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| Initial Environmental Examination |

Project Number: 49108-002

September 2019

India: Himachal Pradesh Skill Development Project

Name of the sub-project: Model Career Center at Dharamshala, Kangra District (Himachal Pradesh)

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

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# ABBREVIATIONS

ADB – Asian Development Bank

ASI – Archaeological Survey of India

CHC – Community Health Center

CLC – City Livelihood Center

CPCB – Central Pollution Control Board

DOHE – Department of Higher Education

DOLE – Department of Labor and Employment

DOP – Department of Planning

DTE – Directorate of Technical Education, Vocational & Industrial Training

DOTE – Department of Technical Education

DOUD – Department of Urban Development

DORD – Department of Rural Development

EIA – Environmental Impact Assessment

EMP – Environmental Management Plan

ESMF – Environmental and Social Management Framework

FSI – Forest Survey of India

GOHP – Government of Himachal Pradesh

GRC – Grievance Redress Committee

HPKVN – Himachal Pradesh Kaushal Vikas Nigam

HPSDP – Himachal Pradesh Skill Development Project

IEE – Initial Environmental Examination

MCC – Model Career Center

MOEF – Ministry of Environment, Forests and Climate Change

PHC – Primary Health Center

PIU – Project Implementation Unit

PMC – Project Management Consultant

PMU – Project Management Unit

PWD – Public Works Department

RLC – Rural Livelihood Centers

SPS – Safeguard Policy Statement

TVET – Technical and Vocational Education and Training

**CURRENCY EQUIVALENTS**

(As of 3 September 2019)

|  |  |  |
| --- | --- | --- |
| Currency unit | – | Indian rupee(s) (Re/Rs) |
| Rs1.00 | = | $0.0140845 |
| $1.00 | = | Rs71.00 |

**WEIGHTS AND MEASURES**

|  |  |  |
| --- | --- | --- |
| μg | – | microgram |
| dB(A) | – | weighted decibel |
| km | – | kilometer |
| km2 | – | square kilometer |
| m | – | meter |
| m2 | – | square meter |

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# EXECUTIVE SUMMARY

1. At the request of the Government of India and the Government of Himachal Pradesh), the Asian Development Bank (ADB) will offer $80 million in loan assistance to modernize and reform Himachal Pradesh’s technical and vocational education and training (TVET) programs, and scale up training capacity. The Department of Technical Education (DOTE) in Himachal Pradesh will be the executing agency for the proposed Himachal Pradesh Skill Development Project (HPSDP). The Himachal Pradesh Kaushal Vikas Nigam (HPKVN); Directorate of Technical Education, Vocational and Industrial Training (DTE); Department of Higher Education (DOHE); and Public Works Department (PWD) will be the implementing agencies. The HPKVN will also function as the project management unit (PMU) for HPSDP.
2. The impact of HPSDP will be a more productive work force in Himachal Pradesh equipped with market-relevant technical and vocational skills created, in alignment with the Himachal Pradesh Skill Development Policy (*Him Kaushal*), 2016. The outcome will be improved employment and livelihood development opportunities for those trained under the project. This will be achieved through the following outputs:

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

1. Output 3 of the project will involve construction of new training facilities and upgrading of some existing buildings to improve the access of TVET programs across Himachal Pradesh[[1]](#footnote-1). The new facilities include construction of six City Livelihood Centers (CLCs), seven rural livelihood centers (RLCs), and one polytechnic for women to be constructed in Rehan, district of Kangra. Eleven employment exchanges will be upgraded into model career centers (MCCs). On average, the CLCs and RLCs will have three to four floors, and occupy about 900 square meters (m2). The MCCs will have three to four floors on average, and occupy around 400 m2 each. The Department of Urban Development (DOUD), Department of Rural Development (DORD), and the Department of Labour and Employment (DOLE) will help HPKVN in running livelihood development and counseling programs at the proposed CLCs, RLCs, and MCCs constructed at their respective premises.
2. GOHP has assured the Asian Development Bank (ADB) that the proposed new infrastructure will be built, either within premises owned by the government, or on vacant and unencumbered land owned by the government. No new land will be acquired, nor will anyone be displaced in anticipation of ADB funding. Sites located within or near environmentally sensitive areas and tribal areas of Himachal Pradesh will not be considered. No project-related activity will have any adverse impact on indigenous peoples or impede their cultural and human rights. Hence, from a safeguards perspective, the project is categorized as ‘B’ for environment, ‘C’ for involuntary resettlement, and ‘C’ for indigenous peoples. The proposed project categorization has been reconfirmed by an experienced PMC environment and social safeguards consultant, who has already visited more than 20 sites identified by the Himachal Pradesh Government to date .
3. One of the civil works subproject is refurbishment of existing DOLE building for the establishment of MCC in Dharamshala city of the Kangra district in Himachal Pradesh. The refurbished building will be a four storey building comprising of basement, ground floor, first floor and second floor. Basement will contain office space, new elevator, new stair case, toilet for ladies and gents. On ground floor, there will be lobby, staff room, Labor Officer Room, Labour Inspector Room, Staff Room and Office Space. The first floor has been planned for conference room, Information Technology Room, Toilets, new elevator, young professional room and staff room. On the second floor, there will be toilets for Gents and persons with Disabilities, elevator, staircase, waiting area, counseling room, Lobby and Regional Employment Officer Room. Septic Tanks already constructed will be used. The solid waste generated will be integrated with the waste disposal system of Dharamshala City as existing building waste is also being disposed off with the city waste. The construction period will be 2 years.
4. This initial environment examination (IEE) report provides details about the building, the potential environmental impacts of the refurbishment works, and ways of mitigating and addressing these[[2]](#footnote-2). Since the DOLE building proposed for refurbishment is in an urban residential area, there is no protected or reserved forest area nearby. There is no natural stream or river near the building. The building is located on an undulating terrain. There are no protected areas (national parks, bird sanctuaries, tiger reserves, etc.); wetlands; mangroves; or estuaries in or near the subproject location. The site is in urban habitation in a hilly region. Therefore, there are no ambient air quality and noise level issues.
5. Since the DOLE building after refurbishment will be having a MCC, which will facilitate placement, counseling and interactions with recruiters, therefore, refurbishment of building, and operations of MCC are unlikely to cause any significant impact. These routine and localized effects associated with construction and operation of the building can be mitigated easily by following the measures laid down in the **environment management plan (EMP)** included in the IEE. The EMP will be included in civil work bidding and contract documents. **The IEE confirms that the subproject as environment category “B”.** No further special study or detailed environmental impact assessment (EIA) needs to be undertaken to comply with the ADB SPS or Government of India EIA Notification, 2006.
6. The PWD (one of the implementing agencies as mentioned earlier) will be responsible for overall planning and implementation of the civil works under the sub-project. It will ensure that IEE and EMP are updated if there are substantial changes and the ESMF is followed during sub-project implementation. The project management consulting (PMC) firm engaged under the project has experienced environment and social safeguards experts. These experts will assist PWD in updating IEE and EMP for the subproject, if required. The PMC will also assist PWD and HPKVN in preparing semi-annual safeguards monitoring reports as required by ADB.

# INTRODUCTION

## Background

1. **Location.** There is an existing building in the ownership of Department of Labor and Employment (DOLE) at Dharamshala. The employment exchange and labor offices are operating from this building. This building is proposed to be refurbished and existing employment exchange and labor office will be converted to a Model Career Center as part of Himachal Pradesh Skill Development (HPSDP) project. The latitude and longitude of the DOLE building to be refurbished for the MCC are 32°12'48.88"N and 76°19'15.66"E, respectively. The nearest rail head at Pathankot is 85 kilometers (km) away. Dharamshala is well connected by roads with all the important places in Himachal Pradesh like Shimla (230 km), Palampur (36.4 km), and Hamirpur (87 km). The Kangra district is the most populous district of Himachal Pradesh. The elevation of project site is about 1290 m above mean sea level. The Beas is the major river of the district and contributes to the fertility of plains in the district. Kangra’s neighboring districts are Gurdaspur district of Punjab in the West, Lahaul Spiti in the North, Una and Hamirpur in the 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.
2. **Present status of DOLE Building.** The existing building is in undulating terrain and an operating building. Vacant space is not significant in the building complex. The refurbishment of building will not require any removal of vegetation or trees. In the neighborhood of the building, there are residential areas and commercial building. Some photos of the existing building are shown in **Figure 1.**

|  |  |
| --- | --- |
| **Figure-1:DOLE Building at Dharamshala** | |
| Site 1.jpg | Site 1.jpg |
| View of DOLE Building to be Refurbished for MCC Establishment | Another View of DOLE Building to be Refurbished for MCC Establishment |

## Compliance with India’s Environmental Regulatory Framework

1. India’s environmental rules and regulations, as relevant for this proposed subproject (refurbishment of building and establishment of MCC), are shown in **Table 1**. The Environmental Impact Assessment (EIA) notification, 2006 by the Ministry of Environment, Forests and Climate Change (MOEF), Government of India specifies the requirements for mandatory environmental clearances. All projects and activities are broadly categorized into two categories—category A and category B, based on the spatial extent of potential impacts on the environment, human health, and natural and human-made resources[[3]](#footnote-3). However, MOEF’s Office Memorandum (F. No. 19-2/2013-IA- III), dated 9 June 2015 exempts all educational and training institutes from obtaining prior environmental clearance. Since all the training facilities to be constructed or upgraded under HPSDP, including this proposed subproject at Dharamshala, are meant for educational and training purposes, they will not require any prior environmental clearances according to the environmental rules and regulations of India. Further, as shown in **Table 1**, most other rules pertaining to India’s  [Ancient Monuments and Archaeological Sites and Remains Act, 1958](http://asi.nic.in/pdf_data/6.pdf); the Wildlife Conservation Act, 1972, amended in 2003 and 2006; and the Forest (Conservation) Act, 1980, will not apply to this subproject. Only some clearances will be required from the Himachal Pradesh State Pollution Control Board for the construction phase of the subproject.

**Table-1: Environmental Regulatory Compliance**

| Subproject | Applicability of Acts and Guidelines | Compliance Criteria |
| --- | --- | --- |
| Refurbishment of existing DOLE Building for MCC, establishing MCC and operation of MCC at Dharamshala | 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 subproject is not covered in the ambit of the EIA notification (amended till date), either as a category A or Category B project. As per the Office Memorandum dated 9 June 2015 of Ministry of Environment, Forests and Climate Change, educational and training institutions are exempted from prior environmental clearance. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the Government of India, are not triggered. – **Not Applicable** |
|  | [The Ancient Monuments and Archaeological Sites and Remains Act, 1958](http://asi.nic.in/pdf_data/6.pdf), and the rules, 1959 provide guidance for carrying out activities including conservation, construction and reuse in and around the protected monuments. | The existing building to be refurbished is not close to any monument which is protected by the ASI. Hence, no clearance is needed from ASI. – **Not Applicable** |
|  | Water (Prevention and control of pollution) Act, 1974 and Air (prevention and control of pollution) Act, 1981 | CFE and CFO from the State Pollution Control Board will be required during construction for installation of diesel generator set, hot mix plant, and concrete batching plant. For the operation phase, no CFO or CFE will be required. – **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. It describes the penalties for contravention of the provisions of the Act. If forest land has to be acquired for the project, clearance is required from the Forest Department. Since the existing building is to be refurbished so no acquisition of any forest land for the subproject implementation. Hence, this is not applicable.  **Not Applicable** |

ASI = Archaeological Survey of India, CFE = Consent for Establishment, CFO = Consent for Operation, EIA = Environmental Impact Assessment.

## Asian Development Bank’s Environmental Safeguard Policy Principles

1. Since the proposed HPSDP is being funded by the ADB, it has to comply with its Safeguard Policy Statement (SPS), in addition to India’s own environmental laws and regulations. The environmental safeguard policy principles embodied in the SPS aim to avoid adverse impacts on the environment and on affected people and/or communities; minimize, mitigate and/or compensate for adverse project impacts, if unavoidable; help borrowers to strengthen their safeguard systems, and to develop their capacity in managing the environmental and social risks. The SPS categorizes all projects into three environmental categories (A, B or C) based on their potential impacts[[4]](#footnote-4). Similarly, ADB’s Rapid Environmental Assessment checklist method was followed to assess the potential impact of the proposed subproject at Dharamshala (**Appendix 1**). The preliminary climate risk screening has been carried using checklist given in **Appendix 2**. As will be explained below, the subproject has been categorized as B. Accordingly; this IEE has been prepared to address the potential impacts in line with the requirements for category B projects. The IEE was based mainly on baseline data generation on environmental parameters and secondary sources of information and field reconnaissance surveys. Stakeholder 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 subproject is included in the IEE.

## Review and Approval Procedure

1. For category B projects, the draft environmental status report is reviewed by the relevant ADB departments and the executing agency. Additional comments are incorporated into the final documents as relevant. These are reviewed by the executing agency and ADB safeguards team. The executing agency then officially submits the IEE report to ADB for consideration by the Board of Directors. The final report is made available worldwide by ADB, via the depository library system and the ADB website.

## 

## Report Structure

1. This report contains eight sections: (i) introduction; (ii) description of project components; (iii) description of the existing environment around the subproject; (iv) environmental impact and mitigation measures; (v) EMP; (vi) processes for public consultation and information disclosure; (vii) findings and recommendations; and (viii) conclusions.

# DESCRIPTION OF THE PROJECT COMPONENTS

## Components of the Subproject

1. The location map of the DOLE building and its surroundings is shown in **Figure 2.** The subproject location on Google map is shown in **Figure 3. Table 2** summarizes the need for the subproject, and is proposed components.

|  |
| --- |
| **Figure-2: Location Map of DOLE Building and SurroundingsFigure 2.jpg** |
| **Figure-3: Location of DOLE Building to be Refurbished for Model Career Center on Google Map**  Figure 1.jpg |

Table-2: Description of the Subproject Components

| **Description** | **Need of the Project** | **Proposed Components** |
| --- | --- | --- |
| An existing building under the ownership of DOLE is to be refurbished for the establishment and operation of MCC | * There is need for the Model Career Centers in Himachal Pradesh to guide Himachali youth for selection of jobs as well as act as an interface between the industry and skill manpower. The existing employment exchanges somehow lack infrastructure to facilitate interaction between skilled youth and industry as well as providing counseling to the students. This refurbishment of existing building will ensure necessary facilities for interaction and counseling. * The model career center will also keep records of employment and this data will help GOHP to plan educational and training facilities as per the emerging needs. | The main subproject components include:  * The refurbished building will be a four storey building comprising of basement, ground floor, first floor and second floor. Basement will contain office space, new elevator, new stair case, toilet for ladies and gents. * On the second floor, there will be toilets for Gents and persons with Disabilities, elevator, staircase, waiting area, counseling room, Lobby and Regional Employment Officer Room. * On first floor, there will be conference room, Information Technology Room, Toilets, new elevator, young professional room and staff room. * On ground floor, there will be lobby, staff room, Labour Officer Room, Labour Inspector Room, Staff Room and Office Space. * Septic Tanks already constructed will be used. * Electricity load already sanctioned and in use in the existing building will be used in refurbished building also. * The solid waste generated will be integrated with the waste disposal system of Dharamshala City as existing building waste is also being disposed off with the city waste. |

DOLE= Department of Labor and Employment, MCC= Model Career Center

1. The layout plan of MCC building (Roof Floor, Second Floor, First Floor, Ground and Basement Floor) is shown below in **Figure 4**.

|  |
| --- |
| **Figure-4: Layout Plan for Refurbishment of Existing DLOE Building to MCC** |
| Figure 4 take drawings of option 2_Page_17.jpg |
| 12Figure 4 take drawings of option 2_Page_16.jpg |
| Figure 4 take drawings of option 2_Page_15.jpg |
| Figure 4 take drawings of option 2_Page_14.jpg |
| Figure 4 take drawings of option 2_Page_12.jpg |
| Figure 4 take drawings of option 2_Page_13.jpg |

## Executing and Implementing Agencies

1. At the request of the Government of India and the Himachal Pradesh government, ADB will offer $80 million in loan assistance to modernize and reform Himachal Pradesh’s TVET programs, and scale up training capacity. The Department of Planning (DOP) of Himachal Pradesh will be the executing agency for the proposed Himachal Pradesh Skill Development Project (HPSDP). The Himachal Pradesh Kaushal Vikas Nigam (HPKVN); Department of Technical Education, Vocational and Industrial Training (DOTE); Department of Higher Education (DOHE); and Public Works Department (PWD) of the Government of Himachal Pradesh will be the implementing agencies. HPKVN will also function as the project management unit (PMU) for the project. The PWD will be responsible for overall planning and implementation of the civil works under the HPSDP. PMU will ensure that the ESMF is adhered to during project implementation. The project management consulting firm engaged under the loan has an experienced environment and social safeguard expert. The PMC assists PWD and HPKVN in preparing semi-annual safeguards monitoring reports. The current IEE report has also been prepared by the PMC.

## Implementation Schedule

1. The implementation period for the proposed subproject is 24 months. The preliminary drawings for building refurbishment have been prepared for approval and have been approved. The bidding process for the subproject is expected to start in July 2019. The subproject will be awarded for construction by October/November 2019. The contractor is expected to be mobilized by December 2019. The construction work is expected to be completed by December 2021.

# DESCRIPTION OF THE EXISTING SUBPROJECT ENVIRONMENT

1. This section presents a brief description of the existing environment around the subproject site, 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.

## Environmental Profile

### Air and Noise Quality

1. No air pollution sources (point or nonpoint) have been seen in the surroundings of subproject influence area. The subproject site is within the municipal limits of Dharamshala town. The subproject site is not on any national or state highway. Traffic on the road connecting to the site is low. Hence, insignificant vehicular emission is expected. There are no industrial establishments near the subproject site. The ambient air quality and noise data for the subproject are not available. However, the levels are expected to be well within the stipulated limits since there are no sources of air or noise pollution near the site. Ambient air quality monitoring and noise level monitoring will be conducted by the contractor prior to start of construction works with the aim of establishing baseline conditions.
2. It was observed that ambient noise scenario in the study area is due to commercial and a vehicular activity as the building to be refurbished is located in Dharamshala town. 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 due to the proposed MCC activities since it only includes only counseling and placement facilitation facilities for the skilled youth. There is no noise baseline data available for the subproject 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 to establish baseline conditions.
3. **Climate.** The climate in Kangra district varies from cold temperate, to tropical, to subtropical. The summer season begins March and lasts till mid-September. The winter is mild and starts from mid-December till mid-March. The monsoon season starts end of June and lasts till end of September. October and November are transition months, while the winter season starts December and ends in February.
4. **Temperature**. The temperature exhibits seasonal variation, lowest 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. **Table 3** shows monthly 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: Government of India, Ministry of Earth Sciences, India Meteorological Department-New Delhi (Year 1980-2010).*

1. **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 observed in last two decades is presented in **Table 4**.

**Table-4: Average Monthly Rainfall at Dharamshala (millimeters)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 | 404.837 | 66.3 | 16.7 | 54.0 |

*Source: Government of India, Ministry of Earth Sciences, Indian Meteorological- Department-New Delhi (Year 1980-2010).*

1. **Humidity**. Based on long-term climatology data of the Kangra district, it is found that relative humidity increases rapidly with the onset of monsoon and reaches a maximum (82% in the morning and 70% in the evening) in August, the peak of the monsoon period. Relative humidity is minimum during the summer months (April–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.
2. **Wind speed and direction.** Two broad wind patterns are observed in the district, the southeast to northwest (January–May), and south westerly to north easterly (June–October). The average wind speed is minimum (0.8 kmph) in July–October. The wind speed goes up to 10.8 kph in summer months.

### Topography and Soils

1. 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 4,880 m amsl in the hills of Dhauladhar. The elevation of subproject site is 846 m amsl. Physiographically, the district can be divided into six units: (i) high hills, which cover almost 60% of the district; (ii) fluvio glacial outwash terraces, which is located in the northeastern part of the district; (iii) structural terraces, in the central part; (iv) valley fills; (v) piedmont plain; and (vi) flood plain.
2. Six types of soils are observed in the district, which are (i) histosols (snow field, peaty, and saline peaty); (2) ultisols (brown red and yellow); (3) alfisols (submountain); (4) ardisols (gray brown); (5) entisols (younger alluvium). The soils at the subproject site are alfisols. The soil map of the district is shown in **Figure 5**. The soils are generally brown, alluvial, and grey brown podzolic. The soils are light textured with neutral pH and good fertility status.

|  |
| --- |
| **Figure-5: Soil Map of Kangra District**  **Figure 5.jpg** |

*Source: Government of India, Ministry of Water Resources, Central Ground Water Board- Ground Water Information Booklet Kangra District. New Delhi (Year -2013)*

### Surface Water and Groundwater

1. The subproject site is located in catchment area of the 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. To establish the baseline scenario, ground water quality data was obtained from the Central Ground Water Board. The water quality data for the project region is given in **Table 5**.

**Table-5: Ground Water Quality in Subproject Area (mg/l)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **pH** | **EC µS/cm at 25°C** | **HCO3** | **Cl** | **SO4** | **NO3** | **F** | **Ca** | **Mg** | **Na** | **K** | **Total Hardness as CaCO3** |
|  | **Units in mg/l** | | | | | | | | | | |
| Minimum | 7.55 | 120 | 37 | 7.09 | Tr | Tr | Tr | 10 | 3.6 | 6.3 | 0.6 | 45 |
| Maximum | 8.6 | 910 | 513 | 110 | 71 | 28 | 0.54 | 112 | 56 | 105 | 38 | 370 |
| **Drinking Water Standard Value** | **6.5-8.5** | **No limit specified** | **600** | **1000** | **400** | **<45** | **1.5** | **200** | **100** | **No limit specified** | **No limit specified** | **600** |
| Tr = traces.  *Source: Government of India, Ministry of Water Resources, Central Ground Water Board (Year 2013)* | | | | | | | | | | | | |

1. 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 the Bureau of Indian Standards for drinking and irrigation. These water samples were drawn by the Central Ground Water Board from all locations in the district. The nearest location is within 5 km from sub project site. The water quality was monitored in the year 2013. Water quality monitoring will be conducted by the contractors prior to the start of construction works.
2. Based on 2012 data, the depth of water level during premonsoon months ranged from 1.56 m to 15.44 m below ground level. During postmonsoon months, it ranged from 0.48 to 12.30 m below ground level. The variation of groundwater table depth is shown in **Figure 6**. The stage of groundwater development in Indaura valley of Kangra district, where the subproject site located, is 50.03% and falls under the safe category. This indicates that groundwater has not been overexploited and that it is restored regularly.

|  |
| --- |
| **Figure-6: Variation of Groundwater Table in Subproject Area**  Figure 6.jpg |

*Source: Government of India, Ministry of Water Resources, Central Ground Water Board-Ground Water Information Booklet Kangra District. New Delhi (Year 2013)*

CLC Mohal Sidhbari

### Geology and Seismology

1. In Himachal Pradesh, geological history goes back to the Archaean Proterozoic transition although the actual Himalayan Mountain building took place only during Cenozoic era. The Himalayas are a classic example of continent and continent collision due to convergent movement of the Indian plate toward 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 trust 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.
2. The Siwalik group in the Himachal Himalaya forms a parallel foot-hill belt in the sub- Himalayan zone, extending along the southern margin of the Palaeogene Sirmour group belt from the Ravi to the Yamuna. Within Himachal Pradesh, the Himalaya has maximum width between Hoshiarpur and Jogindernagar. The Siwalik sediments, though occurring as an independent structural belt, are also seen to overlie the Muree in the Jammu sector of the Kashmir Himalaya and the Kasauli in the Himachal Himalaya. Pilgrim (1910) recorded a gradual transition from Muree beds to Lower Siwalik in the Rawalpindi and Jhelum districts of Pakistan and from Kasauli to Lower *Siwalik* (Nahan) in the Himachal Himalaya. This fact assumes importance because there is a tendency to ignore this normal relationship between the *Siwalik* and *Sirmour* groups at Dharamshala, 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 7**:

|  |
| --- |
| **Figure-7: Geological Map of Project Region**  **Figure 7.jpg** |

*Source: Government of India, Ministry of Water Resources, Central Ground Water Board-Ground Water Information Booklet Kangra District (Year 2013)*

1. India’s seismic code divides the country into five seismic zones (I to V). The subproject 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. It may be mentioned that intensity of earthquake increases from Zone I to V. The Zone V mainly covers Himalayan region in India and Himachal Pradesh being a hilly state lies in Himalayan region. Zones I, II and III mainly cover Central and Southern parts of Indian peninsula. It may be mentioned that after an earthquake of 7.8 intensity on Richter scale in Kangra district in 1905, no major earthquake has occurred in Himachal Pradesh.

## Ecological Resources

### Forests

1. Forests in [Himachal Pradesh](https://en.wikipedia.org/wiki/Himachal_Pradesh) currently cover an area of nearly 37,691 km2 (14,553 sq miles), which is about 38.3% of the total land area of the state. The variation in the landscape has created great diversity of flora and fauna. From the snowbound peaks of the Himalayas to the moist Alpine scrub, sub Alpine forests, dry-temperate and moist-temperate forests to moist deciduous forests, the state possesses a wide biodiversity that in return nurtures a large multiplicity of floral and faunal forms. In the State of Himachal Pradesh, area under forest is (as per Forest Survey of India Report 2017) 68.16%. The area under tree cover is 15100 km2 (3110 km2 very dense forest, 6705 km2 moderate dense forest and 5285 km2 open forest) and most of the forest area is managed by the State Forest Department. The forests of the district can be classified into six main categories, namely (1) tropical dry deciduous forests; (2) sal forests; (3) chir forests; (4) oak forests; (5) deodar, fir, and spruce forests; and (6) the Alpine pastures. The forest cover map is shown in **Figure 8**.

|  |
| --- |
| **Figure-8: Forest Cover Map of Himachal Pradesh**  **Figure 8.jpg** |

*Source: Forest Department, Government of Himachal Pradesh (Year- 2018)*

1. The subproject site location does not fall within any reserved, protected, or revenue forest. The complete vegetation of Himachal Pradesh relies on two factors—height and rainfall. The southernmost part of the state is at a lower altitude level and it contains both humid and subtropical dry broadleaf woodlands, along with subtropical moist broadleaf forests. Majority of the area is covered by Himalayan subtropical broadleaf forests. Apart from this, the state has some of the vegetation that is abundant with sal, sisham, chir pine, dry deciduous, and moist broad-leafed forests. The landscape that falls in temperate regions has trees like oak, deodar, blue pine, fir, and spruce. The trees found in higher elevations include alders, birches, rhododendrons, and moist alpine scrubs.
2. Himachal Pradesh has abundant fruits like apple, peaches, plums, and berries. It is rightly called the “fruit bowl of India.” There are plenty of fruit orchards, and fruits are exported to various parts of the country and abroad. The pleasant climate also helps numerous flower varieties like gladiolas, lilies, tulips, chrysanthemums, roses, marigolds, carnations, etc. to grow in abundance.
3. Himachal Pradesh is home to approximately 1,200 birds and 359 animal species. This includes leopards, ghoral, snow leopard, musk deer (state animal), and western tragopan (state bird). The state is an ideal tourist destination for animal lovers as it hosts 12 main national parks and sanctuaries. It has two major national sanctuaries—the Great Himalayan National Park and the Pin Valley National Park.
4. Since the subproject area of existing building planned to be refurbished for MCC is located in the urban habitation of Dharamshala, there are no protected areas within a 10 km radius. Around the subproject site, one only finds domesticated fauna and common trees such as shisam, manago, neem, and sal. At the existing building of DOLE, there are no trees or shrubs in the building boundary. The entire building area is paved.
5. The water bodies of Kangra District are seasonal in nature because of swift flow. There is not much presence of aquatic life in the water bodies close to the subproject site.

### Protected Areas

1. The list of protected areas (National Parks and Wildlife Sanctuaries) in Himachal Pradesh is given in **Table 6**. Two wild life sanctuaries falling within Kangra district, but they are located more than 15 km away from the building planned for refurbishment for establishing MCC .

**Table-6: Protected Areas in Himachal Pradesh**

| **Sl. No.** | **Sanctuaries** | **District** | **Area (km²)** |
| --- | --- | --- | --- |
| **1** | [Bandli](http://hpforest.nic.in/files/BandliWildLifeSanctuary_A1b.pdf) | Mandi | 32.11 |
| **2** | [Chail](http://hpforest.nic.in/files/ChailWildLifeSanctuary_A1b.pdf) | Solan | 16.00 |
| **3** | [Chandra Tal](http://hpforest.nic.in/files/Chandratal%20wildlife%20sanctuary.pdf) | Lahaul and Spiti | 38.56+  (11.53 for consideration) |
| **4** | [Churdhar](http://hpforest.nic.in/files/ChurdharWildLifeSanctuary_A1b.pdf) | Sirmour | 55.52 |
| **5** | [Daranghati](http://hpforest.nic.in/files/DrangGhatiWildLifeSanctuary_A1b.pdf) | Shimla | 171.50 |
| **6** | [Dhauladhar](http://hpforest.nic.in/files/DhauladharWildLifeSanctuary_A1b.pdf) | Kangra | 982.86 |
| **7** | [Gamgul-Siyabehi](http://hpforest.nic.in/files/GamgulSiyabehlWildLifeSanctuary_A1b.pdf) | Chamba | 108.40 |
| **8** | [Kais](http://hpforest.nic.in/files/KaisWildLifeSanctuary_A1b.pdf) | Kullu | 12.61 |
| **9** | [Kalatop-Khajjiar](http://hpforest.nic.in/files/KalatopKhajiarWildLifeSanctuary_A1b.pdf) | Chamba | 17.17 |
| **10** | [Kanawar](http://hpforest.nic.in/files/Kanawar.pdf) | Kullu | 54.27 |
| **11** | [Khokhan](http://hpforest.nic.in/files/KhokhanWildLifeSanctuary_A1b.pdf) | Kullu | 14.94 |
| **12** | [Kibber](http://hpforest.nic.in/files/KibberWildLifeSanctuary_A1b.pdf) | Lahaul & Spiti | 2220.12 |
| **13** | [Kugti](http://hpforest.nic.in/files/Kugti.pdf) | Chamba | 379.00 |
| **14** | [Lipa Asrang](http://hpforest.nic.in/files/LippaAsrangWildLifeSanctuary_A1b.pdf) | Kinnaur | 31.00 |
| **15** | [Majathal](http://hpforest.nic.in/files/MajathalWildLifeSanctuary_A1b.pdf) | Solan | 30.86 |
| **16** | [Manali](http://hpforest.nic.in/files/ManaliWildLifeSanctuary_A1b.pdf) | Kullu | 29.00 |
| **17** | [Nargu](http://hpforest.nic.in/files/Nargu.pdf) | Mandi | 278.00 |
| **18** | [Pong Dam Lake](http://hpforest.nic.in/files/PongDamLakeWildLifeSanctuary_A1b.pdf) | Kangra | 207.59 |
| **19** | [Rakchham-Chitkul](http://hpforest.nic.in/files/RakchhamChitkulWildLifeSanctuary_A1b.pdf) | Kinnaur | 304.00 |
| **20** | Renuka | Sirmour | 4.00 |
| **21** | [Rupi-Bhaba](http://hpforest.nic.in/files/RupiBhabaWildLifeSanctuary_A1b.pdf) | Kinnaur | 503.00 |
| **22** | [Sechu-Tuan Nalla](http://hpforest.nic.in/files/SechuTuanNallaWildLifeSanctuary_A1b.pdf) | Chamba | 390.29 |
| **23** | Sainj | Kullu | 90.00 |
| **24** | [Shikari Devi](http://hpforest.nic.in/files/ShikariDeviWildLifeSanctuary_A1b.pdf) | Mandi | 29.94 |
| **25** | [Shimla Water Catchment](http://hpforest.nic.in/files/ShimlaWaterCatchmentWildLifeSanctuary_A1b.pdf) | Shimla | 10.00 |
| **26** | [Simbalbara](http://hpforest.nic.in/files/SimbalbaraNationalPark_A1b.pdf) | Sirmour | 27.88 |
| **27** | [Talra](http://hpforest.nic.in/files/TalraWildLifeSanctuary_A1b.pdf) | Shimla | 46.48 |
| **28** | Tirthan | Kullu | 61.00 |
| **29** | [Tundah](http://hpforest.nic.in/files/TundahWildLifeSanctuary_A1b.pdf) | Chamba | 64.00 |
| **30** | Water Supply Catchment | Shimla | 10.00 |
| **National Parks** | | | |
| **1** | [Great Himalayan National Park](http://greathimalayannationalpark.org/) | Kullu | 765.00 |
| **2** | Pin Valley National Park | Lahaul and Spiti | 675.00 |
| **Conservation Areas** | | | |
| **1** | [Shilli Conservation Reserve](http://hpforest.nic.in/files/ShilliConservationReserve_A1b_2.pdf) | Solan | 1.49 |
| **2** | [Shri Naina Devi Conservation Reserve](http://hpforest.nic.in/files/SriNainaDeviConservationReserve_A1b_1.pdf) | Bilaspur | 17.01 |
| **3** | [Darlaghat Conservation Reserve](http://hpforest.nic.in/files/DarlaghatConservationReserve_A1b_1.pdf) | Solan | 0.67 |

*Source: Himachal Pradesh State Forest Department (Year- 2018).*

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## Economic Resources

### Industries

1. Being a hilly state, Himachal Pradesh has few large industrial units. As shown in **Table 7** below, the Kangra district also mainly has micro, small, and medium enterprises focusing on agro-products, textiles, furniture, etc.:

**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 | 3,203 | 9,004.22 | 1,376 |
| 22 | Soda water | – | – | – |
| 23 | Cotton textile | 32 | 75.70 | 197 |
| 24 | Woolen, silk, and artificial thread-based clothes | – | – | – |
| 25 | Jute and jute-based | 2 | 1.00 | 8 |
| 26 | Ready-made garments and embroidery | 18 | 75.60 | 69 |
| 27 | Wood and wooden-based furniture | 300 | 561.30 | 1,150 |
| 28 | Paper and paper products | 48 | 162.00 | 130 |
| 29 | Leather-based | 22 | 292.85 | 328 |
| 31 | Chemical and chemical-based | 130 | 4,524.04 | 1,338 |
| 30 | Rubber, plastic, and petro-based | 59 | 450.29 | 295 |
| 32 | Mineral-based | 150 | 765.77 | 1,942 |
| 33 | Metal-based (steel fabrication) | 05 | 131.01 | 29 |
| 35 | Engineering units | 362 | 10,231.30 | 6,286 |
| 36 | Electrical machinery and transport equipment | 48 | 120.03 | 617 |
| 97 | Repairing and servicing | 352 | 4,389.01 | 1,156 |
| 01 | Others | 60 | 30.08 | 320 |
|  | Kachori Making | 80 | 160.04 | 272 |

*Source: Government of Himachal Pradesh, District Industry Centre. Dharamshala (Year 2010-2011)*

### Transportation

1. The building proposed for refurbishment for MCC at Dharamshala is well connected by roads with all the important places in Himachal Pradesh like Shimla (230 km), Palampur (36.4 km), and Hamirpur (87 km). The nearest rail head at Pathankot is 85 km and nearest airport at Gaggal, Kangra is 12 km away. No clearance or permission from Airport Authority of India (AAI) is needed as MCC building refurbishment as no building height is proposed to be increased and the building is not in the flight path.

### Land Use

1. A study of the land use (**Table 8**) shows 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 hectares). 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. The subproject site land use is residential (if viewed from Table-8 classification- land use of building falls under the category of ‘ Non agriculture use’) and it is well within municipal limits of Dharamshala town**.**

**Table 8: Land Use Pattern of Kangra District**

|  |  |
| --- | --- |
| **Land Use** | **Area** (hectare) |
| Area under forest, dense and open forest | 2,317 |
| Barren and unculturable land | 150 |
| Non agriculture area | 781 |
| Permanent pasture and other grazing | 855 |
| Land under miscellaneous tree, crops, and groves | 82 |
| Culturable wastes | 285 |
| Other fallow land | 119 |
| Net area sown | 1,150 |

*Source: District Census Handbook 2011*

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

### Electrification

1. Most of the villages (93% as per data in District Census Handbook 2011) in Kangra district have been electrified.

## Social and Cultural Resources

### Population and Communities

1. The total geographical area of Kangra district is 5,739 km2, which is 10.31% of the total area of Himachal Pradesh. Area-wise, district Kangra is next only to Lahaul and Spiti (13,835 km2), Chamba (6,528 km2), and Kinnaur (6,401 km2). At 1.3 million, the district accounts for the highest share (22.01%) 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 favorable sex ratio of above 1,000. The Kangra district has a fairly high population density of 233 persons per km2 as compared to the average statewide 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.

1. The native people are the [Kangri people](https://en.wikipedia.org/wiki/Kangri_people). The native language is [Kangri](https://en.wikipedia.org/wiki/Kangri_language), which is very similar to [Punjabi](https://en.wikipedia.org/wiki/Punjabi_language). The majority of the people are Hindu Brahmin, [Rajputs](https://en.wikipedia.org/wiki/Rajputs), [Banias](https://en.wikipedia.org/wiki/Banias), and scheduled castes and scheduled tribes. There are also minority populations of Sikhs, Muslims and Christians. The traditional dress for men is the [kurta](https://en.wikipedia.org/wiki/Kurta), pyjama, and a woolen jacket used in winter. Women generally wear the [Salwar Kameez](https://en.wikipedia.org/wiki/Salwar_kameez).

### Health Facilities

1. Kangra district has one health sub center for every 3,117 persons in the district. Likewise, one primary health center (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 km2 of area in the district, for the state one sub center has to cater almost double the area of 26.91 km2. The same is true for PHC and community health center area coverage. In terms of number of inhabited villages coverage by these sub- Health Center, PHCs and Community Health Centers, there is not much difference for the district and the state. One Sub Health Center 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.

### Educationfacilities

1. 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. There are 3 Universities in the Kangra district.

## Archaeological Resources

1. There are no heritage sites notified by Archaeological Survey of India (ASI) within 300 m distance from the sub-project site. Similarly, no common property resources such as public wells, water tanks, play grounds, common grassing grounds or pastures, market areas and community buildings will be affected by the proposed subproject.

# ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

## Environmental Impacts

1. Any project creating physical infrastructure will cause some minor impacts on the environment. This IEE examines the potential impacts anticipated during the construction and operation of the subproject, namely “Model Career Center at Dharamshala” including:
2. **Location impacts.** Impact associated with site selection including effect on the environment and resettlement or livelihood-related impacts on communities.
3. **Design impacts and preconstruction impacts.** Impact arising from project design, including the technology used, scale of operations, discharge standards, topographic survey, geotechnical survey, etc.
4. **Construction impacts.** Impact resulting from construction activities including site clearance, earthworks, civil works, etc.
5. **Operation and maintenance impacts.** Impact associated with the operation and maintenance of the infrastructure built in the subproject.
6. ADB’s Rapid Environmental Assessment checklist for Buildings was used while screening the site and recommending mitigation measures.

## Location Impacts

1. The existing building to be refurbished for the establishment of MCC is under the ownership of Department of DOLE. No additional land is proposed to be acquired for the subproject, nor will anyone be displaced in anticipation of the proposed ADB project. There are no significant ecological resources in the surroundings of the MCC site. There are no heritage sites notified by ASI (state archaeological department) within the subproject area or in the immediate surroundings (300 m distance). No significant impacts can arise due to project location as the refurbishment of existing building will not have any impact on any area of ecological, archaeological or historical importance. The existing DOLE building is within the Dharamshala town, therefore surrounded by residential and commercial buildings. Hence, there is no requirement for change of land use. The site photographs of building are shown in **Appendix 3**.
2. The existing DOLE building proposed for refurbishment is located within seismic zone V. and even a small magnitude earthquake may damage the refurbished building.

## Impacts during Design and Pre-construction Phase

1. As noted above, the existing building is owned by DOLE, Government of Himachal Pradesh. There are no issues arising due to land acquisition or involuntary resettlement. No tree cutting and shrubs removal is involved for refurbishment of building. 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

1. All construction activities to be undertaken at in the building will be approved by the PMU. The construction stage impacts due to the proposed project components are generic to the construction activities. The EMP emphasizes on the construction impacts and necessary mitigation measures to be strictly followed by the contractor and supervised by the PWD and PIU. The key potential impacts are covered in the following paragraphs.
2. **Impacts due to stock piles of construction materials.** Improper stockpiling of construction materials in and around the building could obstruct movement along access roads and nearby drainage. Hence, due consideration will be given for proper material storage at the building and surroundings. Stock piles will be covered to protect from dust and erosion. Waste materials will be disposed off at the identified and approved locations.
3. **Disposal of construction/demolition waste.** The construction and /or demolition 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 mandatory for the contractor to ensure proper disposal of the construction/demolition waste at the disposal site as designated by the PWD.
4. **Quarry and/or borrow pits operations.** Since the civil works pertain to refurbishment so earthworks are not foreseen. Hence borrow pit operations will not be there. The requirement of sub grade, sand and stone dust is very limited, hence these will be procured from the market. There will not be any need for direct procurement of stones and building material from quarries.
5. **Increase in noise levels.** Noise levels in the immediate proximity of DOLE building are expected to increase somewhat during construction. However, these will be largely imperceptible as civil works will be confined to relatively small area. The duration of construction will also be relatively brief. Transportation of construction materials will be confined to daytime, depending upon extent of construction activity. The increase in noise levels is expected to be between 3-5 dB(A). This increase will be felt up to a distance of 100-200m only. This noise will be intermittent in nature, and will last only during the construction phase. The construction noise will be felt by the residential houses located close to the DOLE building, but this will be intermittent in nature. There will be no construction activity during night time. But necessary monitoring of noise levels will be taken up as part of environmental monitoring plan.
6. **Impacts on biodiversity during construction phase.** No impacts are expected on the biodiversity during the construction phase as all construction works will be carried out within the existing building. There is no requirement for the removal of trees and vegetation.
7. **Disturbance to traffic during construction phase.** At the time of construction, there will be some temporary inconvenience due to transportation of building material and clearance of debris by trucks. However, since the scale of civil works is relatively small, the inconvenience caused will be relatively minor and limited only to the construction phase. A sample Traffic Management plan is attached in **Appendix 4.**
8. **Impacts on cultural properties.** The proposed refurbishment of building will not have any impact on any religious structure or any other structure of historical and/or cultural significance.
9. **Ground water**. Ground water will not be extracted and used for construction purposes. The contractor will arrange for water from the market. It will be supplied by water tankers. The problem of ground water contamination is also not anticipated during the construction phase since there will be proper disposal of the waste water.
10. **Ambient air quality.** Generation of dust is anticipated during transportation, small excavations, and construction activities. Some dust and gaseous emissions will also be generated during the construction period from machines such as mixers, and vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include respirable and suspended particulate matter and gaseous emissions (nitrogen oxide, sulfur dioxide, carbon monoxide, etc.). However, transportation of construction materials will be confined to a few trips per day depending upon the extent of construction activity. Therefore, impact at this stage will be temporary and restricted to the close vicinity of the construction site only.
11. All vehicles and construction equipment operating for the contractor and the consultant will obtain and maintain “Pollution under Control” certificates. To control dust emissions, vehicles deployed for sand, and aggregate haulage, will be covered with tarpaulins to prevent spillage. Regular sprinkling of water during excavations, loading, unloading, vehicular movement, and raw material transport will prevent spread of dust and other contaminants. Periodic air quality monitoring will be conducted to ensure that emissions will comply with standards. The contractor will submit emission monitoring results as a compliance with environmental monitoring plan.
12. **Construction waste.** Some waste will be generated due to excavated earth material and waste from construction and demolition. Debris and excavated earth material can be reused subject to the approval of the PWD engineer during construction. Waste generated during construction and demolition will be disposed off as per law to the satisfaction of the engineer. The clean-up and restoration operations will be implemented by the contractor prior to demobilization. The contractor will clear all temporary structures and dispose off all garbage from the building site. All construction affected portions in the building will be left clean and tidy, at the contractor’s expense and as per the satisfaction of the engineer.
13. The contractor is likely to engage local labor for various construction activities. However, in case of migrant labor has to be engaged, the contractor will establish properly designed labor camp with all basic amenities such as potable drinking water supply and sanitation facilities (septic tanks and soak pit). Dust bins will be placed in adequate numbers. The EMP lays down some measures to address likely adverse impacts associated with the labor camp.

## Environmental Impacts during Operation Phase

1. Since only counseling and facilitation of placement will be taken up at the MCC building after refurbishment, there will not be any adverse environmental impact during operation. As part of building refurbishment works adequate provisions have been made for parking and safe disposal for waste water and solid waste. Additional toilets with septic tank and soak pits have been included in the design. The solid waste generated at MCC during operation phase will be segregated. Its disposal will be integrated with Dharamshala town waste disposal as being done currently.
2. Given the relatively small size of the MCC building, there will not be any significant vehicular increase on account of its operations. Most students and staff will be using public transport. A diesel generator will be required, but only during power cuts. The generator will be of the silent type, and will comply with the levels stipulated by Pollution Control Board.
3. **Safety measures.** The design for the refurbishment of MCC building includes structural and seismic safety measures required by India’s latest building codes (in seismic zone V). The other safety features are explained below:

* The MCC building will be equipped with fire-fighting systems with portable fire extinguishers and smoke detectors. The staircase will have adequate width to allow for people to exit the MCC building during any fire-related or other eventuality.
* During natural calamities, the MCC operating functions will be stopped. The visiting industry professionals, placement and registration seeking candidates and staff will be safely evicted as per the disaster management plan of Himachal Pradesh.
* Necessary first aid facilities will be provided at the MCC building.

1. **Socio-economic impacts.** The MCC will have a positive development impact since it will assist skilled and trained Himachali youth getting placement.
2. **Flora and fauna.** In the operation phase, no impact on flora and fauna is anticipated as building is within the Dharamshala town. There is no scope of plantation as no vacant space is available in the existing building and terrain is highly undulating. There is no existence of any wild life park, bird sanctuary, national park or any other area notified by the GoHP or MoEFCC for ecological importance within an aerial distance of 15 km from subproject site.
3. **Emergency Plan for Accident and Natural Hazards**- For operation phase onsite emergency plan will be prepared by the MCC Manager for minor accidents and fire. For natural calamities the Disaster Management Plan prepared by DOLE will be followed. The Disaster Management Plans have been prepared by the respective departments of GoHP as per provisions of Disaster Management Act 2005 of Government of India.

## Description of Planned Mitigation Measures

1. 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 institutional 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. All subproject activities including construction and operation will take place within available government land.

**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 refurbished building and ensure protection specially from earthquakes and other natural disasters | | Permanent | Major | The design of the building refurbishment has been done considering earthquake coefficient of zone V.  The building to be refurbished is not on the bank of any river or major stream. | PWD |
| 2: Design and Pre-Refurbishment construction works Impacts | | | | | | | |
| **2.1** | | Consents, permits, clearances, 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. | PWD |
| **2.2** | | Layout of components to avoid impact on the aesthetics of the site | | Permanent | Major | The building refurbishment components will not have any adverse impact on aesthetics of DOLE building and surroundings as it involves refurbishment related works inside the existing DOLE building. Hence, no mitigation measures are warranted. | Not Applicable |
| **2.3** | | Slope stability- related issues | | Permanent | Minor | The refurbishment works are planned within the existing building. No cutting of slopes or fill works is required. Hence, no stability issue is involved. No mitigation measures are warranted. | Not applicable |
| **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 | The refurbishment works are planned within the existing building. In these works, drainage of building and surroundings will not have any impacts. | PWD |
| **2.5** | | Integration of energy efficiency and energy conservation programs in the refurbished MCC building | | Permanent | Moderate | The following measures have been included in the design to enhance energy efficiency:   * Usage of recyclable materials like wood substitutes * Installation of Bureau of Energy Efficiency-certified equipment * Usage of energy-efficient lighting fixtures (LED and Solar) | PWD |
| 3: Refurbishment Related Construction Works Impacts | | | | | | | |
| **3.1** | | Construction camp—location, selection, design and layout | | Temporary | Moderate | The construction camp will be located within the existing building or the contractor will hire some building in the vicinity. It will not affect the day-to-day activities of local residents and /or commercial buildings. Adequate sanitation facilities shall be provided at camp site and no waste water will be discharged outside. | Contractor, PWD |
| **3.2** | | Traffic circulation plan during construction | | Temporary | Moderate | Prior to commencement of site activities and mobilization on ground, the contractors will prepare a traffic circulation plan for safe passage of local traffic during the construction stage, if required. This will include alternative access routes, traffic regulations, signages, etc. The contractors will get these plans approved by the PWD engineer.  The contractor will disseminate the traffic circulation plan around the building to be refurbished. | Contractor, PWD |
| **3.3** | | Impacts on flora and fauna | | Temporary | Moderate | Conduct site induction and environmental awareness.  Limit activities within the work area.  Prepare plans for indoor plantations to enhance building looks. | Contractor, PWD |
| **3.4** | | Site clearance activities, including delineation of construction area | | Temporary | Moderate | Since existing building is to be refurbished, so site clearance activities will not be required. Hence, no mitigation measures are warranted on this account. | Contractor, PWD |
| **3.5** | | Drinking water availability | | Temporary | Major | Sufficient supply of potable water will be provided and maintained. The drinking water will be obtained from market through authorized tankers. This water will be stored in tank of suitable size to ensure uninterrupted water supply | 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 and PMU/PMC. PMU will confirm that disposal of the material will not impact the water body or environmentally sensitive areas. | Contractor, PWD |
| **3.7** | | Stockpiling of construction materials | | Temporary | Moderate | Stockpiling of construction materials will neither impact nor obstruct drainage. Stockpiles, if in an open area, will be covered to protect from dust and erosion. | Contractor, PWD |
| **3.8** | | Soil erosion | | Temporary | Nil | Soil erosion related issues are not foreseen as refurbishment works are planned inside the existing DOLE owned building. | Not Applicable |
| **3.9** | | Soil and water pollution due to fuel and lubricants, construction waste | | Temporary | Moderate | The fuel storage 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. No vehicle cleaning or maintenance will be taken up at building site. | 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 water body near the MCC 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 at construction site. The building will be properly barricaded with MS Sheet. | Contractor, PWD |
| **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). The building will be properly barricaded with MS Sheet. | Contractor, PWD |
| **3.14** | | Material handling at site | | Temporary | Moderate | Workers employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles.  Workers who are engaged in welding works will be provided with welder’s protective eye shields.  Workers engaged in stone breaking activities will be provided with protective goggles and clothing.  The use of any toxic chemicals 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. | Contractor, PWD |
| **3.15** | | Disposal of construction waste | | Temporary | Moderate | Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case will construction /demolition waste be disposed of around the DOLE building and especially in vacant land in the locality. | Contractor, PWD |
| **3.16** | | Safety measures during construction | | Temporary | Moderate | 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 to 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.  The contractor will comply with all anti-malaria instructions given by the engineer. | Contractor, PWD |
| **3.17** | | Clearing of construction of camp and restoration | Temporary | Major | Contractor to prepare site restoration plans for approval by the engineer. 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 burned, 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 satisfaction of the engineer. | Contractor, PWD |
| **3.18** | | Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities | Temporary | Major in case of natural calamity and minor in case of accidents or mishaps at construction site | The onsite emergency plan will be prepared by the contractor in consultation with PWD and PMC.  For natural calamities, disaster management plan prepared by the PWD under the provisions of Disaster Management Act 2005 will be followed. | PWD and Contractor |
| **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. | DOLE |
| **4.2** | | Safety risks | | Temporary | Major | * Proper demarcation and flagging of the area requiring safety observations. * Necessary precaution measures to be observed by visitors will be printed on boards and will be prominently put inside the MCC building. | DOLE |
| **4.3** | | Unhygienic conditions due to poor maintenance of sanitation facilities and irregular solid waste collection | | Temporary | Severe | DOLE will carry out maintenance of the toilets, and carry out the regular collection and disposal of waste to the local disposal site. The septic tanks will be emptied regularly. | DOLE |
| **4.4** | | Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities | | Temporary | Major in case of natural calamity and minor in case of accidents or mishaps at construction site | The MCC Manager will prepare on site emergency plan for possible minor accidents and mishaps during operation phase.  For natural calamities, the disaster management plan prepared by DOLE will be followed. | Manger MCC for Onsite Emergency Plan and  DOLE for Disaster Management Plan |

MCC = Model Career Center, DOLE = Department of Labour and Employment, HPKVN = Himachal Pradesh Kaushal Vikas Nigam, LED = Light Emitting Diode, NOC = No Objection Certificate, PWD = Public Works Department.

## Land Aquisition and Resettlement

1. The building proposed for refurbishment is under the ownership of DOLE. There will be no acquisition of any land or private assets. Inside the building as well as outside building, there are no squatters or encroachers. Hence, there is no requirement for any rehabilitation and resettlement.

# ENVIRONMENT MANAGEMENT PLAN

1. The EMP translates recommended mitigation and monitoring measures into specific actions that will be carried out by the contractors and proponent. The EMP deals with management measures, implementation procedure of the guidelines, and enhancement measures to avoid, minimize and mitigate foreseen environmental impacts of the project. For each mitigation measure to be taken, its location, timeframe, implementation, and overseeing and/or supervising responsibilities are listed in the EMP. **Tables 10** to **12** present a generic EMP to guide the contractor in mitigating environmental impacts.
2. The PWD (Dharamshala Office) will supervise the civil works, monitor the performance of contractor and prepare monthly reports covering environment and safeguard issues. During the operation phase, DOLE will undertake operation and maintenance of the facility and prepare periodic reports covering environment and safeguard issues. HPKVN will consolidate the above reports from implementing agencies and prepare a semiannual report on project implementation to ADB. It will permit ADB to field environmental review missions to examine in detail, the environmental aspects of the project. Any major lapses in adhering to the ESMF and IEE or EMP for specific subprojects will be reported to ADB immediately. The PMC’s environment and social safeguard consultants will assist HPKVN and PWD in preparing semi-annual and annual progress reports.

**Table-10: Environmental Management Plan for Design and Pre-Refurbishment Phase**

| **Sl. No.** | **Environmental Issues** | **Mitigation Measures** | **Parameter / Indicator for Compliance** | **Responsible for Implementation** | | **Responsible for Supervision** | | **Frequency for Monitoring** | | **Fund Sources 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 to ensure their long-term sustainability. The long-term sustainability has been ensured by taking into consideration the appropriate Bureau of Indian Standards Codes 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 | | PWD | | Review after completion of detailed project report | Project cost |
| **2** | Layout of components to avoid impacts on the aesthetics of the site | All works are planned inside the existing DOLE building. The building exterior impacts are not foreseen. Any change if required will blend with the local buildings architecture. | DOLE building exterior | PWD | | PWD | | Review after completion of detailed project report | | Project cost |
| **3** | Slope stability related issues | * Slope related stability issues are not foreseen. Any excavations inside the building for refurbishment and / or inclusion of new component will be taken up considering safety of building. Any slope protection related measures will be taken up. | Any slope related measures required | PWD | | PWD | | Review of recommended slope protection measures | | Project cost |
| **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 | * Increase in storm water runoff is not anticipated as refurbishment works will not lead to increase in paved surface. The drainage pattern of building is not likely to change. Hence no mitigation measures are warranted. | Maintenance of current drainage of building. | PWD | | PWD | | After mobilization 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 of subproject components | * The detailed designs for the subproject have ensured that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, etc. The design considers the following energy efficiency measures: * Usage of recyclable materials like wood substitutes. * Installation of Bureau of Energy Efficiency-certified equipment * Usage of energy efficient lighting fixtures (LED) | Specifications of electrical fixtures | PWD | | PWD | | During finalization of detailed project report | | Project cost |
| **6** | Consents, permits, clearances, 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 | PWD | | PWD | | Check consent for establishment of construction camp and approval from civic authorities for DOLE building for refurbishment | | Project cost |
| **7** | Establishment of baseline environmental conditions prior to start of civil works | * Conduct documentation of location of components, areas for construction zone (camp, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates. | Records and photographs | Contractor | | PWD | | Once prior to start of refurbishment works | | Contractor |
| **8** | Utilities | * The locations and operators of utilities to be impacted, on account of building refurbishment, should be identified and documented in detailed project report documents to prevent unnecessary disruption of services during the construction phase. * Require contractor to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. * Obtain from the PIU and/or PWD the list of affected utilities and operators. * If relocations are necessary, contractor will coordinate with the providers to relocate the utility. | * List and maps showing utilities to be shifted * Contingency plan for services disruption | * PWD will prepare preliminary list and maps of utilities to be shifted * During detailed design phase, contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan | | PWD | | Preconstruction Phase of refurbishment works | | Contractor |
| **9** | Social and Cultural Resources | * Consult Archaeological Survey of India or Himachal Pradesh State Archaeology Department to obtain an expert assessment of the archaeological potential during building refurbishment. * 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. * Develop a protocol for use by the contractor during refurbishment works including any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. | Chance find protocol | PWD | | PWD | | Prior to start of building refurbishment works | | Project cost |
| **10** | Construction camp—location, selection, design and layout | * Finalization of the construction camp establishment shall be as per the guidelines below and details of layout to be approved by PWD. * Potential sites for the labor camp will be lined up to be visited by the environmental expert of PMU Safeguards Cell. The one having least impacts on the environment will be approved by the PWD and Safeguards Cell. As far as possible, construction camp will be established within the existing building to avoid impact on other land. * The storage location of construction materials shall be at the DOLE building or any building close to the existing building. * Construction camp sanitation facilities shall be adequately planned. | Construction camp site, and locations of material storage areas, sanitation facilities | Contractor | | PWD | | At the time of construction camp establishment and finalization of storage areas | | Contractor |
| **11** | Sources of construction materials | * Use quarry sites and sources licensed by the Government of Himachal Pradesh. * Verify suitability of all material sources and obtain approval from PIU. * If additional quarries are required after construction has started, obtain written approval from PIU. * Submit monthly to PWD a documentation of sources of materials. | Permits issued to quarries or sources of materials | Contractor  PWD to verify sources (including permits) if additional is requested by contractor | | PWD | | Upon submission by contractor | | Project cost |
| **12** | Access for construction material transportation | * Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of site. * Schedule transport and hauling activities during nonpeak hours. * Locate entry and exit points in areas where there is low potential for traffic congestion. * Keep the site free from all unnecessary obstructions. * Drive vehicles in a considerate manner. * Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours. | Traffic management plan | Contractor | | PWD | | During delivery of construction materials | | Contractor |
| **13** | Occupational health and safety | * Comply with International Finance Corporation Environmental, Health, and Safety Guidelines on Occupational Health and Safety in developing comprehensive site-specific health and safety plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries, and illnesses for workers performing activities and tasks associated with the project. * Include in the health and safety plan measures such as (i) type of hazards in the refurbishment of DOLE building, (ii) corresponding personal protective equipment for each identified hazard, (iii) health and safety training for all site personnel, (iv) procedures to be followed for all site activities, and (v) documentation of work-related accidents. * Provide medical insurance coverage for workers. | Health and safety plan | Contractor | | PWD | | During construction phase | | Contractor |
| **14** | Public consultations | * Continue information dissemination, consultations, and involvement or participation of stakeholders during project implementation. | Disclosure records; consultations | PWD | | PWD | | * During update of IEE report * During preparation of site- and activity-specific plans as per environmental management plan * Prior to start of construction * During construction | | Project cost |

DOLE= Department of Labour and Employment, IEE = Initial Environmental Examination, NOC = No Objection Certificate, PIU = Project Implementation Unit, PWD = Public Works Department.

**Table-11: Environmental Management Plan for Refurbishment Works- Construction Phase**

| **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 the camp site. These facilities will include dust bins in adequate numbers for solid waste collection, and separate toilets for male and females. * Toilet facilities shall be maintained and septic tanks or soak pits shall be provided. The dust bins shall be regularly emptied and waste from camp site shall be disposed off at designated locations. | Construction camp sanitation facilities | Contractor | PWD | Regularly during construction phase | Contractor fee |
| **2** | Traffic circulation plan during construction | * Prior to commencement of site activities and mobilization on ground, the contractor will prepare and get approval from the engineer (PWD) for a circulation plan during construction for safe passage of public vehicles so that locals are not inconvenienced. * The contractor with support of PIU will disseminate these information and circulation plan at the site and at key access roads to the DOLE building. | Safe movement of traffic | Contractor | PWD | Every day during construction phase | Contractor fee |
| **3** | Site clearance activities, including delineation of construction areas | * Only ground cover that directly affects the permanent works or necessary temporary works shall be removed with prior approval from the environmental expert of the Safeguards Cell. * All areas used for temporary construction operations will be subjected to complete restoration to their former condition with appropriate rehabilitation procedures. * Photographic records shall be maintained for the temporary sites used for construction. These will help in proper restoration. | Preconstruction records of sites and vegetation in area of construction | Contractor | PWD | Duration of refurbishment works preparation | Contractor fee |
| **4** | Drinking water availability at construction camp and construction site | * Sufficient supply of cold potable water to be provided and maintained. The drinking water will be obtained from the market and no public supply source in the vicinity of sub-project will be used for drinking or construction purposes. The drinking water will be stored in a suitable size storage tank to ensure uninterrupted availability. * Contractor will submit his plan on how availability of drinking water shall be assured. Source of tanker filling for water will be recorded. | Water supply source and availability of water, source of water supplied by the tanker owner | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **5** | Waste disposal | * The pre-identified disposal location shall be part of the comprehensive waste disposal plan. * A solid waste management plan will be prepared by the contractor in consultation with local civic authorities. * The environmental specialist of PMC/PMU shall approve these disposal sites after conducting a joint inspection on the site with the contractor. * Contractor shall ensure that waste shall not be disposed off near natural streams in the surroundings of the site and along the access path. | Waste disposal sites, waste management plan | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **6** | Stockpiling of construction materials | * Stockpiling of construction materials will be done in such a way that it does not impact and obstruct the drainage. * Stockpiles will be covered to protect from dust and erosion. * As far as possible, construction materials will be stored within the DOLE building. | Subproject stockpiling sites | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **7** | Arrangement for construction water | * The contractor shall provide a list of locations and type of sources from where water for construction shall be acquired.      * To avoid disruption or disturbance to other water users, the contractor shall arrange water from the market through authorized tanker suppliers or from the local municipality and consult PWD before finalizing the source. | Water source of tanker filling | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **8** | Soil erosion and water ponding on account of excavation | * Slope protection measures will be undertaken as per design to control soil erosion at excavated locations in the building. * Water impoundment shall be avoided inside the building. | Locations of slope protection | Contractor | PWD |  | Contractor fee |
| **9** | Water pollution from construction wastes | * The contractor shall take all precautionary measures to prevent entry of waste water into any local stream during construction. | DOLE building site | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **10** | Water pollution from fuel and lubricants | * The contractor shall ensure that all construction vehicle parking locations; fuel and lubricants storage site; 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 vehicles and machinery, as well as equipment operation, maintenance, and refueling shall be carried out in such a manner that spillage of fuels and lubricants does not contaminate the ground. * Waste water from vehicle parking, fuel storage areas, workshops, wash down, and refueling areas shall be treated in an oil interceptor before discharging it on land, or into surface water bodies, or into other treatment system. | Vehicle parking, refueling sites, oil interceptor functioning | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **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 | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **12** | Siltation of water bodies due to spillage of construction wastes | * No disposal of construction / demolition wastes will be carried out into the surface water bodies. * Extraneous construction wastes will be transported to the pre-identified disposal sites for safe disposal. | Surface water sources in the vicinity | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **13** | Generation of dust | * The contractor will take every precaution to reduce the levels of dust at construction sites. There will be water spray at the desired frequency at locations of excavations, internal unfinished roads/walkways and locations of sand and sub grade storages. The water for spraying will be used from the water stored for construction. The water spray records will be maintained at site.      * The air quality monitoring will be conducted as per monitoring plan * The site will be properly barricaded with MS Sheet. | Subproject site, air quality monitoring results, water spray records | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **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 norms. * The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The silent or quiet equipment available in the market shall be used in the subproject. * The Contractor shall maintain a record of pollution under control certificates for all vehicles and machinery used during the contract period, which shall be produced for verification whenever required. | Pollution under control certificates of vehicles and machinery | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **15** | Noise pollution | * The contractor shall confirm that all construction equipment shall strictly conform to the Ministry of Environment, Forests and Climate Change and Central Pollution Control Board noise standards. * Contractor must ensure that all vehicles and equipment used in construction shall be fitted with exhaust silencers. * At the construction sites, noisy construction work such as hammering, operation of diesel generator sets, use of high noise generation equipment shall be stopped during the night time between 10:00 p.m. to 6:00 a.m. * Noise limits for construction equipment used in this project will not exceed 75 dB (A) at 1 m distance. However, noise levels as specified in ambient noise standards (55 dB (A) during day time and 45 dB (A) during night time) will be adhered to during the construction phase. * Noise level monitoring will be carried out as per monitoring plan. * The site will be properly barricaded with MS Sheet. | Certificates of vehicles conforming noise standards, noise monitoring results | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **16** | Impacts on flora and fauna | * Conduct site induction and environmental awareness. * Limit activities within the work area. * Plant indoor trees to enhance building looks | Indoor plants pots in building | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **17** | Material handling at site | * Workers employed on mixing cement, lime mortars, concrete, etc., will be provided with protective footwear and protective goggles. * Workers engaged in welding works will be provided with welder’s protective eye shields. * The use of any toxic chemicals will be strictly in accordance with the manufacturer’s instructions. The PWD will be given at least 6 working days’ notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the contractor. | Data on available personal protective | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **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 will any construction waste will be disposed off around the project site indiscriminately. | Disposal site | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **19** | Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities | The onsite emergency plan will be prepared by the contractor in consultation with PWD and PMC.  For natural calamities, disaster management plan prepared by the PWD under the provisions of Disaster Management Act 2005 will be followed. | Onsite emergency plan document and Disaster Management Plan document of PWD | Contractor | PWD | Mock Drill every quarter | PWD and Contractor |
| **20** | 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 to workers from accidental injuries, fire, etc. First aid treatment will be made available for all injuries likely to be sustained during work. * The contractor will comply with all anti-malaria instructions given by the engineer. | Records of availability of personal protective equipment, availability of first aid kits | Contractor | PWD | Regularly during construction phase of building refurbishment | Contractor fee |
| **21** | 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 burned, 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 preconstruction of temporary sites | Contractor | PWD | End of refurbishment phase | Contractor fee |

DOLE = Department of Labour and Employment, NOC = No Objection Certificate, PIU = Project Implementation Unit, PWD = Public Works Department.

**Table-12: Environmental Management Plan for Operation Phase**

| **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 | * 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 | DOLE through Pollution Monitoring Agency | HPKVN | As per monitoring plan | DOLE |
| **2** | Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection | * DOLE will maintain toilets, and carry out the regular collection and disposal of wastes to a designated waste treatment site. * Solid waste disposal will be integrated with Dharamshala City waste disposal. Septic tanks will be regularly emptied. | Maintenance schedule of MCC building and facilities drawn up | DOLE | HPKVN | Every year during tourist season | DOLE |
| **3** | Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities | The MCC Dharamshala Manager will prepare onsite emergency plan for possible minor accidents and mishaps for operational phase.  For natural calamities, the disaster management plan prepared by DOLE will be followed. | Onsite Emergency plan document and Disaster Management Plan document | Manager MCC Baddi | DOUD | Mock Drills every quarter | MCC operation cost |
| **4** | Natural Disasters | Necessary procedures to be followed by the visitors, MCC staff and jobseekers visiting MCC during the natural disasters shall be written at prominent locations. | Warnings of disasters by Meteorological Department | District Administration | DOLE | During Disasters | Government of Himachal Pradesh |

DOLE = Department of Labour and Employment, HPKVN = Himachal Pradesh Kaushal Vikas Nigam, MCC= Model Career Center, PIU = Project Implementation Unit, PWD = Public Works Department.

## Environmental Monitoring Plan

1. Environmentalmonitoring (covers EMP and all of the Government of Himachal Pradesh’s rules with respect to the environment, and handling of solid and liquid waste) at site will be undertaken by the contractor during pre refurbishing and post refurbishing stages, and be monitored by PWD. Environmental monitoring during post construction will be undertaken by the DOLE and be monitored by HPKVN. The environment and social safeguards specialists of PMC will coordinate with PWD and DOLE to ensure environmental parameters are monitored and reported.
2. An EMP has been prepared to ensure the effective implementation of mitigation measures to address all the environmental issues during refurbishing and operation phase of the subproject. The proposed monitoring of all relevant environmental parameters, with a description of the sampling stations, frequency of monitoring, applicable standards, and responsible agencies are presented in the EMP as given in **Table 13**.

**Table-13: Monitoring Plan for DOLE Building at Dharamshala for Refurbishment for MCC**

| **Sl. No.** | **Field** **(environmental attribute)** | **Phase** | **Parameters to be Monitored** | **Location** | **Frequency** | **Responsibility** | **Cost**  **(Rs/$)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | Air Quality | During pre-refurbishment phase | Nitrogen oxide, Sulfur dioxide, Carbon monoxide, Particulate matter (both 10 micrometers and 2.5 micrometers or less in diameter) | DOLE Building under Refurbishment for MCC establishment | Once in the pre-refurbishment phase to establish baseline | Contractor through approved monitoring agency | Rs130,000/ $2,000 |
| During refurbishment phase | Once in every 3 months (except monsoon season) during refurbishment phase (24 months construction phase) |
| Operation phase | Once every season except during monsoon season during first 2 years |
| **2** | Water quality | During pre-refurbishment phase | Total dissolved solids, Total suspended solids , pH, Hardness, Biochemical oxygen demand, Fecal coliform | Ground water at DOLE building planned for refurbishment | Once in pre-refurbishment phase to establish baseline | Contractor through approved monitoring agency | Rs130,000/ $2,000 |
| During refurbishment phase | Once in every 3 months (except monsoon season) during refurbishment phase |
| Operation phase | Once every season except during monsoon season during first 2 years |
| **3** | Noise levels | During pre-refurbishment phase | Noise quality as per National Ambient Noise Standards on dB(A) scale | DOLE Building Site | Once in pre-refurbishment phase to establish baseline | Contractor through approved monitoring agency | Rs39,000/ $600 |
| During refurbishment phase | Once every 3 months (except monsoon season) during refurbishment phase |
| Operation phase | Once every season except monsoon season for first 2 years |

*Note: For first year of operation phase (under defect liability period) contractor will organize monitoring and for remaining one year DOLE will organize monitoring through approved monitoring agency.*

## Summary of Site- and Activity-Specific Plans

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

**Table-14: Environmental Management Plan—Site and Activity Plans and Programs**

| **Preparation Phase** | **Specific Plan/Program** | **Purpose** | **Responsible for Preparation** | **Responsible for Implementation** |
| --- | --- | --- | --- | --- |
| 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-Refurbishing phase | Environmental monitoring program as per detailed design | Indicate sampling locations, methodology and parameters | PWD | Contractor |
| Pre-Refurbishing phase | Chance find protocol | Address archaeological or historical finds | PWD | Contractor |
| Pre-Refurbishing phase | List of preapproved sites | Location/s for work camp, areas for stockpile, storage and disposal | PWD | Contractor |
| Pre-Refurbishing phase | Waste or spoil management plan | Mitigate impacts due to waste generation | Contractor | Contractor |
| Pre-Refurbishing phase | Spill prevention and containment plan | Mitigate impacts of accidental spills of oil, lubricants, fuels, concrete, and other hazardous materials | Contractor | Contractor |
| Refurbishment phase | Traffic management plan | Mitigate impacts due to transport of materials and pipe-laying works | Contractor | Contractor |
| Refurbishment phase | Health and safety plan | Occupational health and safety | Contractor | Contractor |

PWD = Public Works Department.

1. An indicative traffic management plan is attached in **Appendix 4.**

## Capacity Building

1. In addition to the primary objective of providing support for suitable placement to skilled Himachali youth, the current sub-project will also raise awareness about environmental conservation among job-seekers, implementing agencies, and local communities. The project will have the opportunity to build capacity in environment protection for the above mentioned stakeholders. 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**.

**Table-15: Training Modules for Environmental Management**

| **Program** | **Description** | **Participants** | **Duration** | **Training Conducting Agency** |
| --- | --- | --- | --- | --- |
| **A. Preconstruction 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 * Environmental management plan implementation, introduction of ADB Safeguard Policy Statement, 2009, and ADB Guidelines on Environmental considerations in planning, design and implementing projects | DOLE 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 project management consulting firm |
| Session 1 | * Environmental impacts due to subprojects in construction and operation phases, pollution generation activities during preconstruction and construction phases * Environmental management, environmental provisions, implementation arrangements, methodology of assessment good engineering practices to be integrated into contract documents | All PIUs, HPKVN staff | ½ working day | Safeguards specialist of project management consulting firm |
| **B. Construction Stage** | | | | |
| Session 2 | * Roles and responsibilities of officials, contractors, consultants toward protection of environment * Implementation arrangements and environmental monitoring during construction phase | Engineers and staff of line departments of the Government of Himachal Pradesh, PMU, and PIU | ½ working day | Safeguards Specialist of PMU |
| Session 3 | * Monitoring and reporting system | Engineers and staff of implementing agencies, PMU, and PIU (including the environmental specialist) | ¼ working day | Safeguards Specialist of PMU |

ADB = Asian Development Bank, DOLE = Department of Labour and Employment, HPKVN = Himachal Pradesh Kaushal Vikas Nigam, PIU = Project Implementation Unit, PMU = Project Management Unit, PWD = Public Works Department.

## Environmental Budget

1. 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 initial environmental examination (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

(Rupees)

| **Monitoring Component** | **Rate** | **Amount** | **Source of Fund** |
| --- | --- | --- | --- |
| **Pre-construction and Construction Phase** | | |  |
| **Air Quality**  One location at DOLE Building, thrice a year (one sample at pre refurbishment and six samples during refurbishment phase; total: seven samples) | 10,000 | 70,000 | Contractor |
| **Water Quality**  One ground water sample from Building site (one sample at pre refurbishment and six samples during refurbishment phase; total: seven samples) | 10,000 | 70,000 | Contractor |
| **Noise Quality**  One location at project site (one sample at pre-refurbishment and six samples during refurbishment phase; total 7 samples) | 3000 | 21,000 | Contractor |
| Training for Capacity Building of stakeholders | Covered in the consultancy cost of the Public Works Department and the project management consulting firm | |  |
| Total Pre-Construction and Construction Phase Monitoring Cost |  | **161,000** | **Contractor** |
| **Operations & Maintenance (O&M) Phase** | | |  |
| **Air Quality**  One location at MCC building, thrice a year, for first 2 years (three samples a year, total of six samples) | 10,000 | 60,000 | PMU |
| **Water Quality**  One ground water sample at MCC building , thrice a year, for first 2 years (three samples a year, total of six samples) | 10,000 | 60,000 | PMU |
| **Noise Quality**  One location at MCC building, thrice a year, for first 2 years (three samples a year, total of six samples) | 3,000 | 18,000 | PMU |
| Total O&M Phase Monitoring Cost |  | **138,000** | **PMU** |
| Total Cost |  | **299,000** |  |
| Contingencies @ 5% |  | **14,950** |  |
| **Total Budgeted Cost** |  | **313,950 (around 350,000)** |  |

MCC = Model Career Center, PMU = Project Management Unit.

## Environmental Monitoring and Reporting

1. The PWD will monitor and measure the progress of EMP implementation while supervising civil building refurbishment activities. PWD will undertake site inspections and document review to verify compliance with the EMP and progress toward the final outcome. PWD will submit monthly EMP monitoring and implementation reports to DOLE and HPKVN, who will take follow-up actions, if necessary. The HPKVN will review and consolidate the monthly reports to prepare semiannual monitoring reports to ADB.
2. ADB will review project performance against the executing agency’s commitments as agreed in the loan 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.

# PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

## Process for Consultations Followed

1. This subproject does not involve any elements that could have an adverse impact on the community. There is no deprivation of any sort for the residents or displacement of any groups. Particularly as to environmental impacts, the subproject can be characterized as innocuous.
2. In view of this, the need for holding a public hearing (as defined in EIA Notification 2006 of the Government of India) is not perceived at this stage. However, in compliance with ADB’s guidelines, focused public consultations were undertaken during the site visits in subproject areas. Residents of the area were informed about the proposed subproject and their views were obtained. During the preparation of this IEE, consultations have been held with the officials of DOP, HPKVN, MOEFCC, DOUD, DOLE and other stakeholders such as Dharamshala Municipal Council and nongovernment organization in Dharamshala. The process of consultations was taken up as an integral part of the subproject in accordance with the following objectives:
3. Educate the general public, especially potentially impacted or benefited communities, individuals, and stakeholders about the proposed subproject activities.
4. Familiarize the people with technical and environmental issues of the subproject for better understanding.
5. Solicit the opinion of the communities and individuals on environmental issues and assess the significance of impacts due to the proposed development;
6. Foster cooperation among officers of PIU, the community, and the stakeholders to achieve a cordial working relationship for smooth implementation of the subproject.
7. Identify the environmental issues relating to the proposed activity.
8. During the consultations, local residents identified the need to develop the 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 are summarized in **Table 17**.

**Table-17: Stakeholder Consultations and Dates**

| **Sl. No.** | **Stakeholders Consulted** | **Dates of Consultations** |
| --- | --- | --- |
| **1** | Himachal Pradesh Forest Department | 23 December 2015 and 18 March 2016 |
| **2** | Department of Rural Development, Department of Labor and Employment and Department of Higher Education | 21 December 2015 |
| **3** | Himachal Pradesh Pollution Control Board | 23 December 2016 |
| **4** | Department of Technical Education, Government of Himachal Pradesh | 22 December 2015 and 14 and 15 March 2016 |
| **5** | Local public at Mohal Sidhbari | 3 May 2016 |
| **6** | DOLE Officials at DOLE building | 3 May 2016 |

DOLE= Department of Labour and Employment, HPKVN = Himachal Pradesh Kaushal Vikas Nigam.

1. 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 **Appendix 5.** 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 in Subproject Sites Addressed in Project Design**

| **Sl. No.** | **Place** | **Date** | **Stakeholders** | **Issues Discussed** | **Outcome of Discussions and Consideration in Project Design and Implementation** |
| --- | --- | --- | --- | --- | --- |
| **1** | NGO Office at Mohal Sidhbari in Dharamshala | 3/5/2016 | Local non-government organizations, Local Public | * + HPSDP proposals for CLC and MCC   + Project benefits   + Implementation schedule   + Environmental and social impacts during project implementation   + Disruption to utility services | * + The participants welcomed the project consultants. They emphasized that there is urgent need for promoting skills and livelihood development in the Kangra district. Mr. Sandeep, the NGO Chairperson, noted that most Himachali youth would prefer not to migrate out of the state for low-paying jobs. Hence, it is important to provide them with the right skills so that they can tap sustained livelihood opportunities within the state. The participants noted that MCC will also be helpful in guiding skilled youth in getting suitable employment.   + The local participants noted that during construction and operations, locals should be given preference for the employment. The consultants and DOUD and DOLE representatives assured them that under the proposed subproject, people from within Himachal Pradesh will be given priority.   + The local participants wanted skilling opportunities to focus on locally available materials such as bamboo and pine products. This would help to invigorate the local economy and create jobs.   + The ADB environment and social safeguard consultant asked the participants about suggestions to reduce pollution during construction and operation of CLC and MCC building refurbishment. The participants emphasized the need to control dust and noise. They also noted that solid waste collection and disposal should be handled properly. The ADB consultant assured them that the Environmental Management Plan will include specific measures to address these useful suggestions.   + Locals were informed by the consultants that no disruption to utilities is foreseen. However, if there will be disruption to utilities, locals will be given notice in advance. |
| **2** | DOLE Building proposed for Refurbishment | 3/5/2016 | DOLE Officials and Jobseekers visiting Employment Exchange in DOLE building | * + Building Refurbishment for MCC establishment   + Benefits of MCC   + Environmental and social impacts during project implementation   + Disruption to utility services | * + The DOLE officials working in employment exchange welcomed the establishment of MCC and proposal for refurbishment of existing building for the same.   + They suggested that since building is in undulating terrain so to utilize it fully and effectively lift /elevators be installed as part of refurbishment. The consultants conveyed to the officials that suggestion has been noted and will be conveyed to the design team.   + Participants suggested that noise and dust pollution should be taken care as building is in residential and commercial areas. The environmental expert told that these issues will be taken care by implementation of EMP.   + The DOLE officials suggested that Labour office should be provided a separate and independent floor to facilitate effective operations of MCC. The informed the participants that suggestion has been noted and will be conveyed to the design team. |

**Table-19: Summary of Stakeholder Consultation at Institutional Level**

| **Sl. No.** | **Place and date** | **Stakeholders** | **Issues Discussed** | **Outcome of Discussions and Consideration in Project Design and Implementation** |
| --- | --- | --- | --- | --- |
| 1 | Shimla, 23/12/2015 and 18/3/2016 | Conservator Forest Cum Nodal Officer CAMPA, State Forest Department | Clearances, permissions and No Objection Certificates  (NOCs) - requirements from the State Forest Department and suggestions for the project | 1. The ADB Environment and Social Safeguards consultant briefly explained the project concept to the state department officials. 2. It was informed by the officials that for any site falling under forest land, clearance is required either under the 'Forest (Conservation) Act, 1980 or under the 'Schedule Tribe and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. 3. For vocational training purposes, GOHP can give clearance up to 1.0 hectare land. If application is submitted under the Forest (Conservation) Act, 1980, then the net present value (NPV) of the land and cost for compensatory afforestation are to be paid by the State Government. 4. If the application is submitted under Forest Rights Act 2006, then for educational institutes, payment of NPV and compensatory afforestation costs are exempted for the land up to 1.0 hectare of forest land. The clearance can also be issued at Divisional Forest Officer level. 5. The Forest Officials suggested that application may be made under Forest Rights Act for faster clearance if any site falls under the forest. 6. The ADB Environmental consultant assured everyone that sites on forest land will not be considered to the extent feasible. However, under unavoidable situations, applications for clearances will be submitted as suggested. 7. The land transfer for Women's Polytechnic at Rehan in Kangra district is also completed. The land has been transferred by the revenue department in the name of DOTE (This point pertains to another subproject of HPSDP- Women’s Polytechnic at Rehan in Kangra district). |
| 2 | Shimla, 23/12/2016 | Senior Environmental Engineer, Himachal Pradesh Pollution Control Board | Clearances and Permissions required from Himachal Pradesh Pollution Control Board (HPPCB) and Department of Environment | 1. The ADB Environmental consultant provided an overview on HPSDP. 2. He enquired about the types of permissions and clearances required from the HPPCB and State Department of Environment.   The senior Environmental Engineer, Department of Environment, replied that educational and training institutes are exempted from the environmental clearance process. Therefore, there is no requirement for prior environmental clearances for CLCs, RLCs, MCCs and the Women’s Polytechnic planned under HPSDP. He explained that Consent to establish and Operate has to be obtained from HPPCB only if a residential complex is planned at any of the sites. In case hazardous waste is generated, then a management proposal has to be submitted to the HPPCB for Hazardous waste authorization and disposal.  The ADB Environment and Safeguard consultant replied that none of the planned training facilities will generate hazardous waste, either during construction or operation. |
| 3 | Sunder Nagar, 22/12/2015, 14/03/2016, and 15/03/2016 | Director, DOTE, and other officials | ITI selected for up gradation, locations of RLCs and CLCs selected at ITI campus and site of proposed Women Polytechnic at Rehan in Kangra district | 1. The ADB Environment and Safeguard consultant enquired whether any of project sites under DOTE are planned in forest areas or within buffer or core zones of national park or bird sanctuary. Director, DOTE, replied that CLC/RLC sites planned are within the vacant sites within the premises of existing industrial training institutes. Only the site for the Women’s Polytechnic in Kangra falls within revenue forest land. For this site NOC from Forest Department has been received (This point pertains to another subproject under HPSDP- Women’s’ Polytechnic at Rehan in Kangra district). 2. The ADB Environment and Safeguard consultant suggested that DOTE should submit land ownership details/revenue records for all sites planned under the ADB funding for due diligence. He noted that DOTE should also start the process of getting NOC from the Forest Department and land transfer in DOTE name for the site in Rehan, Kangra, where the Women’s Polytechnic is planned (This point pertains to another subproject under HPSDP- Women’s’ Polytechnic at Rehan in Kangra district). |
| 4 | Shimla, 21/12/2015 | Department of Labor and Employment (DOLE) | Locations of MCCs planned, approximate area required for MCCs | 1. The ADB Environment and Safeguard consultant enquired about the proposed locations of MCCs. The officials replied that with ADB assistance, 11 MCCs planned. The planned locations are Hamirpur, Shimla, Bilaspur, Kullu, Dharamshala, etc. As per Government of India guidelines, the built up area of around 3,000 sq.feet is needed for MCCs. 2. The ADB Environment and Safeguard consultant noted that the revenue record of land ownership should be provided to the ADB team for due diligence. |
| 5 | Shimla, 21/12/2015 | Department of Rural Development (DoRD) | Locations of proposed RLCs, environmental and social safeguard issues, tree cutting, etc. | 1. The ADB Environment and Safeguard consultant enquired about probable locations of RLCs planned. 2. The environmental expert suggested that no sites with temporary or permanent occupation should be identified and revenue records showing ownership details should be provided for the social due diligence. Further, any site involving tree cutting, necessary tree cutting permission should be obtained. 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. These consultation point with DORD pertain to RLCs. These are separate subprojects under HPSDP. |

CLC = City Livelihood Center, DOTE = Department of Technical Education, HPPCB = Himachal Pradesh Pollution Control Board, IEE = Initial Environmental Examination. ITI = Industrial Training Institute, MCC = Model Career Center, RLC = Rural Livelihood Center.

## Consultation and Information Disclosure

1. **Consultations.** To ensure continued public and stakeholder participation in the subproject life cycle, periodic consultations should be held at project sites. This participatory process will ensure that all views of the people are adequately reviewed and suitably incorporated in the design and implementation process.
2. **Information disclosure.** Once the IEE is approved by the Government of Himachal Pradesh and ADB, an electronic version of the IEE will be placed in the official websites of HPKVN and ADB. Upon written request, any person seeking information can obtain a hard copy of the complete IEE document by paying for its photocopying cost. The PMU will issue notification on the disclosure mechanism on a notice board at sub-project construction site, ahead of initiation of implementation of the subproject, providing information on the project, start and end dates, etc.

## Grievance Redress Mechanism

1. The affected person(s)/aggrieved party can give their grievance verbally or in written to the local site office of the sub-project. Grievances of affected person will first be brought to the attention of the site in charge, who can resolve the issue at the site level. If the matter is not solved within 7 days period by the site in charge, it will be brought to the Grievance Redress Committee constituted for the purpose in PIU (PWD). This GRC shall discuss the issue in its monthly meeting and resolve the issues within one month of time after receiving the grievance. If the matter is not resolved by GRC at PIU level within stipulated time, it shall be referred to GRC at PMU level by Project Manager of PIU.
2. 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 matter will be referred to State Level Empowered Committee (SLEC), who will resolve the compliant within one month. However, the aggrieved person/party can bring the matter to the Court of Law any time after filing the complaint either at PIU level or PMU level. The PIU and sub-project site office shall keep records of all grievances received including contact details of complainant, date of receiving the complaint, nature of grievance, agreed corrective actions and the date these were affected and final outcome. For this a complaint register will be maintained at the MCC sub-project site. The grievance redress process is shown below. The cost for functioning of Grievance Redress Mechanism will be accounted for in project cost as part of PMU or PIU functioning.
3. Further, person(s) / aggrieved party who are, or may be, adversely affected by the subproject(s) may submit complaints to ADB’s Accountability Mechanism. The accountability mechanism provides an independent forum and process whereby people can voice, and seek a resolution of their problems, as well as report alleged violations of ADB’s operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected person(s) / aggrieved party should first make a good faith effort to solve their problems by working with the ADB South Asia operations department including the India Resident Mission.

## Composition and functions of GRC

1. PIU Level Grievance Redress Committee (GRC- PIU) – This committee will comprise of Project Manager, Site In charge and one officer from contractor team. The GRC- PIU will be headed by Project Manager (PIU). It will meet at least once a month. The agenda of the meeting will be circulated to all the members and the affected persons/aggrieved party along with venue, date and time at least a week prior to the meeting. The matters shall remain with GRC at PIU level for one month. If the grievance is not resolved within this time period, then it will be referred to GRC at PMU.
2. **GRC at PMU.** There shall be one GRC in PMU. The matters not resolved by the GRC at PIU level within one month shall come under GRC at PMU. GRC at PMU will include the Managing Director HPKVN (Head) and members including Project Manager/ Incharge PIU (PWD Shimla Head Quarters) safeguard specialists (Environmental and Social) of the PMU, and one representative from concerned Department (DOTE/DOLE/DOHE/DOUD/DORD). The Committee shall be headed by the Managing Director, HPKVN. This committee shall look into the matters, which are referred to and not resolved by GRC at PIU level. If the matter is not resolved by the GRC at PMU level within one month of time, then the aggrieved person or party can bring the matter to State Level Empowered Committee (SLEC) which is in-charge of the overall HPSDP. In case grievance is not readdressed by the SLEC, then complainant can reach to the court of law. It may also be mentioned that aggrieved party / or person is free to reach court of law any time during the Grievance Redressal Process.
3. **Approach to GRC.** Affected person or aggrieved party can approach the GRC for redress of his/their grievances through any of the following modes:
   * Web based: A separate corner will be developed at the HPKVN website so that public and affected person can register their complaints in the online column.
   * Telecom based: A telephone number will be displayed at the web site of HPKVN and the construction site (s) sub projects so that general public can register their complaint through telephone and mobile phone to the PIU and PMU office. One complaint register will also be maintained at sub-project
   * Construction site. The grievance redress mechanism for the HPSDP for safeguards related issues has been shown below in **Figure-9**:

|  |
| --- |
| **Figure-9: Grievance Redress Mechanism (HPSDP Project)** image007.jpg |

# FINDINGS AND RECOMMENDATIONS

1. The proposed subproject components do not involve any interventions in and around the natural and cultural heritage destinations and have less significant (direct or indirect) environmental impacts. It is expected that the proposed subproject will enhance economic growth and support and guide the skilled Himachali youth in getting the suitable employment.
2. This IEE has identified minor likely impacts on water, air, and noise during the DOLE building refurbishment and operation period and has defined mitigation measures. Those mitigation measures will be implemented and monitored during the subproject execution. The overall environmental quality of subproject surroundings will not be affected as a result of operating the MCC as adequate sanitation facilities have been planned.
3. 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 by the technical expertise of Safeguards Specialists of the PMC. Further, the environmental monitoring plans provide adequate opportunities towards course correction to address any residual impacts during construction or operation stages.

# CONCLUSIONS

1. Based on this IEE, it is expected that the proposed subproject components have only minor, localized, temporary, and insignificant environmental impacts. These can be easily mitigated through adequate mitigation measures and regular monitoring during the design, construction, and post construction phases of the subproject. Negative impacts on water, air quality, and noise levels during civil works and 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 subproject. Based on the findings of the IEE, the classification of the subproject as category ‘B’ is confirmed. No further special study or detailed EIA needs to be undertaken to comply with the Safeguard Policy Statement, 2009.

# Appendix 1: Rapid Environmental Assessment Checklist

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| **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 (SDES) 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. |

**India/ Himachal Pradesh Skill Development Project**

**Country/Project Title:**

**SAHS**

**Sector Division:**

| **Screening Questions** | **Yes** | **No** | **Remarks** |
| --- | --- | --- | --- |
| **A. Project Sighting**  Is the project area adjacent to or within any of the following areas: |  |  | The subproject involves refurbishment of existing DOLE building to establishment MCC at Dharamshala. The building to be refurbished is located in Dharamshala town of Kangra district of Himachal Pradesh.  The DOLE building is not located beyond 15 km distance from the core and buffer zones of national parks, sanctuaries, tiger reserves, and biosphere reserves, etc. There are no structures or monuments of archaeological importance within 300 m of DOLE proposed for refurbishment for MCC establishment. |
| * Underground utilities |  | √ | There are no underground utilities in the building. All the refurbishment works are planned within the building. |
| * Cultural heritage site |  | √ | The DOLE building proposed for refurbishment is not within 300 m distance of heritage site. |
| * Protected area |  | √ | The DOLE building is located within the municipal limits of Dharamshala town. This is not located in protected area. The DOLE building is located beyond 15 km from the protected areas. |
| * Wetland |  | √ | The DOLE building proposed for refurbishment is not located adjacent to any wetland as it is within the municipal limits of Dharamshala town. There is no wetland within 15 km aerial distance from DOLE building. |
| * Mangrove |  | √ | The DOLE building is located in hilly terrain and is away from coast and creeks. |
| * Estuarine |  | √ | The DOLE building is located in hilly terrain and is away from coast and creeks. |
| * Buffer zone of protected area |  | √ | The building proposed for refurbishment is not in or adjacent to buffer zone of protected area. |
| * Special area for protecting biodiversity |  | √ | The DOLE building is not located in or adjacent to special areas for protecting biodiversity. There are no protected areas within 15 km aerial distance from DOLE building. |
| * Bay |  | √ | The DOLE building is hilly State of Himachal Pradesh. It is away from coastal area. |
| **B. Potential Environmental Impacts**  Will the project cause… |  |  |  |
| * Encroachment on historical or cultural areas? |  | √ | All the refurbishment works are planned within the existing DOLE building which is way from historical and cultural areas. Hence no question of any encroachment. |
| * Encroachment on precious ecology (e.g., sensitive or protected areas)? |  | √ | The construction works related to building refurbishment are planned within the DOLE building located in the city of Dharamshala. Hence no impact or encroachment on precious ecology. |
| * Impacts on the sustainability of associated sanitation and solid waste disposal systems? |  | √ | For waste water, septic tanks are planned as part of sanitation system in subproject buildings. The solid waste will be disposed off by integrating with the disposal system of the Dharamshala city. |
| * Dislocation or involuntary resettlement of people? |  | √ | The building to be refurbished is under the ownership of DOLE, GOHP. There are no issues of involuntary resettlement. |
| * Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups? |  | √ | This HPSDP project is aimed at imparting relevant TVET skills to needy segments and women. In fact, this project is classified as a “GEN” or gender equity project. Hence, it will not have any adverse impact on them or children. This subproject in particular will help skilled youth in placement and counseling for suitable job selection.  The state of Himachal Pradesh is divided into 12 districts. Of these, the Kinnaur and Lahaul-Spiti districts in their entirety, and Pangi and Bharmour (now *tehsil* Bharmour and *sub-tehsil*, Holi) subdivisions of the Chamba district, are notified as scheduled tribal areas of Himachal Pradesh since the proportion of scheduled tribes is 50% or more. These districts are in the extreme north and northeast of Himachal Pradesh, forming a contiguous belt in the far hinterland behind high mountain passes. These locations area away from subproject location. This subproject will not have any impacts on Indigenous people. |
| * Accident risks associated with increased vehicular traffic, leading to loss of life? |  | √ | All the refurbishment related works under the subproject are planned within the building. Hence, there would not be any effect on local vehicular traffic (or risk of accidents), either during the construction or operational phases. However, to rule out any accident due to sub-project related vehicular traffic, if required, flagmen will be deployed near the building to regulate the traffic. A traffic management plan will be prepared for the construction phase of the subproject. |
| * Increased noise and air pollution resulting from increased traffic volume? |  | √ | As noted above, there would be no increase in traffic volume owing to this subproject. Hence, there would be no increase in noise or air pollution. |
| * Occupational and community health and safety risks? |  | √ | The environmental impact related to the construction works for the refurbishment of DOLE building will be minor in nature and mostly limited to the duration of construction. The impact will be confined mainly within the building compound. These minor impacts will be mitigated through EMP implementation.  Potential occupational health and safety risks during construction will be addressed by including provisions in the contract documents and implementation of the environment mitigation plans. During the operation phase, these issues will be taken care of through formulation of safe operating procedures. |
| * Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation? |  | √ | As noted above, the environmental impact related to the building refurbishment related construction works will be minor and mostly limited for the duration of construction. There will not be any physical, chemical, biological, and radiological hazards during project construction and operation phases of the subproject.  Adequate provisions will be included in the relevant contract documents to address potential occupational health and safety hazards during the construction and operation phases. |
| * Generation of dust in sensitive areas during construction? |  | √ | During construction, there will be minor dust generation due to material handling and operation of construction machinery and equipment. This will be controlled through dust suppression measures e.g. water spray and through proper maintenance of construction equipment and machinery. It will also be ensured that construction equipment and machinery conform to the emission norms laid down by the Central Pollution Control Board. The building will be properly barricaded with MS Sheet. |
| * Requirements for disposal of fill, excavation, and/or spoil materials? | √ |  | The current subproject involves building refurbishment, so there are no cut, fill or excavations. Minor spoils generated due to small demolitions inside building will be used to the extent possible. Remaining spoils, if any, will be disposed off at appropriate identified site approved by project authorities. The site will be identified during the construction. |
| * Noise and vibration due to blasting and other civil works? |  | √ | During construction, some noise will be generated due to the operation of construction equipment and machinery. Adequate mitigation measures have been stipulated in the subproject EMP. Since the proposed building refurbishment works are small in nature, no heavy equipment and machinery will be used. No blasting will be required during the construction phase. Hence, there will not be any significant shaking or vibrations. Further, no construction works will be undertaken at night at the DOLE building. There will be periodic noise monitoring at the building as per the monitoring plan prepared as part of EMP. |
| * Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction? |  | √ | Since the subproject is involving refurbishment works in the existing DOLE building, so no question of any impact on ground water flow. |
| * Long-term impacts on local hydrology as a result of building hard surfaces in or near the building? |  | √ | All the works are planned in the existing building. No additional hard and paved surface will be created. Hence, there will not be any impact on local hydrology. |
| * Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)? |  | √ | The construction works in the subproject are minor in nature so large number of construction workers will not be there. During operation phase local students/ youth seeking employment will be visiting for counseling, attending interviews and getting them registered. This will not increase any burden on local social infrastructure and services. |
| * Social conflicts if workers from other regions or countries are hired? |  | √ | Preference will be given to locally available labor. The construction activities are relatively small in nature, and will take place within premises of existing DOLE building. There would be no need to hire workers from other regions or countries. |
| * Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation? |  | √ | In the planned refurbishment works of DOLE building, care has been taken to follow the latest national building and safety codes, and to replace old or faulty electrical equipment. Hence these risks will be reduced. |
| * Risks to community health and safety caused by management and disposal of waste? |  | √ | During the construction phase, waste collection and disposal system will be carried out by the contractor. The processes being followed will be reviewed and approved by the Public Works Department. The firm to be engaged for ensuring quality of civil works will help the Public Works Department in ensuring that the required safety measures are adhered to while managing and disposing of waste.  For the operation phase, adequate provisions have been made in the design to take care of management and disposal of waste water and other solid waste. |
| * 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 building refurbishment works are planned inside DOLE owned building. Specific community risks are not foreseen due to operation since the building is well connected to Dharamshala city roads. If required building foundation will be strengthened to comply with applicable seismic coefficients for Himachal Pradesh. The refurbished building will be maintained regularly in the operation phase. |

DOLE= Department of Labour and Employment, EMP = Environmental Management Plan, MCC = Model career center, TVET= Technical and Vocational Education and Training

# Appendix 2: A Checklist for Preliminary Climate Risk Screening

**Country/Project Title:** India/ Himachal Pradesh Skill Development Project (Sub-project: Refurbishment of Building for MCC Establishment)

Sector: Education

Subsector: Technical Vocational Education and Training

Division/Department: SAHS/ SARD

|  |  |  |  |
| --- | --- | --- | --- |
| **Screening Questions** | | **Scorea** | **Remarks** |
| **Location and Design of project** | Is sighting 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? | 1 | Since Himachal Pradesh is a hilly state, there is risk of landslides during the rainy season. However, current subproject location being in Dharamshala city has good and reliable road and air connectivity. Since all works are planned within the existing building so these works will not be impacted due to extreme weather related events. |
| 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 Dharamshala 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 Dharamshala do not require specific scheduling for maintenance |
| **Performance of project outputs** | Would weather or 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 |

a Options for answers and corresponding score are as follows: 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 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 (including 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

# Appendix 3: Building Photographs

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| Site 1.jpg |
| View of DOLE Building to be Refurbished for MCC Establishment |
| Site 1.jpg |
| Another View of DOLE Building to be Refurbished for MCC Establishment |

# Appendix 4: Sample Traffic Management Plan

**A. Principles**

1. Since the scale of construction work at the subproject site is relatively small, there will not be any major or prolonged disruption of local traffic. Nevertheless, it is good to prepare a traffic management plan (TMP) to minimize and avoid public inconvenience to the extent feasible. This indicative TMP will ensure the safety of all the road users along the work zone and minimize public inconvenience. It addresses the following issues:
2. the safety of pedestrians, bicyclists, and motorists travelling through the construction zone;
3. protection of work crews from hazards associated with moving traffic;
4. avoiding traffic congestion; and
5. maintenance of access to adjoining properties.

**B. Operating Policies for Traffic Management Plan**

1. The following principles will help to promote safe and efficient movement for all road users (motorists, bicyclists, and pedestrians, including persons with disabilities) through and around work zones while reasonably protecting workers and equipment.
2. Make traffic safety and temporary traffic control an integral and high-priority element of every project from planning through design, construction, and maintenance.
3. Inhibit traffic movement as little as possible.
4. Provide clear and positive guidance to drivers, bicyclists, and pedestrians as they approach and travel through the temporary traffic control zone.
5. Inspect traffic control elements routinely, both day and night, and make modifications when necessary.
6. Pay increased attention to roadside safety in the vicinity of temporary traffic control zones.
7. Keep the public well informed.
8. Make appropriate accommodation for abutting property owners, residents, businesses, emergency services, railroads, commercial vehicles, and transit operations.

**C. Procedures for Street Closure, if Required**

1. A final decision to close a particular street and divert the traffic should involve the following steps:
2. approval from the project implementation unit (PIU) and local administration to use alternative local streets as detours;
3. consultation with businesses, community members, traffic police, persons with disability, etc., regarding the mitigation measures necessary at the detours where the road is diverted during the construction;
4. determining the maximum number of days allowed for road closure, and incorporation of such provisions into the contract documents;
5. determining if additional traffic control or temporary improvements are needed along the detour route;
6. considering how access will be provided to the worksite;
7. contacting emergency service, school officials, and transit authorities to determine if there is any effect on their operations; and
8. developing a notification program to keep the public informed, and advising the public of alternate routes as a result of the traffic diversion.
9. If full road-closure of certain streets within the area is not feasible due to inadequate capacity of the detour streets or public opposition, then full closure can be restricted to weekends with the construction commencing on Saturday night and ending on Monday morning prior to the morning rush hour traffic.

**Figure A: Policy Steps for the Traffic Management Plan**

*Source: Asian Development Bank.*

**D. Public Awareness and Notifications**

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

1. road blockages and alternative routes along with the duration (as applicable);
2. traffic control devices placed around the construction zones (signs, traffic cones, barriers, etc.); and
3. Reduced speed limits to be enforced at the work zones and traffic diversions.

8. It may be necessary to conduct an awareness campaign on road safety during construction. It will target relevant groups, i.e., children, adults, and drivers. Therefore, these campaigns will be conducted in schools and community centers. In addition, the project will publish a brochure for public information. These brochures will be widely circulated around the area and will also be available at the PIU, and the 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:

1. Explain why the brochure was prepared, along with a brief description of the project.
2. Advise the public to expect the unexpected.
3. Educate the public about the various traffic control devices and safety measures adopted at the work zones.
4. Educate the public about safe road user behaviour at the work zones.
5. Advise 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.
6. 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 comply with roadworthy and meet certification standards of the government. All vehicles should be in good condition and meet the pollution standards of the Government of India and the Himachal Pradesh government. The drivers will follow the special code of conduct and road safety rules of the Himachal Pradesh government. They will ensure that all loads are covered and secured. Vehicles will be cleaned and maintained in designed places.

**F. Installation of Traffic Control Devices at Work Zones and Traffic Diversion Routes**

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

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

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

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

14 In addition to the delineation devices, all the construction workers should wear fluorescent safety vests and helmets in order to be visible to the motorists at all times. There should be provision for lighting beacons and illumination for night constructions. The PIU and contractor will coordinate with the local administration and traffic police regarding the traffic signs, detour, and any other matters related to traffic. The contractor will prepare the traffic management plan in detail and submit it along with the environmental management plan for the final approval.

# Appendix 5: Photographs and Attendance Sheets of Consultations

###### Photographs of Consultations

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| --- | --- |
| Consultations with DOLE Officials.JPG | Consultations with DOLE Officials.JPG |
| Consultations with DOLE Officials | Another view of consultations with DOLE Officials |
| Consultations with DOLE Officials.JPG | Consultations with DOLE Officials.JPG |
| Consultation with NGO Team at Mohal Sidhbari | Another Photograph of Consultations at Mohal Sidhbari |

###### Signature Sheet of Consultations

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| Consultation sheet1.jpg |

1. A detailed Environmental and Social Management Framework (ESMF) has been prepared in line with ADB’s Safeguard Policy Statement (SPS), 2009, to guide the executing agency and implementing agencies in mainstreaming environmental and social concerns into the design and implementation phases of HPSDP. [↑](#footnote-ref-1)
2. Local stakeholders were involved in developing the IEE through on-site discussions and public consultation. Their views were incorporated into the IEE and the design of the subproject. The IEE will be made available at public locations in the town such as municipal office building and district administration office. It will be disclosed to a wider audience via the ADB, DOLE, and HPKVN websites. [↑](#footnote-ref-2)
3. All projects or activities included as category A in the schedule, including expansion and modernization of existing projects or activities and change in product mix, will require prior environmental clearance from MOEF, Government of India based on recommendations of an expert appraisal committee 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 subparagraph (ii) of paragraph 2; or change in product mix as specified in subparagraph (iii) of paragraph 2, but excluding those that fulfill the general conditions stipulated in the schedule, *will* require prior environmental clearance from the state or union territory Environment Impact Assessment Authority, which shall base its decision on the recommendations of a state or union territory-level expert appraisal committee to be constituted for this notification. In addition, general condition 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 5 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; and (iv) interstate boundaries and international boundaries. [↑](#footnote-ref-3)
4. As per the SPS, 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 financial institution. [↑](#footnote-ref-4)