



Initial Environment Examination

Project Number: 40648-034
May 2015

IND: Infrastructure Development Investment Program for Tourism - Tranche 3

Submitted by

Program Management Unit, Government of Uttarakhand, Dehrdaun

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Asian Development Bank



Govt. of Uttarakhand

Program Management Unit
Infrastructure Development Investment Program for Tourism
(ADB Assisted – Loan No. 2833, India)
Government of Uttarakhand
Pandit Deendyal Upadhaya Paryatan Bhawan,
Near ONGC Helipad Garhi Cantt, Dehradun -248003
Tel: 91-135-2559987, Fax: 91-135-2559988 E-mail: utdb.pmu@gmail.com



Ref: 2464/2-10-ADB IDIPT/249/2014-15

Date: 29.04.2015

To

Country Director,
Indian Resident Mission (INRM),
Plot no -4, San Martin Marg, Chanakyapuri,
New Delhi 110021, PB No-53311 (HPO)

**Sub: IDIPT UK Tranche III: Submission of IEE document for “Creation of Pedestrian Route for
• Pilgrims and Tourists in Haridwar “sub project**

Ref: IEE (based on SAR) submitted vide letter no. 1656/2-10-ADB IDIPT/249/2014-15 dt. 24.09.14 and updated IEE submission (based on DPR) vide letter no. 2040/2-10-ADB IDIPT/249/2014-15 dt. 22.01.15

Respected Madam,

Kindly refer to the IEE document for “**Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar**” sub project, contract Package No. UK/IDIPT-III/KOT/01 (based on DPR) submitted vide this office letter dt. 22.01.15 and ADB’s observations on the same communicated vide mail dt. 29.01.15 and mail dt. 05.02.15.

IEE document along with comments compliance matrix is enclosed for your kind perusal and approval.

Encl.: - As above

Yours Sincerely

(R.K. Joshi)
Additional Program Director

Comments Response Matrix

ADB Comments	Response
<p>ADB observation dt. 29.01.15</p> <p>“Please Clarify how the IEE was revised to facilitate ADB review and approval. If the IEE was revised in response to ADB comments, please submit a comments response matrix. If revised for another reason, please clarify”</p>	<p>Submitted vide mail dt. 05.02.15</p> <p>In response to your observations on the revised IEE and RP documents of Tranche 3, we wish to inform that the draft documents based on SARs were submitted during finalization of loan for tranche 3, which are being updated/ revised based on the project specific DPRs.</p> <p>While developing the DPR the issues related to land availability, duplicity of projects in proposed area, Operation & Maintenance issues, future sustainability considerations and NOCs for land etc were dealt in depth, resulting in some deviation from the earlier submitted documents.</p>
<p>ADB observation dt. 05.02.15</p> <p>“Thank you for your email. However please submit a comments response matrix to ADB’s observations for each of the IEEs and RPs. Revision to documents should be clearly highlighted or made in track changes to facilitate ADB review and approval. The point is to understand the changes to what was earlier reviewed. Thank you for your understanding.”</p>	<p>Submitted herewith</p> <p>Comments response matrix prepared and enclosed herewith.</p>

Changes in IEE Reports between SAR and DPR Stage

S. No.	Details in IEE (SAR Stage)	Corresponding Details in IEE (DPR Stage)	Remarks
1	Page no. 6: Sub Project Scope.	Page no. 6: Sub Project Scope.	There have been some changes in sub project scope due to more consultation with stakeholders including District Authorities, Line agencies. Scope has been curtailed in the DPR.
2	Page no. 13: Components of the Sub Project. Total length of pedestrian pathway to be developed was 11.33 km and Lighting or illumination arrangement was proposed on the pedestrian pathway of 11.33 km.	Page no. 13: Components of the Sub Project. Total length of pedestrian pathway to be developed is 6.5 km (5.5 km at Haridwar and 1 km at Roorkee) and lighting or illumination arrangement is now proposed on the pedestrian pathway of 6.5 km.	Minor changes in the scope
3	Page no. 16: Project Location and layout.	Page no. 16: Project Location and layout.	-do-
4	Page no. 17: Proposed Project Implementation Schedule.	Page no. 17: Proposed Project Implementation Schedule.	In the DPR stage, project implementation period has been kept as 24 months.
5	Page 79: Monitoring Plan for Kanwar Patri Sub Project.	Page 78: Monitoring Plan for Kanwar Patri Sub Project.	The change is due to minor changes in scope of works.
6	Page no. 104: Site Photographs and Correspondence documents (Annex 4 page 105)	Page 107: Site photographs and Correspondence documents (Annex 4 page 108)	Updated photographs attached. NOCs and consultation documents have also been updated

Environmental Assessment Document

Initial Environmental Examination (IEE)

Loan no: 3223 IND

Package No: UK/IDIPT-III/KOT/01

April 2015

**Infrastructure Development Investment Programme for Tourism,
Uttarakhand**

**Sub Project - Creation of Pedestrian Route for Pilgrims and Tourists in
Haridwar**

TRANCHE III

Prepared by the Government of Uttarakhand for the Asian Development Bank

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

ABBREVIATIONS

ADB	-	Asian Development Bank
ASI	-	Archaeological Survey of India
CPCB	-	Central Pollution Control Board
CPR	-	Common property resources
DOT	-	Department of Tourism
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

CURRENCY EQUIVALENTS

(as of 2nd September 2014)

Currency unit – Indian rupee (Rs)

Rs1.00 = \$0.0164

\$1.00 = Rs 61.00

WEIGHTS AND MEASURES

dB (A) A-weighted decibel

ha - hectare

km - kilometer

km²- square kilometer

µg - microgram

m - meter

m²- square meter

MW (megawatt) - megawatt

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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 titled '**Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar**' is being taken up to regulate movement of Kanwaris 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, signages, handrails on canal side, foot over bridges, 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 Kanwaris and there will be proper regulation of movement within the Haridwar city. Approximate length of Route to be developed is 6.5 km (5.5 km pedestrian route at Haridwar and 1 km at Roorkee). 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 over railway track 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 SO₂ and NO_x 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 6.5 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 Kanwaris 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.

1. INTRODUCTION

1.1 Project Background

16. 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).

17. 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, gives 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 sub project has been conceived and planned with an intention to provide better tourist facilities along Haridwar, Roorkee Manglour route, safe passage and not to close NH-58 during Kanwar Mela by developing Kanwar Patri along the bank of Upper Ganga canal.

18. 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.

19. 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.

1.2 Purpose of the IEE

20. 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.

1.3 Extent of the IEE

21. 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**.

1.3.1 ADB Policy

22. 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.

1.3.2 National Law

23. 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 into 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
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. <i>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</i>
ADB Safeguard Policy Statement, (2009)	Sub-project is Category B as no significant impacts are envisaged

24. **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.

1.3.3 Review and Approval Procedure

25. 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.

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

1.4 Scope of Study

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

1.5 Structure of Report

28. 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.

2. DESCRIPTION OF THE PROJECT COMPONENTS

2.1 Components of the Subproject

29. 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 Jathwara Bridge and from near Solani park to Mewar bridge at Roorkee town. Total length of pedestrian pathway to be developed is 6.5 km (5.5 km at Haridwar and 1 km at Roorkee). The entire stretch of 6.5 km length (from near Mayapur Regulator to Jathwara bridge and Solani Park to Mewar bridge), the existing Kanwar Patri will be developed to a pedestrian pathway.
- Landscaping, sitting arrangements, murals, etc. on the proposed pedestrian route.
- Providing lighting or illumination arrangement on the proposed pedestrian route of 6.5 km.
- Providing safety hand railing on the pedestrian route on canal side.
- Providing solid waste bins on the side of proposed pedestrian route.
- Providing a toilet complex and drinking water facility on side of the proposed pedestrian route 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 (NH 58) at Manglour Cross.
- Installation of tourist Signages (Direction Markers) 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(Direction Markers) works is 42 km.

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

2.1.1 Location 1 -Near Shankaracharya Chowk

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

- Toilet complex.
- Drinking water facilities
- Railing on eitherside of pedestrian route
- Landscaping
- Total area proposed to be utilised at this location is 80 sqm.

2.1.2 Location 2 - Before Railway Bridge

32. The proposed facilities before Railway Bridge at Jwalapur 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
- The total area proposed to be utilised at this location for the proposed facilities is 3500 sqm.

2.1.3 Location 3 - Rail Line Crossing near Jawalapur

33. 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.

2.1.4 Location 4 - Intersection of NH-58 and Kanwar Patri (Manglour Cross)

34. 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.

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

36. **Annexure 3** shows site photographs of all four locations mentioned above.

37.

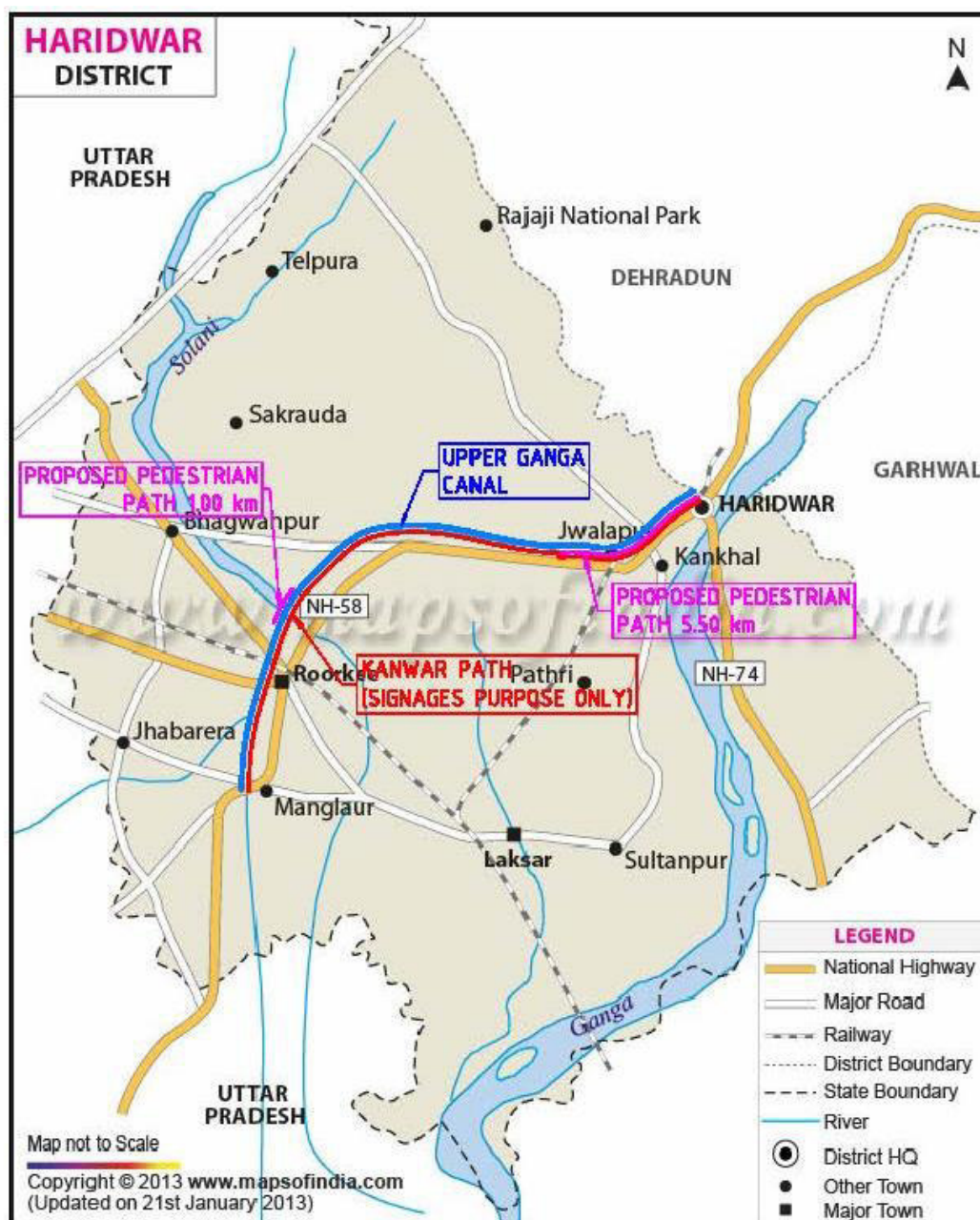


Figure-1: Haridwar District Map with Kanwar Route (Pedestrian Route and Signage Portion) in Uttarakhand

2.2 Need for the Project

38. At present, Kanwaris 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.

2.3 Project Category

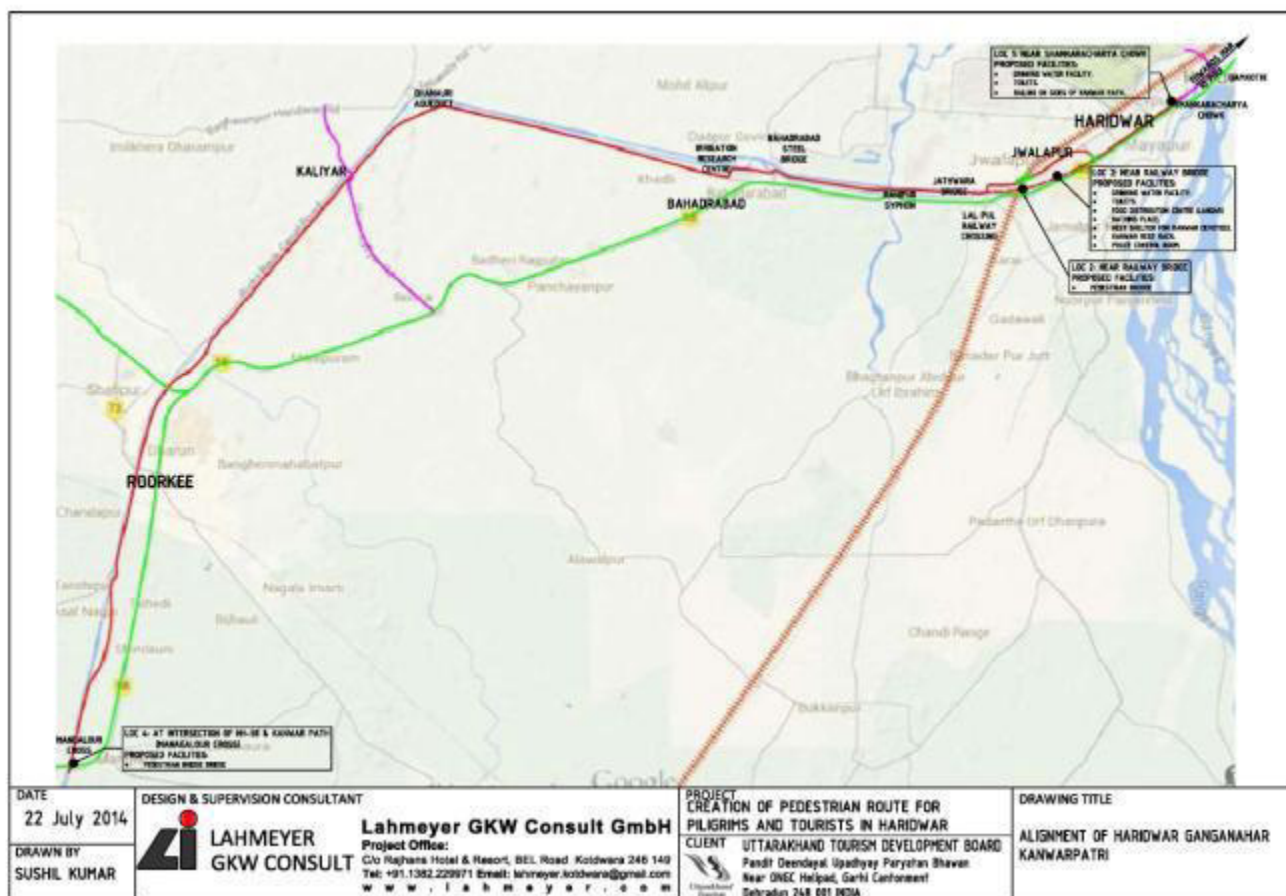
39. This is a tourism infrastructure development sub-project, and as explained above it has been classified by ADB as Category B, because it is not expected to have major negative environmental impacts. Under ADB procedures such projects require an IEE to identify and mitigate the impacts, and to determine 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.

2.4 Project Location and Layout

40. Sub project is located in Haridwar district of Uttarakhand. The length of the pedestrian route to be developed is 6.5km. In the balance length till Manglour cross signages (Direction Markers) will be provided. The Kanwar Path till Manglour cross with NH-58 has been shown on map in **Figure-2**.

41. Communication related to land ownership and NOCs for works is enclosed in **Annexure 4**.

Figure 2: Kanwar Route within Uttarakhand State



2.5 Proposed Project Implementation Schedule

42. The implementation period for the proposed subproject is 24 months. The detailed design of sub project has been completed. The bidding process for the project started in January 2015 and work will be awarded by the end of May 2015, and work will be completed by 2017.

3. DESCRIPTION OF THE EXISTING ENVIRONMENT

43. 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.

3.1 Physical Resources

3.1.1 Air and Noise Quality

44. 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 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	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,
 SO_x – sulfur oxides, NO_x – 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)

45. 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

46. 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.

3.1.2 Climate

47. 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.

48. 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.

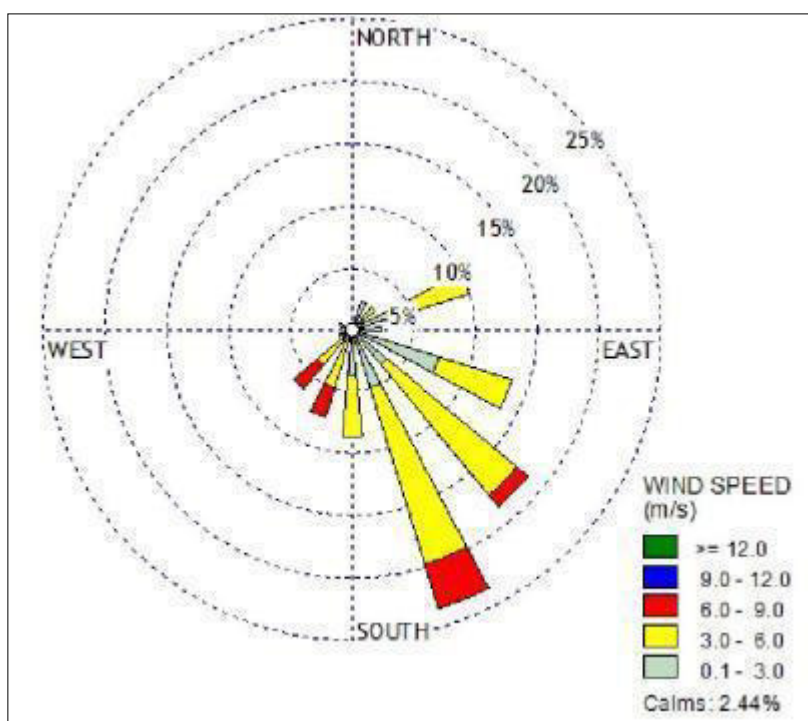
49. The nearest IMD observatory is at Roorkee. The data of this observatory has been referred as project alignment (for signages installation) passes through Roorkee. After February there is steady increase of temperature. May is generally the hottest month with the mean daily maximum temperature at about 40°C and mean daily minimum at about 20°C. 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°C 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°C and the mean daily minimum at about 8°C. 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**.

50. 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.

51. 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.

52. 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



53. 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: Climate Logical Conditions at Haridwar

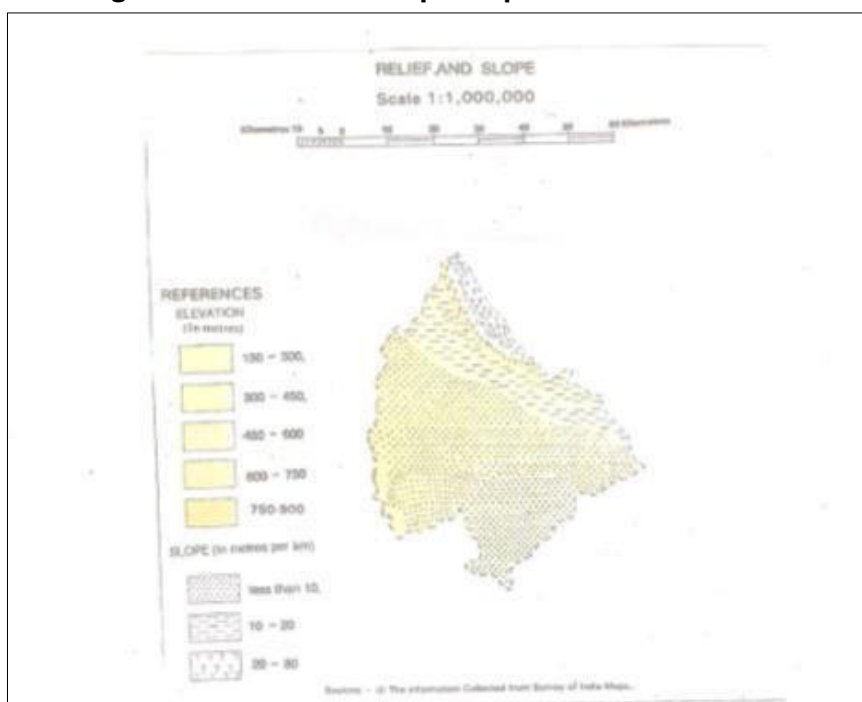
Months	Temperature			Precipitation
	Normal	Warmest	Coldest	Normal (cm)
January	6.4°C	11.6°C	1.1°C	4
February	7.1°C	12.3°C	1.7°C	5
March	10.9°C	16.6°C	5.1°C	6
April	15.4°C	21.5°C	9.3°C	4
May	17.7°C	23.7°C	11.7°C	7
June	18.3°C	23.4°C	13.1°C	11
July	17.2°C	21.1°C	13.4°C	18
August	16.9°C	20.5°C	13.2°C	18
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

3.1.3 Topography and Soils

54. 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



55. 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, micro organisms 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.

56. 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	Yellowish	Sandy loam (sand-66% Silt-	46.40	1.49	41.20

	site		16% Clay-18%)			
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)

3.1.4 Surface Water and Ground Water

57. 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
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 °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)	Bahadarabad 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°C	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 °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)

58. 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 Faecal 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.

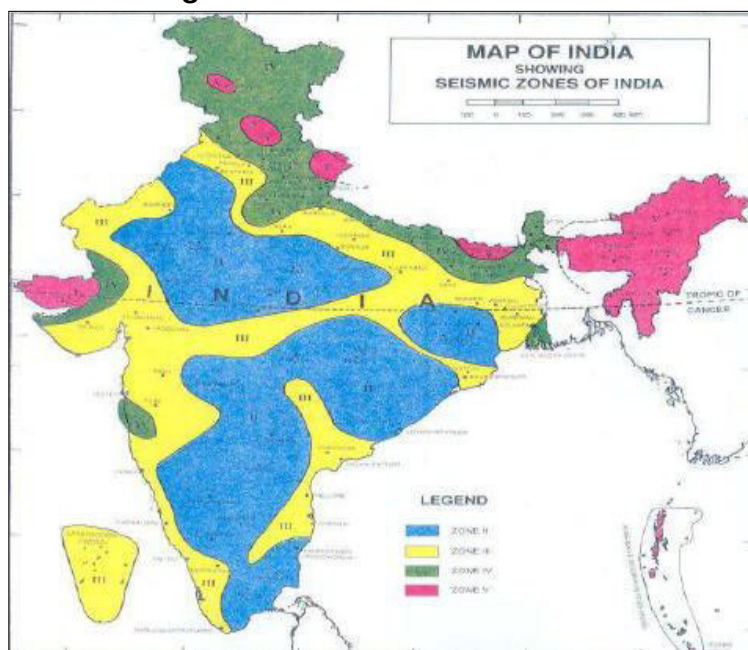
3.1.5 Geology / Seismology

59. 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 convergence 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.

60. 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.

61. 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-5**.

Figure 5: Seismic zones of India



3.2 Ecological Resources

3.2.1 Forests

62. 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.

63. 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-6.

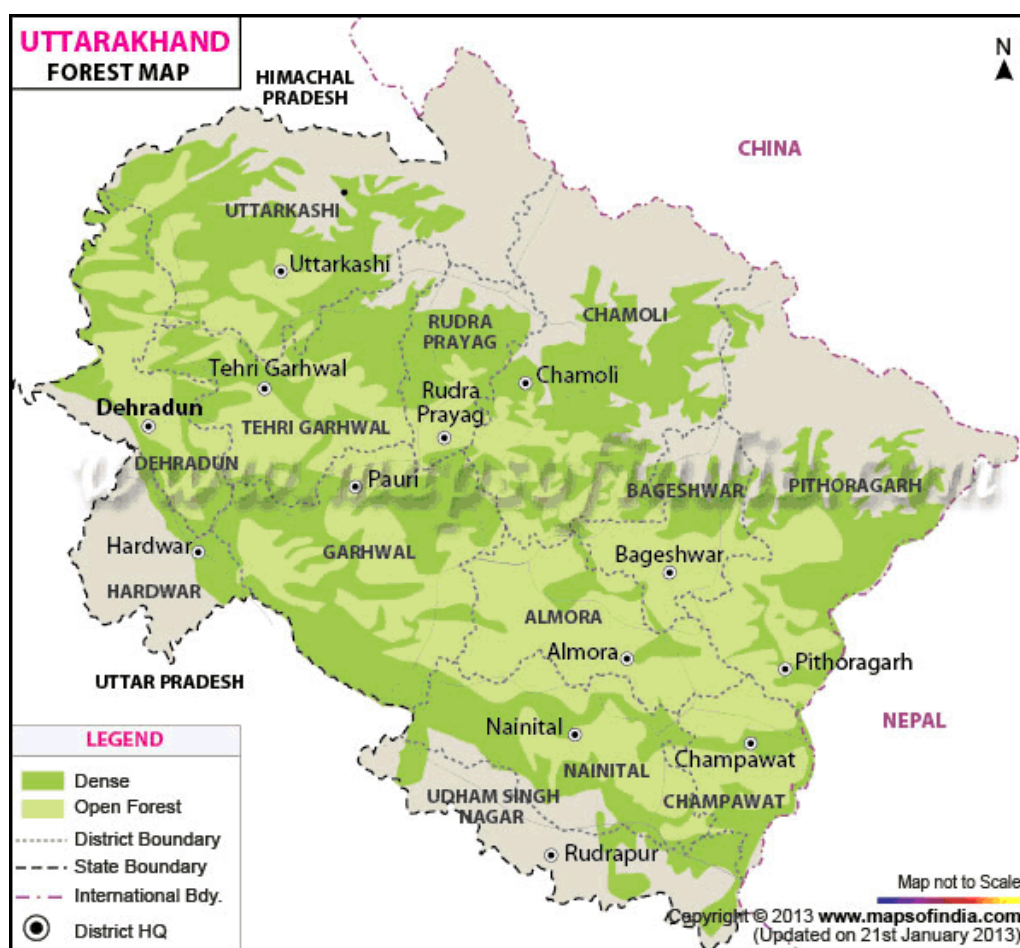


Figure-6: Forest Cover Map of Uttarakhand

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

3.2.2 Wildlife

64. 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.

65. 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.

66. 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 at Rajaji National Park

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

67. 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.

3.2.3 Protected Areas

68. 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

69. 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 km² 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 park 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).

3.2.4 Flora and Fauna in Study Area (Non Forest Areas)

70. The trees found in the non-forest area of study area are of dhak (*Butea monosperma*), conla (*Embllica 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.

71. 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*).

72. 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*).

3.3 Economic Resources

3.3.1 Industries

73. 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.

74. 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.

75. 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

3.3.2 Infrastructural Facilities

76. 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.

77. 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.

78. The health facilities in the form of Hospitals, Primary Health Centres 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.

3.3.3 Transportation

79. 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.

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

3.3.4 Landuse

81. 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.

82. 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.

83. **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

84. The land use map of Haridwar 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.

3.3.5 Power source

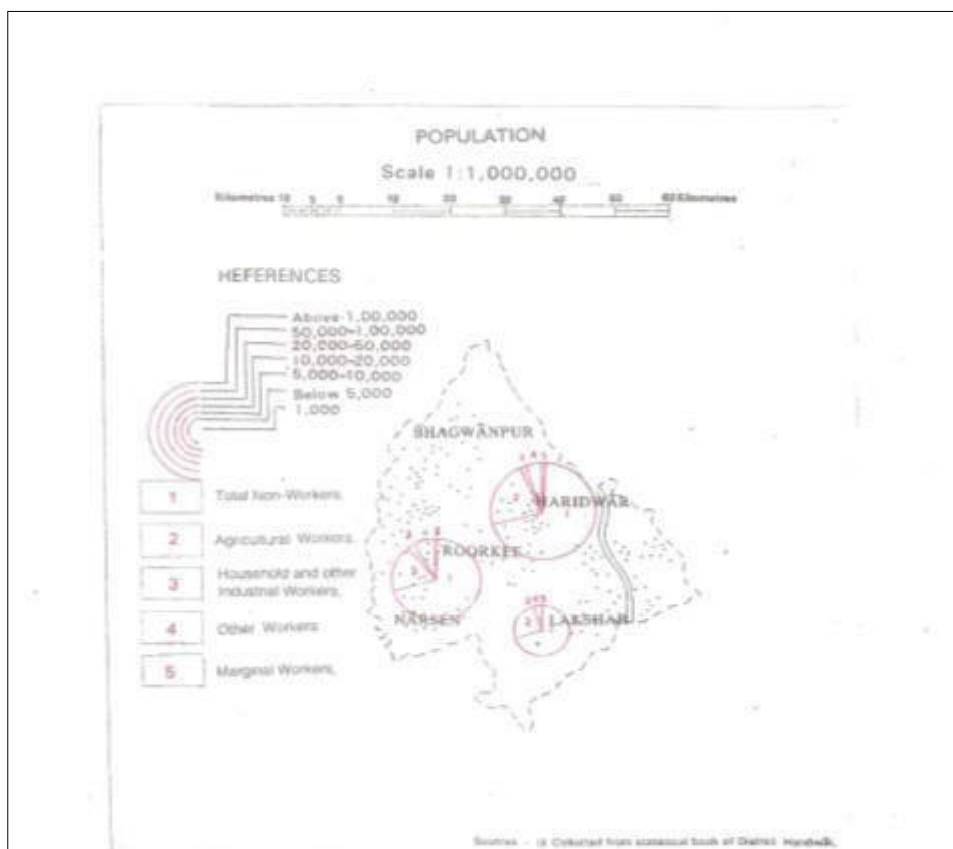
85. Uttarakhand has an estimated hydro power potential of 20,200 MW. However, only 1,130 MW has been tapped at present. Meanwhile, 4,170 MW projects are under implementation and 3,800 MW projects are allotted to Central, State, and private sectors.

3.4 Social and Cultural Resources

3.4.1 Population and Communities

86. 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 km², which is marginally higher than the Indian average of 403 per km². The population profile of the district has been shown in **Figure-7**.

Figure-7: Demographic Map of Haridwar District



87. 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%.

88. 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.

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

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

91. 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.

92. 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.

3.4.2 Health facilities

93. 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.

3.4.3 Education facilities

94. 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.

95. 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 Ayurvedic 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 Ayurvedic 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.

3.5 Social and Cultural Heritage

96. 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.

97. 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 Adhithatri 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.

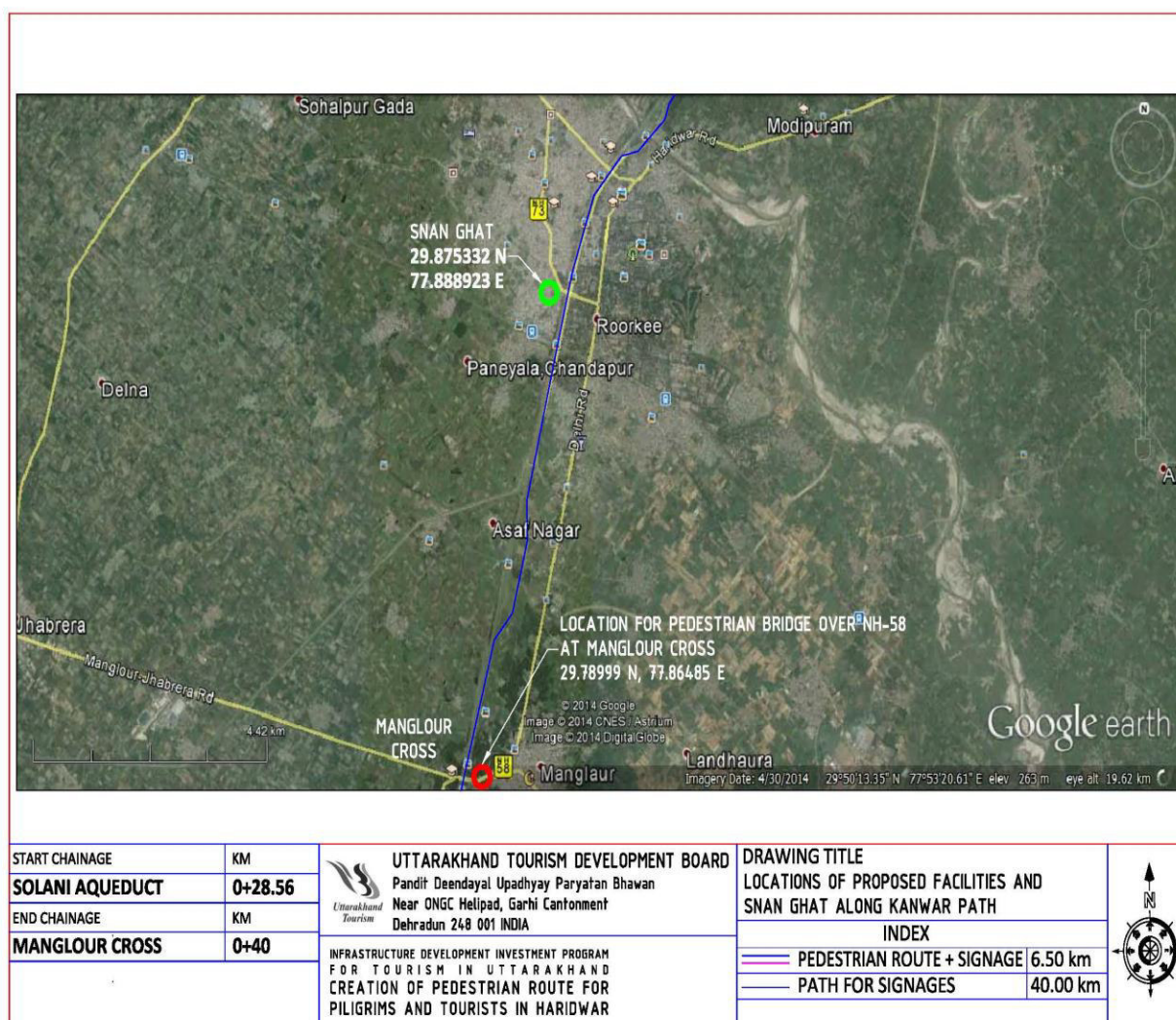
Ram Mandir: This Ram temple is under construction at Bhupatwala and would be the biggest in size in India.

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-8** below.

Figure-8 : Kanwar Patri Alignment showing Site Features



3.6 Archaeological Resources

98. 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.

4. POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 Summary of Potential Environmental Impacts

99. 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-economic and Cultural environment. The IEE helps to identify those negative impacts that are anticipated in the project under consideration and to suggest the mitigation measures to minimize the negative impacts. The assessment 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.

100. 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.

4.1.1 Location Impacts

101. 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.

102. 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 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 3900 m². This land belongs to Irrigation Dept., Government of Uttarakhand As the proposed subproject is to be developed on the land owned by the Government of Uttarakhand, there is no land acquisition or resettlement. There is no acquisition of properties, and tree cutting in the sub project. The pedestrian route is planned to be developed on the canal bank along the existing road.

103. 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 6.5 km. The subproject components will be constructed on existing right of way (ROW). As per DPR and transect walks conducted, the subproject will not result in any permanent impacts to common properties and residences. However it has been noted temporary structures (shops) and mobile vendors/hawkers are present along the Kanwar Patri route and encroaching the ROWs. Based on DPR, site visits, and transect walk and 100 percent census and socio-economic survey conducted, the subproject may cause the following resettlement impacts during civil works: (i) loss of structures due to demolition of 3 temporary shops; (ii) permanent loss of livelihood due to demolition of 3 shops; (iii) temporary loss of livelihood for 7 shops due to shifting; (iv) temporary loss of access/disruption of livelihood for 15 shops; and (v) temporary disruption of livelihood for 12 mobile hawkers. There are 3 women headed households who are considered as vulnerable. Overall impacts would be further minimized during final design and subproject implementation through careful siting and alignment.

104. 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.

4.1.2 Impacts during Design and Pre-Construction Phase

105. 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

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

4.1.3 Impacts during Construction Phase

107. 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.

108. 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.

109. 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, SO₂, CO, etc). However, transportation of construction materials will be confined to adequate trips per day depending upon extent of construction activity. Therefore, impact at this stage will be temporary and restricted to the close vicinity of the construction activities only.

110. 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.

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

112. 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 (6.5 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.

113. 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.

114. 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.

115. 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.

116. 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.

117. 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 Solani Park to Mewar 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.

4.1.4 Impacts during Operation Phase

118. 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.

119. 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. 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 about 6 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 supported from bore wells at site. Since planned facilities are spread over a distance of about 6 km and requirement is only for a maximum period of one month, that too in monsoons, no impact is anticipated on ground water availability.

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

121. 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. It is also regulated by District Authorities and Police. 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.

122. 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.

123. 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.

4.2 Description of Planned Mitigation Measures

124. 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	PIU / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				municipal authorities /district administration will take care of assets similar to Kumbh Mela Committee taking care of assets and facilities created for Kumbh Mela assets.	
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 and Lohe Ka Pul and sizes of structures are small.	PIU / DSC
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,	Permanent	Moderate	Design of proposed components will enable efficient drainage at locations of amenities and maintain natural drainage patterns. The Pedestrian route is planned along the bank of Upper Ganga canal and this has a properly laid drainage system.	PIU/DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
	and addition of paved surfaces at rest area locations				
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 have ensured 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 operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures. Pre-construction	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				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	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				from borrow areas (if needed for levelling of pedestrian route) to the construction sites. Vehicles transporting the material will be covered to 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	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				discarded fuel and lubricants will be stored in the drums and these will be sold to recyclers authorised by the state pollution control board.	
3.9	Siltation of water bodies due to spillage of construction wastes	Temporary	Moderate	Silt fencing to be provided 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 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.	Contractor / DSC
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	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				that pollution emission levels comply with the relevant requirements.	
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	<p>Workers employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles.</p> <p>Workers, who are engaged in welding works, will be provided with welder's protective eye-shields.</p> <p>Workers engaged in stone breaking activities will be provided with protective goggles and clothing.</p> <p>The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The Engineer will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor.</p>	Contractor / DSC
3.14	Disposal of Construction	Temporary	Moderate	Safe disposal of the construction waste will	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
	Waste / Debris / Cut Material			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.	
3.15	Safety Measures During Construction	Temporary	Moderate	<p>Adequate safety measures for workers during handling of materials at site will be taken up.</p> <p>The contractor has to comply with all regulations for the safety of workers, 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.</p> <p>The Contractor will conform to all anti-malaria instructions given to him by the Engineer.</p>	Contractor / DSC
3.16	Clearing of Construction Camps and Restoration	Temporary	Major	<p>Contractor to prepare site restoration plans for approval by the Engineer. The plan is to be implemented by the contractor prior to demobilization.</p> <p>On completion of the works, all temporary</p>	Contractor / DSC

Sl. No.	Potential Environmental Issues	Duration / Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				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
4.3	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 planned at both locations. Grey water treatment facilities planned for waste water from facilities and septic tank at both locations.	Tourism Department through Kanwar Mela Committee/

5. INSTITUTIONAL REQUIREMENTS AND ENVIRONMENT MONITORING PLAN

5.1 Institutional Arrangements

125. 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.

126. 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.

127. 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.

128. 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.

129. 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.

130. 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.

131. 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.

5.2 Environmental Management Plan

132. 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, Table-16 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 includes 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 Kumbh Mela Committee taking care of assets and facilities created for Kumbh 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 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
		aesthetics of the surroundings as these are planned on already 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 Haridwar and Roorkee	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

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	Integration of energy efficiency and energy conservation programs in design of sub-project components	The detailed designs for the sub-project components ensures that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, etc.	Specifications of electrical fittings, Renewable energy source provisions, waste minimization techniques during construction	PIU/DSC	PMU	Design phase (DPR finalisation stage)	DSC/PMC professional fee
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	Conduct documentation of location of components, areas for construction	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
	conditions prior to start of civil works	zone (camps, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates					
7	Utilities	<p>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.</p> <p>2-Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services.</p> <p>3-Obtain from the PIU and/or DSC the list of affected utilities and operators;</p> <p>4-If relocations are necessary; contractor will coordinate with the</p>	<p>List and maps showing utilities to be shifted</p> <p>Contingency plan for services disruption</p>	<p>- DSC will prepare preliminary list and maps of utilities to be shifted</p> <p>- During detailed design phase, contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan</p>	PIU/DSC	Pre-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
		providers to relocate the utility.					
8	Social and Cultural Resources	<p>1-Consult Archaeological Survey of India (ASI) or Uttarakhand State Archaeology Department to obtain an expert assessment of the archaeological potential of Pedestrian route.</p> <p>2-Consider alternatives if the site is found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available.</p> <p>3-Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to</p>	Chance find protocol	<p>- PMC to consult ASI or Uttarakhand State Archaeology Department</p> <p>- PMC to develop protocol for chance finds</p>	PMU	Prior to start of construction activities	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
		ensure they are protected and conserved.					
9	Construction Camps - Location, Selection, Design and Layout	<p>Siting of the construction camps shall be as per the guidelines below and details of layout to be approved by DSC.</p> <p>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 at Haridwar and Roorkee and planned locations of amenities to avoid impact on other land.</p> <p>Location for stockyards for construction materials</p>	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
		shall be identified either at Locations of 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	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
		approval from PIU. Submit to DSC on a monthly basis documentation of sources of materials.					
11	Access	<p>1- Prepare traffic management plan for the portion of canal bank under project influence (from start point to Jathwara Bridge and Solani Park to Mewar Bridge).</p> <p>2-Plan transportation routes (Traffic Management Plan) so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of sites.</p> <p>3-Schedule transport and hauling activities during non-peak hours.</p> <p>4-Locate entry and exit points in areas where there is low potential for</p>	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
		<p>traffic congestion.</p> <p>5-Keep the sites of infrastructure creation along the Pedestrian route free from all unnecessary obstructions.</p> <p>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.</p> <p>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</p>					

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
		<p>concerns/complaints.</p> <p>Provide free access to households along the alignments of raw and clear water transmission routes during the construction phase.</p>					
12	Occupational health and safety	<p>Comply with IFC EHS Guidelines on Occupational Health and Safety</p> <p>Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project.</p>	Health and safety (H&S) plan	Contractor	<p>PMU and PMC</p> <p>PIU and DSC</p>	To be included in updated IEE report after mobilisation of contractor	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
		<p>Include in H&S plan measures such as: (i) type of hazards in the intake wells site; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents.</p> <p>Provide medical insurance coverage for workers.</p>					
13	Public consultations	Continue information dissemination, consultations, and involvement/participation of stakeholders during project implementation.	<ul style="list-style-type: none"> - Disclosure records - Consultations 	PMU and PMC PIU and DSC Contractor	PMU and PMC	<ul style="list-style-type: none"> - During updating of IEE Report - During preparation of site- and activity-specific plans as per EMP - Prior to start of construction - During construction 	<p>PMU</p> <p>Contractor to allocate funds to support</p>

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 Pedestrian Route	<p>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.</p> <p>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</p> <p>All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures.</p>	Site clearance plan and demarcation of construction areas	Contractor	DSC / PIU	Construction sites delineation	Contractor

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	<p>The pre-identified disposal location shall be part of Comprehensive Waste Disposal Plan. Solid Waste Management Plan to be prepared by the Contractor in consultation and with approval of Environmental Specialist of DSC.</p> <p>The Environmental Specialist of DSC shall approve these disposal sites after conducting a joint inspection on the site with the Contractor.</p> <p>Contractor shall ensure that waste shall not be disposed off near any water course (upper Ganga canal or local streams close to Pedestrian Route alignment) or agricultural</p>	Waste Disposal sites, waste management plan	Contractor	DSC / PIU	Regularly during construction phase	Contractor

		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 ensured during transportation of borrow earth material from borrow areas to the construction site. Vehicles transporting the material will be covered to prevent spillage.	Consent of land owner, availability of earth at borrow site, transportation routes	Contractor	DSC / PIU	Regularly during construction phase	Contractor
6	Arrangement for Construction	The contractor shall use ground/surface water as a source of water for the	Identified sources of construction	Contractor	DSC / PIU	Regularly during construction phase	Contractor

	Water	<p>construction with the written consent from the concerned Department.</p> <p>To avoid disruption/disturbance to other water users, the Contractor shall extract water from fixed locations and consult DSC before finalizing the locations.</p> <p>The Contractor shall provide a list of locations and type of sources from where water for construction shall be extracted.</p> <p>The Contractor shall need to comply with the requirements of the State Ground Water Department for the extraction and seek their approval for doing so and submit copies of the permission to DSC.</p>	water availability of construction water				
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	The Contractor shall take all precautionary measures to prevent	Waste water discharge at construction	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

	Wastes	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.	camps, Vehicle parking and washing areas				
9	Water Pollution from Fuel and Lubricants	The Contractor shall ensure that all construction vehicle parking locations, fuel/ lubricants storage sites, vehicle, machinery and equipment maintenance and refuelling sites shall be located at least 500 m away from Ganga River, Upper Ganga canal, and other local streams / village ponds if any	Vehicle parking, refuelling and washing areas	Contractor	DSC/ PIU	Regularly during construction phase	Contractor
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	<p>The contractor will take every precaution to reduce the levels of dust at construction site.</p> <p>All earthworks to be protected/ covered in a manner to minimize dust generation.</p>	Air quality monitoring results, water sprinkling frequency	Contractor	DSC /PIU	Regularly during construction phase	Contractor
12	Emission from Construction Vehicles, Equipment and Machinery	<p>All vehicles, equipment and machinery used for construction shall conform to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The silent/quiet equipment available in the market shall be used in the sub Project.</p> <p>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.</p>	Pollution under control certificates for vehicles and machinery	Contractor	DSC/ PIU	Regularly during construction phase	Contractor
13	Noise Pollution	The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the	Noise under control certificates, noise monitoring	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

		<p>MoEF/CPCB noise standards and all Vehicles and equipment used in construction shall be fitted with exhaust silencers.</p> <p>At the construction sites noisy construction work such as crushing, operation of DG sets, use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am.</p> <p>Noise limits for construction equipment used in this project will not exceed 75 dB (A).</p>	results				
14	Material Handling Site at	<p>Workers employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles.</p> <p>Workers, who are engaged in welding works, will be provided with welder's protective eye-shields.</p> <p>The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The Engineer will be given at least 6</p>	Records of availability of personal protective equipment (PPE), training records for use of PPEs	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

		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.					
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 sustained	Safety training program records, availability of first aid kits and trained personnel	Contractor	DSC/ PIU	Regularly during construction phase	Contractor

		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	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
4.3	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 or grey water treatment facilities.. The size of soak pits and	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

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
		septic tanks will be detailed in DPR and contract document.					
4.4	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

133. **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 Preparation for	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,	Contractor	Contractor

To be Prepared During	Specific Plan/Program	Purpose	Responsible Preparation	Responsible for Implementation
		lubricants, fuels, concrete, and other hazardous materials		

134. Sample Traffic Management Plan is attached **Annexure 5**.

5.3 Environmental Monitoring Plan

135. 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
1	Air Quality	During pre construction phase	CO, NO _x , PM ₁₀ , PM _{2.5} , and SO ₂	At starting point (Shankaracharya Chowk), at location of multi facility location (near Lohe Ka Pul) and near Solani Park (Between Solani Park and Mewar Bridge)	Once in every three months (except monsoon) during Pre construction, construction and operation stages	Contractor
		During Construction Phase				Contractor
		Operation Phase (nil as Yatra will take place on foot only)				PIU/PMU
2	Water quality	During pre construction 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 near Solani Park(Solani Park and Mewar Bridge) , Ground water also at the above 3 locations)	Once in every three months (except monsoon) during pre construction, construction and operation stages	Contractor
		During Construction Phase				Contractor
		Operation Phase (Yatra will take place in monsoon)				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 near Solani Park (Between Solani park and Mewar Bridge)		Contractor
						Contractor
						PIU/PMU

5.4 Capacity Building

136. 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	PMU/PIU (including the ES) and Engineering staff of Tourism dept	¼ Working Day	Safeguards Specialist of the PMC

Program	Description	Participants	Duration	Training Conducting Agency
	Good engineering practices to be integrated into contract documents			
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)	1/4 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)	1/4 Working Day	Safeguards Specialist of the DSC
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

Notes: PMU = Project Management Unit; PIU = Project Implementation Unit; PMC = Project Management Consultant; DSC = Design and Supervision Consultant; ES = Environment Specialist; NGO – non government organization

5.5 Environmental Budget

137. 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			
	Pre Construction and Construction Phase			Contractor's costs
Air Quality (3 locations; 3 times a year , Total 21 samples (3 during pre construction 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 pre construction and 36 during construction phase)	5000	42	210000.00	
Noise Quality (3 locations; 3 times a year, Total 21 samples (3 during pre construction 18 during construction phase)	2500	21	52500.00	
Total Monitoring Cost for Pre construction and Construction Phase			4,20,000.00	
	O&M Phase			PMU
Noise Quality (3 locations; during Kanwar Yatra for initial 2 years, total 6 samples)	2500	06	15,000.00	
Capacity Building Expenses (5 Sessions in project life)	90000	Lump sum	4,50,000.00	PMU/ DSC
Total Cost operation Phase Including			4,65,000.00	

Item	Rate per sample	Number	Total Cost (INR)	Source of funds
capacity building				
Total Cost			8,85,000.00	
Contingencies @ 5 %			44,250.00	
Total Budgeted Cost			9,29,250.00	

5.6 Environmental Monitoring and Reporting

138. 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.

139. 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.

6. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

140. 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
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	Kanwaris, 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
6	Moradabad	12/09/14 and 05/11/14	Northern Railway Officials	Construction of Pedestrian Over Bridge over Railway Track near Jwalapur
7	Dehradun	06/11/14 and 08/11/14	NHAI Officials	Construction of Foot Over Bridge at Manglour Cross on NH-58
8	New Delhi	22/12/14	Chief Bridge Engineer Northern Railway	Presenting Proposal for Construction of Pedestrian Over Bridge over Railway Track near Jwalapur

141. 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.

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

6.1 Public Consultations and Incorporation of Suggestions in Project Design

143. 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**.

144. Recorded Documents of Transact Walk Cum Sub Project Committee meeting is attached as **Annexure 6**.

6.2 Plans for Continued Public Participation

145. 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.

6.3 Information disclosure

146. 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.

147. 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.

6.4 Public Consultations Records

148. 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 Kanwaris and Health department officials in the health camp	Sub project details, project benefit, project related infrastructure requirements etc.	<p>The Kanwaris and the local people were happy to note that such facilities are proposed along the Pedestrian route and foot over Bridges are planned.</p> <p>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.</p> <p>The Kanwaris also suggested that there should be adequate lighting along the route because Yatra continues in night time also.</p> <p>The medical team of Uttarakhand Government (those who were on duty for the Kavar Yatra) suggested that adequate medical facilities should be at all locations</p>	<p>Explained to the participants that at all rest areas drinking water facilities, bathing facilities and sanitation facilities are planned.</p> <p>Explained to the participants that as part of project lighting is being provided all along the Pedestrian Route. .</p> <p>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.</p>

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.	<p>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.</p> <p>They also told that the traders association needs to be involved in matters related to allotment of stalls and kiosks during the <i>Mela</i>. The traders association suggested for adequate sanitation facilities and proper regulation and movement within the Haridwar city</p> <p>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</p>	<p>Explained to the participants that project plans to create infrastructure and allocation of stalls will be carried out by the district administration.</p> <p>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.</p> <p>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.</p>

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.	<p>Ganga Mahasabha is civil society organization/NGO. This organization dedicated for the welfare and safety of the tourists and environmental management of the Har ki Pauri area.</p> <p>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.</p> <p>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.</p>	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
	<ol style="list-style-type: none">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 Path15. 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

6.5 Grievance Redress Mechanism

149. 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.

150. 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.

6.5.1 Composition and functions of GRC

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

152. **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.

153. **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).

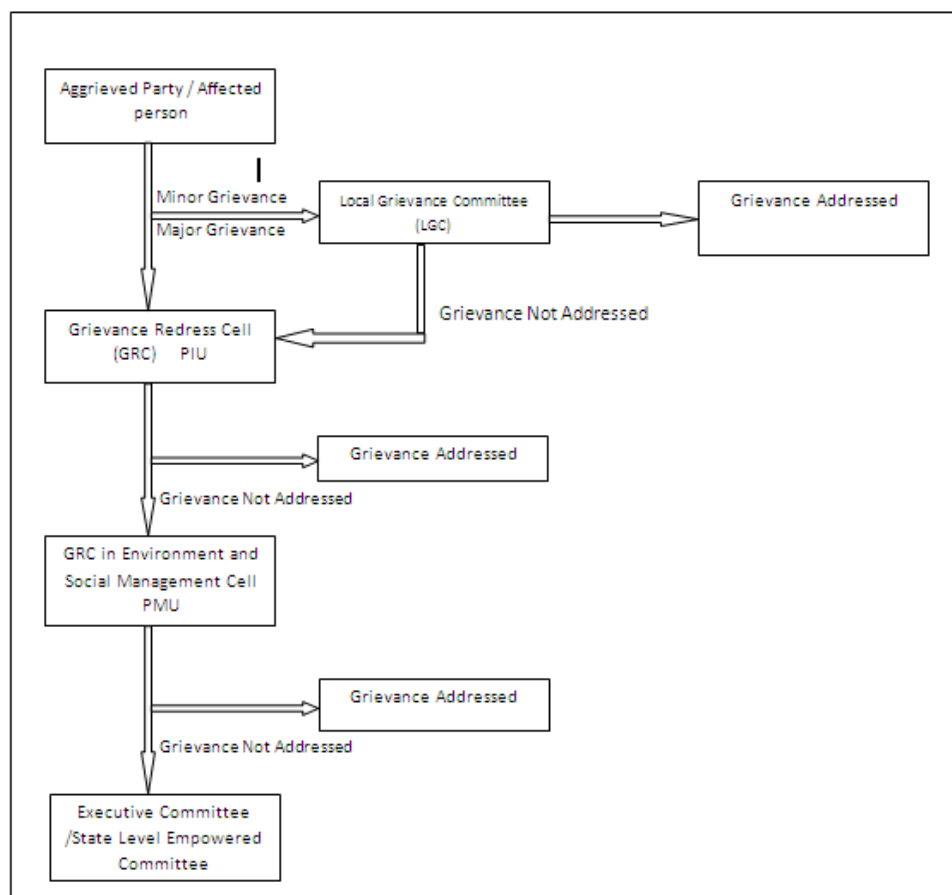
Approach to GRC

154. 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-9** below.

Figure 9: Grievance Redress Mechanism in IDIPT, Uttarakhand

GRIEVANCE REDRESS MECHANISM (IDIPT-Uttarakhand)



Note:

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)

7. FINDINGS AND RECOMMENDATIONS

155. 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.

156. 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.

157. 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.

158. 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.

159. 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.

8. CONCLUSIONS

160. 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.

161. 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

IITIDP: Uttarakhand- Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar,

Title:

SAUW (South Asia Urban Development and Water Division)

Sector 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 at Haridwar and Roorkee 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.

Screening Questions	Yes	No	Remarks
▪ WETLAND		√	No notified wetland close to Pedestrian Route alignment
▪ MANGROVE		√	Not Applicable
▪ ESTUARINE		√	Not Applicable
▪ SPECIAL AREA FOR PROTECTING BIODIVERSITY		√	Not Applicable
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

Screening Questions	Yes	No	Remarks
▪ 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 Yatra 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.
▪ 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.

Screening Questions	Yes	No	Remarks
▪ 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 grey water treatment facilities of adequate capacity is being planned.

A Checklist for Preliminary Climate Risk Screening

Country/Project Title: IDIPT: Uttarakhand, Development of tourism infrastructure for Kanwar Patri

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:

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.

Response	Score
Not Likely	0
Likely	1
Very Likely	2

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

Result of Initial Screening (Low, Medium, High): 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 Haridwar 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 Haridwar 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 project design

Component	Criteria	Compliance
	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
	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	Not applicable because the alignment is not close to any ASI Protected monument/ remains site.

Component	Criteria	Compliance
	original fabric. The results of intervention should be unobtrusive when compared to the original fabric or to previous treatments, but still should be distinguishable	
	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 from the principal area of the site. Landscaping should aim to restore the site to its historic state and should not adversely affect the site: contemporary gardening and landscape concepts and designs should not be introduced.	Not Applicable
Conservation and habitat protection measures- in and around the natural heritage	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.

Component	Criteria	Compliance
assets and protected areas.	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 pumps. The water supply will be needed during one month of Kanwar Yatra. It is planned to provide bore well and on overhead water storage tank of 25000 litre near Shankaracharya Chowk and Lohe Ka Pul.
	30. Will not result in excessive abstraction of ground water or result in excessive groundwater pumping impairing ground water quality	The water requirement has been 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.





Component	Criteria	Compliance
	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 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,

Component	Criteria	Compliance
		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 and grey water treatment facilities 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 Haridwar.
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.
	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

Component	Criteria	Compliance
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 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 from 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 impact 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
	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 Uttarakhand 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.	Location 1:NearShankaracharya Chowk Area Required: 80 sqm.	
2.	Location 2 : Near Lohe Ka Pul at Jwalapur Area Required: 3500 Sqm.	
3.	Location 3 : Near Lohe Ka Pul at Jwalapur	
4.	Location 4 : At Manglour Cross	

Annexure 4

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

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

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

To

District Magistrate
Haridwar

Sub: Concept note on Haridwar Ganganaahar 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, Haridwar, SP, Haridwar 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, Haridwar for Information and necessary follow up in this regard


Sachin Kurve (IAS)
Program Director

Submission of Proposal to NHA for Construction of Foot over Bridge at Manglour Cross on NH-58



Program Management Unit
Infrastructure Development Investment Program for Tourism
(ADB Assisted – Loan No. 2833, India)
Government of Uttarakhand
Pandit Deendyal Upadhaya Paryatan Bhawan, Near ONGC Helipad
Garhi Cantt, Dehradun -248003



Tel: 91-135-2559987, Fax: 91-135-2559988 E-mail: utdb.pmu@gmail.com

Ref: 1809/2-10-ADB/ IDIPT/191/2014-15

Date: 21.11.2014

To,

Project Director,
Project Implementation Unit,
National Highway Authority of India,
House No. 5, lane 4, Sector 4, Teg Bahadur Road, Dehradun (Uttarakhand)

Sub: General Arrangement Drawing of Proposed Foot Over Bridge at Manglour Cross on NH- 58.

Ref: This Office Letter no. 1618/2-10-ADB/IDIPT/191/2013-14 Dated 12.09.2014.

Dear Sir,

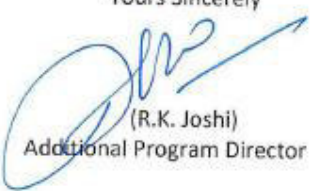
This has reference to the above subject regarding a proposed pedestrian over bridge at Manglour cross on NH- 58 near Manglour Town in Haridwar District. Please also refer to the discussion of experts of our Design & Supervision Consultant (DSC) in your office on 6th November 2014. Subsequently a discussion was also held with your Independent Engineer Mr. G.C. Taneja on 8th November 2014. Based on the discussions, a general arrangement drawing has been prepared by DSC and the same is attached herewith. The main parameters considered in preparing the general arrangement drawing are:

- i) Reduced level of top of the road (NH-58) to be considered is 281.94m.
- ii) The clear width of NH-58 below the proposed bridge to be 20m. Thus, minimum clear span between end supports of the proposed foot over bridge to be 20m.
- iii) Minimum clear height from bottom of walkway of proposed bridge to road surface to be 5.5m.

Kindly review the attached drawing and take necessary action regarding approval, so that execution can be taken up before next Kanwar season.

Encl.:- As above

Yours Sincerely


(R.K. Joshi)
Additional Program Director

Copy to:

1. District Magistrate, Haridwar for kind information please
2. Project Manager, PIU Kotdwar for information and necessary action
3. Team Leader, DSC Kotdwar for information and necessary action


(R.K. Joshi)
Additional Program Director

Minutes of Meeting held with NHAI Officials and Consultants for discussion on NHAI observations on the drawings and their rectification

A meeting on Kanwar Patri sub Project was held with NHAI Officials and Consultants under the chairmanship of Additional Program Director, Additional Secretary-Tourism on 02-03-2015 in the UTDB Conference Hall.

Background: The meeting was held for discussion on the proposal of construction of Foot Over Bridge over NH-58 at Manglour Cross. Proposal regarding the same was sent to NHAI on 12.09.14, on which a series of discussion was held with NHAI in Nov, 2014. NHAI submitted its observations vide letter dt. 13.02.15 and also requested for a joint meeting.

The meeting was attended by:

1. Mr. R.K.Joshi, Additional Program Director, IDIPT-UK
2. Mr. Pradeep Singh Gusain, Manager(T), NHAI Dehradun
3. Mr. R.K. Dinkar Highway Engineer, Consultant NHAI
4. Mr. R.S. Verma, Bridge Engineer, Consultant NHAI
5. Mr. Jyotirmoy Sharma, Team Leader, DSC Kotdwar
6. Mr. Amit Bhardwaj, Project Manager, PIU Kotdwar
7. Ms. Anjali Semwal, Nodal Officer, PIU & DSC Kotdwar

The outcome & decisions of the meeting on NHAI observations are as follows:

- **Distance between the centre line of road and foot over bridge may be provided minimum 6m:** Already complied and shown in revised drawing.
- **The minimum height of column C2 may be provided 4.5 m instead of 3m in the LHS side of NH-58 as service road of left hand side carriageway shall start from this point:** On this observation, revised drawing incorporating the observation was handed to the NHAI Consultants based on which discussion was held. The final drawing shall be officially submitted to NHAI.
- **The structure may be design as per MoRT&H specification:** It was expressed by Addl. Program Director that project shall be compliant with all prevalent specifications

- In the end it was agreed and decided that a joint site visit shall be held along with Administration Authorities at 11:00 am on 3rd March, 2015.

Ref: ²¹⁶⁷ / 2-10/ADB/IDIPT/191 /2013-14

Date: 02nd Mar, 2015

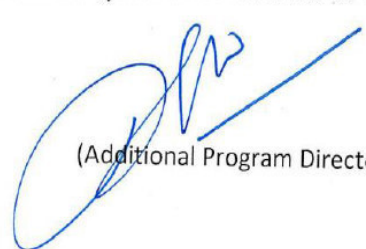


R.K. Joshi

(Additional Program Director)

Copy to:

1. Program Director, IDIPT, UK for kind information
2. DM Haridwar, for kind information
3. DTDO Haridwar, for kind information
4. Project Director, PIU Dehradun, NHAI for kind information
5. Project Manager, PIU Kotdwar for information and necessary action
6. Team Leader DSC Kotdwar for information and necessary action as directed in the meeting



(Additional Program Director)



Govt. of Uttarakhand

Program Management Unit
Infrastructure Development Investment Program for Tourism
(ADB Assisted – Loan No. 2833, India)
Government of Uttarakhand

Pandit Deendyal Upadhya Paryatan Bhawan, Near ONGC Helipad
Garhi Cantt, Dehradun -248003

Tel: 91-135-2559987, Fax: 91-135-2559988 E-mail: utdb.pmu@gmail.com



Ref: 2268/2-10-ADB/ IDIPT/191/2014-15

Date: 16.03.2015

To,

Project Director,
National Highway Authority of India,
Project Implementation Unit, Dehradun
House No. 5, lane 4, Sector 4, Teg
Bahadur Road, Dehradun (Uttarakhand)

Sub: Proposal of Construction of Pedestrian Over Bridge Over NH-58 at Manglour Cross.

- Ref:** 1. Letter no. NHAI/PIU-DDN/SAI Consultant (MZN- HDR)/2011/7278, dated 13.02.15, from Project Director, NHAI, PIU, Dehradun
2. Letter no. NOD-Saicpl/IC/NH-58/11/1/681, dated 12.12.2014, from Team Leader, NOD –SAICPL (JV)
3. Minutes of Meeting 2167/2-10/ADB/IDIPT/191/2013-14 dt. 02.03.15

Dear Sir,

This has reference to the subject and letters as mentioned above regarding the proposed pedestrian over Bridge over NH-58 at Manglour Cross. The general arrangement drawing of the proposed bridge prepared earlier by our consultant was modified exactly as per requirements mentioned in your referred letter. The general arrangement drawing was again discussed in our office on 2nd March 2015 in a meeting between Consultants of NHAI and UTDB (minutes enclosed for kind reference). Subsequent to the meeting it was decided to make joint visit to the proposed over bridge site on 3rd March 2015 to sort out all drawing related issues or any additional requirements of your Consultants. Please note that this site visit was arranged for onsite disposal of all observations raised by your consultants, in addition to the one already attended. During site visit, following was discussed:

1. It was informed by Mr. Taneja (NHAI consultant) that when the two lane over bridge under construction over Upper Ganga canal will be completed, the present alignment of NH 58 near Manglour cross will continue to be used as NH, but with one way traffic towards Roorkee side.
2. It was informed by Mr. Taneja that there is provision of service road on NH on Northern side (Haridwar Side). Therefore, from center line of the highway, 14.5m width will be required on northern/service road side. On the southern side of NH (Mohammadpur Power House Side), there is no provision of service road. Therefore, from centreline of NH, 7m width is needed on southern side. Thus, total requirement of width of the NH along with carriageway, service road, drains, etc. near Manglour cross is (14.5m + 7m) = 21.5m.

3. It was informed by Mr. Taneja that at the junction of Kanwat patri and NH 58, a turning radius of 14m will have to be provided on Kanwar Patri to make a bell mouth shape. Mr. Jyotirmoy Sarma (UTDB Consultant) requested Mr. Taneja to give the requirements in writing along with a sketch/drawing and Mr. Taneja agreed to provide the requirements in writing.

It is necessary that technical decisions on general arrangement of the proposed foot over bridge are to be based on actual requirements from your end in written form along with sketches/drawings. We therefore, request you to provide us all the requirements in written form and all at once, since the communication of observations on piece meal process is delaying the project progress. It is to mention here that had the above points been intimated at first instance, the concept could have been finalized till now.

Kindly also understand that the proposal was conceptualized in view of the need raised by the District Authorities, and in state interest. Hence, your approval on the said proposal is requested at the earliest to expedite the project.

Encl.:- As above

Yours Sincerely



Asheesh Joshi (IAS)
Program Director

Copy to:

1. District Magistrate, Haridwar with request to look into the matter and direct concerned authorities for the needful.
2. DTDO Haridwar, for information and necessary action
3. Project Manager, PIU Kotdwar for information and necessary action
4. Team Leader, DSC Kotdwar for information and necessary action



Asheesh Joshi (IAS)
Program Director

**Submission of Proposal to Chief Engineer, Northern Railways for Pedestrian Over Bridge
over Railway Track near Jwalapur Town**



Govt. of Uttarakhand

Program Management Unit
Infrastructure Development Investment Program for Tourism
(ADB Assisted – Loan No. 2833, India)
Government of Uttarakhand
Pandit Deendyal Upadhaya Paryatan Bhawan, Near ONGC Helipad
Garhi Cantt, Dehradun -248003
Tel: 91-135-2559987, Fax: 91-135-2559988 E-mail: utdb.pmu@gmail.com



Ref: 1884/2-10-ADB/IDIPT/191/2014-15

Date: 02.12.2014

To,
Chief Engineer,
Northern Railway, Baroda House,
New Delhi-110001

Sub: Proposal for Construction of Pedestrian Over Bridge over Railway Track near Jwalapur Town in Haridwar District.

Ref: i) This Office Letter no. 1619/2-10-ADB/IDIPT/191/2013-14, dated 12-09-2014
ii) Sr. Divisional Engineer – I, Northern Railways, Moradabad Letter dated 5.11.2014 (copy encl)

Dear Sir,

Please refer to our above mentioned letter addressed to Divisional Railway Manager, Northern Railways, Moradabad vide which proposal for construction of a pedestrian over bridge over a railway track near 'Lohe Ka Pul' at Jwalapur town in Haridwar District was sent. From the location of the proposed pedestrian over bridge, Jwalapur and Haridwar Railway station are at a distance of 1.3 Km and 4km towards northeast respectively. Location of the proposed pedestrian over bridge is on a road on the bank of Upper Ganga Canal which starts from Haridwar City and runs towards Roorkee. Railway track divides the road on the canal bank and there is an urgent need to construct a pedestrian over bridge at the specified location to maintain the continuity of the road which is used by lakhs of Kanwar Devotees in the month of Shravan.

Subsequent to the dispatch of our proposal, there was a discussion on 5th November 2014 by our project implementation officials in the office of Divisional Railway Manager, Northern Railways, Moradabad. In response to the discussion and the letter received from Sr. Divisional Engineer –I, Northern Railway, Moradabad (copy enclosed), we enclose herewith a report, site plan and General Arrangement drawing of the proposed Pedestrian over bridge for your consideration and necessary action.

Encl.:- as above

Yours Sincerely

(Shailesh Bagauli) IAS
Program Director

- Copy to:** (i) Divisional Railway Manager, Northern Railways, Moradabad, for information with copy of report and drawings.
(ii) Sr. Divisional Railway Manager - I, Northern Railways, Moradabad, for information with copy of report and drawings.
(iii) Team Leader DSC Kotdwar for information and necessary follow up
(iv) Project Manager, PIU Kotdwar for information and necessary follow up

Program Director



Program Management Unit
Infrastructure Development Investment Program for Tourism
(ADB Assisted – Loan No. 2833, India)
Government of Uttarakhand
Pandit Deendyal Upadhaya Paryatan Bhawan, Near ONGC Helipad
Garhi Cantt, Dehradun -248003
Tel: 91-135-2559987, Fax: 91-135-2559988 E-mail: utdb.pmu@gmail.com



Ref: ~~2230~~ /2-10-ADB/IDIPT/191/2014-15

Date: 18.03.2015

To,
Chief Engineer,
Northern Railway, Baroda House,
New Delhi-110001

**Sub: Proposal for Construction of Pedestrian Over Bridge over Railway Track in Jwalapur
Town near Lohe Ka Pul, Laksar Haridwar section, in Haridwar District.**

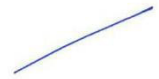
Ref: i) Dy. Chief Engineer/ROB letter no.260-W/1295/UK/Br.(S&D) dt. 13.01.15
ii) This Office letter no. 2158/2-10-ADB/IDIPT/191/2014-15 dt. 02.03.15

Dear Sir,

Kindly recall our submission dt. 02.03.15 in reference to your mentioned letter. It is expected that all your queries have been suitably attended and clarified.

Hence it is requested to convey your approval at the earliest, so that work may be timely executed.

Yours Sincerely


(R.K. Joshi)
Addl. Program Director

Copy to: (i) Sr. Divisional Engineer-I, Northern Railways, Moradabad, for kind information.
(ii) Project Manager, PIU Kotdwar for information and necessary follow up
(iii) Team Leader DSC Kotdwar for information and necessary follow up


(R.K. Joshi)
Addl. Program Director

Annexure-5

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

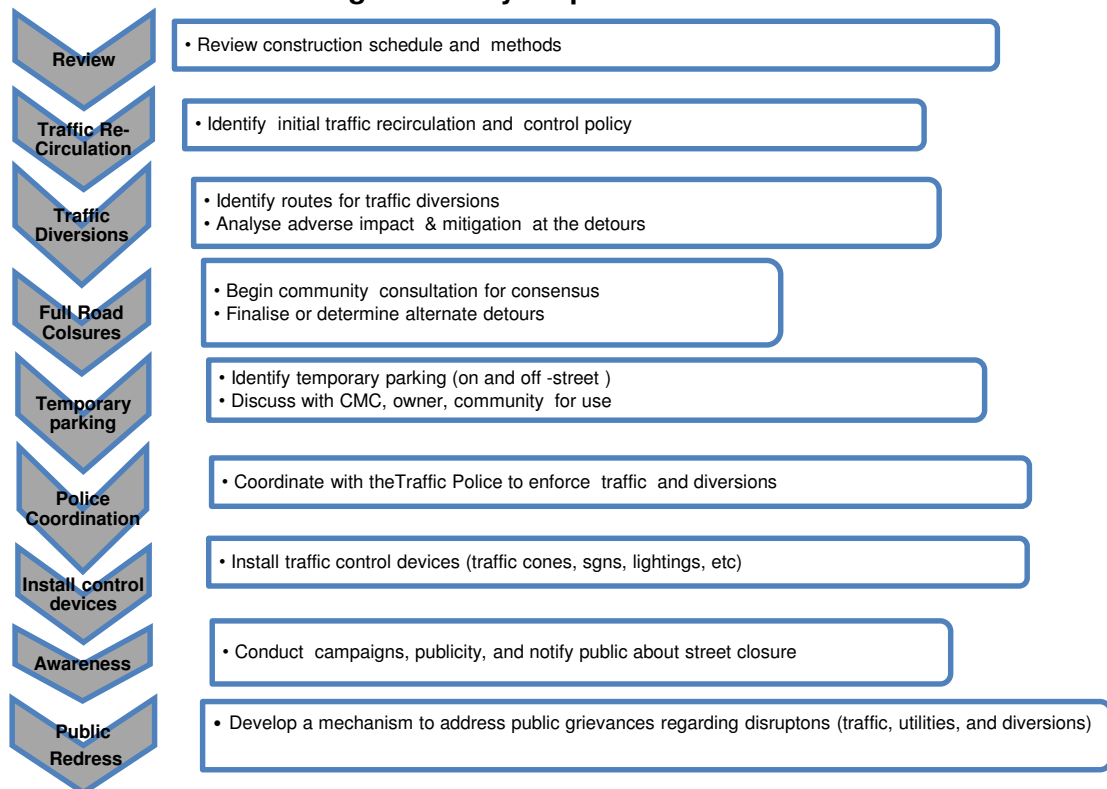
3. Apart from the capacity analysis, a final decision to close a particular section of canal road and divert the traffic should involve the following steps:

- (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 during construction of the pedestrian pathway from Mayapur Regulator to Jathwara bridge 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. Also, for construction of pedestrian pathway from near Solani Park towards Mewar Bridge, no traffic diversion will be needed.

But, during construction of Foot Over Bridge at Manglour Cross, there may be requirement for traffic diversion from Kanwar Patri and National Highway 58.

17. If Kanwar Patri is closed during construction of the Foot Over Bridge at Manglour Cross, then traffic coming from Roorkee side will have to be diverted to NH 58 towards east from near Ganesh Pul on NH 73. People from nearby villages will use rural roads on eastern side of Kanwar Patri to reach NH 58.

18. For any closure of NH 58 during construction of foot over bridge at Manglour cross, all traffic from Delhi side and also from Roorkee side will have to temporarily use the two lane RCC bridge over Upper Ganga Canal (under construction) on NH 58. It is to be noted that after completion of the RCC bridge as mentioned, NH 58 near Manglour cross will have two ways. Out of these, one way will be used for traffic coming from Delhi side, while the other way will be along the RCC bridge for traffic from Roorkee side.

Annexure 6

Recorded Documents of Transect 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/प्रमारी जि0पर्य0वि0अधि0, हरिद्वार।
(3) श्री एच0आर0 मट्ट	सहायक अभियन्ता, सिंचाई विभाग, उत्तराखण्ड।
(4) श्री ज्योतिमय शर्मा	टीम लीडर डी0एस0सी0, आई0डी0आई0पी0टी0 कोटद्वार।
(5) श्री दी0वी0एस0 यादव	एस0डी0ओ0 हैडवर्क्स, एन0डी0जी0सी0, हरिद्वार।
(6) श्री अमीचन्द	उपखण्ड अधिकारी, विद्युत, हरिद्वार।
(7) श्री एच0एस0 शर्मा	अभियन्ता, एन0डी0एस0डी0 कोटद्वार।
(8) श्री काजल कुमार डे	सपोर्ट इंजीनियर, डी0एस0सी0 कोटद्वार।
(9) श्री मौ0 मिस्रम	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 रूडकी।
(14) श्री प्रत्यूष सिंह	उप जिलाधिकारी रूडकी।
(15) श्री पी0के0 पाण्डे	अधिशायी अभियन्ता, खण्ड रूडकी
(16) श्री संजय कुमार	अपर सहायक अभियन्ता पेयजल निगम, हरिद्वार।
(17) श्री सुशील कुमार	कंड ऑपरटर, डी0एस0सी0, कोटद्वार।
(18) श्री डी0पी0श्रीवास्तव	अधिशायी अभियन्ता, जल संस्थान, हरिद्वार।

कार्यवृत्त

सर्वप्रथम शिष्टाचारोपरान्त डामकोटी 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 डामकोटी में एकत्रित सभी अधिकारियों के सम्मुख कांवड़ पटरी के प्रोजेक्ट के महत्व पर प्रकाश डालते हुए प्रोजेक्ट के टीम लीडर श्री ज्योतिमय शर्मा से प्रोजेक्ट में प्रस्तावित कार्यों के बारे में जानकारी प्राप्त की गई। तदोपरान्त डामकोटी से सभी उपस्थित अधिकारियों के साथ पैदल कांवड़ पटरी का डामकोटी 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- ५९

-2-

टीम लीडर श्री ज्योतिमय शर्मा द्वारा सिंहद्वार के समीप नहर पटरी पर जनसुविधाओं के विकास के प्रस्ताव की जानकारी दी, उक्त पर अपर जिलाधिकारी महोदय ने कांवड़ मार्ग को नगर से बाहर नहर की पटरी से ही बनाने के निर्देश प्रोजेक्ट टीम लीडर को दिये। जिसमें लालपुल के समीप ओवरब्रिज व जनसुविधाओं के विकास को आवश्यक मानते हुए प्रोजेक्ट में सम्मिलित किया गया।

अगला पड़ाव जटवाड़ा पुल के समीप पार्किंग स्थल के विकास एवं जनसुविधाओं के विकास को प्रोजेक्ट में सम्मिलित करने पर सहमति बनी। कांवड़ पटरी का निरीक्षण करते हुए रानीपुर झाल पर एक स्टील ब्रिज की आवश्यकता को देखते हुए इसके निर्माण को प्रोजेक्ट में सम्मिलित किया गया। बहादुराबाद से बी०एच०ई०एल० नहर पुल के समीप विश्राम स्थल व जनसुविधाओं के विकास को प्रोजेक्ट में सम्मिलित किया गया।

कांवड़ पटरी का निरीक्षण करते हुए आई०आर०आई० बहादुराबाद के पहले पुराना पथरी हाऊस व नये पथरी हाऊस के मध्य से होते हुए कांवड़ पटरी विकसित करने व पूर्व में स्थित भूमि को लंगर/विश्राम स्थल के रूप में विकसित करने के निर्देश दिये गये। जिससे कांवड़ियों को बहादुराबाद आवादी क्षेत्र से बाहर-बाहर सुविधाजनक मार्ग विकसित किया जा सके।

निरीक्षण दल के अपर जिलाधिकारी महोदय के नेतृत्व में धनौरी के समीप निरीक्षण करते हुए जलसेतु (Aqueduct) के समीप जनसुविधायें विकसित किये जाने को प्रोजेक्ट में सम्मिलित किया गया।

कांवड़ पटरी का निरीक्षण करते हुए पिरान कलियर के आगे व रूडकी कॉलेज ऑफ इंजीनियरिंग के पहले शिवालिक ब्रिकफील्ड को विश्राम स्थल के रूप में विकसित किये जाने के निर्देश दिये गये। रूडकी में सोनाली पार्क के सौन्दर्यीकरण एवं विकास को प्रोजेक्ट में सम्मिलित किया गया।

बी०ई०जी० सेंटर रूडकी के मार्ग व पीर बाबा के पास कांवड़ियों को रेलवे ट्रैक पर धातुपत्र की छत लगाये जाने को प्रोजेक्ट में सम्मिलित करने के निर्देश दिये गये। आसफनगर झाल पर जनसुविधाओं के विकास सहित विश्राम स्थल के विकास करने पर सहमति बनी।

मंगलौर में राष्ट्रीय राजमार्ग व कांवड़ पटरी के प्रतिच्छेदन (Intersection) से आने वाली कठिनाई को दृष्टिगत रखते हुए पुलिस अधीक्षक नगर द्वारा ओवरब्रिज अथवा अण्डरब्रिज बनाया जाने को कांवड़ यात्रा के सहज संचालन हेतु आवश्यक बताया गया। इस बिन्दु पर प्रोजेक्ट टीम लीडर से वार्ता के उपरान्त ओवरब्रिज अथवा अण्डरब्रिज बनाने को प्रोजेक्ट में सम्मिलित किया गया।

निरीक्षण हेतु अपर जिलाधिकारी के नेतृत्व में समस्त उपस्थित अधिकारी व प्रोजेक्ट अधिकारीगण नहर की पटरी से ही चलते हुए उत्तराखण्ड उत्तर प्रदेश की सीमा के निकट मौहम्मदपुर झाल पहुंचे। उक्त स्थल को टीम लीडर, प्रोजेक्ट व अन्य अधिकारियों द्वारा रात्रि विश्राम स्थल के रूप में विकसित किये जाने के सुझाव पर अपर जिलाधिकारी द्वारा प्रोजेक्ट टीम लीडर को देवी मेला भूमि को रात्रि विश्राम स्थल के रूप में विकसित करने के निर्देश दिये गये।

क्रमशः पृष्ठ -3- पर

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श्री अमीचन्द एस0डी0ओ0, यू0पी0सी0एल0 द्वारा विद्युत लाईन डबल फेस बनाये जाने का सुझाव दिया, जिस पर अपर जिलाधिकारी महोदय द्वारा प्रोजेक्ट टीम को भूमिगत विद्युत लाईन (डबल फेस), 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- 177 / कांवड़ पटरी प्रोजेक्ट / 2014-15

दिनांक - 10 मई 2014

प्रतिलिपि:- निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित:-

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 7

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

<p>जिलाधिकारी, हरिद्वार की अध्यक्षता में दिनांक-23.05.2014 को सम्पन्न कंकड़ चट्टी मार्ग पर अस्त्यापना सुविधा विकास हेतु Sub-Project Monitoring Committee की सम्पन्न हुई बैठक में उपस्थिति:-</p> <p><u>बैठक का उपस्थिति विवरण</u></p>		
(1)	श्री जेएचओ नरन्याज	अपर जिलाधिकारी (अशासन), हरिद्वार।
(2)	श्री सुरजीत सिंह पंवार	पुनिस अधीक्षक नगर, हरिद्वार।
(3)	श्री प्रद्युम्न सिंह	उप जिलाधिकारी रुड़की।
(4)	श्री केएचओ मिश्रा	नगर मजिस्ट्रेट, हरिद्वार।
(5)	श्री बीएचओ बुधियाल	उप जिलाधिकारी, हरिद्वार।
(6)	श्री ज्योतिर्नय सिंह	टीम लीडर डीएचओसी, आईडीओआईपीटी, कोटद्वार।
(7)	श्री केएचओ रावत	जिला पर्यटन विकास अधिकारी, हरिद्वार।
(8)	श्री मनोज श्रीवास्तव	जिला सूचना अधिकारी, हरिद्वार।
(9)	श्री चन्द्रमोहन सिंह	सीओओ सिटी, हरिद्वार।
(10)	डॉ० नरेश चौधरी	आपदा प्रबन्धन अधिकारी, हरिद्वार।
(11)	श्री पुरुषोत्तम	अभिशासी अभियन्ता सिवाई, हरिद्वार।
(12)	श्री वीओओ पाण्डेव	अभिशासी अभियन्ता सिवाई, रुड़की।
(13)	श्री ओओओ सिंह	अभिशासी अभियन्ता लोअरवि, रुड़की।
(14)	श्री मी० वृत्तक	अभिशासी अभियन्ता प्रोडक्शंस लोअरवि, हरिद्वार।
(15)	श्री डीपीओ श्रीवास्तव	अभिशासी अभियन्ता जल संस्थान, हरिद्वार।
(16)	श्री देवेन्द्र कुमार	अभिशासी अभियन्ता विद्युत विभाग, हरिद्वार।
(17)	श्री सीपीओएचओ यादव	एचओसीओ डैटवर्स, सिवाई विभाग, उऊओ, हरिद्वार।
(18)	श्री एचओआरओ चट्ट	सहायक अभियन्ता सिवाई खण्ड, हरिद्वार।
(19)	श्री पीओओ धर्मपाल	एचओसीओ विद्युत, रुड़की।
(20)	डॉ० हरिन्द्र मलिक	एचओएचओ, नगर निगम, हरिद्वार।
(21)	श्री संजय कुमार	अपर सहायक अभियन्ता पेयजल निगम, हरिद्वार।
(22)	श्री जनीबन्ध	उपखण्ड अधिकारी, विद्युत, हरिद्वार।
(23)	श्री नुरुदला त्रिपाठी	सहायक अभियन्ता, पीएचओसीओ, आईडीओआईपीटी, देहरादून।
(24)	श्री कचल कुमार डे	सपोर्ट इंजीनियर, डीएचओसीओ कोटद्वार।
(25)	श्री एचओओ सिंह	स्टेशन अधीक्षक, हरिद्वार उत्तर रेलवे।
(26)	श्री पीओओ मिश्रा	जेआईओलरीखण्ड गंगानगर, रानीपुर, हरिद्वार।
(27)	श्री एचओओ शर्मा	जेआईओलरीखण्ड गंगानगर, मावापुर, हरिद्वार।
(28)	श्री आरओओ जोशी	एचओसीओ, आईडीओआईपीटी, देहरादून।
(29)	श्री अमित मारवाह	परियोजना प्रबन्धक, पीओआईपीटी, कोटद्वार।
(30)	श्री नृजपाल शर्मा	आधुनिक, पेयजल निगम, हरिद्वार।

क्रमशः-2-

जिलाधिकारी, हरिद्वार की अध्यक्षता में दिनांक-23.05.2014 को सम्पन्न कांवड़ 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 डी०एस०सी०, आई०डी०आई०पी०टी०, कोटद्वार द्वारा कांवड़ पटरी Sub-Project का प्रस्तुतीकरण किया गया।

डी०एस०सी० 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 चिह्नित स्थलों (मायापुर रेगुलेटर, सिंहद्वार, जटवाड़ा पुल, रानीपुर साइफन, धनौरी एक्वाडक्ट, सौलानी पार्क रुड़की, आसफनगर पुल इत्यादि) की जानकारी दी गई।

कांवड़ पटरी Sub-Project के प्रस्तुतीकरण के दौरान कांवड़ पटरी मार्ग पर पड़ने वाले सभी 11 चिह्नित 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 (उ०प्र० 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)

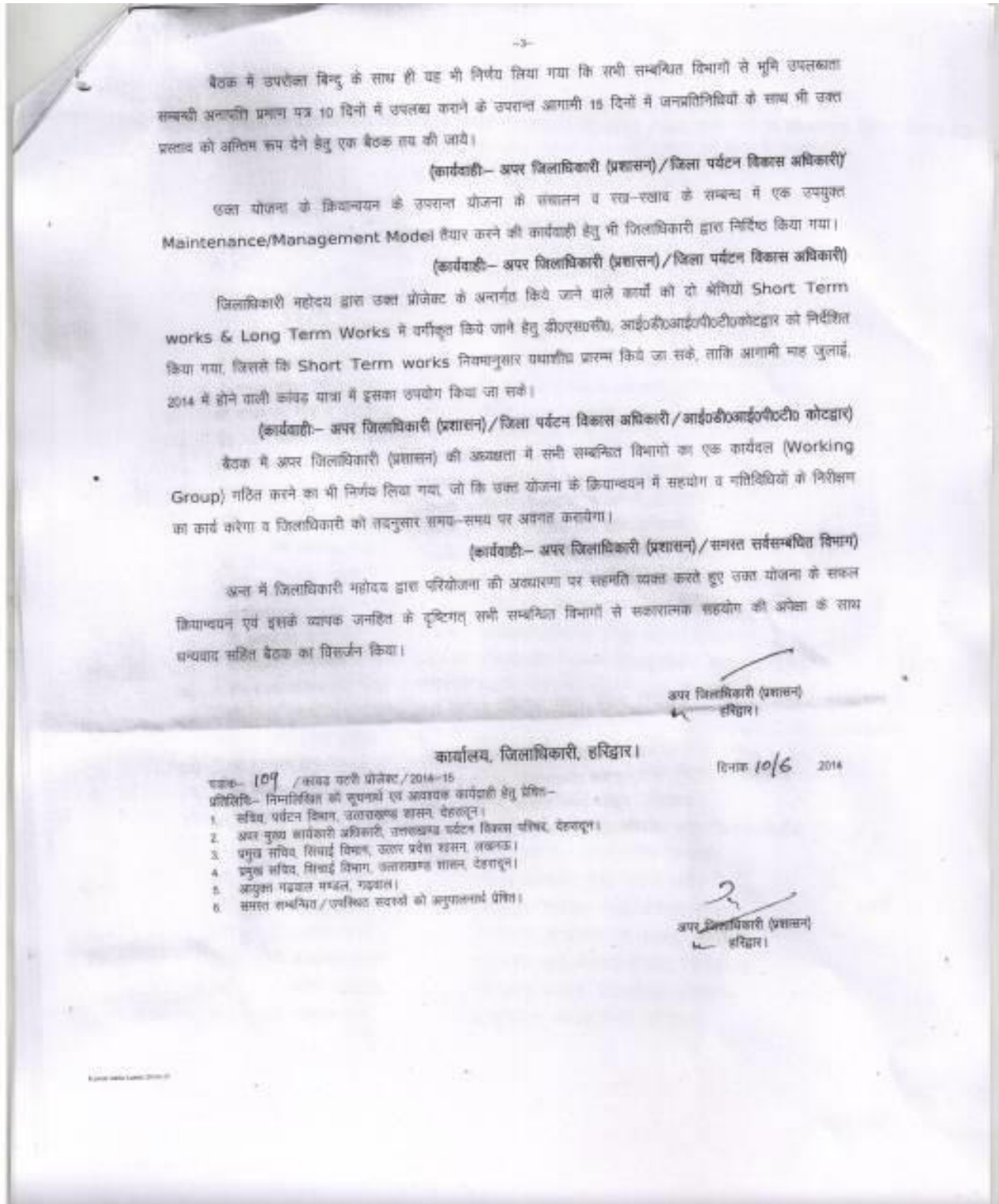
कांवड़ पटरी मार्ग पर सन्दर्भित योजना के क्रियान्वयन हेतु उ०प्र० सिंचाई विभाग से अनापत्ति चाहने पर बैठक में उपस्थित उ०प्र० सिंचाई विभाग के प्रतिनिधि उपखण्ड अधिकारी हैडक्वार्टर्स, हरिद्वार द्वारा उक्त कांवड़ पटरी मार्ग पर प्रस्तावित कार्यों हेतु सैद्धान्तिक सहमति के साथ-साथ इस मार्ग पर भारी मोटर वाहनों तथा व्यावसायिक वाहनों की आवाजाही रोकने हेतु अनुरोध किया गया तथा यह भी अपेक्षा की गयी कि कांवड़ पटरी मार्ग से लगी नहर के प्रस्तावित कार्यों से किसी प्रकार की क्षति न पहुँचे। उ०प्र० सिंचाई विभाग के प्रतिनिधि (S.D.O. Irrigation हरिद्वार) की राय पर डी०एस०सी० द्वारा स्पष्ट किया गया कि इस परियोजना में कांवड़ पटरी पर भारी वाहनों के आवाजाही हेतु कोई प्रावधान नहीं है, तथा जिलाधिकारी महोदय के निर्देशानुसार प्रस्तावित Sub-Project की प्रति उ०प्र० 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 कांवड़ पटरी Sub-Project Monitoring Committee द्वारा निर्देशित किया गया कि उक्त परियोजना में प्रस्तावित कार्यों हेतु 11 चिह्नित स्थलों पर होने वाले कार्यों को व्यावहारिकता तथा सम्बन्धित विभागों से अनापत्ति प्रमाण पत्र प्राप्त करने हेतु अपर जिलाधिकारी (प्रशासन) की अध्यक्षता में सम्पूर्ण कांवड़ पटरी मार्ग के भ्रमण हेतु सभी सम्बन्धित विभागों (उ०प्र० सिंचाई विभाग, उत्तराखण्ड सिंचाई विभाग, लोक निर्माण विभाग, विद्युत, जल निगम जल संस्थान, पर्यटन विभाग, उत्तर रेलवे) तथा एस०पी० सिटी व डी० नरेश चौधरी सहित टीम गठित कर यथासंभव सम्पूर्ण कांवड़ पटरी क्षेत्र का भ्रमण कर प्रस्तावित कार्यों व भूमि उपलब्धता के सम्बन्ध में यथारथान निर्णय लेकर तदनुसार सूचना उपलब्ध कराये।

(कार्यवाही:- अपर जिलाधिकारी (प्रशासन)/सिंचाई विभाग उ०प्र० एवं उत्तराखण्ड/लोकनिर्माण/विद्युत विभाग/जल निगम/जल संस्थान/पर्यटन विभाग/रेलवे/पुलिस/डी० नरेश चौधरी)

अनुरा-3-



Photographs and Signature Sheets of consultations

Consultation 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 MATH	Business	[Signature]	9897354143
2	Kashan Kumar	Business	[Signature]	9760977909
3	Singhania	Business	[Signature]	9837514672
4	31222	Business	[Signature]	989792667
5	Anjan Agarwal	Business	[Signature]	9897237676
6	MANOJ Sirohi	Shant Scout Guide Manager	[Signature]	9456365521
7	Vijendra Tivari A.S.	Shant Scouts Sec.	V.K. Tivari	9956562250
8	Dr. Rajkumar Sharma	medical officer	[Signature]	9897944421
9	Mr. Shiv Kumar Kanyal	Business	Shiv Kumar	9837222681
10	Suresh Gulami	Jila member	[Signature]	9837444455
11	Mr. Bhati	[Signature]	[Signature]	9927615186

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

Signature Sheet of Attendees of Consultations

[illegible]

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

Signature Sheet of Attendees of Consultations

[illegible]



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 Pedestrian Route

	
Movement of Kanwar – Along the Proposed Route	
	
Movement of Kanwar – Along the Proposed Route	
	
Movement of Kanwar – Along the Proposed Route	

Annexure 8

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	<input type="checkbox"/> * Male <input type="checkbox"/> * 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:	
<input type="checkbox"/> Note/Letter <input type="checkbox"/> E-mail <input type="checkbox"/> Verbal/Telephonic	
Reviewed by: (Names/Positions of Official(s) reviewing grievance)	
Action Taken:	
Whether Action Taken Disclosed:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Means of Disclosure:	