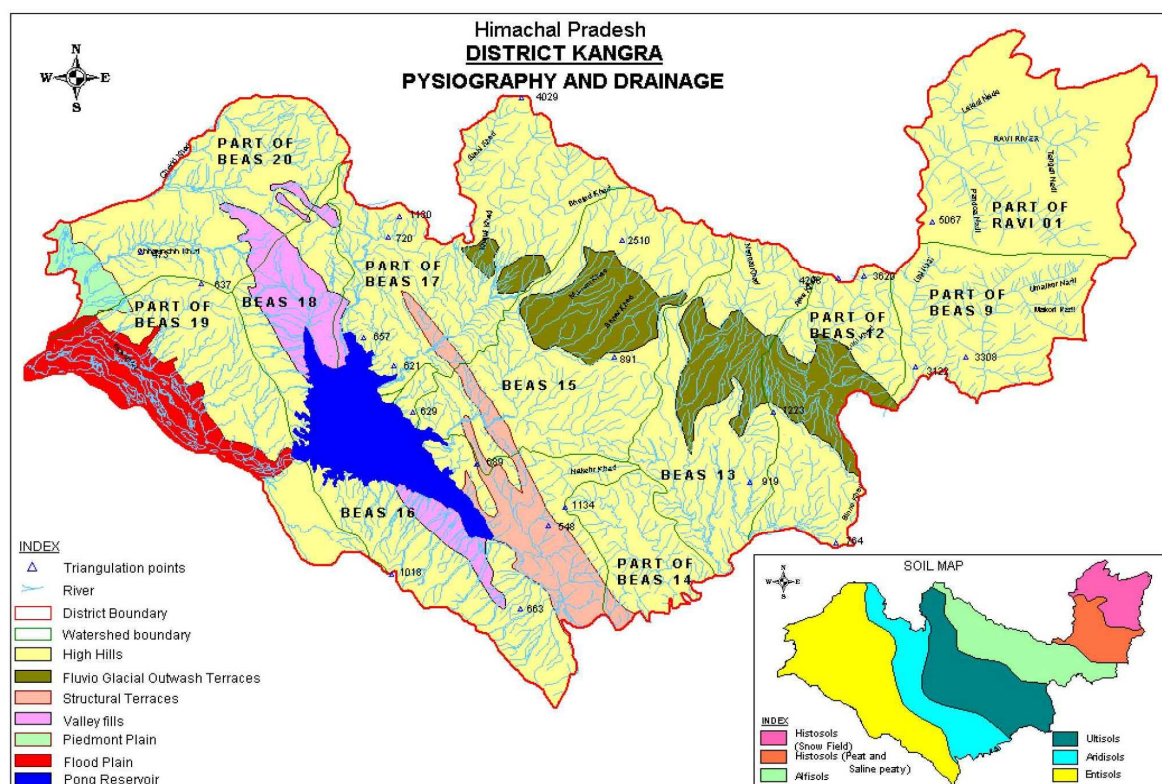
25. **Humidity:** Based on long-term climatologically data of the Kangra district, it is found that Relative Humidity in the area increases rapidly with the onset of monsoon and reaches maximum (82% in the morning and 70% in the evening) during August, when peak monsoon period sets in. Relative Humidity is the minimum during the summer months (from April to June) with May being the driest month (12% in morning and 19% in evening). Skies are heavily clouded during the monsoon months and for short spells when the district is affected by Western Disturbances.
26. **Wind Speed and Directions** Two broad wind patterns are observed in the district viz.

South-East to North-West (January to May) and south westerly to north easterly (June to October). The average wind speed is minimum (0.8 km/hr) in July to October period. The wind speed goes up to 10.8 kmph in summer months.

Topography and Soils

27. Kangra district presents an intricate mosaic of mountain ranges, hills and valleys. It is primarily a hilly district, with altitudes ranging from 350 m above mean sea level (amsl) to 4880 m amsl in the hills of Dauladhar. The elevation of subproject site is 846 m amsl.
28. Physiographically, the district can be divided into six units-viz. (i) high hills, which cover almost 60% of the district (ii) Fluvio glacial outwash terraces, which is located in the north eastern part of the district (iii) structural terraces, in the central part (iv) valley fills (v) piedmont plain and (vi) flood plain.
29. Six type of soils are observed in the district, they are: - 1. Histosols (Snow field, Peaty and Saline Peaty), 2. Ultisols (Brown red and yellow), 3. Alfisols (Sub Mountain), 4. Ardisols (Grey Brown), 5. Entisols (Younger alluvium). The soils at the subproject site are Alfisols. The soil map of the district is shown in Figure-4. The soils are generally brown, alluvial and grey brown Podzolic. The soils are light textured with neutral pH and good fertility status.

Figure-4: Soil Map of Dharamshala District



Source: Ground Water Information Booklet Kangra District, Central Ground Water Board, Ministry of Water Resources, Govt of India

Surface water and Ground water

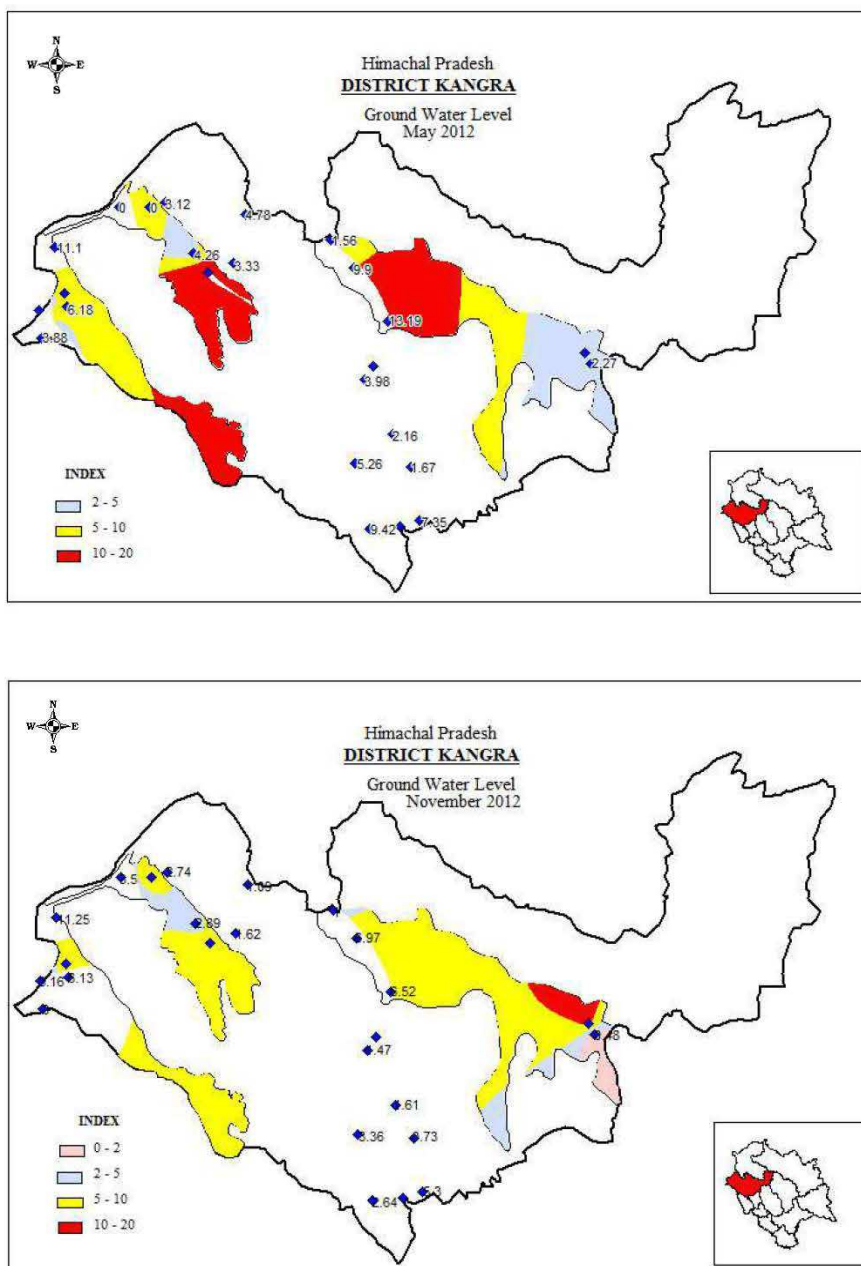
30. The subproject site is located in catchment area of Beas River. In the close vicinity of site, there are no streams or any water body. The ground water sources in the subproject area are dug wells, hand pumps and tube wells.
31. In order to establish baseline scenario, ground water quality data was obtained from the Central Ground Water Board, who is conducting water quality, availability, and exploitation at regular intervals. The water quality data for the project region is given below in Table-5:

Table 5: Ground Water quality in Subproject Area

| Parameter | pH | EC μS/cm at 25°C | HCO ₃ | Cl | So ₄ | NO ₃ | F | Ca | Mg | Na | K | Total Hardness as CaCO ₃ |
|--|------------|------------------------|------------------|------|-----------------|-----------------|------|-----|-----|-----|-----|--|
| | in (mg/l) | | | | | | | | | | | |
| Min | 7.55 | 120 | 37 | 7.09 | Tr | Tr | Tr | 10 | 3.6 | 6.3 | 0.6 | 45 |
| Max | 8.6 | 910 | 513 | 110 | 71 | 28 | 0.54 | 112 | 56 | 105 | 38 | 370 |
| Note: Tr- Traces, Source: Central Ground Water Board | | | | | | | | | | | | |

32. Due to the absence of any water polluting source in the area, it is clear that all parameters of water quality are within the permissible limits specified by BIS for Drinking and irrigation. Water Quality monitoring will be conducted by the Contractor prior to start of construction works.
33. In pre-monsoon (May 2012), the depth to water level range was from 1.56 to 15.44 m below ground level (bgl) and in post- monsoon (November 2012), from 0.48 to 12.30 m bgl. The variation of ground water table depth has been shown in Figure-5. The stage of ground water development in Indaura valley of Kangra district, where subproject site located, is 50.03% and falls in safe category. This indicates that ground water has not been over exploited and there is good recharge of ground water.

Figure-5: Variation of Ground Water Table in Subproject Area



Source: Ground Water Information Booklet Kangra District, Central Ground Water Board, Ministry of Water Resources, Govt

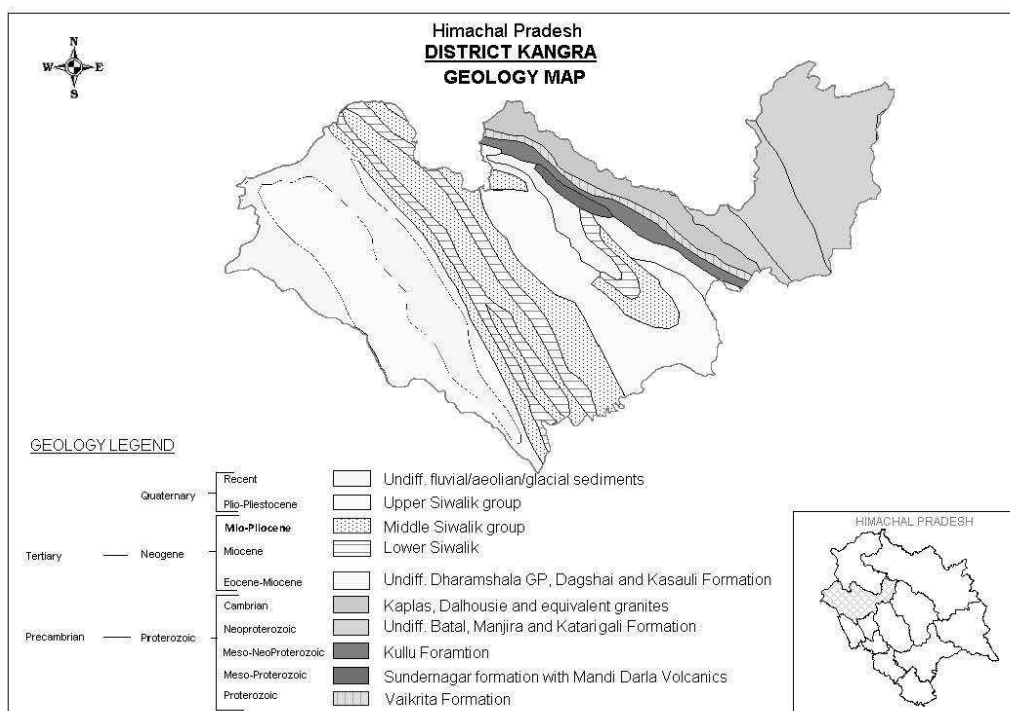
Geology / Seismology

34. The subproject site is located in Kangra district of Himachal Pradesh. 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 Himalaya is 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.

35. 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 and forms part of the larger Sub-Himalayan mega belt extending from Potwar basin in NW to the Arunachal foot-hill in SE. In the Himachal Himalaya it 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 map of project region has been given in Figure -6 below:

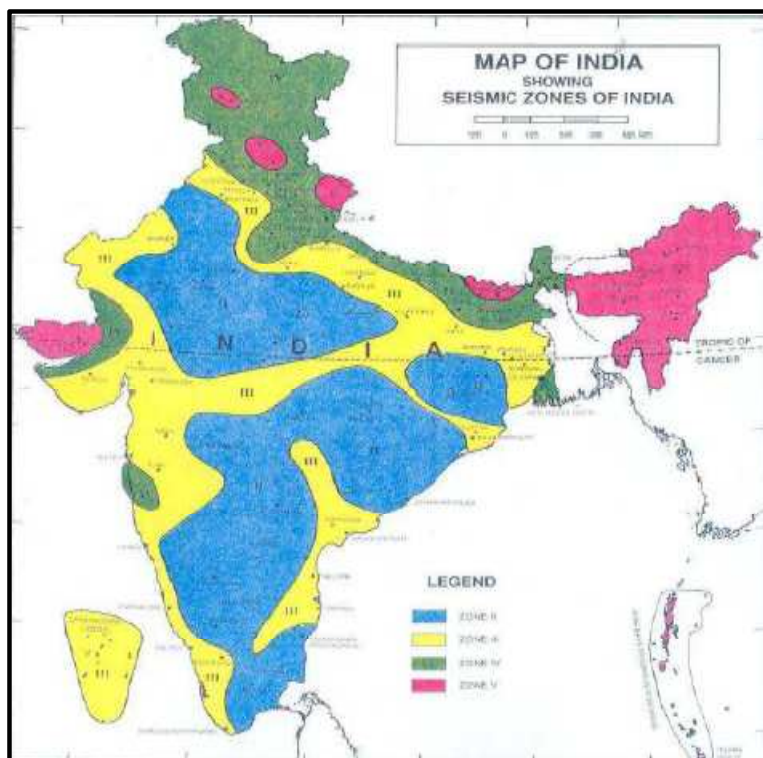
Figure-6: Geological Map of Project Region



Source: *Ground Water Information Booklet Kangra District, Central Ground Water Board, Ministry of Water Resources, GoI*

36. The seismic code in India 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. **Figure 7** shows seismic zonation map of India.

Figure-7: Seismic Zones of India



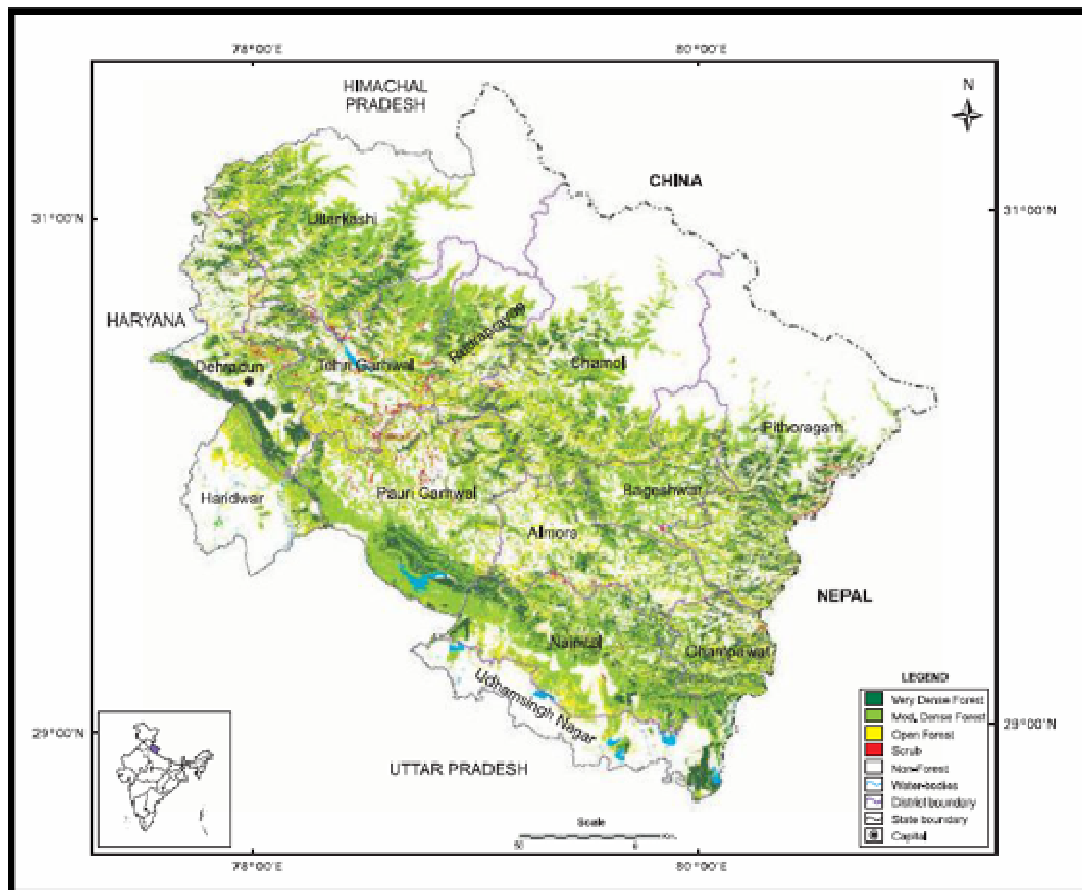
B. Ecological Resources

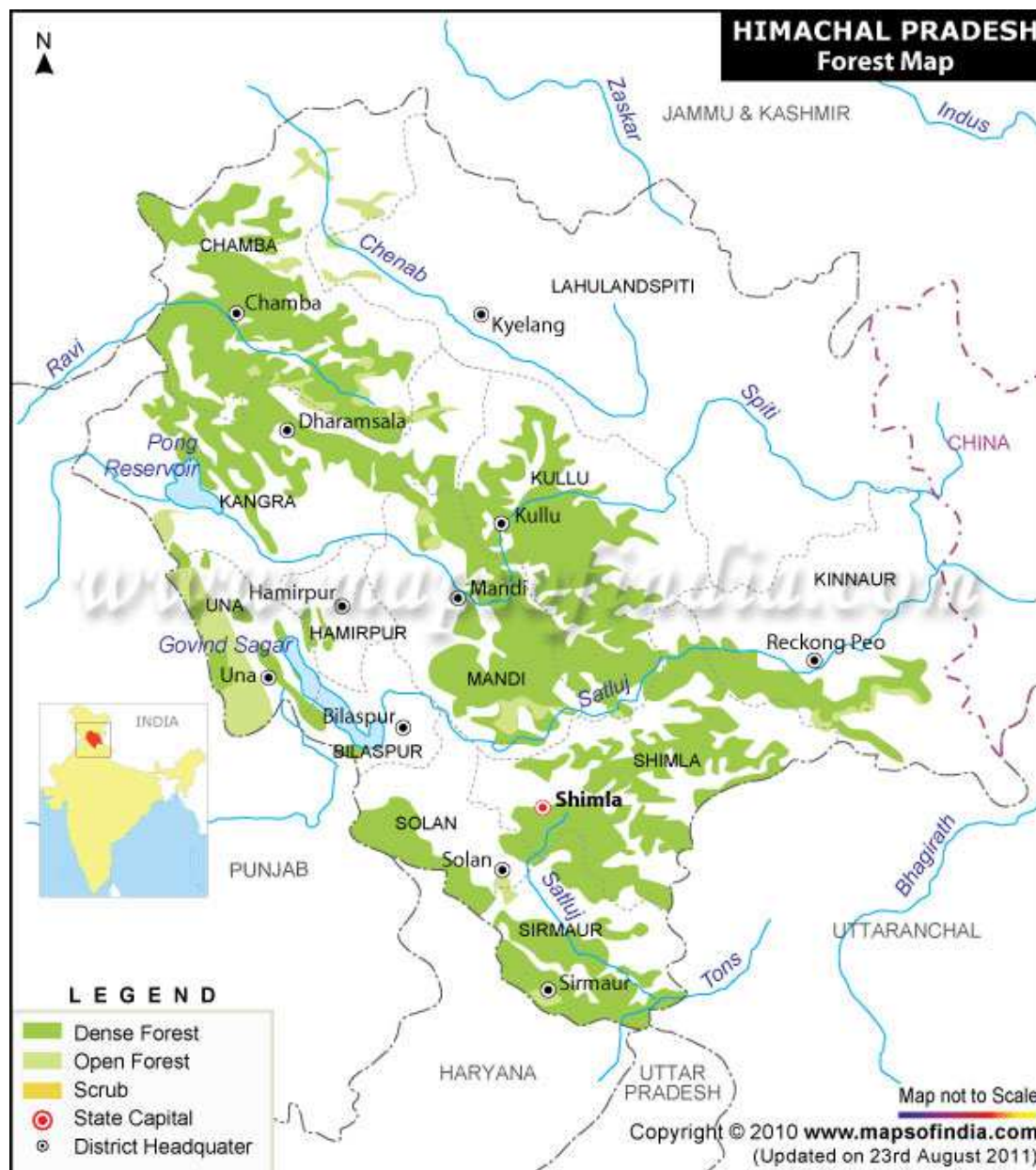
Forests

37. Forests in Himachal Pradesh currently cover an area of nearly 37,691 square kilometers (14,553 sq mi), 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 8**.

Figure 8: Forest cover Map of Himachal Pradesh





Source: State Forest Department

38. The sub project site location does not fall in 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, chir pine, dry deciduous and moist broad-leafed forests. The landscape which falls in temperate regions

has some of the prominent trees like oaks, deodar, blue pine, fir and spruce. The places that lie in top elevation have numerous trees that are sturdy and contain roots that run deep into the earth. Some of the commonly found trees in these regions include Alders, birches, rhododendrons and moist alpine scrubs.

39. Himachal 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. Lush Meadows and paddock can be seen along hillocks and steep lying areas. Post winter season the hilly regions and orchards are full of fruits. The pleasant climate helps numerous flower varieties like gladiolas, lilies, tulips, chrysanthemums, roses, marigolds, carnations etc to grow in abundance.
40. The state is house for numerous species of habitat. The state is the resting place for approximately 1200 birds along with 359 animal species. Some of the animals which form members of this vast list are 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 & sanctuaries. The state also has the distinction of hosting maximum number of sanctuaries in Himalayan region. The Great Himalayan National Park, which was established with the main aim to protect endangered fauna and flora of main Himalayan Mountains. Similarly Pin Valley National Park conserves the flora and fauna of popular cold desert.
41. Since sub project area is located in urban habitation of Dharamshala, so there is only domesticated fauna and common trees of shisam, manago, neem, sal and chirpine are seen.
42. There are no protected areas (PAs) in 10 Km radius of the proposed sub project site. However there are protected areas that are far away from the proposed subproject area.
43. The water bodies of Kangra District are seasonal in nature because of swift flow. There is not much presence of aquatic life in water bodies close to Dharamshala town.

Protected Areas

44. The list of Protected Areas (National Parks and Wildlife Sanctuaries) in the State is given in **Table 6**. It is clear that two Wild Life sanctuaries are falling in Kangra district. These are located more than 20 km away from CLC site.

Table 6: Protected Areas in Himachal Pradesh

| Sl. No. | Sanctuaries | District | Area (Km ²) |
|-----------------------|-------------------------------|----------------|----------------------------------|
| 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 | Gangul-Siyabehi | Chamba | 108.40 |
| 8 | Kais | Kullu | 12.61 |
| 9 | Kalatop-Khajjia | Chamba | 17.17 |
| 10 | Kanawar | Kullu | 54.27 |
| 11 | Khokhan | Kullu | 14.94 |
| 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 |
| National Parks | | | |
| 1 | Great Himalayan National Park | Kullu | 765 |
| 2 | Pin Valley National Park | Lahaul & Spiti | 675 |

| Sl. No. | Sanctuaries | District | Area (Km ²) |
|---------------------------|--------------------------------------|----------|--------------------------|
| Conservation Areas | | | |
| 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

45. The State has very few industrial units mainly because of lack of resources. In recent years, the government is encouraging private participation in all industrial activities in the State. The New Industrial Policy announced in 2003 indicates that private resources may be tapped while promoting integrated industrial estates in Himachal Pradesh. The State government provides assistance in establishing small and medium sized agro parks, food parks, and the likes which in turn are expected to provide common infrastructure facilities for storage, processing, grading, and marketing.
46. Dharamshala has very few industries as industrial development here is still in its infancy stage. **There are no large scale Industries or Public Sector undertakings in entire Kangra district.** Micro and small enterprises and artisan units exist in the District the details of which are given in the **Table-7** below:

Table 7: Details of Existing Micro and Small Enterprises and Artisan Units in the District

| NIC Code No | Type of Industry | Number of Units | Investment (Lakh Rs.) | Employment |
|-------------|---|-----------------|-----------------------|------------|
| 20 | Agro based | 3203 | 9004.22 | 1376 |
| 22 | Soda water | - | - | - |
| 23 | Cotton textile | 32 | 75.70 | 197 |
| 24 | Woolen, silk & artificial Thread based clothes. | - | - | - |
| 25. | Jute & jute based | 2 | 1 | 8 |
| 26. | Ready-made garments & embroidery | 18 | 75.6 | 69 |
| 27. | Wood/wooden based furniture | 300 | 561.30 | 1150 |
| 28. | Paper & Paper products | 48 | 162 | 130 |

| NIC Code No | Type of Industry | Number of Units | Investment (Lakh Rs.) | Employment |
|-------------|--|-----------------|-----------------------|------------|
| 29. | Leather based | 22 | 292.85 | 328 |
| 31. | Chemical/Chemical based | 130 | 4524.04 | 1338 |
| 30. | Rubber, Plastic & petro based | 59 | 450.29 | 295 |
| 32. | Mineral based | 150 | 765.77 | 1942 |
| 33. | Metal based (Steel Fab.) | 05 | 131.01 | 29 |
| 35. | Engineering units | 362 | 10231.30 | 6286 |
| 36. | Electrical machinery and transport equipment | 48 | 120.03 | 617 |
| 97. | Repairing & servicing | 352 | 4389.01 | 1156 |
| 01. | Others | 60 | 30.08 | 320 |
| | Kachori Making | 80 | 160.04 | 272 |

Source: DIC, Dharamshala

Infrastructural Facilities

47. The Dharamshala city is the one of the popular tourist destination in the State because of Dharamshala being abode of his Holiness of Dalai Lama ever since he left Tibet in 1959. This city is the winter capital of Himachal Pradesh. The city has potable drinking water supply, solid waste collection and disposal system is being implemented.

Transportation

48. The important role of transportation in the modernization and development of any area can hardly be overemphasized. The transport facilities not only save time but also make the things available at proper place. The efficient transportation facilities have a major role to play in the marketing of produce. Looking across the blocks of district Dharamshala, in Sulah 71.42 per cent of villages had transport facility available within a distance of 5 km. This was followed by Panchrukhi (67.66 per cent) and Bhawarna (61.39 per cent). On the other side, Fatehpur (41.04 per cent), Rait (46.38 per cent) and Nagrota Surian (47.64 per cent) availability of transportation facility was lowest in the district.
49. The subproject site is connected through a local urban road with the National Highway passing through the Dharamshala town.

Land Use

50. The salient land use features of Kangra district are given below in **Table-8**:

Table 8: Land use pattern of Kangra District

| Land use | Area (In hectare) |
|--|-------------------|
| Area under Forest, dense and open forest | 2317 ha |
| Barren and Un-culturable land | 150 ha |
| Non Agriculture Area | 781 ha |
| Permanent Pasture and other grazing | 855 ha |
| Land under misc. tree/crops and groves | 82 ha |
| Culturable wastes | 285ha |
| Other fallow land | 119 ha |
| Net Area Sown | 1150 ha |

51. A study of the land use figure reveals that majority of the district is under forest cover followed by land under cultivation. The land under permanent pastures and grazing is also significant (855 ha). The barren land area is quite low. Overall it is concluded that land under agriculture is maximum due to plain areas in the district and these plain areas are close to Punjab border.
52. The subproject site land use is residential and it is well within municipal limits of Dharamshala town.
53. **Agricultural Development:** Agriculture is the main occupation of the people. However, intensive cultivation is not possible as significant part of the district is mountainous. Agricultural activities are common on gentle hill slopes and in relatively plain, broad river valleys. The major portion of the revenue earning in the district's economy is carried out by the cash crops. The chief food crops cultivated include wheat, maize, rice, barley, seed-potato, ginger, vegetables, vegetable seeds, mushrooms, chicory seeds, hops, and fig. Farmers have engaged themselves highly in the fruit cultivation and it is also a great blessing to the economy of the state. The farmers focus more upon generating the cash crops for more revenue earning as it suits the agro-climactic conditions in Himachal Pradesh.

Electrification

54. Most of the villages (93.17 per cent) in Kangra district have been electrified. More than ninety five per cent of the villages in Panchrukhi, Bhawarna, Lambagaon and Sulah have been electrified. However, the proportion of villages where power facility is available is slightly lower in Pragpur (87.5 per cent), Baijnath (89.09 per cent) and Nagrota Surian

(89.15 per cent) as compared to other blocks. Social and Cultural Resources

Population and Communities

55. The total geographical area of Kangra district is 5,739 sq km, which is 10.31 per cent of the total area of the state. Area-wise district Kangra is next only to Lahaul and Spiti (13,835 sq km), Chamba (6,528 sq km) and Kinnaur (6,401sq km). At 13.39 lakhs, the district accounted for the highest share (22.01 per cent) of the total population in the state. Along with Hamirpur and Mandi, this district (1,025) is among the chosen three districts that have a favourable sex ratio of above 1,000. About 94.6 per cent of the population of the district lives in 3,619 villages and the district has a fairly high population density of 233 persons per sq km as compared to the state density of 109 persons. As regards the other demographic indicators, while literacy (80.1%) in the district was higher than state (76.1%) figure, it performed below the state with respect to birth rate and death rate statistics. Average population per village stood at 350 persons in the district.
56. The native people are the Kangri people and the native language is Kangri, which is very similar to Punjabi. The majority of the people are Hindu Brahmin Hindu Brahmins, Rajputs, Banias and SC/OBC, although many Tibetans and others who follow Buddhism have also settled here recently. There are also minority populations of Sikhs, Muslims and Christians.
57. The traditional dress for men was the kurta, pyjamas, and a woollen jacket used in winter. Women generally wear the salwar kameez and with the salwar Kameez girls and women take chuenni ("Chaddru" in local language.)

Health facilities

58. In terms of health facilities Kangra district has one health sub-centre (SC) for every 3,117 persons in the district. Likewise, one primary health centre (PHC) is catering to the health needs of 17,345 persons in the district. These figures are slightly higher for the district when juxtaposed against the state level figures. On the other hand, when seen in terms of area coverage, while there is one sub center for every 13.22 sq km of area in the district, for the state one sub center has to cater almost double the area of 26.91 sq km. Similar is true for PHC and community health centre (CHC) area coverage. In terms of number of inhabited villages coverage by these SC, PHCs and CHCs, there is not much difference for the district and the state. One SC is meeting the health needs of 8.34 inhabited villages in the district. Likewise, there is one PHC for 46.40 villages in the district.

59. In Dharamshala town there is availability of good health facilities as there are many private nursing homes and hospitals in addition to Government owned facilities.

Education facilities

60. In the Kangra district, there are 923 primary schools, 135 middle schools, 119 secondary and senior secondary schools, 16 colleges, 12 technical institutions to provide quality education.

Social and Cultural Heritage

61. The Kangradistrict headquarter is located at Dharamshala. Being a Seat of the Tibetan Guru Dalai Lama and availability of good infrastructure facilities, the town act as base station for tourist who visits historical temples of Kangra, Chamunda, Jawalaji and other tourist places of Palampur, Baijnath and Nurpur. Dharamshala is also coming under Dhauladhar tourist Circuit& is major tourist destination of Himachal Pradesh after Shimla and Kullu. Annually 1503489 lakhs tourists visit Dharamshala.
62. Various customs and traditions of the region are based on the Hindu religion. “Shiva” is most widely regarded and “Durga” in different forms is also worshipped throughout the area. Most of the fairs and festivals in the region are associated with the worship of the above. Religious faiths and superstitions are deep rooted amongst the people. Individual function on a new birth, marriage, death, etc., is governed by ancient customs and traditions. For everything, people depend heavily on the astrological forecast of the Brahmins for its auspiciousness.

Archaeological Resources

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

IV. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A. Environmental Impacts

64. Any project creating physical infrastructure may cause impacts upon environment in many ways. The impacts anticipated from the construction of CLC may be on Physical, Biological, Socio-economic and Cultural Environment. The IEE helps to identify those negative impacts that are anticipated in the project under consideration and to suggest the mitigation measures to minimize the negative impacts. The assessment for the subproject namely “City Livelihood Center at Mohal Sidhbari” has been carried out for potential impacts during the following stages of the project planning and implementation:

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

65. Impact identification, screening for significance, and recommended mitigation measures for the sub-project were guided by the use of ADB Rapid Environmental Assessment Checklist for Buildings and standard environmental monitoring plan required for ADB Projects.

Location Impacts

66. The subproject site is an open plot at Mohal Sidhbari in Dharamshala town. The site of CLC is in residential area and within the municipal limits so there is no requirement for change of land use. There are no significant ecological resources in the surroundings of CLC site. There are no heritage sites notified by Archaeological Survey of India (ASI)/state archaeological department within the subproject area or in the immediate surroundings. No significant impacts can arise due to project location as CLC building components will not impinge upon any area of ecological, archaeological or historical importance.

67. The only location impact is that CLC site is located in earthquake zone V and even a small

magnitude earthquake may damage CLC building.

68. The proposed CLC location at Mohal Sidhbari is an unencumbered land under the ownership of Department of Urban Development (**Annexure-3**). Hence, no impacts pertaining to land acquisition and involuntary resettlement. The site photographs are have been shown in **Annexure-2**.

Impacts during Design and Pre-Construction Phase

69. Impacts arising from the inappropriate design include inadequate facilities at CLC, unsafe access road, etc. This will result into inconvenience to the trainees at CLC and other public visitors to the CLC. There may be impacts on surrounding land if proper sanitation waste water collection and treatment is not planned.
70. Anticipated Environmental impacts associated with the Pre-construction phase are: loss of land, properties and livelihood due to acquisition of properties; tree cutting, impacts on natural resources; etc. As the proposed subproject area is owned by the government, there is no land acquisition, impact on properties or involuntary resettlement issues. No tree cutting is anticipated except clearing of the shrubs. During pre-construction stage there will be impact on account of establishment of construction camp if this is established outside the proposed CLC site.
71. Based on the environmental screening of the subproject area, there are no significant adverse environmental impacts during the design and Pre-construction phases.

Impacts during Construction Phase

72. All construction activities to be undertaken at the site will be approved by the PIU. 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 and supervised by the PWD and PIU. The Key impacts are covered in the following paragraphs.
73. **Impacts due to stock piles of construction materials:** Improper stockpiling of construction materials at the CLC site and surrounding can obstruct movement along access road and drainage in the surroundings of site. Due consideration will be given for material storage on construction sites, stock piles will be covered to protect from dust and erosion. Waste materials will be disposed at identified and approved location.

74. **Disposal of construction waste:** The construction waste could lead to untidy conditions at site and may find its way to local urban drains and natural streams and siltation and obstruction to natural flow in these drains and streams. In the proposed subproject, it shall be made mandatory for the contractor involved in construction activities for proper disposal of the construction waste at the disposal site as designated by the PIU and PWD.
75. **Quarry/Borrow pits operations:** All the construction materials will be procured from market as construction works are relatively small level. The construction activities do not require earthworks so operations of borrow areas is not anticipated. The sub project construction activities will also not require direct procurement of stone dust or sand from the quarries. Hence there are no impacts on quarry and no requirement of borrow area operations.
76. **Increase in noise levels:** Noise levels in the immediate proximity of CLC site are expected to increase during construction. However, these will be largely imperceptible as civil works will be confined in relatively small area and the duration of this exposure will also be relatively brief.
77. During construction phase, some noise will also be generated from the various construction activities like equipment and vehicles engaged in transportation of construction materials. However, transportation of construction materials will be confined to the requirement per day, depending upon extent of construction activity. Further the noise associated with the equipment shall be reduced with proper maintenance of construction equipment. 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 500 m only. This noise will be intermittent in nature and will last only till construction phase. The construction noise will be felt by the residential houses located close to CLC site but this 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.
78. **Impacts on biodiversity during construction phase:** No major impacts are expected on the biodiversity during the construction phase as the sub project site is open and there are no trees that need to be cut. There will be removal of some shrubs for the construction of CLC building.

79. **Disturbance to traffic during construction phase:** At the time of construction there will be disturbance and inconvenience for the movement of the public and vehicles due to project construction activities these inconveniences will be temporary in nature and last for a very short duration. Sample Traffic Management plan is attached in **Annexure 4**.
80. **Impact son cultural properties:** The proposed subproject will have no impacts on any religious structure or any other structure of historical and/or cultural significance.
81. **Ground Water:** Ground water is not planned to be extracted and used for construction purposes. The contractor will arrange water for construction from market through the tankers. Hence no impact is anticipated on ground water table on account of construction activities. The problem of ground water contamination is also not anticipated during the construction phase as there will be proper disposal of the waste water.
82. **Ambient Air Quality:** Generation of dust is anticipated during transportation, excavation and construction activities. Certain volumes of dust and gaseous emissions will also be generated during the construction period from construction machineries like mixers, vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include Respirable and Suspended Particulate Matter (RSPM) and gaseous emissions (NO_x, SO₂, CO, etc). However, transportation of construction materials will be confined to adequate 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 site only.
83. All vehicles and construction equipment operating for the contractor and the consultant will obtain and maintain "Pollution under Control" (PUC) Certificates. To control dust emissions, vehicles deployed for borrow material, sand and aggregate haulage, shall be covered with tarpaulins to be spillage proof. Regular sprinkling of water during excavations, loading, unloading, vehicular movement and raw material transport, provisions shall be made in the construction period.
84. Periodic air quality monitoring to ensure emissions to comply with standards will be conducted. The Contractor will submit emission monitoring results as a compliance with environmental monitoring plan.
85. **Construction Waste:** The construction waste will be generated due to excavated earth

material and waste generated from construction Camp, and demolition of any small structures at the locations of facilities construction. Debris/excavated earth material can be reused subject to the approval of the Engineer during the construction. Waste generated from the construction camp and demolition will be disposed off as per law to the satisfaction of the Engineer.

86. The clean-up and restoration operations are to be implemented by the contractor prior to demobilization. The contractor will clear all temporary structures and dispose off all garbage from construction camp site. All construction zones used/affected by the sub-project will be left clean and tidy, at the contractor's expense as per the satisfaction the Engineer
87. The Contractor is likely to engage local labor for various construction activities. However, in case of engaging migratory labor for the purpose, the contractor has to establish properly designed labour camp with all basic amenities such as potable drinking water supply and sanitation facilities (septic tanks and soak pit) and also dust bins to be placed in adequate numbers, which will be regularly emptied and waste will be disposed off as per law. EMP envisages mitigation measures for likely adverse impacts associated with the labour Camp.

Environmental Impacts during Operation Phase

88. Impacts on environmental conditions associated with the operation stage of the CLC subproject pertain to impacts due to training activities at CLC. The operation stage impacts shall be addressed through operating the CLC as per regulatory requirements. CLC design takes care for adequate parking, accommodation and for waste water disposal.
89. No impact is anticipated on the ground water quality and surface water quality during the operation phase as there will be proper disposal of waste water. For this toilet blocks with septic tank and soak pits have been proposed.
90. The solid waste generated at CLC during operation phase will be segregated and its disposal will be integrated with Dharamshala town waste disposal.
91. During operation phase impact on air quality are anticipated from vehicular emissions and operation of DG sets. The impact on account of vehicular emissions will be almost insignificant because increase in Traffic on account of CLC will be insignificant as CLC will be have hostel facilities. Since the DG set operation will be only in the event of power failure, therefore, impacts of ambient air quality due to DG set emissions will be

insignificant. However, there will be regular ambient air quality monitoring during the operation phase.

92. During the operational phase, impacts on noise environment will be due to vehicular movement and DG set operation. As explained above noise related impacts are not anticipated as DG set will be silent type complying requirements of noise levels stipulated by CPCB and vehicular traffic increase is almost insignificant.
93. **Safety Measures:** The safety measures in the CLC building design include structural safety following latest building codes and earthquake resistance. The other safety features are explained below:
- External safety features to be included in the CLC building are installation of fire-fighting systems with portable fire extinguishers and smoke detectors and adequately wide staircase for escape during such eventuality.
 - During natural calamities, the operations will be stopped and trainees and staff will be safely evicted as per Disaster Management plan of the state.
 - Necessary first aid facilities will also be provisioned at the CLC building.
94. **Socio-Economic Impacts:** Positive impact is anticipated in terms of employment opportunity as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction and operation phases. The CLC will improve skills of the urban youth of Dharamshala and surroundings. The skills acquisition shall increase employability of trainees either through self-employment or through getting job in the industry.
95. **Flora and Fauna:** As the CLC location is within urban locality of Dharamshala town, no adverse impact on fauna and flora is anticipated due to the operation of the CLC. Further, to enhance the natural look of CLC plantation of shrubs and landscaping will be taken up along the pathways and vacant space.

Description of Planned Mitigation Measures

96. Screening of environmental impacts is based on the magnitude and duration of the impact. **Table 9** provides the potential environmental impacts and the mitigation measures including the responsibilities for implementing the same. The subproject site is located sufficiently away from Protected Areas and the components proposed will not impact any

environmentally sensitive or protected areas. Interventions are proposed within available government lands

Table 9: Summary of Environmental Impacts and Planned Mitigation Measures

| Sl. No. | Potential Environmental Issues | Duration / Extent | Magnitude | Proposed Mitigation Measures | Institutional Responsibilities |
|------------|--|-------------------|-----------|---|--------------------------------|
| 1 | Location Impacts | | | | |
| 1.1 | Lack of sufficient planning to assure long term sustainability of the CLC building and ensure protection from earthquake and other natural disasters | Permanent | Major | The design of CLC building has been done considering earthquake coefficient of zone V and considerations are also there for sustainability of infrastructure during natural disasters. The site is not on the bank of any river or major stream. | PIU / PWD |
| 2 | Design and Pre-construction Impacts | | | | |
| 2.1 | Consents, permits, clearances, no objection certificate (NOC), etc. | Permanent | Major | Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. Include in detailed design drawings and documents all conditions and provisions if necessary | PIU / PWD |
| 2.2 | Layout of components to avoid impacts on the aesthetics of the site | Permanent | Major | The project components will not have any impacts on aesthetics of site as it involves construction of building. Hence no mitigation measures are warranted. | Not Applicable |
| 2.3 | Slope stability related issues | Permanent | Minor | The CLC site is on plain land. No stability issue is involved. No mitigation measures are warranted. | Not applicable |

| Sl. No. | Potential Environmental Issues | Duration / Extent | Magnitude | Proposed Mitigation Measures | Institutional Responsibilities |
|---------|--|-------------------|-----------|--|--------------------------------|
| 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 will enable efficient drainage at CLC site and maintain natural drainage patterns. | PIU/PWD |
| 2.5 | Integration of energy efficiency and energy conservation programs in design of CLC | Permanent | Moderate | <p>Following measures have been included in design for Energy Efficiency:</p> <ul style="list-style-type: none"> • Usage of recyclable materials like wood substitutes. • Installation of BEE certified equipment • Usage of energy efficient lighting fixtures (LED and solar). • Provision of Solar power generation | PMU/PIU/PWD |
| 3 | Construction Impacts | | | | |
| 3.1 | Construction Camp - Location, Selection, Design and Layout | Temporary | Moderate | Construction camp will be located within CLC site. It will be ensured that camp does not interfere with the local resident activities. Adequate sanitation facilities shall be provided at camp site and no waste water will be discharged outside. | Contractor / PIU |
| 3.2 | Traffic Circulation plan during construction | Temporary | Moderate | Prior to commencement of site activities and mobilization on ground, the Contractor will prepare and get approved from the PWD (the Engineer) ,a traffic circulation plan during construction for safe passage of local traffic | Contractor/ PWD/PIU |

**Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari**

| Sl. No. | Potential Environmental Issues | Duration / Extent | Magnitude | Proposed Mitigation Measures | Institutional Responsibilities |
|---------|---|-------------------|-----------|--|--------------------------------|
| | | | | during construction stage, including development of alternative access routes, traffic regulations, signages, etc., The Contractor with support of the PIU will carry out dissemination of these information and circulation plan around the sub project site. | |
| 3.3 | Impacts on flora and fauna | Temporary | Moderate | Conduct site induction and environmental awareness. Limit activities within the work area. Prepare site landscape and shrubs/tree plantation plan. | Contractor/PIU/PWD |
| 3.4 | Site clearance activities, including delineation of construction area | Temporary | Moderate | The commencement of site clearance activities will be undertaken with due permission from the Environment Specialist of the PWD/HPKVN to minimize environmental impacts. All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures. | Contractor / PWD |
| 3.5 | Drinking water availability | Temporary | Major | Sufficient supply of potable water to be provided and maintained. If the drinking water is obtained from an intermittent public water supply then storage tank will be provided. | Contractor / PWD |
| 3.6 | Waste disposal | Permanent | Major | Location of disposal site for construction waste will be finalized by the Environmental Specialist of the PWD/HPKVN and | Contractor / PWD |

**Himachal Pradesh Skill Development Project
Initial Environmental Examination
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| Sl. No. | Potential Environmental Issues | Duration / Extent | Magnitude | Proposed Mitigation Measures | Institutional Responsibilities |
|----------------|---|--------------------------|------------------|---|---------------------------------------|
| | | | | he will confirm that: disposal of the material does not impact the water body or environmentally sensitive areas and that no endangered / rare flora is impacted by such materials. | |
| 3.7 | Stockpiling of construction materials | Temporary | Moderate | Stockpiling of construction materials does not impact obstruct the drainage and Stockpiles will be covered to protect from dust and erosion. | Contractor / PWD |
| 3.8 | Soil Erosion | Temporary | Moderate | There may be requirements for temporary slope protection during construction at the excavated areas. Adequate measures will be taken up so that there is no soil erosion causing risks in the vicinity. | Contractor / PWD |
| 3.9 | Soil and Water Pollution due to fuel and lubricants, construction waste | Temporary | Moderate | The fuel storage and vehicle cleaning area 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 / 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 subproject site. Extraneous construction wastes will be transported to the pre-identified disposal site for safe disposal. | Contractor / PWD |
| 3.11 | Generation of dust | Temporary | Moderate | The contractor will take every precaution to reduce the levels of dust | Contractor / PWD |

**Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari**

| Sl. No. | Potential Environmental Issues | Duration / Extent | Magnitude | Proposed Mitigation Measures | Institutional Responsibilities |
|---------|--|-------------------|-----------|--|--------------------------------|
| | | | | at construction site. | |
| 3.12 | Emission from Construction Vehicles, Equipment and Machinery | Temporary | Moderate | Vehicles, equipment and machinery used for construction will conform to the relevant Standard and will be regularly maintained to ensure that pollution emission levels comply with the relevant requirements. | Contractor / PWD |
| 3.13 | Noise Pollution | Temporary | Moderate | Noise limits for construction equipment used in this project will not exceed 75 dB (A). | Contractor / PWD |
| 3.14 | Material Handling at Site | Temporary | Moderate | <p>Workers employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles.</p> <p>Workers, who are engaged in welding works, will be provided with welder's protective eye-shields.</p> <p>Workers engaged in stone breaking activities will be provided with protective goggles and clothing.</p> <p>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.</p> | Contractor / PWD |
| 3.15 | Disposal of Construction | Temporary | Moderate | Safe disposal of the construction waste will be | Contractor / PWD |

| Sl. No. | Potential Environmental Issues | Duration / Extent | Magnitude | Proposed Mitigation Measures | Institutional Responsibilities |
|---------|---|-------------------|-----------|--|--------------------------------|
| | Waste | | | ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed off around the project site and especially in vacant plots in the locality. | |
| 3.16 | Safety Measures During Construction | Temporary | Moderate | <p>Adequate safety measures for workers during handling of materials at site will be taken up.</p> <p>The contractor has 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 all injuries likely to be sustained during the course of work.</p> <p>The Contractor will conform to all anti-malaria instructions given to him by the Engineer.</p> | Contractor / PWD |
| 3.17 | Clearing of Construction Camp and Restoration | Temporary | Major | <p>Contractor to prepare site restoration plans for approval by the Engineer. The plan is to be implemented by the contractor prior to demobilization.</p> <p>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</p> | Contractor / PWD |

| Sl. No. | Potential Environmental Issues | Duration / Extent | Magnitude | Proposed Mitigation Measures | Institutional Responsibilities |
|---------|---|-------------------|-----------|--|--------------------------------|
| 4 | Operation and Maintenance impacts | | | | |
| 4.1 | Environmental Conditions | Temporary | Moderate | Air, water, noise and soil quality will be monitored periodically as per the Environmental Monitoring Plan prepared. | DoUD |
| 4.2 | Safety risks | Temporary | Major | (i) Proper demarcation & flagging of the area towards valley side to minimize risks. (ii) On the access path to the temple necessary precaution measures to be observed by the visitors will be put up on boards. | DoUD |
| 4.3 | Unhygienic conditions due to poor maintenance of sanitation facilities and irregular solid waste collection | Temporary | Severe | DoUD will carry out maintenance of the toilets, and carry out the regular collection and disposal of wastes to the local disposal site. The septic tanks will be emptied regularly. | DoUD |

B. Land Aquisition and Resettlement

97. The proposed CLC is to be located on the land owned by the DoUD, GoHP. Hence there will be no acquisition of any private land. Since proposed site is unencumbered land, therefore, there is no acquisition any private assets. At the subproject site there are no squatters or encroachers also. Hence there is no requirement of any rehabilitation and resettlement for the construction of CLC building. To comply with the ADB SPS 2009 and ESMF requirement, a 'Social Due Diligence Report' has been prepared under the separate cover.

V. ENVIRONMENT MANAGEMENT PLAN (EMP)

A. Institutional Arrangements for Project Implementation

98. The Government of Himachal Pradesh through Department of Planning (DoP) is the Executing Agency (EA). The EA (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 subproject level; (iv) provides overall strategic guidance on technical supervision and project execution; and (v) ensures overall compliance with the loan covenants.
99. The implementing agencies (IAs) in the project are HPKVN, DoUD, DoRD, DoTE, PWD and DoLE. For all CLCs project implementing agencies will be DoUD, HPKVN and PWD. The implementing 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 subprojects for due diligence requirements and approve subproject 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.
100. 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.
101. 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 subprojects to satisfy ADB's due diligence requirements and approving subproject 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.

102. 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 subproject 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.
103. 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.
104. The EA will engage one agency for the quality check and to meet time line 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.

105. The Environmental Management Plan (EMP) translates recommended mitigation and monitoring measures into specific actions that will be carried out by the contractor and proponent. EMP deals with the management measures and implementation procedure of the guidelines along with enhancement measures recommended to avoid, minimize and mitigate foreseen environmental impacts of the project. For each mitigation measure to be taken, its location, timeframe, implementation and overseeing/ supervising responsibilities are listed in the EMP. **Tables 10 to 12** presents a generic EMP to guide the contractor in mitigating environmental impacts.

Responsibility for updating IEE during Pre-Construction and Construction

106. **Responsibility for monitoring.** During construction, environmental specialist of safeguards cell at HPKVN and the designated representative engineer of the PIU will monitor the contractor's environmental performance. During the operation phase, monitoring will be the responsibility of the PMU. The Environmental specialist will prepare monthly and quarterly report.
107. **Responsibility for Reporting.** PMU will submit to ADB semi-annual reports on implementation of the EMP and will permit ADB to field environmental review missions which will review in detail the environmental aspects of the project. Any major accidents having serious environmental consequences will be reported immediately. PMC's Environment Safeguard Specialist will assist PMU for finalization semi-annual and annual progress reports.

Table 10: Pre-Construction Phase Environmental Management Plan

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator 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/PMC | Review after completion of DPR | Part of PWD/PMC Professional Fee |
| 2 | Layout of components to avoid impacts on the aesthetics of the site | The project components siting will avoid impacts on the aesthetics of the site and surroundings and CLC building will very well mix | CLC building exterior | PIU / PWD | PMU/PMC | Review after completion of DPR | Part of PWD/PMC Professional Fee |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|---|---|--|--------------------------------|-----------------------------|--|---|
| | | with local buildings. | | | | | |
| 3 | Slope stability related issues | The plot area for CLC building is flat, however, during construction any exposed slopes at excavated areas will be covered and slope protection measures will be provided specially at side slopes of internal roads. | Slope protection measures on side slopes of access path, internal road, etc. | PIU/PWD | PMU/PMC | Review of recommended slope protection measures | Part of PWD/PMC Professional Fee |
| 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 building enables efficient drainage of the plot and maintains natural drainage patterns. The storm water generated will be diverted to local drain through a properly constructed drainage system. | Arrangement for proper diversion of storm water runoff | PIU/PWD | PMU/PMC | After mobilisation of contractor at site and during establishment of construction camp | Incidental to construction cost |
| 5 | Integration of energy efficiency and energy conservation programs in design | The detailed designs for the sub-project have ensured that environmental sustainability principles, including energy efficiency, | Specifications of rain water harvesting structures, electrical | PIU/PWD | PMU/PMC | During finalisation of DPR | Part of project cost |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|---|---|---|--------------------------------|-----------------------------|---|---|
| | of sub-project components | resource recycling, waste minimization, etc. The design considers the following energy efficiency measures : <ul style="list-style-type: none"> • Usage of recyclable materials like wood substitutes. • Installation of BEE certified equipments • Usage of energy efficient lighting fixtures (LED) • Provision of P-V cells on roof for solar power. | fixtures, details of water heating system | | | | |
| 6 | Consents, permits, clearances, no objection certificate (NOC), etc. | Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. | Consents, permits, clearance and NOCs Records and communications | PIU | PMU | check consent for establishment of construction camp , approval from civic authorities for CLC construction | Project cost |
| 7 | Establishment of baseline environmental | Conduct documentation of location of components, areas for construction zone | Records and Photographs | Contractor | PIU/PWD | Once prior to construction | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|--|--|--|-----------------------------|--------------------------|---|
| | conditions prior to start of civil works | (Camp, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates | | | | | |
| 8 | Utilities | <p>1-The locations and operators of utilities to be impacted should be identified and documented in DPR documents to prevent unnecessary disruption of services during the construction phase.</p> <p>2-Require contractor to prepare a contingency plan to include actions to be done in case of unintentional interruption of services.</p> <p>3-Obtain from the PIU and/or PWD the list of affected utilities and operators;</p> <p>4-If relocations are necessary; contractor will coordinate with the</p> | <p>List and maps showing utilities to be shifted</p> <p>Contingency plan for services disruption</p> | <p>- PWD will prepare preliminary list and maps of utilities to be shifted</p> <p>- During detailed design phase, contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan</p> | PIU/PWD | Pre-Construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|-------------------------------|--|-------------------------------------|--|-----------------------------|---|---|
| | | providers to relocate the utility. | | | | | |
| 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 site.</p> <p>2-Consider alternatives, if the site, is 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 made available.</p> <p>3-Develop a protocol for use by the construction contractor in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to</p> | Chance find protocol | <p>- PMC to consult ASI or HP State Archaeology Department</p> <p>- PMC to develop protocol for chance finds</p> | PMU | Prior to start of construction activities | PMC |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|--|--|--------------------------------|-----------------------------|--|---|
| | | ensure they are protected and conserved. | | | | | |
| 10 | Construction Camp - Location, Selection, Design and Layout | <p>Siting of the construction Camp shall be as per the guidelines below and details of layout to be approved by PWD.</p> <p>The potential sites will be selected for labour camp and these shall be visited by the environmental expert of safeguards cell and one having least impacts on environment will be approved by the PWD and safeguard cell. As far as possible construction camp will be established at vacant land near CLC plot Ground to avoid impact on other land.</p> <p>Location for storage of construction materials shall be identified CLC site or at any building close to CLC site.</p> <p>Construction sanitation facilities shall be</p> | Construction Camp site, and locations of material storage areas, sanitation facilities | Contractor | PWD/ PIU | At the time of construction camp establishment and finalization of storage areas | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|---|--|---|---|-----------------------------|---|---|
| | | adequately planned, | | | | | |
| 11 | Sources of construction materials | <p>Use quarry sites and sources licensed by the GoHP.</p> <p>Verify suitability of all material sources and obtain approval from PIU.</p> <p>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.</p> | Permits issued to quarries/sources of materials | <p>Contractor</p> <p>PMC and PWD to verify sources (including permits) if additional is requested by contractor</p> | <p>PMU</p> <p>PIU</p> | Upon submission by contractor | PMC and PWD as part of consultancy fee |
| 12 | Access for Construction material transportation | <p>Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of site.</p> <p>Schedule transport and hauling activities during non-peak hours.</p> | Traffic management plan | Contractor | PIU and PWD | During Delivery of construction materials | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--------------------------------|--|-------------------------------------|--------------------------------|-----------------------------|---------------------------|---|
| | | <p>Locate entry and exit points in areas where there is low potential for traffic congestion.</p> <p>Keep the site free from all unnecessary obstructions.</p> <p>Drive vehicles in a considerate manner.</p> <p>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</p> <p>Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that</p> | Health and safety (H&S) plan | Contractor | PMU and PMC PIU and PWD | During construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|----------------------|---|---|--------------------------------------|-----------------------------|---|---|
| | | <p>are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project.</p> <p>Include in H&S plan measures such as: (i) type of hazards in the intake wells site; (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.</p> <p>Provide medical insurance coverage for workers.</p> | | | | | |
| 14 | Public consultations | Continue information dissemination, consultations, and involvement/participation of stakeholders during project | <p>-Disclosure records</p> <p>- Consultations</p> | PMU,PMC PIU,PWD and Contractor | PMU and PMC | <p>- During updating of IEE Report</p> <p>- During preparation of</p> | <p>PMU</p> <p>Contractor to allocate funds to support</p> |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible for Implementation | Responsible for Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|----------------------|---------------------|-------------------------------------|--------------------------------|-----------------------------|---|---|
| | | implementation. | | | | site- and activity-specific plans as per EMP - Prior to start of construction - During construction | |

Table 11: Construction Phase Environmental Management Plan

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|--|---|----------------------------|-------------------------|-------------------------------------|---|
| 1 | Sanitation facilities at construction Camp | The contractor shall provide sanitation facilities at camp site. These facilities will include dust bins in adequate numbers for solid waste collection, and separate toilets for male and females. These toilets facilities shall be maintained and septic tanks/soak pits shall be | Construction camp sanitation facilities | Contractor | PWD/PIU | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|--|--|----------------------------|-------------------------|-------------------------------------|---|
| | | provided at the toilets. The dust bins shall be regularly emptied and waste from camp site shall be disposed off at designated locations. | | | | | |
| 2 | Traffic Circulation plan during construction | Prior to commencement of site activities and mobilization on ground, the Contractor 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 with support of the PIU will carry out dissemination of these information and circulation plan at site and at key access road to CLC site. | Safe movement of Traffic | Contractor | PWD/PIU | Every day during construction phase | Contractor |
| 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 | Pre-construction records of sites and vegetation in area of construction | Contractor | PWD / PIU | Duration of site preparation | PWD/PIU |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|---|---|---|----------------------------|-------------------------|-------------------------------------|---|
| | | with prior approval from the Environmental Expert of safeguard cell. All areas used for temporary construction operations will be subjected to complete restoration to their former condition with appropriate rehabilitation procedures. The photographic records shall be maintained for the temporary sites used for construction. These will help in proper restoration. | | | | | |
| 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 will submit his plan how availability of drinking water shall be assured. In case it is obtained from the natural | Water supply source and availability of water , permission of local authority if obtained from local spring | Contractor | PWD/PIU | During Construction phase regularly | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|---------------------------------------|---|---|----------------------------|-------------------------|-------------------------------------|---|
| | | spring then permission from local authorities shall be obtained. | | | | | |
| 5 | Waste disposal | <p>The pre-identified disposal location shall be part of Comprehensive Waste Disposal Plan. Solid Waste Management Plan to be prepared by the Contractor in consultation with local civic authorities.</p> <p>The Environmental Specialist of PWD shall approve these disposal sites after conducting a joint inspection on the site with the Contractor.</p> <p>Contractor shall ensure that waste shall not be disposed off near natural streams in the surroundings of site and along the access path.</p> | Waste Disposal sites, waste management plan | Contractor | PWD/PIU | Regularly during construction phase | Contractor |
| 6 | Stockpiling of construction materials | Stockpiling of construction materials will be done in such a way that it does not impact and obstructs the | Subproject stockpiling sites | Contractor | PWD / PIU | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|------------------------------------|---|---|----------------------------|-------------------------|-------------------------------------|---|
| | | drainage. The stockpiles will be covered to protect from dust and erosion. | | | | | |
| 7 | Arrangement for Construction Water | <p>(i) The Contractor shall provide a list of locations and type of sources from where water for construction shall be acquired.</p> <p>(ii)The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department.</p> <p>(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.</p> | Water availability at identified water source locations | Contractor | PWD/PIU | Regularly during construction phase | Contractor |
| 8 | Soil Erosion | Slope protection measures will be undertaken as per design to control soil erosion especially on side slopes of access and | Locations of slope protection | Contractor | PIU/PWD | | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|---|---|----------------------------|-------------------------|-------------------------------------|---|
| | | internal roads. | | | | | |
| 9 | Water Pollution from Construction Wastes | The Contractor shall take all precautionary measures to prevent entering of waste water into any local stream during construction. | Subproject sites | Contractor | PIU/PWD | Regularly during construction phase | Contractor |
| 10 | Water Pollution from Fuel and Lubricants | The Contractor shall ensure that all construction vehicle parking locations, fuel/lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites shall be located at least 500 m away from the natural streams. Contractor 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. | Vehicle parking, refueling sites, Oil interceptor functioning | Contractor | PIU/PWD | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|--|---|----------------------------|-------------------------|-------------------------------------|---|
| | | 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 | PIU/PWD | Regularly during construction phase | Contractor |
| 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 construction wastes will be transported to the pre-identified disposal sites for | Water bodies specially natural springs near sub project site, | Contractor | PIU/PWD | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|---|---|----------------------------|-------------------------|-------------------------------------|---|
| | | safe disposal. | | | | | |
| 13 | Generation of dust | The contractor 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. | Subproject site, air quality monitoring results | Contractor | PIU/PWD | Regularly during construction phase | Contractor |
| 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 Project. The Contractor shall maintain a record of PUC for all vehicles and machinery used during the | PUC certificates of vehicles and machinery | Contractor | PIU/PWD | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|----------------------|---|---|----------------------------|-------------------------|-------------------------------------|---|
| | | contract period which shall be produced for verification whenever required. | | | | | |
| 15 | Noise Pollution | <p>The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEFCC/CPCB noise standards and all Vehicles and equipment used in construction shall be fitted with exhaust silencers.</p> <p>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.</p> <p>Noise limits for construction equipment used in this project will not exceed 75 dB (A).</p> | Certificates of vehicles conforming noise standards, noise monitoring results | Contractor | PWD/PIU | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|----------------------------|--|---|----------------------------|-------------------------|-------------------------------------|---|
| 16 | Impacts on flora and fauna | Conduct site induction and environmental awareness Limit activities within the work area. | Records, Barricades along excavation works, Trees/shrubs planted by project | Contractor | PWD/PIU | Regularly during construction phase | Contractor |
| 17 | Material Handling at Site | 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. 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 | Data on available personal protective | Contractor | PWD/PIU | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|---|--|----------------------------|-------------------------|-------------------------------------|---|
| | | chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor. | | | | | |
| 18 | Disposal of Construction Waste / Debris / Cut Material | The Contractor 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 project site indiscriminately. | Disposal site | Contractor | PIU/ PWD | Regularly during construction phase | Contractor |
| 19 | Safety Measures During Construction | Adequate safety measures for workers during handling of materials at site will be taken up. The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from accidental injuries, fire, etc. First aid treatment will be made | Records of availability of personal protective equipment, availability of first aid kits | Contractor | PIU/PWD | Regularly during construction phase | Contractor |

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator for Compliance | Responsible Implementation | Responsible Supervision | Frequency for Monitoring | Sources of Fund for Implementing Mitigation Measure |
|---------|--|---|--|----------------------------|-------------------------|---------------------------|---|
| | | available for all injuries likely to be sustained during the course of work. The Contractor will conform to all anti-malaria instructions given to him by the Engineer. | | | | | |
| 20 | Clearing of Construction of Camp and Restoration | Contractor to prepare site restoration plans for approval by the Engineer (PWD). The plan is to be implemented by the contractor 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 | PIU/PWD | End of construction phase | Contractor |

Table 12: Operation Phase Environmental Management Plan

| Sl. No. | Environmental Issues | Mitigation Measures | Parameter /Indicator 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 subproject area as suggested in the monitoring plan through an approved monitoring agency. | Monitoring results and relevant standards | DoUD through Pollution Monitoring Agency | PIU | As per monitoring Plan | DoUD./ PMU |
| 2 | Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection | The DoUD will carry out maintenance of the toilets, and carry out the regular collection and disposal of wastes to a designated waste treatment site. The solid waste disposal will be integrated with Dharamshala city waste disposal. Septic tanks will be regularly emptied. . | Maintenance schedule of CLC building and facilities created | DoUD | PIU | Every year during tourist season | DoUD /PMU |
| 3 | Natural Disasters | Necessary procedures to be followed by the visitors, CLC staff and trainees during the natural disasters shall be written at prominent locations. | Warnings of disasters by Meteorological Department | District Administration | PIU | During Disasters | Government of HP |

B. Environmental Monitoring Plan

108. Environmental monitoring will be done during construction in three levels; namely monitoring development of project performance indicators done by the Environmental Specialist of PMC, monitoring implementation of mitigation measures done by the Contractor and overall regulatory monitoring of the environmental issues done by the PMU safeguard Cell Environmental Specialist. To ensure the effective implementation of mitigation measures and Environmental Management Plan during construction and operation phase of the sub-project, 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.

Table 13: Monitoring Plan for Mohal Sidhbari CLC Subproject (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 ₁₀ , PM _{2.5} , and SO ₂ | CLC construction site | Once in pre-Construction phase to establish baseline | Contractor, PWD/ Tourism department through approved Monitoring Agency | INR130,000/ US \$ 2000 |
| | | 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 | CLC construction site ground water | Once in pre-Construction phase to establish baseline | Contractor, PWD/ Tourism department through approved Monitoring Agency | INR130,000/ US \$2000 |
| | | 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 | CLC construction site | Once in pre-Construction phase to establish baseline | Contractor, PWD/ Tourism department through approved Monitoring Agency | INR 39000/US \$ 600 |
| | | During Construction Phase | | | Once in every three months (except monsoon season) during construction phase | | |
| | | Operation Phase | | | Once in season except | | |

**Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari**

| Sl. No. | Field (Environmental Attribute) | Phase | Parameters to be Monitored | Locations | Frequency | Responsibility | Cost (INR/US \$) |
|---------|---------------------------------|-------|----------------------------|-----------|------------------------------------|----------------|-------------------|
| | | | | | monsoon season for initial 2 years | | |

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

Table- 14 summarizes site- and activity-specific plans to be prepared as per EMP tables.

Table 14: 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 and PMC/PWD | Contractor |
| Construction phase | Erosion control and re-vegetation plan | Mitigate impacts due to erosion | Contractor | Contractor |
| Detailed Design Phase | List and maps showing utilities to be shifted | Utilities shifting | PWD during preliminary stage Contractor as per detailed design | Contractor |
| Detailed Design Phase | Contingency plan | Mitigate impacts due to interruption of services during utilities shifting | Contractor | Contractor |
| Pre-Construction | Chance find protocol | Address archaeological or historical finds | PMC | Contractor |
| Pre-Construction Phase | List of pre-approved sites | Location/s for work Camp, areas for stockpile, storage and disposal | PIU and PWD | Contractor |
| Pre-Construction phase | Waste/Spoil management plan | Mitigate impacts due to waste generation | Contractor | Contractor |
| Construction phase | Traffic management plan | Mitigate impacts due to transport of materials and pipe laying works | Contractor | Contractor |
| Construction phase | Health and Safety (H&S) plan | Occupational health and safety | Contractor | Contractor |
| Pre-Construction phase | Spill prevention and containment plan | Mitigate impacts of accidental spills of oil, lubricants, fuels, concrete, and other hazardous materials | Contractor | Contractor |

109. Traffic Management Plan is attached in **Annexure 4**.

C. Capacity Building

110. In addition to the primary objective of skills enhancement of Himachali youth, the current project has the scope for raising awareness about environmental conservation amongst trainees, implementing agencies and local communities. The project will have an opportunity to build capacity in environment protection to the above mentioned stakeholders.

111. 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 15** below.

Table 15: Training Modules for Environmental Management

| Program | Description | Participants | Duration | Training Conducting Agency |
|---------------------------------------|---|--|-----------------|-------------------------------------|
| A. Pre-Construction Stage | | | | |
| 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 officials, Environmental specialist of PWD and other Engineering staff associated with the sub project, PIU staff and HPKVN PMU staff | ½ Working Day | Environmental Specialist of the PMC |
| Session 1 | Environmental impacts due to subprojects in construction and operation phases, pollution generation activities during pre-construction and construction phases Environmental Management, Environmental Provisions, | All PIUs, HPKVN Staff, | 1/2 Working Day | Safeguards Specialist of the PMC |

| Program | Description | Participants | Duration | Training Conducting Agency |
|------------------------------|---|--|-----------------|----------------------------------|
| | Implementation Arrangements, Methodology of Assessment Good engineering practices to be integrated into contract documents | | | |
| B. Construction Stage | | | | |
| Session 2 | Roles and Responsibilities- Roles and Responsibilities of officials / contractors / consultants towards protection of environment Implementation. Arrangements, and Environmental Monitoring during construction phase | Engineers and staff of line departments of the Government of GoHP, and PMU/PIU | 1/2 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 |

Notes: PMU = Project Management Unit; PIU = Project Implementation Unit; PMC = Project Management Consultant; PWD = Public Works Department; ES = Environment Specialist; DoUD - Department of Urban Development

D. Environmental Budget

112. 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 subproject is presented in **Table 16**.

Table 16: Environmental Management and Monitoring costs (INR)

| Monitoring Component | Rate | Amount (INR) | Source of Fund |
|--|--|--------------------------------|-------------------|
| Pre-Construction and Construction Phase | | | |
| Air Quality - one location at construction site, thrice a year (one sample pre construction and 6 samples during construction phase; total 7 samples) | 10,000 | 70,000 | Contractor |
| Water Quality- One ground water sample from construction site (one sample pre construction and 6 samples during construction phase; total 7 samples) | 10,000 | 70,000 | Contractor |
| Noise Quality-One location at project site (one sample pre construction and 6 samples during construction phase; total 7 samples) | 3000 | 21,000 | Contractor |
| Training for Capacity Building of stakeholders | Covered in the consultancy cost of PWD and PMC | | |
| Total Construction Phase Monitoring Cost | | 161,000 | Contractor |
| O & M Phase | | | |
| Air Quality -one location at CLC site, thrice a year, for initial 2 years (3 samples a year, total 6 samples) | 10,000 | 60,000 | PMU |
| Water Quality -one ground water sample at CLC site, thrice a year, for initial 2 years (3 samples a year, total 6 samples) | 10,000 | 60,000 | PMU |
| Noise Quality- one location at CLC site, thrice a year; for initial 2 years (3 samples a year, total 6 samples) | 3000 | 18,000 | PMU |
| Capacity Building Expenses (5 Sessions) | 90000 | 450,000 | PMU |
| Total O&M Phase Monitoring Cost | | 588,000.00 | PMU |
| Total Cost | | 749,000.00 | |
| Contingencies @ 5 % | | 37,450.00 | |
| Total Budgeted Cost | | 786,450 (Say 800, 000) | |

E. Environmental Monitoring and Reporting

113. The PMU will monitor and measure the progress of EMP implementation. PIU 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 PIU, who will take follow-up actions, if necessary. PIU will submit quarterly

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.

114. 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

115. This subproject 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 subproject can be characterized as innocuous.
116. In view of this, the need for holding a public hearing(as defined in EIA Notification 2006 of GoI) 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 project areas. Residents of the area were informed about the proposed sub-project 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 Dharamshala Municipal council and NGO in Dharamshala.
117. The process of consultations was taken up as an integral part of the sub-project 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 project activities;
 - To familiarize the people with technical and environmental issues of the sub project for better understanding;
 - To solicit the opinion of the communities / individuals on environmental issues and assess the significance of impacts due to the proposed development;
 - To foster co-operation among officers of PIU, the community and the stakeholders to achieve a cordial working relationship for smooth implementation of the sub project;
 - To identify the environmental issues relating to the proposed activity.
118. 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 subproject building construction will lead to infrastructure creation for skill development. They demanded fast implementation of the subproject. The dates of consultations and stakeholders consulted have been summarized below in **Table-17**. The views, comments and suggestions of stakeholders and their incorporation in project design are presented in **Tables-18 and 19**. The records of consultations (list of participants with signatures) and consultation photographs are given in **Annexure 5**.

Table 17: Dates and Stakeholders Consulted

| Sl. No. | Stakeholders Consulted | Dates of Consultations |
|---------|---|---|
| 1 | Himachal Pradesh Forest department | December 23, 2015 |
| 2 | Department of Rural Development, Department of Labour and Employment and Department of Higher Education | December 21, 2015 |
| 3 | Himachal Pradesh Pollution Control Board | December 23, 2015 |
| 4 | State Department of Environment, GoHP, HPKVN and DoP | March 14 and 15, 2016 |
| 5 | Department of Technical Education, GoHP | December 12, 2015 March 16 and 17, 2016 |
| 6 | Local Public at CLC site at Mohal Sidhbari | May 03, 2016 |

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

Table 18: 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, Mohal Sidh Bari | 3/5/2016 | With local NGO, and population residing in the surroundings | CLC proposal, project benefits, implementation schedule, environmental and social impacts during project implementation etc. | <p>1- The participants welcomed the project and told the consultants that there is huge potential skill development and livelihood. The NGO Chairperson Mr. Sandeep suggested activities that may be taken up for skill development and employment of youth.</p> <p>2- The local participants demanded that during construction and operations locals should be given preference. It was told by the Consultants and DOUD representatives that in the project people from State will get maximum employment opportunities.</p> <p>3. The local participants demanded that skill development should be such that locally available materials such as bamboo and pine products can be used for production and local's trainees should find employment within the state.</p> <p>4- Consultants asked the participants about their suggestions to reduce pollution and other nuisances to community during construction and operation of CLC. To this consultants answered the participants that necessary measures for dust and noise</p> |

| Sl. No. | Place | Date | Consultations held with | Issues discussed | Outcome of discussions and consideration in project design and Implementation |
|---------|-------|------|-------------------------|------------------|---|
| | | | | | control shall be taken. For this an Environmental Management and Monitoring Plan will be prepared and this will ensure pollution under control. 5- The participants during consultations demanded that solid waste collection and disposal should be taken care properly as city has issue of solid waste collection and disposal. |

Table 19: Summary of Stake Holder Consultation at Institutional Level

| Sl. No. | Place | 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 State Forest Department and suggestions for the project | 1- The Environmental Expert PPTA team briefly explained the project concept to the state department officials. It was informed by the officials that 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. For vocational training purpose State Government can give clearance up to 1.0 Ha land. If application is submitted under the Forest |

| Sl. No. | Place | Date | Consultations held with | Issues discussed | Outcome of discussions and consideration in project design and Implementation |
|---------|-------|------|-------------------------|------------------|--|
| | | | | | <p>(Conservation) Act, 1980 then Net Present Value (NPV) of land and cost for compensatory forestation are to be paid by the State Government.</p> <p>If application is submitted under Forest Rights Act 2006 then for educational institutes NPV and Compensatory Afforestation costs are exempted for the land up to 1.0 Ha. The clearance can also be issued at Divisional Forest Officer (DFO) level.</p> <p>2- The Forest Officials suggested that application may be made under Forest Rights Act for faster clearance if any site falls under the forest. To this Environmental Expert replied that sites under the forest will be avoided, however, under unavoidable situations applications will be submitted as suggested.</p> <p>3- In the project proposed Women Polytechnic site at Rehan in Kangra district is forest area. For this site clearance is to be obtained under the Forest (Conservation) Act, 1980 for the forest land diversion.</p> |

| Sl. No. | Place | Date | Consultations held with | Issues discussed | Outcome of discussions and consideration in project design and Implementation |
|---------|--------|------------|---|---|--|
| 2 | Shimla | 23/12/2016 | Senior Environmental Engineer, Himachal Pradesh Pollution Control Board | Clearances and Permissions required from Himachal Pradesh Pollution Control Board and State Department of Environment | <p>1- The Environmental Expert explained the HPSDP in brief and enquired what type of permissions and clearances are needed from the SPCB and State Department of Environment.</p> <p>Senior Environmental Engineer replied that Educational Institutes are exempted from the Environmental Clearance process. So in the present case also there will be no requirement for prior environmental clearances for CLCs, RLCs, MCCs and proposed Women Polytechnic. He explained that Consent to establish and Operate has to be obtained from SPCB only if residential complex is planned at any of the sites.</p> <p>2- He enquired whether any hazardous waste is likely to be generated at any of the facilities. In that case hazardous waste management proposal is to be submitted to the SPCB for Hazardous waste authorization and disposal. The environmental expert replied that none of the infrastructure facilities to be created will generate hazardous waste.</p> |

| Sl. No. | Place | Date | Consultations held with | Issues discussed | Outcome of discussions and consideration in project design and Implementation |
|---------|--------------|-------------------------------------|--|--|---|
| 3 | Sunder Nagar | 22/12/2015 and March 14 and 15 2016 | Director Technical Education 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 | <p>1- The environmental expert enquired any of project sites under DTE are planned in forest areas or within buffer or core zones of national park or bird sanctuary. The director replied that CLC/RLC sites planned are within the vacant land in existing ITI campuses. The Women Polytechnic site at Kangra is in revenue forest land.</p> <p>2- The environmental expert suggested DTE to submit land ownership details/revenue records for all sites planned under the ADB funding for social due diligence. For this DTE officials agreed.</p> |
| 4 | Shimla | 21/12/2015 | Department of Labour and Employment (DoLE) | Locations of MCCs planned, approximate area required for MCCs | <p>1- The environmental expert enquired from officials about the proposed locations of MCCs. The officials replied that with ADB assistance 12 MCCs planned. The planned locations are Hamirpur, Shimla, Bilaspur, Kullu, Dharamshala, etc. One MCC at Una is under implementation. As per Gol guidelines built up area of around 3000 sqft is needed.</p> <p>2- The environmental expert suggested that none of the planned site should have involuntary resettlement issues and</p> |

| Sl. No. | Place | Date | Consultations held with | Issues discussed | Outcome of discussions and consideration in project design and Implementation |
|---------|--------|------------|---|--|--|
| | | | | | <p>should be in none forest land as far as possible. The revenue record of land ownership should be provided to the ADB team for social due diligence. The officials replied that the sites already in possession with DoLE have been selected and these are in urban areas away from forest areas.</p> <p>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.</p> |
| 5 | Shimla | 21/12/2015 | Department of Rural Development (DoRD) | Locations of BLRCs planned environmental and social safeguard issues, tree cutting, etc. | <p>1 The environmental expert enquired about probable locations of RLCs planned. Any specific site having tree cutting or land not transferred. The officials replied that about 25 RLCs are planned under the project. For some sites have been finalized, but for balance sites are being identified.</p> <p>2- The environmental expert suggested that no sites with temporary or permanent occupation should be identified and revenue records showing</p> |

| Sl. No. | Place | Date | Consultations held with | Issues discussed | Outcome of discussions and consideration in project design and Implementation |
|---------|-------|------|-------------------------|------------------|---|
| | | | | | <p>ownership details should be provided for the social due diligence. Further, any site involving tree cutting, necessary tree cutting permission should be obtained.</p> <p>2- 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.</p> |

B. Future Consultation And Information Disclosure

120. To ensure continued public and stakeholder participation in project life cycle regular consultation is proposed. A grievance redressal Committee will be formed within the PIU (at the site) to register grievances of the people regarding technical, social and environmental aspects. 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 project proposals to the stakeholders and the communities in the vicinity of the subproject location, an extensive project awareness campaign will be carried out.

Information disclosure

121. Electronic version of the IEE will be placed in the official website of the Department of Urban Development, HPKVN, GoHP and the website of ADB after approval of the documents by the HP Government 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/PIU, on a written request.
122. The PMU will issue notification on the disclosure mechanism in local newspapers, ahead of the initiation of implementation of the project, 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

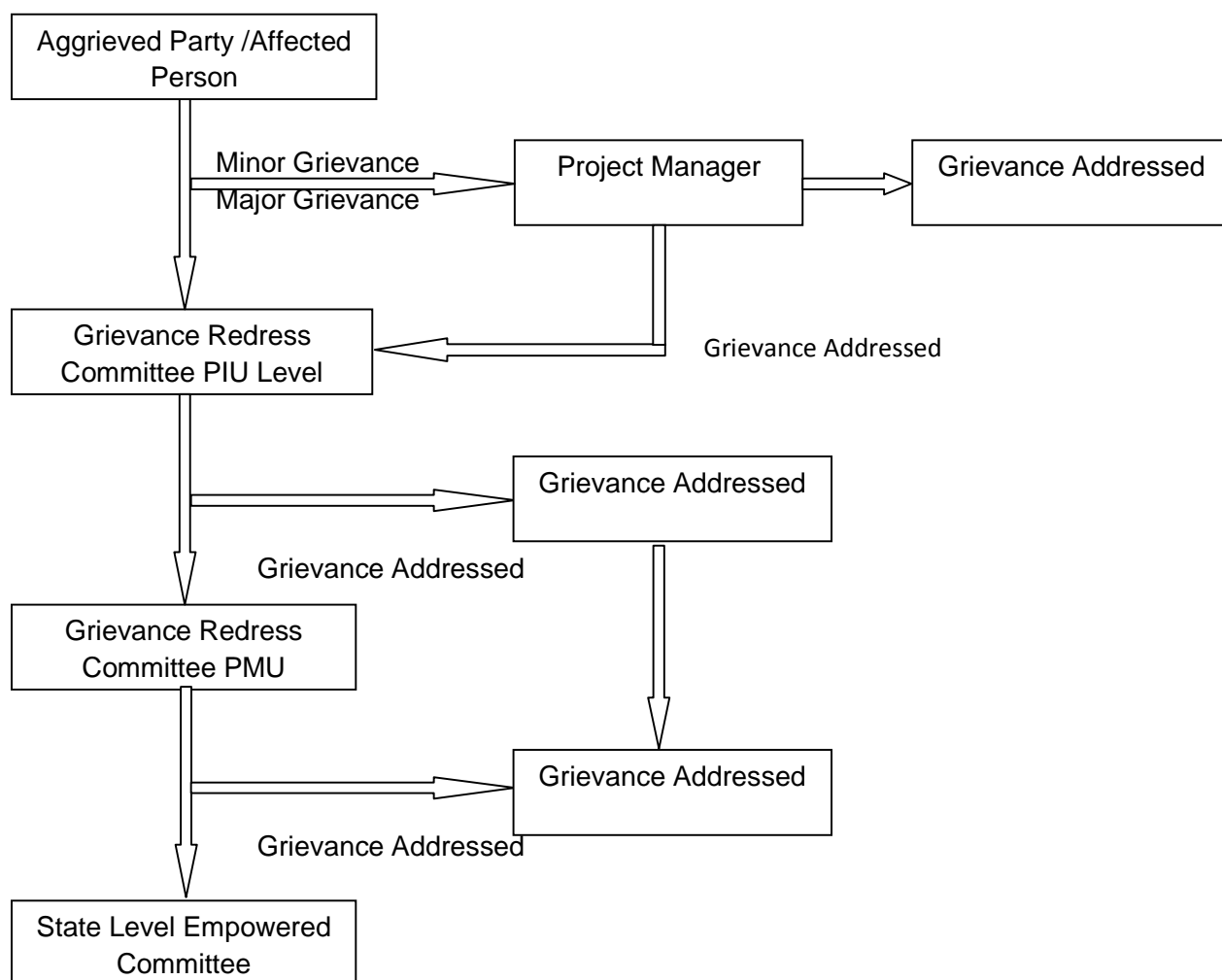
123. The affected person(s)/aggrieved party can give their grievance verbally or in written to the local site office. Grievances of affected person will first be brought to the attention of the Project Manager at PIU who can resolve the issue at the site level. If the matter is not solved within 7 days period by the PIU, it will be brought to the Grievance Redress Committee constituted for the purpose in PIU. 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.
124. 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 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. The grievance redress process is shown below.

Composition and functions of GRC

125. PIU Level Grievance Redress Committee (GRC- PIU) – This committee will comprise of one local elected member of Dharamshala Municipal Council (Ward councilor) , Project Manager, PWD Engineer deployed at site , and construction manager of the contractor.
126. The GRC- PIU shall be headed by Project Manager (PIU). The committee will meet at least once in every month. Agenda of meeting shall be circulated to all the members and affected persons/aggrieved party along with venue, date and time; informed in written at least 7 days in advance of meeting. The matters shall remain with GRC at PIU level for one month and if grievance is not resolved within this time period, the matter shall be referred to GRC at PMU.
127. **GRC within Environmental and Social Management Cell (ESMC) 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 General Manager HPKVN, Safeguard Specialists (Environmental and Social) of PMU and One representative from the DoUD, Shimla office. The Committee shall be headed by GM HPKVN. This committee shall look 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, the aggrieved person/party can bring the matter to State Level Empowered Committee (SLEC).
128. **Approach to GRC.** Affected person/aggrieved party can approach to 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 /community/ affected person can register their complaint in the online column.
 - Telecom based: A telephone number will be displayed at the web site of HPKVN as wells at the construction site of CLC at Mohal Sidhbari so that general public can register their complaint through telephone / mobile phone to the PIU/PMU office.

GRIEVANCE REDRESS MECHANISM (HPSDP PROJECT)



VII. FINDINGS AND RECOMMENDATIONS

129. The proposed subproject components do not involve any interventions in and around the natural and cultural heritage destinations and have less significant (direct/indirect) environmental impacts. It is expected that the proposed subproject will enhance economic growth and employability of local Himachali youth through development of skills.
130. 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-project execution. The overall environmental quality of subproject surroundings will not degrade as result of operating the CLC as adequate sanitation facilities have been planned.
131. The specific management measures laid down in the IEE will effectively address any adverse environmental impacts due to the subproject. The effective implementation of the measures proposed will be ensured through the building up of capacity towards environmental management within the PMU supplemented with the technical expertise of a Safeguards Specialist as part of the PMC Consultants. Further, the environmental monitoring plans provide adequate opportunities towards course correction to address any residual impacts during construction or operation stages.
132. It is recommended that project can be implemented with the implementation of mitigation measures indicated in the EMP for the subproject life cycle.

VIII. CONCLUSIONS

133. On the basis of the IEE, it is expected that the proposed project components have only minor, negative, localized, temporary and less significant environmental impacts. These impacts can be easily mitigated through adequate mitigation measures and regular monitoring during the design, construction and post construction phases of the subproject. It is recommended that HPKVN through PMU should have monitoring responsibility in environmental issues of all program components during operational phase to ensure the environmental sustenance.
134. To conclude, the sub-project will have overall beneficial impacts after completion in terms of employability of Himachali youth. 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 subproject as Category “B” is confirmed, and 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 |
|---|-----|----|--|
| A. Project Siting Is the project area adjacent to or within any of the following areas: | | | The sub project involves establishment of City Livelihood Centre (CLC) in a vacant Government owned plot Dharamshala town in Kangra district of Himachal Pradesh. The proposed CLC site is 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 CLC site. |
| <ul style="list-style-type: none"> ▪ Underground utilities | | √ | The proposed CLC site is a vacant plot. There are no underground utilities at site. |

Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari

| Screening Questions | Yes | No | Remarks |
|--|-----|----|--|
| ▪ Cultural heritage site | | √ | No cultural heritage site within 25 km distance from the subproject site. |
| ▪ Protected Area | | √ | |
| ▪ Wetland | | √ | |
| ▪ Mangrove | | √ | |
| ▪ Estuarine | | √ | |
| ▪ Buffer zone of protected area | | √ | |
| ▪ Special area for protecting biodiversity | | √ | |
| ▪ Bay | | √ | |
| B. Potential Environmental Impacts 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 tank planned) and solid waste collection and disposal will be integrated with the Dharamshala city waste disposal facilities. |
| ▪ Dislocation or involuntary resettlement of people? | | √ | The proposed site is vacant Government owned plot so no Involuntary Resettlement |
| ▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups? | | √ | |

**Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari**

| Screening Questions | Yes | No | Remarks |
|--|-----|----|---|
| <ul style="list-style-type: none"> Accident risks associated with increased vehicular traffic, leading to loss of life? | | √ | <p>The proposed CLC site is in the Dharamshala town on a well-connected road. Since the subproject involves construction of a building <1000 m² for CLC, 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 within the CLC building for the trainees.</p> <p>However, to rule out any accident due to project related vehicular traffic, if required, flagmen will be deployed near the subproject construction sites to regulate the traffic. Traffic Management Plan will be prepared for the construction phase.</p> |
| <ul style="list-style-type: none"> Increased noise and air pollution resulting from increased traffic volume? | | √ | <p>Since increase in the traffic is not anticipated, therefore, no increase in air and noise pollution.</p> |
| <ul style="list-style-type: none"> Occupational and community health and safety risks? | | √ | <p>The CLC activities will not cause any occupational and community health and safety risks.</p> |
| <ul style="list-style-type: none"> Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation? | | √ | <p>No such risks are anticipated</p> |
| <ul style="list-style-type: none"> Generation of dust in sensitive areas during construction? | | √ | <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> |

**Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari**

| Screening Questions | Yes | No | Remarks |
|---|-----|----|---|
| <ul style="list-style-type: none"> Requirements for disposal of fill, excavation, and/or spoil materials? | | √ | The proposed site for CLC is 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 site. The site will be identified during the construction. |
| <ul style="list-style-type: none"> Noise and vibration due to blasting and other civil works? | | √ | 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"> Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction? | | √ | No requirement for draining of water from the site as site is not submerged. |
| <ul style="list-style-type: none"> Long-term impacts on local hydrology as a result of building hard surfaces in or near the building? | | √ | The proposed built up area of CLC is around 900 m ² and this small area will not cause any impact on local hydrology. |
| <ul style="list-style-type: none"> Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)? | | √ | <p>Since CLC building to be constructed is small in size so construction force will not exceed 50. The construction workers will be mainly locals so no influx in anticipated during the construction.</p> <p>During operation phase also all trainees will be accommodated in Hostel so no influx and impacts on social infrastructure is anticipated.</p> |
| <ul style="list-style-type: none"> Social conflicts if workers from other regions or countries are hired? | | √ | Preference will be given to locally available labour. 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. |

**Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari**

| Screening Questions | Yes | No | Remarks |
|---|-----|----|---|
| <ul style="list-style-type: none"> Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation? | | √ | Since proposed CLC building is new, the safety measures are being planned in the building design as per national and state level requirements. |
| <ul style="list-style-type: none"> Risks to community health and safety caused by management and disposal of waste? | | √ | During construction phase waste collection and disposal system will be planned by the contractor 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 Dharamshala town disposal system. |
| <ul style="list-style-type: none"> 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? | | √ | The proposed CLC site is within the municipal limits of Dharamshala town. Specific community risks are not foreseen due to operation as such as the proposed site has good connectivity through a National Highway. The CLC building is being designed following applicable seismic coefficient for Himachal Pradesh to built safety in structural design. There will be periodic maintenance of building during the operation phase. |

A Checklist for Preliminary Climate Risk Screening

Country/Project Title:

Sector:

Subsector:

Division/Department:

| Screening Questions | | Score | Remarks ⁴ |
|---------------------------------------|--|-------|---|
| Location and Design of project | 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 building is in plain terrain, 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 |
| Materials and Maintenance | 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 site 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 site do not require specific scheduling for maintenance |

⁴

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.

| | | | |
|---------------------------------------|---|---|----------------|
| Performance of project outputs | Would weather/climate conditions and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time? | 0 | Not Applicable |
|---------------------------------------|---|---|----------------|

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

Site Photographs





Annexure-3

**Land Records Certified by the Revenue Department Officials Showing GoHP
Ownership**

Annexure-4

Sample Traffic Management Plan (TMP)

A. Principles

1. One of the prime objectives of this TMP is to ensure the safety of all the road users along the work zone, and to address 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) mitigation of the adverse impact on road capacity and delays to the road users;
 - (iv) maintenance of access to adjoining properties
 - (v) Avoid hazards in addressing issues that may delay the project.

B. Operating Policies for TMP

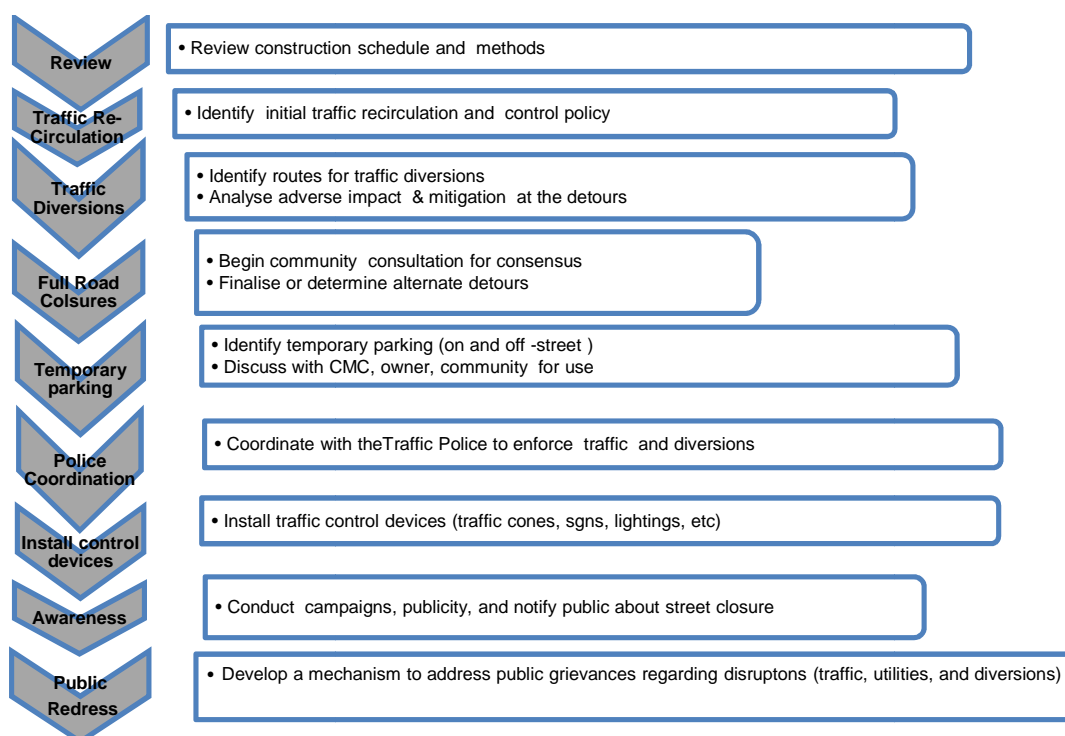
2. The following principles will help promote safe and efficient movement for all road users (motorists, bicyclists, and pedestrians, including persons with disabilities) through and around work zones while reasonably protecting workers and equipment.
 - (i) Make traffic safety and temporary traffic 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) Train all persons that select, place, and maintain temporary traffic control devices.
 - (vii) Keep the public well informed.
 - (viii) 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. Apart from the capacity analysis, a final decision to close a particular street and divert the traffic should involve the following steps:
 - (i) approval from the PIU, local administration to use the 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 are impacts to their operations; and

- (vii) Developing a notification program to the public so that the closure is not a surprise. 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 Street or public opposition, the full closure can be restricted to weekends with the construction commencing on Saturday night and ending on Monday morning prior to the morning peak period.

Figure: Policy Steps for the TMP



D. Public awareness and notifications

5. As per discussions in the previous sections, there will be travel delays during the constructions, as is the case with most construction projects, albeit on a reduced scale if utilities and traffic management are properly coordinated. There are additional grounds for travel delays in the area, as most of the streets lack sufficient capacity to accommodate additional traffic from diverted traffic as a result of street closures to accommodate the works.

6. The awareness campaign and the prior notification for the public will be a continuous activity which the subproject will carry out to compensate for the above delays and minimize public claims as result of these problems. These activities will take place sufficiently in advance of the time when the roadblocks or traffic diversions take place at the particular streets. The reason for this is to allow sufficient time for the public and residents to understand the changes to their travel plans. The project will notify the public about the roadblocks and traffic diversion

through public notices ward level meetings and city level meeting with the elected representatives.

7. The PIU will also conduct an awareness campaign to educate the public about the following issues:

- (i) Traffic control devices in place at the work zones (signs, traffic cones, barriers, etc.);
- (ii) defensive driving behaviour along the work zones; and
- (iii) Reduced speeds enforced at the work zones and traffic diversions.

8. It may be necessary to conduct the awareness programs/campaigns on road safety during construction.

9. The campaign will cater to all types of target 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 contractor's 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. The contractor should ensure that all the vehicles are in proper running condition and it comply with roadworthy and meet certification standards of GoHP. All vehicles to be used shall be in perfect condition meeting pollution standards of GoI and GoHP. The vehicle operator requires a pre state of shift checklist. Additional safety precautions will include the requirement for:

- Driver will follow the special code of conduct and road safety rules of Government of HP.
- Drivers to ensure that all loads are covered and secured drivers to ensure operation equipment can't leak materials hauled
- 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 a key to achieve the above objective, it is important to install good traffic signs at the work zones. The following traffic control devices are 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. The main roads carry considerable traffic; internal roads in the new city areas are wide but in old city roads very narrow and carry considerable traffic. 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/ 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.

15. 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.

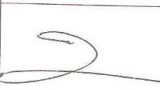




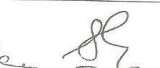



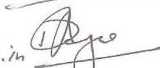
Annexure-5

Photographs and Attendance Sheets of consultations



Himachal Pradesh Skill Development Project
Initial Environmental Examination
Development of City Livelihood Centre at Mohal Sidhbari

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. Env. Engineer | 9418027098 pcbseeshimla@gmail.com |  |
| 3 | Dr. H.K. Gupta, IFS Chief Scientific Officer Deptt. of Env. S&T & MS of Science & Technology | 9418020469 hemantgifs@gmail.com |  |
| 4 | Dr. Umesh Pathania Technical Officer & Estate Officer State Council Scheme Tech & Env. & DEST. | 9418310231 umeshpathania@hot-mail.com |  |
| 5 | Dr. Dharmendra Sharma, Project Director HPS & M. Deptt of Rural Develop (H.P.) | 94186-70335 hdm hp@gmail.com |  |
| 6 | SN Verma ADB Consultant Environment & S | 09841224458 etstudio2@gmail.com |  |
| 7 | Rajesh Kumar, IFS | 9418000751 |  |
| 8 | J Balasubramanian Prominent | 9600044487 |  |
| 9 | Basab Banerjee TVET Expert | 7838577785 |  |
| 10 | DEEPM ANGRA HOD(CE) DTE Sundernagar | 9418107688 angradeepak@yahoo.co.in |  |
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