Draft Initial Environmental Examination

October 2014

IND: Infrastructure Development Investment Program for Tourism Tranche 3 –Development of Tourism Infrastructure in Kartikeya Swami (Uttarakhand)

Prepared by the Government of Uttarakhand for the Asian Development Bank

CURRENCY EQUIVALENTS

(as of 9 October 2014)

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

ABBREVIATIONS

ADB	-	Asian Development Bank
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
IA	-	Implementing Agency
IDIPT	-	Infrastructure Development Investment Program for Tourism
IEE	-	Initial Environmental Examination
IUCN	-	International Union for Conservation of Nature
MoEF	-	Ministry of Environment and Forests
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
UNESCO	-	United Nations Educational Scientific and Cultural Organization
UTDB	-	Uttarakhand Tourism Development Board
UUSDIP	-	Uttarakhand Urban Sector Development Investment Program
WLS	-	Wildlife Sanctuary

WEIGHTS AND MEASURES

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

NOTES

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

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EXECUTIVE SUMMARY

1. **Background:** The India Infrastructure Development Investment Program for Tourism (IDIPT) envisages environmentally and culturally sustainable and socially inclusive tourism development in the project 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 2 includes the states of Uttarakhand and Tamil Nadu. Executing Agency is the Tourism Department of the Government of Uttarakhand; and the Implementing Agency is the Project Management Unit (PMU) of the Uttarakhand Tourism Development Board (UTDB).

2. This Initial Environmental Examination (IEE) has been prepared for the sub-project namely "Development of Tourism Infrastructure in Kartikeya Swami in Rudrapryag District" as part of IDIPT Tranche 3 Uttarakhand. Kartikeya Swami (Murugan swami as known in Southern India). Temple amidst serene environs of Himalayas. The shrine is dedicated to Lord Shiva's son Kartikeya and is situated on a big rock atop the highest cliff around known locally as 'Swaminath danda' (Swaminath-Kartik swami, Danda-Mountain in Garhwali). It is at an altitude of 3050 m above the sea level, in Rudraprayag District of Himalayan state of Uttarakhand. While going to Kartikeya Swami temple from Rudraprayag, it is found that there is lack of tourism infrastructure such as; midway facilities, toilet facilities, parking, signage, tourist reception centre and tourist interpretation centre. Few significant places on the route such as Durga dhari temple and Tungeshwar Mahadev temple, where tourists stay and visit the places. Durga dhari temple is 18 Km from Rudraprayag and Tungeshwar temple is another 7 km away from Durga dhari.

3. Subproject will provide needed tourist infrastructure at Kartikeya Swami, Tungeswar and Durga dhari is to improve the environmental management and quality of the sites towards preserving their ecological and cultural integrity. The place Kartikeya Swami is famous due to only one temple of lord Kartikeya (Son of Lord Shiva) in India. The rest two temples i.e. of Tungeswar Mahadev and Durga dhari temples are famous since PANDAV period. These two temples are on the way of Kartikeya Swami. Thus, all these three temples have significant Heritage importance. The temple of Kartikeya swami is also KULDEVTA of 362 villages situated nearby. Local people have also shown interest in development in proposed activities.

4. **Executing and implementing agencies:** The executing agency is the Dept. of Tourism, UK. The implementing agency is Project Implementation Unit (PIU), to be supported by Design Supervision Consultant (DSC); Project Management Consultants (PMC) and in coordination with Project Management Unit (PMU). The asset owner is the District Tourism Officer. A team of technical, administrative and financial officials, including safeguards specialists, are provided at the PMU to implement, manage and monitor project implementation activities. The PIUs are staffed by qualified and experienced officers and responsible for the day-to-day activities of subproject implementation in the field, and are under the direct administrative control of the PMU. Consultant teams are responsible for subproject planning and management and assuring technical quality of design and construction; and designing the infrastructure and supervising construction; and safeguards preparation.

5. **Categorization:** The environmental impacts of the subproject are not significant and subproject is categorized as Category B, 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

6. **Subproject Scope:** The major scope of this subproject as per SAR (i) improvement of basic tourist infrastructure facilities at Kartikeya Swami Temple, Durga dhari Temple and Tungeshwar Mahadev Temple and providing other facilities in consultation with Village Panchayat, Temple Trust/Committees and Forest department and (ii) Construction of tourism interpretation Centre including facilities at Rudraprayag.

7. **Description of Environment:** Subproject components are located at village & forest areas and at high altitude. Both air and noise environment are at normal level. There is no natural habitat left at sub project sites. Kartikeya Swami temple is located within the Reserve Forest**.** No objection certificate (NOC) from the forest department will be required for Kartikeya Swami temple and approach road since the entire area is said to be "forest area" as per discussion held on 4.9.14 with forest department with Forest conservator of PMU. But Tungeswar and Durga dhari land belongs to Temple trust/ Mandir Samiti. It is confirmed that the land for the proposed Interpretation centre at Rudraprayag is free of any residential or commercial uses and that no temporary or permanent resettlement exist. The land belongs to GMVN for which they agreed to provide the area for construction of new Interpretation centre. 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.

8. **Environmental Management**: 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 includes (i) mitigation measures for adverse environmental impacts during (i) construction, (ii) implementation, (iii) 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.

9. Locations and siting of the proposed infrastructures were considered to further reduce impacts. The concepts considered in design of the subproject are (i) design, material and scale will be compatible to the local architectural, physical, cultural and landscaping elements; (ii) preference will be given to the use of local material and labour as best as possible; (iii) for conservation, local construction material available in the nearby region as best as possible suiting to those in existence; (iv) all painting (interior and exterior) will be with environment-friendly low volatile organic compounds paints; (v) for retaining wall repair works, random rubble masonry will be used, with locally available stone to be laid in cement mortar by local skilled labour; (vi) earth backfill, if any will be done from the site excavated material; and (vii) ensuring all planning and design interventions and decisions are made in consultation with local communities and reflecting inputs from public consultation and disclosure for site selection.

10. 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) quarry/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 built-up areas, and there are well developed methods for their mitigation. The project is relatively small in scale and involves straightforward construction, 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.

11. Few impacts both positive and negative are anticipated to be associated with the operation phase of the subproject. The positive impacts would help improve the condition of the temple, however well-developed mitigation measures to minimize negative impacts would be put in place. The safety of the tourists would be ensured and well developed safety measures and norms would be applied & practiced to minimize any risks.

12. Possible measures to reduce the amount of waste are the use of environmentally friendly and biodegradable products, for example no canned drinks, disposable bottles or packaged foodstuffs and avoidance of plastic packaging whenever possible; instead the use of containers, deposits on bottles etc - recycling of organic waste in the composting system of eating house - education of tourists in environmentally friendly behavior- education of staff.

13. Mitigation measures have been developed to reduce all negative impacts to acceptable levels. Mitigation will be assured by a program of environmental monitoring to be conducted during construction. The environmental monitoring program will ensure that all measures are implemented, and will determine whether the environment is protected as intended. It will include observations on- and off-site, document checks, and interviews with workers and beneficiaries. Any requirements for corrective action will be reported to the ADB.

14. The stakeholders were involved in developing the IEE through discussions on-site and public consultation, after which views expressed were incorporated into the IEE and in the planning and development of the subproject. The IEE will be made available at public locations in the town and will be disclosed to a wider audience via the ADB and Uttrakhand Tourism Development Board of Tourism websites. The consultation process will be continued and expanded during project implementation to ensure that stakeholders are fully engaged in the project and have the opportunity to participate in its development and implementation.

15. 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. After improvement of tourist facilities, number of tourists visiting Kartekya Swami temple will increase. Increase in the number of tourists will result in more business activities / livelihood

16. **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

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

18. **Conclusion and Recommendation:** The subproject is unlikely to cause significant adverse impacts. The potential adverse impacts that are associated with design, construction, and operation can be mitigated to standard levels without difficulty through proper engineering design and the incorporation or application of recommended mitigation measures and procedures. Based on the findings of the IEE, the classification of the Project as Category “B” is confirmed, and no further special study or detailed EIA needs to be undertaken to comply with ADB Environment Policy (2002) or Government of India (GoI) EIA Notification (2006).

I. INTRODUCTION

A. Background

1. The India Inclusive Tourism Infrastructure Development Project (IITIDP) envisages an environmentally and culturally sustainable and socially inclusive tourism development, in the project states of Himachal Pradesh, Punjab, Tamil Nadu and Uttarakhand. The expected Impact of the Project in the four states is sustainable and inclusive tourism development in priority State tourism sub circuits divided into marketable cluster destinations that exhibit enhanced protection and management of key natural and cultural heritage tourism sites, improved market connectivity, enhanced destination and site environment and tourist support infrastructure, and enhanced capacities for sustainable destination and site development with extensive participation by the private sector and local communities.

2. Uttarakhand comprises of 13 districts that are grouped into two regions (Kumaun and Garhwal) and has a total geographical area of 53,484 sq. km. The economy of the State primarily depends on agriculture and tourism. The State is home to some of the most important pilgrimage centres known as the “Char-Dham”, i.e. the Gangotri, Yamunotri, Kedarnath and Badrinath, all of which are situated in the northern region. The state receives over 32 million tourists annually, a majority of whom visit the state during the peak summer season (May-July) for pilgrimage and recreation. About 90% of passenger and freight traffic in the State of Uttarakhand moves by road. Rail services offer freight and passenger connections to the neighboring states through four rail heads in the State's southern low-lying plain region. The hilly and mountainous terrain that covers more than 90% of the State's land area would preclude the development of railway infrastructure catering to intrastate services. The overall road network in the State is 31929 km. The rich natural and cultural attractions of the state offer tremendous potential for tourism development. Accordingly tourism has been given high priority by the government of Uttarakhand since the creation of the state.

3. The India Infrastructure Development Investment Program for Tourism (IDIPT) envisages an environmentally and culturally sustainable and socially inclusive tourism development, in the project state of Uttarakhand.

4. The project uses a sector loan approach through a multi tranche financing facility modality likely in five tranches planned from 2011-2020. The expected impact of the Project in the state is sustainable and inclusive tourism development in priority State tourism sub circuits divided into marketable cluster destinations that exhibit enhanced protection and management of key natural and cultural heritage tourism sites, improved market connectivity, enhanced destination and site environment and tourist support infrastructure, and enhanced capacities for sustainable destination and site development with extensive participation by the private sector and local communities.

5. The investment program outputs will be (i) improved basic urban infrastructure (such as water supply, sanitation, road and public transport, solid waste management, and environmental improvement) and incidental services (such as public toilets, street signage and lighting) at existing and emerging tourist destinations and gateways; (ii) improved connectivity to tourist attractions focusing on the improvement of last-mile connectivity; (iii) enhanced quality of natural and cultural tourist attractions to ensure convenience and safety for visitors; (iv) greater participation by local communities in tourism-related economic and livelihood activities; and (v) strengthened capacity of concerned sector agencies and local communities for planning, development, management, and marketing of tourist destinations and attractions, and promoting private sector participation and small businesses.

Location

6. The Propsed project is located at Rudraprayag District. Rudraprayag is located at WikiMiniAtlas30°17′N 78°59′E / 30.28°N 78.98°E / 30.28; 78.98. It has an average elevation of 895 metres (2,936 feet). Rudraprayag is a town and a municipality in Rudraprayag district in the Indian state of Uttarakhand. Rudraprayag is one of the Panch Prayag (five confluences) of Alaknanda River, the point of confluence of rivers Alaknanda and Mandakini. Kedarnath, a Hindu holy town is located 86 km from Rudraprayag. It is one of the most beautiful regions in the world, rich in deodar, pine, oak, spruce and Himalayan fir trees.

7. Rudraprayag lies on national highway NH 58 that connects Delhi with Badrinath and Mana Pass in Uttarakhand near Indo-Tibet border. Therefore all the buses and vehicles that carry pilgrims from New Delhi to Badrinath via Haridwar and Rishikesh in pilgrim season of summer months pass through Rudraprayag on the way to Joshimath and further north. Rishikesh is the major starting point for road journey to Rudraprayag and regular buses operate from Rishikesh bus station to Rudraprayag. The road distance from Rishikesh to Rudraprayag is 141 km (88 mi) via Devprayag and Srinagar.

8. Rudraprayag District was established on 16th September 1997. The district was carved out from the following areas of three adjoining districts, a) Whole of Augustmuni & Ukhimath block and part of Pokhri & Karnprayag block from Chamoli District, b) Part of Jakholi and Kirti nagar block from Tehri District., c) Part of Khirsu block from Pauri District. As of 2011 it is the least populous district of Uttarakhand (out of 13).

9. According to the 2011 census Rudraprayag district has a population of 236,857. This gives it a ranking of 585 th in India (out of a total of 640). The district has a population density of 119 inhabitants per square kilometer (310 /sq m). Kartikeya Swami temple is the only temple dedicated to lord Murugan or Kartikeya in Uttarakhand. Kartikeya Swami is coming under Uttrakhand Tourism Zone 3.

Present Status

10. The sub project area falls under Rudraprayag District and it is includes three destination points. As mentioned above, regarding three destinations point in circuit of Kartikeya Swami Circuit. The sub – project envisages improvement of basic tourist infrastructure facilities at Kartikeya Swami Temple, Durgh dhari Temple and Tungeshwar Mahadev Temple and providing other facilities in consultation with Village Panchayat, Temple Trust/Committees and Forest department. The sites are important to be developed for the following reasons:

- ✓ Currently facing lack of world-class infrastructure.
- ✓ Need to create more economically vibrant and environmentally sustainable area.
- ✓ At present un- managed and non- clean site.
- ✓ To bring the destination on world map as popular destinations
- ✓ To Strengthen our cultural significance
- ✓ Enhance quality of life and environment.
- ✓ Promote tourism in the areas
- ✓ Create awareness among the locals, Indians and foreigners

11. Location of Kartekya Swami temple is within the reserve forest. No objection certificate from the forest department will be required for Kartekya Swami temple and approach road since the entire area is said to be “forest area” as per discussion held with forest department on 4.9.14 with Forest conservator of PMU. But in case of Tungeswar and

Durga dhari land belongs to Temple trust/ Mandir Samiti and NOC are enclosed in **Annexure 1.** It is confirmed that the land for the proposed Interpretation centre at Rudraprayag is Govt. land and free of any residential or commercial uses, hence no temporary or permanent resettlement exist.

12. The expected impact of the Project is sustainable and inclusive tourism development in and around Kartikeya Swami Temple that exhibit enhanced protection and management of temple, improved market connectivity, enhanced destination and site environment and tourist support infrastructure, and enhanced capacities for sustainable destination and site development with extensive participation by the private sector and local communities.

13. 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 'Development of Tourism Infrastructure in Kartikeya Swami " 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. The IEE was based on a review of sub-project site plans and reports; field visits, and secondary data to characterize the environment and identify potential impacts; and interviews and discussions with stakeholders. Based on the findings of the IEE, an Environmental Monitoring Plan has been prepared, outlining the specific environmental measures to be adhered to during implementation of the sub-project. The REA checklist and environmental selection criteria as per EARF have been given in **Annexure 2** and **Annexure 3** respectively.

B. Purpose of the IEE

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

C. Environmental Regulatory Compliance

15. The realm of environmental regulations and mandatory requirements for the proposed sub-project is shown in **Table 1**. The Environmental Impact Assessment (EIA) notification, 2006 by the Ministry of Environment and Forests (MoEF, GoI) specifies the mandatory environmental clearance requirements. Accordingly, all projects and activities are broadly categorized into two categories[1] - Category A and Category B, based on the spatial

[1] All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, will require prior environmental clearance from the Central Government in the Ministry of Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification; All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfil the General Conditions (GC) stipulated in the Schedule, *will* require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In addition, General Condition (GC) of the notification specifies that any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life Protection) Act, 1972, (ii) Critically Polluted areas

extent of potential impacts and potential impacts on human health and natural and man-made resources. Given that the sub-project is not covered in the ambit of the EIA notification, Environment clearance requirements from the GoI are not triggered.

Table 1: Environmental Regulatory Compliance

Sub-Project	Applicability of Acts/Guidelines	Compliance Criteria
Kartikeya Swami, Tungeswar and Durga dhari Temple	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impacts.	The sub-project is not covered in the ambit of the EIA notification as this is not covered either under Category A or Category B of the notification. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the GoI is not triggered. **Not Applicable**
	The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the rules, 1959 provide guidance for carrying out activities, including conservation, construction and reuse in and around the protected monuments.	The site of Kartikeya Swami Temple is not close to any ASI protected monument. Hence no permission is needed from ASI. **Not Applicable**
	Water (Prevention and control of pollution) Act, 1974 and Air (prevention and control of pollution) Act, 1981	Consent for Establishment (CFE) and Consent for Operation (CFO) from the Uttarakhand PCB for all sub-projects requiring, setting up of hot mix plants, wet mix plants, stone crushers and diesel generators.
	The Wildlife Conservation Act, 1972, amended in 2003 and 2006, provides for protection and management of Protected Areas.	No wildlife protected area nearby. **Not Applicable**
	Forest (Conservation) Act, 1980	This act provides guidelines for conservation of forests and diversion of forest land for non-forest use. The law also states guidelines on de-reservation of various categories of forests for diversion of forest land. This law describes the penalty for contravention of the provisions of the Act. Restriction on the de-reservation of forests or use of forest land for non-forest purpose. If forest land is to be acquired for the project, the Forestry Clearance needs to be taken. **Applicable, NOC is required from State Forest Department** In the current case Kartikeya Swami Temple and pathway are located in Reserve Forest area, For tourism infrastructure creation NOC is required from Forest Department.
	ADB's Safeguard Policy Statement, 2009	Categorization of sub-project components into A, B, C, FI and developing required level of environmental assessment for each

as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries

Sub-Project	Applicability of Acts/Guidelines	Compliance Criteria
		component. **Project is categorized as B (Ref Annexure 2)**

16. The above Table 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 or GoUK are not envisaged.

17. 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 categorizes the proposed components into categories (A, B or C) to determine the level of environmental assessment[2] 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 2** with this report. The sub-project has been categorized as B. Accordingly this IEE is prepared to address the potential impacts, in line with the recommended IEE content and structure for Category B projects. The IEE was based mainly on baseline data generation on environmental parameters and secondary sources of information and field reconnaissance surveys. Stakeholder consultation was an integral part of the IEE. An Environmental management plan (EMP) outlining the specific environmental measures to be adhered to during implementation of the sub-project has been prepared.

D. Review and Approval Procedure

18. 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.

E. Report Structure

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

[2] As per SPS 2009 projects are assigned to one of the following four categories: (i) **Category A.** A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required. (ii) **Category B.** A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination is required. (iii) **Category C.** A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed (iv) **Category FI.** A proposed project is classified as category FI if it involves investment of ADB funds to or through a FI (paras. 65-67).

II. DESCRIPTION OF PROJECT COMPONENTS

A. Assessment of Exiting Situation

Project Location

20. The sub project area falls under Rudraprayag District and it includes three destination points such as Kartikeya Swami Temple, Durgha dhari Temple and Tungeshwar Mahadev temple. The sub project envisages improvement of basic tourist infrastructure facilities at Temple and providing other facilities in consultation with Village Panchayat, Temple Trust/Committees and Forest department.

Durga Dhari Temple

21. The temple is a great place of Shiva and Shakti. Lot of people believes in the place. There is a myth about the temple that in past a cow from Chamak village did not used to give milk to her owner but go to a place of Devi, where her milk used to automatically flow over a shrine. After many days the owner followed her to notice about what's happening, after seeing that the milk had flown to the shrine but not given to the owner, he got angry and beaten the cow with a stick. Soon after this a Shivlinga appeared at the place and there was an evidence of breakage in the linga. The cow then rubbed herself and a water jet immerged there that destroyed the whole Chamak village. The villagers then understood their fault and confessed before the Devi, and then the village again developed and settled. The main temple is approx. 500 m. above from the ground level and is located on the way to Tungeshwar temple.

Tungeshwar Temple at Phalasi Village

22. Tungeshwar is a Village in Tharali Tehsil in Chamoli District of Uttarakhand State, India. It is located 48 km towards South from District headquarters Chamoli Gopeshwar. 167 km from State capital Dehradun. Tungeshwar is surrounded by Dewal Tehsil towards East, Narayan bagar Tehsil towards west, Gairsain Tehsil towards west, Ghat Tehsil towards North. Almora, Pauri , Nainital , Ramnagar are the nearby Cities to Tungeshwar. This Place is in the border of the Chamoli District and Pauri Garhwal District. The main temple is approx. 1500 m from main road.

Kartikeya Swami Temple at Kanak Chauri Village

23. Kartikeya Swami temple is only 40km from Rudraprayag on Rudraprayag - Pokhari route. Kartikeya Swami temple is located near Kanak Chauri village on Rudraprayag – Pokhari route in the Rudraprayag district of Uttarakhand. A mild 3 km trek from Kanak Chauri village takes one to the stunning beauty of Kartikeya Swami temple. Some stretch of it passes through the Rhododendron forests with Himalayan scenic beauty.

24. On the way there are some other famous shrines too, some of them are Nari devi temple in village Nari, tilted at angle of almost 30 degree, and Lord Tungeshwar temple in village Falasi. The same road is connected to Badrinath highway via Pokhri and meets it at Karanprayag also it connects to Kedarnath highway at Banswada via Mohankhal and Chandannagar.

25. Kartikeya Swami (Murugan swami as known in Southern India) Temple amidst serene environs of Himalayas. The shrine is dedicated to Lord Shiva's son Kartikeya and is situated on a big rock atop the highest cliff around known locally as 'Swaminath danda' (Swaminath-Kartik swami, Danda-Mountain in Garhwali).It is at an altitude of 3050 m above the sea level, in Rudraprayag District of Himalayan state of Uttarakhand. This is only temple dedicated to lord Murugan or Kartikeya in Uttarakhand and one of only few in whole Northern India. There is a Bhairon temple just 100 meters before Kartikeya swami. According to Hindu mythology, Lord Shiva (the destroyer) told his sons Ganesha and Kartikeya that one of them, who will be the first to take seven rounds of the universe, will have the privilege of being worshiped first.

26. Ganesha took seven rounds around Shiva and Parvati, while Kartikeya faithfully circled the universe. Impressed by Ganesha, Shiva gave him the honour of being worshipped before anyone. Angered by this, Kartikeya sacrificed his body and gave his bones to Lord Shiva as reverence. Chaukhamba peaks, Kedarnath peak are clearly visible from here.

Interpretation centre at Rudraprayag

27. Heritage interpretation is the communication of information about, or the explanation of, the nature, origin, and purpose of historical, natural, or cultural resources, objects, sites and phenomena using personal or non-personal methods. Interpretation refers to the full range of potential activities intended to heighten public awareness and enhance understanding of natural, cultural heritage sites. These can include print and electronic publications, public lectures, on-site and directly related off-site installations, educational programs, community activities, and ongoing research, training, and evaluation of the interpretation process itself.

28. Infrastructure development of interpretation centre at Rudraprayag is necessary because it is a gateway to pilgrimage tourism. In Rudraprayag tourist used to come to visit mainly Chardham yatra, Hemkund Sahib etc. destinations as well as to see valley of flowers. But, Rudraprayag also has potential to natural, heritage and cultural tourism. It is confirmed that the site of proposed Interpretation Centre at Rudraprayag is free of any residential or commercial uses and that no temporary or permanent resettlement exists.

29. Photo illustration of project sites attached as **Annexure 4.**

B. Proposed Subproject component:

30. The index map of the entire subproject sites is shown in **Figure-1**. Location of project site in satellite image is shown in **Figure 2**. Preserving the temple structure and upgrading the facilities to world class standards will ensure increase in the number of tourists. Thus investing in the tourism industry of the region will help in generating more revenue on the

other side. Apart from the restoration projects, the component of the project that deals with the upgrading of tourist facilities in Kartikaya swami, Tungeswar and Durga dhari in Rudraprayag of Uttarakhand Tourism Action Plan. Appropriate re-designing and planning is required to retain the heritage of the temple complexes, along with accommodation for new spatial requirements of the increasing numbers of visitors.

Proposed sub Project Component:

- **Kartikeya Swami Temple**

  - Improvement of pathway with local stone and fixing stone on natural ground and filling the joints between stone with PCC (1:2:4) for complete item. 3 Km length and 1.5 m wide (Subject to permission from forest department)
  - Railing with railing post grouted in (300mm x 300mm x 300mm) (CM mix 1:2:4) along the pathway on one side 3 Km length (Subject to permission from forest department)
  - Development of View points (4 Nos.) along the pathway and Vyas Gufa (Subject to permission from forest department)
  - Development of Rest Shade (6 Nos.) on the pathway (3 m x 4.50 m) (Subject to permission from forest department)
  - Development of breast wall length 2000 mtr x 750 mm wide (Average 1.5 m height) (Subject to permission from forest department)
  - Development of Retaining wall 3 mtr height and 450 m length. (Subject to permission from forest department)
  - Repair works for the roofs and existing structures (Slate roof repair, outer plaster ,three coat water proof paint, water proofing of roof, wooden rafter replacement wherever needed)
  - Seating arrangement near temple at available space & in between Dharamshala & temple.
  - Stone benches within the temple complex (Existing Repair & new)
  - Signage at strategic places –both informative and directional in between main road to temple complex.
  - Toilet facilities with Bio- Digestible Septic Tank (6 Nos.) (2+2) near Dharamshala & 2 on the pathway.
  - Landscaping of the entrance areas near main road
  - Restoration of Temple premises (Railing, floor, Step etc.) on the pathway in between Bhairon temple & main temple.
  - Entrance arch development near main road.
  - Site development of camping site
  - Solar lighting near temple & along pathway (15 Lighting)
  - Providing dustbins etc. for systemizing the solid waste management.

- **Durga dhari Temple**

  - Approach area development and improvement of CC road from main road to temple premises 500 m length & 3.75 m wide with railing and area before gate.
  - Development of Entrance Gate of the temple at main road.
  - Parking facility and vehicular approach 600 Sqm near temple premise.
  - Construction of Retaining walls 2 m height and 300 m length RR masonry for pathway of approach to guest house
  - Protection wall for parking area near steps of temple. 2.50 m height and 200 m length
  - Providing dustbins etc. for systemizing the solid waste management.

- Improvement of pathway from main road to temple with local stone and fixing of local stone on and filling the joints between stone with c.m. mortar (1:2:4) 300 m length and 1.5 m wide
- Railing with railing post grouted in (300mm x 300mm x 300mm) (CM mix 1:2:4) along the pathway on one side 300 m length
- Signage Work (20 Signage) (Informative & directional)along pathway ,temple complex & near parking
- Seating Arrangement near Temple (20 Sitting)
- Solar lighting near temple & along pathway (10 Lighting)
- Temple entrance arch improvement by stone facing & write up
- Improvement of the temple complex in terms of restructuring of the newly added temporary structures.
- Landscaping work to facilitate better movement in and around temple premises
- Space development for gathering of pilgrims and tourists near temple and paving in local stone.
- New lodging facilities with rooms (Area 450 Sqm) behind temple compound.
- Furniture for lodging facility
- Toilet block at the rear side of the temple complex
- Construction of langar hall 100 sqm (dismantling existing & relocating at suitable place).
- Area confinement with edge wall. Near lodging & langar hall.
- Viewing deck (3 nos.) around temple complex.
- Revival of the rain water harvesting tank .(2 nos.)
- Restoration & renovation of Temple structure outside the existing temple.
- Electrification work in temple complex, parking, gate and langar hall.

❖ **Tungeswar Temple:**

- Entrance area development i.e. pathway improvement from main road to temple gate wherever required by providing PCC, railing etc.(1.5 km length & 1.5 m wide)
- Signage Work (informative signage) along the pathway & near the temple.
- Development of parking facility at Chopta.
- Development of Seating arrangements near temple & along pathway.
- Development of viewing decks (3 nos. for complete item.) near temple premises.
- Development of toilet facilities along pathway & behind temple complex.
- Improvement in the temple precinct
- Restoration and Improvement of Lodging facilities behind temple.
- Development of langar hall 100 sqm along pathway.
- Improvement in the drinking water public stand posts
- Solar lighting(15 Nos.) along the pathway & temple premises
- Entrance gate development outside temple.(2 nos.)
- Development of Chabutra (Platform) outside temple complex
- Providing dustbins etc. for systemizing the solid waste management.

❖ **Interpretation Centre in Rudraprayag District:**

- Construction of tourism interpretation Centre including with parking (50 Cars), Auditorium (100 Persons), Conference Hall (30 Persons), information centre, waiting hall etc.(Area approx. 2700 Sqm) with solar energy panels including consultancy for interrelating item if required.
- Audio Video auditorium 50 persons sitting with 4D
- Provision of acoustic services & peripheral installation
- Furniture in auditorium, conference hall display shop, waiting area, canteen and information centre

- Internal Electrification of premises interpretation centre with HVAC
- Provision for L.T. Line, removal of existing transformer and provision for new transformer to be paid to Vidyut Company.
- Beautification of Interpretation centre building & existing TRH
- Protection wall & façade improvement of existing TRH and integration with interpretation centre
- Fire fighting services for interpretation centre Solar panels for geyser.

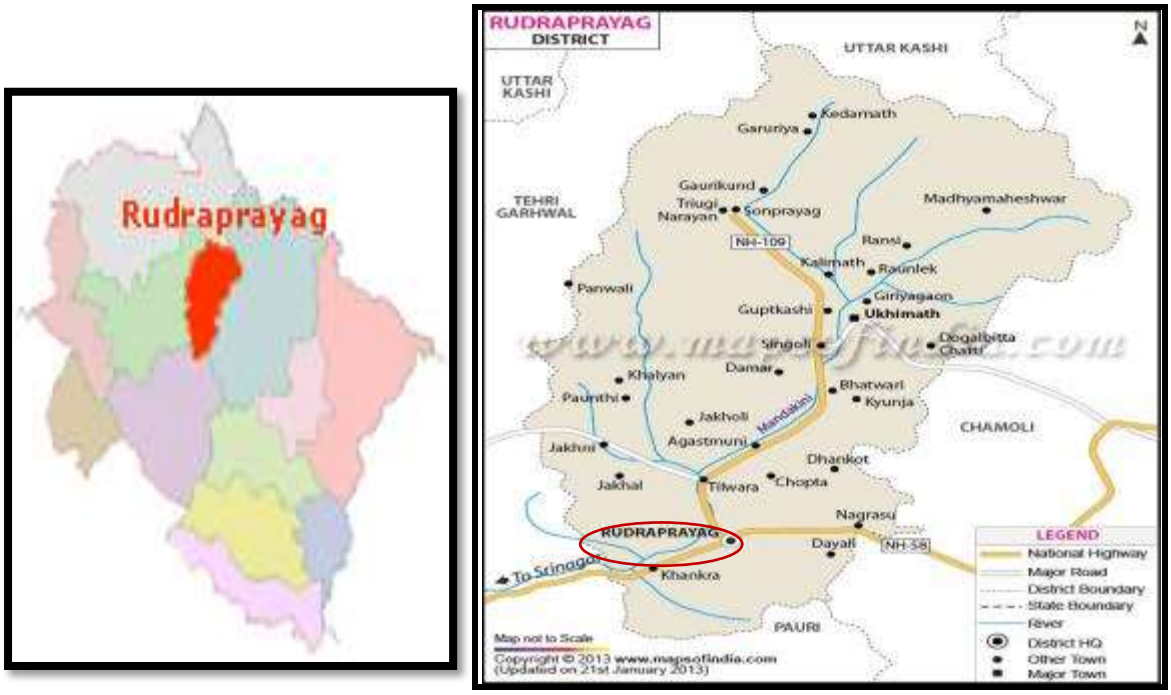


Figure 1: Rudrapraya District map showing the subproject sites

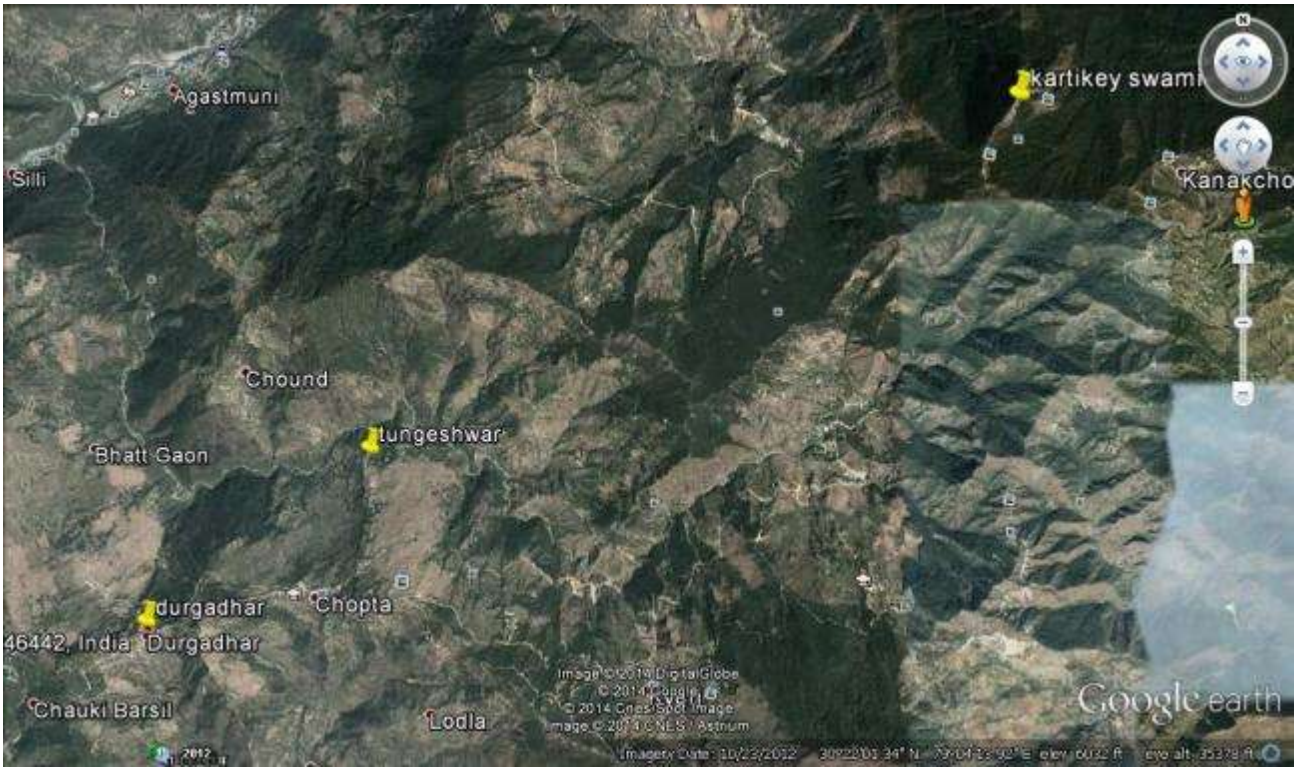


Figure 2: Location of Project Site in Satellite image

C. Implementation Schedule

31. The implementation period for the proposed subproject is 24 months. SAR preparation was started in January 2014 and detailed design to be started in September 2014. Construction of all elements will begin in March 2015, and work will be completed in March 2017.

III. DESCRIPTION OF THE EXISTING ENVIRONMENT

32. 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 Meteorological Department.

A. Environmental Profile

Air and Noise Quality

33. The air pollution level is well within the permissible limits because there are no major sources of pollution in the region. No point or non-point sources of air pollution were observed during the survey period. It was observed that the traffic on the roads is too low to cause unbearable air pollution due to vehicular exhaust. Finally, there are no industries recorded in or around the project site and hence any other source of atmospheric air pollution is not expected.

34. It was observed that ambient noise scenario in the study area is quite low in general. There are no industrial enterprises in and around the project area. As the traffic density is

very low, the noise either from point or nonpoint sources is not expected in the project area. Moreover, there will be not much rise in the noise impacts due to the proposed activities, which are not major. Practically there are no major settlements near the proposed site.

Climate

35. The elevation of the district ranges from 800 m. to 8000 m above sea level. The climate of the district depends on altitude. The winter season is from mid November to March. As most of the region is situated on the southern slops of the outer Himalayas, monsoon currents can enter through the valley, the rainfall being heaviest in the monsoon from June to September.

Rainfall

36. Most of the rainfall occurs during the period June to September when 70 to 80 percent of the annual precipitation is accounted for in the southern half of the district and 55 to 65 percent in the northern half. The effectiveness of the rains is, among others, related to low temperature which means less evapotranspiration and forest or vegetation cover. However, the effectiveness is neither uniform nor even positive in areas where either the vegetation cover is poor or / and has steep slopes or the soils have been so denuded that their moisture absorption capacity has become marginal.

Temperature

37. The details of temperature recorded at the meteorological observatories in the district show that the highest temperature was 34^0C and lowest below 0^0C. January is the coldest month after which the temperature begins to rise till June or July. Temperature varies with elevation. During the winter cold waves in the wake of western disturbances may cause temperature to fall appreciably. Snow accumulation in valleys is considerable.

Humidity

38. The relative humidity is high during monsoon season, generally exceeding 70% on the average. The driest part of the year is the pre monsoon period when the humidity may drop to 35% during the afternoon. During the winter months humidity increases toward the afternoon at certain high stations.

Cloudiness

39. Skies are heavily clouded during the monsoon months and for short spells when the region is affected by the passage of western disturbances. During the rest of the year the skies are generally clear to lightly cloud covered.

Winds

40. Owing to the nature of terrain local affect are pronounced and when the general prevailing winds not too strong to mask these effect, there is a tendency for diurnal reversal of winds, the flow being anabatic during the day and katabatic at night, the latter being of considerable force.

River- Surface water

41. The river Mandakini, which is the most important river coming down from the slopes of Kedarnath peak, joins the Alaknanda (the alaknanda originates at a height of 3641 m below Balakun peak 16 km upstream from Badrinath.) at Rudraprayag. The river actually originates from the springs fed by melting snow of Charabari glacier about one km above Kedarnath temple. Mandakini is itself fed by Vasukiganga, which meets it at Sonprayag 16 km down-stream from Kedarnath. The fact is that the main rivers of the Himalaya are older than the mountains they traverse. This is why they flow right across the axis of the ranges through deep gorges carved out by the river themselves. All the rivers of the district are

snow fed. As the water levels of the rivers are much below the arable land levels, the rivers cannot be generally used for irrigation purposes. No river is located near the project site.

B. Biological Environment:

Forests

42. In the warm valleys of the extreme southern part of the district some species of the trees of the plains such as mango, jamun, pipal, banyan and shisham grow here and there up to an altitude of about 915 m. The 'Sal' which is found up to a height of 1220 m., is seldom seen north of the river Pindar but it is usually not allowed to stand near cultivated tracts because it is said to attract white ants. The Tun and the Kharik, or Kharak are to be seen growing up to an elevation of about 1250 m, which is also suitable for the growth of haldu and dhauri. Carefully protected by the cultivator on the pugar (terrace wall of the field), the leaves of the bhyunl tree afford excellent fodder for the cattle.

43. In the Alaknanda valley, the bases, slopes, gorges and tops of the hills up to the height of 1067 m are well wooded with high trees such as catechu, bahera, har(or harara), amaltas, bel, kachnar and dhak. A large variety of creepers some of which have broad green leaves also thrive I in the vicinity of the trees.

44. From about 1220 m to 1829 m, Chir abounds and above this level oak and chimul are found, the former being a hard wood, is used for making agricultural implements and the latter for fuel. The Chir wood is commonly used for building purposes in the district, and its logs and sleepers are floated down the Alaknanda to the plains. Chir is also tapped for resin but quantity of turpentine produced in the district is small.

45. Above an elevation of 3439 m. Moru or Tilonj and Kharasu grow and their timber is also used for manufacturing agricultural implements. The pangar or horse chestnut and the maple are found up to a height of 3048 m., especially in the Riniganga valley. The wood of the latter is used for making drinking vessels and bowls known as lahauri-doba.

46. Kartikaya Swami temple is under Reserve forest area so NOC is required from forest department. For construction activity no trees will be cut. Forest cover map of Uttarakhand is shown in **Figure 3**.

47. 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.

48. 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 of state. There are no protected areas (PAs) in 10 Km radius of the proposed sub project site.

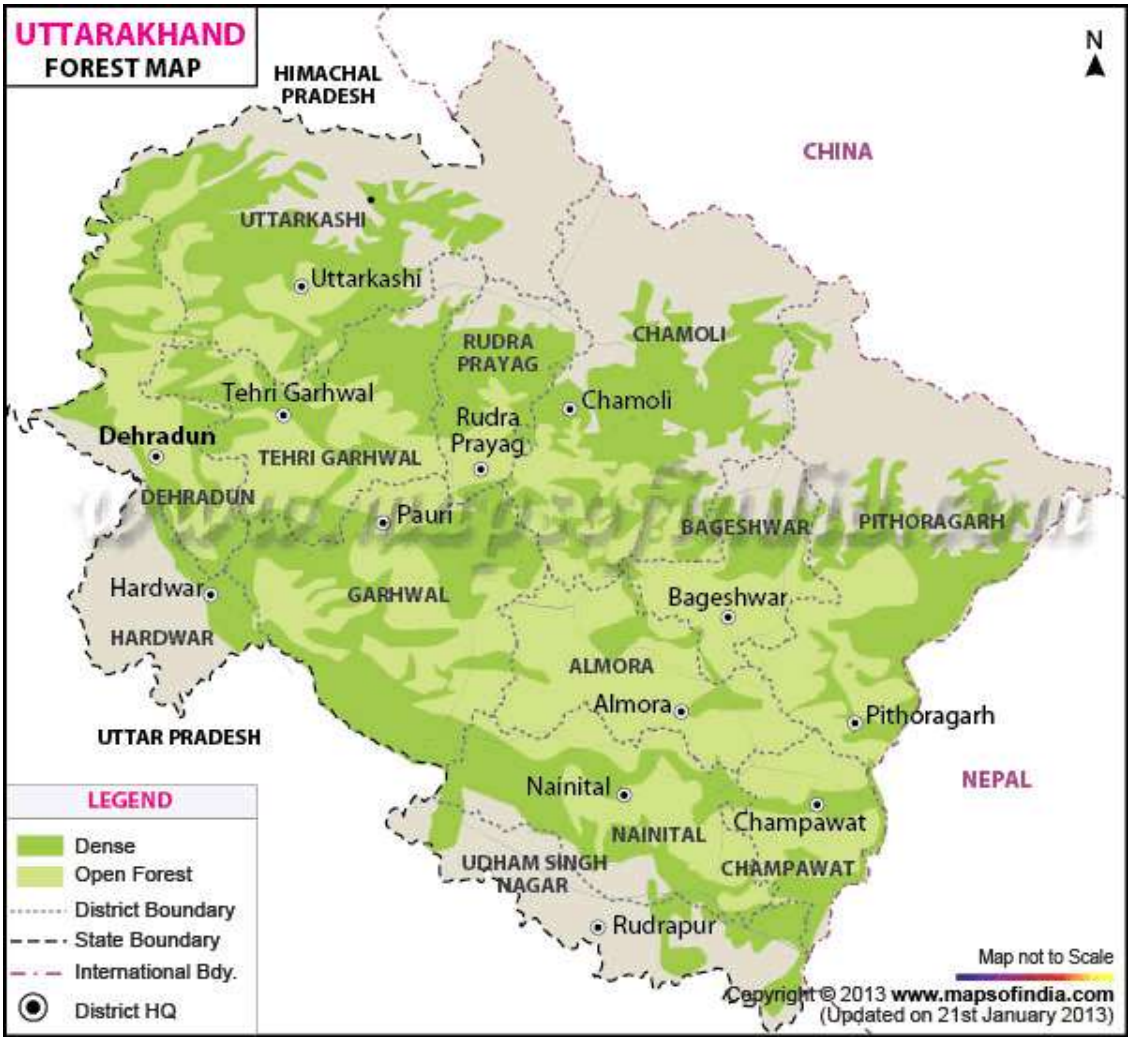


Figure 3 Forest Cover Map of Uttarakhand,
Source: http://www.mapsofindia.com/maps/uttaranchal/uttaranchal-forest-map.htm

Protected Areas

49. 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 -2.**

Table: 2 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

Sl. No	National Park	Year of Establishment	Area (sq.km)	District
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.

50. The tourist arrival data for Rudraprayag district is given in **Table 3**. It is noted that tourist arrival has increased gradually.

Table 3: Tourist Arrival Data for Rudraprayag District for the Years 2007 to 2012

S. No.	Year	Indian	Foreign	Total
1	2007 (January 01, 2007 to December 31, 2007)	851237	14389	865626
2	2008 (January 01, 2008 to December 31, 2008)	867869	14793	882662
3	2009 (January 01, 2009 to December 31, 2009)	871827	15329	887156
4	2010 (January 01, 2010 to December 31, 2010)	898505	16103	914608
5	2011 (January 01, 2011 to December 31, 2011)	912909	20533	933442
6	2012 (January 01, 2012 to December 31, 2012)	964380	15899	980279

Source: District Tourism Development Office, Rudraprayag.

C. Economic Resources

Industries

51. The State has very few industrial units mainly because of lack 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.

52. Rudraprayag has very few industries as industrial development here is still in its infancy stage. There is no large scale Industries or Public Sector undertakings in entire Rudraprayag district. Micro and small enterprises and artisan units exit in the District.

Infrastructural Facilities

Transportation

53. Rudraprayag is connected with Uttrakhand and rest of India through road network. National Highway 58 runs parallel to the North Western part of the Rudraprayag and connects it to rest of the world. Rudraprayag is also well connected by air transportation and railway line with entire country. Nearest Airport and railway station is Jolly Grant and Rishikesh railway Station respectively. Rudraprayag lies on national highway NH 58 that connects Delhi with Badrinath and Mana Pass in Uttarakhand near Indo-Tibet border. Therefore all the buses and vehicles that carry pilgrims from New Delhi to Badrinath via

Haridwar and Rishikesh in pilgrim season of summer months pass through Rudraprayag on the way to Joshimath and further north. Rishikesh is the major starting point for road journey to Rudraprayag and regular buses operate from Rishikesh bus station to Rudraprayag. The road distance from Rishikesh to Rudraprayag is 141 km (88 mi) via Devprayag and Srinagar.

Landuse

54. That majority of the district is under forest cover followed by land under cultivation and land under non-agricultural use. Together these three land use categories account for 94% of the total area. The cultivable barren land, total fallow land (current fallow and other fallow), pasture and other grazing land and land under gardens, bushes, groves etc. account for only 5%, which indicate that apart from the forest cover, remaining areas are primarily utilised for agricultural use.

55. The proposed subproject site at Rudraprayag is located government owned land which belongs to community and its implementation will not require any change in the existing land use pattern. The copy of letter from community mentioning no objection in handing over the land to Department of Tourism, GoUK is placed in **Annexure 1.** Construction of tourism interpretation Centre at GMVN TRH campus in Rudraprayag District including with parking (50 Cars), Auditorium (100Persons), Conference Hall (30 Persons) information Centre, audio video auditorium (50 persons)acoustic services, canteen, waiting hall etc. (area approx. 2700 Sqm) with solar energy panels. It is confirmed that the land for the proposed Interpretation centre is free of any residential or commercial uses.

Agricultural Development

56. Agriculture is the main occupation of the people. However, intensive cultivation is not possible as major part of the district is mountainous. Agricultural activities are common on gentle hill slopes and in relatively plain, broad river valleys of Bhagirathi, Bhilangana and Alaknanda basins. Rice, wheat, mandua, barley, maize and sawan are the principal crops grown in the district. Wheat is the major crop grown in 26962 ha (47.97% of the net sown area) followed by sawan (17488 ha), mandua (14630 ha) and rice (12642 ha). Apart from this, other important crops sown in the district are barley (2620 ha), maize (1641 ha) and urad dal (1524 ha).

Power source

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

D. Social and Cultural Resources

Population and Communities

58. According to the 2011 census Rudraprayag district has a population of 236,857.This gives it a ranking of 585th in India (out of a total of 640). The district has a population density of 119 inhabitants per square kilometer (310 /sq m).

Archaeological Resources

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

IV. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A. Land Acquisition and Resettlement Impacts

60. The sites of subproject components are government-owned land thus will not require land acquisition. Kartikeya Swami temple land belongs to forest department, so NOC is required from forest department and in case of Tungeswar and Durga dhari temple land belongs to Temple Trust, for which NOC is already obtained. Temporary impact is expected for Kartikeya Swami Sub-project which deals under Resettlement Plan.

B. Environmental Impacts

61. The assessment of environmental impacts for the proposed interventions under this package has been carried out during the preparation of the SAR. An environmental assessment using ADB's Rapid Environmental Assessment (REA) checklist for urban development (**Annexure 2**) was conducted. The following are categories of impacts assessed:

- **Location impacts.** Impacts associated with site selection, including impacts on environment and resettlement or livelihood related impacts on communities
- **Design impacts.** Impacts arising from project design, including the technology used, scale of operations etc.
- **Construction impacts.** Impacts resulting from construction activities including site clearance, earthworks, civil works, etc.
- **O&M impacts.** Impacts associated with the operation and maintenance of the infrastructure built in the project.

Design considerations to avoid environmental impacts.

62. The following are design considerations to avoid environmental impacts:

- Incorporation of adequate drainage provisions
- Adoption of design compatible with the natural environment and suitable selection of materials to enhance the aesthetic appeal and blend with the natural surroundings.
- Straight lines and simple geometry in the proposed landscape and architectural features.
- Use of subtle colours and simple ornamentation in the structures.
- Natural tree species in the proposed landscape.
- Use of local stone in the proposed walkways and built structures thus maintaining a rustic architectural character

63. The results of interventions are unobtrusive and will be integral part of the ambience of the site. The physical components have been proposed with minimalist design treatment emphasizing use of local materials (wood, stone) as defined in the management plan of the area.

Assessment of Environmental Impacts

64. The primary impact areas are (i) sites for subproject components; (ii) main routes/intersections which will be traversed by construction vehicles; and (ii) quarries and borrow pits as sources of construction materials. The secondary impact areas are: (i) entire town area outside of the delineated primary impact area; and (ii) entire Rudraprayag district in terms of over-all environmental improvement.

65. In the case of this subproject the components will involve straight forward construction and operation, and impacts will be mainly localized, short in duration and expected only during construction period.

Pre-construction Impacts and Mitigation Measures

66. Consents, permits, clearances, no objection certificate (NOC), etc. Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works.

67. **Mitigation measures**. The following will be conducted during detailed design phase:

- Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works.
- Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. Include in detailed design drawings and documents all conditions and provisions if necessary.

68. **Erosion control.** Most of the impacts will occur due to excavation and earth movements during construction phase. Prior to commencement of civil works, the contractor will be required to:

- Develop an erosion control and re-vegetation plan to minimize soil loss and reduce sedimentation to protect water quality.
- Minimize the potential for erosion by balancing cuts and fills to the extent feasible.
- Identify and avoid areas with unstable slopes and local factors that can cause slope instability (groundwater conditions, precipitation, seismic activity, slope angles, and geologic structure).
- Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time.

69. **Utilities.** Interruption of services will be scheduled and intermittently related to localized construction activities. To mitigate impacts, PIU/DSC will:

- Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during the construction phase.
- Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services.
- Require contractor to obtain from the PIU and/or DSC the list of affected utilities and operators;
- If relocations are necessary, contractor will coordinate with the providers to relocate the utility.

70. **Social and Cultural Resources.** There is a risk that any work involving ground disturbance can uncover and damage archaeological and historical remains. Although no such sites have been identified. For this subproject, excavation will occur in and around existing sites, specified government land so no risk is foreseen to these structures. Nevertheless, the PIU/DSC will:

- Consult Archaeological Survey of India and/or State Department of Archaeology to obtain an expert assessment of the archaeological potential of the site.
- Consider alternatives if the site is found to be of medium or high risk.
- Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available.
- Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved.

71. **Sites for construction work camps and areas for stockpile, storage and disposal.** The priority is to locate these near the subproject sites. The contractor will be required to meet the following criteria for the sites:

- Will not promote instability and result in destruction of property, vegetation, and drinking water supply systems, etc.
- Residential areas will not be considered so as to protect the human environment (i.e., to curb accident risks, health risks due to air and water pollution and dust, and noise, and to prevent social conflicts, shortages of amenities, and crime).
- Disposal will not be allowed near sensitive areas which will inconvenience the community.
- The construction camp, storage of fuel and lubricants should be avoided near water source. Any construction camp site will be finalized in consultation with DSC and PIU.

72. **Sources of construction materials.** Significant amounts of gravel, sand, and cement will be required for this subproject. Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution. The contractor will be required to:

- Use quarry sites and sources permitted by government.
- Verify suitability of all material sources and obtain approval from PIU/DSC.
- If additional quarries are required after construction has started, obtain written approval from PIU/DSC.
- Submit to DSC on a monthly basis documentation of sources of materials.

73. It will be the construction contractor's responsibility to verify the suitability of all material sources and to obtain the approval of DSC/PIU. If additional quarries are required after construction is started, then the contractor obtains written approval of PIU.

74. **Access**. Hauling of construction materials and operation of equipment on-site can cause traffic problems and conflicts in ROWs. Construction traffic will access most work areas from the existing roads therefore potential impacts will be of short-duration, localized and can be mitigated. The contractor will need to adopt the following mitigation measures:

- Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites.
- Schedule transport and hauling activities during non-peak hours.
- Locate entry and exit points in areas where there is low potential for traffic congestion.
- Keep the site free from all unnecessary obstructions.
- Drive vehicles in a considerate manner.

- Coordinate with the Traffic Police for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours.
- Notify affected sensitive receptors by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/complaints.
- Provide free access to households and businesses/shops along the ROWs during the construction phase.

75. Summary of pre-construction activities is presented in **Table 4**. The responsibilities, monitoring program and costs are provided in detailed in the EMMP (Section V). The contractor is required to update the information during detailed design phase.

Table: 4 Summary of Pre-Construction Mitigation Measures

Parameters	Mitigation Measures
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. Include in detailed design drawings and documents all conditions and provisions if necessary
Erosion control	Develop an erosion control and re-vegetation plan to minimize soil loss and reduce sedimentation to protect water quality. Minimize the potential for erosion by balancing cuts and fills to the extent feasible. Identify and avoid areas with unstable slopes and local factors that can cause slope instability (precipitation, seismic activity, slope angles, and geologic structure). Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time.
Utilities	Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during the construction phase. Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. Obtain from the PIU and/or DSC the list of affected utilities and operators; Prepare a contingency plan to include actions to be done in case of unintentional interruption of services. If relocations are necessary, contractor will coordinate with the providers to relocate the utility.
Social and Cultural Resources	Consult Archaeological Survey of India or State Department of Archaeology to obtain an expert assessment of the archaeological potential of the site. Consider alternatives if the site is found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available. Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved.
Sites for construction work camps, areas for	Will not promote instability and result in destruction of property, vegetation and drinking water supply systems, etc. Residential areas will not be considered so as to protect the human environment (i.e., to curb accident risks, health risks due to air and water pollution and dust,

Parameters	Mitigation Measures
stockpile, storage and disposal	and noise, and to prevent social conflicts, shortages of amenities, and crime). Disposal will not be allowed near sensitive areas which will inconvenience the community. The construction camp, storage of fuel and lubricants should be avoided at the river bank. The construction camp site for intake well should be finalized in consultation with DSC and PIU.
Sources of construction materials	Use quarry sites and sources permitted by government. Verify suitability of all material sources and obtain approval from PIU/DSC. If additional quarries are required after construction has started, obtain written approval from PIU/DSC. Submit to DSC on a monthly basis documentation of sources of materials.
Access	Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. Schedule transport and hauling activities during non-peak hours. Locate entry and exit points in areas where there is low potential for traffic congestion. Keep the site free from all unnecessary obstructions. Drive vehicles in a considerate manner. Coordinate with the Traffic Police for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours. Notify affected sensitive receptors by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/complaints. Provide free access to households and businesses/shops along ROWs during the construction phase.

Anticipated Construction Impacts and Mitigation Measures

76. Construction Schedule and Method. As per preliminary design, construction activities will cover 2 years. The exact implementation schedule will be updated during detailed design phase and will be reflected in this IEE.

77. The infrastructures will be constructed manually according to design specifications. Trenches will be dug by backhoe digger, supplemented by manual digging where necessary. Excavated soil will be placed nearby. Demolished materials will be reused to the maximum extent possible. Materials will be brought to site by trucks and will be stored on unused areas within the temple complexes and nearby vacant areas. Any excavated road will be reinstated. The working hours will be 8 hours daily, the total duration of each stage depends on the soil condition and other local features.

78. There is sufficient space for a staging area, construction equipment, and stockpiling of materials. However, the contractor will need to remove all construction and demolition wastes on a daily basis.

79. Although construction of these project components involves quite simple techniques of civil work, the invasive nature of excavation and the subproject sites in built-up areas where there are a variety of human activities, will result to impacts to the environment and sensitive receptors such as residents, businesses, and the community in general. These anticipated impacts are short-term, site-specific and within relatively small areas.

80. **Erosion Hazards**. The sites are in the built up area of the town (particularly Rudraprayag) therefore risk of erosion is low, limited during construction activities and not

expected to have any negative impact on the drainage and hydrology of the area. But both Kartikeya Swami, Tunganath and Durga dhari temples are in hill, chances of erosion are always there. Runoff will produce a highly variable discharge in terms of volume and quality, and in most instances will have no discernible environmental impact. The contractor will be required to:

- Save topsoil removed during excavation and use to reclaim disturbed areas, as soon as it is possible to do so.
- Use dust abatement such as water spraying to minimize windblown erosion.
- Provide temporary stabilization of disturbed/excavated areas that are not actively under construction.
- Apply erosion controls (e.g., silt traps) along the drainage leading to the water bodies.
- Maintain vegetative cover within road ROWs to prevent erosion and periodically monitor ROWs to assess erosion.
- Clean and maintain catch basins, drainage ditches, and culverts regularly.
- Conduct routine site inspections to assess the effectiveness of and the maintenance requirements for erosion and sediment control systems.

81. **Impacts on Water Quality:** Excavated materials may end up in drainages and water bodies adjacent to the sub project sites, particularly during monsoon season. Other risks of water pollution may be caused by: (i) poorly managed construction sediments, wastes and hazardous substances; and (ii) poor sanitation practices of construction workers. The contractor will be required to:

- Schedule civil works during non-monsoon season, to the maximum extent possible.
- Ensure drainages and water bodies within the construction zones are kept free of obstructions.
- Keep loose soil material and stockpiles out of drains, flow-lines and watercourses.
- Avoid stockpiling of excavated and construction materials (sand, gravel, cement, etc.) unless covered by tarpaulins or plastic sheets.
- Re-use/utilize, to maximum extent possible, excavated materials.
- Dispose any residuals at identified disposal site (PIU/DSC will identify approved sites).
- Dispose waste oil and lubricants generated as per provisions of Hazardous Waste (Management and Handling) Rules, 1989.
- Develop a spill prevention and containment plan, educate workers about the plan, and have the necessary materials on site prior to and during construction.
- Refuel equipment within the designated refueling containment area away from drainages, *nallahs*, or any water body.
- Inspect all vehicles daily for fluid leaks before leaving the vehicle staging area, and repair any leaks before the vehicle resumes operation.

82. **Impacts on Air Quality.** There is potential for increased dust particularly during summer/dry season due to stockpiling of excavated materials. Emissions from vehicles transporting workers, construction materials and debris/materials to be disposed may cause increased in air pollutants within the construction zone. These are inherent impacts which are site-specific, low magnitude, short in duration and can be easily mitigated. The contractor will be required to:

- Conduct regular water spraying on earth piles, trenches and sand piles.

- Conduct regular visual inspection along alignments and construction zones to ensure no excessive dust emissions.
- Spreading crushed gravel over backfilled surfaces if re-surfacing of disturbed ROWs cannot be done immediately.
- Maintain construction vehicles and obtain "pollution under control" certificate from UK Pollution Control Board
- Obtain CFE and CFO for diesel generators, etc., if to be used in the project.

83. **Noise and Vibration Impacts.** Noise- and vibration-emitting construction activities include earthworks, rock crushing, concrete mixing, movement and operation of construction vehicles and equipment, and loading and unloading of coarse aggregates. The significance of noise and vibration impacts will be high in areas where noise-sensitive institutions such as health care and educational facilities are situated. These impacts will be temporary, short-term, intermittent, and expected to be in the range of 80 to 100 dB(A).

84. **The contractor will be required to:**

- ✓ Limit construction activities in temple complexes and other important sites to daytime only.
- ✓ Plan activities in consultation with the PIU/DSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.
- ✓ Minimize noise from construction equipment by using vehicle silencers and fitting jackhammers with noise-reducing mufflers.
- ✓ Avoid loud random noise from sirens, air compression, etc.
- ✓ Require drivers that horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach.
- ✓ If specific noise complaints are received during construction, the contractor may be required to implement one or more of the following noise mitigation measures, as directed by the project manager:
- ✓ Locate stationary construction equipment as far from nearby noise-sensitive properties as possible.
- ✓ Shut off idling equipment.
- ✓ Reschedule construction operations to avoid periods of noise annoyance identified in the complaint.
- ✓ Notify nearby residents whenever extremely noisy work will be occurring.
- ✓ Follow Noise Pollution (Regulation and Control) Rules, day time ambient noise levels should not exceed 65 dB(A) in commercial areas, 55 dB(A) in residential areas, and 50 dB(A) in silence zone.[3]
- ✓ Ensure vehicles comply with Government of India noise limits for vehicles. The test method to be followed shall be IS:3028-1998.

85. **Impacts on Flora and Fauna.** As per preliminary design, tree-cutting is not required. This will be reassessed during detailed design phase. There are no protected areas in the direct and indirect impact zones and no diverse ecological biodiversity as vegetation and animals found in the construction zones are common in built up/urban areas. The contractor will be required to:

- ✓ Conduct site induction and environmental awareness.
- ✓ Limit activities within the work area.
- ✓ Replant trees in the area using minimum ratio of 2 new trees for every 1 tree cut, if any. Replacement species must be approved by PIU.

[3] Day time shall mean from 6.00 am to 10.00 pm. Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by UK PCB.

86. **Impacts on Physical Cultural Resources.** There may be inconvenience to tourists, residents, businesses, and other road users due to construction activities in the temple complexes and slower flow of traffic in areas with narrow roads. This potential impact is site-specific, short-term and can be mitigated. The contractor will be required to:

- ✓ Ensure no damage to structures/properties near construction zone.
- ✓ Provide walkways and metal sheets where required to maintain access of people and vehicles.
- ✓ Provide sign boards to inform nature and duration of construction works and contact numbers for concerns/complaints.
- ✓ Increase the workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools;
- ✓ Implement good housekeeping. Remove wastes immediately. Prohibit stockpiling of materials that may obstruct/slow down pedestrians and/or vehicle movement.
- ✓ Ensure workers will not use nearby/adjacent areas as toilet facility.
- ✓ Coordinate with DSC for transportation routes and schedule. Schedule transport and hauling activities during non-peak hours. Communicate road detours via visible boards, advertising, pamphlets, etc.
- ✓ Ensure heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites.
- ✓ Provide instructions on event of chance finds for archaeological and/or ethno-botanical resources. Works must be stopped immediately until such time chance finds are cleared by experts.

87. **Impact due to Waste Generation.** Demolished structures will be reused to the maximum extent possible. Construction activities will produce some excess excavated soils, excess construction materials, and solid wastes (such as removed concrete, wood, trees and plants, packaging materials, empty containers, oils, lubricants, and other similar items). These impacts are negative but short-term and reversible by mitigation measures. The contractor will need to adopt the following mitigation measures:

- ✓ Prepare and implement a waste management plan. Manage solid waste according to the following hierarchy:
- ✓ Reuse, recycling and disposal. Include in waste management plan designated/approved disposal areas.
- ✓ Coordinate with DSC for beneficial uses of excavated soils/silts/sediments or immediately dispose to designated areas.
- ✓ Recover used oil and lubricants and reuse; or remove from the sites.
- ✓ Avoid stockpiling and remove immediately all excavated soils, excess construction materials, and solid waste (removed concrete, wood, trees and plants, packaging materials, empty containers, oils, lubricants, and other similar items).
- ✓ Prohibit disposal of any material or wastes (including human waste) into drainage, *nallah*, or watercourse.

88. **Impacts on Occupational Health and Safety.** Residential accommodation for workers is not proposed. Workers need to be mindful of occupational hazards which can arise from excavation works. Exposure to work-related chemical, physical, biological and social hazard is typically intermittent and of short duration, but is likely to reoccur. Potential impacts are negative and long-term but reversible by mitigation measures. Overall, the contractor should comply with IFC EHS Guidelines on Occupational Health and Safety (this can be downloaded from http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2BOccupati

onal%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES). The contractor will be required to:

- Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.
- Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project.
- Include in H&S plan measures such as: (i) type of hazards during excavation works; (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.
- Provide H&S orientation training to all new workers to ensure that they are apprised of the rules of work at the site, personal protective protection, and preventing injury to fellow workers.
- Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site as well as at construction camps.
- Provide medical insurance coverage for workers.
- Secure construction zone from unauthorized intrusion and accident risks.
- Provide supplies of potable drinking water.
- Provide clean eating areas where workers are not exposed to hazardous or noxious substances.
- Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted.
- Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas.
- Ensure moving equipment is outfitted with audible back-up alarms.
- Mark and provide sign boards in the construction zone, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate.

89. **Impacts on Socio-Economic Activities.** Manpower will be required during the 24 month's construction phase. This can help generate contractual employment and increase in local revenue. Thus potential impact is positive and long-term. As per preliminary design, land acquisition and closure of roads are not required. However, construction activities may impede access of residents and customers to shops. The potential impacts are negative and moderate but short-term and temporary. The contractor will need to adopt the following mitigation measures:

- Leave space for access between mounds of soil.
- Provide walkways and metal sheets where required to maintain access to shops/businesses along trenches.
- Consult businesses and institutions regarding operating hours and factoring this in to work schedules.
- Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.
- Employ at least 50% of the labor force, or to the maximum extent, local persons within the 2-km immediate area if manpower is available.

90. **Summary of Mitigation Measures during Construction. Table-5** provides summary of mitigation measures to be considered by the contractor during construction phase. The detailed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related implementation arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators are provided in the EMP (Section 5).

Table 5: Summary of Mitigation Measures during Construction Phase

Potential Impact	Mitigation Measures
Erosion hazards	Save topsoil removed during excavation and use to reclaim disturbed areas, as soon as it is possible to do so. Use dust abatement such as water spraying to minimize windblown erosion. Provide temporary stabilization of disturbed/excavated areas that are not actively under construction. Apply erosion controls (e.g., silt traps) along the drainage leading to the water bodies. Maintain vegetative cover within road ROWs to prevent erosion and periodically monitor ROWs to assess erosion. Clean and maintain catch basins, drainage ditches, and culverts regularly. Conduct routine site inspections to assess the effectiveness of and the maintenance requirements for erosion and sediment control systems.
Impacts on water quality	Schedule civil works during non-monsoon season, to the maximum extent possible. Ensure drainages and water bodies within the construction zones are kept free of obstructions. Keep loose soil material and stockpiles out of drains, flow-lines and watercourses. Avoid stockpiling of excavated and construction materials (sand, gravel, cement, etc.) unless covered by tarpaulins or plastic sheets. Re-use/utilize, to maximum extent possible, excavated materials. Dispose any residuals at identified disposal site (PIU/DSC will identify approved sites). Dispose waste oil and lubricants generated as per provisions of Hazardous Waste (Management and Handling) Rules, 1989. Develop a spill prevention and containment plan, educate workers about the plan, and have the necessary materials on site prior to and during construction. Refuel equipment within the designated refueling containment area away from drainages, *nallahs*, or any water body. Inspect all vehicles daily for fluid leaks before leaving the vehicle staging area, and repair any leaks before the vehicle resumes operation.
Impacts on air quality	Conduct regular water spraying on earth piles, trenches and sand piles. Conduct regular visual inspection along alignments and construction zones to ensure no excessive dust emissions. Spreading crushed gravel over backfilled surfaces if re-surfacing of disturbed ROWs cannot be done immediately. Maintain construction vehicles and obtain “pollution under control” certificate from UK Pollution Control Board Obtain CFE and CFO for diesel generators, etc., if to be used in the project.
Noise and vibrations impacts	Limit construction activities in temple complexes and other important sites to daytime only. Plan activities in consultation with the PIU/DSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance. Minimize noise from construction equipment by using vehicle silencers and fitting jackhammers with noise-reducing mufflers. Avoid loud random noise from sirens, air compression, etc. Require drivers that horns not be used unless it is necessary to warn other road users or animals of the vehicle’s approach. If specific noise complaints are received during construction, the contractor may be required to implement one or more of the following noise mitigation measures, as directed by the project manager: (i) locate stationary construction equipment as far from nearby noise-sensitive properties as possible; (ii) shut off idling equipment; (iii)

Potential Impact	Mitigation Measures
	reschedule construction operations to avoid periods of noise annoyance identified in the complaint; and/or (iv) notify nearby residents whenever extremely noisy work will be occurring. Follow Noise Pollution (Regulation and Control) Rules, day time ambient noise levels should not exceed 65 dB(A) in commercial areas, 55 dB(A) in residential areas, and 50 dB(A) in silence zone.[4] Ensure vehicles comply with Government of India noise limits for vehicles. The test method to be followed shall be IS:3028-1998.
Impacts on flora and fauna	Conduct site induction and environmental awareness. Limit activities within the work area. Replant trees in the area using minimum ratio of 2 new trees for every 1 tree cut, if any. Replacement species must be approved by DSC.
Impacts on physical resources	Ensure no damage to structures/properties near construction zone. Provide walkways and metal sheets where required to maintain access of people and vehicles. Provide sign boards to inform nature and duration of construction works and contact numbers for concerns/complaints. Increase the workforce in front of critical areas Implement good housekeeping. Remove wastes immediately. Prohibit stockpiling of materials that may obstruct/slow down pedestrians and/or vehicle movement. Ensure workers will not use nearby/adjacent areas as toilet facility. Coordinate with DSC for transportation routes and schedule. Schedule transport and hauling activities during non-peak hours. Communicate road detours via visible boards, advertising, pamphlets, etc. Ensure heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. Provide instructions on event of chance finds for archaeological and/or ethno-botanical resources. Works must be stopped immediately until such time chance finds are cleared by experts.
Impacts on waste generation	Prepare and implement a waste management plan. Manage solid waste according to the following hierarchy: reuse, recycling and disposal. Include in waste management plan designated/approved disposal areas. Coordinate with DSC, Safeguard specialist for beneficial uses of excavated soils/silts/sediments or immediately dispose to designated areas. Recover used oil and lubricants and reuse; or remove from the sites. Avoid stockpiling and remove immediately all excavated soils, excess construction materials, and solid waste (removed concrete, wood, trees and plants, packaging materials, empty containers, oils, lubricants, and other similar items). Prohibit disposal of any material or wastes (including human waste) into drainage, *nallah*, or watercourse.
Impacts on occupational health and safety	Comply with IFC EHS Guidelines on Occupational Health and Safety Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively. Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project. Include in H&S plan measures such as: (i) type of hazards during excavation works; (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. Provide H&S orientation training to all new workers to ensure that they are apprised of the rules of work at the site, personal protective protection, and preventing injury to

[4] Day time shall mean from 6.00 am to 10.00 pm. Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by UK Pollution Control Board

Potential Impact	Mitigation Measures
	fellow workers. Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site as well as at construction camps. Provide medical insurance coverage for workers. Secure construction zone from unauthorized intrusion and accident risks. Provide supplies of potable drinking water. Provide clean eating areas where workers are not exposed to hazardous or noxious substances. Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted. Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas. Ensure moving equipment is outfitted with audible back-up alarms. Mark and provide sign boards in the construction zone, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate.
Impacts on socio-economic activities	Leave space for access between mounds of soil. Provide walkways and metal sheets where required to maintain access to shops/businesses along trenches. Consult businesses and institutions regarding operating hours and factoring this in to work schedules. Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints. Employ at least 50% of the labor force, or to the maximum extent, local persons within the 2-km immediate area if manpower is available. “Mobility Plan” has to be chalked out in consultation with the District Administration prior to start of work.

91. The construction related impacts due to proposed components are generic to construction activities, and are typical of building construction projects. The potential impacts that are associated with construction activities can be mitigated to standard levels without difficulty through incorporation or application of the recommended mitigation measures and procedures.

C. Post-Construction Impacts and Mitigation Measures

92. Site clean-up is necessary after construction activities. The contractor will be required to:

- Backfill any excavation and trenches, preferably with excess excavation material generated during the construction phase.
- Use removed topsoil to reclaim disturbed areas.
- Reestablish the original grade and drainage pattern to the extent practicable.
- Stabilize all areas of disturbed vegetation using weed-free native shrubs, grasses, and trees.
- Restore access roads, staging areas, and temporary work areas.
- Restore roadside vegetation.
- Remove all tools, equipment, barricades, signs, surplus materials, debris, and rubbish. Demolish buildings/structures not required for O&M. Dispose in designated disposal sites.
- Monitor success of re-vegetation and tree re-planting. Replace all plants determined to be in an unhealthy condition.

D. Anticipated Operations and Maintenance (O&M) Impacts and Mitigation Measures

93. Impacts on environmental conditions associated with the O&M of the components pertain to impacts related to increased tourists in the areas resulting to increased vehicular movement along the roads, increased demands for services, and increased solid waste generation. These impacts can be mitigated by:

- Increased vehicular movement along the roads - speed restrictions, provision of appropriate road signage and well located rest points for pedestrians shall minimize impacts on safety of the people
- Increase demands for services – addressed through the subproject design
- Increase solid waste generation – Municipal Corporation to put in place solid waste management programs.

V. ENVIRONMENT MANAGEMENT AND MONITORING PLAN (EMMP)

A. Institutional Arrangements

94. The institutional arrangements specify the arrangements for the implementation of environmental provisions of the entire project, and include the proposed subproject also.

Project Management Unit (PMU) & Project Implementation Unit (PIU)

95. The Department of Tourism, Government of Uttarakhand is the Executing Agency (EA). Project Management Unit (PMU) established in Dehradun for the overall project management and Project Implementation Units (PIU) established for each of the three circuits. The proposed sub-project will be implemented by the PIU, Dehradun. A Safeguards Specialist within the PMU will be responsible for implementation of the resettlement and environmental safeguard provisions. A Forest Conservation Specialist is also proposed in PMU and DSC to look the matters of forests in all the projects.

Project Management Consultant (PMC) & Design and Supervision Consultants (DSC)

96. Project Management Consultants (PMC) and Design and Supervision Consultants (DSC) are recruited to provide assistance to the PMU and PIUs respectively in project implementation. Within the PMC team an Environment Safeguards Specialist will provide overall direction for management of environmental issues, and will provide technical support to the PMU including implementation of the environmental requirements according to ADB requirements, and assist in monitoring impacts and mitigation measures associated with sub-projects. The Safeguards Specialist of the DSC team will be responsible for preparation and revision of the Environmental Assessment documents in line with the EARF and supervise the implementation of the EMP provisions in the various sub-projects. The PMU, will oversee the implementation of the environmental provisions related to subproject implementation, its responsibilities include preparation and updating of IEEs consistent with the ADBs Environmental Assessment Guidelines and the environmental compliance requirements of the Government of Uttarakhand and the Government of India.

97. The DSC's Safeguards Specialist will support environmental management functions including updating sub-project IEEs in respect to environmental management plans, assisting in preparation of IEEs, and assist in monitoring impacts and mitigation measures associated with sub-projects. He/she will be required to include mitigation measures in designs where appropriate, and to specify other measures in construction contracts. Contractors will be required by their contracts to implement all specified mitigation, monitoring, and reporting assigned to contractors as presented in sub-project IEE.

Environmental monitoring will be undertaken by the PMU supported by the DSC- Safeguards Specialist.

98. Towards addressing the environmental issues in the project components during design and implementation, the DSC will include provisions for inputs of an Environmental Specialist. In addition to addressing the issues related to environmental management in the project, the Environmental Specialist will play a central role in ensuring capability building on Environmental Management of the PMU/PIU, Contractor and Line Departments. Specific and specialized responsibilities are:

Responsibilities of Contractors- Strict implementation of EMP and Supervision

- Abide by the environmental laws formulated by the community institution
- Regularly remove trash from the site on daily basis.
- from construction workers affecting lake ecology and biodiversity.
- The area should be declared as plastic free, smoking free and silence zone and sign boards for the purpose should be displayed at work site and workers should be made aware about it by training
- Cutting and collection of fuel wood by the construction workers from the nearby forest should be strictly prohibited
- It will be ensured by the contractor that the top soil will not be unnecessarily trafficked either before stripping or when in stockpiles. Such stockpiled top soil will be returned to cover the disturbed area and cut slopes.
- The Contractor with support of the PIU will carry out dissemination of these information and circulation plan at key entry points to the respective destinations
- The contractor will be responsible for arrangement of water in every workplace at suitable and easily accessible place for the whole construction period. Sufficient supply of cold potable water to be provided and maintained.
- The Contractor will ensure that construction activities not result in any contamination of land, water or air quality by polluting substances
- Contractor will ensure that no trees or shrubs or vegetation are felled or harmed except those required to be cleared for execution of work. The Contractor will protect tree and vegetation from damage to satisfaction of the engineer.

Responsibilities of PIU &DSC-

- Sponsor seminars and/or distribute educational materials to contractors and visitors about environmentally beneficial conservation procedures
- Organize workers' training program for the contractors for environmental management during construction works
- Educate the contractors regarding the eco-sensitivity of the area and explain how to protect bio-diversity during construction works
- Regular site visit and reporting during construction works to check whether objectives of EMP being

99. Responsibilities for EMP Implementation: The following agencies will be responsible for EMP Implementation:

- Uttarakhand Tourism Development Board is the Executing Agency (EA) responsible for overall management, coordination, and execution of all activities funded under the loan;
- PMU is the Implementing Agency (IA) responsible for coordinating procurement and construction of the project. UTDB through its Project

Management Unit (PMU) at Dehradun will be implementing the project;

- The Project Management Consultant (PMC) assists PMU in managing the project including procurement and assures technical quality of design and construction;
- The Design and Supervision Consultant (DSC) will prepare the DPR of the project and will carry out construction supervision during project implementation. Their responsibility will also include EMP implementation supervision;
- A Project Implementation Unit (PIU) has been established in Dehradun This PIU will look into progress and coordination of day to day construction works with the assistance of DSC; and
- The contractor will be responsible for \ execution of all construction works. The contractor will work under the guidance of the PIU Dehradun and DSC. The environmental related mitigation measures will also be implemented by the contractor.

100. The contractor's conformity with contract procedures and specifications during construction will be carefully monitored by the PIU.

101. **Responsibility for updating IEE during detailed design.** DSC will update the IEE as per final design. PMC and PMU will review the report and finalized with the help of DSC for submission to ADB.

102. **Responsibility for monitoring.** During construction, DSC's Environmental Specialist and the designated representative engineer of the PIU will monitor the contractor's environmental performance. During the operation phase, monitoring will be the responsibility of the O & M contractor (during defect liability stage) and then by Municipal Corporation.

103. **Responsibility for Reporting.** PMU will submit to ADB semi-annual reports on implementation of the EMP and will permit ADB to field environmental review missions which will review in detail the environmental aspects of the project. Any major accidents having serious environmental consequences will be reported immediately. PMC's Environment safeguard Specialist will help in preparing monthly, quarterly, semi-annual and annual progress reports.

104. Semiannual report format is attached as **Annexure 5.**

B. Environmental Management Plan

105. All works undertaken towards protection of environmental resources as part of the EMP and as part of good engineering practices while adhering to relevant specifications will be deemed to be incidental to works being carried out and no separate payment will be made unless otherwise specified explicitly. The costs towards environmental management as per EMP unless otherwise provided as a separate head, will be deemed to be part of the BoQ of the project. The scope of works of the contractor towards the implementation of the environmental provisions shall be as follows:

- Abide by all existing Environmental regulations and requirements of the Government of Uttarakhand and Government of India, during implementation,
- Compliance with all mitigation measures and monitoring requirements set out in the Environmental Management Plan (EMP)
- Submission of a method statement detailing how the subproject EMP will be complied with as per the schedule of monitoring given in subsequent

paragraphs.

- Monitoring of project environmental performance and periodic submission of monitoring reports.
- Compliance with all measures required for construction activities in line with the regulatory requirements and the guidelines set forth in the management plans for these areas.
- Compliance of all safety rules and regulations applicable at work, and provision of adequate health and safety measures such as water, food, sanitation, personal protective equipment, workers insurance, and medical facilities.

106. The detailed provisions for specific environmental issues shall be as outlined in the EIMM table on impacts and mitigation measures. **Table 6 and 7** show the potential adverse environmental impacts, proposed mitigation measures, responsible parties, and cost of implementation. This EMP will be included in the bid documents and will be further reviewed and updated during implementation.

Table 6: Pre-Construction EMP Table

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
Consents, permits, clearances, no objection certificate (NOC), etc.	Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. Kartikaya swami temple trust needs NOC from Forest Department for construction path way, rest sheds, and sitting benches and facility toilet and renovation	Consents, permits, clearance, NOCs, etc.	PIU/DSC	PMU/PMC	Check CFEs, permits, clearance, prior to start of civil works	PMU
	Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc.	Records and communications	PIU/DSC	PMU/PMC	Acknowledge upon receipt Send report as specified in CFE, permits, etc.	PMU
	Include in detailed design drawings and documents all conditions and provisions if necessary	Detailed design documents and drawings	Contractor	PMU and PMC PIU and DSC	Upon submission by contractor	Contractor
Establishment of baseline environmental conditions prior to start of civil works	Conduct documentation of location of components, areas for construction zone (camps, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates	Records	Contractor	PMU and PMC PIU and DSC	field visit	PMU
Erosion control	Develop an erosion control and re-vegetation plan to minimize soil loss and reduce sedimentation to protect water quality. Minimize the potential for erosion by balancing cuts and fills to the extent feasible. Identify and avoid areas with unstable slopes and local factors that can cause	Erosion control and re-vegetation plan covering construction phase	Contractor	PMU and PMC PIU and DSC	field visit	PMU

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	slope instability (groundwater conditions, precipitation, seismic activity, slope angles, and geologic structure). Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time. Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time.					
Utilities	Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during the construction phase. Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. Obtain from the PIU and/or DSC the list of affected utilities and operators; If relocations are necessary, contractor will coordinate with the providers to relocate the utility.	List and maps showing utilities to be shifted Contingency plan for services disruption	- DSC to prepare preliminary list and maps of utilities to be shifted - During detailed design phase, contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan	PMU and PMC PIU and DSC	field visit	DSC – preliminary design stage Contractor – detailed design stage
Social and Cultural Resources	Consult Archaeological Survey of India (ASI) or UK State Archaeology Department to obtain an expert assessment of the archaeological	Chance find protocol	- PMC to consult ASI or UK State Archaeology Department	PMU	field visit	PMC

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	potential of the site. Consider alternatives if the site is found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available. Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved.		- PMC to develop protocol for chance finds			
Sites for construction work camps, areas for stockpile, storage and disposal	Will not promote instability and result in destruction of property, vegetation, and drinking water supply systems, etc. Residential areas will not be considered so as to protect the human environment (i.e., to curb accident risks, health risks due to air and water pollution and dust, and noise, and to prevent social conflicts, shortages of amenities, and crime). Disposal will not be allowed near sensitive areas which will inconvenience the community. The construction camp, storage of fuel and lubricants should be avoided near water source	List of pre-approved sites for construction work camps, areas for stockpile, storage and disposal Waste management plan	- DSC to prepare list of potential sites - DSC to inspect sites proposed by contractor if not included in pre-approved sites	PMU PIU	field visit	DSC
Sources of construction materials	Use quarry sites and sources permitted by government. Verify suitability of all material sources and obtain approval from PIU.	Permits issued to quarries/ sources of materials	Contractor PMC and DSC to verify sources	PMU and PIU	Upon submission by contractor	PMC and DSC

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	If additional quarries are required after construction has started, obtain written approval from PIU. Submit to DSC on a monthly basis documentation of sources of materials.		(including permits) if additional is requested by contractor			
Access	Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. Schedule transport and hauling activities during non-peak hours. Locate entry and exit points in areas where there is low potential for traffic congestion. Keep the site free from all unnecessary obstructions. Drive vehicles in a considerate manner. Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours. Notify affected sensitive receptors by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/complaints. Traffic management will be required at Rudraprayag where Interpretation center will be constructed.	Traffic management plan	Contractor	PIU and DSC	field visit	Contractor
Occupational health and safety	Comply with IFC EHS Guidelines on Occupational Health and Safety Develop comprehensive site-specific	Health and safety (H&S) plan	Contractor	PMU and PMC PIU and DSC	field visit	Contractor

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project. Include in H&S plan measures such as: (i) corresponding personal protective equipment for each identified hazard; (ii) H&S training for all site personnel; (iii) procedures to be followed for all site activities; and (iv) documentation of work-related accidents and (v) provide medical insurance coverage for workers.					
Public consultations	Continue information dissemination, consultations, and involvement/ participation of stakeholders during project implementation.	- Disclosure records - Consultations	PMU and PMC PIU and DSC Temple administrators Contractor	PMU and PMC	- During updating of IEE Report - During preparation of site- and activity-specific plans as per EMP - Prior to start of construction - During construction	PMU Contractor to allocate funds to support

Table 7: EMP Table During Construction Phase

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
Erosion hazards	Save topsoil removed during excavation and use to reclaim disturbed areas, as soon as it is possible to do so. Use dust abatement such as water spraying to minimize windblown erosion. Provide temporary stabilization of disturbed/excavated areas that are not actively under construction. Apply erosion controls (e.g., silt traps) along the drainage leading to the water bodies. Maintain vegetative cover within road ROWs to prevent erosion and periodically monitor ROWs to assess erosion. Clean and maintain drainage ditches, and culverts regularly. Conduct routine site inspections to assess the effectiveness of and the maintenance requirements for erosion and sediment control systems.	Erosion control and re vegetation plan	Contractor	PIU and DSC PIU to submit EMP monitoring report to PMU	- daily visual inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	Contractor
Impacts on water quality	Schedule construction activities during non-monsoon season, to the maximum extent possible.	Work schedule	Contractor	PIU and DSC PIU to submit EMP monitoring	- daily inspection by contractor supervisor and/or	Contractor
	Ensure drainages within the construction zones are kept free of obstructions.	Visual inspection				

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	Keep loose soil material and stockpiles out of drains and flow-lines.	Visual inspection		report to PMU	environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	
	Avoid stockpiling of excavated and construction materials (sand, gravel, cement, etc.) unless covered by tarpaulins or plastic sheets.	Visual inspection				
	Re-use/utilize, to maximum extent possible, excavated materials.	condition in waste management plan				
	Dispose any residuals at identified disposal site (PIU/DSC will identify approved sites).	condition in waste management plan				
	Dispose waste oil and lubricants generated as per provisions of Hazardous Waste (Management and Handling) Rules, 1989.	condition in waste management plan				
	Refuel equipment within the designated refueling containment area away from drainages, *nallahs*, or water body.	condition in list of pre-approved sites for construction work camps, areas for stockpile, storage and disposal				
	Inspect all vehicles daily for fluid leaks before leaving the vehicle staging area, and repair any leaks before the vehicle resumes operation.	Vehicle inspection report				
Impacts on air quality	Conduct regular water spraying on stockpiles.	Visual inspection No complaints from sensitive receptors Records	Contractor	PIU and DSC	- daily inspection by contractor supervisor	Contractor

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	Conduct regular visual inspection in the construction zones to ensure no excessive dust emissions.	Visual inspection			and/or environment specialist - weekly visual inspection by DSC (more frequent during dry season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	
	Maintain construction vehicles and obtain “pollution under control” certificate from Uttrakhand Pollution Control Board.	PUC certificates				
Noise and vibrations impacts	Limit construction activities in temple complexes and other important areas to daytime only. Plan activities in consultation with PIU/DSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	Work schedule	Contractor	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during noise-	Contractor
	Minimize noise from construction equipment by using vehicle silencers and fitting jackhammers with noise-reducing mufflers.	Report on ambient noise level monitoring within direct impact zones				
	Avoid loud random noise from sirens, air compression, etc.	zero incidence				

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	Require drivers that horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach. During construction of interpretation center at Rudraprayaga, contractor should be careful	feedback from receptors within direct and direct impact zone			generating activities and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	
	If specific noise complaints are received during construction, the contractor may be required to implement one or more of the following noise mitigation measures, as directed by the project manager: Locate stationary construction equipment as far from nearby noise-sensitive properties Shut off idling equipment. Reschedule construction operations to avoid periods of noise annoyance identified in the complaint. Notify nearby residents whenever extremely noisy work will be occurring.	-Complaints addressed satisfactory - GRM records				
Impacts on flora and fauna	Conduct site induction and environmental awareness at Katikaya swami	Records	Contractor	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if	Contractor
	Limit activities within the work area.	Barricades along excavation works				

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
					corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	
Impacts on physical cultural resources	Ensure no damage to structures/properties adjacent to construction zone.	- Visual inspection - any impact should be addressed by project resettlement plan	Contractor In Coordination with PIU and DSC for any structures within WTP site and construction zone	PIU and DSC	-daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	Contractor
	Provide sign boards to inform nature and duration of construction works and contact numbers for concerns/complaints.	-no complaints received - photo-documentation				
	Implement good housekeeping. Remove wastes immediately.	Visual inspection No stockpiled/ stored wastes				
	Ensure workers will not use nearby/adjacent areas as toilet facility.	No complaints received Sanitation facilities for use of workers				
	Coordinate with PIU/DSC for transportation routes and schedule. Schedule transport and hauling activities during non-peak hours. Communicate road detours via visible boards, advertising, pamphlets, etc. This will be taken care during construction of Interpretation center at Rudraprayag	- Approved routes in traffic management plan				
	Provide instructions on event of chance	condition in chance find				

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	finds for archaeological and/or ethno-botanical resources. Works must be stopped immediately until such time chance finds are cleared by experts.	protocol				
	Prepare and implement a waste management plan. Manage solid waste according to the following hierarchy: reuse, recycling and disposal. Include in waste management plan designated/approved disposal areas. Coordinate with PIU/DSC for beneficial uses of excavated soils or immediately dispose to designated areas. Recover used oil and lubricants and reuse; or remove from the site. Prohibit disposal of any material or wastes (including human waste) into drainage, *nallah*, or watercourse.	condition in waste management plan				
Impact due to waste generation	Comply with IFC EHS Guidelines on Occupational Health and Safety	- Visual inspection - Records	Contractor	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action	Contractor

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
					is required) - random inspection by PMU, PIU, PMC and/or DSC	
Impacts on occupational health and safety	Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	- Visual inspection - Work schedule - Noise level monitoring in work area	Contractor	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	Contractor
	Provide H&S orientation training to all new workers to ensure that they are apprised of the rules of work at the site, personal protective protection, and preventing injury to fellow workers.	- Records - Condition in UK plan				
	Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site as well as at construction camps.	- Visible first aid equipment and medical supplies - Condition in UK plan				
	Provide medical insurance coverage for workers.	Records				
	Secure construction zone from unauthorized intrusion and accident risks.	- Area secured - Trenches barricaded				
	Provide supplies of potable drinking water.	- Supply of water				
	Provide clean eating areas where workers are not exposed to hazardous or	- Workers area				

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	noxious substances.					
	Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted.	- Records - Condition in UK plan				
	Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas.	- Visual inspection - Condition in UK plan				
	Ensure moving equipment is outfitted with audible back-up alarms.	-Construction vehicles - Condition in UK plan				
	Mark and provide sign boards in the construction zone, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate.	- Visible and understandable sign boards in construction zone - UK plan includes appropriate signs for each hazard present				
Impacts on socio-economic activities	Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.	Visible and understandable sign boards in construction zone	Contractor	PIU and DSC	-daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by	Contractor
	Employ at least 50% of the labor force, or to the maximum extent, local persons within the 2-km immediate area if manpower is available.	Employment records				

Potential Impact	Mitigation Measures	Parameter/Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
					DSC (more frequent if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	

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

107. **Table 8** summarizes site- and activity-specific plans to be prepared as per EMP tables.

Table 8: Site- and Activity-Specific Plans/Programs as per EMP

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

108. Through integration of mitigation measures in project design, impacts are mostly insignificant, temporary in nature and can be properly avoided or mitigated by following proposed mitigation measures given in the EMP of this IEE report.

109. Sample & contents of Spoil Management Plan is attached as **Annexure 6** and sample Traffic Management Plan is attached **Annexure 7.**

110. **Table 9** provides the indicative environmental monitoring program which includes relevant environmental parameters, with a description of the sampling stations, frequency of monitoring, applicable standards, and responsibility. This will be updated during detailed design to ensure EMP and monitoring program is commensurate to the impacts of the subproject.

Table 9: Indicative Environmental Monitoring Program

	Field	Phase	Parameters	Location	Frequency	Responsibility	Cost (Rs)
A. Near Temple (works)							
1.	Air quality	Detailed design phase to establish baseline	Particulate matter	In and around the temple premises	24 hours (once)	Contractor	90,000/-
		Construction	Particulate matter	In and around the temple premises	24 hours (one sampling during dry season)	Contractor	90,000/-
2.	Noise level	Detailed design phase to establish baseline	Day time dB(A)	In and around the temple premises	Once dry season Once monsoon season	Contractor	36,000/-
		Construction	Day time dB(A)	In and around the temple premises	During noise-generating activities	Contractor	36,000/-
B. Site-specific (temple complex, parking areas, site for cultural center, etc.)							
1	Air quality	Detailed design phase to establish baseline	Particulate matter	Site	24 hours (once)	Contractor	90,000/-
		Construction	Particulate matter	Site	24 hours (one sampling during dry season)	Contractor	90,000/-
2	Noise	Detailed design phase to establish baseline	Day time dB(A)	Site	Once dry season Once monsoon season	Contractor	36,000/-
		Construction	Day time dB(A)	Sensitive receptors (locations to be determined during detailed design)	During noise-generating activities	Contractor	36,000/-

C. Capacity Building

111. The Environmental Specialist of the DSC will provide the basic training required for environmental awareness followed by specific aspects of infrastructure improvement Projects along with Environmental implications for projects. Specific modules customized for the available skill set will be devised after assessing the capabilities of the members of the Training Programme and the requirements of the project. The entire training would cover basic principles of environmental assessment and management; mitigation plans and programmes, implementation techniques, monitoring methods and tools. The proposed training program along with the frequency of sessions is presented in **Table 10** below. This training program is intended for the entire destination and is not just specific to this package.

Table 10: Training Modules for Environmental Management (common for entire project)

Program	Description	Participants	Form of Training	Duration/ Location	Training Conducting Agency
A. Pre-Construction Stage					
Sensitization Workshop	Introduction to Environment: Basic Concept of environment Environmental Regulations and Statutory requirements as per Govt. of India and ADB	Tourism / Forest / Roads / Culture Department Officials, Project Director (PD) and Environmental Specialist (ES) of the PMU/PIU	Workshop	½ Working Day	Environmental Specialist of the PMC and DSC
B. Construction Stage					
Module 1	Roles and Responsibilities of officials/contractors/ consultants towards protection of environment Implementation Arrangements	Engineers and staff of line depts. of GoUK, and PMU/PIU (including the ES)	Lecture / Interactive Sessions	½ Working Day	Safeguards Specialist of the PMC and DSC
Module 2	Monitoring and Reporting System	Engineers and staff of implementing agencies and PMU/ PIU (including ES)	Lecture / Interactive Sessions	½ Working Day	Safeguards Specialist of the PMC and DSC

D. EMP Implementation Cost

112. As part of good engineering practices in the project, there have been several measures as safety, signage, dust suppression, procurement of personal protective equipment, provision of drains, etc. and the costs for which will be included in the design costs of specific subprojects. Therefore, these items of costs have not been included in the IEE budget. Only those items not covered under budgets for construction are considered in the IEE budget.

113. This is a small construction project and it is not expected to cause much significant air, water and noise pollution. The main EMP cost will arise from monitoring of environmental parameters (air and noise) and training.

114. The costs of water sprinkling for dust suppression and providing personal protective equipment's to construction workers shall borne by contractor as part of conditions of contract. In addition the sources of funds for Mitigation measures during construction stage including monitoring during construction stage are also to be borne by the contractor. These are deemed to be included as part of the contract price amount quoted by the contractor for the works. The costs of components for monitoring in operation stage and the capacity building costs are to be funded by the PMU. The EMP cost is given in the **Table 11** below.

Table 11: Environmental Budget

S.N.	Particulars	Stages	Unit	Total number	Rate (INR)	Cost (INR)	Source of fund
A. Monitoring Measures							
1	Air quality monitoring	Construction	Per sample	18	10,000	180,000	Contractor budget
2	Noise Levels – silence zones	Construction	Per location	18	4,000	72,000	Contractor budget
3	Ambient Air Quality	Operation	Per Sample	18	10,000	180,000	PMU
4	Ambient Noise Quality	Operation	Per Sample	18	4,000	72,000	PMU
Sub- Total (A)						**504,000**	
B.	**Capacity Building – Training cost**						
1	Sensitization Workshop	Pre-Construction	L.S	3		450,000	PMU
2	Training Session I	Construction	L.S	3		450,000	PMU
3	Training Session II	Construction	L.S	3		450,000	PMU
Sub -Total (B)						**1,350,000**	
Total (A+B) INR						**1,854,000**	

VI. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A. Process For Consultations Followed

115. This subproject does not involve any elements, which could have an adverse impact on the community. There is no deprivation of any sort for the residents or displacement of any groups. Particularly, with regard to environmental impacts the subproject can be characterized as innocuous.

116. In view of this, the need for holding a public hearing 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 areas. Residents of the area were informed about the proposed sub-project and their views were obtained. During the preparation of this IEE, consultations have been held with the officials of Uttarakhand Tourism Department, District collector, Garhwal Mandal Vikas Nigam (GMVN), Forest Department, and other Stakeholders and agencies in Rudraprayag district. The local level consultations were also carried out on February 08, 2014 by the other subject experts and Environmental expert DSC. The locals suggested that locals come for cremation near the project site. This should be stopped. The consultants discussed this issue with the District Tourism Development Officer and came to know that administration has approved.

117. The Team Leader DSC and Environmental Expert of DSC also had consultations with the District Collector Development Officer on February, 2014 for his comments and

suggestions for the successful implementation of the project. The consultants further explained the department people, tourism people and Mandir committee in the meeting.

118. 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.

119. During the consultations local residents and other stakeholders of subproject area opined that there are limited tourism infrastructures in the region and the tourist inflow is minimal. The subproject implementation will help improvement in infrastructures and publicity about the region. They demanded fast implementation of the subproject.

Figure 4: (Consultation in progress)

B. Future Consultation and Information Disclosure

120. 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 redressed 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.

Information disclosure

121. 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 for the same to the Project Director.

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

C. Grievance Redress Mechanism

123. The affected person/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.

124. GRC at PMU shall discuss the issue and try to resolve it and inform the PIU accordingly. If the matter is not resolved by the GRC at PMU level within one month of time,

the aggrieved person/party can bring the matter to The Court of Law. The PIU shall keep records of all grievances received including contact details of complainant, date of receiving the complaint, nature of grievance, agreed corrective actions and the date these were affected and final outcome. The grievance redress process is shown below.

Composition and functions of GRC

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

126. 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.

127. GRC within Environmental and Social Management Cell (ESMC) at PMU- There shall be one GRC in PMU. The matters not resolved by the GRC at PIU level within one month shall come under GRC at PMU. GRC at PMU will include 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).

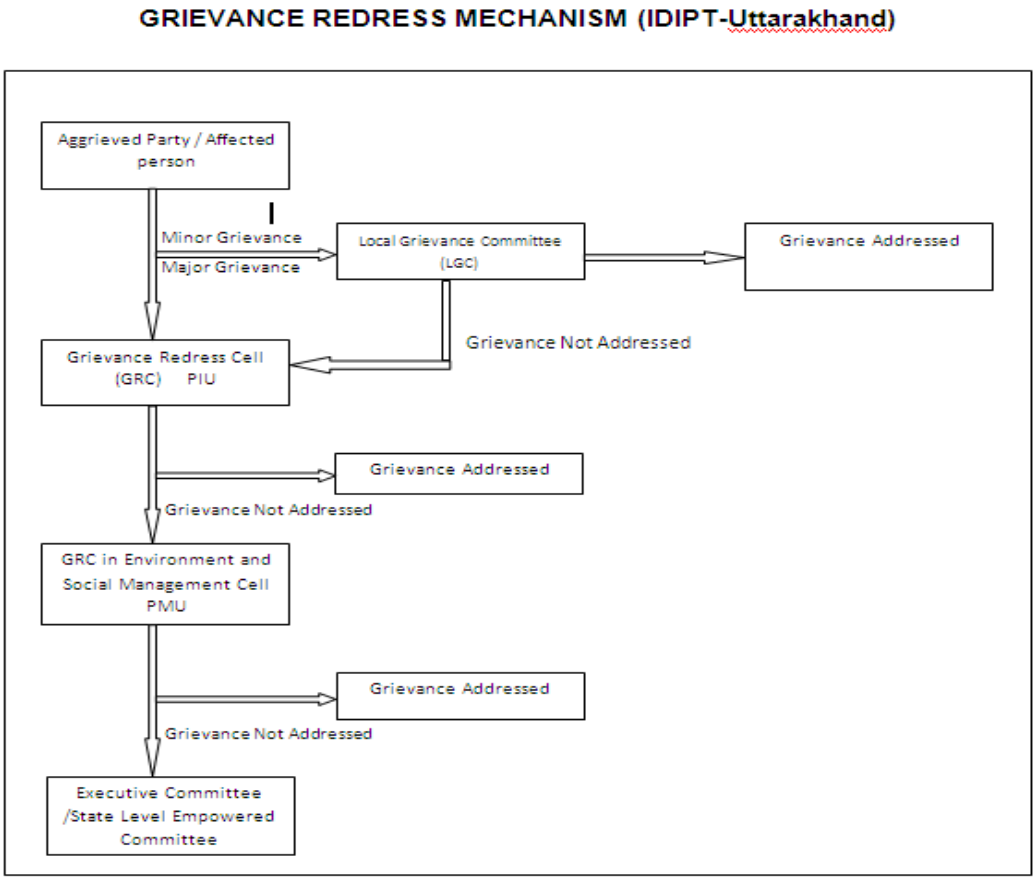
Approach to GRC

128. 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.

129. The format for writing complaints in written format has been given in **Annexure-9.** The grievance redress mechanism has also been shown in **Figure-5** below.

Figure 5: Grievance Redress Mechanism in IDIPT, Uttarakhand



Notes:

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

VII. FINDINGS AND RECOMMENDATIONS

130. The proposed subproject components do not involve any interventions in and around the natural and cultural heritage destinations and have less significant (direct/indirect) environmental impacts. It is expected that the proposed subproject will enhanced economic growth and provision of 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.

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

132. 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.

VIII. CONCLUSIONS

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

134. In conclusion, the sub-project will have overall beneficial impacts after completion in terms of tourism development. Negative impacts on water, air quality and noise levels during civil works & operation phase, which will be appropriately monitored and adequately mitigated. This report has not identified any comprehensive, broad, diverse or irreversible adverse impacts caused by the sub project. It is recommended that project can be implemented with proper mitigation measures to protect the environment.

135. 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 All NOCs

Letter of Village Panchayat for providing land for infrastructure works at Durga dhari Temple

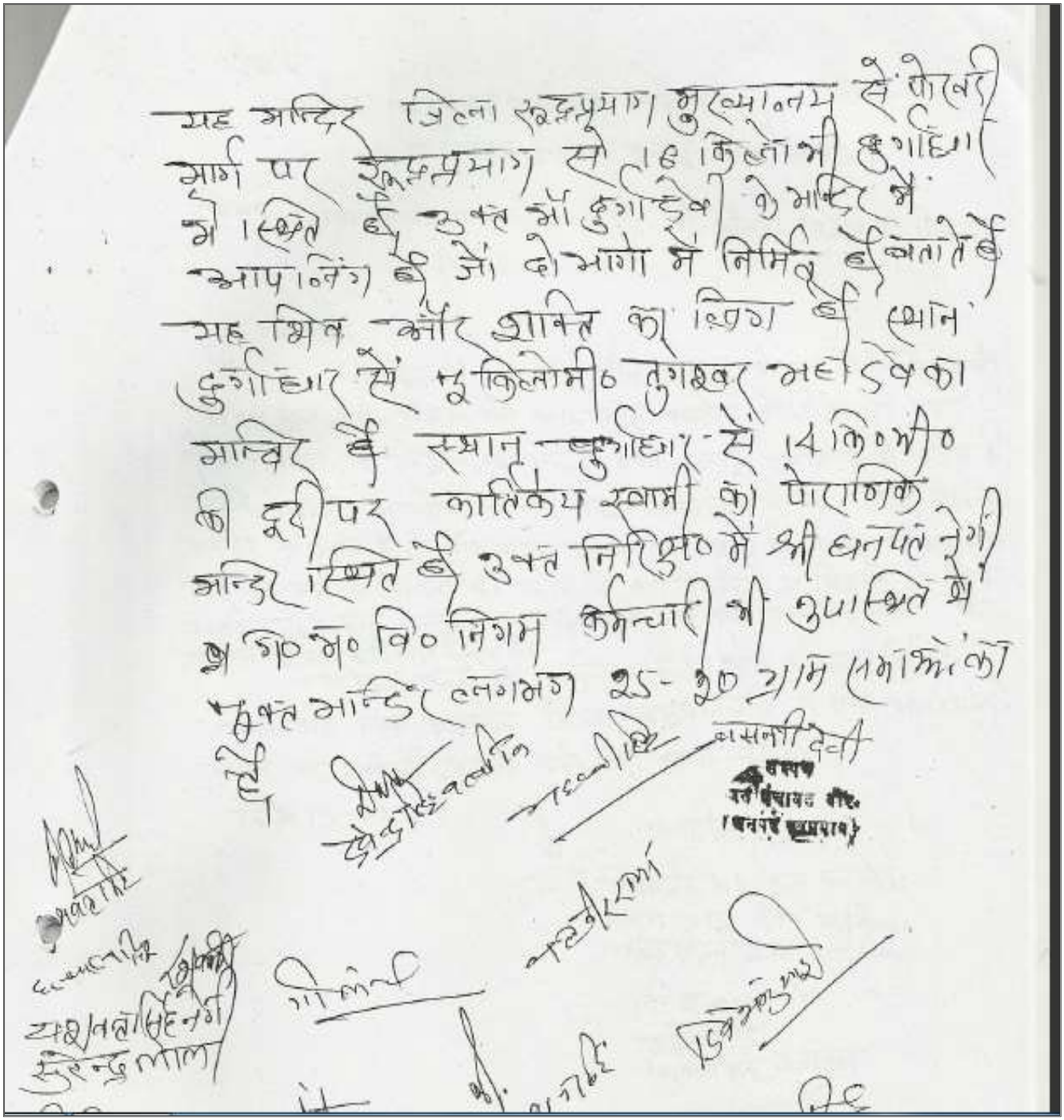
आज दिनांक 12/02/2014 को ग्राम पंचायत बोर
में वन सरपंच श्रीमती बसन्ती देवी की अध्यक्षता में
एक ग्राम बैठक सम्पन्न हुई, जिसमें निम्न
प्रस्ताव पारित किया गया,

प्र० सं० 1:- श्री नरेश चमोली वन संरक्षण विशेषज्ञ (PMU)
एवं श्री योगेन्द्र सिंह रावत वरिष्ठ वास्तुकार
पी० एस० सी० पर्यटन देहरादून के निरीक्षण के
उपरान्त माँ दुर्गा देवी के मन्दिर के सम्मुख भूमि
पर एशियन डेवलपमेंट बैंक द्वारा वित्त पोषित
परियोजना अन्तर्गत प्रस्तावित माँ दुर्गा देवी
मन्दिर का सौन्दर्यीकरण एवं मुख्य मोटर मार्ग
दुर्गाधार से माँ दुर्गा देवी मन्दिर सड़क का
उन्नतीकरण हेतु 1500 वर्ग मी० भूमि जो कि
ग्राम पंचायत की है उक्त भूमि को उपरोक्त
कार्य हेतु देने के लिए सर्व सम्मति से प्रस्ताव
पारित किया गया है उक्त भूमि पर किसी का
व्यक्तिगत कब्जा नहीं है

प्र० सं० 2:- सर्व सम्मति से यह भी निर्णय लिया गया है,
कि इससे भी अतिरिक्त भूमि चाहिए होगी तो
ग्राम सभा देने को तैयार है।

बसन्ती देवी

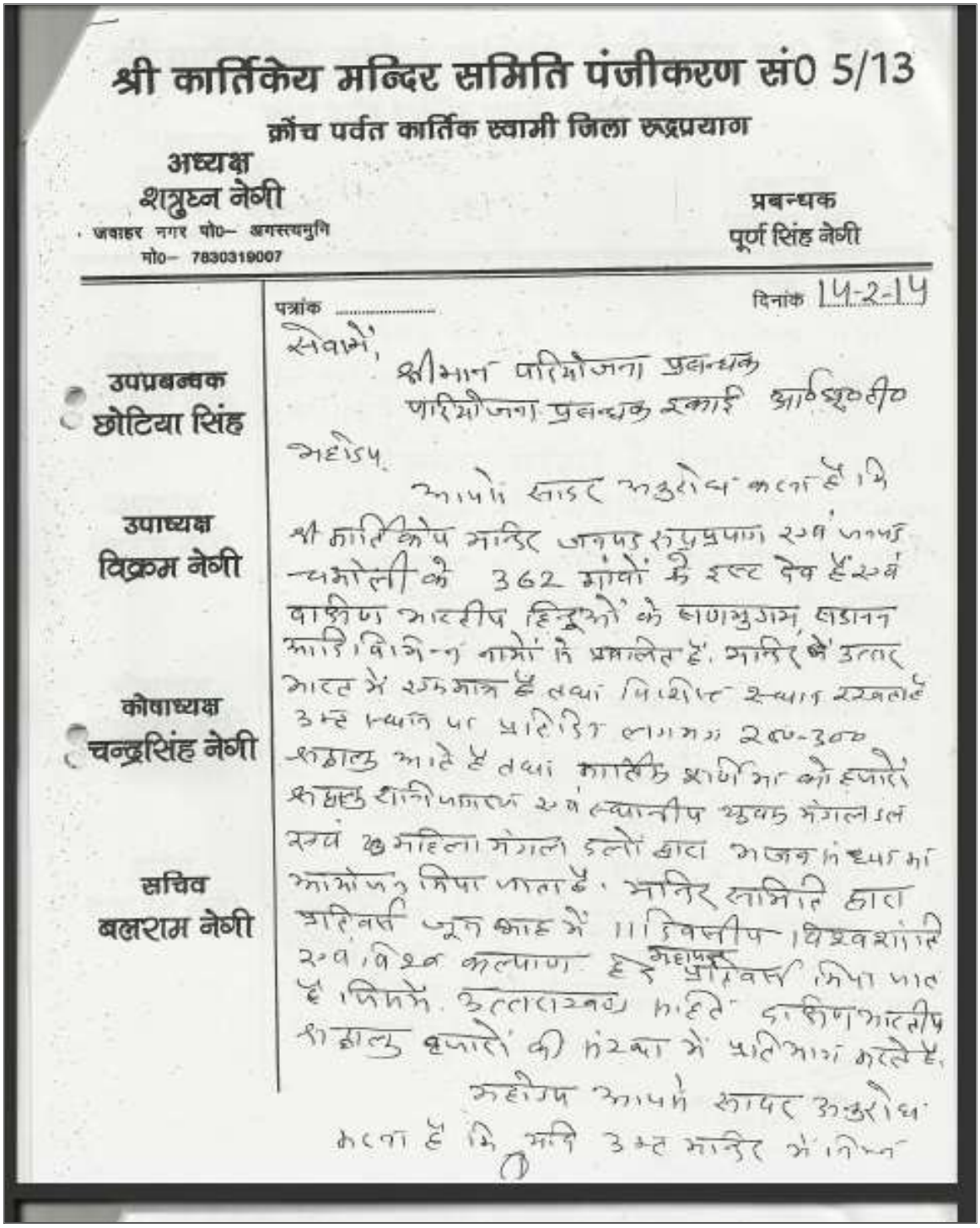
प्र० सं० 3:- मन्दिर की विशेषता:



Transcript

Meeting and discussion was held under the chairmanship of Sarpanch, vill-Baurna and suggestion was given for upgradation of road from Durga dhari to Maa Durga Temple. If required village panchayat agreed to provide land for such development.

Letter of Temple Trust for providing land for infrastructure development works at Kartikeya Temple premises



श्री कार्तिकेय मन्दिर समिति पंजीकरण सं0 5/13

क्रौंच पर्वत कार्तिक स्वामी जिला रुद्रप्रयाग

अध्यक्ष
शत्रुघ्न नेगी
जवाहर नगर पो0– अगस्त्यमुनि
मो0– 7830319007

प्रबन्धक
पूर्ण सिंह नेगी

उपप्रबन्धक
छोटिया सिंह

उपाध्यक्ष
विक्रम नेगी

कोषाध्यक्ष
चन्द्रसिंह नेगी

सचिव
बलराम नेगी

पत्रांक .....

दिनांक 14-2-14

सेवामें,

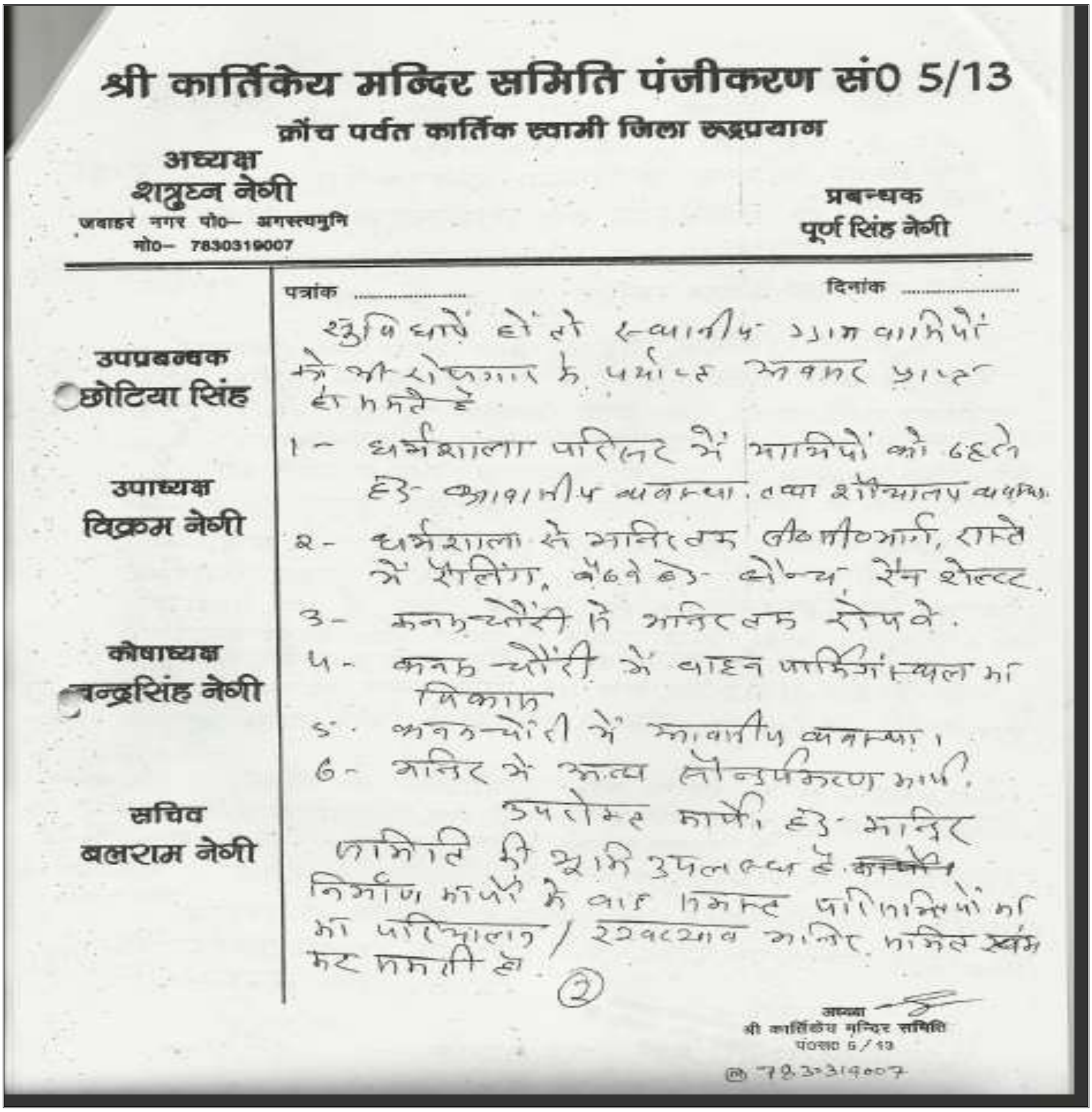
श्रीमान परियोजना प्रबन्धक
परियोजना प्रबन्धक इकाई आर्द्रभूमि

महोदय,

आपसे सादर अनुरोध करता हूँ कि श्री कार्तिकेय मन्दिर जनपद रुद्रप्रयाग एवं जनपद चमोली के 362 गांवों के इष्ट देव हैं एवं दक्षिण भारतीय हिन्दुओं के षणमुखम, सुब्रमण्य स्वामी, विभिन्न नामों से प्रचलित हैं. मन्दिर जो उत्तर भारत में एकमात्र है तथा विशेष स्थान रखता है इस स्थान पर प्रतिदिन लगभग 200-300 श्रद्धालु आते हैं तथा कार्तिक पूर्णिमा को हजारों श्रद्धालु दीपोत्सव एवं स्थानीय युवक मंगल दल एवं महिला मंगल दलों द्वारा भजन कीर्तन का आयोजन किया जाता है. मन्दिर समिति द्वारा प्रतिवर्ष जून माह में ।। दिवसीय विश्वशांति एवं विश्व कल्याण हेतु महायज्ञ का आयोजन किया जाता है जिसमें उत्तराञ्चल सहित दक्षिण भारतीय श्रद्धालु हजारों की संख्या में प्रतिभाग करते हैं.

महोदय आपसे सादर अनुरोध करता हूँ कि यदि इस मन्दिर में निम्न

t



श्री कार्तिकेय मन्दिर समिति पंजीकरण सं0 5/13

क्रौंच पर्वत कार्तिक स्वामी जिला रूद्रप्रयाग

अध्यक्ष
शत्रुघ्न नेगी
जवाहर नगर पो0– अगस्त्यमुनि
मो0– 7830319007

प्रबन्धक
पूर्ण सिंह नेगी

उपप्रबन्धक
छोटिया सिंह

उपाध्यक्ष
विक्रम नेगी

कोषाध्यक्ष
चन्द्रसिंह नेगी

सचिव
बलराम नेगी

पत्रांक .... दिनांक ....

सुविधायें हों तो स्थानीय ग्राम वासियों को भी रोजगार के पर्याप्त अवसर प्राप्त हो सकते हैं

1- धर्मशाला परिसर में यात्रियों को ठहरने हेतु आवासीय व्यवस्था तथा शौचालय व्यवस्था

2- धर्मशाला से मन्दिर तक पैदल मार्ग, रास्ते में रेलिंग, बैठने हेतु बेन्च, रैन शेल्टर.

3- कनकचौरी से मन्दिर तक रोपवे.

4- कनकचौरी में वाहन पार्किंग स्थल का विकास

5- कनकचौरी में आवासीय व्यवस्था।

6- मन्दिर में अन्य सौन्दर्यीकरण कार्य.

उपरोक्त कार्यों हेतु मन्दिर समिति की भूमि उपलब्ध है। निर्माण कार्यों के बाद निर्मित परिसम्पत्तियों का का परिचालन / रखरखाव मन्दिर समिति स्वयं कर सकती है।

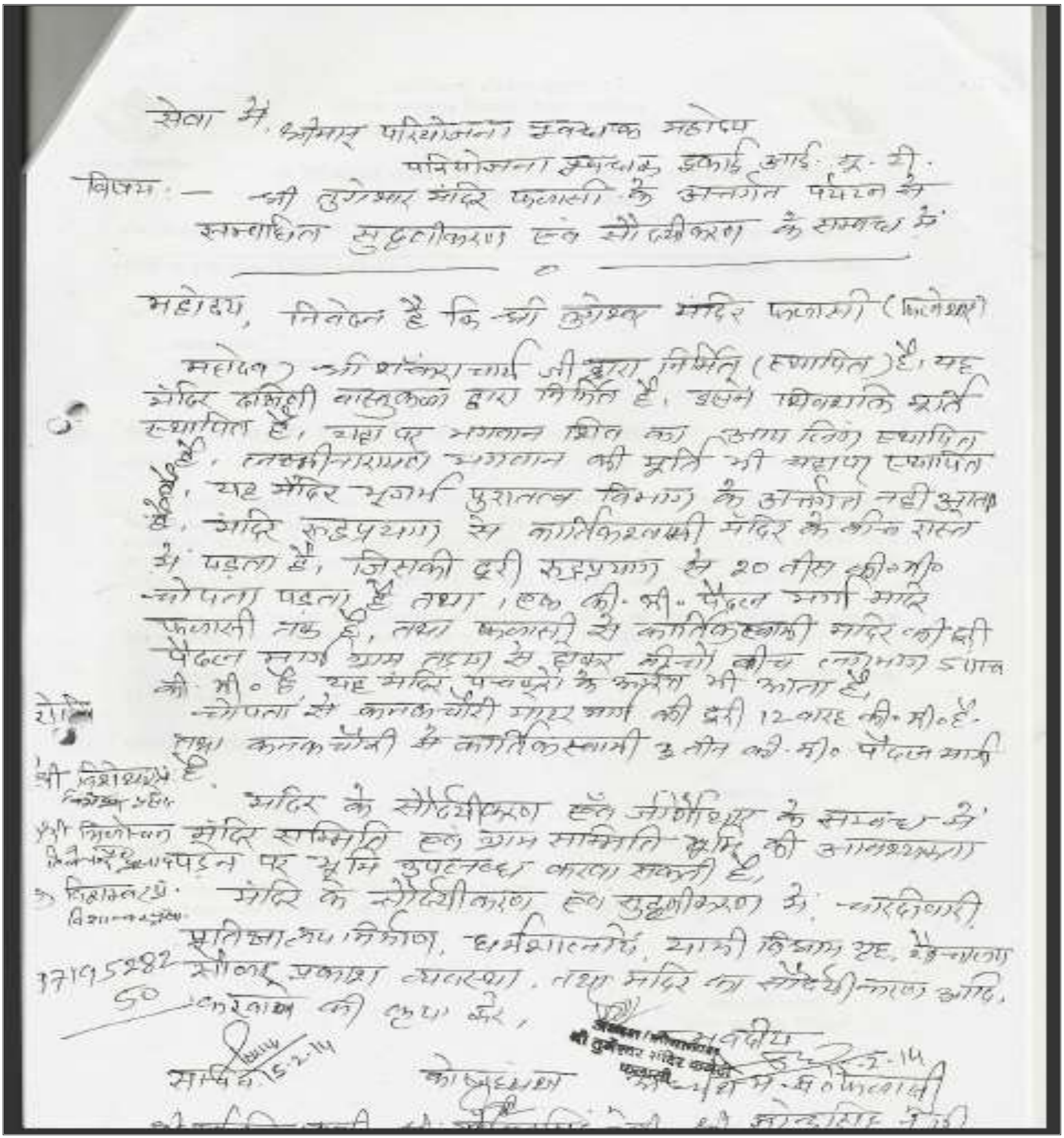
(2)

अध्यक्ष
श्री कार्तिकेय मन्दिर समिति
पंजी0 5/13
मो 7830319007

Transcript

Letter from Kartikeya Swami Temple Trust to Project Director, IDIPT for providing infrastructure facilities at Kartikeya Swami temple and its vicinity. Request has been made for construction of Rest house, Toilets blocks, Sitting arrangement, rain shelters from Rest house to Temple, Parking and Beautification of temple etc.

Letter of Temple Trust and Village Panchayat for providing land for infrastructure development works at Tungeshawar Temple.



सेवा में, श्रीमान परियोजना प्रबन्धक महोदय
परियोजना प्रबन्धक इकाई आई. डी. पी. टी.
विषय :— श्री तुंगेश्वर मंदिर फलासी के अन्तर्गत पर्यटन से सम्बन्धित सुदृढ़ीकरण एवं सौन्दर्यीकरण के सम्बन्ध में

महोदय, निवेदन है कि श्री तुंगेश्वर मंदिर फलासी (तुंगेश्वर महादेव) श्री शंकराचार्य जी द्वारा निर्मित (स्थापित) है, यह मंदिर [illegible] वास्तुकला द्वारा निर्मित है, इसमें [illegible] मूर्ति स्थापित है, जहां पर भगवान शिव का [illegible] लिंग स्थापित है, लक्ष्मीनारायण भगवान की मूर्ति भी यहां पर स्थापित है, यह मंदिर भूगर्भ पुरातत्व विभाग के अन्तर्गत नहीं आता है, मंदिर रुद्रप्रयाग से कार्तिकस्वामी मंदिर के [illegible] रास्ते में पड़ता है, जिसकी दूरी रुद्रप्रयाग से 20 बीस कि॰मी॰ चोपता पड़ता है तथा 1 एक कि॰ मी॰ पैदल मार्ग मंदिर फलासी तक है, तथा फलासी से कार्तिकस्वामी मंदिर की भी पैदल मार्ग ग्राम [illegible] से होकर [illegible] बीच लगभग 5 पांच की मी॰ है, यह मंदिर पंचपुरों के [illegible] भी आता है, चोपता से कनकचौरी मोटर मार्ग की दूरी 12 बारह की॰ मी॰ है तथा कनकचौरी से कार्तिकस्वामी 3 तीन की॰ मी॰ पैदल मार्ग है।

मंदिर के सौन्दर्यीकरण एवं जीर्णोद्धार के सम्बन्ध में मंदिर समिति एवं ग्राम समिति भूमि की आवश्यकता पड़ने पर भूमि उपलब्ध करवा सकती है, मंदिर के सौन्दर्यीकरण एवं सुदृढ़ीकरण में चारदीवारी, प्रतिक्षालय निर्माण, धर्मशाला, शौचालय, यात्री विश्राम गृह, बैठने की व्यवस्था, सोलर प्रकाश व्यवस्था, तथा मंदिर का सौन्दर्यीकरण आदि करवाने की कृपा करें,

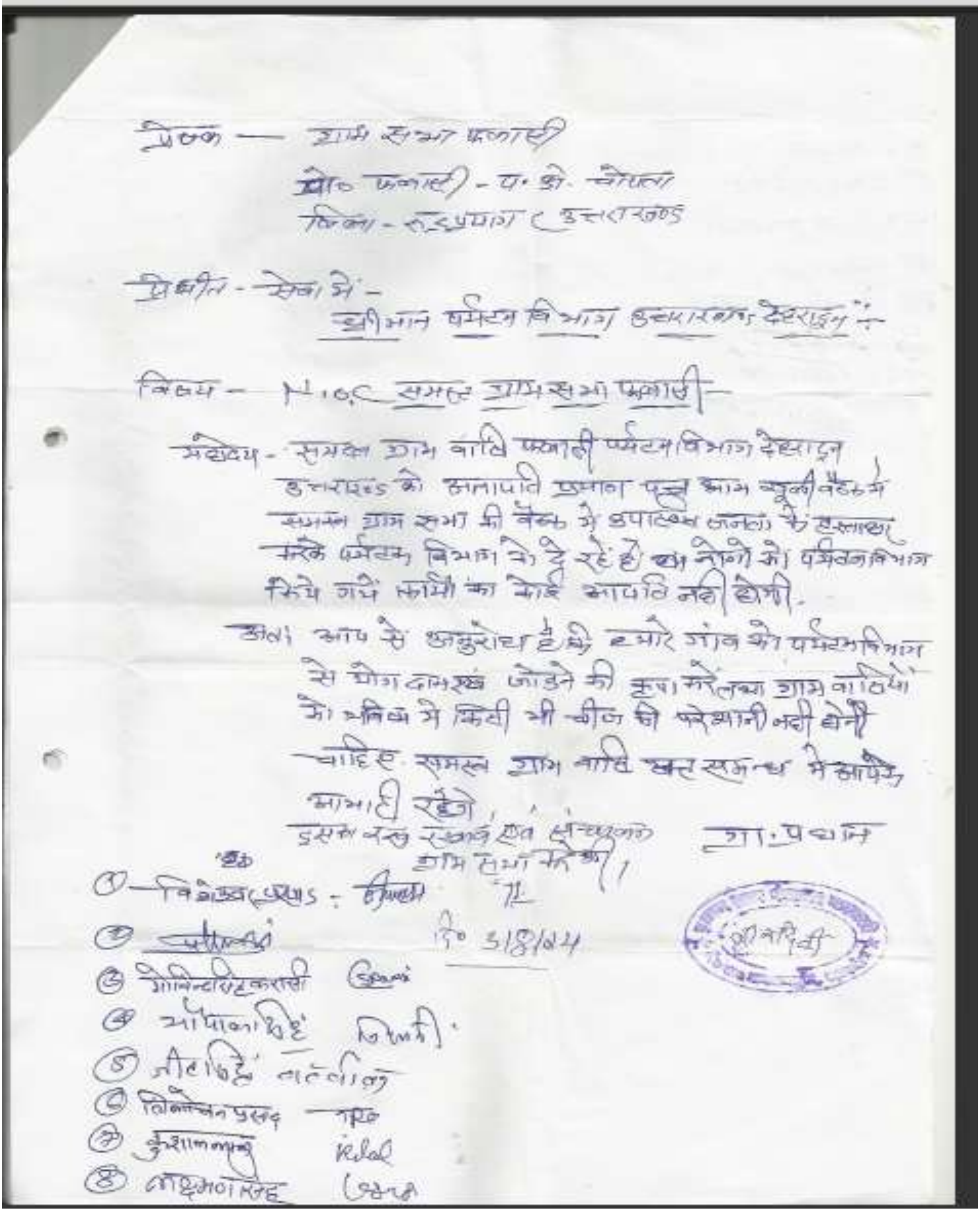
भवदीय

सचिव 15-2-14 कोषाध्यक्ष अध्यक्ष / श्री तुंगेश्वर मंदिर कमेटी फलासी 15-2-14

Transcript

Letter from Tungeshwar Temple Trust and Village Panchayat to Project Director, IDIPT for providing infrastructure facilities at Tungeshwar temple and its vicinity. Request has been made for construction of rest house, Toilets blocks, Sitting arrangement, Rain shelters from Rest house to Temple, Parking and beautification of temple etc. Assurance is given by the Trust and Panchayat for providing lands for such development.

NOC of village panchayat, Palasi for Infrastructure development works in Temple Tungeshwar



प्रेषक — ग्राम सभा फलासी
ग्रा० फलासी - प० को० चोपता
जिला - रुद्रप्रयाग (उत्तराखण्ड)

प्रेषित - सेवा में -
श्रीमान पर्यटन विभाग उत्तराखण्ड देहरादून

विषय — N.O.C. समस्त ग्राम सभा फलासी —

महोदय - समस्त ग्राम वासी फलासी पर्यटन विभाग देहरादून उत्तराखण्ड को अनापत्ति प्रमाण पत्र आम खुली बैठक में समस्त ग्राम सभा की बैठक में उपस्थित जनता के हस्ताक्षर करके पर्यटन विभाग को दे रहे हैं कि लोगों को पर्यटन विभाग किये गये कार्यों का कोई आपत्ति नहीं होगी.

अतः आप से अनुरोध है कि हमारे गांव को पर्यटन विभाग से योग दान स्व. जोड़ने की कृपा करें तथा ग्राम वासियों को भविष्य में किसी भी चीज की परेशानी नहीं होनी चाहिए. समस्त ग्राम वासि इस सम्बन्ध में आपके आभारी रहेंगे,

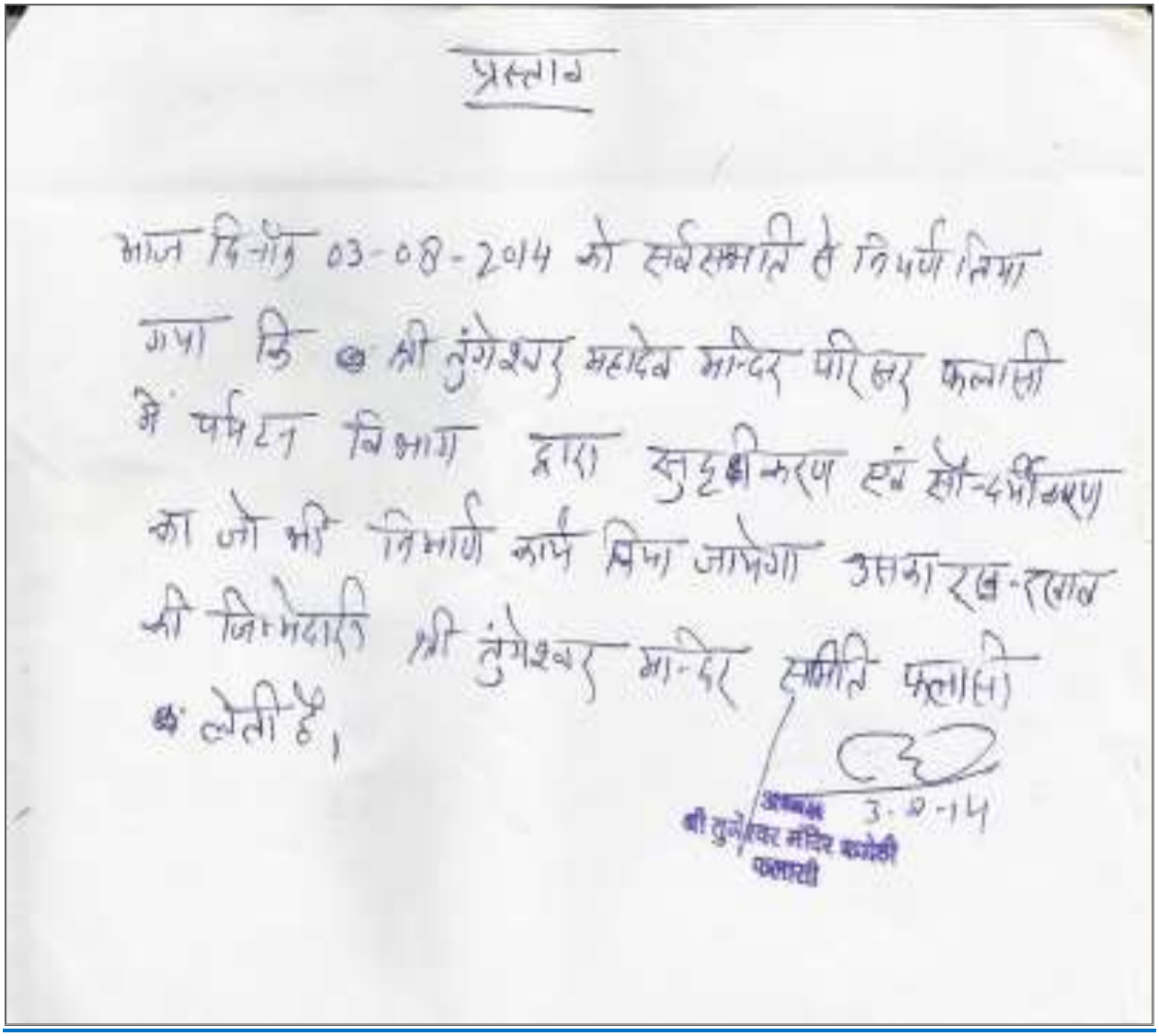
इसको वस्तु स्वार्थ एवं स्वेच्छा से ग्राम सभा ने की।

ग्रा० प्रधान

दि० 3/8/14

(1) — [illegible] प्रसाद
(2) [illegible]
(3) गोविन्द सिंह [illegible] Sami
(4) [illegible] सिंह
(5) [illegible] सिंह
(6) त्रिलोचन प्रसाद
(7) कुशाल [illegible] Rilal
(8) [illegible]

Assurance of Temple Trust, Tungeshwar Mahadev for operation and Maintenance of Project Assets.



प्रस्ताव

आज दिनांक 03-08-2014 को सर्वसम्मति से निर्णय लिया गया कि श्री तुंगेश्वर महादेव मन्दिर परिसर फलासी में पर्यटन विभाग द्वारा सुदृढ़ीकरण एवं सौन्दर्यीकरण का जो भी निर्माण कार्य किया जायेगा उसका रख-रखाव की जिम्मेदारी श्री तुंगेश्वर मन्दिर समिति फलासी करेगी।

अध्यक्ष 3.8.14
श्री तुंगेश्वर मंदिर कमेटी
फलासी

Transcript

Meeting was held on dated 3rd August, 2014 at Tungeshwar Temple premises and decision was taken by the Temple Trust for maintenance of project assets after the completion of sub-project.

ANNEXURE 2: RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST

Instructions:

Natural, Heritage & Cultural

1. 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.

2. 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.

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

Country/Project Title: IITIDP – Development of tourist facilities at Kartikeya Swami Temple.

Sector Division: SAUW

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area adjacent to or within any of the following areas:			
▪ Underground utilities		√	No underground activity within the temple premises.
▪ Cultural heritage site		√	It is temple but not coming within ASI protected area.
▪ Protected Area		√	Kartekya swami Temple located within the forest land. NOC is required from Forest department. But in case of Tungaswar and Durgadhari temple land belongs to Temple Trust and Mandir Samit..
▪ Wetland		√	
▪ Mangrove		√	Temple is not coming mangrove area
▪ Estuarine		√	There is no estuarine within the project site
▪ Buffer zone of protected area		√	Project site is not coming under buffer zone
▪ Special area for protecting biodiversity		√	There is no special area for protecting biodiversity within the project area.
▪ Bay		√	
B. Potential Environmental Impacts Will the Project cause.			
▪ Encroachment on historical/cultural areas?		√	Project is not encroaching the historical and cultural area
▪ Encroachment on precious ecology (e.g. sensitive or protected areas)?		√	Kartekya swami temple located in Reserve forest land , for that NOC is required .

Screening Questions	Yes	No	Remarks
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems?		√	These impacts shall result in the event of the sanitation and solid waste systems not being developed in the proposed area.
▪ Dislocation or involuntary resettlement of people?		√	No re-settlement will be done within the project area.
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		√	Project will not give any adverse impact on poor, women, and children group
▪ Accident risks associated with increased vehicular traffic, leading to loss of life?		√	Project area is not much crowded, so there is less chance of accident.
▪ Increased noise and air pollution resulting from increased traffic volume?	√		Adoption of the mitigation measures shall effectively address such impacts during construction and post construction.
▪ Occupational and community health and safety risks?		√	Proper precaution will be taken on occupational and community health during implementation time.
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		√	No risk and vulnerable to occupational health.
▪ Generation of dust in sensitive areas during construction?	√		Envisaged during the construction activities, especially for activities within the area. Adoption of the mitigation measures shall effectively address such impacts during construction.
▪ Requirements for disposal of fill, excavation, and/or spoil materials?	√		
▪ Noise and vibration due to blasting and other civil works?		√	
▪ Temporary silt runoff due to construction		√	During construction time, contractor will ensure proper silt runoff. Also there is no major construction activity
▪ Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction?		√	There is no major construction activity, so ground water will not be affected.
▪ Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?		√	
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		√	Exiting water supply and sanitation system will support population influx during project construction and operation period
▪ Social conflicts if workers from other regions or countries are hired?		√	As per ADB guideline, 50% labour will be engaged from the local area/project site and rest may be from the other regions.
▪ Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation?		√	There is no high tension electric line within the project sites.

Screening Questions	Yes	No	Remarks
▪ Risks to community health and safety caused by management and disposal of waste?		√	Very minor waste will be generated and that will not affect community health.
▪ Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		√	Proper precaution will be taken by the implementing agency during executing the project.

A Checklist for Preliminary Climate Risk Screening

Country/Project Title: IITIDP: Uttarakhand, Development of tourism infrastructure at Kartekya Swami

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)	0	Not applicable

[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.

	throughout their design life time?		

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

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

Result of Initial Screening (Low, Medium, High): Medium

Other Comments: **None**

ANNEXURE 3: Environmental Selection Criteria (as per EARF table 6)

Component	Criteria	Remarks
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, Kartikeya Swami has tremendous potential to become a national hub for eco-tourism. UNWTO master plan for Tourism also suggests development and promotion of tourism around Kartikeya swami Temple. • Enhanced livelihood opportunities with increase in tourist flow once basic infrastructure and services improved. • Enhanced opportunities for small restaurants/dhaba's owners, Hotel/lodges, local guides, local produce etc. • Villagers will be engaged in the maintenance work of the structures at Kartikeya Swami, Durgadhar & Tugeshwar temple. • Income of the Mandir Samittee will increase due to halting of number of tourists • Interpretation centre at Rudraprayag and at other three locations will give employment to staff like receptionist, guides, managers, care takers etc. • Specific soft measures (training, formation of self help groups, etc.) for community benefit have been taken care of under Rural Tourism sub project in which villages around Kartikeya Swami t have been covered.
	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.	Kartikeya Swami Temple lie within the forest land. NOC is required from Forest department. But in case of Tungaswar and Durga dhari temple land belongs to Temple Trust and Mandir committee

Component	Criteria	Remarks
	4. Will be in line with the Conservation Plan/management plan for the conservation and management of the Protected areas	*NA*
	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 promote tourism related activities in protected areas subject to clearance from forest department
	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	Location of temple is not close to any Archaeological Survey of India (ASI) notified archaeological monument or heritage site.
	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, construction of pathways will not involve any major works within prohibited and regulated areas as no ASI notified monument/heritage site exists in the vicinity.
	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
	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, community interaction and local population residing close to subproject site have been

Component	Criteria	Remarks
		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.	Effort has been made to provide a feeling of the glorified history of the region. The proposed structure shall be constructed in in sync with Uttarakhand architecture
	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.	NA as the sub project works are not close to any protected monuments/structures. Designs are in sync with the architectural character of the temple
	16.Will ensure that physical remains are conserved in their historic condition without loss of evidence. Respect for the significance of the physical emails must guide any restoration. Technical interventions should not compromise subsequent treatment of the original fabric. The results of intervention should be unobtrusive when compared to the original fabric or to previous treatments, but still should be distinguishable	Not applicable because the site is not close to any ASI Protected monument/ remains site.
	17. Will ensure that the adaptive reuse of any particular building of monuments/structures does not intrude or induce impacts on other areas of the monument	*Not applicable*
Component	Criteria	
	18. Will ensure preservation of traditional technology and craftsmanship. New materials and techniques may only be used after they have been tried and proven, and should in no way cause damage to site.	Project designs are based on guidelines conforming to Uttarakhand architecture. The construction and operation of temple campus will not have any impact traditional technology and craftsmanship.
	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	*NA*
	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	*NA*

Component	Criteria	Remarks
	excavation-should be submitted for all site programmed for excavation	
	21. Will ensure that treatment of the cultural heritage site and its environs is a comprehensive measure to prevent damage form natural processes and human actions, to reveal the historic condition of a site, and to allow its rational use. Service building should be as far as possible form the principal area of the site. Landscaping should aim to restore the site to its historic state and should not adversely affect the site: contemporary gardening and landscape concepts and designs should not be introduced.	*NA,* as the site is not a cultural heritage site Proposed subproject entails construction of temple infrastructure, which has been designed in heritage style with facilities for basic amenities
Conservation and habitat protection measures- in and around the natural heritage assets and protected areas.	22. Will observe the principle of not adversely impacting the habitat quality of the protected area and shall involve treatment of damage caused by natural processes and human actions and prevention of further deterioration, using both technical and management measures.	Kartikeya Swami Temple lie within the forest land. NOC is required from Forest department. But in case of Tungaswar and Durgadhari temple land belongs to Temple Trust and Mandir committee
	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.	NA
	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.	Site is not in core or buffer zone of any protected area. (Proposed sub project interventions shall provide facilities. The temple and surroundings are not part of protected area and the temple also does not fall within the buffer zone of protected area). Kartikeya Swami Temple lie within the forest land. NOC is required from Forest department. But in case of Tungaswar and Durgadhari temple land belongs to Temple Trust and Mandir Committee
	25. Will ensure that the areas of significant habitat diversity habitats are conserved in their natural condition.	*NA*

Component	Criteria	Remarks
	26. The results of intervention should be unobtrusive when compared to the original fabric or to previous treatments, but still should be distinguishable	It is tried to retain the architectural character of the temple through proposed interventions.
	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.	No new materials and techniques are proposed to be used.
	28. Service buildings should be as far as possible from the principal area of the site.	*NA*
Water supply	29. Will be taken up from existing potable treatment systems nearby, unless no such systems are available in the vicinity.	NA.
	30. Will not result in excessive abstraction of ground water or result in excessive groundwater pumping impairing ground water quality	Not envisaged as water requirements are to be met from existing water supply system.
	31. Will ensure adequate protection from pollution of intake points	Not Applicable, as no new intake point or water supply infrastructure is to be created as part of this sub project.
	32. Will not result in unsatisfactory raw water supply (e.g. supply with excessive pathogens or mineral constituents)	The sub project activities during construction and operation phase will not result into unsatisfactory raw water supply as waste water from Adventure Tourist Centre will not be going to raw water supply source. Further, in house, water treatment measures will be observed prior to supply of potable water in the Centre.
	33. Will ensure proper and adequate treatment and disposal facilitates for increased volumes of wastewater generation	Not much waste water generation envisaged. Septic tanks/sock pits of sufficient capacity are proposed
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	NA
	35. Will ensure that sanitation improvements proposed do not result in pollution of groundwater.	Environmental Management and Monitoring Plan (EMMP) has been prepared and this will ensure no impact on ground water quality.

Component	Criteria	Remarks
	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.	Will be ensured and since it is a tourism project, no such nuisance envisaged during the construction and operation phases of the sub project.
	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.
	38. Will not cause overflows and flooding of surroundings, especially around the heritage sites with raw sewage.	Proposed septic tanks/ sock pits are of adequate capacity, overflow and flooding not anticipated. The septic tank will be emptied every quarter through a vacuum sludge truck. The responsibility of septic tank cleaning lies with the Tourism Department. If the temple trust is to be managed through an Operator then Dept. will ensure that the septic tanks are cleaned every quarter. For the septic tank cleaning arrangement will be made with the local municipal authorities at the site. The sludge from the vacuum truck will be disposed off at the location identified by the PIU in consultation with local municipal authorities.
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 odor and influx of insects, rodents, etc.	During construction phase suitable buffer will be provided as per EMMP. Project also has provisions for landscaping and maintenance of rich green belt with native species in the vacant space of temple

Component	Criteria	Remarks
	41. Will ensure that for composting pits for protected areas, the locations are devoid of any wildlife population, especially wild boars, porcupines	*NA*
	42. Will ensure any on site waste management done in compliance with government regulations and in coordination with municipal authorities.	It will be ensured
Roads	43. Will ensure minimal clearing of vegetation	Site is devoid of any vegetation hence clearing of vegetation not envisaged. The roads circulation plan planned to be integrated with the local road network.
	44. Will ensure on dislocation and involuntary resettlement of people living in right of way.	No dislocation and involuntary resettlement envisaged. The sub project site is adjacent to the existing road.
	45. Will not lead to alteration of surface water hydrology of streams/waterways that may result in increased sediment load due to erosion form construction sites.	Erosion from construction sites will be controlled as per EMMP provisions. Road construction within the subproject complex will not have any impact on the surface water hydrology of the project region.
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	NA
	48. Will ensure effective drainage of the monument area, and provide for improved structural stability of the monuments	Not Applicable
Development of parking and other tourist infrastructure amenities	49. Will ensure no deterioration of surrounding environmental conditions due to uncontrolled growth around these facilities, increased traffic and increased waste generation resulting from improved infrastructure facilities	Any new growth or expansion will be within the regulations of Uttrakhand Tourism Development Board and local Civic authorities. The parking facilities for the sub project have been planned within the temple complex Hence there will be no impact on existing traffic on account of operation of subproject. The tourist centre will have a well planned solid waste collection and disposal system. Not envisaged. Project shall add

Component	Criteria	Remarks
	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.	to the aesthetic beauty of the site and enhance the visitor experience.

ANNEXURE 4: Photo Illustration

Photos: Kartikey Swamy

pathway to the main shrine, Kartikey swami Temple

Temple complex, Kartikey swami Temple

View of , Kartikey swami Temple

pathway to the main shrine, Kartikey swami Temple

Temple trust land for parking

Available Trust land

Photos: Durga dhari Temple

View of Durgadhari Temple

Vacant trust land within temple premises.

Pathway to the temple

Vacant trust land

Entrance gate of Temple

Existing Stairs of temple

Photos: Tungeshwar Temple

View Of Entrance Gate

Existing Pathway

Vacant land along the pathway for construction of toilet and sitting arrangement

View of Temple premises

View of Tungeshwar Temple

View Of Entrance Gate

ANNEXURE 5: Sample Semi-Annual Environmental Monitoring Report Template

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

INTRODUCTION

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

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

COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS

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

COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

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

COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

- Provide the monitoring results as per the parameters outlined in the EMP. Append supporting documents where applicable, including Environmental Site Inspection Reports.
- There should be Reporting on the following items which can be incorporated in the checklist of routine Environmental Site Inspection Report followed with a summary in the semi-annual Report send to ADB. Visual assessment and review of relevant site documentation during routine site inspection needs to note and record the following:

- What are the dust suppression techniques followed for site and if any dust was noted to escape the site boundaries;
- If muddy water was escaping site boundaries or muddy tracks were seen on adjacent roads;
- adequacy of type of erosion and sediment control measures installed on site, condition of erosion and sediment control measures including if these were intact following heavy rain;
- Are their designated areas for concrete works, and refuelling;
- Are their spill kits on site and if there are site procedure for handling emergencies;
- Is there any chemical stored on site and what is the storage condition?
- Is there any dewatering activities if yes, where is the water being discharged;
- How are the stockpiles being managed;
- How is solid and liquid waste being handled on site;
- Review of the complaint management system;
- Checking if there are any activities being under taken out of working hours and how that is being managed.

Summary Monitoring Table

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

Overall Compliance with CEMP/EMP

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

APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

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

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

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

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

Air Quality Results

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

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

Water Quality Results

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

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

Noise Quality Results

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

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

SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

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

Annexes

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

SAMPLE ENVIRONMENTAL SITE INSPECTION REPORT

Project Name
Contract Number

NAME:_____ DATE: _____
TITLE: _____ DMA:_____
LOCATION:_____ GROUP: _____

WEATHER CONDITION: _____

INITIAL SITE CONDITION: _____

CONCLUDING SITE CONDITION:

Satisfactory_____ Unsatisfactory_____ Incident_____ Resolved _____Unresolved _____

INCIDENT:
Nature of incident: _____

Intervention Steps: _____

Incident Issues

Resolution

Project Activity Stage	Survey	
	Design	
	Implementation	
	Pre-Commissioning	
	Guarantee Period	

Inspection

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

Site Restored to Original Condition Yes No

Signature
_____

Sign off

_____ _____

Name Name
Position Position

ANNEXURE 6: SAMPLE OUTLINE OF SPOIL MANAGEMENT PLAN (SMP)

1.0 Purpose and application:

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

2.0 Objectives of SMP:

The objectives of SMP are:

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

3.0 Structure of SMP:

Section 1: Introduction of SMP
Section 2: Legal and other requirements
Section 3: Roles and responsibilities
Section 4: Identification and assessment of spoil aspects and impacts
Section 5: Spoil volumes, characteristics and minimization
Section 6: Spoil reuses opportunities, identification and assessment
Section 7: On site spoil management approach
Section 8: Spoil transportation methodology
Section 9: Monitoring, Reporting, Review, and Improvements

4.0 Aspects and Potential Impacts

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

Aspects	Potential Impacts
Air Quality	Potential for high winds generating airborne dust from the stock piles
Sedimentation	Potential for sediment laden site runoff from spoil stockpiles and potential for spillage of spoil from truck on roads
Surface and Groundwater	Contamination of water (surface and ground water)
Noise	Associated with spoil handling and haulage and storage
Traffic	Impacts associated with spoil haulage
Land Use	Potential for spoil to be transported to a receivable site that doesn't have permission for storage/disposal
Design specifications	Limitations on opportunities to minimize spoil generation
Sustainability	Limited sites for storage, reuse opportunities

5.0 Spoil volumes, characteristics and minimization

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

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

5.3 Adopt Spoil Reduce, Reuse Opportunities

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

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

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

5.5 Storage and stock piling

5.6 Transportation and haulage route

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

ANNEXURE 7: TRAFFIC MANAGEMENT PLAN (TMP)

A. Principles

1. One of the prime objectives of this TMP is to ensure the safety of the sites
   (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 road closure, if required

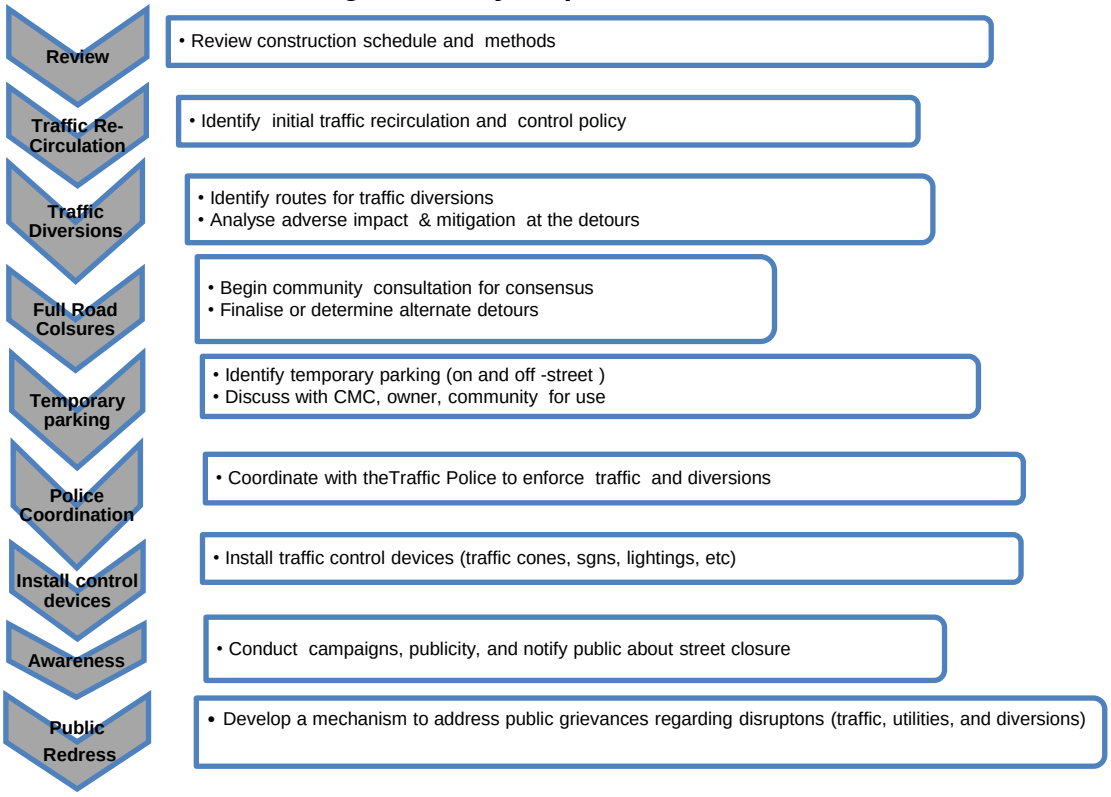
3. Apart from the capacity analysis, a final decision to close a particular section of road and divert the traffic should involve the following steps:
   (i) approval from the PIU, local administration to use the other bank of canal or any other rural road as detours;
   (ii) consultation with businesses, 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 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 of roads Flaggers/ personnel should be equipped with reflective jackets at all times and have traffic control batons (preferably the LED type) for regulating the traffic during night time.

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

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

ANNEXURE 8: Meeting minutes of the meeting held at Rudraprayag on 22nd February 2014

दिनांक 22 फरवरी 2014 को जिलाधिकारी, रूद्रप्रयाग की अध्यक्षता में एशियन डेवलपमेंट बैंक द्वारा वित्त पोषित उप परियोजना के SAR की प्रथम बैठक की कार्यवाही का कार्यवृत्त

उपस्थिति –

1– श्री एम0एस0 राणा, मुख्य विकास अधिकारी, रूद्रप्रयाग।
2– श्री अजय शर्मा, उप प्रभागीय वनाधिकारी, रूद्रप्रयाग।
3– श्री रवीन्द्र निराला, वन क्षेत्राधिकारी, केदारनाथ वन्यजीव प्रभाग, गोपेश्वर–चमोली।
4– श्री इन्द्रजीत बोस, अधिशासी अभियन्ता, लोक निर्माण विभाग, रूद्रप्रयाग।
5– श्रीमती सीमा नौटियाल, प्र0 जिला पर्यटन विकास अधिकारी, रूद्रप्रयाग।
6– श्री रंजन मलिक, ई0एस0एस0।
7– पल्लवी, आर्टिस्ट इक्को टूरिज्म प्लानर, डी0एस0सी0।
8– श्री विनोद कुमार चमोली, इन्चार्ज डिजाइन सुपविजन कन्सल्टेन्ट(डी0एस0सी0)।
9– श्री नरेश चमोली, पी0एम0यू0 आई0डी0आई0पी0टी0, देहरादून।
10– श्री यशवन्त सिंह नेगी, कोषाध्यक्ष, मन्दिर समिति फलासी।
11–श्री योगम्बर नेगी पूर्व अध्यक्ष छात्र संघ अगस्त्यमुनि।
12–श्री शत्रुघ्न नेगी अध्यक्ष, श्री कार्तिकेय मन्दिर समिति।
13–श्री वीरेन्द्र सिंह रावत उपाध्यक्ष, महाकवि कालीदास समिति कविल्ठा।
14–श्री सुरेशानन्द गौड, महामंत्री महाकवि कालीदास जन्म भू स्मारक समिति कविल्ठा।
15–श्री वीरपाल सिंह नेगी, सामाजिक कार्यकर्ता ग्राम क्यूड़ी।
16–श्री कुलदीप सिंह बर्त्वाल, सामाजिक कार्यकर्ता, कुण्डा दानकोट।
17–श्री सूरज सिंह नेगी, पूर्व प्रदेश प्रवक्ता, उत्तराखण्ड युवा कॉंग्रेस।

सर्वप्रथम जिला पर्यटन विकास अधिकारी, द्वारा बैठक में सभी अधिकारियों, डी0एस0सी0 टीम, जनप्रतिनिधियों व आगन्तुकों का अभिवादन एवं स्वागत किया गया तथा बैठक में उपस्थित समस्त सदस्यों का परिचय प्राप्त किया गया। जिलाधिकारी महोदय द्वारा डी0एस0सी0 टीम से जानकारी चाही गयी कि किन–किन योजना पर कार्य किया जाना है। जिस पर श्री विनोद चमोली इन्चार्ज डी0एस0सी0 द्वारा अवगत कराया गया कि ए0डी0बी0 के अन्तर्गत जनपद में कार्तिक स्वामी एवं तुंगनाथ ट्रैकिंग रूट का विकास, मन्दिरों का सौन्दर्यीकरण, एवं इन स्थलों पर आने वाले ग्रामों को रूरल टूरिज्म के रूप में विकसित किया जाना है, जिस पर बैठक में निम्न कार्यों को किये जाने हेतु प्रस्ताव रखे गये –

1– कार्तिक स्वामी का पर्यटन विकास – कार्तिक स्वामी में निम्न कार्य किये जा सकते हैं –

- कनकचौरी से कार्तिक स्वामी तक 3.5 किमी0 खण्डिंजा मार्ग का निर्माण।
- रास्ते पर जगह–जगह रैलिंग का निर्माण।
- पैदल मार्ग पर बैंचेज की स्थापना।
- मन्दिर से 150 मीटर नीचे ब्यू–प्वाइंट एवं रैन सैल्टर का निर्माण।
- कार्तिक स्वामी मन्दिर समिति की धर्मशाला का जीर्णोद्धार एवं शौचालय की व्यवस्था।
- कार्ति स्वामी में पेयजल की व्यवस्था।
- कार्तिक स्वामी मन्दिर परिसर एवं रास्ते में सोलर लाइट की स्थापना।

जिला पर्यटन विकास अधिकारी, द्वारा अवगत कराया गया कि कार्तिक स्वामी में 04 सोलर लाइट जिला योजना 2013–14 में प्रस्तावित है, किन्तु शासन से अनुमोदित धनराशि के सापेक्ष

धनराशि अवमुक्त न होने के कारण वर्ष 2014--15 में मन्दिर परिसर में 04 सोलर लाइट स्थापित की जायेगी।

उप प्रभागीय वनाधिकारी, रूद्रप्रयाग द्वारा अवगत कराया गया कि कार्तिक स्वामी वन क्षेत्रान्तर्गत है, जिस कारण कार्तिक स्वामी क्षेत्र में पक्का निर्माण नहीं किया जा सकता है तथा कार्तिक स्वामी को विकसित करने हेतु किसी अन्य कार्यदाई संस्था से भी कार्य नहीं किया जा सकता है, कार्तिक स्वामी में वन अधिनियम के अन्तर्गत ही इक्को फ्रैण्डली निर्माण वन विभाग द्वारा किया जा सकता है।

(कार्य0 –प्रोजेक्ट मैनेजमेन्ट यूनिट डी0एस0सी, वन प्रभाग रूद्रप्रयाग, जिला पर्यटन विकास अधिकारी, रूद्रप्रयाग)

2– चोपता–तुंगनाथ का पर्यटन विकास – चोतपा–तुंगनाथ को विकसित किये जाने हेतु निम्न कार्य किये जा सकते हैं –

- तुंगनाथ में भी चोपता से तुंगनाथ तक निर्मित खण्डिंजा मार्ग का जगह–जगह पर निर्माण व रैलिंग का निर्माण।
- रास्ते व मन्दिर परिसर में सोलर लाइट की स्थापना।
- व्यू–प्वाइंट एवं रैन सैल्टर का निर्माण।
- पैदल मार्ग पर बैंचेज की स्थापना।
- श्री तुंगनाथ मन्दिर में स्थित श्री बद्री–केदार मन्दिर समिति की धर्मशाला का जीर्णोद्धार।
- शौचालय की स्थापना।
- दुगलबिट्टा में पी0डब्ल्यू0डी0 का गेस्ट हाउस का पुर्नद्धार।

श्री रवीन्द्र निराला, वन क्षेत्राधिकारी, गुप्तकाशी (वन्य जीव प्रभाग गोपेश्वर–चमोली) द्वारा अवगत कराया गया कि चोपता श्री तुंगनाथ क्षेत्र वन्य जीव प्रभाग गोपेश्वर–चमोली के अन्तर्गत है, जिसमें पक्का निर्माण न कर इक्को फ्रैण्डली निर्माण कार्य किया जा सकता है व सेन्च्युरी क्षेत्र के अन्तर्गत होने के कारण भारत सरकार वन मंत्रालय की अनुमति ली जानी आवश्यक है।

जिला पर्यटन अधिकारी द्वारा अवगत कराया गया कि पूर्व में भारत सरकार ग्रामीण पर्यटन योजना के अन्तर्गत वर्ष 2004–05 में रू0 45.00 लाख की धनराशि प्रदान की गयी थी, जो उप वन संरक्षक वन्य जीव प्रभाग गोपेश्वर–चमोली को उपलब्ध कराई गयी थी जिसमें वन विभाग द्वारा सारी एवं देवरियाताल में इन्टरप्रटेक्शन सेन्टर व रिसेप्शन सेन्टर का निर्माण भी किया गया है। जिलाधिकारी महोदय द्वारा डी0एस0सी0 टीम को सुझाव दिये गये कि सेन्च्युरी क्षेत्र में किये जाने वाले कार्यों में कार्यदाई संस्था उप वन संरक्षक वन्य जीव प्रभाग गोपेश्चर–चमोली से प्रस्ताव एवं आंगणन प्राप्त कर कार्यवाही की जाय।

(कार्य0 पी0एम0यू0, डी0एस0सी0, उप वन संरक्षक वन्य जीव प्रभाग गोपेश्वर–चमोली, जिला पर्यटन विकास अधिकारी, रूद्रप्रयाग)

3– ग्रामीण पर्यटन का विकास – ग्रामीण पर्यटन को विकसित किये जाने के सम्बन्ध में इन्चार्ज डी0एस0सी0 द्वारा अवगत कराया गया कि प्रथम चरण में 10 ग्रामों को विकसित किया जाना है। कार्तिक स्वामी व कालीमठ क्षेत्रान्तर्गत आने वाले ग्रामों का उनके द्वारा सर्वेक्षण किया जा चुका है व जिसमें कालीमठ, फाटा, कविल्ठा, ऊखीमठ, फलासी धिमतोली कनकचौरी का निरीक्षण किये गये।

जनप्रतिनिधि श्री सूरज नेगी द्वारा अवगत कराया गया कि रूद्रप्रयाग से कार्तिक स्वामी मार्ग पर ग्राम चोपता पड़ता है, जिसे ग्रामीण पर्यटन के रूप में विकसित किया जा सकता है व चोपता से पैदल 500 मीटर फलासी गॉव में तुंगनाथ जी का प्राचीन मन्दिर है, जिसको शंकराचार्य जी ने जीर्णोद्धार किया था का भी सौन्दर्यीकरण करवाया जाय। जिससे वहॉ देशी पर्यटकों के साथ–साथ विदेशी पर्यटक भी आयं। चोपता,स्वारी–ग्वांस मोटर मार्ग पर व्यू प्वाइंन्ट का निर्माण व ग्वांस से कार्तिक स्वामी तक 3.5 किमी0 ट्रैक रूट का निर्माण किया जाय।

जिलाधिकारी, महोदय द्वारा चौमासी को पर्यटन ग्राम के रूप में विकसित करने का सुझाव दिया गया, यह ग्राम श्री केदारनाथ मार्ग पर स्थित है व 16/17 जून 2013 आई भीषण आपदा के समय श्री केदारनाथ से खाम बुग्याल होते हुए इस रास्ते कुछ यात्री सुरक्षित बचे व भविष्य में इस मार्ग को भी विकसित किया जाना है। जिला पर्यटन विकास अधिकारी द्वारा अवगत कराया गया कि ऊखीमठ नगर पंचायत के अतर्गत है इसके स्थान पर चौमासी को पर्यटन ग्राम के रूप में विकसित किया जा सकता है। जी0ए0सी0 द्वारा यह भी प्रस्ताव रखा गया कि पर्यटन ग्राम में पड़ने वाले अन्य स्थलों पर पार्किंग, व्यू–प्वाइन्ट, दुर्गाधार में दुर्गा माता का मन्दिर सौन्दर्यीकरण, खड़पतिया हैलीपैड के निकट व्यू–प्वाईन्ट का निर्माण किया जाना है। जिस पर जिलाधिकारी द्वारा सरकारी भूमि उपलब्ध करवाये जाने हेतु सहमति दी गयी।

बैठक में यह निर्णय लिया गया कि जनपद में पर्यटन ग्राम के अन्तर्गत फाटा, कालीमठ, कविल्ठा, चौमासी, चोपता फलासी, घिमतोली को विकसित किया जाय।

(कार्य0– पी0एम0यू0, जी0एस0सी0, वन विभाग, जिला पर्यटन विकास अधिकारी, रूद्रप्रयाग)

अन्त में बैठक धन्यवाद के साथ समाप्त की गयी।

ह0/–
(डॉ राघव लंगर)
I.A.S.
जिलाधिकारी,
रूद्रप्रयाग।

कार्यालय : जिलाधिकारी, रूद्रप्रयाग।

पत्रांक 453 /ए0डी0बी0/2013–14 दिनांक 8-6फरवरी 2014
पृ0प0सं0 : /तद्दिनांकित/2013।

प्रतिलिपि–
1. सचिव पर्यटन, उत्तराखण्ड शासन, देहरादून को सादर सूचनार्थ प्रेषित।
2. मुख्य कार्यकारी अधिकारी, उत्तराखण्ड पर्यटन विकास परिषद, देहरादून को सादर सूचनार्थ प्रेषित।
3. परियोजना प्रबन्धक, पी0एम0यू0,उत्तराखण्ड पर्यटन विकास परिषद, देहरादून को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित
4. डिजाइन सुपरविजन कन्सलटेन्ट, देहरादून को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

जिलाधिकारी,
रूद्रप्रयाग।

Transcript

Meeting was held under the chairmanship of Dist Collector at Rudraprayag on 22 February 2014 for the proposed works at Kartikeya Swami, Durga dhari and Tungeshwar temple and its vicinity under ADB assisted IDIPT program. All the stakeholders(Forest Dept, Temple Trust members, Panchayat Samiti members, NGO representatives, Tourism dept officials etc was present in the meeting. Instruction was given by the chairmen to other stakeholders to provide all support to the executing agency for further implementation of this sub-project. Decision was also taken to cover more villages under this program such as Patha, Kalimath, Kaviltha,Choupta, Ghimtoli.

Details of Consultation

The basic objectives of this stakeholders' consultation were:

(i) To inform the stakeholders on the proposed work
(ii) To seek the views of stakeholders on the proposed work
(iii) To ensure their participation in planning of sub-project and its operation and maintenance.
(iv) Scope of livelihood generation after the sub-project execution.

Key stakeholders identified for consultation were:

(I) Temple Trust Committee
(II) Village Panchayat
(III) Local Villagers
(IV) Shopkeepers and Business Bodies
(V) Civil Society/Govt. Officials

Summary of discussion and views of stakeholders:

<table>
<tr><th>S.No</th><th>Date</th><th>Location</th><th>Persons Consulted</th><th>Issues Discussed</th></tr>
<tr><td></td><td>12-15 Feb. 2014</td><td>Kartikeya swami, Durgadhari and Tungeshwar Temple</td><td>Villager and Mandir samittee</td><td>Stakeholders were happy to know that initiative has been taken by Tourism Department with ADB loan for the infrastructure development works in Kartikeye swami, Durga dhari and Tungeshwar Temple and its vicinity. They expected that Tourist inflow will be increased after the execution of this sub-project, the present site lacks basic amenities in all the proposed locations. During consultation, Temple and Village Panchayat has given assurance to provide all kind of support and were happy to know that proposed design was being worked out in regular consultation with them.
Stakeholders also agreed that design is so good and after execution it may attract more tourists for a longer duration of time. So, there seems to be a strong possibility for a better business.</td></tr>
<tr><td></td><td>18.2.14</td><td>Durgadhar Bazar</td><td>villagers</td><td>Discussed about the importance of Mandir and village details, tourist inflow etc

Tourist inflow data
<table>
<tr><td>S.No.</td><td>Name of the Mela/Fair</td><td>Month</td><td>No. of Tourists</td></tr>
<tr><td>1</td><td>Shivratri</td><td>March</td><td>Villagers of 25-30villages</td></tr>
<tr><td>2</td><td>Nanda Amastmi</td><td>August</td><td>Villagers of 30-3 villages</td></tr>
<tr><td>5</td><td>Navratri</td><td>Twice in year</td><td>300-350 per da</td></tr>
</table>
</td></tr>
<tr><td>2</td><td>18.2.14</td><td>Phalasi village</td><td>villagers</td><td>Gram Panchayat: Phalasi, Block: Augustmuni (32 kms), District: Rudraprayag (22kms)
• Connectivity: vehicular road up to village
• Is there no Heritage structure within base villages
• Is there any temple trust/village panchyat land available within base villages: yes

Population structure of these villages</td></tr>
</table>

<table>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>
<table>
<tr><th>Household</th><th>population</th><th>castes</th><th>livelihood</th></tr>
<tr><td>300</td><td>1700</td><td>Bhartwal, Bhatt, Bhandari, Jagwan, Negi, Rawat, Butola, Gusai</td><td>Agriculture work, Labours, Govt. Job (50-60 families migrated for job)</td></tr>
</table>
Tourist Inflow Data
<table>
<tr><th>S.No.</th><th>Name of the Mela/Fair</th><th>Month</th><th>No. of Tourists</th></tr>
<tr><td>1</td><td>Shivratri</td><td>March</td><td>Villagers of 20-25 villages</td></tr>
<tr><td>2</td><td>Janamastmi</td><td>August</td><td>Villagers of 20-25 villages</td></tr>
<tr><td>3</td><td>Sawan Maas</td><td>July</td><td>200-250 per day</td></tr>
<tr><td>4</td><td>Maagh Maas</td><td>December</td><td>200-250 per day</td></tr>
<tr><td>5</td><td>Navratri</td><td>Twice in year</td><td>Villagers of 20-25 villages</td></tr>
</table>
</td>
</tr>
<tr>
<td></td>
<td>18.2.14</td>
<td>Durgadhar village</td>
<td>Villagers</td>
<td>
Village: Durgadhar , Gram sabha: Bora, Block: Augustmuni, District: Rudraprayag

connected with vehicular road (District-33kms, Rudraprayag-50 kms)
There is no heritage structure within the vicinity
Mandir committee but land is available within village for the infrastructure development

Tourist inflow data
<table>
<tr><th>S.No.</th><th>Name of the Mela/Fair</th><th>Month</th><th>No. of Tourists</th></tr>
<tr><td>1</td><td>Nanda Amastmi</td><td>August-Sept.</td><td>Villagers of 4-7 villages</td></tr>
<tr><td>2</td><td>Navratri</td><td>Twice in year</td><td>200-300 per day</td></tr>
<tr><td>3</td><td>Per day</td><td></td><td>20-50</td></tr>
</table>
Population structure of these village
<table>
<tr><th>Household</th><th>population</th><th>castes</th><th>livelihood</th></tr>
<tr><td>300</td><td>1600</td><td>Gusai (150HH), Negi (10HH), Kaitheith (10HH), Tamtalu (130HH)</td><td>Agriculture work, Labours, Govt. Job (army, police, teachers, politicians)</td></tr>
</table>
</td>
</tr>
</table>

	21.06.14	Kartikeya Swami	Mandir samitte members and gram sabha members	Discussion: Land issues, NOC and O&M issues with Mandir samitte members and gram sabha members and they said they don't have any problem to provide land for the development to the site, infact they are happy if Tourism Department is going to develop this site. They also said mandir samitte and gram sabha is ready to do operation and maintenance of the development work. mandir samitties said they will help during the implementation period wherever required.
	22.06.14	Durgadhari mandir	Mandir samitte members and gram sabha members	
	23.06.14	Tungeshwar temple	Mandir samitte members and gram sabha members	

Letter to Divisional Forest Officer, Rudraprayag for providing NOC for proposed works in Kartikeya Swami temple requesting that nature of works is renovation and restoration, and ecofriendly material will be utilized and does not entail any tree felling or damage to the environment

(एडीबी० सहायतित– लोन नं० 2833, इंडिया)

Govt. of Uttarakhand

उत्तराखण्ड शासन

Uttarakhand

पं० दीनदयाल उपाध्याय पर्यटन भवन, नियर ओ०एन०जी०सी० हैलिपैड

गढ़ी कैन्ट, देहरादून– 248003

फोन : 91-135-2559985, फैक्स : 91-135-2559985 ई–मेल : utdb.pmu@gmail.com

पत्रांक/582–10/पी०एम०यू०/ए०डी०बी०/145/आई०डी०पी०आई०टी०/ /2014–15 दिनांक 13/08/2014

सेवा में,

प्रभागीय वनाधिकारी
रुद्रप्रयाग

विषय : जनपद रुद्रप्रयाग में एशियन डेवेलपमेन्ट बैंक द्वारा सहायतित प्रोजेक्ट के अंतर्गत कार्तिक स्वामी मन्दिर के सौन्दर्यकरण के लिए प्रस्तावित कार्यो हेतु ऐनापत्ती प्रमाण पत्र के संबंध में।

संदर्भ: – 1) मुख्य सचिव उत्तराखण्ड की अध्यक्षता में द्वितीय एस०एल०ई०सी० की 8 नवम्बर 2013 को हुई बैठक की कार्यवाही का कार्यवृत।(संलग्न)

2) जिलाधिकारी रुद्रप्रयाग की अध्यक्षता में दिनाक 22 फरवरी 2014में हुई बैठक की कार्यवाही का कार्यवृत की पंत्राक स० 433/ए०डी०बी०/2013–14 दिनाक 6 मार्च 2014.(संलग्न)

महोदय,

कृपया उपरोक्त का संदर्भ ग्रहण करना चाहें जिसके अंतर्गत एशियन डेवेलपमेन्ट बैंक द्वारा सहायतित प्रोजेक्ट के अंतर्गत पर्यटन विभागीय स्तर में कार्तिक स्वामी मंदिर के निम्न कार्य प्रस्तावित किये गए है जो आपके अन्तर्गत आता है ।

1. कनकचौडी से मंदिर तक 3 किमी पैदल मार्ग का मरम्मत कार्य एंव जगह–जगह रेलिगं लगाना।
2. मंदिर परिसर का सुधारीकरण एंव सौन्दर्यकरण कार्य ।
3. पुरानी दीवारो का मरम्मत कार्य।
4. सुचना पट लगाना।
5. मंदिर परिसर एंव पैदल मार्ग में बायो डिग्रेडेबल प्री फैब्रीकेटेड शौचालयों बनाना।

विभाग इस परिपेक्ष्य के संपुष्टि करता है कि –

- इन कार्यो के दौरान वृक्षों की कोई क्षति नही होगी एंव पर्यावरण के नियमों को ध्यान में रखकर कार्य किये जायेगें।
- परियोजना में लोकल सामग्री जो की इंकोफेन्डली है उसी का उपयोग किया जायेगा एंव वन से पत्थर, लकडी, आदि का दोहन नही किया जायेगा तथा उसे बाहर से लाया जायेगा ।
- ये कार्य मूलतः मरम्मत सुधारीकरण एंव सौन्दर्यकरण से संबंधित है। कोई नया कार्य इसमें नही कराया जायेगा।

अतः आपसे अनुरोध है कि प्रस्तावित उपरोक्त कार्यो को कराने हेतु अनापत्ती प्रमाण पंत्र उपलब्ध कराने की कृपा करें ताकि मंदिर का सौन्दर्यकरण कार्य किया जा सके एंव धार्मिक पर्यटन को बढावा दिया जा सकें।

संलग्नक–यथोपरि

भवदीय

(आर०के० जोशी)
अपर कार्यक्रम निदेशक

प्रतिलिपि–

1. सचिव पर्यटन, उत्तराखण्ड देहरादून को सादर सूचनार्थ प्रेषित।
2. मुख्य वन संरक्षक, गढवाल पौडी को सादर सूचनार्थ प्रेषित।
3. जिलाधिकारी रुद्रप्रयाग को सादर सूचनार्थ एंव अपने स्तर से अनापत्ति प्रमाण पत्र हेतु आवश्यक सहयोग की अपेक्षा।

(आर०के० जोशी)
अपर कार्यक्रम निदेशक

Letter from Divisional Forest Officer, Rudraprayag in response to the request for NOC for proposed works in Kartikeya Swami temple stating that the area being reserve Forest and as per directions of Supreme Court and the provisions of Forest Act, NOC from the DFO level can't be given to any other implementing agency besides Forest Dept.

कार्यालय प्रभागीय वनाधिकारी, रूद्रप्रयाग वन प्रभाग, रूद्रप्रयाग।

पत्रांक 504 /12-1(2) दिनांक 6/9 /2014::

सेवा में,

परियोजना प्रबन्धन ईकाई
पर्यटन संरचना विकास निवेश कार्यक्रम
(ए.डी.बी. साहतित–लोन न0 2833–इंडिया)
उत्तराखण्ड शासन
प.दीनदयाल उपाध्याय पर्यटन भवन, नियर ओ0एन0जी0सी0हैलिपैड
गढ़ी कैन्ट देहरादून–248003

विषय :– **जनपद रूद्रप्रयाग मेंएशियन डेवेलपमेन्ट बैंक द्वारा सहायतित प्रोजेक्ट के अन्तगर्त कार्तिक स्वामी मन्दिर के सौन्दर्यकरण के लिए प्रस्तावित कार्यो हेतु अनापत्ति प्रमाण पत्र के सम्बन्ध में।**

सन्दर्भः– आपका पत्रांक 1510/2–10/पी0एम0यू0/ए0डी0बी0/145/ आई0डी0पी0आई0 टी0/ 2014 – 15 दिनांक /08

महोदय,

उपरोक्त सन्दर्भित पत्र में क्रम में आज दिनांक 4.09.2014 को प्रभागीय वनाधिकारी रूद्रप्रयाग के अध्यक्षता में प्रभागीय कार्यालय रूद्रप्रयाग वन प्रभाग रूद्रप्रयाग में पर्यटन संरचना विकास निवेश कार्यक्रम के अधिकारियों एवमं कर्मचारियों के साथ एक बैठक आयोजित की गयी जिसमें पर्यटन संरचना विकास निवेश की ओर से श्री नरेश चमोली फोरेस्ट कन्जरवेशन स्पेशलिस्ट, पी0एम0यू0,आई0डी0आई0डी0टी0 देहरादून तथा श्री अवनिश गोयल, साइट इन्जीनियर(सिविल), डी0एस0सी0देहरादून तथा वन विभाग की ओर से श्री अजय कुमार शर्मा उपप्रभागीय वनाधिकारी, श्री मुरारी लाल वनक्षेत्राधिकारी अगस्त्यमुनि एवंम श्री ललित मोहन सिहं नेगी वनक्षेत्राधिकारी रूद्रप्रयाग सम्मलित थे। बैठक में कार्तिक स्वामी मन्दिर के सौन्दर्यीकरण हेतु निम्न निर्णय लिया गया।

जैसा कि उपप्रभागीय वनाधिकारी रूद्रप्रयाग द्वारा दिनांक 22 फरवरी 2014 को जिलाधिकारी रूद्रप्रयाग की अध्यक्षता में एशियन डबमपेन्ट बैंक द्वारा वित्तपोषित उप परियोजना के एस0 ए0आर0 की प्रथम बैठक अवगत कराया गया था कि कार्तिक स्वामी मन्दिर आरक्षित वन क्षेत्रान्तर्गत हैं, जिस कारण कार्तिक स्वामी क्षेत्र मे निर्माण कार्य नहीं किया जा सकता है वन अधिनियमों एवमं उच्चतम न्यायालय द्वारा दिये गये निर्देशों के क्रम में कार्तिक स्वामी क्षेत्र को विकासित करने हेतु किसी अन्य कार्य दाई संस्था द्वारा कार्य करवाना सम्भव नहीं है, केवल वनविभाग द्वारा वानिकी कार्य कराये जा सकते है।

अतः प्रस्तावित कार्यो को करने हेतु इस स्तर से अनापत्ति प्रमाण पत्र निर्गत करना सम्भव नहीं है।

भवदीय

प्रभागीय वनाधिकारी,
रूद्रप्रयाग वन प्रभाग,रूद्रप्रयाग।

संख्या / दिनांकित।

प्रतिलिपि :– जिलाधिकारी रूद्रप्रयाग को उनके पत्रांक 433/ए0डी0 बी0/2013–14 दिनांक 6.03.2014 के क्रम सूचनार्थ प्रेषित ।

प्रभागीय वनाधिकारी,
रूद्रप्रयाग वन प्रभाग,रूद्रप्रयाग।

ANNEXURE 9: SAMPLE GRIEVANCE REDRESS FORM

(To be available in Local Language and English)

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

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

FOR OFFICIAL USE ONLY

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