Initial Environmental Examination

September 2017

India: Himachal Pradesh Skills Development Project — Model Career Center at Hamirpur (Package No. HPSDP-PWD/04)

Prepared by the Government of Himachal Pradesh for the Asian Development Bank. This is an initial draft available on https://www.adb.org/projects/49108-002/main#project-documents

CURRENCY EQUIVALENTS

(as of 4 September 2017)

Currency unit	−	Indian rupee/s (₹)
₹1.00	=	$0.01567
$1.00	=	₹63.8100

ABBREVIATIONS

ADB	–	Asian Development Bank
ASI	–	Archaeological Survey of India
CHC	–	community health center
CLC	–	city livelihood center
CFE	--	Consent for Establishment
CFO	---	Consent for Operation
CPCB	–	Central Pollution Control Board
DOHE	–	Department of Higher Education
DOLE	–	Department of Labor and Employment
DOP	–	Department of Planning
DOTE	–	Department of Technical Education, Vocational & Industrial Training
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
MOEFCC	–	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

WEIGHTS AND MEASURES

µg	–	microgram
dB(A)	–	weighted decibel
ha	–	hectare
km	–	kilometer
km^2	–	square kilometer
m	–	meter
m^2	–	square meter
MW	–	megawatt

NOTES

(i) The fiscal year (FY) of the Government of India ends on 31 March. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2017 ends on 31 March 2017.

(ii) In this report, “$” refers to US dollars.

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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 Radish's technical and vocational education and training (TVET) programs, and scale up training capacity. The Department of Planning (DOP) in 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) 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 improved 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 improved.

3. Output 3 of the project will involve construction of new training facilities and upgrading of some existing buildings to improve the access of TVET programs across Himachal Pradesh.[1] The new facilities include construction of seven 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) and one new MCC will also be constructed. On average, the CLCs and RLCs will have three to four floors, and occupy about 900 square meters (m^2). The MCCs will have three to four floors on average, and occupy around 400 m^2 each. The new MCC planned at Hamirpur will also be a three floor building. The total built up area of this MCC will be around 800 m2. The Department of Urban Development (DOUD), Department of Rural Development (DORD), and the Department of Labor and Employment (DOLE) will help HPKVN in running livelihood development and counseling programs at the proposed CLCs, RLCs, and MCCs constructed at their respective premises.

4. 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

[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.

has been reconfirmed by an experienced ADB environment and social safeguards consultant, who has already visited 16 sites identified by the Himachal Pradesh government to date.[2]

5. One of the civil works subprojects included under advance contracting is a MCC at Hamirpur in the Hamirpur district of Himachal Pradesh. It will provide the needy and educated youth of the district counseling facilities for career development. This MCC will also act as an interface between industry and educated youth by organizing job fairs and interactive sessions besides maintaining data base of available employable manpower. The proposed MCC is planned on a vacant and unencumbered plot owned by DOLE at the outer skirts of Hamirpur town. The MCC will be a three-floor building including the ground floor, with a total built-up area of 683.24 m2. On the ground floor, there will be a reception cum display area, Lobby/waiting hall, IT section, MCC Manager's room, and toilet and drinking water facilities. On the first floor, there will be space for the group counseling room, individual counseling rooms two numbers, registration room for vacancies, superintendent room, statistical assistant room, ladies toilet, etc.. On the second floor, there will be labor officer's room, meeting hall, conciliation room, staff toilets, and labor inspector room. The MCC design ensures adequate space for data storage, registration facilities and administrative facilities for labor officers.

6. The architectural expression of the building is in harmony with the local style of Himachal Pradesh—suitable for cool weather, long rainy season, and light snowfall. The building aims to evoke a friendly counseling atmosphere that will attract the jobs providers and jobs seekers. The MCC will be barrier-free. There will be ramps and specially designed toilets to make it easy for people with disabilities. The MCC will have adequate number of modern sanitation and drinking water facilities. Concrete gutters at the end of steel sheeting roofs will direct the rainwater to underground rain water harvesting tanks. The clean rainwater run-off can be reused for horticultural purposes and replenishing groundwater.

7. The proposal includes for the provision of solar power panels, for which a budget of $13,400 has been allocated. The system is expected to generate about 3 kilovolt-amperes to meet the light and water heating. A preliminary estimate has been approved by the state government for a sum of $502,562, inclusive of taxes, contingencies, and administrative charges. The construction period will be 2 years. The preliminary estimate also budgets for a 10.5% cost escalation on this basis. Any waste generated on account of operation and maintenance of solar PV Cell will be taken up by the supplier, who will also be maintaining the PV cell, for possible recycle and reuse.

8. This initial environment examination (IEE) report provides details about the site, the potential environmental impact of the civil works, and ways of mitigating and addressing these.[3] Since the site is at the outer skirts of Hamirpur town, there is no protected or reserved forest area nearby. There is no natural stream or river near the site. The subproject site is on a plain terrain. There are no protected areas (national parks, bird sanctuaries, tiger reserves, etc.);

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[2] In addition to the ADB environment and social safeguards consultant, other experts including an architect, labor economist, gender specialist, plus relevant consultants from the consulting firm engaged under the project preparatory technical assistance project (IND TA 8760), have also screened these sites. ADB. 2015. *Technical Assistance to India for Supporting Skill Development in Himachal Pradesh*. Manila (TA 9060-IND).

[3] 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, employment exchange building and district administration office. It will be disclosed to a wider audience via the ADB, DOLE, DOP, and HPKVN websites.

wetlands; mangroves; or estuaries in or near the subproject location. The site is in a relatively open area. Therefore, there are no ambient air quality and noise level issues.

Since the MCC will be a relatively small building for counseling and registration of job seekers, facilitating interviews for registered candidates and maintenance of records of registered and selected candidates, etc. Its construction and operation are unlikely to cause any significant impact. These routine and localized effects associated with construction and operation of the new MCC 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.

9. The PWD (one of the implementing agencies as mentioned earlier) will be responsible for overall planning and implementation of the civil works under the HPSDP including this subproject. It will ensure that EMP prepared is implemented. The project management consulting (PMC) firm to be engaged under the proposed loan will have experienced environment and social safeguards experts. These experts will assist PWD in the smooth implementation of EMP. The PMC will also assist PWD and HPKVN in preparing semi-annual safeguards monitoring reports as required by ADB.

I. INTRODUCTION

A. Background

1. Location The subproject site for the proposed Model Career Center (MCC), at Hamirpur, is situated near Hamirpur town in the Hamirpur district of Himachal Pradesh. The latitude and longitude of the sub-project site are 31.671334 N and 76.533107 E, respectively. The nearest rail head is at Una and it is about 76 kilometers (km) away. Hamirpur town is well connected by roads with all the important places in Himachal Pradesh like Hamirpur (3 km), Mandi (71 km), Sunder Nagar (72 km), Shimla (142 km), Palampur (69.3 km), and Kangra (91 km). The Hamirpur is the smallest district of Himachal Pradesh. The elevation of project site is about 748 m above mean sea level. Hamirpur district shares borders with the neighboring districts of Mandi to North, Bilaspur to South and South West, Una to West and Kangra to North West. River Beas separates Hamirpur from Kangra and is a parent river to two of tributaries, namely Maan Khad and Kunah Khad flowing across either sides of Hamirpur district, to the adjacent Sutlej. The district lies between the parallels of 31°25′N and 31°52′N and between 76°18′E and 76°44′E

2. Present status of site. The sub-project site at Hamirpur is plain land. The site belongs to the Department of Labour and Employment, Government of Himachal Pradesh. There are no permanent or temporary structures on the site. Since the site has been lying vacant and unused, small shrubs have grown over time. There are also no trees at the site. Close to the sub-project site, there are residential houses. Some photos of the site are shown in **Figure 1**.

Figure 1: Site Photographs of MCC Hamirpur

	
Plot measures approximately 16m x 25m, Frontage has road	Bamboo is approximately in the centre, there is a level difference of about 1.2m

B. Compliance with India's Environmental Regulatory Framework

3. India's environmental rules and regulations, as relevant for this proposed sub-project, are shown in **Table 1**. The Environmental Impact Assessment (EIA) notification, 2006 by the Ministry of Environment, Forests and Climate Change (MOEFCC), 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.[4] However, MOEFCC's Office Memorandum (F. No. 19-2/2013-IA- III), dated 9 June 2015, and 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 Hamirpur, are meant for educational, training purposes and skills development, they will not require any prior environmental clearances according to the environmental rules and regulations of India. Further, as shown in Table 1, most other rules pertaining to India's Ancient Monuments and Archaeological Sites and Remains Act, 1958; the Wildlife (Protection) 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 sub-project.

Table 1: Environmental Regulatory Compliance

Subproject	Applicability of Acts and Guidelines	Compliance Criteria
Construction and operation of Model Career Center at Hamirpur	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, and the rules, 1959 provide guidance for carrying out activities including conservation, construction and reuse in and around the protected monuments.	The Model Career center site at Hamirpur 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**

[4] 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 10 km from the boundary of (i) protected areas notified under the Wild Life Protection) Act, 1972; (ii) critically polluted areas as notified by the Central Pollution Control Board from time to time; (iii) notified eco-sensitive areas; and (iv) interstate boundaries and international boundaries.

Subproject	Applicability of Acts and Guidelines	Compliance Criteria
	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. No forest land is required for this subproject. Hence, this is not applicable. – **Not Applicable**

ASI = Archaeological Survey of India, CFE = consent for establishment, CFO = consent for operation, EIA = environmental impact assessment.
Source: Asian Development Bank.

C. Asian Development Bank's Environmental Safeguard Policy Principles

4. 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.[5] Similarly, ADB's Rapid Environmental Assessment checklist method was followed to assess the potential impact of the proposed sub-project at Hamirpur (Appendix 2). As will be explained below, the sub-project 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 sub-project is included in the IEE.

D. Review and Approval Procedure

5. 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

[5] 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.

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.

E. Report Structure

6. This report contains eight sections: (i) introduction; (ii) description of sub-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.

II. DESCRIPTION OF THE PROJECT COMPONENTS

A. Components of the Subproject

7. The location of the MCC site and its surroundings are shown in **Figures 2 and 3. Table 2** summarizes the need for the sub-project, and is proposed components.

Figure 2: Location of Hamirpur MCC Site

MCC = Model Career Center
Source: Asian Development Bank.

Figure 3: Location of Sub Project Site

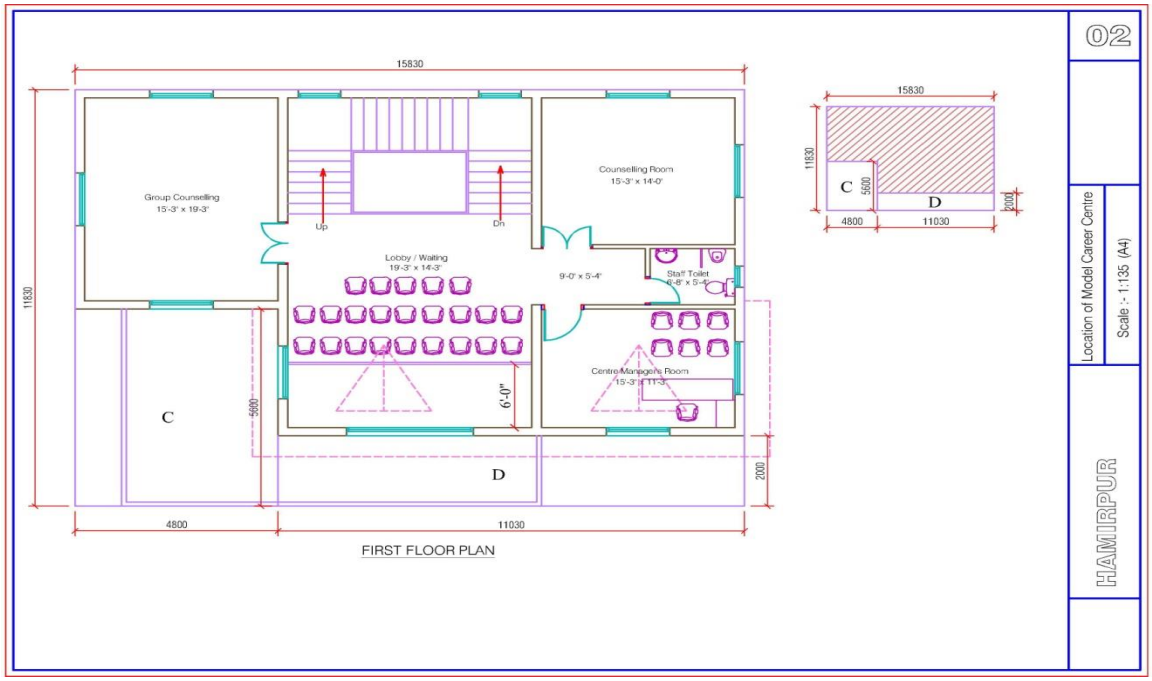
Table 2: Description of the Subproject Components

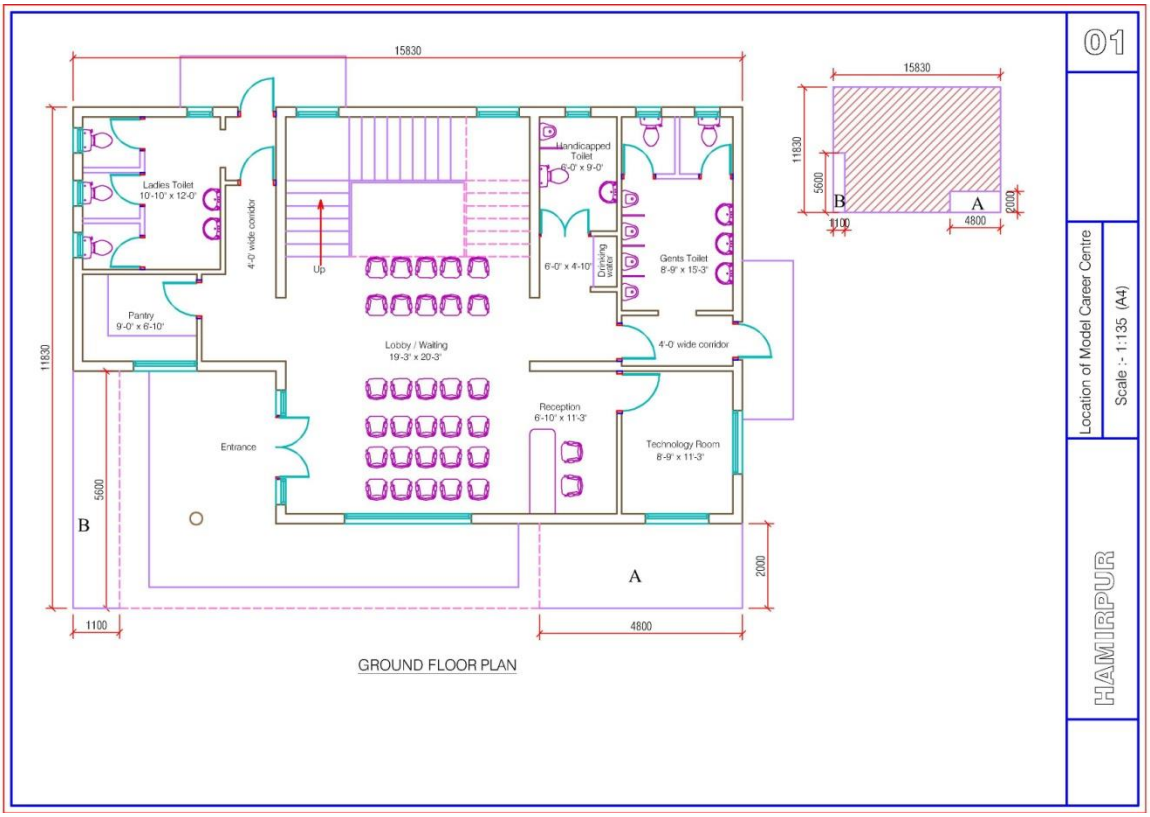
Description	Need of the Project	Proposed Components
A MCC is proposed at the outer skirts of Hamirpur town in Hamirpur district of Himachal Pradesh	• There is need for the Model Career Centers in Himachal Pradesh to guide Himachali youth for selection of jobs as well as act as an interface between the industry and skill manpower. • The 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 MCC will be a three-storey building. It will have a lobby cum waiting area, and Technology Room on the ground floor. • There will be rooms for counseling for big groups and small groups. This floor will also have a MCC Manager's room • On the second floor there will be counseling room and IT section for records upkeep. • Sanitation facilities have been planned on all floors. • A septic tank will be provided for 100 users. • Solar panels will be installed on the roof with potential to generate 5 kW. • The total electricity load has been estimated as 25 kilowatts • Water consumption has been estimated as 4500 liters per day. Water source will be from the municipal supply. • The solid waste generated will be integrated with the waste disposal system of Hamirpur City.

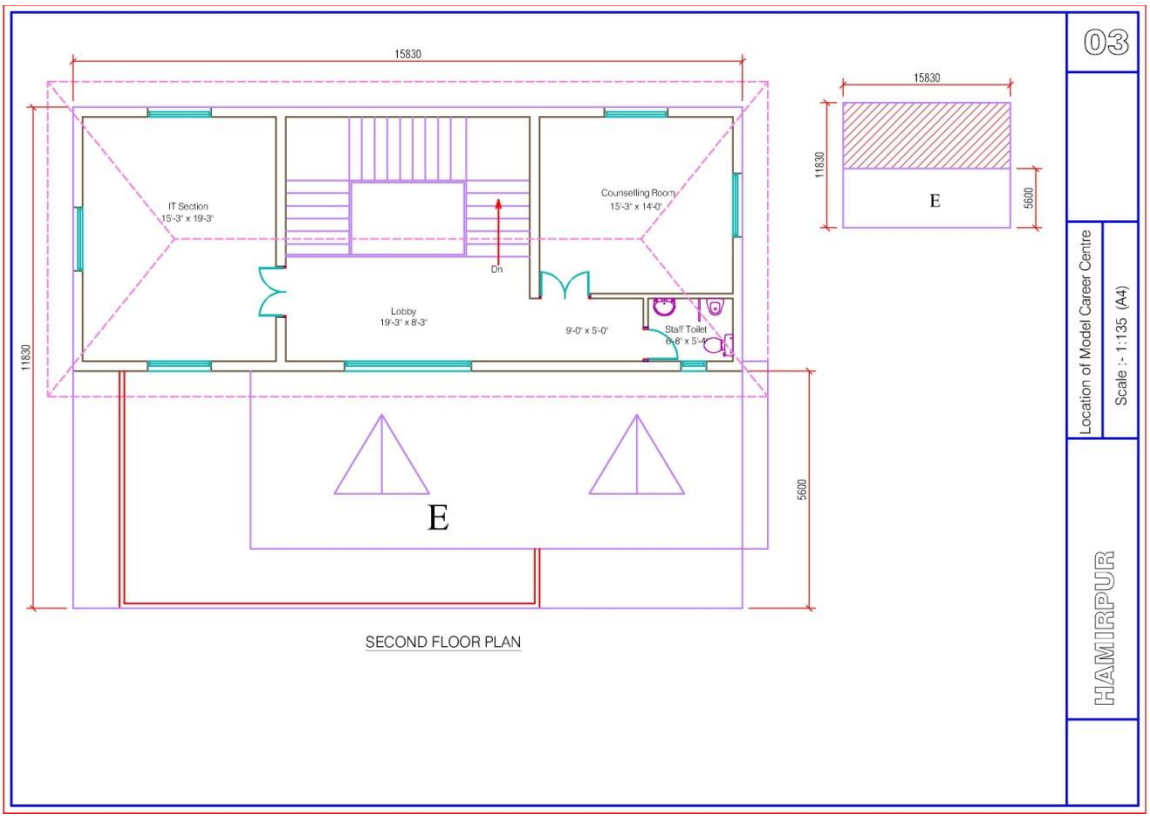
MCC = model career center.
Source: Asian Development Bank.

8. The layout plan of MCC for ground floor, first floor and second floor is shown below in **Figure 4**.

Figure 4: Layout Plan of MCC Building







Source: Asian Development Bank.

B. Executing and Implementing Agencies

9. 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. They will ensure that IEEs and EMPs are prepared for all subprojects and the ESMF is adhered to during project implementation. The project management consulting firm to be engaged under the proposed loan will have experienced environment and social safeguards experts. The PMC will assist PWD and HPKVN in preparing semi-annual safeguards monitoring reports. HPKVN will consolidate these safeguard reports and submit them to ADB semiannually.

C. Implementation Schedule

10. The implementation period for the proposed subproject is 24 months. The preliminary drawings for MCC have been prepared for approval and have been approved. The bidding

process for the sub project is expected to start in July 2017. The sub-project will be awarded for construction by October 2017. The contractor is expected to be mobilized by December 2017. The construction work is expected to be completed by December 2019.

III. DESCRIPTION OF THE EXISTING SUBPROJECT ENVIRONMENT

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

A. Environmental Profile

1. Air and Noise Quality

12. No air pollution sources (point or nonpoint) have been seen in the surroundings of subproject influence area. The subproject site is at the outer skirts of Hamirpur 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 MCC 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.

13. It was observed that ambient noise scenario in the study area is quite low in general. There are no industrial establishments in and around the subproject site. 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 counseling activities, and registration and interview conducting facilities for the visiting industrial establishment officials. 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.

14. Climate The subproject site and its surroundings fall in sub-humid sub tropical climate zone of Himachal Pradesh. The winter prevails from mid November to mid March, spring from mid March to mid May, summer from mid May to September and transition season from October to November. There are two seasons of rainfall during the year, one from December to March, associated with the passage of western disturbances and the other which is the main one, extending from middle of June till end of September, caused by the south west monsoon. Some rain is also received in the post monsoon month of October. July and August are the wettest months. Out of the total rainfall 70 percent is received in the month of July, August and September only.

15. Temperature The temperature exhibits seasonal variation, lowest during the winter, and

higher during the summer. May, June, and July are the hottest months while January, February, and December are the cold months. The maximum temperature rises to about 36°C in June and the minimum temperature falls to about 6.4°C in January. **Table 3** shows monthly temperature variation for Hamirpur.

Table 3: Average, Maximum, and Minimum Temperature at Hamirpur

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	11.7	14.3	18.9	24	28.8	30.3	26.9	25.9	25.5	22.3	17.4	13.6
Min. Temperature (°C)	6.4	8.7	13	17.5	22.4	24.6	23.2	22.5	21.2	16.5	10.8	7.7
Max. Temperature (°C)	17.1	20	24.8	30.6	35.3	36	30.7	29.4	29.9	28.1	24	19.5
Avg. Temperature (°F)	53.1	57.7	66.0	75.2	83.8	86.5	80.4	78.6	77.9	72.1	63.3	56.5
Min. Temperature (°F)	43.5	47.7	55.4	63.5	72.3	76.3	73.8	72.5	70.2	61.7	51.4	45.9
Max. Temperature (°F)	62.8	68.0	76.6	87.1	95.5	96.8	87.3	84.9	85.8	82.6	75.2	67.1

Source: Government of India, Ministry of Earth Sciences, India Meteorological Department. New Delhi.

16. Rainfall The area received 1162–1448 mm yearly rainfall over this 90% rainfall constitutes during the period middle of June to end of September. The monthly average rainfall observed in last two decades is presented in **Table 4**.

Table 4: Average Monthly Rainfall at Hamirpur (millimeters)

Month	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Rainfall	79	54	67	24	29	92	478	448	211	41	14	35

Source: Government of India, Ministry of Earth Sciences, Indian Meteorological Department. New Delhi.

17. Humidity. Based on long-term climatology data of the Hamirpur district, it is found that relative humidity increases rapidly with the onset of monsoon and reaches a maximum (100% in the morning and 70% in the evening) in the peak of the monsoon period. Relative humidity is minimum during the summer months (April–June) with May being the driest month (8.78% 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.

18. 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 (5kmph) in winter months and maximum (12 kmph) in summer months.

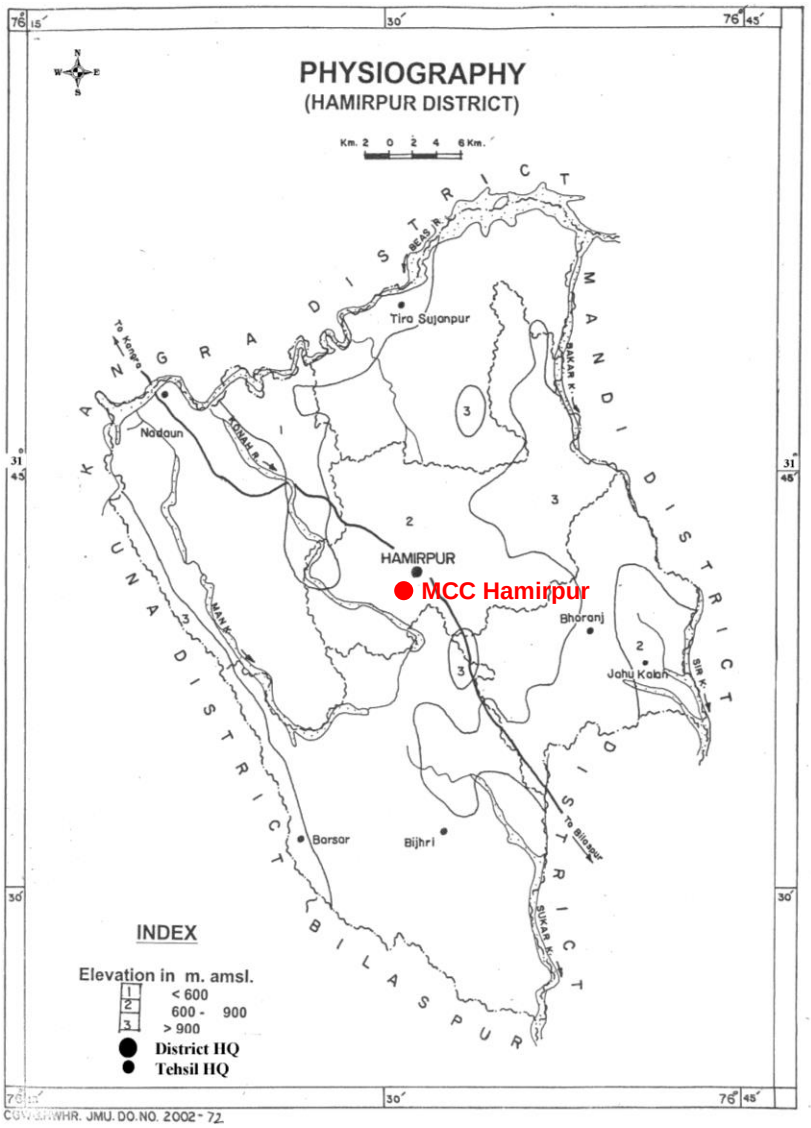
2. Topography and Soils

19. The topography of Hamirpur district is mostly hilly and undulating. The surface elevation

ranges from 400 m to 600 m above mean sea level along the Beas river valley and in lower reaches of Kunah Khad in the northern part of the district. The elevation is more than 900 m above mean sea level in the eastern part of the district. The altitudinal variation in-general, ranges between 600 to 900 m above mean sea level. Sola Singhi hill ranges forms the western boundary of the district, with a maximum elevation of 1145 m above mean sea level. Deep gulleys and gorges are formed in the north-eastern part of the district. The river / Khad valleys are broad in the southern part of the district, mainly along the Sukar and Sir Khad in Bhorang-Jahu-Dhankar areas. In the drainage basin of Beas River, the general ground slope is towards north, while in the Sutlej River this slope is towards south. The subproject site is located in a relatively plain terrain. The site elevation is 746 m above mean sea level. The physiographic map of Hamirpur district showing MCC is given in **Figure-5**.

20. The soils of the district can broadly be divided into nine groups on the basis of their development and physico-chemical properties. These are: (i) alluvial soils, (ii) brown hill soil, (iii) brown earth, (iv) brown forests soils, (v) grey wooded or podzolic soils, (vi) grey brown podzolic soils, (vii) planosolic soils, (viii) humus and iron podzols (ix) alpine humus mountain speletal soils. The soils around the subproject site are generally brown, alluvial and grey brown podzolic. The soil map of the district is shown in Figure 6. The soils are generally brown, alluvial, and grey brown podzolic. The soils are light textured with acidic pH and good fertility status. Surface layer of soil up to 15-20 cm is of reddish brown to yellowish brown color. As per the information of past environmental impact assessment studies conducted soil characteristics are acidic in nature having pH values from 6.6 to 6.8. The soil texture varies from coarse sandy loam to clay loam having predominantly Sand. The Sodium absorption ratio (SAR) varies from 1.6 to 1.8.

Figure 5: Physiographic Map of Hamirpur District



Source: Government of India, Ministry of Water Resources, Central Ground Water Board. *Ground Water Information Booklet Hamirpur District*. New Delhi.

3. Surface Water and Groundwater Quality

21. The subproject site is located in catchment area of the Beas River. Kunah is the most important tributary of the Beas River in the Hamirpur district. Major tributaries of this Khad are Sukar, Jhaniari, Gasota, Hathali and Sukrala Khads. These khads are perennial and have floods during rainy season. The water quality data of Kunah Khad has been obtained from the secondary sources and this has been given in Table-5 below. 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 6**.

Table-5: Surface Water Quality (Kunah Khad) in Subproject Area

Sl. No.	Parameter	Value	CPCB Water Quality Criteria for A to C Classes for Surface Water	Drinking Water Standard Value (IS:10500)
1	pH	8.2	6.5-8.5	6.5 to 8.5
2	Temperature (Deg. 0C)	21.2	Not Specified	Not Specified
3	Chloride (as Cl), mg/l, Max	27	Not Specified	250
4	Nitrate, mg/l, Max.	4.9	Not Specified	45
5	Iron (as Fe), mg/l, Max.	0.14	Not Specified	0.3
6	Total Dissolved solids mg/l, Max	190	Not Specified	500
7	Total Suspended Solids mg/l, Max.	45	Not Specified	Not specified
8	Sulphate (as SO4) mg/l, max.	45	Not Specified	150
9	Oil & Grease, mg/l	0.5	Not Specified	0.5
10	Biochemical Oxygen Demand, mg/l (3 days for 270 C)	0.7	2-3	Not specified
11	Chemical Oxygen demand, mg/l	7.3	Not Specified	Not specified
12	Copper (as Cu), mg/l	BDL	Not Specified	0.05
13	Zinc (as Zn), mg/l. Max.	BDL	Not Specified	5
14	Mercury (as 0.001 Hg) mg/l, Max.	BDL	Not Specified	0.001
15	Cadmium (as Cd) mg/l, Max.	BDL	Not Specified	0.003
16	Arsenic (as As), mg/l, max.	BDL	Not Specified	0.01
17	Cyanide (as CN) mg/l, Max.	BDL	Not Specified	0.05
18	Lead (as Pb) mg/l, Max.	BDL	Not Specified	0.01
19	Total Chromium (as Cr), mg/l	BDL	Not Specified	0.05
20	Boron, mg/l	0.06	Not Specified	0.5
21	DO, mg/l	6.8	4-6	Not Specified
22	Total Hardness (as CaCO3), mg/l	158	Not Specified	200
23	Total Alkalinity, mg/l	142	Not Specified	200

Note : 1- Designated Best Use -Class A: Fit for Drinking Water without Conventional Treatment but after disinfection

2-Designated Best Use -Class B: Fit for Bathing (Organized)

3- Designated Best Use -Class C: Fit for Drinking Water with Conventional Treatment and disinfection

BDL = Below Detection Limit.
Source: Himachal Pradesh State Pollution Control Board

Table 6: Ground Water Quality in Subproject Area

Parameter	pH	EC µS/cm at 25°C	HCO3	Cl	SO4	NO3	F	Ca	Mg	Na	K	Total Hardness as CaCO3
Minimum	8.02	280	12	10	1	2	Tr	30	11	7.5	0.6	120
Maximum	8.17	360	153	125	85	22	0.16	48	17	14.0	5.8	165
Drinking Water Standard Value	6.5 - 8.5	No limit specified	No Limit specified	1000	400	45	1.5	200	100	No limit specified	No limit specified	600

Tr = traces. All parameters units in mg/l, except pH
Source: Government of India, Ministry of Water Resources, Central Ground Water Board.

22. 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. The surface water quality of Kunah Khad if compared with CPCB criterion of various uses, it fits in to class 'A'. This implies that Kunah Khad water is fit for drinking even without disinfection. The water sampling for Kunah Khad is about 5 km from the subproject site. The ground water samples were drawn by the Central Ground Water Board from different locations across the district. The nearest location is within 2 km from the subproject site. The water quality was monitored in the year 2013 for both ground and surface. Water quality monitoring will be conducted by the contractors prior to the start of construction works.

23. Based on 2012 data, the depth of water level during pre monsoon months ranged from 2.73 to 8.59 m below ground level. During post monsoon months, it ranged from 2.47 to 9.97 m below ground level. The stage of groundwater development in the entire Hamirpur district, where the subproject site located, is <70 % and falls under the safe category. This indicates that groundwater has not been overexploited and that it is restored regularly.

4. Geology and Seismology

24. 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.

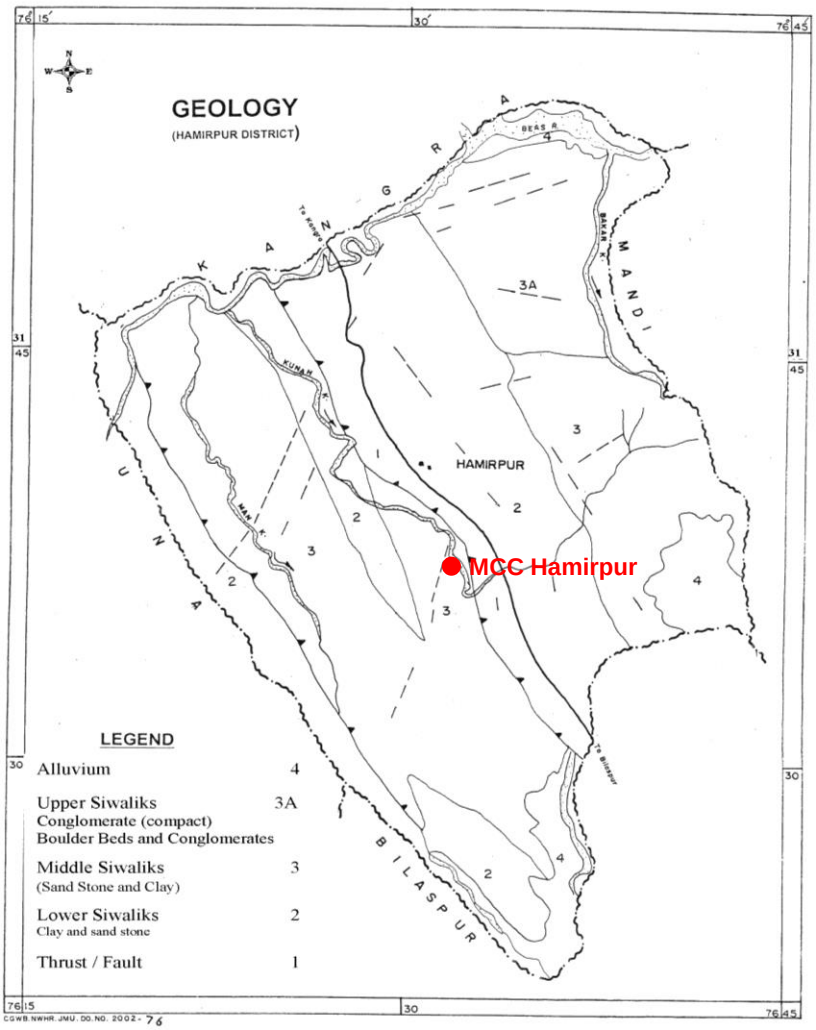
25. The Shivalik group in the Himachal Himalaya forms a parallel foot-hill belt in the sub-Himalayan zone, extending along the southern margin of the Palaeogene Sirmour group belt from the Ravi to the Yamuna. Within Himachal Pradesh, the Himalaya has maximum width between Hoshiarpur and Jogindernagar. 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 *Shivalik* (Nahan) in the Himachal Himalaya. This fact assumes importance because there is a tendency to ignore this normal relationship between the *Shivalik* 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 6**. There are two main geological horizons, namely post-tertiary and tertiary formations in Hamirpur district. The sequence of geological formation is given in **Table-7** below. Almost the entire Hamirpur district is underlain by the tertiary formations. These formations are represented by the Siwalik group of rocks (lower, middle and upper). Lower Shivaliks comprise of massive dark gray sandstone and

purple shales. These are conformably overlain by micaceous sandstone and gray clay/shales of middle Siwalik. Upper Shivaliks comprise of conglomerates, coarse-grained sandstones, inter bedded with grey and pink clays/silts and sand stone or pebbles beds. Conglomerates occupy the major part of the district. Conglomerates are compact and hard in northern part, while in south-eastern parts these are weathered and fractured.

Table 7: Geological Formations in Project Region

Age	Formation	Lithology
Post-Tertiary (Quaternary)	Alluvium	Sand, Gravels, Pebble, Boulders and Clay
Tertiary (Siwalik)	Upper	Conglomerates, Boulders and pebbly sandstone
	Middle	Micaceous sandstone and shale
	Lower	Hard, purple sandstone & shale

Figure 6: Geological Map of Project Region



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

26. 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 and the Atlas prepared by the Building Materials Promotion and Technology Council, Government of India and UNDP (IS 1893 [Part I: 2002]). All structures have been 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.

27. **Drainage**

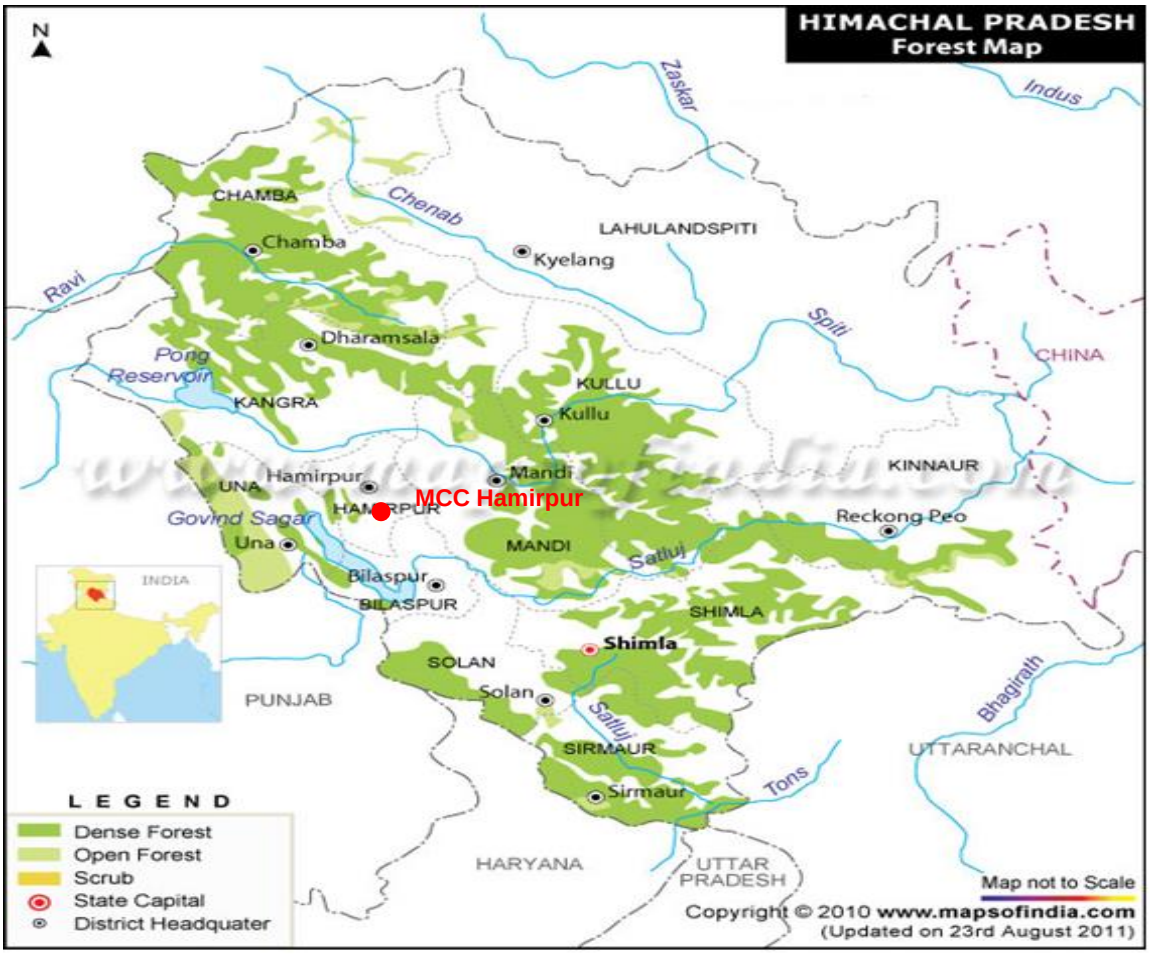
The sub-project site at Hamirpur is drained by Kunah Khad, a tributary of Beas River. No flooding issues have been reported at the subproject site as site is about 5 km from Kunah Khad. Further, being in hilly region all site has swift drainage.

B. Ecological Resources

1. Forests

28. Forests in Himachal Pradesh currently cover an area of nearly 37,691 km^2 (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. Reserve forests constitute 71.11%, protected forests cover 28.52%, and unclassed forests constitute 0.35% of the total forest area. Hamirpur district has about 43.65% (488 sq km of its geographic area (1118 sq km) under forests and most of it is managed by the Forest Department. The forests of the district can be classified into six main categories, namely (1) tropical dry deciduous forests; (2) sal forests; (3) chir forests; (4) oak forests; (4) deodar, fir, and spruce forests; and (5) the Alpine pastures. The forest cover map is shown in **Figure 7.**

Figure 7: Forest Cover Map of Himachal Pradesh



Source: Forest Department, Government of Himachal Pradesh.

29. 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.

30. 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. The topography and the agro- climatic conditions of Hamirpur district are quite suitable for the production of the various fruits. The topography of the district can be grouped into three categories namely high hill areas located at a higher elevation, mid hill areas and low lying valley areas. Fruits of different varieties, depending upon the terrain, climatic condition and

soil are grown in the district. The total area of district under horticulture is around 6639 hectares as per data of Economics and Statistics Department of GOHP.

31. 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.

32. Since the subproject site of MCC is located at the outer skirts of Hamirpur town, there are no protected areas within a 20 km radius. Around the subproject site, one only finds domesticated fauna (cow, goats, buffalo, mules, hens, dogs, cats, etc.) and common trees such as shisam, mango, neem, and sal. At the subproject site there is presence of Bamboo (*Bambusa vulgaris)* 4 groves, Kainth (*Limmonia acidissima*) -1 tree and Beul (*Grewia Optiva*) -1 tree. Out of these trees only Bamboo groves will be removed for the construction of MCC. Some common birds of the project area are Crow, Parrot, Gidh (Vulture), Koel, Neelkant (blue jay), and Kala teetar.

33. The major water body close to subproject site is Kunah. This is a perennial stream and tributary of Beas River. The aquatic micro- flora and fauna of this stream includes phytoplankton (Chaetophora sp. (clean water algae), Sphaerocystis sp. (Surface algae), chlorella sp. (fresh water algae), and Moss (wet & moist placed growing vegetation)), Zooplanktons (Protozoans Rotifers), and Benthos (Ephemeroptera, Plecoptera, Diptera, Hemiptera and Crustacea). The above information is based on Environmental Impact Assessment Study report of a mineral extracting industry in the project region. There are no endangered or rare species flora at and around subproject site as site is outerskirts of inhabited Hamirpur town.

2. Protected Areas

34. The list of protected areas (National Parks and Wildlife Sanctuaries) in Himachal Pradesh is given in **Table 8**. None of the protected areas are falling within Hamirpur. None of these protected areas are located within 20 km aerial distance from the proposed MCC site at Hamirpur.

Table 8: Protected Areas in Himachal Pradesh

Sl. No.	Sanctuaries	District	Area (km²)
1	Bandli	Mandi	32.11
2	Chail	Solan	16.00
3	Chandra Tal	Lahaul and Spiti	38.56+ (11.53 for consideration)
4	Churdhar	Sirmour	55.52
5	Daranghati	Shimla	171.50
6	Dhauladhar	Kangra	982.86
7	Gamgul-Siyabehi	Chamba	108.40
8	Kais	Kullu	12.61
9	Kalatop-Khajjiar	Chamba	17.17

Sl. No.	Sanctuaries	District	Area (km²)
10	Kanawar	Kullu	54.27
11	Khokhan	Kullu	14.94
12	Kibber	Lahaul & Spiti	2220.12
13	Kugti	Chamba	379.00
14	Lipa Asrang	Kinnaur	31.00
15	Majathal	Solan	30.86
16	Manali	Kullu	29.00
17	Nargu	Mandi	278.00
18	Pong Dam Lake	Kangra	207.59
19	Rakchham-Chitkul	Kinnaur	304.00
20	Renuka	Sirmour	4.00
21	Rupi-Bhaba	Kinnaur	503.00
22	Sechu-Tuan Nalla	Chamba	390.29
23	Sainj	Kullu	90.00
24	Shikari Devi	Mandi	29.94
25	Shimla Water Catchment	Shimla	10.00
26	Simbalbara	Sirmour	27.88
27	Talra	Shimla	46.48
28	Tirthan	Kullu	61.00
29	Tundah	Chamba	64.00
30	Water Supply Catchment	Shimla	10.00
National Parks			
1	Great Himalayan National Park	Kullu	765.00
2	Pin Valley National Park	Lahaul and Spiti	675.00
Conservation Areas			
1	Shilli Conservation Reserve	Solan	1.49
2	Shri Naina Devi Conservation Reserve	Bilaspur	17.01
3	Darlaghat Conservation Reserve	Solan	0.67

Source: Himachal Pradesh State Forest Department.

C. Economic Resources

1. Industries

35. Being a hilly state, Himachal Pradesh has few large industrial units. As shown in **Table 9** below, the Hamirpur district also mainly has micro, small, and medium enterprises focusing on agro-products, textiles, furniture, etc.:

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

NIC Code No	Type of Industry	Number of Units	Investment (lakh ₹)	Employment
20	Agro-based	333	110.24	433
22	Soda water	06	5.07	22
23	Cotton textile	-	-	-
24	Woolen, silk, and artificial thread-based clothes	37	5.48	66
25	Jute and jute-based	-	-	-
26	Ready-made garments and embroidery	31	7.4	91
27	Wood and wooden-based furniture	272	108.20	548
28	Paper and paper products	48	72.00	50
29	Leather-based	11	18.70	42.0
31	Chemical and chemical-based	6	2.10	15.0
30	Rubber, plastic, and petro-based	15	923.93	91.0
32	Mineral-based	-	-	-
33	Metal-based (steel fabrication)	233	62.61	297
35	Engineering units	-	-	-
36	Electrical machinery and transport equipment	-	-	-
97	Repairing and servicing	96	60.69	165
01	Others	322	102.36	602

Source: Government of Himachal Pradesh, District Industry Centre. Hamirpur

2. Transportation

36. The MCC site at Hamirpur is well connected by roads with all the important places in Himachal Pradesh like Shimla (142 km), Palampur (69.3 km), and Hamirpur (3 km). The nearest rail head at Una is 76 km away. The nearest airport from MCC subproject site is 83 km. No clearance or permission from Airport Authority of India (AAI) is needed as subproject site is significantly away from airport and MCC building is low height building (ground plus two floors).

3. Land Use

37. A study of the land use (Table 10) shows that majority of the district is under forest cover followed by land under cultivation. The land under non agricultural uses is also significant (15300 hectares). The land under double crop area is also significant. This is due to availability of water sources in the district. 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 and it is well within municipal council limits of Hamirpur town**.**

Table 10: Land Use Pattern of Hamirpur District

Land Use	**Area** (hectare)
Geographical area of district	110200
Area under forest, dense and open forest	18200

Misc. Tree, crops and Groves (Not included in net area sown)	0.0
Permanent Pastures & Other Grazing Lands	11500
Culturable Waste land	11000
Land put to Non- Agri- Culturable Uses	15300
Barren & Unculturable Land	11700
Current Follows	5300
Other Follows	1500
Net Area sown	35700
Net Area sown more than once	33200

Source: District Census Handbook Hamirpur District, 2011

38. Agricultural Development Agriculture is the main occupation of the people in Hamirpur district. However, intensive cultivation is not possible as significant part of the district is mountainous. Despite the hilly topography of the district the agro climatic conditions provide a range of potentialities for growing cash crops like off season vegetables, cereals, pulses and oil seeds. Among the cereals wheat, maize, rice and barley are extensively grown.

4. Electrification

39. There is 100 % electrification in rural and urban areas of Hamirpur district as per Statistical abstract published by Department of Economics and Statistics, GOHP for the year 2015-2016.

D. Social and Cultural Resources

1. Population and Communities

40. The Hamirpur district has a total area of 1,118 sq. km forming 2.01 per cent of the total area of the state. It ranks 12th in area amongst the districts of the state. According to Census 2011, the total population of Hamirpur district is 4,54,768 comprising 2,17,070 males and 2,37,698 females. This population of the district forms 6.62 per cent of the state population and rank at 8th place among the districts. Out of the total population of the district 93.09 per cent lives in rural areas while 6.91 per cent lives in urban areas. Rural population of the district is distributed among 5 Tehsil and 2 sub-Tehsil, whereas urban population is spread over to 4 towns. The total urban population in the district is 31,430 comprising 16,322 males and 15,108 females. The total rural population in the district comes to 4,23,338 consisting of 2,17,070 males and 2,37,698 females. Over all the district have 1,725 villages. The total rural population is distributed in 1,671 inhabited villages. Rests of the 54 villages have been returned as un-inhabited. The density of population in Hamirpur district comes to 407 per sq.km. Against the state density of 123 persons. At the sub-district level, the density of population varies between 583 in Bhoranj sub- district and 255 persons in Tira Sujanpur sub-district. In rural areas, the density of population works out 383 persons per sq. km. while in urban area it comes to 2,707 at the district level. There are 1,095 females for every thousand males in Hamirpur district. The sex ratios for rural and urban areas of the district are 1,109 and 926, respectively. The proportion of females is much higher in rural areas in comparison to urban areas of the district. As per Census 2011, Hamirpur district reported 3,58,091 persons as literates constituting 88.15 per cent of the total population. The proportion of male and female literates in the district is 94.36 and 82.62 per cent, respectively. The literacy rate is higher than the state average of

76.1%. Out of the total population of 4,54,768 of the district, 4,49,412 (98.82 per cent) have reported their religion as Hindu followed by 3,711 (0.82 per cent) as Muslim. Remaining Sikhs, Buddhist, Christian, Jain and other religions have a negligible representation in the district.

41. The mother tongue in Hamirpur district is Hindi. The other local languages such as Punjabi and Kangri are spoken by a very small fraction of population. The majority of the people are Hindu Brahmin, Rajputs, 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*, *pyjama*, and a woolen jacket used in winter. Women generally wear the *salwar kameez*.

2. Health Facilities

42. The GOHP run health facilities in Hamirpur district include 4 hospitals, 3 Community Health Centers and 29 Primary Health Centers. The Ayurvedic related health facilities include 5 hospitals, and 6 dispensaries. In addition to the above mentioned government run health facilities, there are many private run hospitals, nursing homes and clinics.

3. Education facilities

43. In the Hamirpur district, there are 489 primary schools, 120 middle schools, 156 secondary and senior secondary schools, 16 degree colleges (5 Government and 11 private) , 3 Engineering Colleges to provide quality education. In addition to this, there are many private owned schools, degree colleges, polytechnic institutes and Industrial Training Institutes.

E. Archaeological Resources

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

IV. ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

A. Environmental Impacts

45. 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 Hamirpur” including:

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

46. ADB’s Rapid Environmental Assessment checklist for Buildings was used while

screening the site and recommending mitigation measures (**Appendix 1**).

B. Location Impacts

47. The subproject site is located on unencumbered land owned by the Department of Labour and Employment (**Appendix 5**). No new land has been acquired for the subproject, nor has anyone been displaced in anticipation of the proposed ADB financed subproject. 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. No significant impacts can arise due to project location as the MCC building components will not impinge upon any area of ecological, archaeological or historical importance. The site of MCC is in outer skirts of Hamirpur town and within the municipal limits. Hence, there is no requirement for change of land use. The site photographs are shown in **Appendix 4**.

48. The MCC site is located within seismic zone V. and even a small magnitude earthquake may damage the MCC building.

C. Impacts during Design and Preconstruction Phase

49. As noted above, the proposed subproject site is owned by the Government of Himachal Pradesh. There are no issues arising due to land acquisition or involuntary resettlement. There is need to cut 4 bamboo groves. Based on the environmental screening of the subproject area, there are no significant adverse environmental impacts during the design and preconstruction phases.

D. Impacts during Construction Phase

50. All construction activities to be undertaken at the site 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.

51. Impact due to stock piles of construction materials. Improper stockpiling of construction materials in and around the MCC site could obstruct movement along access roads and nearby drainage. Hence, due consideration will be given for proper material storage MCC construction site. Stock piles will be covered to protect from dust and erosion. Waste materials will be disposed at identified and approved locations.

52. Disposal of construction waste. The construction waste could lead to untidy conditions at site and may find its way to local urban drains and natural streams and siltation and obstruction to natural flow in these drains and streams. In the proposed subproject, it shall be mandatory for the contractor to ensure proper disposal of the construction waste at the disposal site as designated by the PWD.

53. Quarry and/or borrow pits operations. Since the civil works are of a small size, all construction material will be procured from market ensuring these are from GOHP authorized sources. There will not be any need for direct procurement of stones and building material from quarries.

54. Increase in noise levels. Noise levels in the immediate proximity of MCC site 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 5%–10% of ambient noise levels. This increase will be felt up to a distance of 500 m only. This noise will be intermittent in nature, and will last only during the construction phase. The construction noise is not likely to be felt at residential houses near the MCC site as these are at more than 200 m distance. At the residential locations noise levels are not anticipated to exceed the stipulated limits of residential areas. But necessary monitoring of noise levels will be taken up as part of environmental monitoring plan.

55. Impacts on biodiversity during construction phase. No major impacts are expected on the biodiversity during the construction phase as the sub project site is open, and there is need to remove only 4 bamboo groves. Presence of local shrubs has also not been seen at the site. As part of compensatory plantation, 18 trees will be planted in the vacant space along the periphery of the MCC plot. Around 30 shrubs will also be planted along the internal roads. There are no endangered or rare species of flora and fauna at and around MCC site.

56. 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 6.**

57. Impact on cultural properties. The proposed subproject will not have any impact on any religious structure or any other structure of historical and/or cultural significance.

58. Groundwater. 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 the authorized 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.

59. Ambient air quality. Generation of dust is anticipated during transportation, excavation, and construction activities. Some dust and gaseous emissions will also be generated during the construction period from machines such as mixers, and vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include respirable and suspended particulate matter 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.

60. 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 transporting material, 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 the vehicle emission standards specified by the Government of India and ambient air quality standards specified by the Central Pollution Control Board.. The contractors will submit emission monitoring results as a compliance with environmental monitoring plan.

61. Construction waste. Some waste will be generated due to excavated earth material and waste from construction. Debris and excavated earth material can be reused subject to the approval of the PWD engineer during 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 construction site. All construction zones used and affected by the subproject will be left clean and tidy, at the contractor's expense as per the satisfaction the engineer.

62. 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 camps with all basic amenities such as potable drinking water supply and sanitation facilities (septic tanks and soak pit). Dust bins will be placed in adequate numbers. The EMP lays down some measures to address likely adverse impacts associated with the labor camp.

E. Environmental Impacts during Operation Phase

63. Since only guidance to the job seekers and facilitation to the industrial enterprises for organizing interviews at MCC will be undertaken, there will not be any adverse environmental impact during operation. The MCC design provides for adequate parking, accommodation, and safe disposal for waste water and solid waste. Toilet blocks with septic tank and soak pits have been included in the design. The solid waste generated at MCC during operation phase will be segregated. Its disposal will be integrated with Hamirpur town waste disposal. There may be generation of some waste on account of maintenance and operation of solar PV cell. The supplier of the solar PV cell will be responsible for collecting the waste for possible reuse and recycling. Since septic tanks have been proposed for waste water, therefore, regular maintenance and cleaning of these needs to be undertaken as part of MCC operations.

64. Given the relatively small size of the MCC, there will not be any significant vehicular increase on account of its operations. Most job seekers will be using public transport. A diesel generator will be required, but it will operate only during power cuts. The generator will be of the silent type, and will comply with the levels stipulated by the Central Pollution Control Board.

65. Safety measures. The design of the MCC 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 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 during any fire-related or other eventuality.
- During natural calamities, the operations will be stopped. The visiting public members and MCC 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.

66. Socioeconomic impacts. The MCC will have a positive development impact since it will provide guidance and counseling for career development to the skilled, trained and needy Himachali youth for getting appropriate employment. The MCC will also act as interface between the skilled youth and industry.

67. Flora and fauna. Since the MCC will be located within Hamirpur town, no adverse impact on fauna and flora is anticipated due to its operation. To enhance the natural look of the MCC, planting of shrubs and landscaping will be taken up along the pathways and vacant space. Eighteen trees will be planted in the vacant space between the boundary and building. About 30 shrubs will be planted on the side slopes of internal roads.

68. Emergency Plan for Accident and Natural Hazards- For operation phase onsite emergency plan will be prepared by the managers of MCC for minor accidents and fire. For natural calamities the Disaster Management Plan prepared by Department of Labour and Employment 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.

F. Description of Planned Mitigation Measures

69. Screening of environmental impacts is based on the magnitude and duration of the impact. **Table 11** 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 lands.

Table 11: 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 MCC building and ensure protection specially from earthquakes and other natural disasters	Permanent	Major	The design of MCC building has been done considering earthquake coefficient of zone V. The site is not on the bank of any river or local stream.	PWD
2: Design and Preconstruction 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	PWD

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				provisions, if necessary.	
2.2	Layout of components to avoid impact on the aesthetics of the site	Permanent	Major	Project components will not have any adverse impact on aesthetics of site as it involves construction of a building. Hence, no mitigation measures are warranted.	Not Applicable
2.3	Slope stability-related issues	Permanent	Minor	The MCC site is on plain land. 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	Design of proposed MCC will allow efficient drainage at the site and maintain natural drainage patterns	PWD
2.5	Integration of energy efficiency and energy conservation programs in design of MCC	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) • Provision of solar power generation	PWD
3: Construction Impacts					
3.1	Construction camp—location, selection, design and layout	Temporary	Moderate	The construction camp will be located within the MCC site. It will not affect the day-to-day activities of local residents. 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	Temporary	Moderate	Prior to commencement of site activities and	Contractor, PWD

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
	construction			mobilization on ground, the contractors will prepare a traffic circulation plan for safe passage of local traffic during the construction stage. This will include alternative access routes, traffic regulations, signages, etc. The contractors will get these plans approved from the PWD engineer The contractor will disseminate the traffic circulation plan around the sub project site.	
3.3	Impacts on flora and fauna	Temporary	Moderate	Conduct site induction and environmental awareness. Limit activities within the work area. Prepare site landscape and shrub or tree plantation plan (for 18 trees and 30 shrubs.)	Contractor, PWD
3.4	Site clearance activities, including delineation of construction area	Temporary	Moderate	The commencement of site clearance activities will be undertaken with due permission from the environment specialist of the PWD or HPKVN to minimize environmental impacts. All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures	Contractor, PWD
3.5	Drinking water availability	Temporary	Major	Sufficient supply of potable water will be provided and maintained. The drinking water will be obtained from the market through authorized tankers. This water will be stored in a tank of suitable size to ensure uninterrupted water supply	Contractor, PWD

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
3.6	Waste disposal	Permanent	Major	Location of disposal site for construction waste will be finalized by the environmental specialist of PWD or HPKVN. He will confirm that disposal of the material will not impact the water body or environmentally sensitive areas. He will also ensure that no endangered or rare flora is impacted by such materials.	Contractor, PWD
3.7	Stockpiling of construction materials	Temporary	Moderate	Stockpiling of construction materials does not impact nor obstruct drainage. Stockpiles will be covered to protect from dust and erosion.	Contractor, PWD
3.8	Soil erosion	Temporary	Moderate	Temporary slope protection may be required during construction at the excavated areas. Adequate measures will be taken up so that there is no soil erosion causing risks in the vicinity.	Contractor, PWD
3.9	Soil and water pollution due to fuel and lubricants, construction waste	Temporary	Moderate	The fuel storage and vehicle cleaning area will be stationed such that water discharge does not drain into the local drain. Soil and water pollution parameters will be monitored as per monitoring plan.	Contractor, PWD
3.10	Siltation of water bodies due to spillage of construction wastes	Temporary	Moderate	No disposal of construction wastes will be carried out into any streams near the subproject site. Extraneous construction wastes will be transported to the pre-identified disposal site for safe disposal.	Contractor, PWD
3.11	Generation of dust	Temporary	Moderate	The contractor will take every precaution to reduce the levels of dust at construction site. The site of MCC will be properly	Contractor, PWD

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				barricaded with Mild Steel Sheets to avoid dust and air pollution impacts in the surroundings.	
3.12	Emission from construction vehicles, equipment and machinery	Temporary	Moderate	Vehicles, equipment, and machinery used for construction will conform to the relevant standard (vehicular emission standards of Government of India and CPCB specified standards for equipment and machinery) 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) at 1 m distance. The site of MCC will be properly barricaded with Mild Steel Sheets to avoid noise impacts in the surroundings.	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 chemical will be strictly in accordance with the manufacturer's instructions. The engineer will be given at least 6 working days' notice of the proposed use of any chemical. A register of all	Contractor, PWD

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				toxic chemicals delivered to the site will be kept and maintained up to date by the contractor.	
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 waste be disposed of around the project site and especially in vacant plots 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 conform to all anti-malaria instructions given to him 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	Contractor, PWD

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				expense, to the satisfaction of the engineer.	
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.	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 maintained and emptied regularly.	DOLE
4.4	Waste generated on account operation and maintenance of Solar PV Cells	Intermittent	Minor	The supplier of solar PV cells will maintain the system. Any waste generated will be collected by the supplier for possible reuse and recycling. For this, necessary agreement will be prepared at the time of supply and installation.	DOLE
4.5	Onsite emergency plan for minor accidents and	Temporary	Major in case of natural	The Manager Hamirpur MCC will prepare onsite emergency plan for	Manger MCC for Onsite Emergency Plan

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
	mishaps and Disaster Management Plan for Natural Calamities		calamity and minor in case of accidents or mishaps at construction site	possible minor accidents and mishaps during operation phase. For natural calamities, the disaster management plan prepared by DOLE will be followed.	and DOLE for Disaster Management Plan

MCC = model career center, DOLE = Department of Labor and Employment, HPKVN = Himachal Pradesh Kaushal Vikas Nigam, LED = light emitting diode, NOC = no objection certificate, PWD = Public Works Department.
Source: Asian Development Bank.

G. Land Aquisition and Resettlement

70. The proposed MCC will be located on land owned by the DOLE. The land records showing ownership of DOLE-GOHP have been given in **Appendix-5**. Hence, there will not be any acquisition of private land. Since the proposed site is unencumbered land, there is no acquisition any private assets. At the subproject site, there are no squatters or encroachers. Hence, there is no requirement for any rehabilitation and resettlement.

V. ENVIRONMENT MANAGEMENT PLAN

A. Institutional Arrangements for Project Implementation

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

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

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

74. DOP will establish a PMU, headed by a full-time Project Director (PD) at HPKVN, and consisting of personnel drawn from relevant line departments and market. This PMU will also

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

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

76. The Project Management Consultant (PMC) is proposed to be engaged to provide support to the PMU in overall planning, risk management, implementation, monitoring and evaluation of projects under the HPSDP. The PMC will also assist the PMU and PIUs in meeting the relevant requirements of ADB, GOHP, and GOI for project implementation. The PMC will report to and work under the overall guidance of the PMU. The scope of services of the PMC's will include but not necessarily be limited to: (i) planning, reporting, and communication; (ii) establishment of procedures and systems; (iii) review and preparation of plans, manuals and reports; (iv) overall project management, monitoring and implementation of MIS; and (v) social, environmental, archaeological, occupational health and safety, community participation and gender action compliance monitoring.

77. The executing agency will engage one agency for the quality check and to meet timeline requirements. This agency will work under the PMU. The scope of services of the agency will include but not necessarily be limited to: (i) surveys, verification of feasibility studies and base maps; (ii) project planning and management support to the PIU; (iii) finalization of design criteria, preparation of manuals, guidelines and systems; (iv) preparation of detailed design and bid documents; and (v) construction management and contract administration.

78. In order to ensure effective implementation of safeguard related components in the project PIU at PWD will include a safeguard expert (an environmental cum social expert) in the team. This safeguard expert will ensure compliance with ESMF requirements, and implementation of environmental management plans of sub-projects at sites through contractor(s).

79. The PMC will also have safeguard experts in their team to support PMU in reporting, safeguards related documents preparation, disclosure and capacity building of PIUs, PMU and contractor(s). The PMU at HPKVN will establish a safeguard cell comprising of an environmental expert, and a social development expert.

80. The contractor at sub-project site will designate one officer as safeguard cum safety officer for the implementation of IEE and EMP requirements at site. The project implementation arrangement for safeguard compliance has been shown below in **Figure -8**.
Tables 12 to **14** present a generic EMP to guide the contractor in mitigating environmental impacts for pre construction, construction and operation phases of MCC.

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

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

82. **Responsibility for Reporting.** PMU at HPKVN will submit semi-annual reports on the implementation of the EMP to ADB. It will permit ADB to field environmental review missions to examine in detail, the environmental aspects of the project. Any major lapses in adhering to the ESMF and IEE and / or EMP for specific sub-project should be reported to ADB immediately. The PMC's Environment Safeguard Specialist will assist the PMU in finalizing the semi-annual and annual progress reports. For any none compliance observed corrective actions will be taken in a time bound manner. The cost for mitigating none compliance will be borne by the contractor as per contract provisions. In case of mitigation costs not coming in scope of contract, these will be met out of contingencies built in EMP cost and in overall project cost.

FGURE 8: PROJECT IMPLEMENTATION ARRANGEMENT FOR SAFEGUARD COMPLIANCE

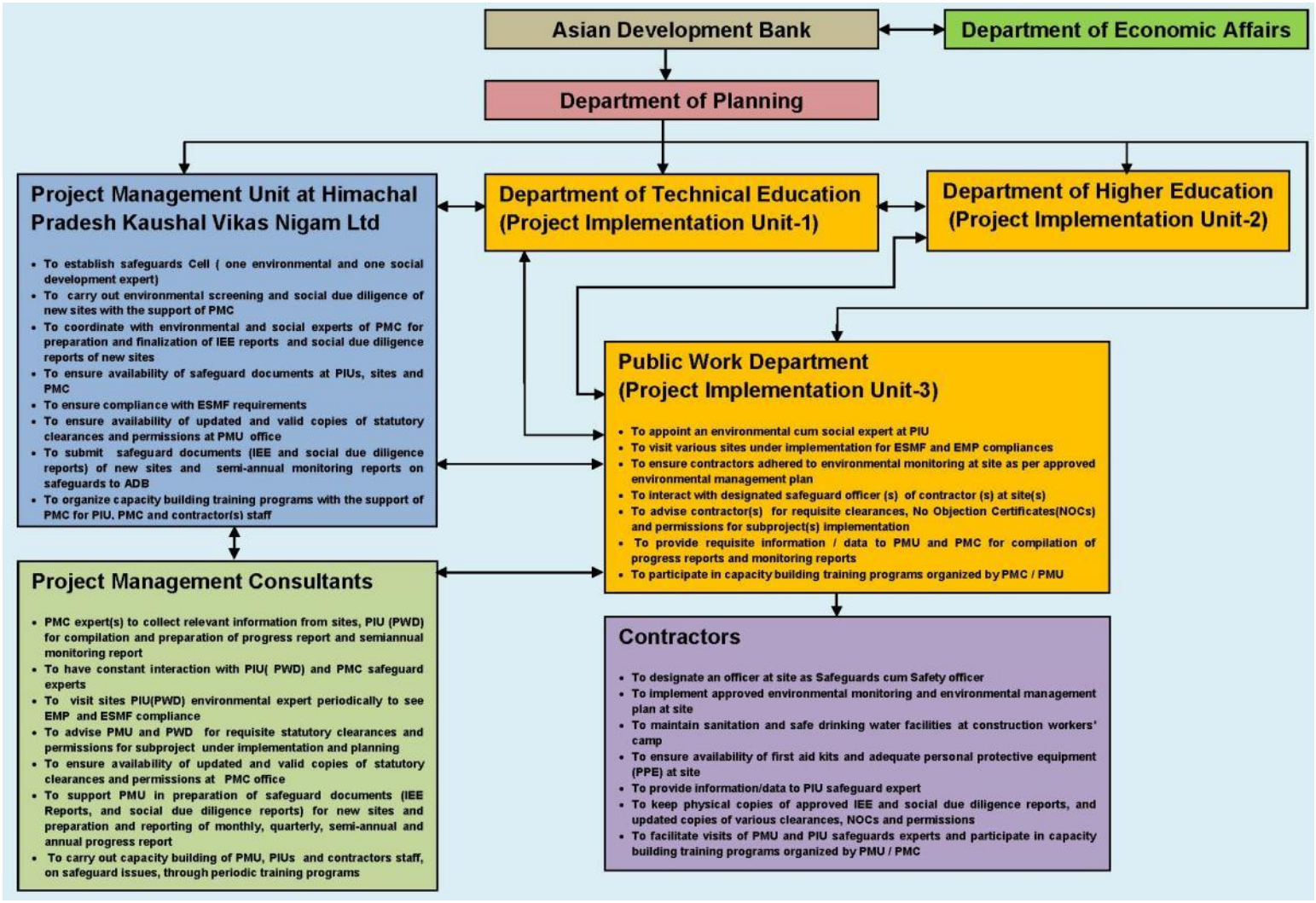


Table 12: Environmental Management Plan for Preconstruction Phase

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	Verification of design parameters	PWD	PWD	Review after completion of detailed project report	Project cost

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
		coefficient, appropriate wind load factor (corresponding to 39 m/s wind speed), and detailed design after carrying geotechnical investigations and topographic survey.					
2	Layout of components to avoid impacts on the aesthetics of the site	• The project components sighting will avoid impacts on the aesthetics of the site and surroundings, and the MCC building will blend well with local buildings.	MCC building exterior	PWD	PWD	Review after completion of detailed project report	Project cost
3	Slope stability related issues	• The plot area for MCC building is flat, however, during	Slope protection measures on side slopes of access path,	PWD	PWD	Review of recommended slope protection measures	Project cost

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
		construction any exposed slopes at excavated areas will be covered and slope protection measures will be provided specially at side slopes of internal roads.	internal road, etc.				
4	Increased storm water runoff from alterations of the site's natural drainage patterns due to landscaping, excavation works, construction of parking lot, and addition of paved surfaces	• Design of proposed MCC building enables efficient drainage of the plot and maintains natural drainage patterns. The storm water generated will be diverted to local drains through a properly constructed drainage system.	Arrangement for proper diversion of storm water runoff	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	• The detailed designs for the	Specifications of rain water harvesting	PWD	PWD	During finalization of detailed project	Project cost

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
	conservation programs in design of subproject components	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	structures, electrical fixtures, details of water heating system			report	

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
		efficient lighting fixtures (LED) - Provision of photovoltaic cells on roofs for solar power.					
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 MCC construction	Project cost
7	Establishment of baseline environmental conditions prior to start	• Conduct documentation of location of compone	Records and photographs	Contractor	PWD	Once prior to construction	Contractor

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Fund Sources for Implementing Mitigation Measure
	of civil works	nts, areas for construction zone (camp, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates.					
8	Utilities	• The locations and operators of utilities to be impacted should be identified and documented in detailed project report documents to prevent unnecessary disruption of services during the constructi	• 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	Contractor

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
		on 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.					
9	Social and Cultural Resources	• Consult Archaeological Survey of India or Himachal Pradesh State Archaeology	Chance find protocol	PWD	PWD	Prior to start of construction activities	Project cost

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
		Department to obtain an expert assessment of the archaeological potential of site. • Consider alternatives if the site is found to be of medium or high risk. • Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available. • Develop a protocol for use by the construction contractor					

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
		in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved.					
10	Construction camp—location, selection, design and layout	• Sighting of the construction camp 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 Safeguards Cell. The one having	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

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
		least impacts on the environment will be approved by the PWD and Safeguards Cell. As far as possible, the construction camp will be established on vacant land near the MCC plot to avoid impact on other land. • The storage location of construction materials shall be at the MCC site or any building close to the MCC site. • Construction sanitation facilities shall be adequately					

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
		planned.					
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	Traffic management plan	Contractor	PWD	During delivery of construction materials	Contractor

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Fund Sources for Implementing Mitigation Measure
		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 Departme					

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
		nt for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours.					
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	Health and safety plan	Contractor	PWD	During construction phase	Contractor

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
		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 construction of the MCC					

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
		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.					
14	Public consultations	• Continue information dissemination, consultations, and involvement or participati	Disclosure records; consultations	PWD	PWD	• During update of IEE report • During preparation of site- and activity-specific plans as	Project cost

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
		on of stakeholders during project implementation.				per environmental management plan • Prior to start of construction • During construction	

MCC = model career center, IEE = initial environmental examination, NOC = no objection certificate, PIU = project implementation unit, PWD = Public Works Department.
Source: Asian Development Bank.

Table 13: Environmental Management Plan for 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	Construction camp sanitation facilities	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		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.					
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 inconvenie	Safe movement of traffic	Contractor	PWD	Every day during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		nced. • The contractor with support of PIU will disseminate these information and circulation plan at the site and at key access roads to the MCC site.					
3	Site clearance activities, including delineation of construction areas	• Only ground cover or shrubs that directly affect the permanent works or necessary temporary works shall be removed (4 Bamboo groves) with prior approval from the environmental expert of the Safeguards Cell. • All areas used for temporary construction operations will be subjected to complete	Preconstruction records of sites and vegetation in area of construction	Contractor	PWD	Duration of site preparation	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		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.					
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. No public supply source in the vicinity of sub-project will be used for drinking or construction	Water supply source and availability of water, source of water used by the tankers	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		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. The original source of the water supplied by the tankers will be recorded.					
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	Waste disposal sites, waste management plan	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		in consultation with local civic authorities. • The environmental specialist of PWD shall approve these disposal sites after conducting a joint inspection on the site with the contractor. • Contractor shall ensure that waste shall not be disposed of near natural streams in the surroundings of the site and along the access path.					
6	Stockpiling of construction materials	• Stockpiling of construction materials will be done in such a way that it does not impact and obstruct the	Subproject stockpiling sites	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		drainage. • Stockpiles will be covered to protect from dust and erosion.					
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.	Source of water used by the tankers	Contractor	PWD	Regularly during construction phase	Contractor fee
8	Soil erosion and water	• Slope protection	Locations of slope	Contractor	PWD		Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
	ponding on account of excavation	measures will be undertaken as per design to control soil erosion especially on side slopes of access and internal roads. • The excavation works will be avoided during monsoon months to avoid soil erosion, stagnation of water, and vector - borne diseases.	protection				
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.	Subproject sites	Contractor	PWD	Regularly during construction phase	Contractor fee
10	Water pollution from fuel and lubricants	• The contractor shall ensure that all	Vehicle parking, refueling sites, oil interceptor	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		construction vehicle parking locations; fuel and lubricants storage sites; vehicle, machinery, and equipment maintenance and refueling sites shall be located at least 500 m away from the natural streams. • Contractor shall ensure that all 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. • Wastewater from vehicle parking,	functioning				

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		fuel storage areas, workshops, wash down, and refueling areas shall be treated in an oil interceptor before discharging it on land, or into surface water bodies, or into other treatment system.					
11	Soil pollution due to fuel and lubricants, construction wastes	• The fuel storage and vehicle cleaning area will be stationed such that spillage of fuels and lubricants does not contaminate the ground. • Soil and pollution parameters will be monitored as per monitoring plan.	Vehicle maintenance and parking area, soil quality monitoring results	Contractor	PWD	Regularly during construction phase	Contractor fee
12	Siltation of water bodies due to	• No disposal of constructio	Water bodies especially	Contractor	PWD	Regularly during constructi	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
	spillage of construction wastes	n 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.	natural springs near subproject site			on phase	
13	Generation of dust	• The contractor will take every precaution to reduce the levels of dust at construction sites. Water will be sprayed as required, on locations of excavations, internal unfinished roads/walk ways and locations of sand and sub grade storages. The water for spraying	Subproject site, air quality monitoring results, water spray records	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		will be used from the water stored for construction. The water spray records will be maintained at site. • All filling works are to be protected or covered in a manner to minimize dust generation. In order to minimize dust impacts, MCC site will be protected through MS sheet barricades. • The air quality monitoring will be conducted as per monitoring plan					
14	Emission from construction vehicles, equipment and machinery	• All vehicles, equipment, and machinery used for construction shall conform to	Pollution under control certificates of vehicles and machinery	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		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 for all vehicles and machinery used during the contract period, which shall be produced for verification whenever required.					

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
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 crushing, operation of diesel generator sets, use	Certificates of vehicles conforming noise standards, noise monitoring results	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		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					

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		construction site will be properly barricaded through MS sheets to avoid noise impacts in the surroundings of MCC site.					
16	Impacts on flora and fauna	• Conduct site induction and environmental awareness. • Limit activities within the work area. • Plant trees and shrubs in the area/space marked for plantation in the layout.	Record Barricades along excavation works. Note trees and shrubs planted by the project.	Contractor	PWD	Regularly during construction phase	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.	Data on available personal protective	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		• Workers engaged in welding works will be provided with welder's protective eye shields. • The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The PWD will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the contractor.					
18	Disposal of construction waste, debris, cut material	• The contractor shall confirm that safe disposal of the	Disposal site	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		construction waste will be ensured in the pre-identified disposal locations. • In no case will any construction waste will be disposed of around the project site indiscriminately.					
19	Safety measures during construction	• Adequate safety measures for workers during handling of materials at site will be taken up. • The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger to workers from accidental injuries, fire, etc. First aid	Records of availability of personal protective equipment, availability of first aid kits	Contractor	PWD	Regularly during construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		treatment will be made available for all injuries likely to be sustained during work. • The contractor will conform to all anti-malaria instructions given to him by the engineer.					
20	Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities	1-The onsite emergency plan will be prepared by the contractor in consultation with PWD and PMC. 2- 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	Contractor
21	Clearing of construction of camp and restoration	• Contractor to prepare site restoration plans for approval by the	Restoration plan, and records of preconstruction of temporary sites	Contractor	PWD	End of construction phase	Contractor fee

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		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.					

MCC =model career center, NOC = no objection certificate, PIU = project implementation unit, PWD = Public Works Department.
Source: Asian Development Bank.

Table 14: 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	Maintenance schedule of MCC building and facilities drawn up	DOLE	HPKVN	Every year during tourist season	DOLE

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		integrated with Hamirpur City waste disposal. Septic tanks will be maintained and regularly emptied.					
3	Natural disasters	• Necessary procedures to be followed by the visitors, MCC staff and trainees during the natural disasters shall be written at prominent locations.	Warnings of disasters by the Meteorological Department	District administration	HPKVN	During disasters	Government of Himachal Pradesh
4	Waste Generation on account of maintenance and operations of solar PV Cell	• The solar PV cell will be maintained and operated by the supplier. Any waste generated will be taken by the supplier	Waste generated from the operation and maintenance of solar PV cells	DOLE and supplier of solar PV cells	HPKVN	During entire operation phase	DOLE

Sl. No.	Environmental Issues	Mitigation Measures	Parameter / Indicator for Compliance	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		for possible reuse and recycle. For this, necessary agreement will be made at the time of supply.					
5	Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities	The Manager of MCC Hamirpur 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 Hamirpur	DOLE	Mock Drills every quarter	MCC operation cost

MCC = model career center, DOLE= Department of Labor and Employment, HPKVN = Himachal Pradesh Kaushal Vikas Nigam, PIU = project implementation unit, PWD = Public Works Department.
Source: Asian Development Bank.

C. Emergency Response Plan

83. The Government of India enacted the Disaster Management Act in 2005. To implement this Act, the National Disaster Management Authority has been established at the central level and State Disaster Management Authorities (SDMA) was established in each state including Himachal Pradesh. The Chief Minister is the chairman of Himachal Pradesh SDMA.

84. As per Section 40 of the Disaster Management Act, 2005, each government department, in conformity with the guidelines laid down by the SDMA, shall draw up their own disaster management plans.

85. Accordingly, a general disaster management plan for the entire state was prepared by the Public Works Department (PWD) in 2015.

86. Similarly, the Department of Labor and Employment prepares disaster management plans focusing on their own facilities falling in different parts of the state.

87. These plans prepared by PWD and DOLE cover natural calamities including earthquakes, floods, cloud bursts, landslides, and avalanche as relevant. They also lay down clear procedures which have to be followed during natural calamities.

88. Further, all public and private structures have to be designed on the basis of the seismic zoning and structural engineering standards prescribed by the Bureau of Indian standards and the provisions of India's National Building codes. These codes cover all aspects of building construction including administrative regulations, development control rules; fire safety requirements; stipulations regarding materials, structural design and construction (including safety).

89. Himachal Pradesh has adopted robust standard operating procedures (SOP) for responding to any disaster. It has also established an incident response system, which is activated after any event for search, evacuation, rescue, relief and rehabilitation. The. SOP lays down, in a comprehensive manner, the specific actions required to be taken by various departments and agencies of Government of Himachal Pradesh, as well as organizations under the control of Government of India for responding to natural disasters. The SOP covers the preparedness, early warning, response, relief and restoration phases of disaster management for effective and efficient response.

90. During the construction phase (for a period of 24 months), the MCC at Hamirpur will be under PWD's jurisdiction. Hence, PWD will be responsible for ensuring that the civil contractors follow relevant building codes and safety norms.

91. During the operation phase, the MCC will come under DOLE's jurisdiction. Therefore, it will be responsible for following the relevant aspects of the disaster management plan prepared by the DOLE Department Authorities.

92. Hence, instead of preparing a separate emergency response plan for the project or any sub-project (and might be redundant exercise), all statutory provisions of GOHP and the Government of India, including those pertaining to disaster mitigation and response requirements, needs to be adhered to.

D. Environmental Monitoring Plan

93. Environmental monitoring (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 preconstruction and post construction 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.

94. An EMP has been prepared to ensure the effective implementation of mitigation measures to address all the environmental issues during construction 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 15**.

Table 15: Monitoring Plan for MCC Hamirpur Subproject at Preconstruction, Construction, and Operation Phases

Sl. No.	Field (environmental attribute)	Phase	Parameters to be Monitored	Locations	Frequency	Responsibility	Cost (Rs/$)
1	Air Quality	During preconstruction phase	Nitrogen oxide, sulfur dioxide, carbon monoxide, particulate matter (both 10 micrometers and 2.5 micrometers or less in diameter)	MCC construction site	Once in the preconstruction phase to establish baseline	Contractor through approved monitoring agency	Rs130,000/ $2,000
		During construction phase			Once in every 3 months (except monsoon season) during construction phase (24 months construction phase)		
		Operation phase			Once every season except during monsoon season during first 2 years		
2	Water quality	During preconstruction phase	Total dissolved solids, total suspended solids , pH, hardness, biochemical oxygen demand, fecal coliform	MCC construction site groundwater	Once in preconstruction phase to establish baseline	Contractor through approved monitoring agency	Rs130,000/ $2,000
		During construction phase			Once in every 3 months (except monsoon season) during construction phase		
		Operation phase			Once every season except during monsoon season during first 2 years		
3	Noise levels	During	Noise	MCC	Once in	Contractor	Rs39,000

Sl. No.	Field (environmental attribute)	Phase	Parameters to be Monitored	Locations	Frequency	Responsibility	Cost (Rs/$)
		preconstruction phase	quality as per National Ambient Noise Standards on dB(A) scale	construction site	preconstruction phase to establish baseline	through approved monitoring agency	/ $600
		During construction phase			Once every 3 months (except monsoon season) during construction phase		
		Operation phase			Once every season except monsoon season for first 2 years		

MCC = model career center.
Source: Asian Development Bank.

E. Summary of Site- and Activity-Specific Plans

95. **Table 16** summarizes site- and activity-specific plans to be prepared as per EMP tables.

Table 16: Environmental Management Plan—Site and Activity Plans and Programs

Preparation Phase	Specific Plan/Program	Purpose	Responsible for Preparation	Responsible for Implementation
Preconstruction phase	Environmental monitoring program as per detailed design	Indicate sampling locations, methodology and parameters	PWD	Contractor
Construction phase	Erosion control and revegetation plan	Mitigate impacts due to erosion	Contractor	Contractor
Detailed design phase	List and maps showing utilities to be shifted	Utilities shifting	PWD during preliminary stage; contractor as per detailed design	Contractor
Detailed design phase	Contingency plan	Mitigate impacts due to interruption of services during utilities shifting	Contractor	Contractor
Preconstruction	Chance find protocol	Address archaeological or historical finds	PWD	Contractor
Preconstruction phase	List of preapproved sites	Location/s for work camp, areas for stockpile, storage and disposal	PWD	Contractor
Preconstruction phase	Waste or spoil management plan	Mitigate impacts due to waste generation	Contractor	Contractor
Construction phase	Traffic management plan	Mitigate impacts due to transport of materials and pipe-laying works	Contractor	Contractor
Construction phase	Health and safety plan	Occupational health and safety	Contractor	Contractor
Preconstruction phase	Spill prevention and containment plan	Mitigate impacts of accidental spills of oil, lubricants, fuels, concrete, and other hazardous materials	Contractor	Contractor

PWD = Public Works Department.
Source: Asian Development Bank.

96. An indicative traffic management plan is attached in **Appendix 6.**

F. Capacity Building

97. In addition to the primary objective of skills enhancement of Himachali youth, the current subproject will also raise awareness about environmental conservation among trainees, implementing agencies, and local communities. The project will have the opportunity to build capacity in environment protection for the abovementioned 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 17**.

Table 17: 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 subproject, PIU staff and HPKVN PMU staff	½ working day	Environmental specialist of project management consulting firm
Session 1	• Environmental impacts due to subproject 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 Labor and Employment, HPKVN = Himachal Pradesh Kaushal Vikas Nigam, PIU = project implementation unit, PMU = project management unit, PWD = Public Works Department.
Source: Asian Development Bank.

G. Environmental Budget

98. Most of the mitigation measures require the MCC contractor to adopt good site practices, which should be part of 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 18.**

Table 18: Environmental Management and Monitoring Costs
(Rupees)

Monitoring Component	Rate	Amount	Source of Fund
PRECONSTRUCTION AND CONSTRUCTION PHASE			
Air Quality One location at MCC construction site, thrice a year (one sample at pre-construction and six samples during construction phase; total: seven samples)	10,000	70,000	Contractor
Water Quality One ground water sample from MCC construction site (one sample at pre-construction and six samples during construction phase; total: seven samples)	10,000	70,000	Contractor
Noise Quality One location at MCC site (one sample at preconstruction and six samples during construction 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 Construction Phase Monitoring Cost		**161,000**	**Contractor**
OPERATIONS & MAINTENANCE (O&M) PHASE			
Air Quality One location at MCC site, 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 site, 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 site, thrice a year, for first 2 years (three samples a year, total of six samples)	3,000	18,000	PMU
Capacity Building Expenses (five sessions)	90,000	450,000	PMU

Monitoring Component	Rate	Amount	Source of Fund
Total O&M Phase Monitoring t and Capacity Building Cost		**588,000**	**PMU**
Total Cost		**749,000**	
Contingencies @ 5%		**37,450**	
Total Budgeted Cost		**786,450 (around 800,000)**	

MCC = model career center, PMU = project management unit.
Source: Asian Development Bank.

H. Environmental Monitoring and Reporting

99. The PWD will monitor and measure the progress of EMP implementation while supervising civil construction 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 PMU, 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.

100. 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.

VI. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A. Process for Consultations Followed

101. 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.

102. .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, DOLE, and other stakeholders such as People seeking employment at Hamirpur Employment Exchange and PWD office Hamirpur. The process of consultations was taken up as an integral part of the subproject in accordance with the following objectives:

(i) Educate the general public, especially potentially impacted or benefited communities, individuals, and stakeholders about the proposed subproject activities.
(ii) Familiarize the people with technical and environmental issues of the subproject for better understanding.
(iii) Solicit the opinion of the communities and individuals on environmental issues and assess the significance of impacts due to the proposed development;

(iv) Foster cooperation among officers of PIU, the community, and the stakeholders to achieve a cordial working relationship for smooth implementation of the subproject.
(v) Identify the environmental issues relating to the proposed activity.

103. During the consultations, skilled youth seeking employment demanded better facilities, ease of registration for employment and better counseling from employment exchange officials for the employment and officials. The subproject building construction will lead to infrastructure creation for facilitation of employment for the skilled and educated Himachali youth. They demanded fast implementation of the subproject. The dates of consultations and stakeholders consulted are summarized in **Table 19**.

Table 19: Stakeholder Consultations and Dates

Sl. No.	Stakeholders Consulted	Dates of Consultations
1	Himachal Pradesh Forest Department	23 December 2015
2	Department of Rural Development, Department of Labor and Employment and Department of Higher Education	21 December 2015
3	Himachal Pradesh Pollution Control Board	23 December 2015
4	Department of Environment, Government of Himachal Pradesh; HPKVN; and Department of Planning	14–15 March 2016
5	Department of Technical Education, Government of Himachal Pradesh	12 December 2015 and 16–17 March 2016
6	Local public at MCC site at Hamirpur	6 May 2016

HPKVN = Himachal Pradesh Kaushal Vikas Nigam.
Source: Asian Development Bank.

104. The views, comments, and suggestions of stakeholders and their incorporation in project design are presented in **Tables 20 and 21.** The records of consultations (list of participants with signatures) and consultation photographs are given in **Appendix 7.** It is clear that most of the suggestions of stakeholders have been taken care in the project design.

Table 20: Views, Comments, and Suggestions of Stakeholders at Subproject Site and Addressal in Project Design

Sl. No.	Place	Date	Stakeholders	Issues Discussed	Outcome of Discussions and Consideration in Project Design and Implementation
1	Model Career center site, Hamirpur	6/5/2016	Youth seeking employment, people residing near the site and employment exchange officials	• MCC proposal • Project benefits • Implementation schedule • Environmental and social impacts during	• The participants welcomed the project consultants. They emphasized that there is urgent need for promoting skills and livelihood development in the State. GOHP should focus on creating employment for local youth. • The youth visiting the existing employment exchange at Hamirpur for registration and seeking employment told the consultants that there is urgent need of new office for employment exchange as current office is very small and at a very congested location.

Sl. No.	Place	Date	Stakeholders	Issues Discussed	Outcome of Discussions and Consideration in Project Design and Implementation
				project implementation • Disruption to utility services	• The local youth suggested that there is need to provide effective guidance before interview and details about the organization conducting interview for employment should be explained. The ADB consultants team replied that the new MCC building proposed will have counseling rooms and adequate space for carrying activities for the employment exchange. The employment exchange at new building will display all details about the company visiting for conducting interviews. There will be effective guidance to the job seekers. . • The ADB environment and social safeguard consultant asked the participants about suggestions to reduce pollution during construction and operation of MCC. 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. • Local participants demanded that during construction, local contractors should be hired so that there is generation of employment. The consultants replied that there will be a transparent bidding process. This will be done by the PWD. The local contractors should participate in the bid subject to qualifying the qualification criteria.

Source: Asian Development Bank.

Table 21: 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	Conservator Forest cum Nodal Officer CAMPA, State Forest Department	Clearances, permissions and No Objection Certificates - requirements from the State Forest	• The ADB Environment and Social Safeguards consultant briefly explained the project concept to the state department officials. • Officials advised that for any site falling under forest land, clearance is required either under the Forest

Sl. No.	Place and date	Stakeholders	Issues Discussed	Outcome of Discussions and Consideration in Project Design and Implementation
			Department and suggestions for the project	(Conservation) Act, 1980 or under the Schedule Tribe and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. • For vocational training purposes, the Government of Himachal Pradesh can give clearance up to 1.0 hectare land. If application is submitted under the Forest (Conservation) Act, 1980, then the net present value of the land and cost for compensatory forestation are to be paid by the state government. • If the application is submitted under Forest Rights Act 2006, then for educational institutes, payment of net present value and compensatory afforestation costs are exempted for the land up to 1.0 hectare. The clearance can also be issued at the level of the divisional forest officer. • The Forest officials suggested that application may be made under the Forest Rights Act for faster clearance if any site falls under the forest. • The ADB 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. • Only the proposed women's polytechnic site at Rehan in Kangra district falls within forest area. Under the Forest (Conservation) Act, 1980, clearance is required for forest land diversion. This has been received as of 6 July 2016. The land has also been transferred in the name of DOTE.
2	Shimla, 23/12/2015	Senior Environmental Engineer, Himachal Pradesh Pollution Control Board	Clearances and permissions required from HPPCB and Department of Environment	• The ADB consultant provided an overview on the Himachal Pradesh Skill Development Project (HPSDP). 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,

Sl. No.	Place and date	Stakeholders	Issues Discussed	Outcome of Discussions and Consideration in Project Design and Implementation
				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 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 upgrade, locations of RLCs and CLCs selected at ITI campus and site of proposed Women Polytechnic at Rehan in Kangra district	• The ADB 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 and 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. • The ADB consultant suggested that DOTE should submit land ownership details and revenue records for all sites planned under the ADB funding for due diligence. He noted that DOTE should also start the process of getting clearances from the Forest Department for the site in Rehan, Kangra, where the Women's Polytechnic is planned.
4	Shimla, 21/12/2015	Department of Labour and Employment	Locations of MCCs planned, approximate area required for MCCs	• The ADB 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 the Government of India guidelines, the built- up area of around 3,000 sq feet is needed for MCCs. • 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	Locations of proposed RLCs, environmental	• The ADB Environment and Safeguard consultant enquired about probable locations of RLCs planned.

Sl. No.	Place and date	Stakeholders	Issues Discussed	Outcome of Discussions and Consideration in Project Design and Implementation
			and social safeguard issues, tree cutting, etc.	• 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. • The ADB consultant also suggested that sites should be at least 300 m away from buildings and monuments of heritage importance and those declared as protected monuments by the State Archaeological Department or by the Archaeological Survey of India. The officials noted the suggestions.

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.
Source: Asian Development Bank.

B. Consultation and Information Disclosure

105. **Consultation.** To ensure continued public and stakeholder participation in the subproject life cycle, periodic consultations should be held at subproject site. This participatory process will ensure that all views of the people are adequately reviewed and suitably incorporated in the design and implementation process.

106. 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 DOLE, HPKVN, Government of Himachal Pradesh, 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 in local newspapers, ahead of initiation of implementation of the subproject, providing information on the project, start dates, etc. The notice will be issued by the PMU in local newspapers 1 month ahead of the implementation works. This will create awareness of the project implementation among the public.

C. Grievance Redress Mechanism

107. The affected person(s)/aggrieved party can give their grievance verbally or in written to the local site office of MCC 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 (GRC) 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.

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. The PIU and sub-project site office shall keep records of all grievances received including contact details of complainant, date of receiving the complaint, nature of grievance, agreed corrective actions and the date these were affected and final outcome. For this a complaint register will be maintained at each sub-project site. The grievance redress process is shown below **Figure-9.** The cost for functioning of Grievance Redress Mechanism will be accounted for in project cost as part of PMU or PIU functioning.

Further, person(s) / aggrieved party who are, or may be, adversely affected by the subproject 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

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.

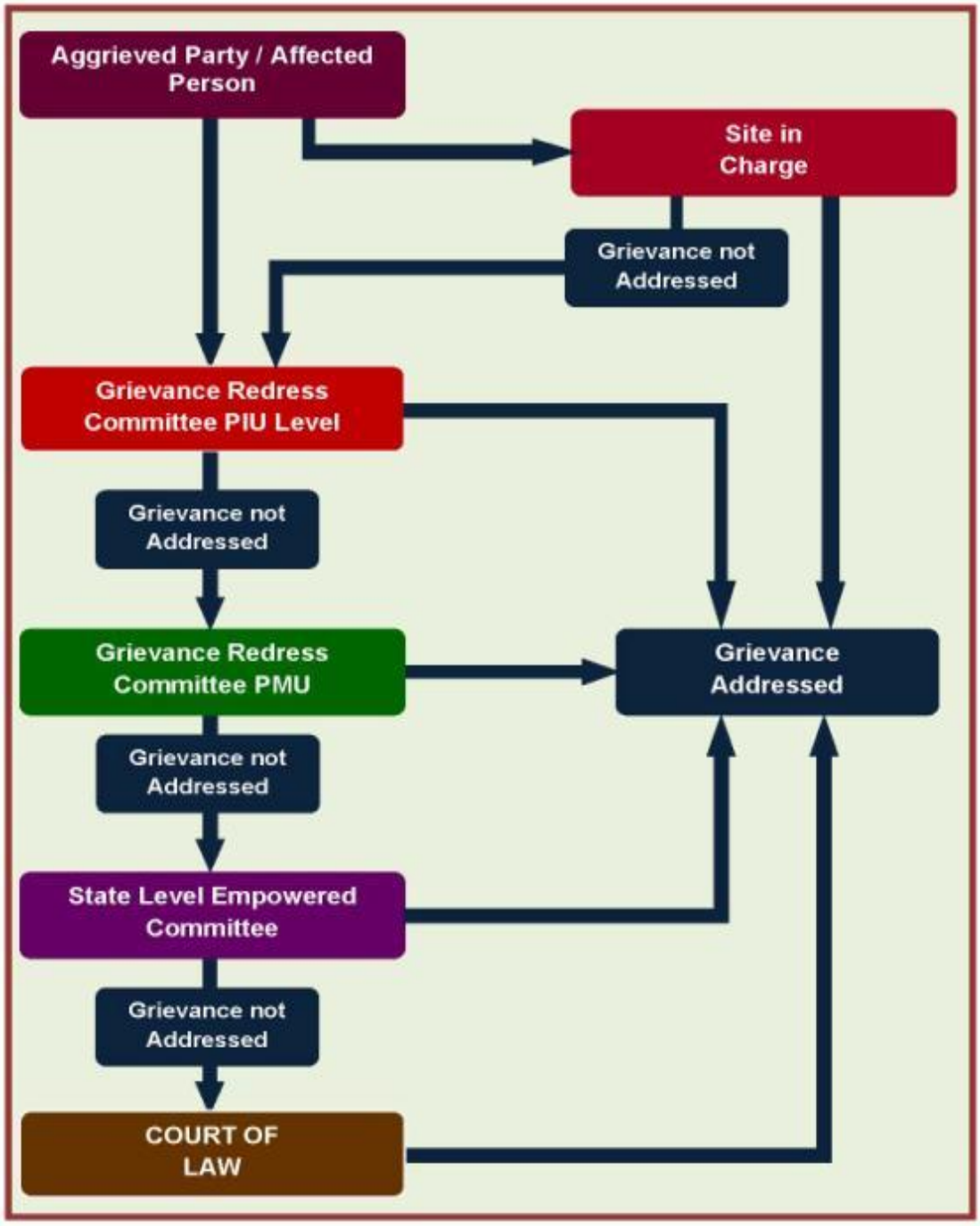
GRC at PMU. There shall be one GRC in PMU. The matters not resolved by the GRC at PIU level within one month shall come under GRC at PMU. GRC at PMU will include the Managing Director, HPKVN, and Project Manager PIU (PWD), safeguard specialists (Environmental and Social) of the PMU, and one representative from concerned Department (DOTE/DOLE/DOHE). 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 after filing compliant either at PIU level or at PMU level.

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.

Figure 9: Grievance Redress Mechanism of the Himachal Pradesh Skill Development Project



PIU = project implementation unit, PMU = project management unit.
Source: Asian Development Bank.

VII. FINDINGS AND RECOMMENDATIONS

108. 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 will support skilled and educated youth in seeking employment in the state with proper counseling.

109. This IEE has identified minor likely impacts on water, air, and noise during the construction 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.

110. 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.

VIII. CONCLUSIONS

111. 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: ENVIRONMENT CATEGORIZATION

A. Instructions

(i) The project team completes and submits the form to the Environment and Safeguards Division (RSES) for endorsement by RSES Director, and for approval by the Chief Compliance Officer (CCO). OM F1/OP on *Safeguard Review Procedures* (paras. 4-7) provides the requirements on environment categorization.
(ii) The classification of a project is a continuing process. If there is a change in the project components or/and site that may result in category change, the Sector Division submits a new form and requests for recategorization, and endorsement by RSES Director and by the CCO. The old form is attached for reference.
(iii) In addition, the project team may propose in the comments section that the project is highly complex and sensitive (HCS), for approval by the CCO. HCS projects are a subset of category A projects that ADB deems to be highly risky or contentious or involve serious and multidimensional and generally interrelated potential social and/or environmental impacts.

B. Project Data

Country/Project No./Project Title	:	**India/ 49108-002/ Himachal Pradesh Skill Development Project**
Department/ Division	:	SARD/SAHS
Processing Stage	:	Fact-finding mission completed (20−27 June 2016)
Modality	:	

[×] Project Loan [ ] Program Loan [ ] Financial Intermediary [ ] General Corporate Finance
[ ] Sector Loan [ ] MFF [ ] Emergency Assistance [ ] Grant
[ ] Other financing modalities:

C. Environment Category

[×] New [ ] Recategorization — Previous Category [ ]

[ ] tegory A	[×] Category B	[ ] Category C	[ ] Category FI

D. Basis for Categorization/ Recategorization (please. attach supporting documents):

[×] Rapid Environmental Assessment Checklist
[×] Project and/or Site Description
[×] Other:
1. Environmental and Social Management Framework
2. Initial Environmental Examination (Subproject – Model Career Center at Hamirpur in Hamirpur District of Himachal Pradesh)

E. Comments

Project Team Comments	**SDES Comments**
The HPSDP project involves construction of new training facilities and upgrade of some existing buildings to improve the access of technical and vocational education and training (TVET) facilities to the underserved areas of Himachal Pradesh. The new facilities include construction of 7 CLCs, 7 RLCs and 1 polytechnic for women. Eleven existing employment exchanges will be upgraded into model career centers (MCCs). One new MCC is also planned at Hamirpur. The proposed MCC will occupy built up area of 683.24 m2 and will have three floors. Since MCC building is part of HPSDP and will peruse counseling and	

career guidance to the educated youth of Himachal, according to the environmental rules and regulations of India and Himachal Pradesh, there will not be requirement for any prior environmental clearance. The land for the sub project has already been transferred in the name of DOLE and is in possession of DOLE. The subproject site is free from encumbrances. The subproject site is not located within core and buffer zones of national parks, sanctuaries, tiger reserves, and biosphere reserves; or within 100 meters from the boundary of protected monuments of archaeological importance. Hence, the subproject is category B with respect to environment. The ADB consultant has taken relevant government staff to the MCC site, and shown them how to use ADB's rapid environmental assessment checklists. He has also conducted workshops on ADB's safeguard policies and processes with the implementing agencies including the Public Works Department, which will oversee the civil works.	

F. Approval

Proposed by: Shamit Chakravarti Project Team Leader: SARD/SAHS Date:	**Endorsed by**: Herath Gunatilake Director, SDES Date:	
Endorsed by: Sungsup Ra Director, SAHS Date:	**Approved by**: Chief Compliance Officer Date:	☐ Highly Complex and Sensitive Project

APPENDIX 2: RAPID ENVIRONMENTAL ASSESSMENT CHECKLIST

Instructions:

- (i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (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.

Country/Project Title:	**India/ Himachal Pradesh Skill Development Project (Establishment of Model Career Center at Hamirpur)**
Sector Division:	**SAHS**

Screening Questions	Yes	No	Remarks
A. Project Sighting Is the project area adjacent to or within any of the following areas:			The subproject involves establishment one MCC at Hamirpur. This MCC will provide guidance to educated youth for career development and will act as interface between youth and industry through facilitation of interviews and job fairs. The built up area of MCC is 683.24 m2. None of the subproject components are located within core and buffer zones of national parks, sanctuaries, tiger reserves, and biosphere reserves; or within 100 meters from the boundary of protected monuments of archaeological importance.
▪ Underground utilities		√	The MCC subproject site is located in an open area at the outer skirts of Hamirpur town. There is no presence of underground utilities.
▪ Cultural heritage site		√	
▪ Protected area		√	
▪ Wetland		√	
▪ Mangrove		√	
▪ Estuarine		√	
▪ Buffer zone of protected area		√	
▪ Special area for protecting biodiversity		√	

Screening Questions	Yes	No	Remarks
▪ Bay		√	
B. Potential Environmental Impacts Will the project cause…			
▪ Encroachment on historical or cultural areas?		√	
▪ Encroachment on precious ecology (e.g., sensitive or protected areas)?		√	
▪ 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 building. The solid waste will be disposed of by integrating with the disposal systems of the Hamirpur city.
▪ Dislocation or involuntary resettlement of people?		√	The subproject site is under the ownership of DOLE. The site is unencumbered vacant plot. This has been confirmed during the site visits.
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		√	This 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. 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 *subtehsil*, 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. Given their high altitude, inhospitable terrain, harsh winters, sparsely and dispersed population, and poor connectivity (especially during winters and rainy seasons), no civil works (i.e., construction of training facilities) have been planned here. Since subproject site is not in Kinnaur and Lahaul -Spiti district, therefore, there will be no adverse impact on Idigenous Peoples.
▪ Accident risks associated with increased vehicular traffic, leading to loss of life?		√	MCC planned to be constructed is of relatively small scale and MCC site is located outside Hamirpur town. So there will be no effect on local vehicular traffic (or risk of accidents), either during the construction or operational phases. However, to rule out any accident due to project related vehicular traffic, if required, flagmen will be deployed near the subproject construction site 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		√	As noted above, there would be no increase in traffic volume owing to this subproject. Hence, there would be no

Screening Questions	Yes	No	Remarks
increased traffic volume?			increase in noise or air pollution.
▪ Occupational and community health and safety risks?		√	The environmental impact related to the construction of MCC building will be minor in nature and mostly limited to the duration of construction. The impact will be confined mainly within the construction site. These minor impacts will be mitigated through Environmental Management Plan. Potential occupational health and safety risks during construction will be addressed by including provisions in the contract documents and implementation of the environment mitigation measures. 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 construction of MCC building 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. 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.
▪ Requirements for disposal of fill, excavation, and/or spoil materials?	√		Since the subproject site is plain and requires no cutting or filling. The generation of spoils is not anticipated except minor construction waste. The construction waste will be utilized to the extent possible. Any remaining waste will be disposed off at disposal site. The disposal site will be identified during the construction waste.
▪ 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 EMP. Since the proposed MCC building is relatively small, no heavy equipment and machinery will be used. No blasting will be required in the construction. Hence, there will not be any significant shaking or vibrations. Further, no construction works will be undertaken at night at the subproject site. There will be periodic noise monitoring at construction site 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 sites are in hilly terrain and have swift drainage pattern, no adverse impact on ground water flow are anticipated.

Screening Questions	Yes	No	Remarks
▪ Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?		√	Most of the subproject sites are within the campuses of existing departments of the government. 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 project aims to train around 60,000 local youth over the 5-year period. The training facilities, colleges, ITIs, and polytechnics covered under the project are spread across the state in a balanced manner. Several of the RLCs and CLCs will have their own hostels. The women's polytechnic will also have its own hostel. All the students and trainees will be local from within Himachal Pradesh. Hence, there will not be any influx of people. Adequate facilities (as per specified codes) for water and sanitation have been designed for each training facility. Since the subproject sites are spread across the state, and the building sizes are small, the construction work force per site will not exceed 40 to 50. The contractors will arrange for potable water supply for the workers, and also provide adequate sanitation facilities. Hence, there will not be any burden on social infrastructure and services during the project life cycle.
▪ 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 so requirement of workers will not be significant. 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?		√	Since the MCC building to be constructed will be new, the latest national building codes and safety measures will be followed.
▪ 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 MCC building 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		√	Specific community risks are not foreseen due to operation since the MCC site has good access through the road. The MCC building has been designed following applicable seismic coefficients for Himachal Pradesh. The building will be maintained regularly in the operation phase.

Screening Questions	Yes	No	Remarks
community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

EMP = environmental management plan, MCC = model career center,
Source: Asian Development Bank.

APPENDIX 3: A CHECKLIST FOR PRELIMINARY CLIMATE RISK SCREENING

Country/Project Title: India/ Himachal Pradesh Skill Development Project
Sector: Education
Subsector: Technical Vocational Education and Training
Division/Department: SAHS/ SARD

Screening Questions		Score[a]	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, the road connectivity to Hamirpur town and MCC site is reliable.
	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 MCC site do not demand usage of any specific construction material to counteract weather phenomenon
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?	0	No, weather conditions at MCC site 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.
Source: Asian Development Bank.

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 4: SITE PHOTOGRAPHS

Proposed MCC site at Hamirpur

APPENDIX 5 (A) : LAND RECORDS SHOWING OWNESHIP OF GOHP AND NO OBJECTION CERTIFICATES OF VARIOUS UTILITIES AND REGULATORY DEPARTMENTS

HIMACHAL PRADESH
IRRIGATION & P.H. DEPARTMENT

No.IPH/NSD-NOC/2015-16- 13090-93 Dated:- 1-9-15
To

The District Employment Officer,
Hamirpur Distt. Hamirpur.

Subject:- No Objection Certificate for the transfer of land.

Reference:- Your office letter No. DEE/HMR/Bldg/12-4106 dt. 17-08-2015.

With reference to above, it is intimated that this department has no objection for the transfer of land to the Name Labour and Employment, H.P. Construction office building for the District Employment Office, Hamirpur in Tehsil and Distt. Hamirpur, as per Mohal and Khasra Nos mentioned in your letter.

Executive Engineer,
I&PH Division, Hamirpur

Copy to the Assistant Engineer IPH Sub-Division Hamirpur for informaiotn w.r.t. his office letter No 2247 dt. 26-08-2015.

Executive Engineer,
I&PH Division, Hamirpur

Himachal Pradesh
Public Works Department

No. PWD/HMR/CB/ WAI/NOC/ /2014-15- 12772-73 Dated: 11/9/2015
To

The District Employment Officer,
Hamirpur Distt Hamirpur.(HP)

Subject: NOC for the transfer of land.

Reference :- Your office Letter No.DEE/HMR/Bldg/12- 4105 dated 17-8-2015.

In this connection, it is intimated that this Department has no objection for transfer of land in the name of Department Labour and Employment (HP) for construction of office building for the Distt. Employment office Hamirpur situated in Mauza up Mahal Usyana in Tikka Usyana Moza Bazuri Tehsil Hamirpur Distt Hamirpur comprising in Khasara Nos 610/435 subject to the condition that no construction will be allowed with in 5.00 Mtr. from the edge of the road. It may be ensured by the concerned agency that during the Construction there is no violation of HP. Road side control Act and Road Infrastructure Act.

DA:Nil

Executive Engineer,
Hamirpur Division,
HP PWD Hamirpur.

Copy forwarded to the Assistant Engineer Hamirpur , Sub Division HP PWD Hamirpur for information with reference to his letter No. 2224 dated 04-9-2015.

DA: Nil.

Executive Engineer,
Hamirpur Division,
HP PWD Hamirpur.

D.L. R. Form No. 8

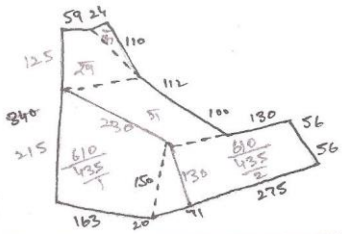
नकल जमाबन्दी साल 2012-13 अजहाल उपमहाल मौजा चबूतरा त-व जिला हमीरपुर
मौजा ... परगना ... तहसील ... जिला

नं. खेवट या जमाबन्दी	नम्बर खतौनी	नाम पति या तरफ मय नाम नम्बरदार व तादाद मुआमला	नाम मालिक व ऐहवाल	नाम काश्तकार व ऐहवाल	नाम चाह व दीगर वसायल आबपाशी	नम्बर हाय खसरा	रकबा हर खेत व मिजान खाता मय किस्म अराजी: बीघों में	रकबा हर खेत व मिजान खाता मय किस्म अराजी: मीट्रिक इकाईयों में	लगान जो मुजारा अदा करता है व तफसील शरह व तादाद	हिस्सा या पैमाना हकीयत व तरीका बाछ	मुतालबा व शरह मुआमला व हबूब	कैफियत
1	2	3	4	5	6	7	8		9	10	11	12
54 मि०	91 मि०		प्रदेश सरकार	कब्जा स्वयं तौबे हुकूक बर्तन बर्तनदारान		610/435	1261—10 चरागाह बिला दरख्तान					बमवजब नोट बाले इं० 88 तबदीली इन्द्राज बरवानाम खसरा नम्बर 610/435 में से 610/435/1 रकबा 423-75 बहक बरवानाम० नामे एवंम रोजगार विभाग हि० इन्तकाल दिनांक 12-02-16 को मन्जूर हुआ

जिला उपरोक्त सही सरकार तैयार
शुल्कार ... 25/2/16
ग्रामीण राजस्व अधिकारी
वृत ...
तह. व जिला हमीरपुर (हि.प्र.)

नक्शा ततीमा शजरा लट्ठा बन्दोबस्त जदीद (सानी) साल 1981-82
उपमुहाल असमाणा मौजा बजूरी त-व जिला हमीरपुर।
पैमाना व हिसाब 100 है-कौ० प्रति सै-मी०

उत्तर



ततीमा मिसल बुक

खसरा नम्बर		इस्तखराज रकबा	रकबा मय किस्म भूमि
साबका	हाल		
610/435 मिन	610/435/1	$\frac{300\,(120+130)}{2} = 37500$ जो० $\frac{150 \times 65}{2} = 4875$ 42375	423-75 चरागाह बिला दरख्तान
〃	610/435/2	$\frac{330\,(100+120)}{2} = 36300$ क $\frac{120 \times 21}{2} = 1260$ ख $\frac{160\,(55+120)}{2} = 14000$ ग $\frac{300\,(105+110)}{2} = 32250$ 83810	शेष रकबा 837-35 चरागाह बिला दरख्तान
			1261-10

22/07/2015

PATWARI,
Patwar Circle LOHARAR,
Teh. & Distt. Hamirpur (H.P.)

CERTTIFICATE

It is certified that the land bearing Khasra No610/435

Area 1261-10 measuring 1 Kanal 2 Marla situated in 423-75 बिस्वेदर

Tika up Mahal Usaina Mauza Bazuri Tehsil and District Hamirpur H.P. proposed for Construction of the office building of District Employment Office,Hamirpur and NOC of which is sought, has been vested to the Government of H.P under Ceiling of Land Holdings Act, 1972 and/ or H.P.Village Common Land and utilization Act,1974. It is further certified that the Land was neither recorded as forest land before its vesting nor it has been recorded as forest land thereafter at any time.

PATWARI
Patwar Circle LOHARAR
Tehsil & Distt. Hamirpur (H.P.)
22/08/2015

Tehsildar,
Hamirpur

No. 7702
H.P. Forest Department.

Dated Hamirpur, the 03-09-15

From:

Divisional Forest Officer,
Hamirpur Forest Division,
Hamirpur.

The District Employment Officer,
Hamirpur Distt. Hamirpur HP.

Subject:- NOC for the transfer of land.

Sir,

Kindly refer to your office letter Endst. No. 4107 dated 19.8.2015 on the subject cited above.

2. In this connection, on the recommendation/report of the committee and being non forest land comprising Khasra No. **610/435/1** area measuring **01 Kanal 2 Marla** situated in **UP Mohal Usiyana Mouza Bajuri** Tehsil & Distt. Hamirpur HP, NOC of this department is hereby granted subject to the conditions that 1 No. Bamboo clump standing on the proposed land will not be felled without the prior approval of the competent authority.

Yours faithfully,

Divisional Forest Officer,
Hamirpur Forest Division
Tel. No.01972-224922
E.Mail ID: dfohamirpur@gmail.com

Endst. No._____/ Dated Hamirpur, the_____/
1. Copy is forwarded to R.O. Hamirpur w.r.t. his office memo. No. 662/H dated 2.9.2015 for information.

Divisional Forest Officer,
Hamirpur Forest Division.
Tel. No.01972-224922
E.Mail ID: dfohamirpur@gmail.com

HIMACHAL PRADESH STATE ELECTRICITY BOARD LIMITED
(A State Govt. undertaking)

No.241256/2014-15- 6504 Dated :- 11-9-15
To

The Distt. Employment Officer,
Hamirpur, District Hamirpur. (HP).

Sub :- **NOC for the transfer of land.**
Sir,

Jai Hind,

Kindly refer to your office letter No. DEE/HMR/Bldg/12-4/08 dated 19.8.2015 on the subject cited above.

In this context, it is intimated that H.P. State Electricity Board Limited has no objection if the land transferred in favour of Distt. Employment Office, Hamirpur. At presently there is no any existing electricity line crossing over the above land which can cause the collation of Indian Electricity rule

This is for your kind information please.

Yours faithfully,

Sr. Executive Engineer,
Electrical Division,
HPSEB, Hamirpur.

नकल पारित प्रस्ताव कंमाक 94/2015 दिनांक 28–09–2015

94/2015 दिनांक 28–09–2015 पत्र कमांक DEE/HMR/Bldg/12-4109 dated 19-08-2015 आमदा जिला रोजगार अधिकारी हमीरपुर बावत NOC for the transfer of land.

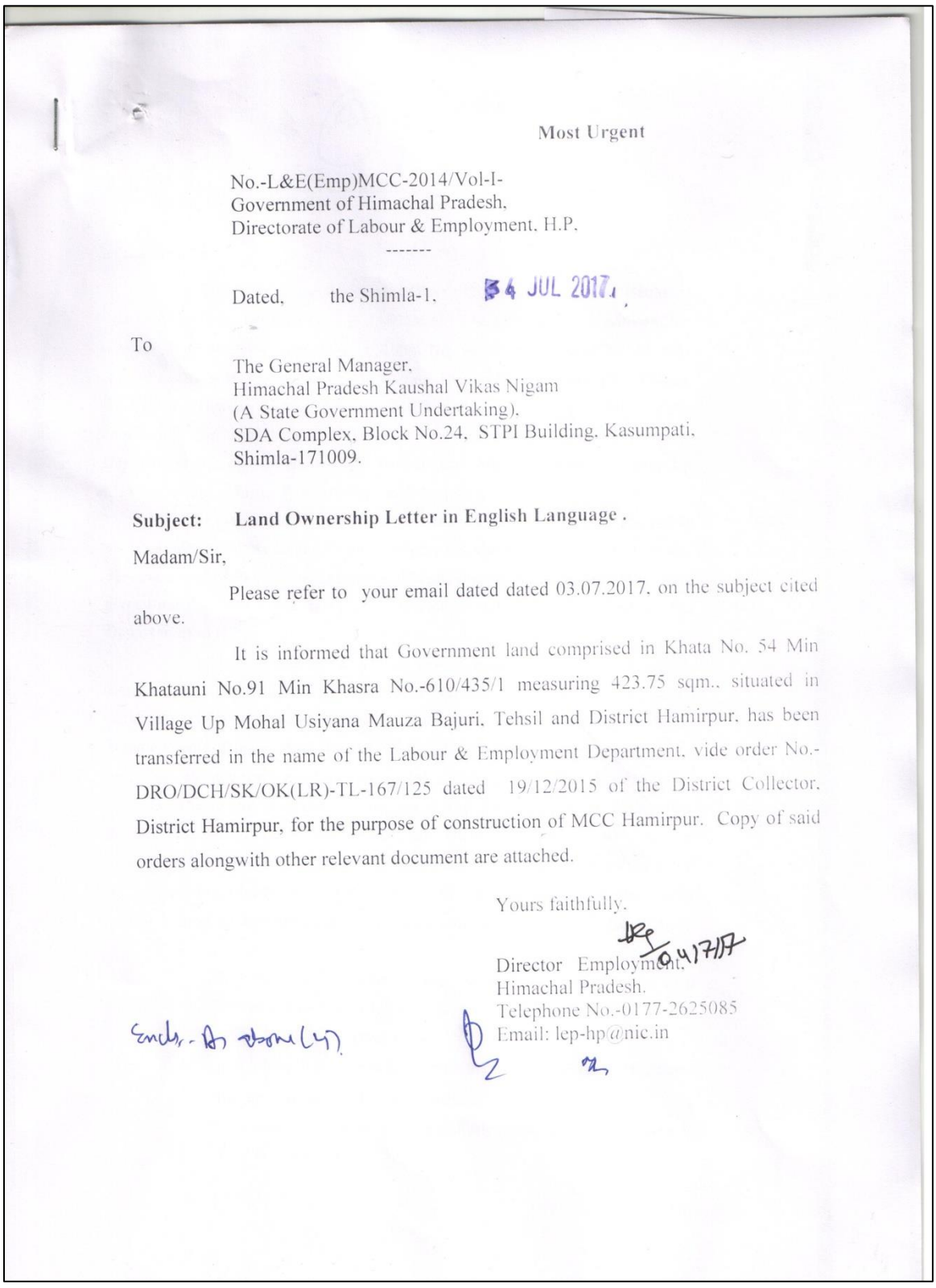
कार्यकारी अधिकारी महोदय द्वारा पत्र के अंश सभा को पढ़ कर सुनाये गये जिसमें लिखा गया है कि खसरा न0 610/435 उपमहाल उसियाना मौजा बजूरी कों जिला रोजगार कार्यालय हमीरपुर के नाम पर स्थानान्तरित करवाने हेतू अनापति प्रमाण पत्र की आवश्यकता है इस पर सभा द्वारा गहन विचार विमर्श किया गया और सर्व सम्मति से निर्णय लिया गया कि यदि उपरोक्त खसरा न0 को जिला रोजगार कार्यालय के नाम पर स्थानान्तरित किया जाता है तो उन्हें इस बारे कोई एतराज नहीं है अतः अनापति प्रमाण पत्र दिया जावे।

नकल मुताविक असल है।

Executive Officer
Municipal Council
Hamirpur (H.P.)

हस्ता0
प्रधान,
नगर परिषद हमीरपुर

APPENDIX 5 (B) : CERTIFICATION OF LAND OWNERSHIPS BY THE DEPARTMENT OF LABOUR AND EMPLOYMENT FOR MCC HAMIRPUR SITE



Most Urgent

No.-L&E(Emp)MCC-2014/Vol-I-
Government of Himachal Pradesh,
Directorate of Labour & Employment, H.P.

Dated, the Shimla-1. 04 JUL 2017

To

The General Manager,
Himachal Pradesh Kaushal Vikas Nigam
(A State Government Undertaking),
SDA Complex, Block No.24, STPI Building, Kasumpati,
Shimla-171009.

Subject: Land Ownership Letter in English Language .

Madam/Sir,

Please refer to your email dated dated 03.07.2017, on the subject cited above.

It is informed that Government land comprised in Khata No. 54 Min Khatauni No.91 Min Khasra No.-610/435/1 measuring 423.75 sqm., situated in Village Up Mohal Usiyana Mauza Bajuri, Tehsil and District Hamirpur, has been transferred in the name of the Labour & Employment Department, vide order No.-DRO/DCH/SK/OK(LR)-TL-167/125 dated 19/12/2015 of the District Collector, District Hamirpur, for the purpose of construction of MCC Hamirpur. Copy of said orders alongwith other relevant document are attached.

Yours faithfully.

04/7/17

Director Employment,
Himachal Pradesh.
Telephone No.-0177-2625085
Email: lep-hp@nic.in

Encls.- As above (4).

APPENDIX 6: 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:

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

B. Operating Policies for Traffic Management Plan

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

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

C. Procedures for Street Closure, if Required

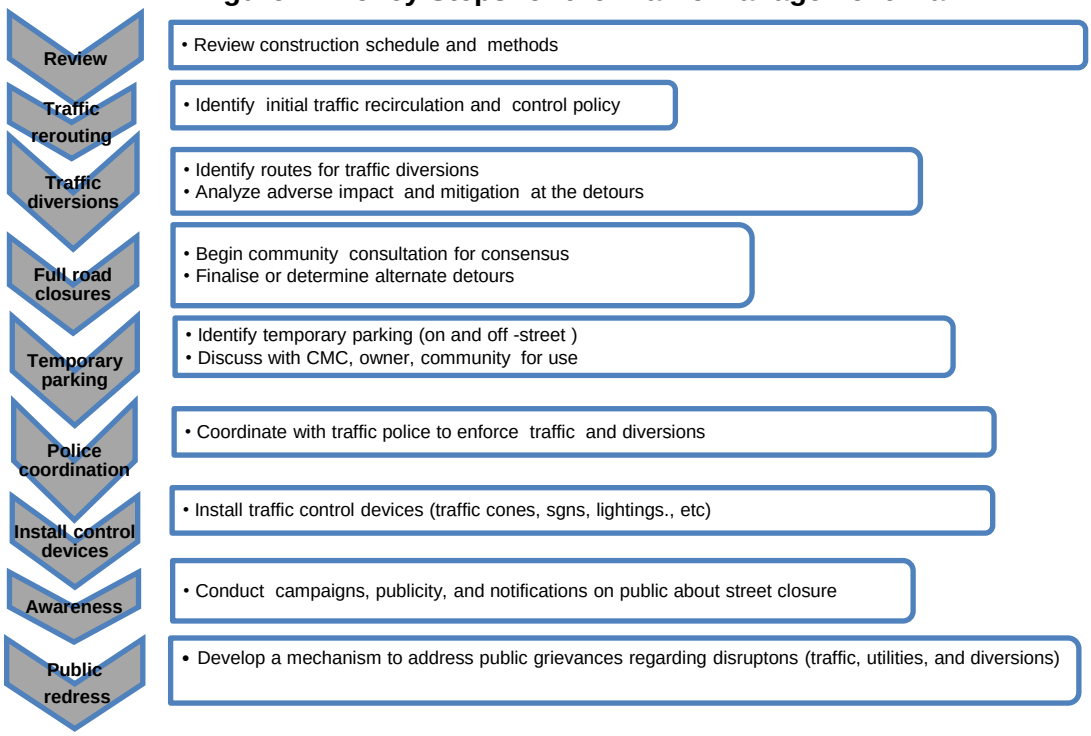
3. A final decision to close a particular street and divert the traffic should involve the following steps:

(i) approval from the project implementation unit (PIU) and local administration to use alternative local streets as detours;
(ii) 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;
(iii) determining the maximum number of days allowed for road closure, and incorporation of such provisions into the contract documents;

(iv) determining if additional traffic control or temporary improvements are needed along the detour route;
(v) considering how access will be provided to the worksite;
(vi) contacting emergency service, school officials, and transit authorities to determine if there is any effect on their operations; and
(vii) Developing a notification program to keep the public informed, and advising the public of alternate routes as a result of the traffic diversion.

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

Figure A: Policy Steps for the Traffic Management Plan



Source: Asian Development Bank.

D. Public Awareness and Notifications

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

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

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

(i) Explain why the brochure was prepared, along with a brief description of the project.
(ii) Advise the public to expect the unexpected.
(iii) Educate the public about the various traffic control devices and safety measures adopted at the work zones.
(iv) Educate the public about safe road user behaviour at the work zones.
(v) 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.
(vi) Indicate the office hours of relevant offices.

E. Vehicle Maintenance and Safety

10. A vehicle maintenance and safety program shall be implemented by the construction contractor. The contractor should ensure that all the vehicles are in proper running condition, and 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 7: PHOTOGRAPHS AND ATTENDANCE SHEETS OF CONSULTATIONS

IND 49108-002: Supporting Skill Development in Himachal Pradesh

Stakeholder Consultations

Date : 06/8/16 **Location:** MCC Manipur Site

Planned Facility: MCC

S. No.	Name	Designation	Phone Number	Signature
1	VP Rana	DEO	9418498145	
2	SUDHA SOOD	Supdt	9418768497	
3	Pawan Kumar	Peon	8628850838	Pawan Kumar
4	Yashpal Malik	PWC.	9015044088	
5	HARSH NAGPAL	PWC	9888007005	
6	Anita	Clerk	9805315746	
7	Ukesh Kumar	Clerk	01181-91326	
8	Vijay Sharma	Labour Inspector	92188-40930	
9	Shweta Verma	ADB Consultant	9811224548	
10				
11				
12				
13				
14				