Draft Initial Environmental Examination

October 2014

IND: Infrastructure Development Investment Program for Tourism Tranche 3
–Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar (Uttarakhand)

Prepared by the Government of Uttarakhand for the Asian Development Bank

CURRENCY EQUIVALENTS

(as of 9 October 2014)

Currency unit	–	Indian rupee/s (Re/Rs)
Re1.00	=	$0.0163
$1.00	=	Rs61.025

ABBREVIATIONS

ADB	-	Asian Development Bank
ASI	-	Archaeological Survey of India
CPCB	–	Central Pollution Control Board
CPR	-	Common property resources
DOT	-	Department of Tourism
DSC	-	Design Supervision Consultants
EA	-	Executing Agency
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
FSI	-	Forest Survey of India
GMVN	-	Garhwal Mandal Vikas Nigam
GoI	-	Government of India
GoU	-	Government of Uttarakhand
HNB	-	Hemwati Nandan Bahuguna
IA	-	Implementing Agency
IDIPT	-	Infrastructure Development Investment Program for Tourism
IEE	-	Initial Environmental Examination
IUCN	-	International Union for Conservation of Nature
MFF	-	Multi-tranche Financing Facility
MoEF	-	Ministry of Environment and Forests
NDBR	-	Nanda Devi Biosphere Reserve
NDNP	-	Nanda Devi National Park
NP	-	National Park
OM	-	Operations Manual
PA	-	Protected area
PD	-	Program director
PIU	-	Project Implementation Unit
PMC	-	Project Management Consultant
PMU	-	Project Management Unit
PUC	-	Pollution under Control
REA	-	Rapid Environmental Assessment
SEIAA	-	State Environment Impact Assessment Authority
SLEC	-	State-level empowered committee
SPCB	-	State Pollution Control Board
SPM	-	Suspended Particulate Matter
SPS	-	Safeguard Policy Statement
UK	-	Uttarakhand
UNESCO	-	United Nations Educational Scientific and Cultural Organisation
UTDB	-	Uttarakhand Tourism Development Board
UUSDIP	-	Uttarakhand Urban Sector Development Investment Program
WLS	-	Wildlife Sanctuary

WEIGHTS AND MEASURES

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

NOTES

In this report, "$" refers to US dollars.

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EXECUTIVE SUMMARY

1. **Background.** The India Infrastructure Development Investment Program for Tourism (IDIPT) envisages environmentally and culturally sustainable and socially inclusive tourism development in the states of Himachal Pradesh, Punjab, Tamil Nadu and Uttarakhand, delivered through a Multi-tranche Financing Facility (MFF) loan from Asian Development Bank (ADB). IDIPT Project 3 includes the states of Uttarakhand and Tamil Nadu. The project will focus on: (i) strengthening connectivity to and among key tourist destinations; (ii) improving basic urban infrastructure and services, such as water supply, road and public transport, solid waste management and environmental improvement, at existing and emerging tourist destinations to ensure urban amenities and safety for the visitors, and protect nature and culture-based attractions. Physical infrastructure investments will be accompanied by: (iii) capacity building programs for concerned sector agencies and local communities for better management of the tourist destinations and for more active participation in the tourism-related economic activities, respectively. As part of Tranche 3 of project a sub project '**Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar**' is being taken up to regulate movement of Kanwarias and to provide infrastructure facilities along the route. The facilities include toilet complex, drinking water fountain, bathing and sanitary facility, rest shelter, food distribution centre, police control room, solid waste bins, compound wall with entrance gate, landscaping, etc .

2. **Executing and Implementing Agencies.** The Tourism Department of the Government of Uttarakhand is the Executing Agency (EA); and the Project Management Unit (PMU) of the Uttarakhand Tourism Development Board (UTDB) is the implementing agency (IA).

3. **Categorisation.** The subproject **"Creation of Pedestrian Route for Pilgrims and Tourists"** is classified as Environmental Category B as per the SPS as no significant impacts are envisioned. Accordingly Initial Environmental Examination (IEE) has been prepared for the sub-project. The IEE is based on a careful review of subproject site and report; field visits; secondary data collection to characterize the environment and identify potential impacts; and consultations with stakeholders. An Environmental Management Plan (EMP) outlining the specific environmental measures to be adhered to during implementation of the subproject has been prepared. The subproject will conform to all Government regulations, policies and standards.

4. **Sub Project Scope.** Subproject will provide much needed facilities for the movement of Kanwarias and there will be proper regulation of movement within the Haridwar city. Approximate length of Route to be developed is 11.33 km. The facilities of drinking water, rest areas, bathing and public conveniences, food serving, lighting and pedestrian pathway have been proposed at 2 locations. At two locations Foot Over Bridges (FOBs) have been proposed (one for rail near Jawalapur, and one for NH-58 crossing at Manglour) and signages on Kanwar route from Haridwar to Manglour.

5. **Description of Environment**. There are no protected areas (PAs), wetlands, mangroves, or estuaries within or near the alignment of pedestrian route except that Upper Ganga canal (partially lined) is the only water body on the bank of which pedestrian route is planned to be developed. Trees, vegetation and animals in the subproject site are those commonly found in built-up areas with many planted exotic trees. No rare, threatened, endangered or endemic flora or fauna are observed along the alignment of pedestrian route. The ambient air quality in respect of SO_2 and NOx is well within limits. The ground water quality

meets drinking water standards. The particulate matter concentration at some locations is higher than limits specified in AAQ standards. There are no heritage sites listed by Archaeological Survey of India (ASI) within the subproject area or in near vicinity.

6. **Environmental Impacts and Environmental Management.** No common property resources (CPR) such as public wells, water tanks, play grounds, common grassing grounds or pastures, market areas and community buildings will be affected by the proposed subproject. The sub project is planned along the bank of Upper Ganga canal so there is no question of impacts of CPRs.

7. The environmental impact of the subproject is not significant and is placed at Category B level, as per ADB's Safeguards Policy Statement. The specific measures stated in the EMP will address all adverse environmental impacts due to the subproject. A detailed monitoring plan prepared as part of this IEE will further mitigate negative environmental impacts during implementation.

8. The proposed subproject alignment/route is within the land under the ownership of Uttarakhand Government. There are no impacts envisaged on land acquisition or resettlement due to the proposed subproject components.

9. Potential negative impacts were identified in relation to construction and operation of the improved infrastructure. No impacts were identified as being due to the subproject design or location. EMP, proposed as part of this IEE which includes (i) mitigation measures for adverse environmental impacts during implementation, (ii) environmental monitoring program, and the responsible entities for mitigation, monitoring, and reporting; (iii) public consultation and information disclosure; and grievance redress mechanism. Mitigation measures have been developed to reduce all negative impacts to acceptable levels. The project activities will not require felling of trees and vegetation as there is planning to make pedestrian footpath along the existing canal bank road in a length of 11.33 km.

10. Majority of the significant impacts will occur during the construction phase and are generic to the construction activities. Key impacts during construction phase are envisaged on the following aspects: (i) drainage, (ii) borrow pit operations, (iii) dust generation, air and noise pollution from construction activities, (iv) handling of construction materials at site, (v) disposal of construction waste materials, and (vi) adoption of safety measures during construction. These are common impacts of construction in the development of road/passage, and there are well developed methods for their mitigation. The project is relatively small in scale and involves straightforward construction and low-maintenance operation, so it is unlikely that there will be major impacts. Ground water will not be used for construction purposes and the problem of ground water contamination is not anticipated during the construction phase as there will be proper disposal of the sludge.

11. The implementation of the sub project will not involve dislocation or involuntary resettlement of people. Only temporary impact may be expected. The Objective of the IDIPT is to have enhanced and sustainable economic growth of Uttarakhand with emphasis on promoting commerce and improvement of livelihood of the poor by exploring potential of Tourism sector. The Investment Program envisages improvement of Tourist infrastructure, urban environment and better living conditions in the state, as well as for the increasing number of tourists visiting the State.

12. Positive impact is anticipated in terms of employment opportunity as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction

phase. During operations of the improved infrastructures and services, the inconvenience to Kanwarias and Public will greatly reduce. This can be considered a long-term cumulative benefit of the subproject.

13. **Consultation, Disclosure and Grievance Redress.** Public consultations were done in the preparation of the project and IEE. On-going consultations will occur throughout the project implementation period. A grievance redress mechanism is described within the IEE to ensure any public grievances are addressed quickly

14. **Monitoring and Reporting.** The PMU, PIU, PMC and DSC will be responsible for environmental monitoring. The PIU with support from the DSC will submit quarterly monitoring reports to the PMU. The PMU will consolidate the quarterly reports and will send it to ADB. ADB will post the environmental monitoring reports on its website.

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

I. INTRODUCTION

A. Project Background

1. Asian Development Bank (ADB) approved Infrastructure Development Investment Program for Tourism (IDIPT) on 02 April 2012 to promote economic growth in the State of Uttarakhand. The main goal of the program is to elevate the overall economic status in the State by improving both service delivery system and urban management in principal cities and important towns of the State. Investment planning has been formulated mainly based on the requirement for strengthening of Tourism sector. Loan funds from ADB will be available to the Uttarakhand Tourism Development Board (UTDB) through a number of tranches (projects). ADB has a plan to provide loans up to amount of US$23.28millions to finance projects under IDIPT Tranche 3. Each tranche will be comprised of a number of sub-projects and the execution of the same will be decided after thorough assessment and time bound planning. The scope includes design and implementation of different schemes formulated based on need assessment and long term planning processes. To support implementation of the program, UTDB has engaged Project Management Consultant (PMC) and three separate Design Supervision Consultants (DSCs).

2. Creation of Pedestrian Route for Pilgrims and Tourists and surrounding habitations along the main movement route of Kanwarias is one of the sub-projects assigned to DSC Kotdwar. The Kanwar Mela in Haridwar is one of the important cultural events in the state and Haridwar in particular where cultural tourists converge in million to collect Holy water of the Ganges and carry it to their villages or to any other temples. The route taken has very little tourist amenities which call for urgent investment in civic and other tourist facilities to streamline tourism and provide basic services. This sub project aims to address the needs and invest in infrastructure on the route taken by the devotee tourists on foot, from Haridwar Har Ki Pauri to Mangalour town Cross on NH 58 leading to Uttar-Pradesh state. Kanwar Mela, the biggest Cultural gathering in north India, only next to the Kumbh, is giving sleepless nights to the police and the civil officials. The mela, also known as the Kanwar Teerth Yatra, begins on the first day of the month of Savan of the Hindu calendar which normally falls in July month. During the mela lakhs of saffron clad Kanwarias wend their way to Haridwar to take the holy water of The Ganges (Gangajal) in vessels kept in decorated pots at the ends of bamboo structures called 'Kanwars'. In the year 2009, nearly 9 Million Kanwarias, (Cultural Tourists) mostly from Uttarakhand, Western U.P., Delhi, Haryana and Himachal Pradesh, congregated in Haridwar on the holy mission. In the year 2010 the number of the Kanwarias coming to the city crossed the 10 Million mark. The above expected to cross 15 Million marks in the future years. Every year during Kanwar Yatra Government of Uttarakhand has to close NH-58 for vehicular traffic from Haridwar to Roorkee, Muzaffar Nagar, Meerut, Ghaziabad and Delhi. The Government of Uttarakhand with an intention to provide better tourist facilities along Haridwar, Roorkee Manglour route, safe passage and not to close NH-58 during Yatra is planning to develop a Kanwar Patri along the bank of Upper Ganga canal.

3. The development of tourist facilities and a dedicated route will reduce inconvenience to locals and will also improve the livelihood of stakeholders in the region. The expected impact of the Project is sustainable and inclusive tourism development in and around the sub project.

4. As per the ADB's Environmental Assessment Guidelines, and in line with the Environment Assessment and Review Framework (EARF) for the project, the sub-project namely Creation of Pedestrian Route for Pilgrims and Tourists is categorized as B and an Initial

Environmental Examination (IEE) prepared. This IEE assesses the environmental impacts due to the proposed development works and specifies measures towards addressing the impacts.

B. Purpose of the IEE

5. This IEE assesses the environmental impacts due to the proposed subproject and specifies measures towards addressing the impacts. The IEE was based on a review of subproject site plans and reports; field visits, and secondary data to characterize the environment and identify potential impacts; and interviews and discussions with stakeholders. This IEE provides mitigation measures for impacts related to location and design, construction, operation, and maintenance. An EMP outlining the specific environmental measures to be adhered to during implementation of the subproject has been prepared.

C. Extent of the IEE

6. Indian laws and ADB policy require that the environmental impacts of development projects are identified and assessed as part of the planning and design process, and that action is taken to reduce those impacts to acceptable levels. This is done through the environmental assessment process, which has become an integral part of lending operations and project development and implementation worldwide. The realm of environmental regulations and mandatory requirements for the proposed sub-project is shown in **Table 1.**

1. ADB Policy

7. ADB's Safeguard Policy Statement (SPS, 2009) requires the consideration of environmental issues in all aspects of the Bank's operations, and the requirements for Environmental Assessment as described in its Operations Manual (OM). This states that ADB requires environmental assessment of all project loans, program loans, sector loans, sector development program loans, financial intermediation loans and private sector investment operations. The nature of the assessment required for a project depends on the significance of its environmental impacts, which are related to the type and location of the project, the sensitivity, scale, nature and magnitude of its potential impacts, and the availability of cost effective mitigation measures. Projects are screened for their expected environmental impacts and are assigned to one of the following categories:

- Category A: Projects that could have significant environmental impacts. An Environmental Impact Assessment (EIA) is required.
- Category B: Projects that could have some adverse environmental impacts, but of less significance than those for category A. An Initial Environmental Examination (IEE) is required to determine whether significant impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.

2. National Law

8. The Environmental Impact Assessment (EIA) Notification, 2006 (and its subsequent amendments till date) by the Ministry of Environment and Forests (MoEF), Government of India (GoI) specifies the mandatory environmental clearance requirements. All projects/ activities are broadly categorized in to Category A and Category B for the mandatory environmental clearance requirements, based on the spatial extent of potential impacts and potential impacts on human health and natural and man-made resources. Projects included as Category A in the

Schedule require prior environmental clearance from the Central Government whereas projects included as Category B in the Schedule require prior environmental clearance from the State Environment Impact Assessment Authority (SEIAA). Any project 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) inter-State boundaries and international boundaries. Given that the subproject is not covered in the ambit of the EIA notification, Environment clearance requirements from the GoI are not triggered. Proposed sub project is screened through Environmental Regulatory Compliance as shown in **Table-1** below.

Table 1: Environmental Regulatory Compliance

Applicability of Acts/Guidelines	**Compliance Criteria**
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	This subproject is not covered in the ambit of the EIA notification as they are not covered in schedule of activities either under Category A or Category B of the notification
ADB Safeguard Policy Statement, (2009)	Sub-project is Category B as no significant impacts are envisaged
The Wildlife Conservation Act, 1972, amended in 2003 and 2006, provides for protection and management of Protected Areas.	Not Applicable
Forest (Conservation) Act, 1980	This act provides guidelines for conservation of forests and diversion of forest land for non-forest use. The law also states guidelines on de-reservation of various categories of forests for diversion of forest land. This law describes the penalty for contravention of the provisions of the Act. Restriction on the de-reservation of forests or use of forest land for non-forest purpose. If forest land is to be acquired for the project, the Forestry Clearance needs to be obtained. *For felling of the tree if any permission will be required from local forest office, but tree removal is not likely required in the project*

9. **Table 1** indicates that the proposed sub project does not need to go through a full-scale environmental assessment process; as the scale of impacts and categorization of the sub project components will not require clearances from Competent Authorities. Therefore, any further approvals or environmental clearances from the GoI/ State Level Environmental Impact Assessment Authority (SEIAA) are not envisaged. The ADB guidelines, stipulate addressing environmental concerns, if any, of a proposed activity in the initial stages of project preparation. For this, the ADB Guidelines categorize the proposed components into categories (A, B or C) to determine the level of environmental assessment required to address the potential impacts. The Rapid Environmental Assessment (REA) checklist method was followed as per ADB requirement to assess the potential impacts of the project in planning phase. The REA checklist is attached as **Annexure 1** with this report. The sub-project has been categorized as B. Accordingly this IEE is prepared to address the potential impacts, in line with the recommended IEE content and structure for Category B projects. The IEE was based mainly on secondary sources of information and field reconnaissance surveys. Stakeholder consultation was an

integral part of the IEE. An Environmental Monitoring Plan outlining the specific environmental measures to be adhered to during implementation of the sub-project has been prepared.

3. Review and Approval Procedure

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

11. Compliance on Environment Assessment & Review Framework for sub project selection and implementation is shown in **Annexure 2.**

D. Scope of Study

12. This is the IEE report for the subproject viz., Creation of Pedestrian Route for Pilgrims and Tourists. It discusses the generic environmental impacts and mitigation measures relating to the location, design, construction and operation of physical works proposed under this subproject.

E. Report Structure

13. The IEE has been structured as per ADB's Environmental Assessment Guidelines (2003), and the Government of India's Environmental Impact Assessment Notification (2006). This IEE contains eight sections: (1) Introduction; (2) Description of Project Components; (3) Description of the Environment; (4) Potential Environmental Impacts and Mitigation measures; (5) Institutional Requirements and Environmental Monitoring Plan; (6) Public Consultation and Information Disclosure; (7) Findings and Recommendations; and (8) Conclusions.

II. DESCRIPTION OF THE PROJECT COMPONENTS

A. Components of the Subproject

14. The components of the sub project have been described below:

- Development of a pedestrian route or pathway for movement of pilgrims and tourist from near Mayapur Regulator to Bahadarabad Bridge. Total length of pedestrian pathway to be developed is 11.33 km. For a stretch of 5.9 km length (from near Mayapur Regulator to Jathwara bridge) the existing Kanwar Patri will be developed to a pedestrian pathway. For a stretch of 5.43 km (from Jathwara Bridge to Bahadarabad Steel Bridge) a pedestrian pathway will be developed on the side of existing motorable Kanwar Patri (canal bank road). For this 5.43 km stretch of Kanwar Patri, both proposed pedestrian pathway and existing motorable canal bank road will exist.
- Landscaping, sitting arrangements, murals, etc. on the proposed pedestrian pathway.

- Providing lighting or illumination arrangement on the proposed pedestrian pathway of 11.33 km.
- Providing safety hand railing on the pedestrian pathway on canal side.
- Providing solid waste bins on the side of proposed pedestrian pathway.
- Providing a toilet complex and drinking water facility on side of the proposed pedestrian pathway near Shankaracharya Chowk.
- At one location near the proposed pedestrian pathway (before Lohe Ka Pul on railway track near Jawalapur) a multi facility complex will be developed which will include a toilet complex, drinking water fountain, bathing and sanitation facilities, rest shelter, food distribution centre, police control room, solid waste bins, compound wall with entrance gate, landscaping, etc.
- Construction of a foot over bridge over Railway track near Jawalapur.
- Constructions of a foot over bridge over National Highway at Managalour cross with NH-58.
- Installation of tourist Signages on Kanwar Patri from Har Ki Pauri to Mangalour Cross.
- Total length of the stretch of Kanwar Patri to be taken up for the signage works is 42 km.

15. The location wise specific facilities along the route have been described below

1. Location 1 -Near Shankaracharya Chowk

16. The proposed facilities at Mayapur Regulator are as follows:

- toilet complex.
- drinking water facilities
- railing on canal side

2. Location 2- Before Railway Bridge

17. The proposed facilities at Singhdwar Bridge are as follows:

- drinking water facilities
- toilet complex
- drinking water fountain
- rest shelter
- food distribution centre
- police control rooms
- solid waste bins
- bathing and sanitation facilities

3. Location 3- Rail Line Crossing near Jawalapur

18. At this location foot over bridge is planned to cross the rail line. No other facilities such as drinking water, toilets or bathing facilities are planned at this location.

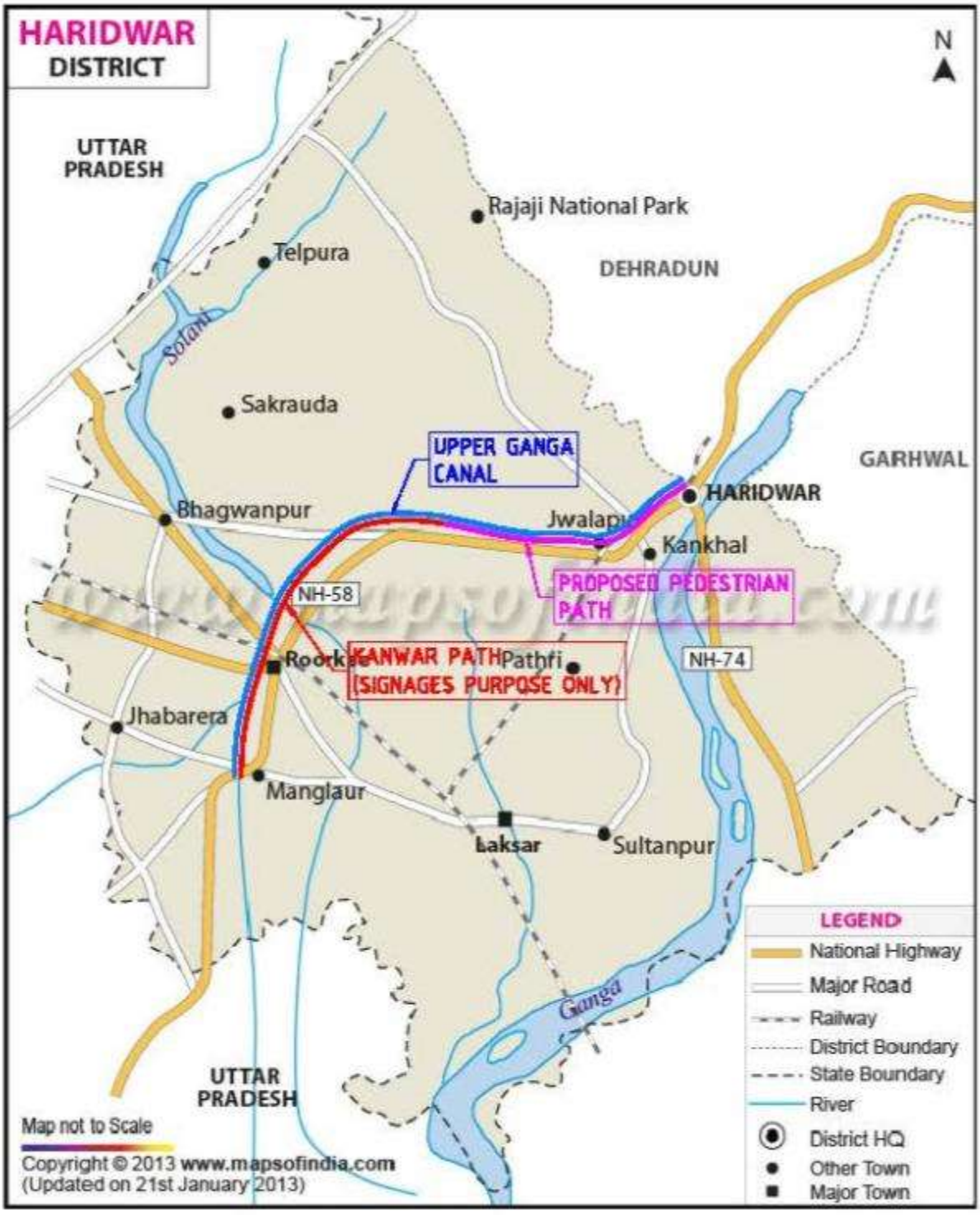
4. Location 4- Intersection of NH-58 and Manlour Cross (Area requirement - Nil)

19. This is end point and only crossing with NH-58 planned and there is proposal to provide foot over bridge. There is no planning of facilities such as toilets, drinking water, bathing, etc. at this location.

20. The map of route to be developed is shown in Hardwar district Map in **Figure-1.**

21. **Annexure 3** shows site photographs of all locations except crossing of alignment with rail line near Jwalapur.

Figure-1: Hardwar District Map with Kanwar Route (Pedestrian Route and Signage Portion) in Uttarakhand



B. Need for the Project

22. At present Kanwarias have to take route through the existing National Highway -58 connecting Haridwar - Roorkee- Muzaffarnagar- Meerut. This road has to be closed for vehicular traffic for about a week and traffic of this road is diverted to other roads. At the same time local population residing along the road also faces inconvenience and business establishments are also not properly operated. The facilities for these cultural tourists are organised by religious groups. In future traffic is bound to increase and numbers of devotees are also increasing at an exponential rate. The sub project interventions will streamline movement of devotees and will also create business opportunities for locals.

C. Project Category

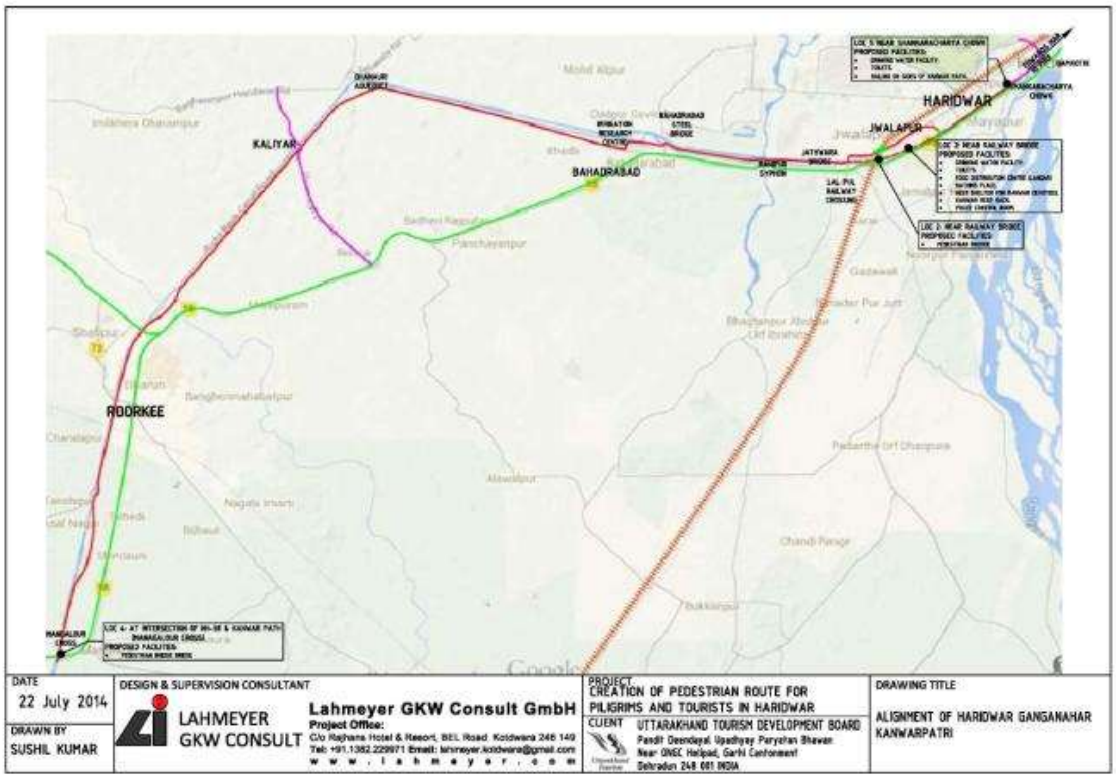
23. This is a tourism infrastructure development sub-project, and as explained above it has been classified by ADB as Category B, because it is not expected to have major negative environmental impacts. Under ADB procedures such projects require an IEE to identify and mitigate the impacts, and to determine whether further study or a more detailed EIA may be required. The environmental screening revealed that the project route is away from protected or sensitive areas.

D. Project Location and Layout

24. Sub project is located in Haridwar district of Uttarakhand. The length of the pedestrian route to be developed is 11.33km. In the balance length till Manglour cross signages will be provided. The Kanwar Path till Manglour cross with NH-58 has been shown on map in **Figure-2**.

25. Land related Communication to District Magistrate Office and Communication to District Tourism Officer is enclosed in **Annexure 4.**

Figure 2: Kanwar Path Route within Uttarakhand State



E. Proposed Project Implementation Schedule

26. The implementation period for the proposed subproject is 18 months. The detailed design of sub project will be completed by October end. The bidding process for the project will start by October 20, 2014 and Construction of all elements will begin December 15, 2014, and work will be completed in the mid of 2016.

III. DESCRIPTION OF THE EXISTING ENVIRONMENT

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

A. Physical Resources

1. Air and Noise Quality

28. The air pollution level is well within the permissible limits because there are no major sources of pollution in the region. Currently there are no pollution generation sources along the Kanwar path. **Table 2** shows the ambient air quality at Haridwar and Laksar (near Roorkee) is

well within the stipulated limits except for PM10 and PM2.5. The values of PM10 and PM2.5 are exceeding the limits because of localized dust. These high levels are recorded at urbanised and commercial location at Haridwar and at Industrial location near Roorkee. At project site the levels are expected to be within the stipulated limits.

Table 2: Air Quality at Haridwar

	PM10 (µg/m3)	PM2.5 (µg/m3)	SO_2 (µg/m3)	NO_X (µg/m3)	CO (mg/m^3)
Haridwar *	137	75	16	20	<0.20
Laksar (near Roorkee)**	184	NA	7.6	7.7	NA
National Standard	100	60	80	80	2.00

PM2.5 – Particulate Matter < 2.5 micron, PM10 – Respirable Particulate Matter, SOx – sulfur oxides, NOx – oxides of nitrogen, CO- carbon monoxide, NA - Not Available
Source:*Environmental Impact Assessment of Haridwar - Kashipur section of NH-74 (NHAI)-2012.
** Sri Cement Clinker Grinding Unit Laksar (Compliance report).

29. It was observed that ambient noise scenario in the study area are quite low because project route alignment is planned along the canal bank, which is isolated from the habitations. As the traffic is very low, the noise either at point or nonpoint sources is not expected in the project area. The project activities during construction and operation phases will generate noise and the baseline levels will help in determining change in noise levels. **Table 3** shows the results of noise monitoring carried out for Environmental Impact Assessment study of Haridwar-Kashipur section of NH-74. It is clear that noise levels are exceeding the limits for commercial and residential areas.

Table 3: Results of noise level monitoring in Haridwar (Haridwar- Kashipur section of NH-74)

Station	Sound Level dB (A)	
	Leq(Day)	Leq(Night)
Haridwar	77	63.9
Standard	**65**	**55**

Source: Environmental Impact Assessment of Haridwar - Kashipur section of NH-74 (NHAI)-2012

30. During the construction period, a temporary increase in the noise levels are expected as there will be movement of construction machineries and construction activities to be done in the proposed site. Suitable noise barriers in the form of temporary enclosures and timely scheduling of construction activities will help minimize these effects better.

2. Climate

31. The climate of the project area is characterised by a hot dry summer and a cool winter. The year may be divided into the following seasonal cycles: winter season from about middle of November to February followed by summer season from March to middle of the June month. The monsoon season starts from middle June and lasts till September end. The October and November months form transition period.

32. The average annual rainfall in the district is about 1000 mm range. About 90% of the annual normal rainfall in the project area is received during the south-west monsoon months

from June to September, August being the rainiest month. The variation in annual rainfall from year to year is appreciable. On an average there are 26 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district.

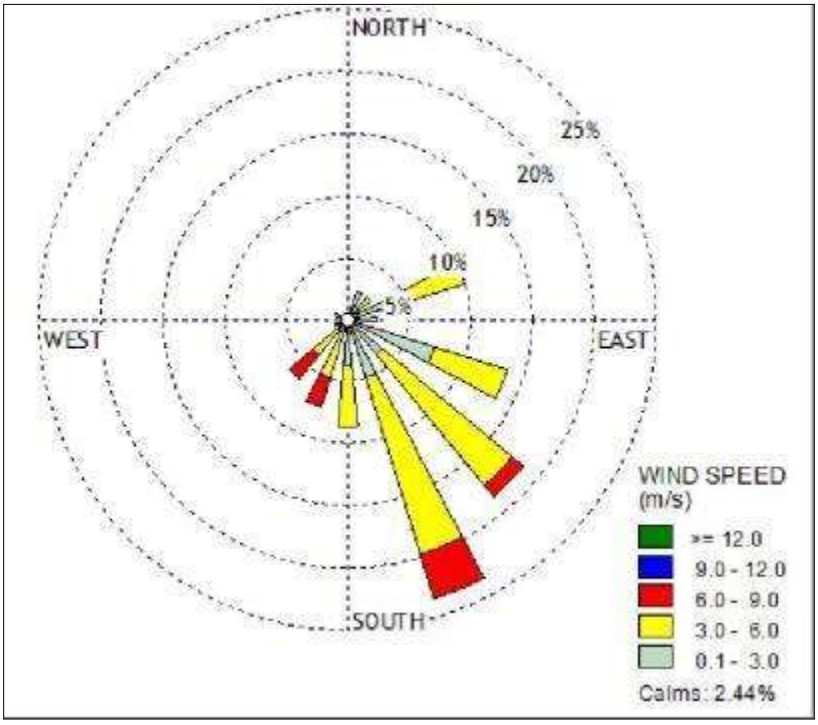
33. The nearest IMD observatory is at Roorkee. The data of this observatory has been referred as project alignment (for signages installation) passes through Roorkee. After February there is steady increase of temperature. May is generally the hottest month with the mean daily maximum temperature at about 40^0C and mean daily minimum at about 20^0C. The nights are slightly warmer in June than in May. The heat in summer is intense and the hot, dry and dust laden westerly winds which are common in the hot season make the weather severely tiring. In this season maximum temperature on individual days sometimes reaches 41^0C or over. There are occasional dust storms during summer months, but with the onset of monsoon by about the third week of June there is appreciable drop in day temperature and the weather becomes more bearable. But the nights continue to be as warm as in the latter part of summer. With the withdrawal of monsoon by end September there is a slight increase in day temperature. But there is a rapid drop in night temperature after withdrawal of the monsoon. After November both day and night temperatures decrease rapidly till January, which is usually the coldest month with the mean daily maximum temperature at about 23^0C and the mean daily minimum at about 8^0C. During the cold season the district is affected by cold waves in the wake of eastward moving western disturbances when minimum temperature occasionally goes down to about 4 deg. C. The climatic conditions have been summarised in **Table-4**.

34. During monsoon season the relative humidity is generally high being over to 90 percent. Thereafter humidity decreases and by summer, which is the driest part of the year the relative humidity in the afternoon become less than 30 percent.

35. During monsoon season and for brief spells of a day or two during the cold season when the district is affected by passing western disturbances skies are generally heavily clouded or overcast. In the rest of the year mostly clear or lightly clouded conditions prevail.

36. Winds are generally light and are mostly from directions between South West and North West. In May and South West monsoon season winds on many days blow also from directions between north-east and south-east. The average wind speed is about 8 kmph. The wind persistence during summer season has been shown in **Figure-3.**

Figure- 3: Wind Persistence in Various Directions-Wind Rose



37. During the monsoon season depressions originating in the Bay of Bengal which move across central parts of the country sometimes affect the weather over the district causing wide spread moderate rains and gusty winds in the district. In the cold season western disturbances affect the weather over the district causing a few the thunder storms. Dust storms occur occasionally during the hot season. Thunder storms occur throughout the year, the highest incidence being the monsoon season.

Table 4: Climatic Conditions at Haridwar

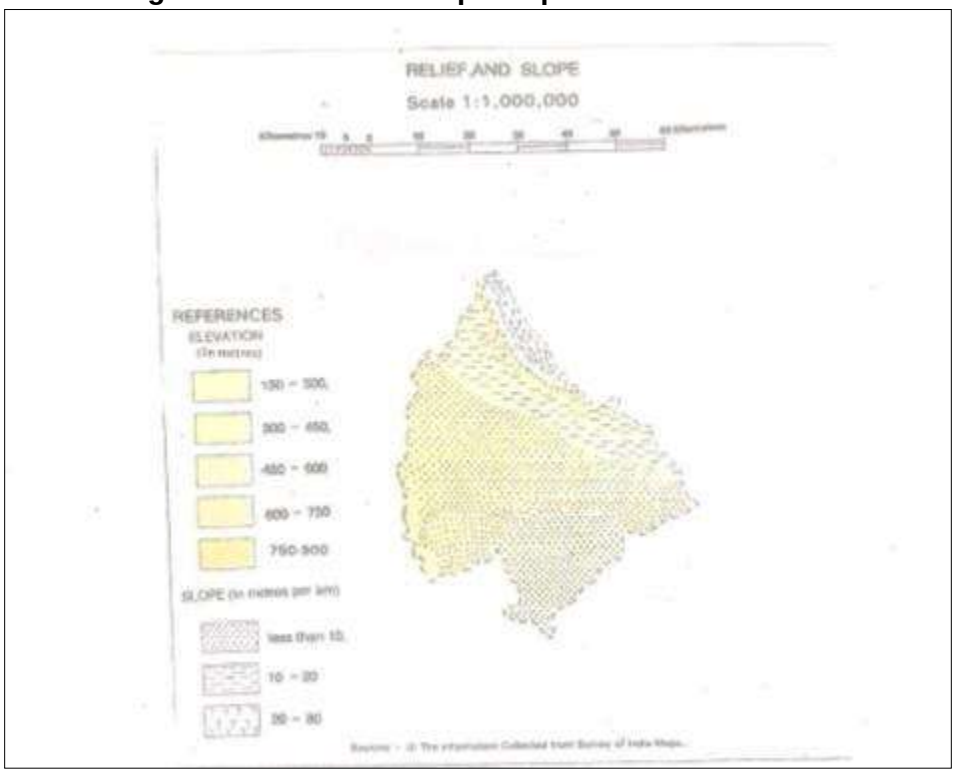
Months	Temperature			Precipitation
	Normal	Warmest	Coldest	Normal (cm)
January	6.4°C	11.6°C	1.1°C	4
February	7.1°C	12.3°C	1.7°C	5
March	10.9°C	16.6°C	5.1°C	6
April	15.4°C	21.5°C	9.3°C	4
May	17.7°C	23.7°C	11.7°C	7
June	18.3°C	23.4°C	13.1°C	11
July	17.2°C	21.1°C	13.4°C	18
August	16.9°C	20.5°C	13.2°C	18
September	16.1°C	20.5°C	11.6°C	12
October	14.3°C	19.9°C	8.8°C	3
November	11.2°C	17.0°C	5.3°C	0
December	8.4°C	13.9°C	2.9°C	2

Source: India Meteorological Department.

3. Topography and Soils

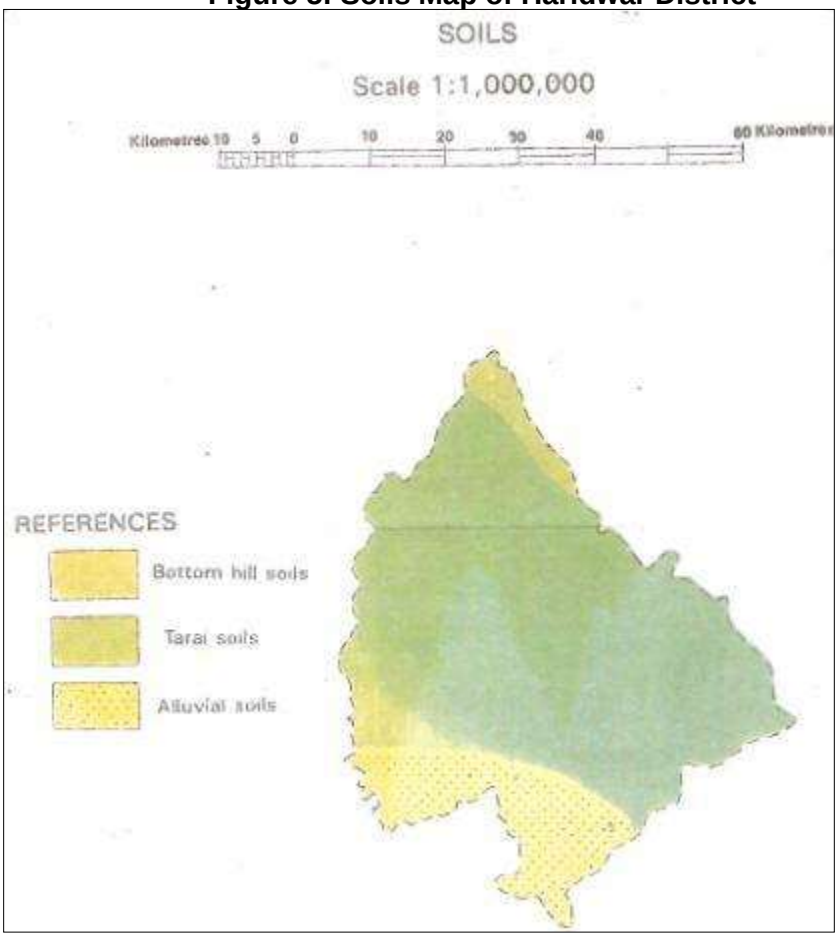
38. The part of the study area is plain and part in rolling terrain as project site is foot hills. The elevation of plain area is about 287.30 m above the mean sea level. The slope of project site and surroundings is less than 10 m per km. The slope is towards south. Being at foot hills it provides quick drainage. There is existence of Ganga River and Upper Ganga canal in the study area. The relief and slope map for Haridwar district has been given in **Figure-4.**

Figure-4 : Relief and Slope Map of Haridwar District



39. Soil characteristics depend on the climate, parent material and time, which are due to geomorphology and climatology of a given area. Soil may be defined as a thin layer of earth's crust which serves as a natural medium for the growth of plants. It is unconsolidated mineral matter that has been subjected to and influenced by genetic and environmental factors such as parent material, climate, microorganisms and physico-chemical action of wind, water and sunlight, all acting over a period of time. Some soils are light yellow, some are black, some are coarse textured and some are fine textured. They serve as a reservoir of nutrients for plants and crops and also provide mechanical anchorage and favourable tilt. The study area is dominated by the agriculture fields outside Haridwar town. The soils in study area are alluvial soil. The soil map of Haridwar district is given in **Figure-5**.

Figure 5: Soils Map of Haridwar District



40. However to have an idea of nature of soil secondary data was collected for appropriate physical and chemical parameters. The soils in project area are alluvial depositions of Gangetic basin. These are rich in organic matter as study area is at foot hills and mostly plain. The soil quality of study area has been obtained from past EIA studies in the project region. This has been given in **Table 5 and Table 6**. It is clear from these tables that soils have significant sand content. All soil samples are yellowish in colour. The soils are alkaline in nature.

Table 5: Physical Characteristics of Soil

Sl.No.	Sampling Location	Colour	Texture	Porosity (%)	Bulk Density (gm/cm^3)	Water Holding Capacity (%)
1.	Bahadarabad IOCL LPG Plant site	Yellowish	Sandy loam (sand-66% Silt-16% Clay-18%)	46.40	1.49	41.20
2	Bahadarabad	Yellowish	Sandy loam (Sand-65% Silt-19% Clay-16%)	49.6	1.48	44.30
3	Gurukul Kangri University Haridwar	Yellowish	Sandy loam (Sand-71% Silt-14% Clay-15%)	51.0	1.52	46.9

Source: IOCL LPG Bottling Plant EIA Study 2013 (from Uttarakhand Environment Protection and State Pollution Control Board).

Table 6: Chemical Characteristics of Soil

Sl.No	Sampling Location	pH	Alkalinity	HCO_3^-	Nitrogen	Phosphorus	Potassium	Calcium
1.	IOCL LPG Bottling Plant Bahadarabad	7.4	44	49.8	48	58	72	96
2	Bahadarabad	7.6	47	50	51	51	66	121
3	Gurukul Kangri	7.5	51	47	52	53	68	154

Source: IOCL LPG Bottling Plant EIA Study 2013 (from Uttarakhand Environment Protection and State Pollution Control Board).

4. Surface water and Ground water

41. The study area is drained by the Ganga River and its tributaries. The surface water of the region is unprotected from untreated waste water and runoff from agricultural chemical fertilizers and pesticides. No proper sewage treatment facilities exist in the project area. The increasing pollution of water bodies constitutes the biggest threat to public health. At present, there is limited information available on the quality of fresh water resources in the study region. The surface and ground water quality data for the project region has been obtained from the secondary sources and results are given in **Table 7 and Table 8** for surface water and **Table 9** for ground water below.

Table 7: Water Quality -Physico-Chemical Analysis of Surface Water

Sl. No	Parameter	Units	Ganga River (Near Haridwar)	Test Method
1	Odour	Unobjectionable	Unobjectionable	IS 3025 P-5
2	Temperature	Deg. C	25	
3	pH Value		7.59	IS 3025 P-11
4	Conductivity at 25oC	µmhos/cm	210.4	IS 3025 P-14
5	Total Dissolved Solids	mg/l	128.5	IS 3025 P-16
6	Total Suspended Solids	mg/l	15.60	IS 3025 P-17
7	Dissolved Oxygen (D.O)	mg/l	7.9	IS 3025 P-38
8	Biochemical Oxygen Demand (BOD) @27°C 3days	mg/l	<2.0	IS 3025 P-44
9	Chemical Oxygen Demand (COD)	mg/l	<4.0	IS 3025 P-58
10	Phosphate (as PO4)	mg/l	0.08	IS 3025 P-31

Sl. No	Parameter	Units	Ganga River (Near Haridwar)	Test Method
11	Total Coliform	MPN/100ml	$2.5x10^3$	IS 16221981
12	Faecal Coliform	MPN/100ml	$2.7x10^2$	IS 16221981
13	Appearance	Per 100ml	Clear	APHA 2110
14	Nitrate (as NO3)	mg/l	2.30	IS 3025 P-34

Source: Environmental Impact Assessment of Haridwar - Kashipur section of NH-74.

Table 8: Surface water Quality of Upper Ganga Canal

Source	Temp(deg ^{0}C)	pH	DO	BOD	Faecal Coliform MPN/100ml)	Total Coliform (MPN/100ml)
Upper Ganga Canal near Plant site	15.0	7.4	8.0	3.1	10	1000

Source: Environmental Impact Assessment of IOCL LPG Bottling Plant Haridwar 2013 (from Uttarakhand Environment Protection and State Pollution Control Board).

Table 9: Ground Water Quality in Study Area

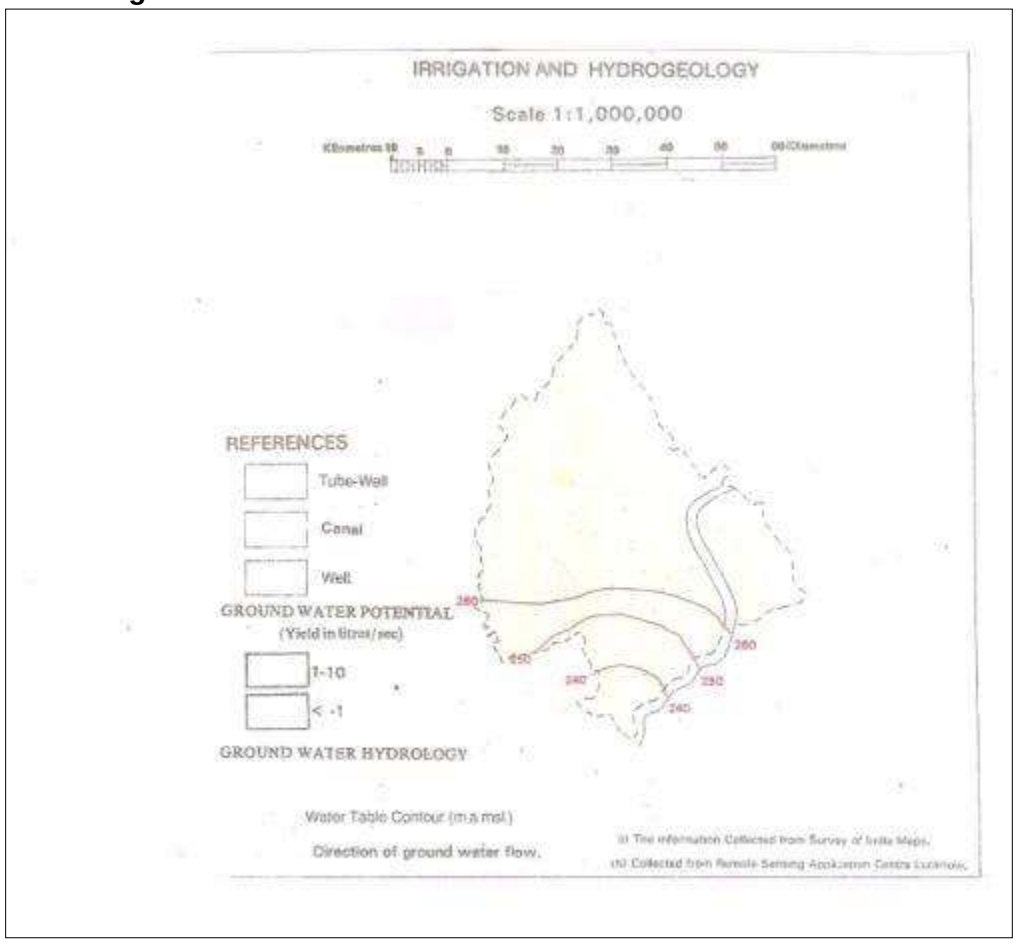
Parameter	Unit	IOC L Plant site (About 300 m from Kanwar Route)	Bhadarabad Town (At about 500 m from Kanwar Route)	Gurukul Kangri Haridwar (at about 500m from Kanwar Route)
pH	-	7.5	7.4	7.2
Conductivity at 25^0C	µmho/cm	51	37	29
Turbidity	NTU	1.5	1.1	1.0
Total suspended solids	mg/l	6.0	7.0	5.0
Total dissolved solids	mg/l	110	125.0	118.0
Total alkalinity, as $CaCO_3$	mg/l	170	235.0	210;0
Total hardness, as $CaCO_3$	mg/l	134	174	176
Calcium, as $CaCO_3$	mg/l	2.3	1.6	1.5
Sodium, as Na	mg/l	21.41	19.67	21.20
Cadmium, as CD_3	mg/l	<0.01	<0.01	<0.01
Copper, as Cu	mg/l	<0.01	<0.01	<0.01
Total iron, as Fe	mg/l	<0.02	<0.01	<0.01
Chromium, as Cr^{+6}	mg/l	<0.01	<0.01	<0.01
Oil & Grease	mg/l	<0.01	<0.01	<0.01
Chloride, as Cl	mg/l	21	29	21
Sulphate, as SO_4^{--2}	mg/l	12.4	23.0	21.0
Phosphate, as PO_4^{--3}	mg/l	<0.01	<0.01	<0.01
Dissolved silica, as SiO_2	mg/l	3.0	5.0	4.1
Dissolved oxygen	mg/l	1.1	1.2	<1
B.O.D., 5 days 20 ^{0}C	mg/l	1	0.2	1
C.O.D.	mg/l	3	1	2

Source: Environmental Impact Assessment of IOCL LPG Bottling Plant Haridwar -2013 (from Uttarakhand Environment Protection and State Pollution Control Board).

42. All the results for surface water samples are found to be well within the prescribed IS: 2296 limits, but faecal coliforms are very high in Ganga River. Relatively low dissolved oxygen values were observed in the surface water samples indicating that the Ganga river water at Haridwar and its tributaries is grossly polluted. High MPN counts of Feacal and total coliform in the samples indicate that the waters are grossly contaminated and can only be used with conventional treatment including disinfection for domestic purposes.

43. The Central Groundwater Board has estimated the annual replenishable quantum of groundwater resources in Uttarakhand to be nearly 0.28 million hectare meter. The estimation of groundwater in the mountainous terrain is very complex and very little empirical data exists. The ground water occurs often in pockets, depending largely on the secondary porosity developed due to fractures, joints, and faults and is restricted in extent due to topographical features. In the Bhabar zone the groundwater is very deep, though often in artesian conditions, while in the Terai it is shallow and causes water logging. It is clear from ground water quality results (Table 9) that all parameters of ground water quality are well within the stipulated limits specified in IS: 10500 (2012). The map showing ground water contour depth has been given in **Figure 6.**

Figure 6: Ground water Contour Profile of Hardwar District



5. Geology / Seismology

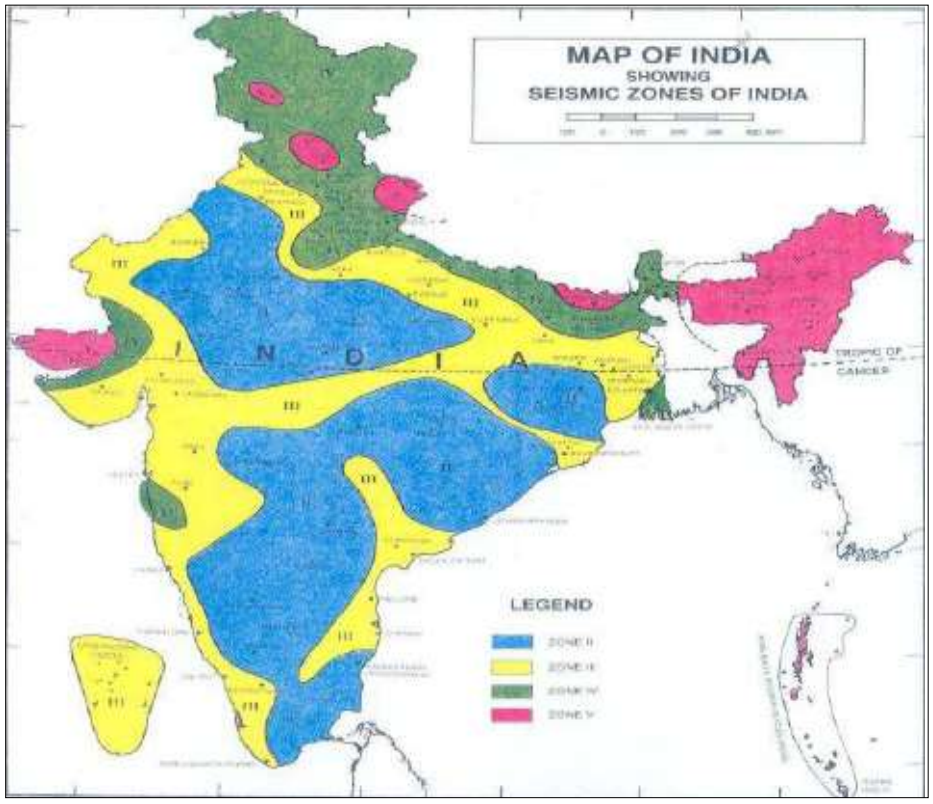
44. The Himalayan organic belt is visualized as compressive plate boundary zone between the Eurasian plate on the north and the Indian plate to the south. The plate conversance between the formerly separated continental masses (the plates), resulted into complete

demolition of the Tethys ocean basin, which was intervening between the two plates till the Mid-Miocene. The collision of the two plates gave birth to the Himalayan orogeny. The Himalayan general strike is WNW-EWE, measuring about 2400 km long and average width about 270 km. Uttarakhand Himalaya occurring in the central part of the Himalayan folded belt has exposed rock types varying in age from Proterozoic to Late tertiary period, disposed in four major tectonic belts designated as the Foothill Siwalik belt, Lesser Himalayan belt, Central Crystalline and Tethyan belt.

45. The Ganga plain landscape covers the study area. The study area lies between the rocky Himalayan belt in the north and the southern hilly tract comprised of mainly Pre-Cambrian rocks. Flexing of the Indian lithosphere in response to the compressive forces due to collision, and thrust fold loading produced the Ganga Plain foreland basin. It is filled with recent alluvial sediments which is at places more than 1,000 m. thick and an amalgams of sand, silt, clay in varying proportions.

46. The main tectonic elements of the project area 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. Several damaging earthquakes are recorded from this region. As such, the project region is classified under high seismic zone IV. The seismic zones on Indian map have been shown in **Figure 7.**

Figure 7: Seismic zones of India



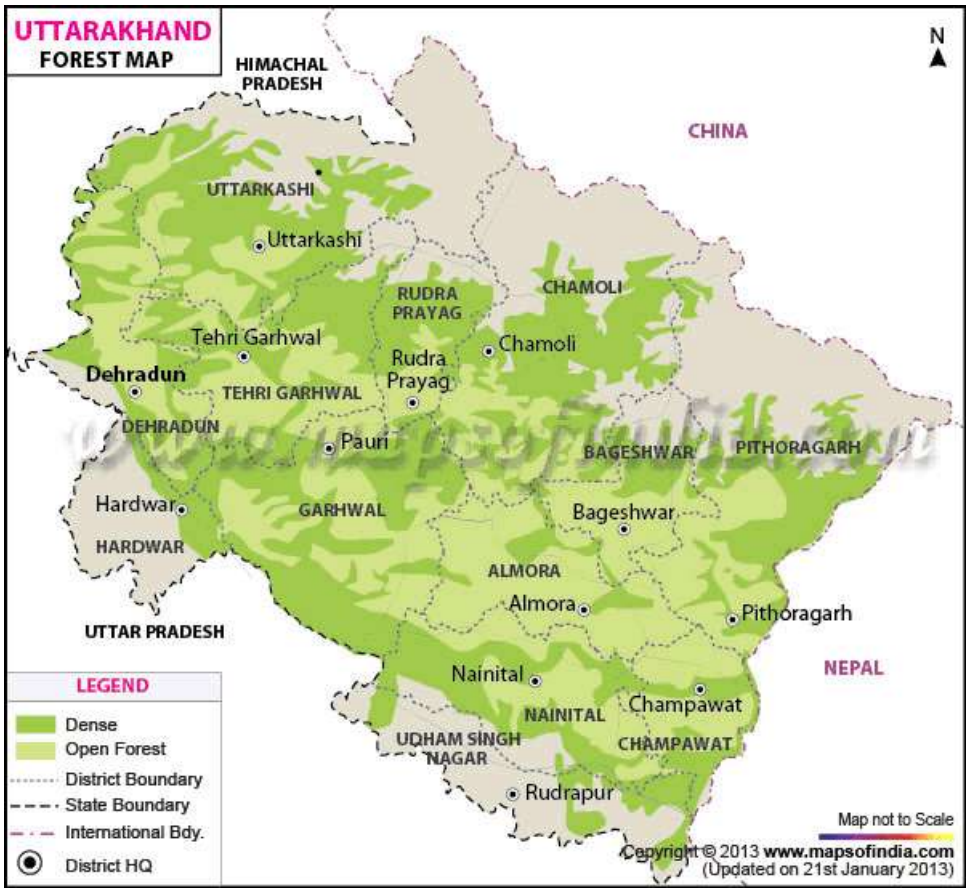
B. Ecological Resources

1. Forests

47. The recorded forest area of the Uttarakhand is 3.47 million hectares, which is around 64.79 % of its geographic area (FSI, 2011). Reserve Forests (RF) constitute 71.11%, Protected Forests 28.52% and Un-classed forests constitute 0.35% of the total forest area. The forests can be broadly categorized into two categories: the hill forests and the lower Shivalik hill forests, more commonly known as Bhabar and Terai forests. In terms of type, the state forest is classified into 9 forest types based on Champion and Seth (1968) system, the largest among which are the Himalayan Moist Temperate Forests, Sub-tropical Pine Forest, Tropical Moist Deciduous Forest and Tropical Deciduous Forests accounting for 37.15%, 28.81%, 19.08%, and 6.46%, respectively.

48. The forest areas within 10 km aerial distance of Kanwar Patri alignment are Shivalik RF, Chandi RF and Pathri RF. Some notable tree species observed in the study site are Poplar (*Populus ciliata*) and Eucalyptus (*Eucalyptus citriodora*) due to their fast growing and large market demands, and Khair (*Acacia catechu*) and Seesam (*Dalbergia sissoo*) for their ecological and economic importance. The forest map of Uttarakhand has been given in **Figure 8.**

Figure 8: Forest Cover Map of Uttarakhand



Source: http://www.mapsofindia.com/maps/uttaranchal/uttaranchal-forest-map.htm

2. Wildlife

49. Uttarakhand has about 64.79 % of its geographic area under forests and most of it is managed by the Forest Department. 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.

50. The State is home to nearly 4048 species of Angiosperms and Gymnosperms belonging to 1198 genera under 192 families. Of these nearly 116 species are endemic to Uttarakhand. 161 species of flora found in Uttarakhand are recognized as rare or threatened under the categorization of the International Union for Conservation of Nature (IUCN). Out of the 223 species of Orchids reported from the North Western Himalayas, over 150 have been reported from the State.

51. The State also supports a wide variety of faunal forms which includes about 102 species of mammals, 623 species of birds, 124 species of fish, 69 species of reptiles and 19 species of amphibians. Highly endangered species like Tiger, Asian Elephant, King Cobra, etc. find suitable habitat in the forests around Haridwar (Rajaji National Park). The faunal diversity of Rajaji National Park (situated more than 10 km from the starting point of alignment) is given in **Table 10.**

Table 10: Faunal Diversity Rajaji National Parks

Fauna	Rajaji National Park
Mammals	49
Birds	315
Reptiles	49
Amphibia	10
Pisces	49
Chilopoda	7
Termites	21
Odonata	38
Lepidoptera	68

Source: Uttarakhand Forest Department.

52. The subproject area is around Upper Ganga canal and there is existence of agriculture fields and habitations. In the surroundings of Kanwar Path route. Common flora and domesticated fauna are recorded. No rare, threatened, endangered or endemic flora or fauna are observed in the subproject area.

3. Protected Areas

53. The State of Uttarakhand is represented by Biogeographic Zones 2B Western Himalaya and 7B Siwaliks. About 18.7 % of the total area under the Forest Department has been earmarked for biodiversity conservation by the creation and management of 12 Protected Areas (PA) and a biosphere reserve in the State. The Nanda Devi Biosphere Reserve (NDBR) is the lone biosphere reserve in the State. The Nanda Devi National Park (NDNP) and the Valley of

Flowers NP are UNESCO World Heritage Sites declared in 1988. The list of PA's (National Parks and Wildlife Sanctuaries) in the State is given in **Table 11**. Nearest PA's to the subproject area are Corbett NP, Rajaji NP and Sonanadi WLS, all situated more than 10 km away from the subproject area.

Table 11: National Parks and Wildlife Sanctuaries in Uttarakhand

Sl. No	National Park	Year of Establishment	Area (sq.km)	District
1	Corbett NP	1936	521	Pauri Garhwal
2	Nanda Devi NP	1982	630	Chamoli
3	Valley of Flower NP	1982	87	Chamoli
4	Rajaji NP	1983	820	Dehradun and Haridwar
5	Gangotri NP	1989	2390	Uttarkashi
6	Govind NP	1990	472	Uttarkashi
7	Govind WLS	1955	521	Uttarkashi
8	Kedarnath WLS	1972	957	Chamoli
9	Askot WLS	1986	600	Pithoragarh
10	Sonanadi WLS	1987	301	Pauri Garhwal
11	Binsar WLS	1988	46	Almora
12	Musoorie WLS	1993	11	Dehradun

Source: Wildlife and Protected Areas, ENVIS, 2002.

54. The Rajaji National Park was established in 1983 protecting sections of the tropical deciduous forest area of the Shivalik Hill range on the Himalayan foothills. The Park covers 820.42 km^2 along the Haridwar, Dehradun and Pauri Garhwal. The park has a vast Sal forest, and mixed forest mostly covered with *Acacia catechu* and *Vetiveria zizanioides*. It is refuge to approximately 49 species of mammals, 315 species of birds, 49 species of reptiles, 10 species of amphibians and 49 of Piscean species. This park has the largest population of elephants in Uttarakhand and a large population of tigers and leopards. Notable animals seen in the par are the Wild Cat, Goral, Rhesus Macaque, Himalayan Yellow Throated Marten, Monitor, Lizard, Indian Hare, Sloth, Himalayan Black Bear, King Cobra, Jackal, Barking Deer, Sambar, Wild boar, Indian Langur, Indian Porcupine and Pythons. The population of birds consists of the Great Pied Hornbill, Himalayan Pied Kingfisher, Sparrows, Fire Tailed Sunbird, and the Peacock (Indian National Bird).

4. Flora and Fauna in Study Area(Non Forest Areas)

55. The trees found in the non-forest area of study area are of dhak (*Butea monos-perma),* conla (*Emblica officinalis*), arjun (*Terminalia arjuna*), ashok (*Polyalthia longifolia*), asna (*Terminalia alata*), bahera (*Terminalia bellirica*), bargad (*Ficus bengalensis*), barhal (*Artocarpus lakoocha*), bel (*Aegle marmelos*), eucalyptus (*Eucalyptus tere-ticornis*), gular (*Ficus glomerata*), gul mohar (*Delonix regia*), jamun (*Suzygium cumini*), kaitha (*Feronia limonia*), katahal (*Arto-carpus heterophyllus*), khair (*acacia indica*), mahua (*Madhuka indica*), liteni (Naphelium litchi), neem (*Azadirachta indica)*, pipal (*Ficus religiosa*), sagon (*Tectona grandis*), silver oak (*Grevilea*

robusta), kala siris (*Albizia lebbek*), safed siris (*Albizia lebbek*) and shisham (*Dalbergia sissoo*), Grasses like dub (*Cynedon dactylon*), Baib (*Enlaliopis bineta*), kans (*Saccharum spontaneum*) and spear grass are also found in the district. The study area has Litchi trees also. These are in private orchards. There are mango tree orchards commonly seen in the study area.

56. The study area harbours common rural species. The most commonly found wild animal is the Nilgai or the blue bull (*Bose-laphus tragocamelus*). The other animals found in the district are panther (Panthera pardus), Indian fox *(Vulpesbengalensis)* sambhar (*Gervus unicolor*), hyaena (*Hyaena hyaena)*, hare (*Lepus ruficandatus*), porcupine (*Hystrix indica*), jungle cat (*Felis chaus*), jackal (*Canis aureus*), mongoose (*Harpestes edwardsi*), monkey (*Innus rhesus)* and squirrel (*Funambulus pennauti*).

57. Variety of birds are found in the study area. The most common among the game birds is the partridge *(Francolines pondicerianus)* which occurs everywhere and is locally known as titar. Other types of partridge, such as kala titar or black partridge *(Francolines vulgaris)*, gray parridge *(Francolines Pondicerianus)* are found near the forests. Among the quails the most common are the bater (*Coturnix communis*) and the lava (*Perdicula asiatica)* which are usually found in the bushes. Other birds found in the district are kabutar or pigeon *(Columbialivia*), fakhta or *dove streptopelia decacte*), parkia or turtle dove (*Streptopelia chinensis*), harial (*Streptopelia senegalensis*), peacock (*Pavo cristatus*), snipe or chaha (*Capella gallinago*), lal sir (*Netta rufina)*, white-eyed pochard or khanjan (*Aythya rufa*), nil sir (*Anas Platy rhynchos*), seekhpar (*Anas acuta*), jal murgi (*Amaurornis phoeonucums*).

- **Fish** – Fish are found in the rivers, and village ponds of the district, the common species being rohu *(Labeo rohua)*, karonch *(Labeo calbasu)*, Khursa *(Labeo gonius)*, nain *(Cirrhina mrigala)*. Catla *(Catla Catla)*, bam *(Mastacenbelus armatus)*, and silond *(Silondia silondia).*
- **Reptiles –** Snakes are common in the district especially in the rural area the Chief being the Cobra *(Naja naja)*, Karait *(Bungrus caeruleus)* and water snake *(Natrix piscator)*. The other reptiles are the chameleon (*girgit*), the goh and the Chhipkali (*liazard*).

C. Economic Resources

1. Industries

58. The State has very few industrial units mainly because of lack of resources. In recent years, the government is encouraging private participation in all industrial activities in the State. The New Industrial Policy announced in 2003 indicates that private resources may be tapped while promoting integrated industrial estates in Uttarakhand. The State government provides assistance in establishing small and medium sized agro parks, food parks, and the likes which in turn are expected to provide common infrastructure facilities for storage, processing, grading, and marketing.

59. In project influence area there is only one major industry - Bharat Heavy Electricals Ltd., Ranipur. In addition to this there are small scale industries in industrial areas Roorkee, and Bahadarabad.

60. There are a number of National Parks and Wildlife Sanctuaries are located in Uttarakhand. Revenue is generated from visit of the tourist. Corbett NP received 71.9 million INR from tourism activities during April 2011 to March 2012 which forms 80.4% of the total

revenue receipts by the key PA's of the State. **Table 12** shows the tourist arrival and revenue receipts of important PA's of Uttarakhand during April 2011 to March 2012.

Table 12: Tourist Arrival & Revenue Receipts of Important Protected Areas of Uttarakhand (April 2011–March 2012)

Protected Area	Area (km^2)	Indian	Foreigner	Total	Revenue (Rs. In Lakhs)
Corbett NP	520.84	202528	7734	210262	719.38
Rajaji NP	820.42	19268	1793	21061	52.42
Gangotri NP	2390.00	13675	1692	15367	38.15
Valley of Flowers NP	87.00	6328	527	6855	11.39
Nanda Devi NP	630.00	55	8	63	0.13
Govind NP/WLS	472.08	2172	125	2297	4.88
Binsar WLS	45.59	17343	432	17775	37.57
Sonanadi WLS	301.76	16323	788	17111	29.41
Kedarnath WLS	957.00	701	102	803	1.31
Total		278393	13201	291594	894.64

2. Infrastructural Facilities

61. The infrastructure facilities in study area include roads (National Highways/State Highways/Major District Roads/Ordinary District Roads), Rail connectivity, drinking water supply, educational and health facilities.

62. There are schools (both primary and secondary) and colleges (including private and government) in study area. But none of these are located along the pedestrian as it is planned along canal bank. Roorkee city is a big educational hub.

63. The health facilities in the form of Hospitals, Primary Health Centers and private nursing homes. None of these are located along the alignment of Pedestrian route for pilgrims and tourists and hence no impact on these on account of project execution.

3. Transportation

64. The towns close to Kanwar Path such as Haridwar and Roorkee are well connected by motorable roads with major destinations of Uttarakhand and Uttar Pradesh States. The National Highway connecting Haridwar to capital city Delhi is NH-58 and other NH connecting Haridwar with Uttar Pradesh is NH-74 connecting to Kashipur, Bijnaur, Nazibabad, etc. Buses to Haridwar are available from major destinations of Uttarakhand State and also from ISBT Kashmiri Gate, Delhi. Haridwar can be reached via air through the airport of Jollygrant which lies close to Dehradun, 40 km away from Haridwar.

65. The project area is also connected by rail transport through Delhi - Dehradun rail line.

4. Landuse

66. The study area of sub project alignment is plain as Haridwar the starting point of project is located in foot hills. Agriculture is one of the main economic activities of the study area (10 km aerial distance on either side of alignment). Most of the farmers in the region are owner-

cultivators with small and limited family farms - approximately 50% of all land holdings are less than 0.5 hectares in size and 50% under one hectare. Agriculture in the region is interlinked with crop husbandry, animal husbandry and forestry to form a production system.

67. Wheat and Barley are the main 'Rabi' crops while Rice, Kodo, Sanva are main 'Kharif' crops of the region. Various pulses are grown intercropped during the two harvest seasons - early winter after the rainy season (millet), and mid-summer before the hot dry season (barley-wheat). Dry and wet rice, taro, pumpkins, beans, corn, ginger, chili, cucumber, and leafy vegetables are also grown in the area. Potatoes have become an important cash crop being grown in areas.

68. **Table 13** provides a summary of Land use pattern of Haridwar District.

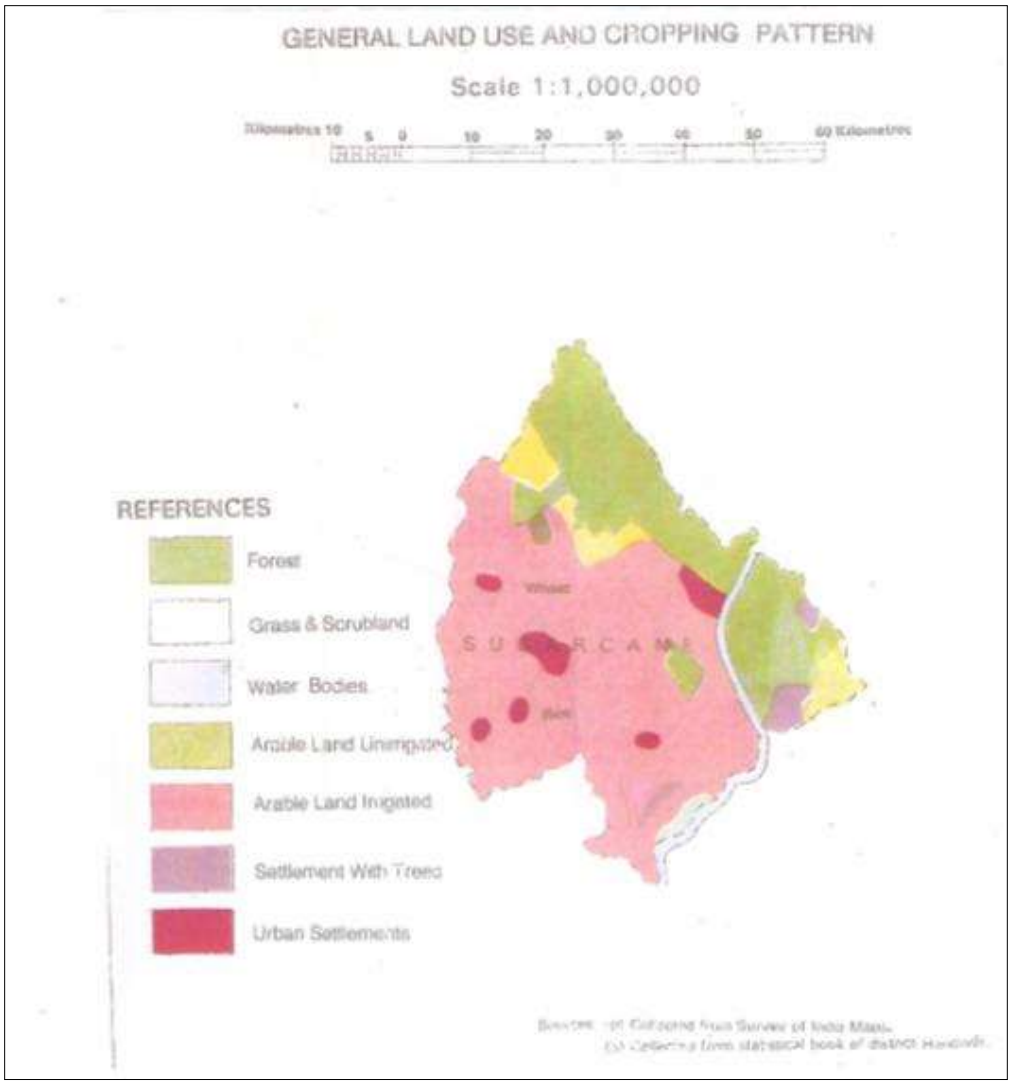
Table 13: Land use pattern of Haridwar District

Land use	%
Forest Area	64
Pasture land	4
Area Under Non agriculture	6
Barren and Unculturable land	6
Cultivable waste land	6
Total Fallow land	1
Net Sown area	14
Irrigated Area	47

Source: Haridwar District Website.

69. The land use map of Hardwar district has been given in Figure 9 below. It is clear from this figure that most dominant land use is arable land irrigated followed by forest land.

Figure 9: Land Use Map of Hardwar District



5. Power source

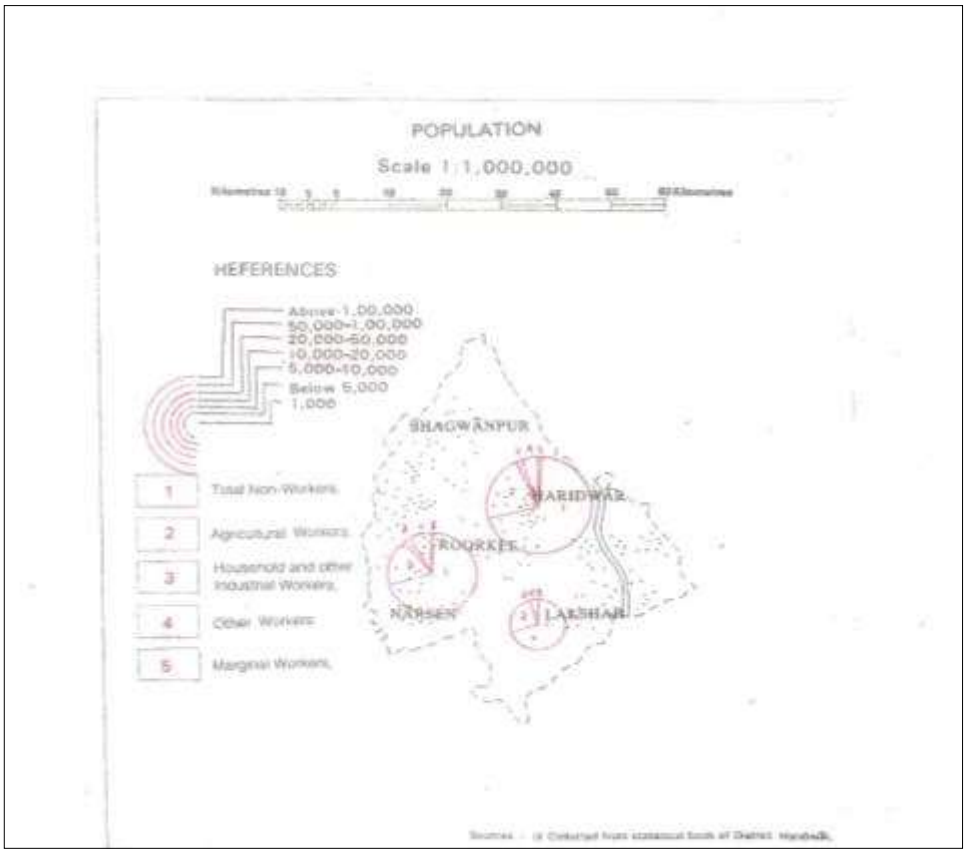
70. Uttarakhand has an estimated hydro power potential of 20,200 MW. However, only 1,130 MW has been tapped at present. Meanwhile, 4,170 MW projects are under implementation and 3,800 MW projects are allotted to Central, State, and private sectors.

D. Social and Cultural Resources

1. Population and Communities

71. The entire length of sub project falls in Haridwar district. Population of the Haridwar district is about 1750000, with sex ratio (Females per 1000 males) of 924. Population density of the district is 429 per km^2, which is marginally higher than the Indian average of 403 per km^2. The population profile of the district has been shown in **Figure 10.**

Figure 10: Demographic Map of Haridwar District



72. Scheduled castes constitute 34.7 % of the total population, while scheduled tribe population is nil. Majority of the scheduled castes reside in the rural areas. Literacy rate of the district is 72.90%.

73. The predominant communities living in the area are Hindus followed by Sikhs, Christians, Jains and Buddhists. The major Hindu castes include vaisyas, Rajputs, Jats, Gujars, Brahamans and occupational groups such as Koris, Nais, Dhanooks, Kurmis, Dhobkis Lohar, Banjaras,etc.

74. The schedule cast population consists of Chamars (Dhusia, Jhusia or Jataver), Dhanuk, Dhobi, Korwa, Balmiki, etc.

75. People mainly speak Hindi. Other languages spoken in the area include Punjabi, Urdu and English.

76. Wheat is the staple food. Maize, jowar, bajra, barley, gram peas, pulses (arhar, moong, urd, etc.) and vegetables are consumed as secondary food. Most of the population is vegetarian. Sugarcane and paddy crops are also grown in fairly large agriculture area of the district.

77. The main occupation of people in the study area is agriculture and allied activities, including poultry and animal husbandry. Data on employment shows that 42 % workers are in service, 10% are self-employed, 0.50 % is unemployed. Of all unemployed 44 % are student, 2.8% are house wives, 0.10 % are farmers, and 0.70 % are retired.

2. Health facilities

78. At district headquarters at Haridwar there is one district hospital. In addition to, there are many Homeopathic and Ayurvedic clinics and hospitals. In allopathic hospitals all-important medical facilities such as Radiology, Pathology, Child Care, Orthopaedics, Anaesthesia, Surgery, etc. are available.

3. Education facilities

79. Haridwar district is well endowed with academic institutions of excellence, mainly to the facilities of national fame available for studies in sciences, engineering, technology and advanced research in the town of Roorkee.

80. Education in Sanskrit based classics and Hindu religious/cultural disciplines are an age-old tradition in the district, mainly centered in and around Haridwar city. Some of the important institutions of this genre are:

Gurukul Kangri, situated in Kankhal, on the banks of river Ganges, on Haridwar-Jwalapur bypass road. It is one of the oldest Universities of India. It was founded in 1902, to study the unique Gurukul based education system. Here Ancient Vedic and Sanskrit literature, Ayurveda, Philosophy are part of the curriculum besides modern sciences and journalism. Its 'Archaeological Museum', established in 1945, houses some rare statues, coins, paintings, manuscripts and artefacts, starting from Harappa culture (c.2500–1500 BC). Mahatma Gandhi visited the campus three times and stayed in its sprawling and serene campus for extended periods of time, most notably during the 1915 Kumbh Mela.

Vishwa Sanskrit Mahavidyalaya, Haridwar A Sanskrit University, set up by Govt. of Uttarakhand, it is the only university in the world dedicated to studies of ancient Sanskrit scriptures and books. Its curriculum also covers ancient Hindu rituals, traditions and culture, and it boasts of a building inspired by ancient Hindu architecture style.

State Ayuevedic College & Hospital Rishikul, Haridwar, is the oldest Ayurvedic Medical College of India. It is situated near Devpura in Haridwar on the banks of Upper Ganges Canal. It is also providing postgraduate education for Ayurveda. Soon it will be transformed as the first Ayuevedic University of Uttarakhand.

Govt Ayurvedic College & Hospital, Gurukul Kangri of HNB Garhwal University is also one of the oldest Ayurvedic medical colleges in India. It is situated in Gurukul Kangri University Campus.

Dev Sanskriti Vishwavidyalaya: established in 2002 by the act of the Uttarnchal Government is a fully residential university. Run by Sri Vedmata Gayatri Trust, Shantikunj Haridwar (headquarters of All World Gayatri Pariwar), it provides various degree, diploma and certificate courses in areas like Yogic Science, Alternative Therapy, Indian Culture, Tourism, Rural Management, Theology (Dharm Vigyan), Spiritual Counseling etc. It also provides distance learning courses.

Modern Ashrams are also being established in the district for imparting training in yoga and meditation to people coming now from near and far, including foreign countries of the West.

Shantikunj Ashram provides a 9 days camp and one month / three months courses covering yoga, meditation, art of living, scientific spirituality etc.

E. Social and Cultural Heritage

81. Haridwar is a place of intense religious significance, Haridwar also hosts several religious festivals throughout the year; popular among them are the Kavad Mela, Somvati Amavasya Mela, Ganga Dashara, Gughal Mela, in which around 2–2.5 million people take part.

82. Apart from these, there is the mammoth Kumbh Mela which takes place once in every twelve years, when the planet Jupiter (Brihaspati) comes into the sign Aquarius (Kumbha). First written evidence of the Kumbha Mela can be found in the accounts of Chinese traveler Huan Tsang or Xuanzang (602 – 664 A.D.), who visited India in 629 AD.The 1998 Maha Kumbh Mela saw over 80 million pilgrims visiting this city, to take a dip in the holy river Ganges.

Har ki Pauri: One of the holiest spots on earth for the Hindus, this ancient bathing ghat (Steps) is of prime importance. A majority of the present *ghats* were largely developed in the 1800s.

Sati Kund: It is the well-known mythological Sati immolation heritage situated in Kankhal.

Daksheswara Mahadev Temple: The ancient temple of Daksha Mahadev, also known as Daksheswara Mahadev Temple, is situated in the south of Kankhal town and is a tribute to the legends of Sati's self-immolated and king Daksha's death and later life with a goat's head.

Maya Devi Temple: This temple of the Adhisthatri deity of Haridwar is considered one of the*Siddhapeethas* and is said to be the place where the heart and navel of Goddess Sati had fallen. It is one of the few ancient temples still standing in Haridwar, along with Narayani Shila Temple and Bhairav Temple.

Sapt Rishi Ashram and Sapt Rishi Sarovar, where the Ganges split herself into seven currents so that seven great sages on its bank would not be disturbed by the flow.

Bhimgoda Tank: This tank, where Bhima is said to have drawn water from the rocks by thrusting his knee into the ground, is situated at a distance of about 1 km from Har-ki-Pauri.

Chandi Devi Temple: The present temple, commemorating the ancient Chandi legend, was constructed in 1929 AD by the Dogra King of Kashmir, Suchat Singh; it can also be reached through a ropeway.

Mansa Devi Temple: The temple dedicated to Mansa Devi, a form of Shakti draws many pilgrims. There are two ways to reach the temple – trekking or it can also be reached through a ropeway.

Piran Kaliyar Sharif: This famous 'Dargah' (Shrine) of Hazrat Alauddin Sabir Kaliyari, a 13th-century Sufi Saint of Chishti Order, was built by Ibrahim Lodhi, a Delhi Sultanate ruler. Also known as Sarkar Sabir Pak, it is located in Kaliyar village, 7 km from Roorkee, and is a living example of religious harmony in India; it is visited by devotees from all over the world, during the annual 'Urs' festival, which is celebrated from 1st day (of sighting the new moon) to 16th day of Rabee-ul-awwal month of Islamic calendar.

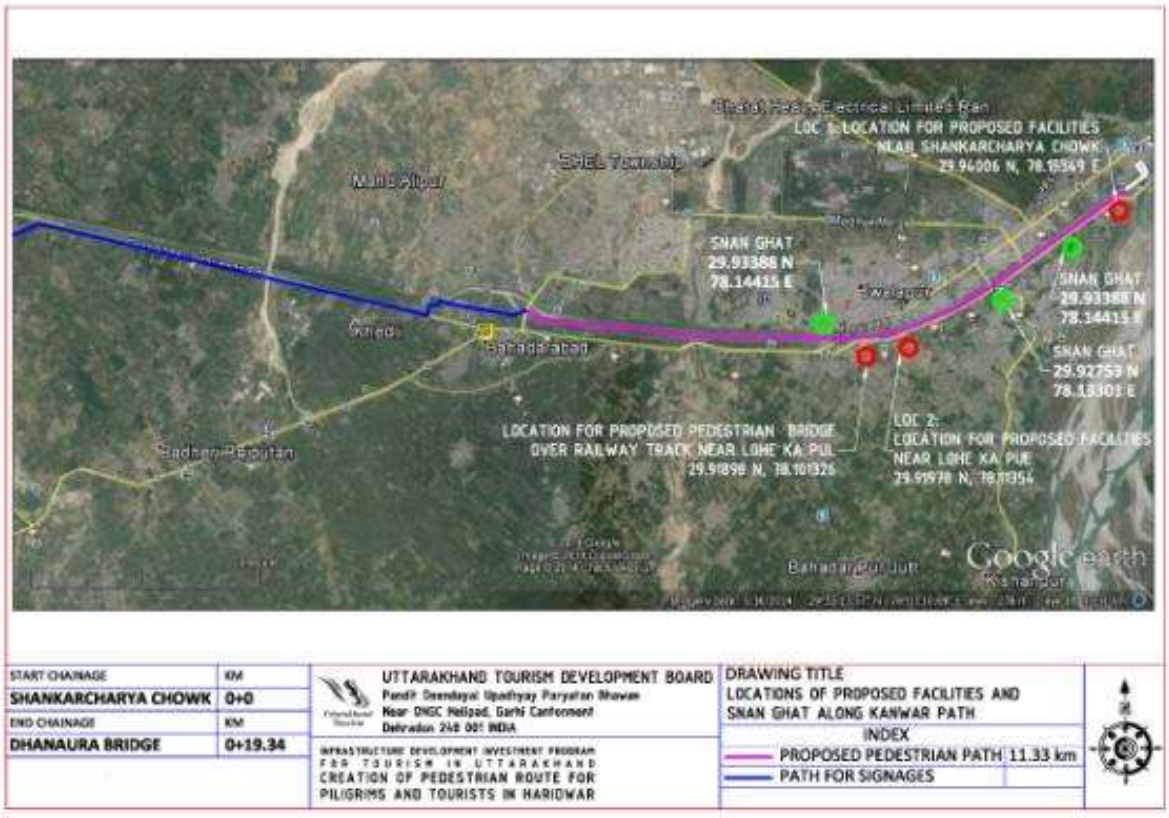
Ram Mandir: This Ram temple is under construction at Bhupatwala and would be the biggest in size in India.

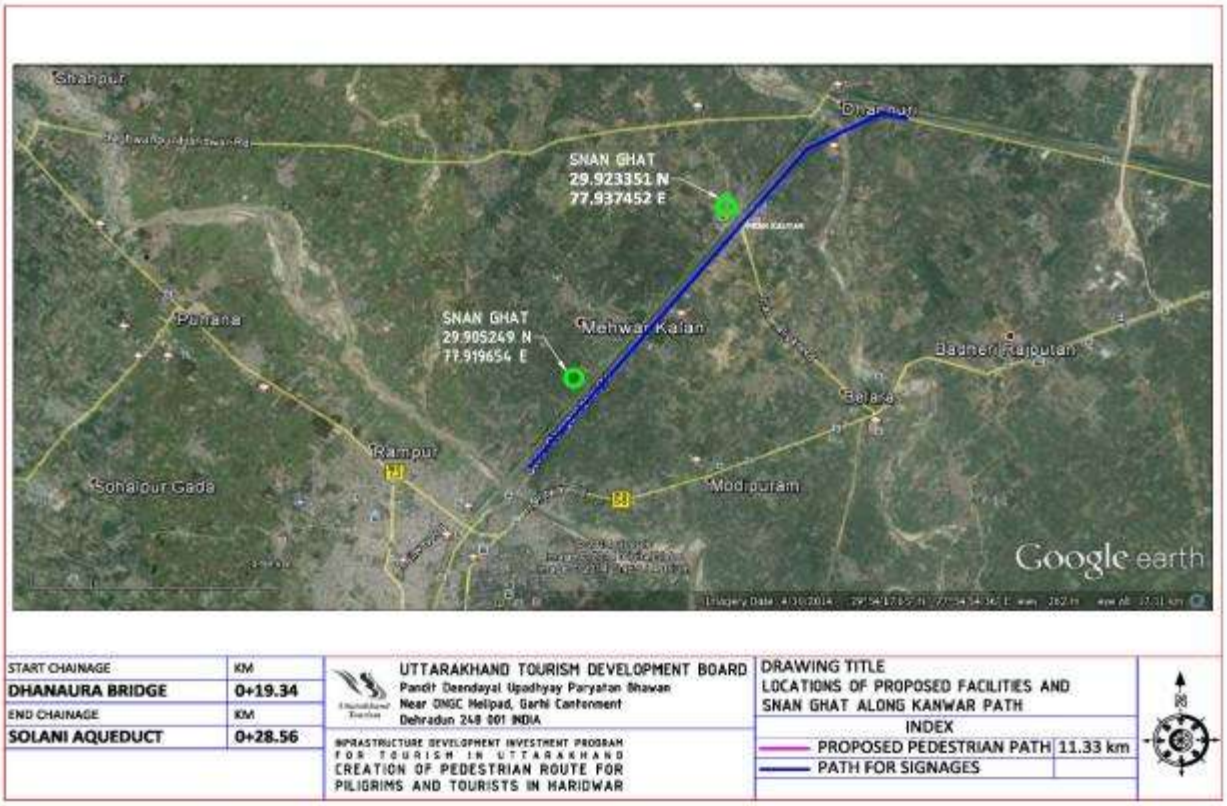
Shantikunj: Shantikunj is headquarters of spiritual and social organisation All World Gayatri Pariwar (AWGP). Founder of the organisation, Pt. Shriram Sharma Acharya, was a great saint, spiritual leader and freedom fighter. He spent last twenty years of his life here, writing literature and directing activities of the organisation. Shantikunj is considered as a place of pilgrimage by millions of devotees of this global organisation.

Along Kanwar Path Alignment

Since the Kanwar Path alignment is along the canal bank. The irrigation department has constructed 3 bathing Ghats for public between Shankaracharya chowk and Bahadarabd one each at Piran Kaliyar, Roorkee and Manglour. The site features on google map is shown in **Figure 11** below.

Figure 11 : Kanwar Patri Alignment showing Site Features





START CHAINAGE	KM
DHANAURA BRIDGE	0+19.34
END CHAINAGE	KM
SOLANI AQUEDUCT	0+28.56

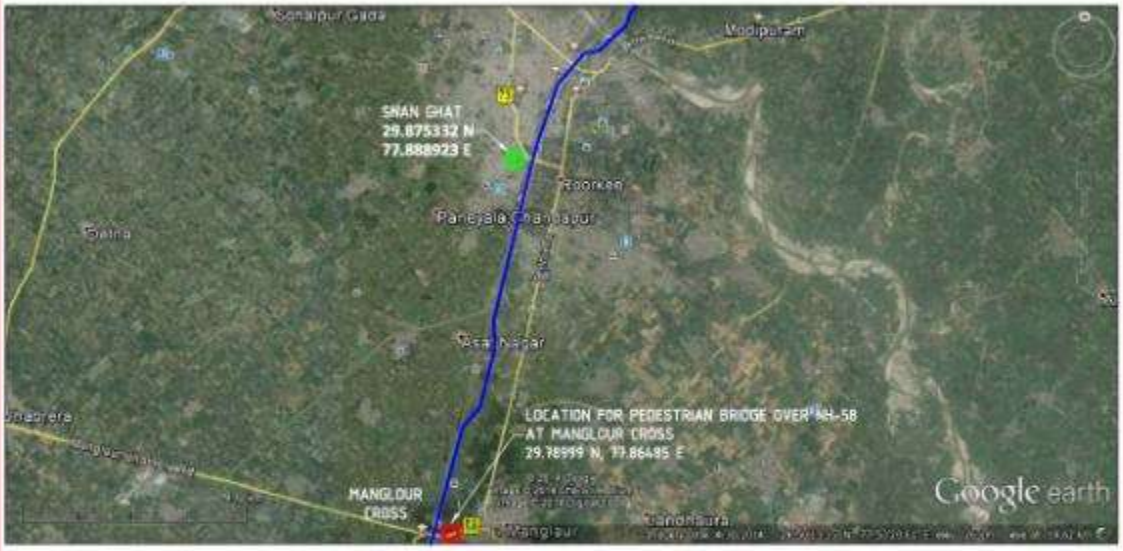
UTTARAKHAND TOURISM DEVELOPMENT BOARD
Pandit Deendayal Upadhyay Paryatan Bhawan
Near ONGC Helipad, Garhi Cantonment
Dehradun 248 001 INDIA

INFRASTRUCTURE DEVELOPMENT INVESTMENT PROGRAM FOR TOURISM IN UTTARAKHAND
CREATION OF PEDESTRIAN ROUTE FOR PILIGRIMS AND TOURISTS IN HARIDWAR

DRAWING TITLE
LOCATIONS OF PROPOSED FACILITIES AND SNAN GHAT ALONG KANWAR PATH

INDEX

PROPOSED PEDESTRIAN PATH	11.33 km
PATH FOR SIGNAGES	



START CHAINAGE	KM
SOLANI AQUEDUCT	0+28.56
END CHAINAGE	KM
MANGLOUR CROSS	0+40

UTTARAKHAND TOURISM DEVELOPMENT BOARD
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F. Archaeological Resources

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

IV. POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A. Summary of Potential Environmental Impacts

84. Urban development projects like tourism infrastructure may cause impacts upon environment in many ways. The impacts anticipated from the proposed subproject may be on Physical, Biological, Socio-economical and Cultural environment. The IEE helps to identify those negative impacts that are anticipated in the project under consideration and to suggest the mitigation measures to minimize the negative impacts. The assessment of potential impacts for the subproject "Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar" is being carried out during the following stages of the project planning and implementation:

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

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

1. Location Impacts

86. The sub project starting point, at Haridwar, is located more than 9 km from Ranipur, Motichur and Chilla gates of Rajaji National Park and there are no significant ecological resources in the sub project region (protected areas or rare or important species or habitats). The core zone of the park is more than 25 km from the starting point at Haridwar . There are no heritage sites listed by Archaeological Survey of India (ASI) within the subproject area or in the study area. No significant impacts can arise due to project location as the sites involving the project components do not pass through/ near any environmentally sensitive areas or any cultural / historical areas, etc.

87. The proposed pedestrian route is planned along the bank of Upper Ganga canal and land on the canal bank at locations of amenities to be developed is also in possession of Government of Uttarakhand. There are no impacts envisaged on land acquisition or resettlement due to the proposed subproject components. The total land requirement for the facilities to be created at 2 locations is about 5000 m^2. This land belongs to Government of Uttarakhand.

88. One anticipated location impact is the facilities will be used during Kanwar Mela for a maximum period of one month. For the balance 11 months of the year facilities will remain exposed to atmosphere and general public. The project should effectively plan implementation in such a way that maintenance and protection of the assets created is there for long term sustainability.

2. Impacts during Design and Pre-Construction Phase

89. Impacts arising from the inappropriate designs of proposed facilities would in general include the inadequate drainage provisions, inadequate sanitation facilities, non-availability of waste water collection, treatment and disposal facilities, inadequate solid waste collection and disposal during the Kanwar Yatra. These have been addressed through adoption of sound design criteria. The results of interventions are unobtrusive and will be integral part of the overall ambience so as to avoid impacts on the aesthetics of the site.

90. Anticipated Environmental impacts associated with the Pre-construction phase are: loss of land due to construction of infrastructure and pedestrian route. There is no acquisition of properties, loss of livelihood and tree cutting in the sub project.. As the proposed subproject is to be developed on the land owned by the Government of Uttarakhand, there is no land acquisition or resettlement. The land is already in possession of Government. The pedestrian route is planned to be developed on the canal bank along the existing road. The land belongs to Uttarakhand irrigation department. The design will be in such a way that it will minimize the clearance of trees at locations of amenities and foot over bridges. There may be requirement for removal of shrubs for the creation of pedestrian route in a length of about 11.33 km.

91. Based on the environmental screening of the Pedestrian route alignment, there are no significant adverse environmental impacts during the design and Pre-construction phase.

3. Impacts during Construction Phase

92. Majority of the significant impacts will occur during the construction phase and are generic to the construction activities. Key impacts during construction phase are envisaged on the following aspects: (i) drainage, (ii) collection, treatment and disposal of waste water at construction camp site (iii) borrow pit operations, (iv) dust generation, air and noise pollution from construction activities, (v) handling of construction materials at site, (vi) disposal of construction waste materials, and (vii) adoption of safety measures during construction.

93. Ground water will not be used for construction purposes and the problem of ground water contamination is not anticipated during the construction phase as there will be proper disposal of waste water from construction camp and construction workers' camp. Municipal water (or another source approved by the Engineer) shall be used for all activities such as washing of equipment or disposal of any type of waste, dust suppression, concrete mixing, compacting, etc.

94. Generation of dust is anticipated during transportation, excavation and construction activities particularly during small earthworks for making Pedestrian route and at locations of amenities at Shankaracharya chowk and multi facilities complex near Lohe Ka Pul (Jwalapur) . Certain volumes of dust and gaseous emissions will also be generated during the construction period from construction machineries like mixers, vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include Respirable Particulate Matter (RPM) and gaseous emissions ($NO_{X,}$ $SO_{2,}$ CO, etc). However, transportation of

construction materials will be confined to adequate trips per day depending upon extent of construction activity. Therefore, impact at this stage will be temporary and restricted to the close vicinity of the construction activities only.

95. All vehicles and construction equipment operating at the time of construction, the contractor and the consultant will obtain and maintain “Pollution under Control” (PUC) Certificates. To control dust emissions, vehicles deployed for borrow material, sand and aggregate haulage, shall be covered with tarpaulins to be spillage proof. Regular sprinkling of water during excavations, loading, unloading, vehicular movement and raw material transport, provisions shall be made for the entire construction period.

96. Periodic air quality monitoring to ensure emissions comply with standards will be conducted.

97. During construction phase, some noise will be generated from the various construction activities like equipment and vehicles engaged in transportation of construction materials. However, transportation of construction materials will be confined to the requirement per day, depending upon extent of construction activity. Further the noise associated with the equipments shall be reduced with the application of the lubricant. The increase in noise levels is expected to be between 5 - 10 % in the Pedestrian route portion (11 33 km length) and insignificant in balance length where signages are to be placed. However, the noise levels will be confined to the work sites only and will be temporary in nature and also short duration as well.

98. The construction activity will be carried out away from environmentally sensitive areas. Therefore, no adverse impact on fauna and flora is anticipated due to the proposed activity.

99. Construction waste will be generated due to creation of facilities and pedestrian route, excavated earth material and waste generated from construction camps if any. Debris/ excavated earth material will be reused subject to the approval of the Engineer during the construction. Any unused construction waste will be disposed off as per established law and at the approved site. Waste generated from the construction camps will be disposed off as per law to the satisfaction of the Engineer.

100. The clean-up and restoration operations are to be implemented by the contractor prior to demobilization. The contractor will clear all temporary structures, concrete batching plant, and temporary accommodation of workers at camp and construction office and dispose off all garbage. All construction zones used/affected by the sub-project will be left clean and tidy, at the contractor’s expense as per the satisfaction of the Engineer.

101. The Contractor is likely to engage local labour for various construction activities. However, in case of engaging migratory labour for the purpose, the contractor has to establish properly designed labour camp with all basic amenities such as potable drinking water supply and sanitation facilities. EMP envisages mitigation measures for likely adverse impacts associated with the labour camps.

102. The implementation of the pedestrian route subproject will not involve dislocation or involuntary resettlement of people. Positive impact is anticipated in terms of employment opportunity as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction phase. Most of the predicted impacts are associated with the construction process, and are produced because that process is invasive, involving trenching (for Toilet Block, water supply infrastructure, laying of electrical cable for lighting at multi facility

complex, etc.) and other ground disturbance. However the routine nature of the impacts means that most can be easily mitigated. The pedestrian route is planned to be created on left side of existing road up to Jathwara bridge and along the right side of road from Jathwara bridge to Bahadarabad Steel bridge and at locations of amenities and rest areas small structures for water supply, food distribution, rack construction, toilet blocks and bath rooms are to be constructed. The project is relatively small in scale and involves straightforward construction and low-maintenance operation, so it is unlikely that there will be major impacts.

4. Impacts during Operation Phase

103. There will be impact on sustainability of infrastructure if these are not maintained properly. The assets created as part of Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar will be maintained by a Committee to be constituted by the Government of Uttarakhand on the lines of Kumbh Mela committee. This committee will be chaired by the Haridwar District Magistrate.

104. No impact is anticipated on the ground water quality during the operation phase as there will be proper disposal of waste water from the locations of amenities at Shankaracharya Chowk and near Lohe Ka Pul. The water for consumption will be obtained through tankers from the local municipal bodies at Haridwar and Bahadarabad. In case it is obtained from hand pumps permission will be obtained from Central Ground water board. Since area is not in critical zone declared by Central ground water board, therefore no impact is anticipated on ground water table. Further, the locations of amenities are spread over a distance of 11.33 km, therefore, there will not be localised impacts on ground water table. It may also be mentioned that Yatra is during monsoon season, any withdrawal from the ground will be recharged through rains. The water requirement for drinking and bathing at locations of facilities will be support from bore wells at site. Since planned facilities are spread over a distance of about 11.33 km and requirement is only for a maximum period of one month, no impact is anticipated ground water availability.

105. During operational phase of proposed sub-project, ambient air quality will not be affected as Yatra is on foot and vehicular traffic on Kanwar Patri is not allowed. Hence no mitigation measures are warranted.

106. During the operational phase, minor noise impacts will be felt due to movement of devotees and due to operation of music systems at locations of amenities at Shankaracharya Chowk and Lohe Ka Pul. This activity will be temporary and will last only during the Yatra duration. Both of the above mentioned areas are within urban areas away from habitations; hence impacts on local community on account of noise are not anticipated. However, noise monitoring along the Pedestrian route will be taken up and in the event of values crossing stipulated limits during Yatra, Music activities will be regulated at the locations of rest areas.

107. The implementation of the sub project will not involve dislocation or involuntary resettlement of people. The Objective of the IDIPT is to have enhanced and sustainable economic growth of Uttarakhand with emphasis on promoting commerce and improvement of livelihood of the poor by exploring potential of Tourism sector. The Investment Program envisages improvement of Tourist infrastructure, urban environment and better living conditions in the state, as well as for the increasing number of tourists visiting the State. Positive impact is anticipated in terms of employment opportunity as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction phase. During operation

phase locals will get business opportunities for the supply of food and other essentials. This can be considered a long-term cumulative benefit of the subproject.

108. As the subproject location is away from any environmentally sensitive area, no adverse impact on fauna and flora is anticipated due to the proposed activity.

B. Description of Planned Mitigation Measures

109. Screening of environmental impacts is based on the magnitude and duration of the impact. **Table 14** provides the potential environmental impacts and the mitigation measures including the responsibilities for implementing the same. The subproject alignment is located sufficiently away from habitat and the components proposed will not impact any environmentally sensitive or protected areas. Improvements are proposed within available government lands and existing right-of-way.

Table 14: 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 improvements and ensure protection of the assets created.	Permanent	Major	Design will include provisions for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability. For this Kanwar Mela committee/local municipal authorities /district administration will take care of assets similar to Kumbh Mela Committee taking care of assets and facilities created for Kumbah Mela assets.	PIU / DSC
2	**Design Impacts and Pre-construction Impacts**				
2.1	Layout of components at locations of rest areas to avoid impacts on the surroundings	Permanent	Major	The project components (Alignment of Pedestrian route, locations of rest areas and amenities, sanitation and drinking water facilities along the route, food distribution and serving areas, provision of water supply to devotees, parking, etc.) siting will avoid impacts on the aesthetics of the surroundings as these are planned on already vacant space along the canal bank at Shankaracharya Chowk	PIU / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				and Lohe Ka Pul and sizes of structures are small.	
2.2	Increased storm water runoff from alterations of the natural drainage patterns due to Kanwar Patri Development, , excavation works, development of rest areas and amenities (drinking water, sanitation, Kanwar racks, etc.) at the identified locations, and addition of paved surfaces at rest area locations	Permanent	Moderate	Design of proposed components will enable efficient drainage at locations of amenities and maintain natural drainage patterns. The Pedestrian route is planned on the bank of Upper Ganga canal and this has a properly laid drainage system.	PIU/DSC
2.3	Integration of energy efficiency and energy conservation programs in design of sub-project components	Permanent	Moderate	The detailed designs for the sub-project components shall ensure that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, etc. are followed.	PIU/DSC
3	**Construction Impacts**				
3.1	Construction Camps - Location, Selection, Design and Layout	Temporary	Moderate	Construction camp will be located away from settlements and drainage from and through the camp will not endanger any domestic or public water supply. Construction camp including sanitation facilities will be adequately drained.	Contractor / DSC
3.2	Site clearance activities, including delineation of construction areas	Temporary	Moderate	The commencement of site clearance activities will be undertaken with due permission from the Environment Specialist of the DSC consultant to minimize environmental impacts. All areas used for temporary construction	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures. Pre construction photographs will be taken for all temporary sites to be acquired for completion of construction. The temporary sites will be acquired by contractor for construction camp, workers' camp, storage sites for construction materials, etc.	
3.3	Drinking water availability at construction camp and workers' camp	Temporary	Major	Sufficient supply of cold potable water to be provided and maintained. If the drinking water is obtained from an intermittent public water supply then storage tanks will be provided.	Contractor / DSC
3.4	Waste disposal	Permanent	Major	Location of disposal sites will be finalized by the Environmental Specialist of the DSC and he will confirm that: disposal of the material does not impact natural drainage courses or surface water bodies or low lying areas and that no endangered / rare flora is impacted by such materials.	Contractor / DSC
3.5	Stockpiling of construction materials	Temporary	Moderate	Stockpiling of construction materials does not impact obstruct the drainage and Stockpiles will be covered to protect from dust and erosion.	Contractor / DSC
3.6	Borrow pits Operations	Permanent	Moderate	Adequate safe precautions will be ensured during transportation of earth from borrow areas (if needed for levelling of pedestrian route) to the construction sites. Vehicles transporting the material will be covered to	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				prevent spillage. The borrow pits will be identified and consent of owner will be obtained. The contractor will also submit borrow area redevelopment plan to the DSC for approval and supervision during borrowing.	
3.7	Soil Erosion	Temporary	Moderate	Slope protection measures will be undertaken as per design to control soil erosion. This issue may come up at locations of amenities at Shankaracharya chowk and near Lohe Ka Pul..	Contractor / DSC
3.8	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 water body (upper Ganga canal). Soil and water pollution parameters will be monitored as per monitoring plan. At construction camp vehicle washing ramps will be constructed and an oil water separator pit will be provided at ramp area. All the vehicles maintenance will be done at construction camp only. The discarded fuel and lubricants will be stored in the drums and these will be sold to recyclers authorised by the state pollution control board.	Contractor / DSC
3.9	Siltation of water bodies due to spillage of construction wastes	Temporary	Moderate	Silt fencing to be provided at towards canal side if needed during development of pedestrian route and rest areas to prevent sediments from the construction site to enter into the canal or local drainage channels. No disposal of	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				construction wastes will be carried out into the canal/local streams along the alignment of pedestrian route. Extraneous construction wastes will be transported to the pre-identified disposal site for safe disposal.	
3.10	Generation of dust	Temporary	Moderate	The contractor will take every precaution to reduce the levels of dust at construction sites. Water sprinkling will be carried out on haul roads. All earthworks to be protected/ covered in a manner to minimize dust generation.	Contractor / DSC
3.11	Emission from Construction Vehicles, Equipment and Machinery	Temporary	Moderate	Vehicles, equipment and machinery used for construction will conform to the relevant Standard and will be regularly maintained to ensure that pollution emission levels comply with the relevant requirements.	Contractor / DSC
3.12	Noise Pollution	Temporary	Moderate	Noise limits for construction equipment used in this project will not exceed 75 dB (A). There shall be regular monitoring for noise at camp and construction sites.	Contractor / DSC
3.13	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.	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The Engineer will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor.	
3.14	Disposal of Construction Waste / Debris / Cut Material	Temporary	Moderate	Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed around the project site indiscriminately. Spoil Management Plan as per Format and Guidelines provided in **Annexure-5** shall be prepared.	Contractor / DSC
3.15	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, including complete use of PPEs. Precaution will be taken to prevent danger of the workers from fire, 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 / DSC
3.16	Clearing of Construction of Camps and Restoration	Temporary	Major	Contractor to prepare site restoration plans for approval by the Engineer. The plan is to be	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				implemented by the contractor prior to demobilization. On completion of the works, all temporary structures will be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Engineer	
4	**Operation and Maintenance impacts**				
4.1	Environmental Conditions	Temporary	Moderate	Air, water, noise quality will be monitored periodically as per the Environmental Monitoring Plan prepared.	Tourism department
4.2	Uncontrolled tourism flow	Temporary	Major	Environmental Monitoring Plan and the Tourism Master Plan will be implemented strictly to avoid uncontrolled tourism flow.	Tourism department
4.3	Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection	Temporary	Moderate	Tourism department through local municipal bodies or specially hired agency will carry out maintenance of the toilets, and carry out the regular collection and disposal of wastes to a designated waste treatment sites.	Tourism department
4.4	Supply of water during operation of system	Temporary (For a month during Yatra)	Moderate	The water during operation phase will be obtained from bore wells at both sites. The bore wells infrastructure like pump, motor, electric supply will be arranged during construction.	Tourism Department through Kanwar Mela Committee/ Municipal authorities/ Specially hired agency
4.5	Discharge of bathing and toilet water	Temporary (During Kanwar Yatra, maximum one month)	Moderate	Toilet Block with adequate capacity of Septic tank and soak pits planned at both locations.	Tourism Department through Kanwar Mela Committee/

V. INSTITUTIONAL REQUIREMENTS AND ENVIRONMENT MONITORING PLAN

A. Institutional Arrangements

110. The Government of Uttarakhand through Department of Tourism (DOT) is the Executing Agency (EA). The EA (i) assumes overall responsibility for the execution of the Project and reporting; (ii) engage adequate permanent or fixed-term staff to implement the Project; (iii) setup a state-level project management unit (PMU) and project implementation units (PIU); (iv) provide overall strategic guidance on technical supervision and project execution; and (v) ensure overall compliance with the loan covenants.

111. The implementing agency (IA) is the Uttarakhand Tourism Development Board (UTDB). The IA's responsibilities include (i) project planning and budgeting; (ii) day-to-day assistance, supervision and guidance for the project implementation units and their consultants; (iii) review subprojects for due diligence requirements and approve subproject proposals; (iv) bidding, evaluation and contract award; (v) managing and disbursing funds; (vi) review compliance with loan covenants, contract specifications, work plans and quality control; and (vii) consolidate and submit progress reports, finance and accounting / audit reports, and matters requiring higher level decision to state-level empowered committee (SLEC) and ADB.

112. A State-level empowered committee (SLEC) has been established in Uttarakhand, chaired by state's Chief Secretary, with Principal Secretary/Secretary of the Department of Tourism as member secretary and comprised of secretaries from relevant line departments. The SLEC have 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.

113. Dept. of Tourism (DoT) has established a PMU, headed by a full-time program director (PD), and consisting of personnel drawn from relevant line departments and market. The PMU is 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 their consultants; (iii) reviewing subprojects to satisfy ADB's due diligence requirements and approving subproject proposals submitted by PIU 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. The PMU will be supported by a team of consultants.

114. The sub-project will be implemented by the Project Implementation Unit (PIU) of IA, i.e. UTDB, comprising of personnel drawn from relevant line departments and outside of government and will be headed by a Project manager. The PIUs will be responsible for: (i) prioritizing and preparing subproject proposals; (ii) providing day-to-day assistance, supervision and guidance to the design and supervision consultants; (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.

115. The Project Management Consultant (PMC) has been engaged to provide support to the PMU in overall planning, risk management, implementation, monitoring and evaluation of projects under the Investment Program. The PMC also assists the PMU and PIUs in meeting the relevant requirements of ADB, Government of Uttarakhand, and Government of India for project implementation. The PMC reports and works under the overall guidance of the PMU. The scope of services of the PMC includes 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 Investment Program management, monitoring and implementation of PPMS; and (v) social, environmental, archaeological, occupational health and safety, community participation and gender action compliance monitoring.

116. The Design and Supervision Consultant (DSC) has been engaged to provide all necessary support to and coordination with the EA, IAs, PMU and any other consultants engaged by the authorities to achieve the desired outcomes of the Investment Program. The DSC reports to and work under the overall guidance of the PIUs. The scope of services of the DSC includes 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; (v) construction management and contract administration; (vi) environmental, social, archaeological, cultural heritage, community participation and gender action compliance monitoring; and (vii) capacity building of the service providers for operational sustainability.

B. Environmental Management Plan

117. The Environmental Management Plan (EMP) translates recommended mitigation and monitoring measures into specific actions that will be carried out by the contractor and proponent. EMP deals with the management measures and implementation procedure of the guidelines along with enhancement measures recommended to avoid, minimize and mitigate foreseen environmental impacts of the project. For each mitigation measure to be taken, its location, timeframe, implementation and overseeing/ supervising responsibilities are listed in the EMP. **Table 15, Table16,** and **Table 17** present a generic EMP to guide the contractor in mitigating environmental impacts.

Table 15: Environmental Management Plan for Pre Construction Stage

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
1	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created	Design will include provisions for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability. For this Kanwar Mela committee/ Local Municipal Authorities/Specially Hired Agency/district administration will take care of assets similar to Kumbah Mela Committee taking care of assets and facilities created for Kumbah Mela assets.	O&M Criteria, Maintenance schedules of facilities and assets	PIU / DSC	PMU	Effective O&M criteria evaluation during DPR	Part of DSC professional fee
2	Layout of components to avoid impacts on the aesthetics of the surroundings of Kanwar Patri	The project components (Alignment of Pedestrian route, locations of amenities, sanitation and drinking water facilities along the route, food distribution and serving areas, provision of water supply to devotees, parking, etc.) siting will avoid impacts on the aesthetics of the surroundings as these are planned on already	Aesthetics of structures planned	PIU / DSC	PMU	During finalisation of design and during implementation	DSC/PMC professional fee

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		vacant space along the canal bank and sizes of structures are small.					
3	Increased storm water runoff from alterations of the natural drainage patterns due to Creation of Pedestrian Route, , excavation works, development of amenities (drinking water, sanitation, Kanwar racks, etc.) at the identified 2 locations, and addition of paved surfaces due to creation of paved surface due to development of pedestrian path at rest area locations	Design of proposed components will enable efficient drainage of the sites and maintain natural drainage patterns.	Natural drainage of project area	PIU/DSC	PMU	During finalisation of design and during implementation	DSC/PMC professional fee
4	Integration of energy efficiency and energy	The detailed designs for the sub-project components shall	Specifications of electrical fittings, Renewable	PIU/DSC	PMU	Design phase (DPR finalisation stage)	DSC/PMC professional fee

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	conservation programs in design of sub-project components	ensure that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, etc.	energy source provisions, waste minimization techniques during construction				
5	Consents, permits, clearances, no objection certificate (NOC), etc.	Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc.	Consents, permits, clearance and NOCs Records and communications	PIU	PMU	check consent for establishment of construction camp (s) , clearance from railway authorities for foot Over Bridge and from National Highways Authority of India for Foot Over Bridge at Manglour cross, prior to start of civil works and report to ADB in Monthly progress report	Project cost /PMU
6	Establishment of baseline environmental conditions prior to start of civil	Conduct documentation of location of components, areas for construction zone (camps, staging, storage, stockpiling,	Records and Photographs	Contractor	PIU/DSC	Once prior to construction	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	works	etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates					
7	Utilities	1-Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during the construction phase. 2-Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. 3-Obtain from the PIU and/or DSC the list of affected utilities and operators; 4-If relocations are necessary; contractor will coordinate with the providers to relocate the utility.	List and maps showing utilities to be shifted Contingency plan for services disruption	- DSC 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	PIU/DSC	Pre-Construction Phase	Contractor
8	Social and Cultural	1-Consult Archaeological Survey of India (ASI) or	Chance find protocol	- PMC to consult ASI or Uttarakhand	PMU	Prior to start of construction	DSC/PMC

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	Resources	Uttarakhand State Archaeology Department to obtain an expert assessment of the archaeological potential of Pedestrian route. 2-Consider alternatives if the site is found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available. 3-Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and		State Archaeology Department - PMC to develop protocol for chance finds		activities	

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		conserved.					
9	Construction Camps - Location, Selection, Design and Layout	Siting of the construction camps shall be as per the guidelines below and details of layout to be approved by DSC. The potential sites will be selected for labour camp and these shall be visited by the DSC environmental expert and one having least impacts on environment will be approved by the DSC. As far as possible construction camp will be established at in vacant land near alignment of Pedestrian route and planned locations of amenities to avoid impact on other land. Location for stockyards for construction materials shall be identified either at Locations of	Construction camps site, and locations of material storage areas, sanitation facilities	Contractor	DSC/ PIU	At the time of construction camp establishment and finalisation of storage areas	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		amenities/facilities or at sites at a minimum distance of 300 m from streams. Construction sanitation facilities shall be adequately planned, The Sewage collection and treatment and disposal and solid waste collection and disposal at camp site shall be designed, built and operated.					
10	Sources of construction materials	Use quarry sites and sources licensed by the Uttarakhand Government. 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.	Permits issued to quarries/sources of materials	Contractor PMC and DSC to verify sources (including permits) if additional is requested by contractor	PMU PIU	Upon submission by contractor	PMC and DSC as part of consultancy fee

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		Submit to DSC on a monthly basis documentation of sources of materials.					
11	Access	1- Prepare traffic management plan for the portion of canal bank under project influence (from start point to Bahadarabad Steel Bridge). 2-Plan transportation routes (Traffic Management Plan) so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of sites. 3-Schedule transport and hauling activities during non-peak hours. 4-Locate entry and exit points in areas where there is low potential for traffic congestion. 5-Keep the sites of	Traffic management plan	Contractor	PIU and DSC	During Delivery of construction materials	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		infrastructure creation along the Pedestrian route free from all unnecessary obstructions. 6-Drive vehicles in a considerate manner. Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours. 7-Notify affected sensitive receptors (educational institutes, bathing Ghats) by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/complaints. Provide free access to					

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		households along the alignments of raw and clear water transmission routes during the construction phase.					
12	Occupational health and safety	Comply with IFC EHS Guidelines on Occupational Health and Safety Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project. Include in H&S plan measures such as: (i) type of hazards in the intake wells site; (ii) corresponding personal	Health and safety (H&S) plan	Contractor	PMU and PMC PIU and DSC	To be included in updated IEE report	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents. Provide medical insurance coverage for workers.					
13	Public consultations	Continue information dissemination, consultations, and involvement/participation of stakeholders during project implementation.	- Disclosure records - Consultations	PMU and PMC PIU and DSC Contractor	PMU and PMC	- During updating of IEE Report - During preparation of site- and activity-specific plans as per EMP - Prior to start of construction - During construction	PMU Contractor to allocate funds to support

Table 16: Environmental Management Plan for Construction Stage

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
1	Site clearance activities, including delineation of construction areas along Kanwar Patri	Shrubs and grass (no trees) shall be removed from construction sites (at locations of planned amenities/facilities and along the alignment of Pedestrian Route) before commencement of construction. All works shall be carried out such that the damage or disruption of flora other than those identified for cutting is minimum. Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Expert of DSC All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures.	Site clearance plan and demarcation of construction areas	Contractor	DSC / PIU	Construction sites delineation	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
2	Drinking water availability	Sufficient supply of cold potable water to be provided and maintained. If the drinking water is obtained from an intermittent public water supply then storage tanks will be provided. .At construction camp site water will be arranged as per available source followed by storage	Availability of water at identified sources, drinking water quality results	Contractor	DSC/ PIU	Regularly during construction phase	Contractor
3	Waste disposal	The pre-identified disposal location shall be part of Comprehensive Waste Disposal Plan. Solid Waste Management Plan to be prepared by the Contractor in consultation and with approval of Environmental Specialist of DSC. The Environmental Specialist of DSC shall approve these disposal sites after conducting a joint inspection on the site with the Contractor. Contractor shall ensure	Waste Disposal sites, waste management plan	Contractor	DSC / PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		that waste shall not be disposed off near any water course (upper Ganga canal or local streams close to Pedestrian Route alignment) or agricultural land, Orchards and Natural Habitats like Grasslands.					
4	Stockpiling of construction materials	Stockpiling of construction materials does not impact, obstruct the drainage and Stockpiles will be covered to protect from dust and erosion. If these are exposed than regular water spray shall be carried out.	Identified locations of stockpiling	Contractor	DSC/ PIU	Regularly during construction phase	Contractor
5	Borrow Area Operations (if required)	Contractor shall finalize the borrow areas for procurement of earth after assessment of the availability of sufficient quantity of earth; avoid productive agriculture areas, consent of owner and other logistic arrangements. Adequate safety precautions will be	Consent of land owner, availability of earth at borrow site, transportation routes	Contractor	DSC / PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		ensured during transportation of borrow earth material from borrow areas to the construction site. Vehicles transporting the material will be covered to prevent spillage.					
6	Arrangement for Construction Water	The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department. To avoid disruption/ disturbance to other water users, the Contractor shall extract water from fixed locations and consult DSC before finalizing the locations. The Contractor shall provide a list of locations and type of sources from where water for construction shall be extracted. The Contractor shall need to comply with the requirements of the State Ground Water	Identified sources of construction water , availability of construction water	Contractor	DSC / PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		Department for the extraction and seek their approval for doing so and submit copies of the permission to DSC.					
7	Soil Erosion	Slope protection measures will be undertaken as per design to control soil erosion (especially at locations of facilities at Shankaracharya Chowk and Lohe Ka Pul).	Protection locations towards canal side (Hand Railing)	Contractor	DSC/ PIU	Regularly during construction phase	Contractor
8	Water Pollution from Construction Wastes	The Contractor shall take all precautionary measures to prevent entering of wastewater into local streams, water bodies or the upper Ganga Canal during construction. Contractor shall not wash his vehicles in canal/Ganga River water and shall not enter river/ local streams bed for that purpose.	Waste water discharge at construction camps, Vehicle parking and washing areas	Contractor	DSC/ PIU	Regularly during construction phase	Contractor
9	Water Pollution from Fuel and	The Contractor shall ensure that all construction vehicle parking locations, fuel/	Vehicle parking, refuelling and washing	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	Lubricants	lubricants storage sites, vehicle, machinery and equipment maintenance and refuelling sites shall be located at least 500 m away from Ganga River, Upper Ganga canal, and other local streams / village ponds if any	areas				
10	Soil Pollution due to fuel and lubricants, construction waste	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.	Fuel and Lubricant storage areas, soil quality parameters	Contractor	DSC / PIU	Regularly during construction phase	Contractor
11	Generation of dust	The contractor will take every precaution to reduce the levels of dust at construction site. All earthworks to be protected/ covered in a manner to minimize dust generation.	Air quality monitoring results, water sprinkling frequency	Contractor	DSC /PIU	Regularly during construction phase	Contractor
12	Emission from Construction Vehicles,	All vehicles, equipment and machinery used for construction shall conform to the relevant	Pollution under control certificates for vehicles	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	Equipment and Machinery	Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The silent/quiet equipment available in the market shall be used in the sub Project. The Contractor shall maintain a record of PUC for all vehicles and machinery used during the contract period which shall be produced for verification whenever required.	and machinery				
13	Noise Pollution	The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEF/CPCB noise standards and all Vehicles and equipment used in construction shall be fitted with exhaust silencers. At the construction sites noisy construction work such as crushing, operation of DG sets,	Noise under control certificates, noise monitoring results	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am. Noise limits for construction equipment used in this project will not exceed 75 dB (A).					
14	Material Handling at Site	Workers employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles. Workers, who are engaged in welding works, will be provided with welder's protective eye-shields. The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The Engineer will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date	Records of availability of personal protective equipment (PPE), training records for use of PPEs	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		by the Contractor.					
15	Disposal of Construction Waste / Debris / Cut Material	The Contractor shall confirm that Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed off around the project site indiscriminately. The waste will be disposed off as per spoil Management Plan (**Annexure-5**) to be prepared during construction phase.	Disposal sites, waste utilisation records	Contractor	DSC/ PIU	Regularly during construction phase	Contractor
16	Safety Measures During Construction	Adequate safety measures for workers during handling of materials at site will be taken up. The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from fire, etc. First aid treatment will be made available for all injuries likely to be	Safety training program records, availability of first aid kits and trained personnel	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
		sustained during the course of work. The Contractor will conform to all anti-malaria instructions given to him by the Engineer.					
17	Clearing of Construction of Camps and Restoration	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 burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Engineer	Pre construction records and photographs, disposal site rehabilitation	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

Table 17: Environmental Management Plan for Operation Phase

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
4.1	Environmental Conditions	The periodic monitoring of the ambient air quality, noise level, water (both ground and surface water) quality, in the subproject area as suggested in pollution monitoring plan through an approved monitoring agency.	Results of monitoring in respect of ambient air quality, water quality, noise levels, and soil quality and standards of ambient air quality, drinking water and ambient noise	PIU	Tourism department / PMU	Once a season (except monsoon) for 2 years	PMU
4.2	Uncontrolled tourism flow	Environmental Monitoring Plan and the Tourism Master Plan will be implemented strictly to avoid uncontrolled tourism flow.	Tourism Master Plan	Tourism department	District Administration	Every year during Kanwar Yatra	Government of Uttarakhand and Tourism Department
4.3	Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection	Tourism department will carry out maintenance of the toilets, and carry out the regular collection and disposal of wastes to a designated waste treatment site.	Maintenance schedule of sanitation facilities	PIU	PMU	Every year during Kanwar Yatra	PMU

S. No.	Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
4.4	Discharge of bathing and sanitation water	The waste water and bathing water from both locations where facilities are being created will be diverted to septic tank and soak pits. The size of soak pits and septic tanks will be detailed in DPR and contract document.	Schedule of cleaning of soak pits and septic tanks and waste water management	Tourism Department through Kanwar Mela Committee/Municipal Authorities/ Specially Hire Agency	PIU/ PMU	Every year during Kanwar Yatra	PMU
4.5	Availability of drinking water/ conflict with the water supply of local people	The bore well with pumping arrangement planned at each location shall be operated. A suitable capacity water storage tank will be also be constructed at each rest of the area, so that there is no conflict with local water supply.	Storage quantity of water at each location, tourist numbers	Tourism Department through Kanwar Mela Committee Municipal Authorities/ Specially Hire Agency	PIU/ PMU	Every year during Kanwar Yatra	PMU

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

118. **Table 18** summarizes site- and activity-specific plans to be prepared as per EMP tables.

Table 18: Site- and Activity-Specific Plans/Programs as per EMP

To be Prepared During	Specific Plan/Program	Purpose	Responsible for Preparation	Responsible for Implementation
Detailed Design Phase	Environmental monitoring program as per detailed design	Indicate sampling locations, methodology and parameters	PMU/PIU and PMC/DSC	Contractor
Detailed Design Phase	Erosion control and re-vegetation plan	Mitigate impacts due to erosion	Contractor	Contractor
Detailed Design Phase	List and maps showing utilities to be shifted	Utilities shifting	DSC 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
Detailed Design Phase	Chance find protocol	Address archaeological or historical finds	PMU and PMC	Contractor
Detailed Design Phase	List of pre-approved sites	Location/s for work camps, areas for stockpile, storage and disposal	PIU and DSC	Contractor
Detailed Design Phase	Waste management plan	Mitigate impacts due to waste generation	Contractor	Contractor
Detailed Design Phase	Traffic management plan	Mitigate impacts due to transport of materials and pipe laying works	Contractor	Contractor
Detailed Design Phase	H&S plan	Occupational health and safety	Contractor	Contractor
Detailed Design Phase	Spill prevention and containment plan	Mitigate impacts of accidental spills of oil, lubricants, fuels, concrete, and other hazardous materials	Contractor	Contractor

119. Sample & contents of Spoil Management Plan is attached as **Annexure 5** and sample Traffic Management Plan is attached **Annexure 6.**

C. Environmental Monitoring Plan

120. Environmental monitoring will be carried out during construction in three levels; namely monitoring development of project performance indicators identified by the DSC Environmental

Specialist, monitoring implementation of mitigation measures being implemented by the Contractor; and overall regulatory monitoring of the environmental issues identified by the PMU/PMC Environmental Specialist. To ensure the effective implementation of mitigation measures and Environmental Management Plan during construction and operation phases of the sub-project, it is essential that an effective Environmental Monitoring Plan be followed as given in **Table 19**. 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 below.

Table 19: Monitoring Plan for Kanwar Patri Subproject

Sl. No.	Field (Environmental Attribute)	Phase	Parameters to be Monitored	Locations	Frequency	Responsibility	Cost (INR/US $)
1	Air Quality	During preconstruction phase	CO, NOx, PM10, PM2.5, and SO_2	At starting point (Shankaracharya Chowk), at location of multi facility location (near Lohe Ka Pul) and near End Point (Bahadarabad Steel Bridge)	Once in every three months (except monsoon) during Preconstruction, construction and operation stages	Contractor	2,92,500/4875
		During Construction Phase				Contractor	
		Operation Phase				PIU/PMU	
2	Water quality	During preconstruction phase	TDS, TSS, pH, Hardness, BOD, Faecal Coli form	Surface Water (Upper Ganga canal) at start point, at location of multi facility (Lohe ka Pul) and End Point (Bahadarabad Steel Bridge) , Ground water also at the above 3 locations)	Once in every three months (except monsoon) during preconstruction, construction and operation stages	Contractor	390,000/ 6500
		During Construction Phase				Contractor	
		Operation Phase				PIU/PMU	
3	Noise Levels		Leq (Day), Leq (Night), Leq max, Leq Min,	At start point (Shankaracharya Chowk), Location of Multi Facility (near Lohe Ka Pul) and End Point (Bahadarabad Steel Bridge)		Contractor	97,500/1625
						Contractor	
						PIU/PMU	
4	Socio-economic monitoring	Income levels, livelihood options, especially on tourism	-	Once a year, for five years from the completion of the project	All along the Kanwar Patri alignment	5 years	5,00,000/8333

D. Capacity Building

121. The Environmental Specialist of PMC and DSC 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 20** below.

Table 20: Training Modules for Environmental Management

Program	Description	Participants	Duration	Training Conducting Agency
A. Pre-Construction Stage				
Sensitization Workshop	Introduction to Environment: Basic Concept of environment Environmental Regulations and Statutory requirements as per Government of India and ADB	Tourism / Forest Department Officials, Project Director (PD) and Environmental Specialist (ES) of the PMU/PIU	½ Working Day	Environmental Specialist of the PMC
Session 1	Introduction to Environment: Basic Concept of environment Safeguards Regulations and Statutory requirements as per Govt of India and ADB Guidelines on Environmental considerations in planning, design and implementing projects	PMU/PIU (including the ES) and Engineering staff of the implementing agencies	¼ Working Day	Safeguards Specialist of the PMC
Session 2	Environmental components impacted in construction and operation stages Activities causing pollution during construction and operation stages Environmental Management, Environmental Provisions, Implementation Arrangements, Methodology of Assessment Good engineering practices to be integrated into contract documents	PMU/PIU (including the ES) and Engineering staff of Tourism dept	¼ Working Day	Safeguards Specialist of the PMC
B. Construction Stage				
Session 3	Role during Construction- Roles and Responsibilities of officials / contractors / consultants towards protection of environment Implementation. Arrangements Monitoring mechanisms	Engineers and staff of line departments of the Government of Uttarakhand, and PMU/PIU (including the ES)	¼ Working Day	Safeguards Specialist of the DSC
Session 4	Monitoring and Reporting System	Engineers and staff of implementing agencies, and PMU/PIU (including the ES)	¼ Working Day	Safeguards Specialist of the DSC

Program	Description	Participants	Duration	Training Conducting Agency
C. Operation Stage				
Session 5	Skill upgrade on religious devotees handling, management and maintenance of assets, management of self-help groups, etc.	District authorities and self-help group associated with Kanwar Yatra Management	2 days	Tourism department

DSC = design and supervision consultant; ES = environment specialist; NGO = nongovernmental organization; PIU = project implementation unit; PMC = project management consultant; PMU = project management unit.

E. Environmental Budget

122. Most of the mitigation measures require the contractors to adopt good site practice, which should be part of their normal procedures already, so there are unlikely to be major costs associated with compliance. Only those items not covered under budgets for construction are included in the IEE budget. The IEE costs include mitigation, monitoring and capacity building costs. The summary budget for the environmental management costs for the subproject is presented in **Table 21.**

Table 21: Environmental management and monitoring costs (INR)

Item	Rate per sample	Number	Total Cost (INR)	Source of funds
Environmental Monitoring				
Preconstruction and Construction Phase				Contractor's costs
Air Quality (3 locations; 3 times a year, Total 21 samples (3 during preconstruction phase and 18 during construction phase))	7500	21	157500.00	
Water Quality (3 ground and 3 surface water samples; 3 times a year, total 42 samples (6 during preconstruction and 36 during construction phase))	5000	42	210000.00	
Noise Quality (3 locations; 3 times a year, Total 21 samples (3 during preconstruction 18 during construction phase))	2500	21	52500.00	
Total Monitoring Cost for Pre construction and Construction Phase			**420000.00**	
O&M Phase				PMU
Air Quality (3 locations; 3 times a year for initial 2 years, Total 18 samples)	7500	18	135,000.00	
Water Quality (3 surface and 3 Ground water samples; 3	5000	36	180,000.00	

Item	Rate per sample	Number	Total Cost (INR)	Source of funds
times a year for initial 2 years, total 36 samples)				
Noise Quality (3 locations; 3 times a year for initial 2 years, total 18 samples)	2500	18	45,000.00	
Socio-economic monitoring (annually for 5 years)	10000	Lump sum	500,000.00	
Capacity Building Expenses (5 Sessions in project life)	90000	Lump sum	4,50,000.00	PMU/ DSC
Total Cost operation Phase Including capacity building and Socio-economic monitoring			**1310000**	
Total Cost			**1730,000.00**	
Contingencies @ 5 %			**86500.00**	
Total Budgeted Cost			**1816500.00 say 1800000.00 Say US $ 30275**	

F. Environmental Monitoring and Reporting

123. The PMU will monitor and measure the progress of EMP implementation. PIU will undertake site inspections and document review to verify compliance with the EMP and progress toward the final outcome. DSC will submit monthly monitoring and implementation reports to PIU, who will take follow-up actions, if necessary. PIU will submit quarterly monitoring and implementation reports to PMU. The PMU will submit semi-annual monitoring reports to ADB. Monitoring reports will be posted in a location accessible to the public. The format of semi-annual environmental monitoring report format has been given in **Annexure-7.**

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

VI. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

125. This subproject does not involve any elements, which could have an adverse impact on the community. There is no deprivation of any sort for the residents or displacement of any groups. Particularly, with regard to environmental impacts the subproject can be characterized as innocuous. In view of this, the need for holding a public hearing is not perceived at this stage. However in compliance with the ADB's guidelines, focused public consultations were undertaken during the site visits in the sub project area. Residents and stakeholders of the area were informed about the proposed sub-project and their views were obtained. During the preparation of this IEE, consultations have been held with the officials of Utharakhand Tourism Department, District Administration Haridwar, Forest Department, Police Department, and other Stakeholders and agencies in Haridwar and surroundings. The locations and dates of consultations with various stakeholders are given in **Table-22** below.

Table 22: Consultations with Stakeholders (With Dates and Locations)

S. No.	Place	Date	Consulted officials/ persons	Issues discussed

S. No.	Place	Date	Consulted officials/ persons	Issues discussed
1	Transact Walk (From start point to End Point)	30/5/2014	District Administration and local people	Finalisation of facilities at different locations and gathering suggestions of Public
2	Discussion with stakeholders	23/5/2014	UP Irrigation Department and District Administration Haridwar	Implementation of project
3	Haridwar	15/7/2014	Kanwarias, Health Department Officials at Haridwar	Information about project and invitation of suggestion for the project
4	Haridwar	19/7/2014 and 21/8/2014	Mr. Aggarwal, President traders Association and office bearers	Problems being faced during Kanwar Mela and measures to be adopted in project design
5	Haridwar	19/7/2014 and 21/8/2014	Ganga Maha Sabha (an NGO managing amenities and facilities at Harkipaudi)	Views on the proposed project

126. The process of consultations was taken up as an integral part of the sub-project in accordance with ADB Guidelines and following objectives:

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

127. The location specific issues discussed and their incorporation in project design and implementation is as follows:

A. Public Consultations and Incorporation of Suggestions in Project Design

128. The views, comments and suggestions of stakeholders have been summarised below in **Table- 23.** The transact walk was undertaken along the Kanwar Patri stretch and suggestions gathered for design have been given in **Table-24.**

129. Recorded Documents of Transact Walk Cum Sub Project Committee meeting is attached as **Annexure 8.**

B. Plans for Continued Public Participation

130. To ensure continued public participation, provisions to ensure regular and continued stakeholder participation, at all stages during the project design and implementation is proposed. A grievance redressal cell will be set up within the PIU to register grievances of the people regarding technical, social and environmental aspects. This participatory process will ensure that all views of the people are adequately reviewed and suitably incorporated in the design and implementation process. Further, to ensure an effective disclosure of the project proposals to the stakeholders and the communities in the vicinity of the subproject location, an extensive project awareness campaigns will be carried out.

C. Information disclosure

131. Electronic version of the IEE will be placed in the official website of the Tourism Department and the website of ADB after approval of the documents by Government and ADB. On demand, any person seeking information can obtain a hard copy of the complete IEE document at the cost of photocopy from the office of the PMU/PIU, on a written request and payment.

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

D. Public Consultations Records

133. The public consultation records showing list of participants, contact number, signature and photographs of consultations are given in **Annexure 9.**

Table-23: Stakeholder Consultations Issues Raised and Incorporation in Project Design

S.No.	Place	Date	Participants	Issues discussed	Outcome of discussions	Addressed in Design
1	Sub project site	15/07/2014	With the Kanwarias and Health department officials in the health camp	Sub project details, project benefit, project related infrastructure requirements etc.	The Kanwarias and the local people were happy to note that such facilities are proposed along the Pedestrian route and foot over Bridges are planned. They expressed their concern that there is lack of sanitation, drinking water and bathing facilities at rest areas as current arrangements are voluntarily organized by the locals. The Kanwarias also suggested that there should be adequate lighting along the route because Yatra continues in night time also. The medical team of Uttarakhand Government (those who were on duty for the Kawar Yatra) suggested that adequate medical facilities should be at all locations	Explained to the participants that at all rest areas drinking water facilities, bathing facilities and sanitation facilities are planned. Explained to the participants that as part of project lighting is being provided all along the Pedestrian Route till Bahadarabad Steel Bridge. Explained to the medical team those as part of project medical facilities are not planned. However, there will be space for medical assistance where district administration can deploy medical team.

S.No.	Place	Date	Participants	Issues discussed	Outcome of discussions	Addressed in Design
2	At the office of the president district Traders association	19/07/14 and 21/08/2014	Mr. Aggarwal, President traders Association and office bearers	Sub project details, project benefit, project related commercial activates etc.	They all welcome the project and expressed the concern about the facilities to be created regarding business and commercial activities related to the Kanwar Mela. They also told that the traders association needs to be involved in matters related to allotment of stalls and kiosks during the *Mela*. The traders association suggested for adequate sanitation facilities and proper regulation and movement within the Haridwar city The Association suggested that Pedestrian Route needs to be developed in such a way that it creates an area of tourism activities throughout the year. The facilities be created to the standards that the area is created a tourism hub for the national and international tourists with a dedicated shopping area of local handicrafts material etc. The safety of tourists may be kept in mind while designing facilities	Explained to the participants that project plans to create infrastructure and allocation of stalls will be carried out by the district administration. Explained that proper sanitation facilities will be planned in Haridwar city and district administration is creating facilities from through some other ongoing project also. After construction of Pedestrian route there will be proper regulation of Kanwar Tourist movement. The suggestion of developing facilities for the year round use and creation of tourist hub noted. It is conveyed to design team. The safety of tourists will be kept of utmost importance and safety measures will be provided towards canal side.

S.No.	Place	Date	Participants	Issues discussed	Outcome of discussions	Addressed in Design
3	At the office of Ganga Mahasabha	19/07/14 and 21/08/2014	Community leaders and villagers	Sub project details, project benefit, project related O&M etc.	Ganga Mahasabha is civil society organization/NGO. This organization dedicated for the welfare and safety of the tourists and environmental management of the Harkipaudi area. They welcome the project. They told that O&M is the most important aspect of such facilities. The facilities and the infrastructure to be created needs to be utilized throughout the year for the tourists. This will help the local people to involve in income generation process. The participants suggested that there should be adequate warning signs at as many Kanwarias try to jump in fast flowing river and there are many casualties every year.	It was explained at start point and all other locations of Kanwar path till Manglour cross there will be 'Do and Do'nts' for the Kanwarias.

Table 24: Transact Walk Outcome

Date of Transact Walk - May 30, 2014	
Issue Discussed	**Outcome and Suggestions**
	1. Land availability at Location 1 (Near Mayapur Regulator) is to be examined carefully. At this location, the Kanwar Path is to be shifted to left by about 2 m. 2. Location 2 near Singhdwar Bridge is not to be considered as the Kanwar Path will not pass through Jwalapur Town. It is proposed that the Kanwar Path will now run straight and pass the railway track near Jwalapur. 3. A railway foot over bridge is proposed at railway track near Jwalapur. 4. Before the railway crossing, space is available and facilities will be proposed at this location. 5. Near Jatwara Bridge, a car parking facilities will be provided. Other facilities as proposed earlier will have to be considered. 6. At location near Irrigation Research Centre, space at the right side of the canal is to be examined for providing facilities. 7. At Dhanauri, the location of facilities will be before the aqueduct near Gujjar colony. 8. Locations near Aman brick field and near Roorkee College of Engineering are not to be considered. Instead of these two locations, a location near Shivalik Brick Field is to be considered. 9. Solani park have to be considered under the proposal. 10. A metal sheet below railway track near Roorkee (Peer Baba) is to be provided. 11. At Mangalour cross, feasibility of providing an overhead bridge or under pass on National Highway is to be examined. 12. Near Mohammad Pur Power House, facilities are to be provided. 13. SP Haridwar requested to include some police check posts under the project. 14. ADM requested for examining a proposal of providing a permanent water pipe line on one side the Kanwar Path 15. ADM requested for repair of road on entire stretch of Kanwar Path along with adequate drainage facility. 16. ADM requested to consider laying underground electric cable on one side of Kanwar route 17. SP Haridwar requested to providing safety chain on the Bank of Ghats at required locations

E. Grievance Redress Mechanism

134. The affected person/aggrieved party can give their grievance verbally or in written to the local grievances committee. Grievances of affected person will first be brought to the attention of the implementing NGO who can resolve the issue at site level. If the matter is not solved within 7 days period by the NGO or PIU, it will be brought to the Grievance Redress Committee constituted for the purpose in PIU. This GRC shall discuss the issue in its monthly meeting and resolve the issues within one month of time after receiving the grievance. If the matter is not resolved by GRC at PIU level within stipulated time, it shall be referred to GRC at PMU level by Executive Engineer of PIU.

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

1. Composition and functions of GRC

136. **Local Grievance Committee.(LGC) –** The local LGC will comprise of an NGO representative, Line Agency, representative of Gram Panchayat ,Special invitee.

137. **Grievance Redress Committee (GRC) at PIU-** In each PIU there shall be one GRC, which will include Project Manager (PIU), District Tourist Officer of Department of Tourism of Govt. Of Uttarakhand, Community Development Officer of PIU, nominated representative of District Magistrate and nominated representative committee shall be headed by Project Manager (PIU). The committee will meet at least once in every month. Agenda of meeting shall be circulated to all the members and affected persons/aggrieved party along with venue, date and time; informed in written at least 7 days in advance of meeting. The matters shall remain with GRC at PIU level for one month and if grievance is not resolved within this time period, the matter shall be referred to GRC at PMU.

138. **GRC within Environmental and Social Management Cell (ESMC) at PMU-** There shall be one GRC in PMU. The matters not resolved by the GRC at PIU level within one month shall come under GRC at PMU. GRC at PMU will include Community Development Expert of PMU, Safeguard Specialist of PMU and Additional Project Director (APD) of PMU. The Committee shall be headed by APD of PMU. This committee shall look the matters, which are referred to and not resolved by GRC at PIU level. If the matter is not resolved by the GRC at PMU level within one month of time, the aggrieved person/party can bring the matter to The Executive Committee/State Level Empowered Committee (SLEC).

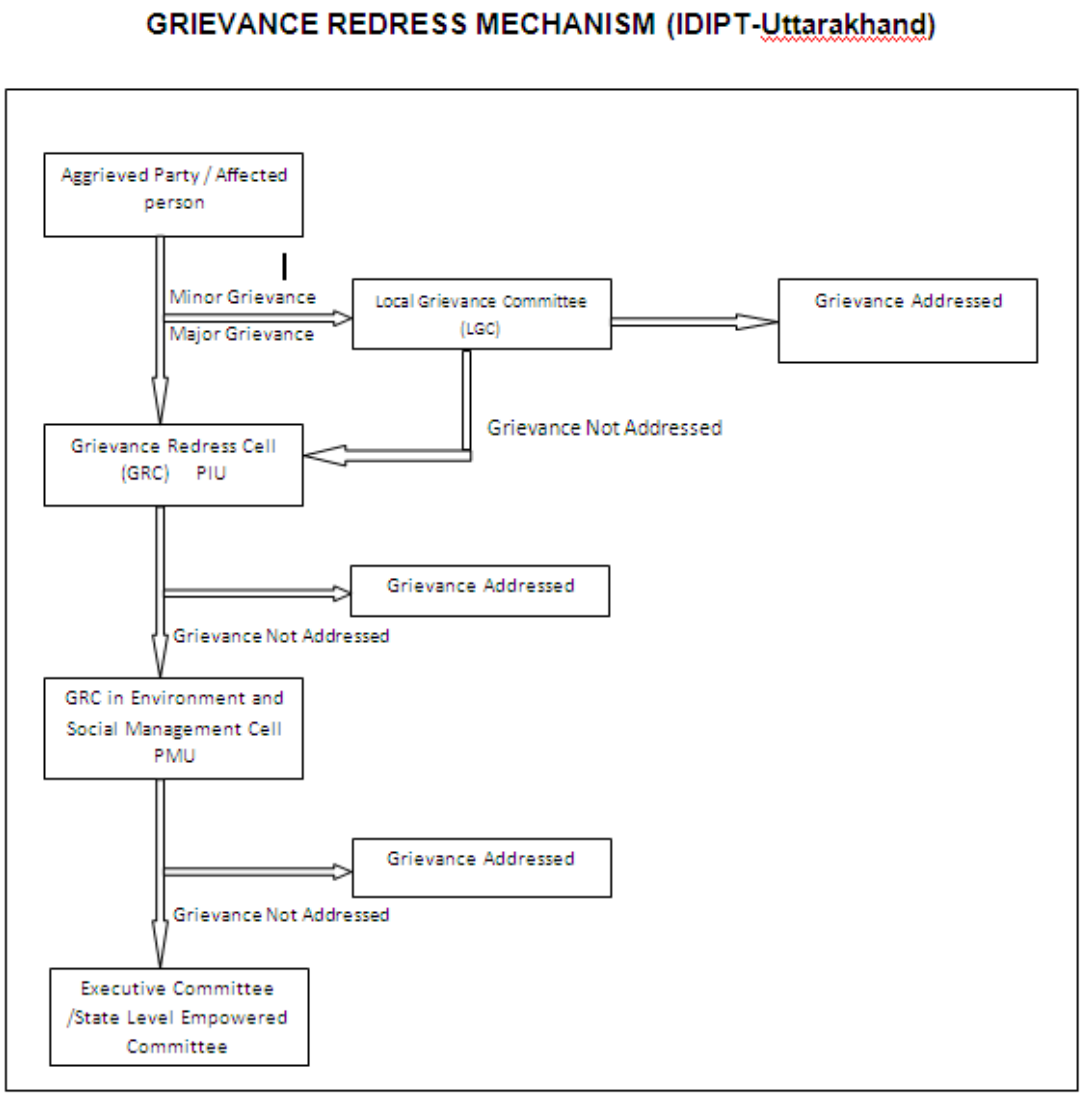
Approach to GRC

139. Affected person/aggrieved party can approach to GRC for redress of his/their grievances through any of the following modes-

a) Web based: A separate corner will be developed at the program website so that public / community/ affected person can register their complaint in the online column.
b) Telecom based: A toll free no. Will be issued by the PMU/ PIU so that general public can `register their complaint through telephone / mobile phone to the PIU/PMU office.

c) Through implementing NGO: The local representative of the NGO appointed for the purpose will collect the problems & issues of the community or affected person and pass on the same to PIU / PMU.
d) The format for writing complaints in written format has been given in **Annexure-10.** The grievance redress mechanism has also been shown in **Figure-12** below.

Figure 12: Grievance Redress Mechanism in IDIPT, Uttarakhand



Notes: 1. LGC - NGO, Line Agency, Representative of Gram Panchayat, Special invitee
2. GRC - PM, CDO, Engineer, DFO, DTO, SDM
3. GRC in Environment and Social Management Cell (ESMC) – PMU (APD, SS, CDS, FS), PMC (EE, CDE)

VII. FINDINGS AND RECOMMENDATIONS

140. The proposed subproject components do not involve any interventions in and around the natural and cultural heritage destinations and have insignificant (direct/indirect) environmental impacts. It is expected that the proposed subproject will enhance economic growth and livelihood opportunities for local communities through tourism infrastructure development with a focus on preservation and development of natural and cultural heritage and incidental services. The proposed Project under the Facility is provided to support the State of Uttarakhand, to enhance and develop the tourism sector as a key driver for economic growth.

141. This IEE has identified minor likely impacts on water, air and noise during construction and operation period and has defined mitigation measures. These mitigation measures will be implemented and monitored during the sub-project execution. Further, the provision of environmental infrastructure, including access to sanitation and waste management facilities within the tourist areas, will make better the environmental conditions and minimize the pollution related and aesthetic quality.

142. The specific management measures laid down in the IEE will effectively address any adverse environmental impacts due to the subproject. The effective implementation of the measures proposed will be ensured through the building up of capacity towards environmental management within the PMU supplemented with the technical expertise of a Safeguards Specialist as part of the PMC and DSC Consultants. Further, the environmental monitoring plans provide adequate opportunities towards course correction to address any residual impacts during construction or operation stages.

143. On the basis of the IEE It is expected that the proposed project components have only minor, negative, localized, temporary and less significant environmental impacts. These impacts can be easily mitigated through adequate mitigation measures and regular monitoring during the design, construction and post construction phase of the project. It is recommended that PMU should have monitoring responsibility in environmental issues of all program components and to ensure the environmental sustenance.

144. It is recommended that subproject may be implemented with proper mitigation measures to protect the environment. For this EMP and monitoring plan given in this IEE may be followed.

VIII. CONCLUSIONS

145. The proposed Investment Program for “Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar” in the Uttarakhand State can be done without any major environmental impacts and is beneficial to the society. As per the reconnaissance survey followed by discussion with stakeholders and public no major adverse impacts are anticipated. Further, there are hardly any significant environmental impacts that may arise during construction and operation period, and it will be of short duration and site specific as well.

146. Based on the findings of the IEE, the classification of the subproject as Category “B” is confirmed, and no further special study or detailed EIA needs to be undertaken to comply with ADB SPS (2009).

Annexure- 1:
Rapid Environmental Assessment (REA) Checklist

Rapid Environmental Assessment (REA) Checklist General

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES), for endorsement by Director, RSES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title: IITIDP: Uttarakhand- Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar,

Sector Division: SAUW (South Asia Urban Development and Water Division)

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural Heritage Site		√	The alignment of Pedestrian Route is not close to cultural heritage site.
▪ Legally Protected Area (Core Zone or Buffer Zone)		√	The Pedestrian Route alignment is not in core zone or buffer zone of legally protected area.
▪ Wetland		√	No notified wetland close to Pedestrian Route alignment
▪ Mangrove		√	Not Applicable
▪ Estuarine		√	Not Applicable
▪ Special Area for Protecting Biodiversity		√	Not Applicable

Screening Questions	Yes	No	Remarks
B. Potential Environmental Impacts Will the project cause…			
▪ impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		√	The development of Pedestrian Route for Pilgrims and Tourists will not cause any impact on historical / cultural areas or disfiguration of landscape
▪ disturbance to precious ecology (e.g. sensitive or protected areas)?		√	No impact on protected or sensitive areas
▪ alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?		√	No such impacts anticipated
▪ deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		√	There may be minor impacts on Upper Ganga canal due to accidental spill of construction materials during the development.
▪ increased air pollution due to project construction and operation?		√	During construction phase only dust may arise which should be mitigated through water sprinkling, no other significant emission is expected as no use of heavy equipment is proposed
▪ noise and vibration due to project construction or operation?		√	There will be minor generation of noise during the construction phase but impact will not be felt because Pedestrian Route alignment is on Upper Ganga canal bank away from habitations. During Mela time for a short period there will be increase in noise level due to use of music system but stringent control/ enforce system will be applied to minimize noise impact
▪ involuntary resettlement of people? (physical displacement and/or economic displacement)		√	No involuntary resettlement in the project.
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		√	No impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?		√	No such impacts anticipated
▪ creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?		√	No such impacts anticipated.

Screening Questions	Yes	No	Remarks
▪ social conflicts if workers from other regions or countries are hired?		√	Construction workers will be hired locally and a properly laid construction camp will be established and this will avoid social conflicts.
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		√	Construction workers will be hired locally and a properly laid construction camp will be established and this will avoid social conflicts.
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		√	No such risks anticipated during construction.
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		√	No risks to community health as there will be transport of construction materials in covered conditions and in operation phase no transport of fuel, chemicals and explosives is planned.
▪ community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		√	No such impact anticipated.
▪ generation of solid waste and/or hazardous waste?	√		No generation of hazardous waste in construction and operation phases. The solid waste generated during construction phase will be utilised in construction works and balance will be disposed off at identified sites. In operation phase solid waste will be collected and disposed off at municipal sites.
▪ use of chemicals?		√	No use of chemicals planned
▪ generation of wastewater during construction or operation?		√	Waste water generation anticipated from construction camp for this septic tank and soak pits shall be provided. During operation phase there will be discharge of waste water from locations of facilities(Shankaracharya Chowk and Lohe ka Pul). For this waste water septic tank and soak pits of adequate capacity is being planned.

A Checklist for Preliminary Climate Risk Screening

Country/Project Title: IITIDP: Uttarakhand, Development of tourism infrastructure for Kanwar Patr

Sector : Tourism

Division/Department: SAUW (South Asia Urban Development and Water Division)

Screening Questions		Score	Remarks[1]
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?	0	No effect as alignment planned on canal bank
	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	No major structures planned
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	No climatic conditions likely to affect selection of project inputs
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?	1	The extreme weather conditions will affect maintenance scheduling
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?	0	Not applicable

Options for answers and corresponding score are provided below:

Response	Score

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

Not Likely	0
Likely	1
Very Likely	2

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

Result of Initial Screening (Low, Medium, High): Medium
Other Comments: **None**

Annexure 2
Compliance With EARF

Component	Criteria	Compliance
Overall selection criteria	1. Will be fully consistent with management plans or master plans for the area	No specific Management plan for the area. But Kanwar Mela at Hardwar attracts more than 15 million devotees and infrastructure facilities to handle and regulate such a high number are inadequate.
	2. Will avoid resettlement/relocation. If unavoidable the extent of resettlement will be minimized.	No such impact anticipated
	3. Will not result in destruction of or encroachment onto protected areas, including National Parks. Sanctuaries, Conservation Reserves and Community Reserves, environmentally sensitive zones and Biosphere reserves.	No environmentally sensitive zones in the vicinity of sub project Pedestrian Route, therefore, no destruction or encroachment onto protected areas.
	4. Will be in line with the Conservation Plan/management plan for the conservation and management of the Protected areas	Not applicable
	5. Will promote tourism related activities in protected areas, in the zones earmarked for tourism development, the scale and extent of which shall be in line with the provisions in the Management Plan	The sub project will not promote tourism related activities in protected areas. The activity area of sub project will be Hardwar city and Kanwar route and these are not part any notified protected area(National Park, Wild life Sancturay or Bird sanctuary)
	6. Will not result in destruction of or encroachment onto archaeological monuments/heritage sites and will be in line with the master plan proposals for the conservation and preservation of the site/monuments	The alignment of Pedestrian Route is not close to any site/monument notified by state archaeological department or by Archaeological Survey of India (ASI). Alignment is along the left bank of Upper Ganga canal. This canal is not an archaeologically protected structure.
	7. Will not involve major civil works within the prohibited and regulated areas, as defined in the ASI refutations, to minimize any potential impacts on safety to the structures/ monuments	Yes, development of Pedestrian route and associated infrastructure will not involve any major works within prohibited and regulated areas as no ASI notified monument/heritage site exists in the vicinity of alignment
	8. Will reflect inputs from public consultation and disclosure for site selection	Meaningful public consultations have been done from planning phase and inputs have been considered in the

Component	Criteria	Compliance
		project design
	9. Will not introduce any elements or components that are invasive upon the sanctity and significance of the cultural heritage site, including large scale commercial activities or creation of new land uses with potential to trigger induced development and land use changes around the sites	The sub project will not introduce any element or components that are invasive upon sanctity of cultural heritage site.
	10. Will introduce landscaping and other tourist infrastructure in line with the environmental quality of the tourist destinations, such as landscaping in harmony with the natural vegetation and diversity and not encourage introduction of species that are invasive	No new/alien species shall be introduced. Landscaping plan includes only native species.
	11. Will not result in development of physical infrastructure/ tourism amenities that would impair the environmental conditions due to lack of management capacities or high O&M costs	Provisions for O&M has been made in the EMP and responsibility entrusted to the executing department to ensure environment management sustainability.
	12. Will reflect inputs from public consultation and disclosure for site selection	Inputs from major stakeholders like District Authorities, Irrigation department, NGOs, Kanwarias(devotees), Traders' Association and local population residing close to subproject site have been incorporated in the designs and planning.
Conservation measures and excavation measures-in and around Cultural properties and protected Monuments/ Structures.	13 Will observe the principle of not altering the historic condition and shall involve treatment of damage caused by natural processes and human actions and prevention of further deterioration, using both technical and management measures.	Not Applicable as no cultural property in the vicinity of alignment.
	14 Will promote in situ conservation and only in the face of uncontrollable natural threats and relocation is the sole means of saving elements of a site may they be moved in their historic condition.	No protected Monument/ cultural heritage site in vicinity, therefore, this is not applicable
	15 Will ensure that intervention be minimal. Every intervention proposed shall have clear objectives and use tried and proven methods and materials.	The sub project works are not close to any protected monuments/structures. Designs are in sync with the architectural character of the surroundings

Component	Criteria	Compliance
	16 Will ensure that physical remains are conserved in their historic condition without loss of evidence. Respect for the significance of the physical emails must guide any restoration. Technical interventions should not compromise subsequent treatment of the original fabric. The results of intervention should be unobtrusive when compared to the original fabric or to previous treatments, but still should be distinguishable	Not applicable because the alignment is not close to any ASI Protected monument/ remains site.
	17. Will ensure that the adaptive reuse of any particular building of monuments/structures does not intrude or induce impacts on other areas of the monument	Not applicable
Component	Criteria	
	18. Will ensure preservation of traditional technology and craftsmanship. New materials and techniques may only be used after they have been tried and proven, and should in no way cause damage to site.	The development of Pedestrian Route does not involve construction of buildings hence this is not applicable.
	19. Will ensure that the setting of a heritage site be conserved. Natural and cultural landscapes that form part of a sites setting contribute to its significance and should be integrated with its conservation	Not Applicable
	20. Will ensure that during archaeological excavation care be taken to conserve the physical remains. A practical plan for the conservation of a site-both during and after excavation-should be submitted for all site programmed for excavation	Not Applicable
	21. Will ensure that treatment of the cultural heritage site and its environs is a comprehensive measure to prevent damage from natural processes and human actions, to reveal the historic condition of a site, and to allow its rational use. Service building should be as far as possible form the principal area of the site. Landscaping should aim to restore the site to its historic state and should not	Not Applicable

Component	Criteria	Compliance
	adversely affect the site: contemporary gardening and landscape concepts and designs should not be introduced.	
Conservation and habitat protection measures- in and around the natural heritage assets and protected areas.	22. Will observe the principle of not adversely impacting the habitat quality of the protected area and shall involve treatment of damage caused by natural processes and human actions and prevention of further deterioration, using both technical and management measures.	*NA* Not near protected area and no significant biodiversity noticed around Pedestrian Route alignment as this is along upper Ganga canal.
	23. Will ensure that intervention, in form of additional civil works within the protected areas, be minimal. Every intervention proposed shall have clear objectives and use tried and proven methods and materials.	Not Applicable The Pedestrian Route alignment is not close to the protected area
	24. Will not open up new areas of tourist movement, including opening up of new routes for boating in wetlands etc, especially in areas identified as core or zone identified for conservation in the management plan for the protected area.	The Pedestrian route alignment is not in core or buffer zone of any protected area. The facilities to be created will not involve any activity relating to the boating.
	25. Will ensure that the areas of significant habitat diversity habitats are conserved in their natural condition.	The development of Pedestrian route and signages along Kanwar Path will not have any impact on diversity as it is on the bank of Upper Ganga canal.
	26. The results of intervention should be unobtrusive when compared to the original fabric or to previous treatments, but still should be distinguishable	Not Applicable.
	27. New materials and techniques may only be used after they have been tried and proven, and should in no way cause damage to the site.	Not Applicable.
	28. Service buildings should be as far as possible from the principal area of the site.	Not Applicable
Water supply	29. Will be taken up from existing potable treatment systems nearby, unless no such systems are available in the vicinity.	Water requirement of the project at both locations of facilities will be worked out in DPR. This will be met at each location from dug wells/hand pump.

Component	Criteria	Compliance
	30. Will not result in excessive abstraction of ground water or result in excessive groundwater pumping impairing ground water quality	The water requirement will be worked out in DPR. It will not be at a single location and will be at various locations along the alignment. Hence no impact envisaged on ground water and quality.
	31. Will ensure adequate protection from pollution of intake points	Not Applicable, as no new intake point proposed as part of this sub project.
	32. Will not result in unsatisfactory raw water supply (e.g. supply with excessive pathogens or mineral constituents)	The sub project activities during construction and operation phase will not result into unsatisfactory raw water supply as waste water from construction camp will be discharged to septic tank/soak pits. During operation phase waste water generated will be discharged to soak pits/septic tank constructed as part of Toilet block at both locations of facilities.
	33. Will ensure proper and adequate treatment and disposal facilitates for increased volumes of wastewater generation	Not much waste water generation envisaged as facilities will be in use for a maximum period of one month in a year. Septic tanks/sock pits of sufficient capacity are proposed at both locations of facilities along the Pedestrian Route alignment.
Sanitation and toilet facilities	34. Will ensure that the site selection for the septic tank/ or any/ or any other treatment method proposed is not close to water intake or water usage points, or areas prone to flooding or water logging	The locations of Septic tanks/soak pits at rest areas along the Pedestrian Route alignment will be finalised at Deeper water table., The design of the septic tanks has been done to ensure that there is a difference of at least 1.5m between the bottom bed of the septic tank and the maximum ground water level, to avoid any contamination of ground water. The Pedestrian Route alignment is not close to intake, water usage points or areas prone to flooding or water logging.
	35. Will ensure that sanitation improvements proposed do not result in pollution of groundwater.	The design of the septic tanks has been done to ensure that there is a difference of at least 1.5m between the bottom bed of the septic tank and the maximum ground water level, to avoid any contamination of ground

Component	Criteria	Compliance
		water. Further, Environmental Management and Monitoring Plan (EMMP) has been prepared and this will ensure no impact on ground water quality.
	36. Will not interfere with other utilities and block access to buildings, cause nuisance to neighbouring areas due to noise, smell, and influx of insects, rodents, etc.	One of the aims of sub project is to avoid nuisance to neighbouring areas of existing route (through NH-58). The sub project will help in regulating the movement of Kanwar devotees. The proposed alignment is away from habitations along bank of Upper Ganga canal and it will avoid noise, smell, etc.
	37. Will not impair downstream water quality due to inadequate sewage treatment or release of untreated sewage,	Not envisaged as septic tank/sock pits of adequate capacity have been designed at both locations identified for creation of amenities for Kanwar devotees.
	38. Will not cause overflows and flooding of surroundings, especially around the heritage sites with raw sewage.	Proposed septic tanks/ sock pits are of adequate capacity, overflow and flooding not anticipated. The septic tank will be emptied each year before beginning of Kanwar Yatra through a vacuum sludge truck. The responsibility of septic tank cleaning lies with the local PIU. For the septic tank cleaning arrangement will be made with the local municipal authorities at Haridwar. The sludge from the vacuum truck will be disposed off at the location identified by the PIU in consultation with local municipal authorities at Hardwar.
Solid waste management	39. Will ensure that the disposal of solid wastes will not result in degradation of aesthetics in the vicinity of the proposed tourist areas	There is provision of waste segregation at source through separate Bio-degradable and Non-Biodegradable Waste bins and suitable disposal arrangements. Both types of solid wastes will be disposed off in consultations with local civic authorities.

Component	Criteria	Compliance
	40. Will ensure buffer of greenbelt and earth works around the site to avoid nuisance to neighboring areas due to foul odour and influx of insects, rodents, etc.	During construction phase suitable buffer will be provided as per EMMP. Project also has provisions for landscaping at each rest area with native species.
	41. Will ensure that for composting pits for protected areas, the locations are devoid of any wildlife population, especially wild boars, porcupines	Not Applicable
	42. Will ensure any on site waste management done in compliance with government regulations and in coordination with municipal authorities.	It will be ensured
Roads	43. Will ensure minimal clearing of vegetation	The alignment of Pedestrian Route is planned on the bank of upper Ganga canal, and the bank is is devoid of vegetation as it is a motorable road hence clearing of vegetation from road side is not planned. .
	44. Will ensure on dislocation and involuntary resettlement of people living in right of way.	No dislocation and involuntary resettlement envisaged. The alignment is planned on the land owned by the Government of Uttarakhand.
	45. Will not lead to alteration of surface water hydrology of streams/waterways that may result in increased sediment load due to erosion form construction sites.	Erosion from construction sites will be controlled as per EMMP provisions. The Pedestrian route is planned along existing motorable road on the canal bank, therefore, no imapct on ground and surface water hydrology.
Drainage and flood protection	46. Will ensure improvements are identified to cater to the watershed or drainage zones and not individual drains.	No alterations to the existing drainage patterns are expected due to project interventions
	47. Will ensure adequacy of outfall of proposed drainage works, to avoid any impacts associated with flooding in downstream areas, or areas not covered	Not Applicable

Component	Criteria	Compliance
	48. Will ensure effective drainage of the monument area, and provide for improved structural stability of the monuments	Not Applicable
Development of parking and other tourist infrastructure amenities	49. Will ensure no deterioration of surrounding environmental conditions due to uncontrolled growth around these facilities, increased traffic and increased waste generation resulting from improved infrastructure facilities	Any new growth or expansion will be within the regulations of Uttrakhand Tourism Development Board and local Civic authorities. The parking facilities for the sub project have been planned within the available Government land at planned rest areas. In fact one of the aim of sub project is to provide relief to vehicular traffic on NH-58 by regulating Kanwar Devotees to Pedestrian Route.. Both locations of rest area along the Pedestrian route will have a well planned solid waste collection and disposal system.
	50. . Will not create structures or buildings that are physically or visually intrusive, in terms of size, scale, location that shall have an adverse impact on the aesthetic quality or the site, through careful designs in terms of built form, construction materials etc.	No buildings are planned in the sub project.

Annexure 3
Site Photographs and Area Requirements

Sl. No	Locations	Photograph of Location
1.	**Location1:NearShankaracharya Chowk** **Area Required:150 sqm.**	
		
3.	**Location2:NearJathwara Bridge** **Area Required: 5000sqm.**	

Annexure 4

Communication to District Magistrate, Haridwar(No.1300/2-10-ADB/DPIT/191/2014-15 Dated June 17,2014) by the programme director/PMU/IDIPT/GoUK requesting him to facilitate NOC for timely execution of the project

Program Management Unit
Infrastructure Development Investment Program for Tourism
(ADB Assisted – Loan No. 2833, India)
Government of Uttarakhand
Govt. of Uttarakhand
Pandit Deendyal Upadhaya Paryatan Bhawan, Near ONGC Helipad
Garhi Cant, Dehradun -248003
Uttarakhand Sanskrit Academy
Tel: 91-135-2669987, Fax: 91-135-2559988
E-mail: utdb.pmu@gmail.com

1300/2-10-ADB/IDIPT/191/ 2014-2015 Dated: 17 June, 2014

To

District Magistrate
Hardwar

Sub: Concept note on Haridwar Ganganahar Kanwar Patri Sub Project

Ref: Minutes of Sub Project Monitoring Committee meeting dt. 23.05.14 and 30.05.14

Dear Sir,

Pursuant to the meetings on the mentioned sub-project and your instructions, a joint field investigation was undertaken with the ADM, Hardwar, SP, Hardwar and other officials from Irrigation Dept. along with team of our experts.

During the site visit and discussion with concerned officials, it was found that land at all locations of proposed facilities on the side of the Kanwar Patri is owned by UP Irrigation Department. Therefore, NOC will have to be obtained from UP Irrigation Deptt. before implementing the sub project.

Hence it is requested to facilitate the 'No Objection Certificate' from UP Irrigation Department, for smooth and timely execution of the sub project. Necessary Concept note along with details of locations of proposed facilities **(Encl:1)** is attached herewith for seeking NOC from UP Irrigation Department.

Encl: as above

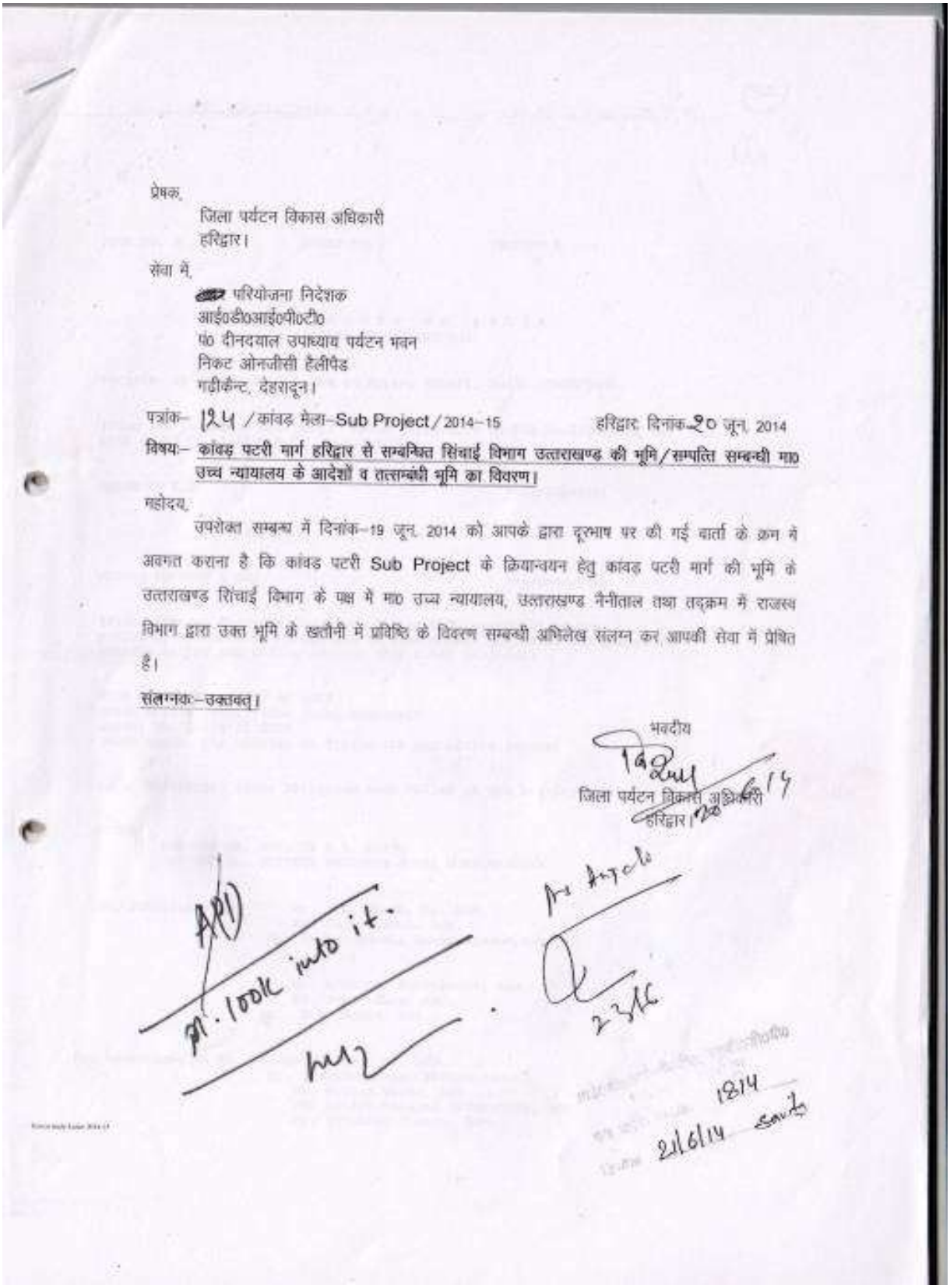
Yours Sincerely

Sachin Kurve (IAS)
Program Director

Copy to (i) DTDO, Hardwar for information and necessary follow up in this regard

Sachin Kurve (IAS)
Program Director

Communication by District Tourism Development Officer(letter No. 124/kawarmela-Subproject/2014-15 dated June 20 2014) addressed to programme director/PMU/IDIPT/GoUK confirming and attaching the latest land records showing the ownership of the land which belongs to Irrigation Department,GoUK.



प्रेषक,

जिला पर्यटन विकास अधिकारी
हरिद्वार।

सेवा में,

परियोजना निदेशक
आई०डी०आई०पी०टी०
पं० दीनदयाल उपाध्याय पर्यटन भवन
निकट ओनजीसी हैलीपैड
गढ़ीकैन्ट, देहरादून।

पत्रांक- 124 /कांवड़ मेला-Sub Project/2014-15 हरिद्वार दिनांक-20 जून, 2014

विषयः- कांवड़ पटरी मार्ग हरिद्वार से सम्बन्धित सिंचाई विभाग उत्तराखण्ड की भूमि/सम्पत्ति सम्बन्धी माo उच्च न्यायालय के आदेशों व तत्सम्बन्धी भूमि का विवरण।

महोदय,

उपरोक्त सम्बन्ध में दिनांक-19 जून, 2014 को आपके द्वारा दूरभाष पर की गई वार्ता के क्रम में अवगत कराना है कि कांवड़ पटरी Sub Project के क्रियान्वयन हेतु कांवड़ पटरी मार्ग की भूमि के उत्तराखण्ड सिंचाई विभाग के पक्ष में माo उच्च न्यायालय, उत्तराखण्ड नैनीताल तथा तद्क्रम में राजस्व विभाग द्वारा उक्त भूमि के खतौनी में प्रविष्टि के विवरण सम्बन्धी अभिलेख संलग्न कर आपकी सेवा में प्रेषित है।

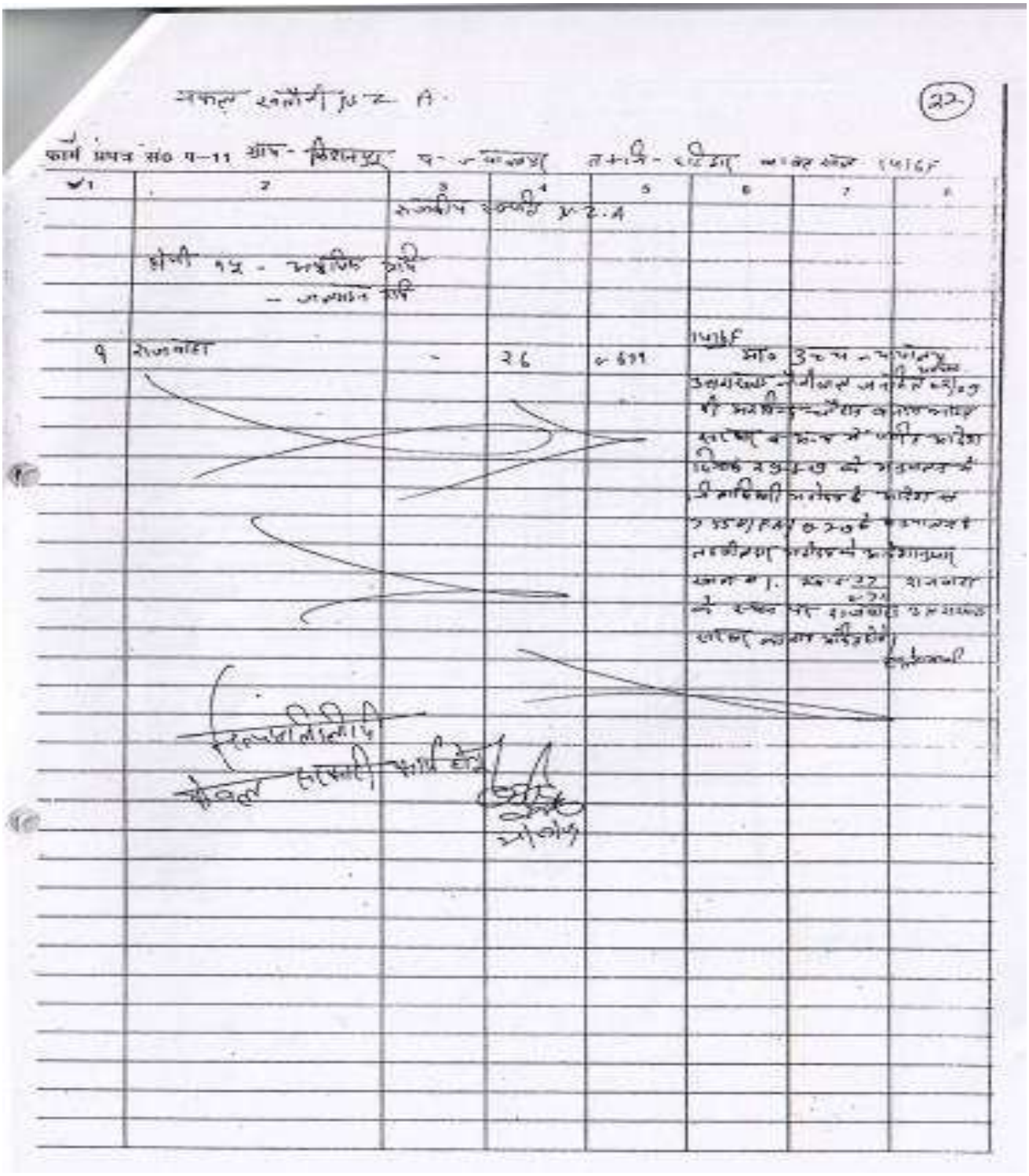
संलग्नक-उक्तवत्।

भवदीय

जिला पर्यटन विकास अधिकारी
हरिद्वार।

API)
Pl. look into it.

Land Records showing the land title infavor of Irrigation Department



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[illegible]	[illegible]		2.562	N.Z.A	–
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Annexure 5

Sample Outline of Spoil Management Plan (SMP)

1.0 Purpose and application:

SMP is to describe how the project will manage the spoil generated and reuse related to design and construction works. This is an integral part of EMP. The objective of SMP is to reuse of spoil from works in accordance with the spoil management hierarchy outlined in this document.

2.0 Objectives of SMP:

The objectives of SMP are:

- To minimize spoil generation where possible
- Maximize beneficial reuse of spoil from construction works in accordance with spoil management hierarchy
- Mange onsite spoil handling to minimize environmental impacts on resident and other receivers
- Minimize any further site contamination of land, water, soil
- Manage the transportation of spoil with consideration of traffic impacts and transport related emissions

3.0 Structure of SMP:

Section 1: Introduction of SMP

Section 2: Legal and other requirements

Section 3: Roles and responsibilities

Section 4: Identification and assessment of spoil aspects and impacts

Section 5: Spoil volumes, characteristics and minimization

Section 6: Spoil reuses opportunities, identification and assessment

Section 7: On site spoil management approach

Section 8: Spoil transportation methodology

Section 9: Monitoring, Reporting, Review, and Improvements

4.0 Aspects and Potential Impacts

The key aspects of potential impacts in relation to SMP are listed in table below

Aspects	Potential Impacts
Air Quality	Potential for high winds generating airborne dust from the stock piles
Sedimentation	Potential for sediment laden site runoff from spoil stockpiles and

	potential for spillage of spoil from truck on roads
Surface and Groundwater	Contamination of water (surface and ground water)
Noise	Associated with spoil handling and haulage and storage
Traffic	Impacts associated with spoil haulage
Land Use	Potential for spoil to be transported to a receivable site that doesn't have permission for storage/disposal
Design specifications	Limitations on opportunities to minimize spoil generation
Sustainability	Limited sites for storage, reuse opportunities

5.0 Spoil volumes, characteristics and minimization

5.1 Spoil volume calculations: Estimate the volumes of spoils produced from each of the construction sites.

5.2 Characterization of spoil: Based on the type of spoil; characterization is done (sand stone, mud mix materials, reusable materials

5.3 Adopt Spoil Reduce, Reuse Opportunities

An overview of the assessment methodology to be used is mentioned below.

- Consideration of likely spoil characteristics
- Identification of possible reuse sites
- Screening of possible reuse opportunities

5.4 Identification of possible safe disposal sites for spoil: Those spoils which can't be reuse shall be properly disposed in designated areas, such disposal areas should be identified in project locations. Such disposal areas should be safe from environmental aspects and there should be any legal and resettlement related issues. Such areas need to be identified and prior cliental approval should be obtained to use it as spoil disposal area. The local administration must be consulted and if required permission should be obtained from them.

5.5 Storage and stock piling

5.6 Transportation and haulage route

6.0 Based on the above, the contractor will prepare a SMP as an integral part of EMP and submit it to the DSC for their review and approval.

Annexure-6

Traffic Management Plan (TMP)

A. Principles

1. One of the prime objectives of this TMP is to ensure the safety of all the road users on the bank of upper Ganga canal on which this Pedestrian route is planned along the work zone, and to address the following issues:

(i) the safety of pedestrians, bicyclists, and motorists travelling through the construction zone;
(ii) protection of work crews from hazards associated with moving traffic;
(iii) mitigation of the adverse impacts on road capacity and delays to the road users;
(iv) maintenance of access to adjoining properties
(v) Avoid hazards near built up areas
(vi) Addressing issues that may delay the project.

B. Operating Policies for TMP

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

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

C. Analyze the impact due to Section of canal road closure, if required

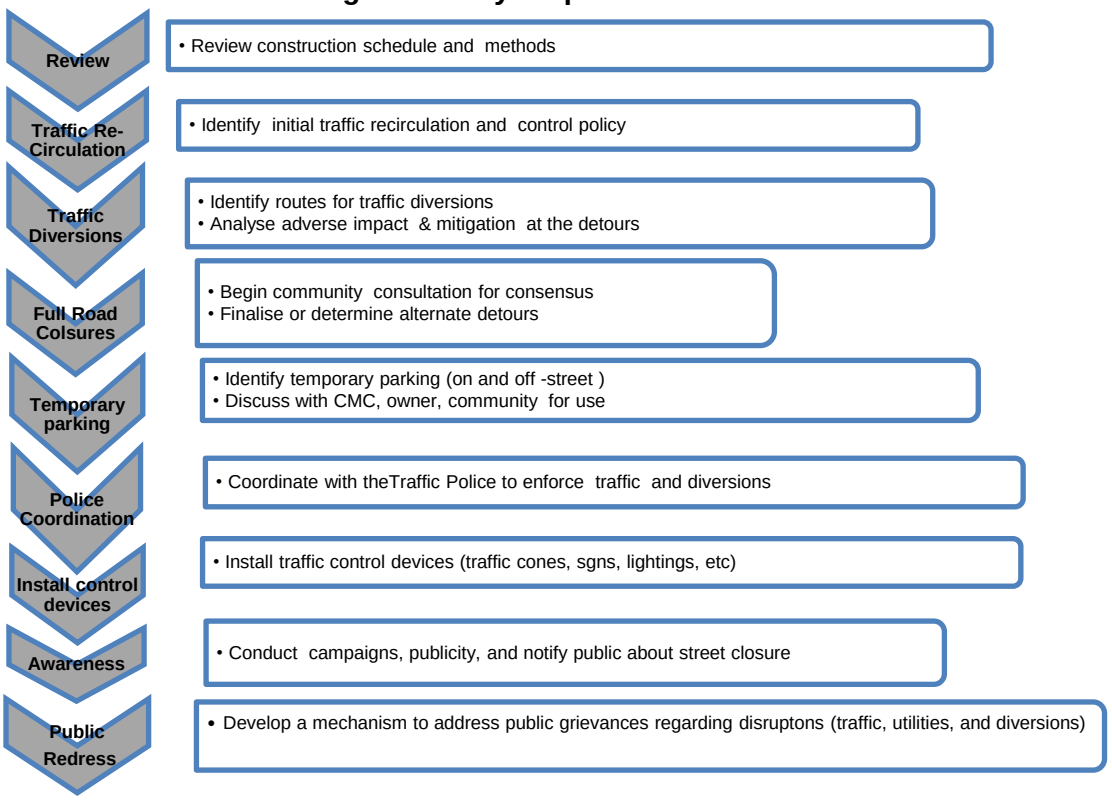
3. Apart from the capacity analysis, a final decision to close a particular section of canal road and divert the traffic should involve the following steps:

(i) approval from the PIU, local administration to use the other bank of canal or any other rural road as detours;
(ii) consultation with businesses, community members, traffic police, PWD, etc, regarding the mitigation measures necessary at the detours where the road is diverted during the construction;

(iii) determining of the maximum number of days allowed for road closure, and incorporation of such provisions into the contract documents;
(iv) determining if additional traffic control or temporary improvements are needed along the detour route;
(v) considering how access will be provided to the worksite;
(vi) contacting emergency service, school officials, and transit authorities to determine if there are impacts to their operations; and
(vii) developing a notification program to the public so that the closure is not a surprise. As part of this program, the public should be advised of alternate routes that commuters can take or will have to take as result of the traffic diversion.
(viii) In the current case closure of any street or roads crossing the canal are not required.

4. If full road-closure of certain section within the area is not feasible due to inadequate capacity of the Detour road or public opposition, the full closure can be restricted to weekends with the construction commencing on Saturday night and ending on Monday morning prior to the morning peak period.

Figure: Policy Steps for the TMP



D. Public awareness and notifications

5. As per discussions in the previous sections, there will be travel delays during the constructions, as is the case with most construction projects, albeit on a reduced scale if utilities and traffic management are properly coordinated.

6. The awareness campaign and the prior notification for the public will be a continuous activity which the project will carry out to inform the public for the above delays. These activities will take place sufficiently in advance of the time when the roadblocks or traffic diversions take place at the particular streets. The reason for this is to allow sufficient time for the public and residents to understand the changes to their travel plans. The project will notify the public about the roadblocks and traffic diversion through public notices ward level meetings and city level meeting with the elected representatives.

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

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

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

9. The campaign will cater to all types of target groups i.e. children, adults, and drivers. Therefore, these campaigns will be conducted in schools and community centers. In addition, the project will publish a brochure for public information. These brochures will be widely circulated around the area and will also be available at the PIU, and the contractor's site office. The text of the brochure should be concise to be effective, with a lot of graphics. It will serve the following purpose:

(i) explain why the brochure was prepared, along with a brief description of the project;
(ii) advise the public to expect the unexpected;
(iii) educate the public about the various traffic control devices and safety measures adopted at the work zones;
(iv) educate the public about the safe road user behaviour to emulate at the work zones;
(v) tell the public how to stay informed or where to inquire about road safety issues at the work zones (name, telephone, mobile number of the contact person; and
(vi) indicate the office hours of relevant offices.

E. Vehicle Maintenance and Safety

10. A vehicle maintenance and safety program shall be implemented by the construction contractor. The contractor should ensure that all the vehicles are in proper running condition and it comply with roadworthy and meet certification standards of Government of Uttarakhand Transport Department. All vehicles to be used will comply with emission regulations and standards promulgated by the Government of India. The vehicle operator requires a pre state of shift checklist. Additional safety precautions will include the requirement for:

- Driver will follow the special code of conduct and road safety rules of Government of India.
- Drivers to ensure that all loads are covered and secured drivers to ensure operation equipment can't leak materials hauled
- Vehicles will be cleaned and maintained in designed places.

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

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

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

11. Procedures for installing traffic control devices at any work zone vary, depending on road configuration, location of the work, construction activity, duration, traffic speed and volume, and pedestrian traffic. All the work zones should be cordoned off, and traffic shifted away at least with traffic cones, barricades, and temporary signs (temporary "STOP" and "GO").

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

13. Traffic police shall regulate traffic away from the work zone and enforce the traffic diversion results from full closure of certain section along the canal. Flaggers/ personnel should be equipped with reflective jackets at all times and have traffic control batons (preferably the LED type) for regulating the traffic during night time.

14 In addition to the delineation devices, all the construction workers should wear fluorescent safety vests and helmets in order to be visible to the motorists at all times. There should be provision for lighting beacons and illumination for night constructions.

15. The PIU and contractor will coordinate with the local administration and traffic police regarding the traffic signs, detour, and any other matters related to traffic. The contractor will prepare the traffic management plan in detail and submit it along with the EMP for the final approval.

G. Suggested Traffic Diversion for the Sub Project

16. There will be no requirement for traffic diversion from start point to Bahadrabad steel bridge (entire length of Pedestrian alignment) as public will make use of NH-58 and internal roads of Haridwar, Jawalapur and SIDCUL area. Further, the route is almost parallel to NH-58. But during execution of signage works in entire length of 42 km and installation of Foot Over Bridge at Manglour Cross there may be requirement for traffic diversion.

17. If there is need to close any section of road from Bahadarabad steel bridge to Piran Kaliyar then through traffic from Haridwar to Roorkee needs to be diverted to NH-58 from Bahadarabad. Similarly traffic coming from Roorkee to Hardwar needs to be diverted to NH-58 from Piran Kaliyar. The local village traffic between Bhadarabad and Piran Kaliyar may use right bank canal road.

18. For any closure between Piran Kaliyar and Solani Park , the traffic may be diverted to right canal bank road from Kaliyar as well as Solani park.

19. From Solani Park to End point any closure of canal road requires then traffic may be diverted to NH-58 from Manglour for traffic coming from Meerut side and from Roorkee for traffic coming from Haridwar side. The local villagers will take available Rural road to access NH-58.

Annexure-7

Sample Semi-Annual Environmental Monitoring Report Template

This template must be included as an Annex in the EIA/IEE that will be prepared for the project. It can be adapted to the specific project as necessary.

INTRODUCTION

- Overall project description and objectives
- Description of sub-projects
- Environmental category of the sub-projects
- Details of site personnel and/or consultants responsible for environmental monitoring
- Overall project and sub-project progress and status

No.	Sub-Project Name	Status of Sub-Project				List of Works	Progress of Works
		Design	Pre-Construction	Construction	Operational		
		☐	☐	☐	☐		
		☐	☐	☐	☐		
		☐	☐	☐	☐		

COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS

No.	Sub-Project Name	Statutory Environmental Requirements	Status of Compliance	Action Required

COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

No. (List schedule and paragraph number of Loan Agreement)	Covenant	Status of Compliance	Action Required

COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

- Provide the monitoring results as per the parameters outlined in the EMP. Append supporting documents where applicable, including Environmental Site Inspection Reports.
- There should be Reporting on the following items which can be incorporated in the checklist of routine Environmental Site Inspection Report followed with a summary in the semi-annual Report send to ADB. Visual assessment and review of relevant site documentation during routine site inspection needs to note and record the following:
  - What are the dust suppression techniques followed for site and if any dust was noted to escape the site boundaries;
  - If muddy water was escaping site boundaries or muddy tracks were seen on adjacent roads;
  - adequacy of type of erosion and sediment control measures installed on site, condition of erosion and sediment control measures including if these were intact following heavy rain;
  - Are their designated areas for concrete works, and refuelling;
  - Are their spill kits on site and if there are site procedure for handling emergencies;
  - Is there any chemical stored on site and what is the storage condition?
  - Is there any dewatering activities if yes, where is the water being discharged;
  - How are the stockpiles being managed;
  - How is solid and liquid waste being handled on site;
  - Review of the complaint management system;
  - Checking if there are any activities being under taken out of working hours and how that is being managed.

Summary Monitoring Table

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring
Design Phase						
Pre-Construction Phase						
Construction Phase						
Operational Phase						

Overall Compliance with CEMP/EMP

No.	Sub-Project Name	EMP/CEMP Part of Contract Documents (Y/N)	CEMP/EMP Being Implemented (Y/N)	Status of Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed & Additional Measures Required

APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

- Brief description on the approach and methodology used for environmental monitoring of each sub-project

MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS (AMBIENT AIR, WATER QUALITY AND NOISE LEVELS)

- Brief discussion on the basis for monitoring
- Indicate type and location of environmental parameters to be monitored
- Indicate the method of monitoring and equipment to be used
- Provide monitoring results and an analysis of results in relation to baseline data and statutory requirements

As a minimum the results should be presented as per the tables below.

Air Quality Results

Site No.	Date of Testing	Site Location	Parameters (Government Standards)		
			PM10 (µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)

Site No.	Date of Testing	Site Location	Parameters (Monitoring Results)		
			PM10 (µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)

Water Quality Results

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	Conductivity (µS/cm)	BOD (mg/L)	TSS (mg/L	TN (mg/L)	TP (mg/L)

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	Conductivity (µS/cm)	BOD (mg/L)	TSS (mg/L	TN (mg/L)	TP (mg/L)

Noise Quality Results

Site No.	Date of Testing	Site Location	LA_{eq} (dBA) (Government Standard)	
			Day Time	Night Time

Site No.	Date of Testing	Site Location	LA_{eq} (dBA) (Government Standard)	
			Day Time	Night Time

SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

- Summary of follow up time-bound actions to be taken within a set timeframe.

Annexes

- Photos
- Summary of consultations
- Copies of environmental clearances and permits
- Sample of environmental site inspection Report
- Other

SAMPLE ENVIRONMENTAL SITE INSPECTION REPORT

Project Name
Contract Number

NAME:_____ DATE: _____
TITLE: _____DMA: _____
LOCATION:_____ GROUP: _____

WEATHER CONDITION:_____

INITIAL SITE CONDITION: _____

CONCLUDING SITE CONDITION:

Satisfactory _____ Unsatisfactory_____ Incident_____ Resolved _____
Unresolved _____

INCIDENT:
Nature of incident:_____

Intervention Steps:_____

Incident Issues

Resolution

Project Activity Stage	Survey	
	Design	
	Implementation	
	Pre-Commissioning	
	Guarantee Period	

Inspection

Emissions	Waste Minimization
Air Quality	Reuse and Recycling
Noise pollution	Dust and Litter Control
Hazardous Substances	Trees and Vegetation

Site Restored to Original Condition Yes No

Signature

_____

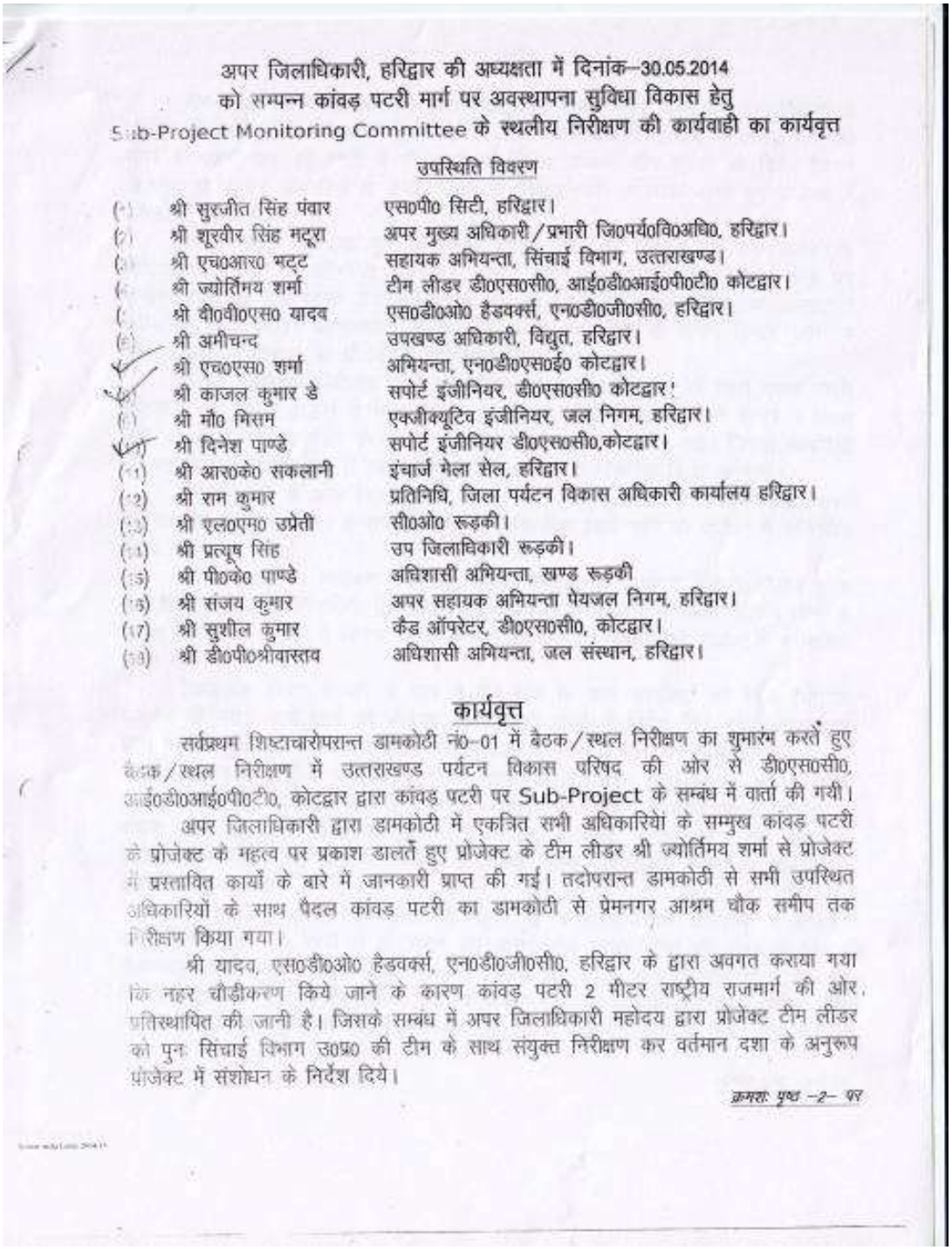
Sign off

_____ _____

Name Name **Position Position**

Annexure 8

Recorded Documents of Transact Walk Cum SubProject Committee meeting (30/05/2014)



अपर जिलाधिकारी, हरिद्वार की अध्यक्षता में दिनांक–30.05.2014
को सम्पन्न कांवड़ पटरी मार्ग पर अवस्थापना सुविधा विकास हेतु
Sub-Project Monitoring Committee के स्थलीय निरीक्षण की कार्यवाही का कार्यवृत्त

उपस्थिति विवरण

(1)	श्री सुरजीत सिंह पंवार	एस0पी0 सिटी, हरिद्वार।
(2)	श्री शूरवीर सिंह मटूरा	अपर मुख्य अधिकारी/प्रभारी जि0पर्य0वि0अधि0, हरिद्वार।
(3)	श्री एच0आर0 भट्ट	सहायक अभियन्ता, सिंचाई विभाग, उत्तराखण्ड।
(4)	श्री ज्योर्तिमय शर्मा	टीम लीडर डी0एस0सी0, आई0डी0आई0पी0टी0 कोटद्वार।
(5)	श्री वी0वी0एस0 यादव	एस0डी0ओ0 हैडवर्क्स, एन0डी0जी0सी0, हरिद्वार।
(6)	श्री अमीचन्द	उपखण्ड अधिकारी, विद्युत, हरिद्वार।
(7)	श्री एच0एस0 शर्मा	अभियन्ता, एन0डी0एस0ई0 कोटद्वार।
(8)	श्री काजल कुमार डे	सपोर्ट इंजीनियर, डी0एस0सी0 कोटद्वार।
(9)	श्री मौ0 मिसम	एक्जीक्यूटिव इंजीनियर, जल निगम, हरिद्वार।
(10)	श्री दिनेश पाण्डे	सपोर्ट इंजीनियर डी0एस0सी0,कोटद्वार।
(11)	श्री आर0के0 सकलानी	इंचार्ज मेला सेल, हरिद्वार।
(12)	श्री राम कुमार	प्रतिनिधि, जिला पर्यटन विकास अधिकारी कार्यालय हरिद्वार।
(13)	श्री एल0एम0 उप्रेती	सी0ओ0 रूड़की।
(14)	श्री प्रत्यूष सिंह	उप जिलाधिकारी रूड़की।
(15)	श्री पी0के0 पाण्डे	अधिशासी अभियन्ता, खण्ड रूड़की
(16)	श्री संजय कुमार	अपर सहायक अभियन्ता पेयजल निगम, हरिद्वार।
(17)	श्री सुशील कुमार	कैड ऑपरेटर, डी0एस0सी0, कोटद्वार।
(18)	श्री डी0पी0श्रीवास्तव	अधिशासी अभियन्ता, जल संस्थान, हरिद्वार।

कार्यवृत्त

सर्वप्रथम शिष्टाचारोपरान्त डामकोठी नं0–01 में बैठक/स्थल निरीक्षण का शुभारंभ करते हुए बैठक/स्थल निरीक्षण में उत्तराखण्ड पर्यटन विकास परिषद की ओर से डी0एस0सी0, आई0डी0आई0पी0टी0, कोटद्वार द्वारा कांवड़ पटरी पर Sub-Project के सम्बंध में वार्ता की गयी।

अपर जिलाधिकारी द्वारा डामकोठी में एकत्रित सभी अधिकारियों के सम्मुख कांवड़ पटरी के प्रोजेक्ट के महत्व पर प्रकाश डालते हुए प्रोजेक्ट के टीम लीडर श्री ज्योर्तिमय शर्मा से प्रोजेक्ट में प्रस्तावित कार्यों के बारे में जानकारी प्राप्त की गई। तदोपरान्त डामकोठी से सभी उपस्थित अधिकारियों के साथ पैदल कांवड़ पटरी का डामकोठी से प्रेमनगर आश्रम चौक समीप तक निरीक्षण किया गया।

श्री यादव, एस0डी0ओ0 हैडवर्क्स, एन0डी0जी0सी0, हरिद्वार के द्वारा अवगत कराया गया कि नहर चौड़ीकरण किये जाने के कारण कांवड़ पटरी 2 मीटर राष्ट्रीय राजमार्ग की ओर प्रतिस्थापित की जानी है। जिसके सम्बंध में अपर जिलाधिकारी महोदय द्वारा प्रोजेक्ट टीम लीडर को पुनः सिंचाई विभाग उ0प्र0 की टीम के साथ संयुक्त निरीक्षण कर वर्तमान दशा के अनुरूप प्रोजेक्ट में संशोधन के निर्देश दिये।

क्रमशः पृष्ठ –2– पर

श्री अमीचन्द एस0डी0ओ0, यू0पी0सी0एल0 द्वारा विद्युत लाईन डबल फैस बनाये जाने का सुझाव दिया, जिस पर अपर जिलाधिकारी महोदय द्वारा प्रोजेक्ट टीम को भूमिगत विद्युत लाईन (डबल फैस), प्रकाश व्यवस्था को आवश्यक मानते हुए इसे प्रोजेक्ट में सम्मिलित करने के निर्देश दिये गये। साथ ही अपर जिलाधिकारी महोदय द्वारा पूरी कांवड़ पटरी को भूमिगत वाटर सप्लाई को प्रोजेक्ट में सम्मिलित किये जाने के निर्देश दिये गये।

प्रोजेक्ट को प्रभावी ढंग से लागू करने के सम्बंध में हुई वार्ता में उ0प्र0 सिंचाई विभाग से अनापत्ति को आवश्यक मानते हुए श्री यादव एस0डी0ओ0 द्वारा बताया गया कि अनापत्ति हेतु पत्रावली अधिशासी अभियन्ता मेरठ को भेजी जानी है। अपर जिलाधिकारी महोदय द्वारा प्रोजेक्ट के सम्बंध में अनापत्ति हेतु शीघ्र कार्यवाही किये जाने की आवश्यकता को उत्तराखण्ड पर्यटन विकास परिषद की टीम के सदस्यों को निर्देश दिये।

पुलिस अधीक्षक नगर द्वारा कांवड़ पटरी पर स्थित प्रत्येक पुलिस बीट पोस्ट हेतु 01 कक्ष व वाच टावर बनाये जाने की आवश्यकता बताई गई। उक्त सभी स्थलों पर पुलिस टीम हेतु टायलेट सहित कक्ष व वाच टावर बनाया जाना प्रोजेक्ट में सम्मिलित किया गया।

अन्त में अपर जिलाधिकारी महोदय द्वारा परियोजना के प्रभावी क्रियान्वयन हेतु उक्त परियोजना को अत्यन्त महत्वपूर्ण मानते हुए इसके सफल सफल क्रियान्वयन हेतु उपस्थित समस्त अधिकारियों के माध्यम से सभी सम्बन्धित विभागों से सकारात्मक सहयोग की अपेक्षा के साथ धन्यवाद सहित विसर्जन किया।

(जीवन चन्द्र नगन्याल)
अपर जिलाधिकारी (प्र0)
हरिद्वार।

कार्यालय, अपर जिलाधिकारी, हरिद्वार।

पत्रांक– /कांवड़ पटरी प्रोजेक्ट/2014–15 दिनांक मई 2014

प्रतिलिपिः– निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषितः–

1. जिलाधिकारी महोदय, हरिद्वार को सादर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।
2. अपर मुख्य कार्यकारी अधिकारी, उत्तराखण्ड पर्यटन विकास परिषद, देहरादून।
3. समस्त सम्बन्धित/उपस्थित सदस्यों को अनुपालनार्थ प्रेषित।

अपर जिलाधिकारी (प्र0)
हरिद्वार।

Annexure 9

Minuted Document of Stakeholder consultation with List of participants (23/05/2014)

जिलाधिकारी, हरिद्वार की अध्यक्षता में दिनांक–23.05.2014 को सम्पन्न कांवड़ पटरी मार्ग पर अवस्थापना सुविधा विकास हेतु Sub-Project Monitoring Committee की सम्पन्न हुई बैठक में उपस्थिति:–

बैठक का उपस्थिति विवरण

(1)	श्री जे0एस0 नगन्याल	अपर जिलाधिकारी (प्रशासन), हरिद्वार।
(2)	श्री सुरजीत सिंह पंवार	पुलिस अधीक्षक नगर, हरिद्वार।
(3)	श्री प्रयूष सिंह	उप जिलाधिकारी रूड़की।
(4)	श्री सी0के0 मिश्रा	नगर मजिस्ट्रेट, हरिद्वार।
(5)	श्री बी0एस0 बुदियाल	उप जिलाधिकारी, हरिद्वार।
(6)	श्री ज्योतिमय सिंह	टीम लीडर डी0एस्ता0सी0, आई0सी0आई0सी0टी0 कोटद्वार।
(7)	श्री के0एस0 रावत	जिला पर्यटन विकास अधिकारी, हरिद्वार।
(8)	श्री मनोज श्रीवास्तव	जिला सूचना अधिकारी, हरिद्वार।
(9)	श्री चन्द्रमोहन सिंह	सी0ओ0 सिटी, हरिद्वार।
(10)	डॉ0 नरेश चौधरी	आपदा प्रबन्धन अधिकारी, हरिद्वार।
(11)	श्री पुरुषोत्तम	अधिशासी अभियन्ता सिंचाई, हरिद्वार।
(12)	श्री पी0के0 पाण्डेय	अधिशासी अभियन्ता सिंचाई, रूड़की।
(13)	श्री ओ0पी0 सिंह	अधिशासी अभियन्ता लो0नि0वि0, रूड़की।
(14)	श्री गौ0 वृसुक	अधिशासी अभियन्ता प्रा0खण्ड लो0नि0वि., हरिद्वार।
(15)	श्री डी0पी0 श्रीवास्तव	अधिशासी अभियन्ता जल संस्थान, हरिद्वार।
(16)	श्री देवेन्द्र कुमार	अधिशासी अभियन्ता विद्युत विभाग, हरिद्वार।
(17)	श्री वी0वी0एस0 यादव	एस0डी0ओ0 हैडवर्क्स, सिंचाई विभाग, उ0प्र0, हरिद्वार।
(18)	श्री एम0आर0 भट्ट	सहायक अभियन्ता सिंचाई खण्ड, हरिद्वार।
(19)	श्री पी0के0 थपलियाल	एस0डी0ओ0 विद्युत, रूड़की।
(20)	डॉ0 हरेन्द्र मलिक	एस0एम0ओ0, नगर निगम, हरिद्वार।
(21)	श्री संजय कुमार	अपर सहायक अभियन्ता पेयजल निगम, हरिद्वार।
(22)	श्री अनीमन्द	उपखण्ड अधिकारी, विद्युत, हरिद्वार।
(23)	श्री गुरुदत्त त्रिपाठी	सहायक अभियन्ता, पी0एम0सी0, आई0सी0आई0पी0टी0 देहरादून।
(24)	श्री कंचल कुमार डे	सपोर्ट इंजीनियर, डी0एस्ता0सी0 कोटद्वार।
(25)	श्री एम0के0 सिंह	स्टेशन अधीक्षक, हरिद्वार उत्तर रेलवे।
(26)	श्री पी0के0 मिश्रा	जे0ई0उत्तरीखण्ड गंगनहर, रानीपुर, हरिद्वार।
(27)	श्री एस0के0 शर्मा	जे0ई0उत्तरीखण्ड गंगनहर, मायापुर, हरिद्वार।
(28)	श्री आर0के0 जोशी	एन0डी0, आई0सी0आई0पी0टी0, देहरादून।।
(29)	श्री अमित भारद्वाज	परियोजना प्रबन्धक, पी0आई0यू0, कोटद्वार।
(30)	श्री बृजपाल शर्मा	आशुलिपिक, पेयजल निगम, हरिद्वार।

क्रमशः–2–

जिलाधिकारी, हरिद्वार की अध्यक्षता में दिनांक–23.05.2014 को सम्पन्न कांवड पटरी मार्ग पर अवस्थापना सुविधा विकास हेतु Sub-Project Monitoring Committee की बैठक की कार्यवाही का कार्यवृत्त:–

उपस्थिति:– संलग्न पत्रक के अनुसार।

सर्वप्रथम बैठक में उत्तराखण्ड पर्यटन विकास परिषद की ओर से डी0एस0सी0, आई0डी0आई0पी0टी0, कोटद्वार द्वारा कांवड पटरी Sub-Project का प्रस्तुतीकरण किया गया।

डी0एस0सी0 कोटद्वार द्वारा बैठक में उपस्थित सदस्यों को उत्तराखण्ड पर्यटन विकास परिषद की ओर से तैयार किए गये कांवड़ पटरी Sub-Project में शामिल मायापुर रेगुलेटर से मंगलौर सीमा तक 11 चिन्हित स्थलों (मायापुर रेगुलेटर, सिंहद्वार, जटवाड़ा पुल, रानीपुर साइफन, धनौरी एक्वाडक्ट, सौलानी पार्क रूड़की, आसफनगर पुल इत्यादि) की जानकारी दी गई।

कांवड़ पटरी Sub-Project के प्रस्तुतीकरण के दौरान कांवड़ पटरी मार्ग पर पड़ने वाले सभी 11 चिन्हित स्थलों पर उक्त परियोजना (Kanwar Patri Sub-Project) में प्रस्तावित कार्यों हेतु वृक्षारोपण, कांवड़ पटरी की मरम्मत, जल निकासी हेतु नालियों का निर्माण आदि कार्यों हेतु भूमि उपलब्धता के सम्बन्ध में जानकारी दी गई तथा अवगत किया गया कि सभी सम्बन्धित विभागों तथा भूस्वामियों (उ0प्र0 सिंचाई विभाग, उत्तराखण्ड सिंचाई विभाग, राजस्व विभाग, सम्बन्धित भू स्वामियों) से भूमि उपलब्धता अथवा अनापत्ति प्रमाण पत्र आवश्यकता होगी।

(कार्यवाही:– राजस्व विभाग/सिंचाई विभाग उत्तर प्रदेश एवं उत्तराखण्ड)

कांवड़ पटरी मार्ग पर सन्दर्भित योजना के क्रियान्वयन हेतु उ0प्र0 सिंचाई विभाग से अनापत्ति चाहने पर बैठक में उपस्थित उ0प्र0 सिंचाई विभाग के प्रतिनिधि उपखण्ड अधिकारी हैडवर्क्स, हरिद्वार द्वारा उक्त कांवड़ पटरी मार्ग पर प्रस्तावित कार्यों हेतु सैद्धान्तिक सहमति के साथ–साथ इस मार्ग पर भारी मोटर वाहनों तथा व्यावसायिक वाहनों की आवाजाही रोकने हेतु अनुरोध किया गया तथा यह भी अपेक्षा की गयी कि कांवड़ पटरी मार्ग से लगी नहर को प्रस्तावित कार्यों से किसी प्रकार की क्षति न पहुंचे। उ0प्र0 सिंचाई विभाग के प्रतिनिधि (S.D.O. Irrigation हरिद्वार) की राय पर डी0एस0सी0 द्वारा स्पष्ट किया गया कि इस परियोजना में कांवड़ पटरी पर भारी वाहनों के आवाजाही हेतु कोई प्रतिबन्ध नहीं है, तथा जिलाधिकारी महोदय के निर्देशानुसार प्रस्तावित Sub-Project की प्रति उ0प्र0 सिंचाई विभाग के प्रतिनिधि को अनापत्ति/आपत्ति जारी करने हेतु उपलब्ध करायी गई है।

(कार्यवाही:– पुलिस विभाग/ उत्तर प्रदेश सिंचाई विभाग)

कांवड़ पटरी Sub-Project से सम्बन्धित कार्यों के बारे में बैठक में सम्यक विचारोपरान्त जिलाधिकारी हरिद्वार/अध्यक्ष कांवड पटरी Sub-Project Monitoring Committee द्वारा निर्देशित किया गया कि उक्त परियोजना में प्रस्तावित कार्यों हेतु 11 चिन्हित स्थलो पर होने वाले कार्यों की व्यावहारिकता तथा सम्बन्धित विभागों से अनापत्ति प्रमाण पत्र प्राप्त करने हेतु अपर जिलाधिकारी (प्रशासन) की अध्यक्षता में सम्पूर्ण कांवड पटरी मार्ग के भ्रमण हेतु सभी सम्बन्धित विभागों (उ0प्र0 सिंचाई विभाग, उत्तराखण्ड सिंचाई विभाग, लोक निर्माण विभाग, विद्युत, जल निगम जल संस्थान, पर्यटन विभाग, उत्तर रेलवे) तथा एस0पी0 सिटी व डी0 नरेश चौधरी सहित टीम गठित कर यथाशीघ्र सम्पूर्ण कांवड पटरी क्षेत्र का भ्रमण कर प्रस्तावित कार्यों व भूमि उपलब्धता के सम्बन्ध में यथास्थान निर्णय लेकर तदानुसार सूचना उपलब्ध करायें।

(कार्यवाही:– अपर जिलाधिकारी (प्रशासन)/सिंचाई विभाग उ0प्र0 एवं उत्तराखण्ड/लो0नि0वि0/विद्युत विभाग/जल निगम/जल संस्थान/पर्यटन विभाग/रेलवे/पुलिस/डी0 नरेश चौधरी)

क्रमशः–2–

-3-

बैठक में उपरोक्त बिन्दु के साथ ही यह भी निर्णय लिया गया कि सभी सम्बन्धित विभागों से भूमि उपलब्धता सम्बन्धी अनापत्ति प्रमाण पत्र 10 दिनों में उपलब्ध कराने के उपरान्त आगामी 15 दिनों में जनप्रतिनिधियों के साथ भी उक्त प्रस्ताव को अन्तिम रूप देने हेतु एक बैठक तय की जाये।

(कार्यवाही– अपर जिलाधिकारी (प्रशासन)/जिला पर्यटन विकास अधिकारी)

उक्त योजना के क्रियान्वयन के उपरान्त योजना के संचालन व रख-रखाव के सम्बन्ध में एक उपयुक्त Maintenance/Management Model तैयार करने की कार्यवाही हेतु भी जिलाधिकारी द्वारा निर्देशित किया गया।

(कार्यवाही– अपर जिलाधिकारी (प्रशासन)/जिला पर्यटन विकास अधिकारी)

जिलाधिकारी महोदय द्वारा उक्त प्रोजेक्ट के अन्तर्गत किये जाने वाले कार्यों को दो श्रेणियों Short Term works & Long Term Works में वर्गीकृत किये जाने हेतु डीएसपीसी, आईजीआईपीटीकोटद्वार को निर्देशित किया गया, जिससे कि Short Term works नियमानुसार यथाशीघ्र प्रारम्भ किये जा सकें, ताकि आगामी माह जुलाई, 2014 में होने वाली कांवड़ यात्रा में इसका उपयोग किया जा सके।

(कार्यवाही– अपर जिलाधिकारी (प्रशासन)/जिला पर्यटन विकास अधिकारी/आईजीआईपीटी कोटद्वार)

बैठक में अपर जिलाधिकारी (प्रशासन) की अध्यक्षता में सभी सम्बन्धित विभागों का एक कार्यदल (Working Group) गठित करने का भी निर्णय लिया गया, जो कि उक्त योजना के क्रियान्वयन में सहयोग व गतिविधियों के निरीक्षण का कार्य करेगा व जिलाधिकारी को तद्नुसार समय-समय पर अवगत करायेगा।

(कार्यवाही– अपर जिलाधिकारी (प्रशासन)/समस्त सर्वसम्बन्धित विभाग)

अन्त में जिलाधिकारी महोदय द्वारा परियोजना की अवधारणा पर सहमति व्यक्त करते हुए उक्त योजना के सफल क्रियान्वयन एवं इसके व्यापक जनहित के दृष्टिगत् सभी सम्बन्धित विभागों से सकारात्मक सहयोग की अपेक्षा के साथ धन्यवाद सहित बैठक का विसर्जन किया।

अपर जिलाधिकारी (प्रशासन)
हरिद्वार।

कार्यालय, जिलाधिकारी, हरिद्वार।

दिनांक 10/6 2014

पत्रांक- 109 /कांवड़ यात्री प्रोजेक्ट/2014-15

प्रतिलिपि- निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित-

1. सचिव, पर्यटन विभाग, उत्तराखण्ड शासन, देहरादून।
2. अपर मुख्य कार्यकारी अधिकारी, उत्तराखण्ड पर्यटन विकास परिषद, देहरादून।
3. प्रमुख सचिव, सिंचाई विभाग, उत्तर प्रदेश शासन, लखनऊ।
4. प्रमुख सचिव, सिंचाई विभाग, उत्तराखण्ड शासन, देहरादून।
5. आयुक्त गढ़वाल मण्डल, गढ़वाल।
6. समस्त सम्बन्धित/एवसिलट सदस्यों को अनुपालनार्थ प्रेषित।

अपर जिलाधिकारी (प्रशासन)
हरिद्वार।

Photographs and Signature Sheets of consultations

Consultations with Traders Associations at Haridwar

Date: 21/08/2014

Signature Sheet of Attendees of Consultations

Sl No.	Name	Occupation	Signature/Thumb Impression	Telephone Number
1	MR PANKAJ MATA	Business		9897354143
2	Kishan Kumar	Business		9760977909
3	[illegible]	Business		9837514672
4	[illegible]	Business		9897902667
5	Arpan Agarwal	Business		9897237676
6	MANOJ SIKRI	Bharat Scout Guide Manager		9456365521
7	Virender Tiwari AJ.	Bharat Scouts Sec.	V.K. Tiwari	9456562250
8	Dr Rajkumar Sharma	medical officer Bharat Scouts Guide		9897941421
9	Mr. Shiv Kr Kashyap	Business	Shiv Kumar	9837222681
10	Suresh Gulati	Jilla member		9837[illegible]455
11	Mr. Bhati	[illegible]		9927015136

Consultation with Ganga Maha Sabha at Haridwar
Dated: 21/08/2014

Signature Sheet of Attendees of Consultations

Sl No.	Name	Occupation	Signature/Thumb Impression	Telephone Number
1	डा० सिद्धार्थ चक्रपाणी	[illegible]	[illegible]	9997888815
2	Dr. ABHISHEK SHIVPURI	[illegible]	A. Shivpuri	9634341012
3	Manoj Sharma	[illegible]	[illegible]	9927169405
4	श्री आशुतोष शर्मा	[illegible]	आशुतोष	9837355334
5	श्री नवीन चन्द्र	[illegible]	[illegible]	9837928587

Place of consultation :- Haridwar.
Date :- 22/8/14

Signature Sheet of Attendees of Consultations

Sl No.	Name	Occupation	Signature/Thumb Impression	*Telephone Number*
	Chandrapal	Service		9927223495
	Sanjay	education	Sanjay	9045872452
	Rakesh Kumar	Chandrapal	Rakesh	8273444226
	Sukarni Singh	Doctor		9358283335
	सोनू	मजदूरी		-
	रफीक	व्यापारी		-
	मो० इलियास	इलेक्ट्रीशियन		-
	wasim	Shopkeeper		9997259193

Haridwar Police Report on Kanwar Fair, Management issues and solutions

सेवा में,

वरिष्ठ पुलिस अधीक्षक,
जनपद – हरिद्वार।

विषयः–कांवड मेला 2014 की व्यवस्था, अनुभूत समस्यायें एवं समाधान सम्बन्धी आख्या।

महोदय,

कृपया सादर अवगत कराना है कि कॉवड मेला–2014 दिनॉक 13.07.2014 को प्रारम्भ होकर दिनॉक 25.07.2014 को जलाभिषेक के पश्चात सम्पन्न हुआ। इस वर्ष कुल **2 करोड, 65 लाख, 93 हजार, 590 कावडियों** एवं **लगभग 01 लाख बडे कांवड वाहन तथा लगभग 05 लाख छोटे/दोपहिया वाहनों का** जनपद में आगमन हुआ। काँवड मेले की संवेदनशीलता के दृष्टिगत सम्पूर्ण मेला क्षेत्र को **06 सुपर जोन, 23 जोन तथा 90 सेक्टरों** में विभाजित किया गया। प्रत्येक सुपर जोन में अपर पुलिस अधीक्षक, जोन में पुलिस उपाधीक्षक स्तर के अधिकारी नियुक्त किये गये तथा प्रत्येक सेक्टर में निरीक्षक/थानाध्यक्ष/अनुभवी उ0नि0 को सेक्टर प्रभारी बनाया गया। कॉवड मेला–2014 हेतु जनपद के अतिरिक्त गैर जनपद से भी पुलिस बल प्राप्त हुआ। गैरजनपद से उक्त पुलिस बल मेला हेतु दो चरणों में प्राप्त हुआ।

कांवड मेला 2014 हेतु जनपद/गैरजनपद से निम्न पुलिस बल प्राप्त हुआ।

विवरण	जनपद	गैरजनपद	योग
अपर पुलिस अधीक्षक	2	4	6
पुलिस उपाधीक्षक	6	8	14
निरीक्षक/थानाध्यक्ष	19	28	47
उपनिरीक्षक	138	103	241
महिला उपनिरीक्षक	8	7	15
मुख्य आरक्षी	118	131	249
आरक्षी	893	947	1840
महिला आरक्षी	105	98	203
उपनिरीक्षक यातायात	2	4	6
मुख्य आरक्षी यातायात	14	15	29
आरक्षी यातायात	57	59	116
प्रशिक्षु आरक्षी पीटीसी नरेन्द्रनगर से	-	-	55
प्रशिक्षु उ0नि0 स0पु0 पीएसी की विभिन्न वाहनियों से	-	-	41
पीएसी	1 PL	12 Coy, 1.5 PL	12 Coy, 2.5 PL
आर0ए0एफ0			02 COY.
एस0एस0बी0			03 COY.
बीडीएस	02	02	04
होमगार्डस	400	-	400
स्वान दल	01	02	03

अग्निशमन वाहन	06	06	12
कू बैक पैक सैट	02	-	02
सीसीटीवी			76
हैण्ड हैल्ड सैट			107
स्टैटिक सैट			19
एचएचएमडी	30	-	30
मोटर बोट	01	02 बीईजी रूडकी	03
रिकवरी वैन बडे	05	-	05
रिकवरी वैन छोटे	-	01	01
हल्के वाहन		8	8
मोटर साईकिल वाहन मय चालक	-	28	28
अभिसूचना ईकाई स्टाफ	41	41	82
जल पुलिस	04 TEAM	बीईजी रूडकी का तैराक दल	

उल्लेखनीय है कि कांवड मेला के प्रारम्भिक चरण में विगत वर्ष की तुलना में काफी क पुलिस बल गैरजनपद से प्राप्त हुआ था।

कांवड मेले के अन्तिम तीन दिवस में डाक कांवड हेतु नगर क्षेत्र मे राष्ट्रीय राजमार्ग ए विभिन्न पार्किंग को **10 अतिरिक्त जोन एवं 25 सैक्टर** में विभक्त किया गया। प्रत्येक जोन व प्रभारी पुलिस उपाधीक्षक/निरीक्षक एवंसैक्टर के प्रभारी निरीक्षक/थानाध्यक्ष/अनुभवी उ0नि बनाये गये। असामाजिक तत्वों एवं आतंकवादी संगठनों द्वारा गडबडी फैलाने की सम्भावनाओं व दृष्टिगत मेला प्रारम्भ होने से पूर्व ही निरन्तर हर की पैडी, मंशा देवी मन्दिर, रेलवे स्टेशन, बस स्टैण्ड, एवंअन्य महत्वपूर्ण स्थलों पर बम निरोधक दस्तों एवंश्वान दल के माध्यम से निरन्तर एण्टी सबोटाज चैकिंग की कार्यवाही करायी गयी। जीआरपी हरिद्वार/लक्सर/रूड़की में कॉवडियों की सघन चैकिंग की गयी व कॉवडियों को ट्रेनों की छतों पर यात्रा करने से पूर्ण रूप से रोक लगायी गयी। मेला क्षेत्र से अतिकमण हटाये जाने हेतु विशेष अभियान चलाकर कार्यवाही की गई। कॉवड मेला के दौरान रमजान का पवित्र महीना होने के कारण नमाजियों व कॉवडियों के मध्य सामजंस्य स्थापित करने हेतु सादे वस्त्रों में विशेष पुलिस बल को मस्जिद/मदरसें/दरगाह आदि संवेदनशील स्थानों पर नियुक्त किया गया। काँवड मेला प्रारम्भ होने से पूर्व जनपद के व्यापार मण्डल के पदाधिकारियों/होटल धर्मशाला स्वामियों-प्रबन्धक/टैक्सी-टैम्पो यूनियन/एस0पी0ओ0 /सम्भ्रान्त नागरिकों/विभिन्न इकाइयों आदि के साथ गोष्ठियां आयोजित कर सुझाव प्राप्त कर पुलिस व्यवस्था को और अधिक दुरूस्त किया गया। मेला क्षेत्र में विभिन्न घाटो पर कांवडियों की डूबने की घटनाओं पर रोकथाम एवं बचाव हेतु जल पुलिस/फ्लड दल के साथ ही बीईजी रूडकी के तैराक दल को भी नियुक्त किया गया। जल पुलिस/फ्लड/बीईजी के जवानों द्वारा कुल **93 व्यक्तियों को डूबने से बचाया गया।** कांवडियों से बिछडे हुये परिजनों को मिलाये जाने हेतु सीसीआर मे खोया पाया सैल का गठन किया गया जिनके द्वारा **कुल खोये 284 पुरूष , 40 महिला व 44 बच्चों में से 281 पुरूष, 40 महिला व 44 बच्चो को उनके परिजनों से मिलाया गया शेष की तलाश जारी है।** इस वर्ष मेले के दौरान **कुल 18 कांवडियों की मृत्यु की सूचना प्राप्त हुई, जिनमें से डूबने से 10, सडक दुर्घटना में 07 तथा 01 कॉवडियें की मृत्यु अन्य कारण से हुई।** काँवड मेला के दौरान कानून एवं शांति व्यवस्था बनाये रखने हेतु **समस्त थाना क्षेत्रों के लगभग 650 सम्भ्रान्त नागरिकों को चिन्हित कर विभिन्न क्षेत्रों में विशेष पुलिस अधिकारी** नियुक्त किया गया। कांवड मेले के दौरान बीट/हल्का/चौकी/थाना स्तर पर कांवड समितियों की स्थापना की गई जिनके द्वारा पुलिस प्रशासन/जिला प्रशासन एवं कांवडियों के मध्य सेतु का कार्य किया गया तथा कानून एवं शांति व्यवस्था बनाये रखने में महत्वपूर्ण योगदान दिया गया। वाहनों को पार्क किये जाने हेतु **18 पार्किंग** की व्यवस्था की गयी थी। काँवड मेला के दौरान काँवडियों द्वारा उत्तेजनावश घटित की जाने वाली घटनाओं पर नियन्त्रण रखने हेतु भीड वाले स्थानों जैसे हर की पैडी, ललतारौ पुल, खडखडी, बाजार क्षेत्र, अपर रोड, ज्वालापुर, बहादराबाद, रूडकी, मंगलौर एवंनहर पटरी पर कांवडियों के वेश में पुलिस कर्मियों को नियुक्त किया गया

तीन चरणों में यातायात योजना तैयार की गई अन्तिम चरण में एकल मार्गीय व्यवस्था लागू की गई जिससे यातायात का संचालन सुचारू रहा। यातायात योजना को सफल बनाने के लिए दिल्ली ,मेरठ, मुजफ्फरनगर से आने वाले समस्त वाहनों को बैरागी कैम्प, हरिराम इण्टर कालेज एवं बिजनौर की तरफ से आने वाले वाहनों को नीलधारा/गौरीशंकर पार्किंग में पार्क करवाया गया जिससे शहर में अनावश्यक वाहनों का प्रवेश नहीं हुआ और अन्तिम दिवस को छोड़कर शेष दिनों में राष्ट्रीय राजमार्ग पर जाम की स्थिति उत्पन्न नहीं हुई। कांवड मेले के दौरान जनपद की समस्त पार्किंग का प्रयोग सुनियोजित तरीके से किया गया जिसके तहत् सर्वप्रथम बैरागी कैम्प पार्किंग को उसके बाद नीलधारा, रोडीबेलवाला, पंतद्वीप पार्किंग, चमगादड टापू में पार्किंग करवायी गयी है। पैदल काँवडियों की वापसी नहर पटरी से कराई गई। नहर पटरी पर दिशासूचक बोर्ड, पी0ए0सिस्टम एवं प्रोत्साहन सम्बन्धी व्यापक प्रचार–प्रसार कराया गया। हरकी पैडी से जल भरकर वापस जाने वाले पैदल काँवडियों को अलकनन्दा तिराहे की ओर नहीं जाने दिया गया, बल्कि रोडीबेलवाला रैम्प निकट चण्डीघाट टैक्सी यूनियन के पास से बिरला घाट पुल की ओर डायवर्ट कर रेलवे स्टेशन रोड, तुलसी चौक, डामकोठी पुल होते हुये नहर पटरी की ओर भेजा गया। काँवड मेले के दौरान पैदल कॉवडियों हेतु **10 डायवर्जन प्वाइंट क्रमशः पुल जटवाडा, रानीपुर झाल, बहादराबाद नहर पुल, कलियर, गणेशपुर पुल, एवं मंगलौर नहर पुल** राष्ट्रीय राजमार्ग पर स्थापित किये गये, जिनसे काँवडियों को राष्ट्रीय राजमार्ग से डायवर्ट कर काँवड/नहर पटरी पर भेजा गया। प्रत्येक डायवर्जन प्वाइंट पर पब्लिक ऐड्रेस सिस्टम स्थापित किया गया। काँवडियों/पुलिस बल की सुविधा के दृष्टिगत इन प्वाइंटों पर टैन्ट की व्यवस्था की गयी। सम्पूर्ण जनपद में राष्ट्रीय राजमार्ग/नहर पटरी पर **28 मोटर साईकिल** मोबाईल लगाई गई। मेले में नियुक्त अपर पुलिस अधीक्षक/पुलिस उपाधीक्षक/निरीक्षक/उ0नि0/आरक्षी/पी0ए0सी0 /केन्द्रीय अर्द्व सैनिक बल आदि की आवासीय व्यवस्था का चार्ट सुनियोजित तरीके से तैयार कर उचित आवासीय व्यवस्था की गई।

डाक कांवड के दौरान भारी संख्या में कांवडियो द्वारा निजी वाहन, कार, टाटा 407, मिनी ट्रक, ट्रक, मो0सा0, स्कूटर तथा साइकिल इत्यादि से आगमन किया गया। कांवडियों में अधिकांश नवयुवक थे, जिनमे उत्तेजक प्रवृत्ति के कांवडियों की संख्या अधिक थी, जिनके द्वारा वाहनों को तेज गति से चलाते हुए भय का वातावरण उत्पन्न करने का प्रयास किया गया, परन्तु पुलिस अधिकारियो द्वारा उक्त कांवडियों के विरूद्ध आवश्यक कार्यवाही की गई साथ ही पुलिस बल द्वारा सूझ–बूझ के साथ संयम का परिचय देते हुए शांति/कानून/यातायात व्यवस्था बनाये रखी गयी। डाक कांवड के दिनों में यातायात व्यवस्था को सुचारू रूप से बनाये रखने हेतु अनुभवी पुलिस बल नियुक्त किया गया, ड्यूटीरत पुलिस बल एवंप्रशिक्षणरत आरक्षियों द्वारा पूर्ण सजगता एवंनिष्ठा के साथ लगातार प्रयास कर शांति व्यवस्था ड्यूटी एवंयातायात को सुचारू रूप से रखने में अपना उत्कृष्ठ प्रर्दशन किया गया तथा जाम जैसी स्थिति उत्पन्न नहीं होने दी।

कांवड मेला–2014 में की गई नवीन व्यवस्थायें :–

- कांवड मेला हेतु प्रथम बार 06 सुपर जोन बनाये गये जिससे विभिन्न जोन में ड्यूटियों के कुशल पर्यवेक्षण में सहायता प्राप्त हुई।
- पूर्व में संयुक्त रहे शंकराचार्य चौक एवं बैरागी कैम्प को पृथक कर अलग–अलग जोन बनाया गया।
- कांवड मेले से पूर्व ही महत्वपूर्ण गोष्ठियों का आयोजन कर आवश्यक तैयारियां प्रारम्भ की गई।
- कांवड मेला हेतु तीन चरणों में यातायात योजना तैयार की गई अन्तिम चरण में एकल मार्गीय व्यवस्था लागू की गई जिससे यातायात का संचालन सुचारू रहा।
- यातायात योजना को सफल बनाने के लिए दिल्ली ,मेरठ मुजफ्फरनगर से आने वाले समस्त वाहनों को बैरागी कैम्प एवं हरिराम इण्टर कालेज व बिजनौर की तरफ से आने वाले वाहनों को नीलधारा/गौरीशंकर पार्किंग में पार्क करवाया गया जिससे शहर में अनावश्यक वाहनों का प्रवेश

- कांवड मेले के दौरान जनपद की समस्त पार्किंग का प्रयोग सुनियोजित तरीके से किया जिसके तहत् सर्वप्रथम बैरागी कैम्प पार्किंग को उसके बाद नीलधारा, रोडीबेलवाला, पंत पार्किंग, चमगादड टापू में पार्किंग करवायी गयी है।
- पैदल काँवडियों की वापसी नहर पटरी से कराई गई। नहर पटरी पर दिशासूचक ब पी0ए0सिस्टम एवं प्रोत्साहन सम्बन्धी व्यापक प्रचार–प्रसार कराया गया।
- हरकी पैडी से जल भरकर वापस जाने वाले पैदल काँवडियों को अलकनन्दा तिराहे की ओ नहीं जाने दिया गया, बल्कि रोडीबेलवाला रैम्प निकट चण्डीघाट टैक्सी यूनियन के पास बिरला घाट पुल की ओर डायवर्ट कर रेलवे स्टेशन रोड, तुलसी चौक, डामकोठी पुल होते नहर पटरी की ओर भेजा गया।
- प्रत्येक डायवर्जन प्वाइंट पर पब्लिक ऐड्रेस सिस्टम स्थापित किया गया। काँवडियों/पुलिस ब की सुविधा के दृष्टिगत इन प्वाइंटों पर टैन्ट की व्यवस्था की गयी।
- सम्पूर्ण जनपद में राष्ट्रीय राजमार्ग/नहर पटरी पर **28 मोटर साईकिल** मोबाईल लगाई गई।
- कांवड मेला के मध्य में पवित्र रमजान माह पडने के कारण शान्ति/सौहार्द बनाये रखने हे जनपद के मुस्लिम पुलिस अधि0/कर्म0गण को विभिन्न मस्जिद/मजार/मदरसों पर स वस्त्रों में नियुक्त किया गया।
- इस वर्ष सिडकुल की कम्पनियों से 100 गार्ड प्राप्त कर यातायात व्यवस्था हेतु लगाये गये।
- राष्ट्रीय राजमार्ग एवं अन्य मार्गों के किनारे जहां पूर्व वर्षो में कांवडियों के वाहन खडे होने यातायात बाधित होता था ऐसे स्थानों को चिन्हित कर वहां इस प्रकार नालियां खुदवाई गई कि कोई भी वाहन सडक के किनारे खडा न हो सके।
- हरकी पैडी व आसपास के क्षेत्र के निवासियों हेतु हाथी पुल के समीप दोपहिया वाहन पार्किंग की व्यवस्था की गई ताकि हरकी पैडी क्षेत्र में वाहनों का अनावश्यक प्रवेश न हो सके।
- कांवड मेले के अन्तिम चरण में रोडवेज की सभी बसें ऋषिकुल मैदान से संचालित होने के कारण बस अड्डे को दुपहिया वाहनों की पार्किंग हेतु प्रयुक्त किया गया।

कांवड मेले के दौरान पुलिस के समक्ष आयी समस्यायें :–

- कांवड मेले के दौरान दिल्ली, मेरठ ,मु0नगर एवं सहारनपुर की ओर से आने वाले समस्त वाहनों को रूडकी से लक्सर की ओर मार्ग परिवर्तित कर कनखल से शंकराचार्य चौक होते हुये बैरागी कैम्प में पार्क कराया गया। अधिकतर कांवडियों का हरिद्वार में प्रवेश उपरोक्त मार्ग से होता है परन्तु बैरागी कैम्प पार्किंग में प्रवेश व निकास मार्ग एक ही होने के कारण कांवड मेले के अन्तिम दिवस में राष्ट्रीय राजमार्ग में जाम की स्थिति उत्पन्न हो गई थी।
- पार्किंगो को आपस में जोडने वाले पुलों का निर्माण न होने के कारण बैरागी कैम्प एवं निकटतम पार्किंग का पूरा प्रयोग नहीं हो पा रहा है।
- यद्यपि नहर पटरी एवं पार्किंग में जल/प्रकाश की उचित व्यवस्था की गयी थी, लेकिन बैरागी कैम्प पार्किंग, हरिराम इन्टर कालेज पार्किंग कनखल, चमगादड टापू पार्किंग एवं नहर पटरी पर कुछ स्थानों पर और अधिक कृत्रिम प्रकाश की आवश्यकता प्रतीत हुई।
- कांवड मेले के दौरान दोपहिया वाहनों की संख्या में प्रतिवर्ष वृद्वि हो रही है प्रत्येक दोपहिया वाहन सवार कावडियें मो0सा0 सहित हरकी पैडी क्षेत्र में प्रवेश के इच्छुक रहते हैं इस स्थिति में दोपहिया वाहनों की पार्किंग हेतु समुचित व्यवस्था न होने के कारण सीसीआर, रोडीबेलवाला क्षेत्र में कांवडियों द्वारा दोपहिया वाहन अव्यवस्थित रूप से खडे कर दिये जाते है।
- कांवड मेले के अन्तिम चरण में दिनांक 23.07.2014 से वाहनों का पुहाना से पूर्ण रूप से मार्ग परिवर्तित नहीं हो पाया था।

भविष्य के लिये सुझाव :–

- इस वर्ष अधिकांश वाहनों की पार्किंग हेतु बैरागी कैम्प पार्किंग का प्रयोग किया गया जिससे जाम की स्थिति उत्पन्न नहीं हुई एवंयातायात सुचारू रहा परन्तु बैरागी कैम्प में वाहनो के आने व जाने का एक ही मार्ग होने के कारण यातायात संचलन प्रभावित होता रहा। **उक्त समस्या के समाधान हेतु निम्न उपाय किये जाने नितान्त आवश्यक है।**

  1. श्रीयंत्र टापू के पास अस्थायी पुल (घराटों वाला पुल) को स्थायी किया जाना।
  2. बैरागी कैम्प पार्किंग एवं घराटों वाली पार्किंग को जोडने हेतु एक छोटे पुल का निर्माण।
  3. बैरागी कैम्प पार्किंग एवं नीलधारा/गौरीशंकर पार्किंग को जोडने हेतु बडे पुल का निर्माण किया जाय जिससे दिल्ली, मेरठ की ओर जाने वाले वाहनों को वाया बिजनौर भेजने में आसानी होगी एवं वाहनों का अनावश्यक दबाब चण्डीपुल पर नहीं पडेगा व हरिद्वार–दिल्ली राजमार्ग पर जाम/दबाब नहीं बढेगा।

- वाहनों की व्यवस्थित पार्किंग हेतु बैरागी कैम्प पार्किंग व अन्य पार्किंगों को योजनाबद्व रूप से समतल किये जाने व सभी पार्किंगों में मूलभूत सुविधायें जैसे बिजली , पानी ,शौचालय आदि की व्यवस्था किया जाना आवश्यक है।

- कांवड मेला के दौरान प्रतिवर्ष बडे/छोटे वाहनों की संख्या में अत्याधिक वृद्वि हो रही है जिस हेतु जनपद हरिद्वार में स्थित सभी राष्ट्रीय राजमार्गो का चौडीकरण व फोरलेन किया जाना नितान्त आवश्यक है।

- भगत सिंह चौक के पास स्थित टिबडी पार्किंग, पुल जटवाडा के समीप स्थित स्थान पर, रोडीबेलवाला चौकी के सामने स्थित आनन्द वन समाधि में खाली पडी भूमि पर बहुमंजिला पार्किंग का निर्माण किया जाय।

- वर्तमान में प्रयोग किये जा रहे बस स्टेशन को ऋषिकुल मैदान में स्थानान्तरित कर उक्त भूमि पर बहुमंजिला वाहन पार्किंग का निर्माण कर इसका प्रयोग किया जाय।

- भगत सिंह चौक से मेला अस्पताल होते हुये ब्रहमपुरी तिराहे तक सडक चौडीकरण की आवश्यकता है जिससे हिलबाईपास से आने वाले वाहनों की निकासी सुचारू रूप से हो सके साथ ही ब्रहमपुरी तिराहा एवं गुरूद्वारे के पास से एक फ्लाईओवर का निर्माण ललतारौ पुल तक किया जाये जिससे चण्डीघाट चौक की ओर जाने वाला यातायात सुचारू रूप से चल सके।

- ललतारौ पुल के नीचे दोनो तरफ स्थित घाटो को जोडने हेतु पुल के नीचे कोई मार्ग नहीं है जिससे श्रद्वालुगण एक घाट से दूसरे घाट की ओर जाने हेतु सीढी मार्ग से ललतारौ पुल के पास उपर सडक पर आ जाते है जिस कारण किसी भी प्रकार की दुर्घटना की सम्भावना बनी रहती है इस समस्या के समाधान हेतु ललतारौ पुल के नीचे दोनो घाटो को जोडने हेतु स्थायी मार्ग के निर्माण की आवश्यकता है।

- चीला मार्ग पर पडने वाले बरसाती नाले पर स्थायी पुल निर्माण की आवश्यकता है।

- मेले से पूर्व ही हिल बाईपास मार्ग की पूर्ण मरम्मत कर कांवड मेला के दौरान प्रयोग में लाय जाय। संज्ञान में आया है कि हिलबाईपास सडक का निर्माण पूर्व में लोनिवि द्वारा किया गया थ परन्तु राजा जी नेशनल पार्क के नोटिफिकेशन के समय उक्त मार्ग की सम्बन्धित विभाग द्वार सही पैरवी न करने के कारण केन्द्र सरकार/मान0 उच्चतम न्यायालय द्वारा उक्त मार्ग क अधिकार राजा जी नेशनल पार्क को दे दिया गया जिस कारण मार्ग के दोनो ओर राजा जी नेशनल पार्क द्वारा अपनी चौकियों का निर्माण किया गया है। उक्त मार्ग के राजा जी नेशनल पार्क के अधिकार क्षेत्र में होने के कारण इसकी मरम्मत करने में काफी समस्यायें आती है। भविष्य में इस सम्बन्ध में सही पैरवी कर इस मार्ग को राजा जी नेशनल पार्क के अधिकार क्षेत्र से पृथक कर पुनः लोनिवि को हस्तगत किया जाना आवश्यक है जिससे मेला/पर्व आदि मे इसका प्रयोग किया जा सके।

- कांवड मेला ड्यूटी हेतु मांग के अनुरूप पर्याप्त पुलिस बल उपलब्ध करवाया जाय ताकि कांवड मेला के दौरान सुदृढ पुलिस प्रबन्ध किये जा सके।

- भविष्य में कांवड मेला ड्यूटी हेतु गैरजनपद से प्राप्त होने वाले अधिकारी/कर्म0गण की नामवार सूची मेला प्रारम्भ होने से 01 सप्ताह पूर्व ही उपलब्ध करा दिये जायें ताकि पुलिस व्यवस्थायें समय से पूर्ण की जा सके।

- कांवड मेला ड्यूटी हेतु गैर जनपद से साफ छवि वाले पुलिस कर्मियों को ही ड्यूटी हेतु भेजा जाये।

- कॉवड मेला की तैयारी हेतु प्रशासन की बैठक कॉवड मेला शुरू होने से लगभग 04 माह पूर्व हो जानी आवश्यक है, जिससे समय से नहर पटरी व नहर पटरी पर अन्य व्यवस्थायें समय से पूर्ण करायी जा सकें, क्योकि अन्तिम चरण में विभिन्न विभागों द्वारा बरसात होना/बजट की समस्या होना आदि समस्याओं से अवगत कराया जाता है।

- स्थानीय व्यक्तियों के द्वारा जो काँवड बनायी जाती है उसका आकार, ऊँचाई तथा चौड़ाई निर्धारित किये जाने हेतु सम्बन्धित थाना प्रभारियों/जोनल अधिकारी/सैक्टर अधिकारी द्वारा उच्चाधिकारियों के आदेशों का अनुपालन शत–प्रतिशत कराया जाना आवश्यक है।

- नहर पटरी पर भविष्य में जल/प्रकाश की समुचित व्यवस्थाओं के साथ ही पटरी के दोनों ओर प्लांटेशन कराया जाये, ताकि काँवडियों को छाया मिल सके।

- नहर पटरी पर कई स्थानों पर कॉवडियें रैलिंग के छोटे होने के कारण रैलिंग को फॉद कर मुख्य मार्ग पर आ जाते है जिससे मुख्य मार्ग पर यातायात के चलने के कारण सड़क दुर्घटना की काफी सम्भावना बनी रही, जिस हेतु भविष्य में नहर पटरी के किनारे बनी रैलिंग को और अधिक ऊँचा किये जाने की आवश्यकता है।

- अत्यधिक बरसात होने के कारण नहर पटरी जगह–2 से क्षतिग्रस्त हो जा रही थी। भविष्य में इस समस्या का समय रहते निदान किया जाना आवश्यक है।

- रानीपुर झाल, गणेशपुर पुल एवं मंगलौर नहर पुल पर काँवडिये राष्ट्रीय राजमार्ग पर आ जाते हैं। इस स्थिति से बचने के लिए इस स्थान पर ब्रिज/ओवर ब्रिज का निर्माण किया जाना

- नहर पटरी पर लगे पुलिस बल की सुविधा के दृष्टिगत टीनशेड/टैंट एवं जल/प्रकाश/अस्थायी शौचालय/खोये कांवडियों की सूचना प्रसारण हेतु पब्लिक एड्रेस सिस्टम की समुचित व्यवस्थाऐं किया जाना आवश्यक है।

- बैरागी कैम्प पार्किंग में 04 वॉच टॉवर बनाये जाने की आवश्यकता है।

- प्रतिवर्ष बढती श्रद्वालुओं एवं उनके वाहनों की संख्या के दृष्टिगत दीनदयाल/धोबीघाट पार्किंग को पांचमजिला पार्किंग एवं उक्त पार्किंग के निकट खाली पडी भूमि को पार्किंग के रूप में विकसित किया जाना आवश्यक है।

- इस वर्ष जिला प्रशासन द्वारा चमगादड टापू पार्किंग का आवंटन ठेकेदार को दिनांक 25.07.2014 (जलाभिषेक दिवस) तक के लिए बिना पुलिस की राय/एनओसी प्राप्त कर किया गया। जबकि पूर्व वर्षो में उक्त आवंटन कांवड मेला प्रारम्भ होने के मात्र 04 अथवा 05 दिन के लिए होता था। इस वर्ष कांवड मेले के अन्तिम चरण में श्रद्वालुओं की अत्याधिक भीड को दृष्टिगत रखते हुये पुलिस द्वारा उक्त पार्किंग स्थल को श्रद्वालुओं एवं उनके वाहनों को पार्क किये जाने हेतु खाली करने का प्रयास किया गया तो सम्बन्धित ठेकेदार द्वारा मान0 उच्च न्यायालय उत्तराखण्ड में एक रिट जनपद पुलिस के विरूद्व दायर कर दी गई थी। जिस कारण उक्त पार्किंग स्थल का प्रयोग कांवड मेले के दौरान श्रद्वालुओ के वाहनों को पार्क करने में नही किया जा सका तथा अत्याधिक कठिनाई का सामना करना पडा।

- भविष्य में मेला क्षेत्र में स्थित सभी पार्किंगो के ठेके कांवड मेले से 02 माह पूर्व पुलिस की राय एवं एनओसी प्राप्त कर आवंटित कर दिये जायें तथा ठेके देते समय पार्किंग में पेयजल, शौचालय एवं सफाई सहित सभी शर्तों का स्पष्ट रूप से उल्लेख किया जाय।

- चमगादड टापू, सर्वानन्द घाट, बैरागी कैम्प पार्किंग में वर्षा होने के कारण जल भराव की स्थिति उत्पन्न हो जाती है । अत: सभी पार्किंग स्थलों से जलनिकासी हेतु समुचित व्यवस्था किये जाने की आवश्यकता है।

- हरकी पैडी एवं आस-पास के क्षेत्र के स्थानीय निवासियों हेतु जूना अखाडा के निकट, भूरे की खोल, सूखी नदी के पास दोपहिया वाहन पार्किंग की व्यवस्था किये जाने की आवश्यकता है।

हरिद्वार में होने वाले कुम्भ एवं अन्य मेलों के दौरान मंशा देवी जाने वाले श्रद्धालुओं की अपर रोड सहित रतन टॉकीज मोड पर काफी भीड जमा हो जाती है एवं चण्डी देवी जाने वाले श्रद्धालुओं की भीड के कारण ललताराव पुल, चण्डीघाट चौक पर यातायात काफी प्रभावित होता है, जिस कारण निरन्तर किसी भी दुर्घटना की सम्भावना बनी रहती है। यदि वर्तमान में संचालित हो रहे मंशा देवी एवं चण्डी देवी रोपवे को आपस में किसी माध्यम से जोडकर एक किया जा सके तो उक्त समस्या का समाधान हो सकता है।

कांवड मेला की व्यवस्थाओं हेतु अलग से जनपद हरिद्वार पुलिस को शासन से अनुदान दिये जाने की आवश्यकता है।

2.8.14

पुलिस अधीक्षक नगर/

Consultation with Traders Association (Registered)

Consultation with Ganga Maha sabha(Registered NGO)

Consultations with Health Service providers -Along the proposed Stretch

Photographs of Kanwar Movements along the proposed Stretch

Movement of Kawar –Along the proposed Stretch

Movement of Kawar –Along the proposed Stretch

Movement of Kawar –Along the proposed Stretch

Annexure- 10

Sample Grievance Redress Form

(To be available in Local Language and English)

The _____Project welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback. Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing *(CONFIDENTIAL)* above your name. Thank you.

Date		**Place of registration**			
Contact Information/Personal Details					
Name		**Gender**	* Male * Female	**Age**	
Home Address					
Place					
Phone no.					
E-mail					
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below: If included as attachment/note/letter, please tick here:					
How do you want us to reach you for feedback or update on your comment/grievance?					

FOR OFFICIAL USE ONLY

Registered by: (Name of Official registering grievance)	
Mode of communication: Note/Letter E-mail Verbal/Telephonic	
Reviewed by: (Names/Positions of Official(s) reviewing grievance)	
Action Taken:	
Whether Action Taken Disclosed:	Yes No
Means of Disclosure:	