



Initial Environmental Examination

Project Number: 40648-033
November 2014

IND: Infrastructure Development Investment Program for Tourism – Tranche 2

Submitted by
Department of Tourism, Government of Uttarakhand

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Asian Development Bank



Govt. of Uttarakhand

Program Management Unit

Infrastructure Development Investment Program for Tourism

(ADB Assisted – Loan No. 2833, India)

Government of Uttarakhand

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Ref: 78/2-10-ADB IDIPT/130/2013-14

Date: 06.11.2014

To

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New Delhi 110021, PB No-53311 (HPO)

Sub: Loan No. 2833 IND- IDIPT, Submission of IEE document for “Development of Adventure Centres in Uttarakhand” sub project

Respected Madam,

Kindly find the IEE document for “**Development of Adventure Centres in Uttarakhand**” sub project (contract Package No. UK/IDIPT/DDN/06) for your kind perusal and approval.

Encl.:- As above

Yours Sincerely

(R.K. Joshi)
Additional Program Director

Environmental Assessment Document

Initial Environmental Examination (IEE)

Loan No: 2833 IND

November 2014

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

Subproject: Development of Adventure Centers in Uttarakhand

Prepared by Uttarakhand Tourism Development Board, Government of Uttarakhand, for the Asian Development Bank

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

CURRENCY EQUIVALENTS

(as of 23rd August 2014)
Currency unit – Indian rupee (Rs)
Rs1.00 = \$0.0165
\$1.00 = Rs 60.44

WEIGHTS AND MEASURES

dB (A) A-weighted decibel
ha- hectare
km-kilometer
km²-square kilometer
µg-microgram
m -meter
m²-square meter
MW (megawatt) -megawatt

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

ABBREVIATIONS

ADB	- Asian Development Bank ,
BOD	- Biological Oxygen Demand
BoQ	- Bill of Quantities
CO	- Carbon monoxide
CPCB	- Central Pollution Control Board
DSC	- Design and Supervision Consultant
EA	- Executing Agency
EAC	- Expert Appraisal Committee
EARF	- Environment Assessment and Review Framework
EIA	- Environmental Impact Assessment
EMP	- Environment Management Plan
ES	- Environmental Specialist
GC	- General Conditions
GMVN	Garhwal Mandal Vikas Nigam
GoI	- Government of India
GoUK	- Government of Uttarakhand
IDIPT	- Infrastructure Development Investment Program for Tourism
IEE	- Initial environmental examination
INR	- Indian Rupee
KMVN	Kumaun Mandal Vikas Nigam
MLD	- Million Liters per day
MoEF	- Ministry of Environment and Forests
MFF	- Multi- Trench Financing Facility
NGO	- Non-Governmental Organization
NOx	- Nitrogen oxide
PD	- Project Director
PIU	- Project Implementation Unit
PM	- Particulate Matter
PMU	- Project Management Unit
PUC	- Pollution Under Control Certificate
RP	- Resettlement Plan
RPM	- Respirable Particulate Matter
SAUW	- South Asia Urban Development and Water Division
SC	- Scheduled Castes
SEAC	- State Expert Appraisal Committee
SO ₂	- Sulphur dioxide
SPM	- Suspended Particulate Matter
SPS	- Safeguards Policy Statement
STP	- Sewage Treatment Plant

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Executive Summary

1. 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. Uttarakhand lies in the northern part of India amidst the magnificent Himalayas and dense forests. The State is bordering Himachal Pradesh in the north-west and Uttar Pradesh in the South and shares international borders with Nepal and China. The State is comprised of 13 districts divided into two regions and also called administrative divisions; the Kumaon and Garhwal. Considering the scale, magnitude, and type of the works proposed under Development of Adventure Center, the subprojects are judged to have less adverse environmental impacts that are largely construction-related, site specific, and temporary and reversible in nature.

3. This Initial Environmental Examination (IEE) has been prepared for the sub-project namely "Development of Adventure Centers in Uttarakhand" as part of IDIPT Project 2 Uttarakhand. The IEE is based on a careful review of subproject site plan and report; field visits; secondary data collection to characterize the environment and identify potential impacts; and consultations with stakeholders. An Environmental Management Plan (EMP) outlining the specific environmental measures to be adhered to during implementation of the subproject has been prepared. The subproject will conform to all Government regulations, policies and standards, as well as Asian Development Bank's Safeguard Policy Statement (2009).

4. Subproject will provide needed tourist infrastructure in 13 centers located in 8 districts. The subproject centers are located at Kaleshwar, Joshimath, Pauri, Satpuli, Kotgi, Mori, Bhikiyasain, Kumariya, Kapkot, Karkiya, Pancheshwar, Baldhar, and Sherghat area. In 7 out of 8 districts interpretation center (except Pauri) will be constructed for tourist information and awareness. One interpretation center is already existing in one district. The land ownership of all the proposed sites for interpretation centre belongs to Tourism department. There are no impacts envisaged on land acquisition or resettlement due to the proposed subproject components.

5. The proposed sub project of 'Development of adventure center at 13 locations' involves (i) procurement of equipment as per ADB guidelines stated for procurement of goods and allied services (ICIB) After procurement of the goods it is proposed to run these centers for training and commercial activity under the overall supervision and custody of district adventures sports officer of Uttarakhand. The proposed subproject locations are reported within the lands under the ownership of the State Govt. All environmental standards for adventure water sports will have to be complied as per 'Uttarakhand River Rafting / Kayaking Rules, 2013'. Environmental safety guidelines are also planned to be an integral part of training modules in the proposed subproject.

6. Majority of the significant impacts will occur during the construction phase of the Interpretation centres 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. There will be proper disposal arrangement of the sludge.

7. 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 each hotel - education of tourists in environmentally friendly behavior- education of staff.

8. No environmental impacts related to siting, were identified after environmental examination. All adventures centers are not located inside or near a cultural heritage site, protected area, wetland, mangrove, estuarine, buffer zone of protected area or special area for protecting biodiversity. There are no rare, threatened, and endangered species (flora and fauna) within the subproject adventure centers. Environmental impacts and mitigation measures are corresponding to different stages of project development.

9. Positive social impact is anticipated in terms of training and capacity building and employment opportunities to the local people. Added residential developments, similar business facilities are likely to develop in the project area. Environmental impacts are anticipated during the operation phase and these impacts can be easily mitigated through adequate mitigation measures and regular monitoring during Implementation phase of the project.

10. Wide stakeholder consultation was carried out during the environmental examination of UTDB, project affected communities, government institutions, and non-governmental organizations. Highlight of all consultations were documented and applicable recommended measures particularly in minimizing shifting of structures, potential conflict with migrant workers, and competing demand for local resources were incorporated in the design and the environmental management plan. This IEE report will be disclosed in the ADB website pursuant to the Bank's Public Communication Policy and in the GMVN and KNVN website.

11. The Environmental Management Plan (EMP), to form part of the bidding documents, adopted the procurement package scheme and facilitates subsequent compliance monitoring by the agency.

12. The initial environmental examination ascertains that the sub-project is unlikely to cause any significant environmental impacts. No additional studies or need of undertaking detailed EIA is envisaged at this stage. The Executing Agency shall ensure that Environment

Management and Monitoring Plan is included in Bill of Quantity (BOQ) and forms part of bid document and civil works contract. The same shall be revised if necessary during project implementation or if there is any change in the project design and followed by approval of ADB.

I. INTRODUCTION

A. Background

13. Uttarakhand comprises of 13 districts that are grouped into two regions (Kumaon 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 intra state 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.

14. 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.

15. The project uses a sector loan approach through a multitranche 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.

16. 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.

17. The development of adventure tourism centers across the state has been proposed under the IDIPT program for promotion & development of adventure tourism in Uttarakhand. The thirteen adventure tourism centers under the sub project are proposed in two regions i.e. Garhwal and Kumaon which are falling in tourist zone (as per UNWTO Master Plan for Tourism Development) 2, 3, 5, 6, and 7 of Uttarakhand State. Out of total 7 tourism zones,

proposed 13 adventure centers are coming under the following tourism zones. The details of the tourism zone are as follows:

18. **Zone 2**, is the main Eastern Gateway to Uttarakhand and its eastern Kumaon Region from Delhi and Uttar Pradesh by road and rail. It is also a National and International gateway by air once the Pantnagar Airport starts receiving scheduled domestic and other international flights boost the opportunities for international tourism in Uttarakhand. This is particularly important for Zone 2 as this tradition is a family, leisure and second home destination focused mainly on the Lake District, the historic lake ambiance of Nainital, Kaladhungi and wildlife of the Corbett National Park. In the north east by the watershed between the southern and the north eastern river basin from Kathima and the border towards Uttar Pradesh to Mornaula and Lamgara villages and the Almora, Champawat road all the way to south of Almora Town. From there over the hills south of Champa Kholi to Ranikhet, Dwarahat and across the hills to the point west of Gwaldam where the proposed demarcation line meets the Watershed between the Central Ganges and the North Eastern Kali River basin.

19. **Zone 3** comprises of the southern central area of the state and is sandwiched between zone 1 west and zone 2 east, it is basically consisting entirely of Himalayan foothills with smaller sections of level plains in the westernmost part near Haridwar and a brim of plain interspersed with low mountains and hills along the southern border of the zone and Uttarakhand State. Main access to the zone from out of state is by railway to Haridwar and Rishikesh in the west. Ramnagar in the east and closer to Lansdowne and Corbett National Park from Kotdwar in the forest belt west of the park and Najibabad and Dhambur in Uttar Pradesh south of the park. From these railway hubs visitors need to go by road. There is no Airport existing or planned in the zone and the nearest airport option is several hours away by road. National Highway 74 connecting Haridwar in the west with Kashipur in the east provides the main southern access to the zone. From there NH 119 runs northeast to Pauri Town and provides access to the villages in the hills and valleys southeast and northwest of the road. NH 119 separates the zone in two more or less equal parts. The Zone is rather undeveloped in terms of tourism.

20. Zone 3 is delineated as follows:

- ✓ In the north by the Alaknanda River Valley and NH 58 between Devaprayag, Rudraprayag and Karanprayag and the Pindar River Valley between Karanprayag and Deodara Village near Gwaldam following the major watershed between the western central river basin and the North eastern basin and the lesser watershed between the Alaknanda River and its tributaries and the PurviNajar River
- ✓ In the southeast by the Watershed between the Ramganga and Kosi Rivers from the Karanprayag – Gwaldam road around Kulsari and Deoradao Villages in the north to the state boundary at Jhirna Village in the south.
- ✓ In the northwest by the Ganges River between Haridwar and Devaprayag, and in the southwest by NH 74 from Haridwar.

21. **Zone 5** is basically separated into three segments;

- ✓ Northern sparsely populated segment with high mountains and glaciers, the huge Ascot Sanctuary and remote towns and villages populated by tribal ethnic minorities and mostly accessible by tracks and trails only.
- ✓ A medium densely populated central segment, the “Greater Himalaya View Belt”, with well-established hill stations and resorts, ancient forest temples, quaint villages and small towns, waste agricultural areas on the slopes of beautiful river valleys, medium high and low mountains covered in dense protected forests and the Binsar Wildlife Sanctuary.
- ✓ A medium densely populated southern segment with important spiritual, religious, historic and cultural tourism resources, medium high mountains and attractive agricultural valleys separated by forested watersheds.

22. **Zone 6** consists of the Alaknanda River Basin. It contains the two Char Dhams Kedarnath and Badrinath; the Panch Kedar (5 temples of Shiva) Circuit consisting of Kedarnath, and four remote temples in the high Himalayas; the Panch Prayag (Where 5 rivers meet Alaknanda) at the confluences of Bhagirathi, Mandakini, Pindar, Nandakini and Dhauliganga, respectively with the Alaknanda River; the Shri Hemkund Sahib (Where the guru meditated) a high altitude lake and the highest Sikh Temple location in the world and the only connected with the previous birth of a Sikh Guru. The Valley of Flowers and Nanda Devi National Parks are also located in Zone 6. The holy town of Josimath is the base for pilgrims and other visitors to Badrinath and the access point to the Auli Ski Resort located at 2720 m altitude 8 km south of the town. Access to the zone by air will in the future be to Gauchar Domestic Airport 12 km west of Karanprayag on NH 58 and from there by road to the Char Dhams and other destinations.

23. Access from east, south east and zone 5 is either by state road from Gwaldam and Bajinath or NH 87 from Ranikhet. Access from south and zone 3 is by NH 119 from Pauri and NH 58 from Devaprayag and further north to Josimath and Badrinath. NH 109 connects Kedarnath with NH 58 from Rudraprayag. Access from west and zone 1 and 4 is by state road From Tehri Lake and Chamba via Srinagar. The zone is characterized by spectacular beauty, low population density, few roads passable by ordinary vehicles, remote villages only accessible and connected by tracks and trails, glaziers, high mountains and peaks.

24. Zone 6 is delineated as follows: In the northeast by the international border between India and Chinas Tibet Autonomous Region. There are 7 passes between India and China in the zone but none are presently open for passage. In the southeast by the watershed between the Alaknanda and Kali Rivers.

25. In the south by the watershed between the Alaknanda river and the Ramganga and Ganges River Basins, and in the northeast by the watershed between the Ramganga and Bhagarathi rivers.

26. **Zone 7** is delineated as follows: In the northwest by the Tons River and the state boundary between Uttarakhand and Himachal Pradesh. In the east and southeast by the major watershed between the Bhagirathi and Yamuna Rivers, and in the south by the Aglar River and the lesser watershed between the Yamuna and Asan Rivers.

B. Purpose of the IEE

27. This IEE assesses the environmental impacts due to the proposed subproject and specifies measures towards addressing the impacts. The IEE is 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. There are also construction impacts but these will be of limited intensity and of short duration. Therefore, as per the Asian Development Bank's (ADB) Environmental Assessment Guidelines, the sub-project components are categorized as 'B' and this IEE carried out. 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

28. 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 categories¹ - Category A and Category B, based on the spatial 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
Development of Adventures centers	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.	These sub-projects are not covered in the ambit of the EIA notification as they are 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.

¹All 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 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
	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.	None of the proposed locations are ASI sites.
	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 Uttaranchal SPCB for all sub-projects requiring, setting up of hot mix plants, wet mix plants, stone crushers and diesel generators. Not required for this package.
	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.
	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 component. IEE for proposed project "Development of Adventure Centers" is categorized as B
	Uttarakhand River Rafting / Kayaking Rules, 2013	Applied during operation phase – safety during river Rafting & Kayaking (Appendix 1)

29. All the adventure centers are coming under Uttarakhand Tourism Department/UTDB. The proposed subproject locations are reported within the lands under the ownership of the State Govt. and in case any eventuality the district sports officers may opt to co-opt any minor beneficiary to help them in this activity to running the center that such beneficiary should be licensed holders issued by Uttarakhand Tourism Development Board/any competent authority and works on their sites under the project to ensure works meet their rules & regulations. Permits for excavation, construction in the proposed subproject locations will be obtained by the executing agency prior to tendering of works.

30. Uttarakhand Tourism Development Board is the highest state government body responsible for policy, planning, regulation, marketing & promotion of tourism affairs in Uttarakhand. District adventure sports/tourism officers are appointed to manage the

adventure tourism affairs in their respective districts. Garhwal Mandal Vikas Nigam Ltd. & Kumaon Mandal Vikas Nigam Ltd. are the two state bodies responsible for providing tourist services in Garhwal & Kumaon region respectively.

31. Both GMVN & KMVN have their own adventure wing that conducts adventure training programs as well as provide adventure tourism services for tourists in their respective areas. Over the years the government has taken some major initiatives. A world class Ski resort has been developed at Auli with ropeway, chairlift, artificial snow making machines, snow beaters and quality accommodation with all modern amenities and comforts.

32. Adventure sports training in Uttarakhand has largely been the state prerogative. Though over the years some private institutions have also started conducting adventure sports training in the state. The state of Uttarakhand is heaven for adventure seekers with altitude ranging from Terai plains to Snow Capped Himalayas thereby providing a perfect natural setting for adventure training. Though various initiatives taken by the government has yielded positive results but more sustained efforts are needed to realize the true potential of adventure tourism in the state and to make Uttarakhand as one of the most sought after adventure tourism destination for both domestic as well as international tourists.

33. 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.

34. 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 assessment² 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 **Appendix 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 is based mainly on environment quality assessment by the DSC Environment Expert and Adventure Expert 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

²As 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).

environmental measures to be adhered to during implementation of the sub-project has been prepared.

35. Compliance on Environment Assessment & Review Framework for sub project selection and implementation is shown in **Appendix 3**.

D. Review and Approval Procedure

36. 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

37. 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 Plan; (vi) Public consultation & Information Disclosure; (vii) Findings and Recommendations; and (viii) Conclusions.

II. DESCRIPTION OF PROJECT COMPONENTS

A. Components of the sub project

38. The varied geographical features of the state, with altitude variations ranging from 60 m in Terai plains to 7817 m Nanda Devi Peak in high Himalayas makes it highly rich in terms of natural features and biodiversity. The presence of numerous peaks above 6000 meters, snow fed glaciers, raging Himalayan rivers, Lakes and water bodies, deep gorges & canyons, natural rock features, waterfalls, high altitude meadows (Bugsyals) and high mountain valleys together with rich flora & fauna makes Uttarakhand one of the best potential regions in the world for a wide range of land, air and water based adventure activities such as (Trekking, Mountaineering, River Rafting, Kayaking, Paragliding, Mountain biking etc.) The rivers of Uttarakhand are inviting enough for both the amateur as well as the die-hard professional. One can opt for canoeing, kayaking or rafting, depending upon the nature of the water.

39. Keeping in consideration the availability of vast adventure tourism resource base in the state, the promotion and development of adventure tourism will not only help in much needed tourism product diversification to tap the growing domestic & international market but will also greatly help in creating income generating opportunities for locals in remote mountain regions thereby fulfilling the economic development objectives of the state.

40. The tourism policy of the state also highlights Uttarakhand as a paradise for adventure sports with bountiful natural features as snow clad peaks, high altitude meadows, lakes, rivers and valleys. Further the policy document states that a major thrust will be given to the promotion and development of adventure tourism activities in the state. The promotion and development of adventure tourism activities in the state in a systematic and planned manner can very well be achieved through establishment and development of adventure tourism centers across the state which will also play a catalyst role in the local economic development.

41. **Table 2** provides a summary of each of the existing condition, need for the project and components proposed under this subproject. Location of project sites is shown in **Figure 1**. Photo illustration of project sites is included in **Appendix 4**.

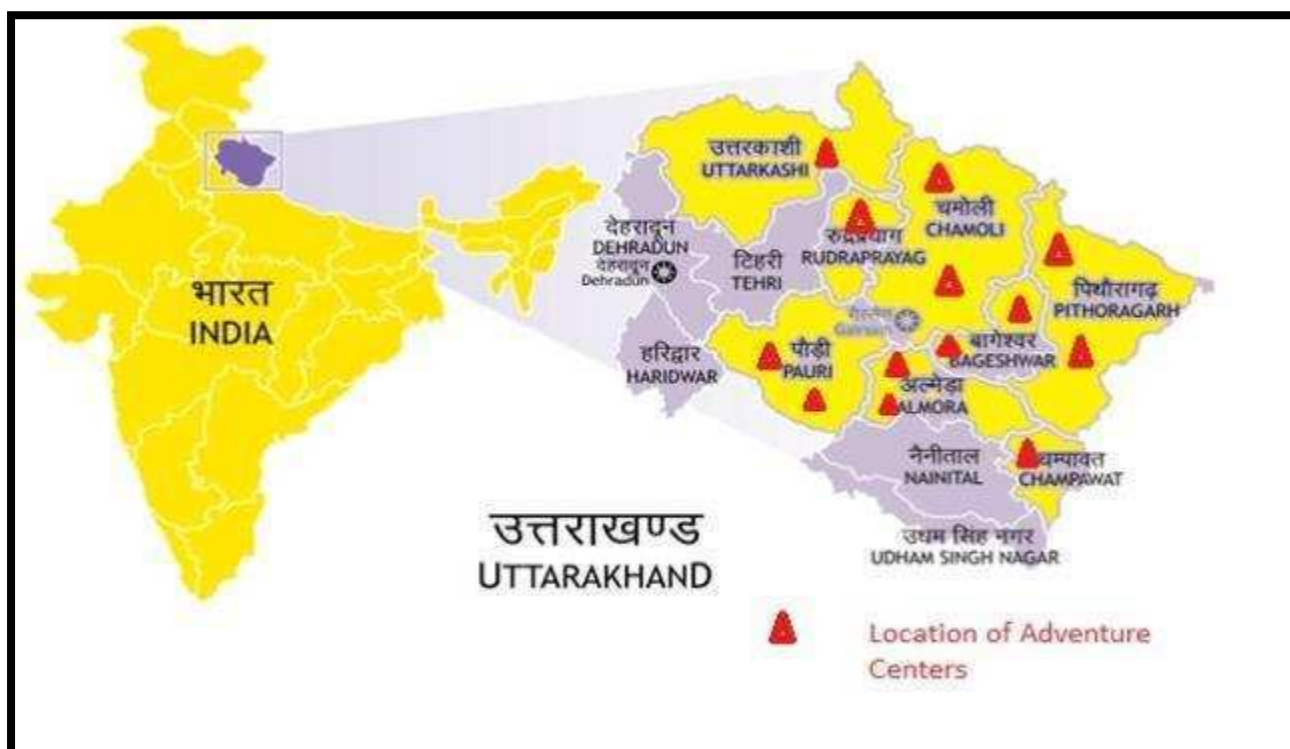


Figure 1: Location of 13 Adventure centers

Table 2: Description of the Subproject Components

Sub Project	Area Description	Need of sub project	Proposed Components
Development of Adventures center	<p>The following 13 centers belong to 8 districts of Uttarakhand. The centers are</p> <ul style="list-style-type: none"> ✓ Chamoli Centers: Kaleshwar, Joshimath, ✓ Pauri Centers: Pauri, Satpuli/Vyas ghat, ✓ Rudrapur Center: Kotgi, ✓ Uttarkashi Center: Mori, ✓ Almora Centers: Bhikyasain, Kumariya, ✓ Bageshwar Centers: kapkot, Karkiya, Pancheshwar, ✓ Pithoragarh Centers: Baldhar and Sherghat ✓ Champawat Center- Pancheshwar 	<p>The establishment of thirteen adventure centers under the sub project will open up new avenues for tourism induced employment & income generation in Tons, Mandakini, Alaknanda, Mahakali, Sariyu & Ramganga river valleys. It will also help in easing out pressure of rafting activities in river Ganga (<i>Kaudiyala – Rishikesh</i>) with expansion of rafting activities across the state in new potential areas</p>	<ul style="list-style-type: none"> ▪ Construction of interpretation center in 7 districts (except Pauri) ▪ Rafting ▪ Kayaking ▪ Angling ▪ Rock Climbing / Rope Course ▪ Trekking ▪ Mountain Biking ▪ Camping ▪ Artificial Rock Climbing ▪ Trekking ▪ Para Gliding ▪ Parasailing ▪ Powered Hang gliding ▪ Hot air Ballooning ▪ Mountain Biking ▪ Artificial Rock Climbing ▪ Training and capacity building

B. Project Category

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

C. Project Location

43. The establishment of thirteen adventure centers under the sub project will open up new avenues for tourism induced employment & income generation in Tons, Mandakini, Alaknanda, Mahakali, Sariyu & Ramganga river valleys. It will also help in easing out pressure of rafting activities in river Ganga (*Kaudiyala – Rishikesh*) with expansion of rafting activities across the state in new potential areas.

44. The suitable period for river activities depends on the adequacy of water volume. Thus, September-November and March-April-May are most appropriate.

45. Land provided by Govt./UTDB there is a provision of 150 Sqm. (Approx.) area for the storage of sports equipments during off season. All the 13 centers are located in Garhwal and Kumaon region. The details of the thirteen centers are as follows:

Garhwal Region

46. In Garhwal region the sacred river Ganga offers the professional as well as the amateur the exhilaration of white water rafting. The Alaknanda & Bhagirathi, are the main tributaries of the Ganga and meet at Devprayag, frothing from their racy descent. Their waters are of Grade IV to V, challenging the expert to savor the thrill.

47. Down river from Devprayag, the Ganga changes into a pool drop river. This stretch of almost 70 km is perfect for amateur and the novice, for here the river offers some fine Grade III rapids and two Grade IV 'GOLF COURSE' 4 km below Shimpuri Village; each followed by rapids, the 'WALL' at Byasi and the deep and placid pools.

48. Sandy beaches line the river at intervals, allowing river rafters to pull up alongside. The slopes on either side are covered with oak, pine, spruce and fir, with the occasional village and its terraced fields dotting the landscape. Wildlife is visible at a distance, comprising mainly of spotted deer, monkey, leopard, while multi-hued butterflies flit among flowering bushes. Spiritual retreats and ashrams overlook the river and add to the spiritual experience.

Table 3: Professional & Tourist Stretches/ Site (Garhwal Region)

Garhwal Region					
District	Centre	Activities	River/Route/Site	Location	Stretch (in km)
Chamoli	Kaleshwar	Rafting	Alaknanda	Kaleshwar	10.0
		Kayaking			10.0
		Angling		Kaleshwar to Gauchar	
		Rock Climbing / Rope Course		Kaleshwar	
		Trekking		Deoriatal/Chandrashila	
		Mountain Biking		Kaleshwar, Adi Badri ,	
				Kaleshwar-Pokhri-Mohan Lal	
				Ukhi math-Chopta- Gopeshwar	
		Camping		Kaleshwar	
	Joshimath	Artificial Rock Climbing Rope Course		Joshimath	
		Trekking		Kuwari Pass	
				Valley Of Flowers	
				Bhavishya Badri	
				Lata Kharak/ Nanda Devi	
				Sanctuary	
				Dungiri Base.	
		Mountain Biking		Joshimath-Mana	
				Joshimath-Niti Valley	
				Joshimath-Nath Pahar	
				Joshimath-Urgam Valley	
				Joshimath-Auli	
Rudraprayag	Kotgi	Rafting			
		Kayaking			
		Angling			
		Rock Climbing / Rope Course			
		Trekking			
		Mountain Biking			
		Camping			
		Artificial Rock Climbing Rope Course			

Garhwal Region					
District	Centre	Activities	River/Route/Site	Location	Stretch
		Trekking			
		Mountain Biking			
Pauri	Pauri	Para Gliding	Pauri		
		Parasailing			
		Powered Hang gliding			
		Hot air Ballooning			
	Satpuli/ Vyas Ghat	Angling	Satpuli		
UttarKashi	Mori	Rafting /Kayaking	Tons	Sandhara-Khoonigad	9.00
				Sandhara-Lungad	3.00
				Hanol-Tyuni	15.0
		Angling	Tyuni	Tyuni	
		Rock Climbing /Rope Course			
		Mountain Biking	Mori-Tyuni	Mori-Tyuni	
		Trekking	Kedarnath-	Kedarnath-	
			Har Ki Doon	Har Ki Doon	

*stretches have only been provided where applicable

Kumaon Region

49. In Kumaon, the kali Ganga (Sharda) flows down from the Nepal border through Kumaon hills. The Kali and the Gori rivers meet at Jauljibi where the water volume increases, offering adventure to professionals. For over 117 km from Jauljibi to Tanakpur its rapids are Grade IV and more. The tough 3 days of rafting should be done by professionals.

50. Lower down among the forested slopes, the river become calmer offering the amateur a sporting challenge before flowing out into the plains of Uttarakhand. Mahakali Ganga River flows along the border between India and Nepal. A self-contained river journey as well as an expedition or mega trip upto Tanakpur can be undertaken. Rafting can also be undertaken through Kumaon Mandal Vikas Nigam in Mahakali River.

Table: 4 Professional & Tourist Stretches/ Site (Kumaon Region)

Kumaon Region					
District	Centre	Activities	River/Site /Route	Location	Stretch (In Km)
Almora	Bhikiyasain	Rafting	Ramganga West	Mansi to Bhikiyasain	17
		Kayaking	Ramganga West	Mansi to Bhikiyasain	17
		Angling	Ramganga West	Mansi to Bhikiasain	17
		Rock Climbing /Rope Course		Shilapani	
		Mountain Biking		Bhikyasain-Manila	
				Marchula-Mohan	
				Kumariya-Dewarpani-Bhikiyasain	
	Kumariya	Rafting	kosi	KunKhet-RamNagar	25
		Kayaking	kosi	KunKhet-RamNagar	25
		Artificial Rock Climbing /Rope Course	Artificial Rock Wall	Kumariya	
		Mountain Biking		Kumariya-Chaurgar	
				Kumariya-Chimtakhal-Mohan	
		Camping		Kumariya	
		Mountain Biking		Almora-Binsar	
				Almora-Jageshwar	
				Almora-Dhyari-Dungra	
				Mornaula-Almora	
		Camping		Dina Pani Almora	
Bageshwar	Kapkot	Rafting	Saryu River	Kapkot-sheraghat	
		Kayaking		Kapkot-sheraghat	
		Angling		Kapkot-Bageshwar	
		Rock Climbing /Rope Course		Kapkot	
		Mountain Biking		Bageshwar- Patiyasor	
				Bageshwar- Kumariya	
	Karkiya	Trecking		Pindari Glacier	
				Sunder Dhunga Glacier	
				Namik Glacier	
				Kafni Glacier	
		Angling	Saryu River	Supi -Kapkot	
		Mountain Biking		Song-Bharari-shama-leti	

				Song-Bharari-shama-Munsiyari	
				Song-Sama-Thal-Reema-Bageshwar	
Champawat	Pancheshwar	Rafting	Saryu	Baturi-Pancheshwar	25.0
		Inflatable Kayaking		Baturi-Pancheshwar	
		Angling		Pancheshwar	
		Rock Climbing /Rope Course		Pancheshwar	
		Mountain Biking		Pancheshwar, Lohaghat, Abbot mount	
				Pnacheswar-Kheti Khan	
				Champwat-Pancheshwar	
		Camping		Pancheshwar	
Pithoragarh	Baldhar	Rafting /Kayaking	Kali	Baldhar-Haneshwar	12.00
		Angling		Baldhar-Boom	12.00
		Rock Climbing /Rope Course		Baldhar	
		Mountain Biking		Baldhar-Tijam-Narayan Swami Ashram	
		Camping		Baldhar	
	Sherghat	Trecking		Milam Glacier	
				Chotta Kailash	
				Namik Glacier	
				Khalia Top	
		Mountain Biking		Mnsiyari-Birthi-Jauljibi	
				Shergaht-Munsiyari	
		Rock Climbing /Rope Course		Chakar Dunga	
		Rafting /Kayaking	Gori Ganga	Sherghat-Jauljibi	12.0
		Para Gliding		Khaliya Top (For Professional Flyers)	
		Camping		Sherghat	

51. All the above locations are under UTDB jurisdiction. So there is no need of land acquisition for interpretation center. **Figure 2** shows design of interpretation center.

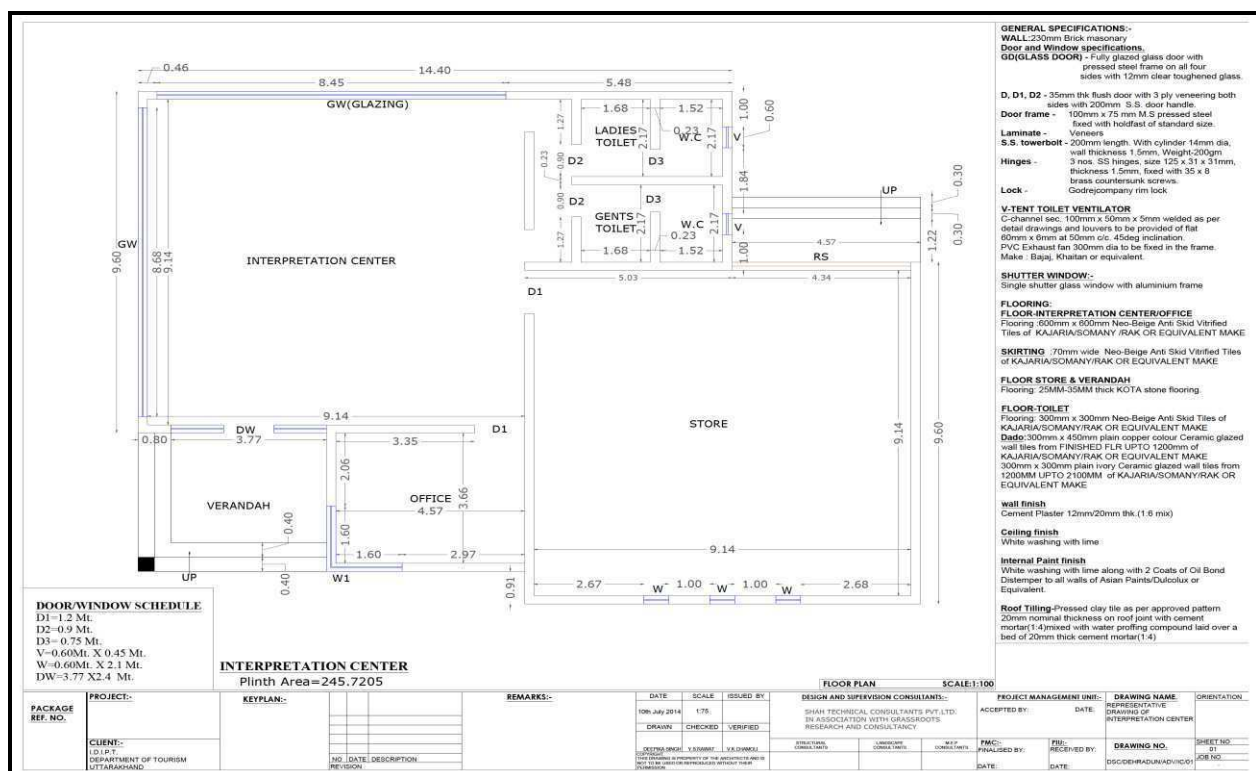


Figure 2: Design of Interpretation center

D. Sub project Proposals

52. The objectives of the sub project are:

- Providing new interest among the tourists, thereby holding visitors in the region for longer duration and increasing revenue.
- Enhanced Livelihood opportunities at local community level through tourism multiplier effect.
- Enhanced capacity to promote private sector participation and small business.
- Enhanced quality of natural and cultural tourist attractions; and to promote adventure tourism.

53. The following approach & methodology has been adopted for the Sub Project:

- Adventure Centres to be established at locations identified & properly rekiied by GMVN & KMVN and further inspection by DSC
- In view of the above set up it is deliberated by UTDB that District Adventure Sports Officers will facilitate the coordination and Supervision of Assets between UTDP and Private Parties/Self Help Groups for smooth functioning of the Project.
- Equipment to be procured as per guide lines of ADB Bank (NCB). Then the said Equipment, Bided out for Lease/ Rent for 10 years as per qualifications and financial requirement set for the bidding documents.

- Renter will operate/run the adventure centres (providing sports to Tourists and also imparting Training (Mandatory condition) as per requirement set forth in the Bidding Documents.
- Cost of adventure trainings to be conducted shall be borne by sub project. As provided in the DPR .

54. The adventure centers developed under the sub project will be operated and maintained by Bidder/Renter under an agreement with UTDB for which formal tenders will be invited for all centers as per the Terms & Conditions set forth by the Board. Since it is Major initiative by Uttarakhand Govt. constant Monitoring by UTDB through District Adventure Sports Officer is considered mandatory for smooth running and imparting training schedule

E. Project period and Implementation Schedule

55. Implementation period for this package is 12 months. The project is expected to start during January 2015 and likely to be completed by end of January 2016.

III. DESCRIPTION OF EXISTING ENVIRONMENT

A. Environmental Profile – Physical Resource of Uttarakhand

56. Uttarakhand is the newly formed hill state in the Indian Himalayan Region which became a separate state, carved out of hill districts and sub Himalayan regions of Uttar Pradesh in the year 2000. The geographical location (28°43' N to 31°27' N and 77°34' E to 81°02' E) resource setting of Uttarakhand is unique and shares its borders with China and Nepal. It borders the Tibet Autonomous Region on the north, Nepal on the east and the Indian states of Uttar Pradesh to the south, Haryana to the west and Himachal Pradesh to the north west. There are 13 districts in Uttarakhand which are grouped into two divisions: Kumaon division and Garhwal division.

Topography:

57. Uttarakhand has a total geographic area of 53,483 km², of which 93% is mountainous and 64.79% is covered by forest. Most of the northern parts of the state are part of Greater Himalaya ranges, covered by the high Himalayan peaks and glaciers, while the lower foothills are densely forested. The difference in altitude between the lowest parts and the highest part (snow peaks of Nandadevi) is almost 7,000 meters. The following map shows topography condition of Uttarakhand:

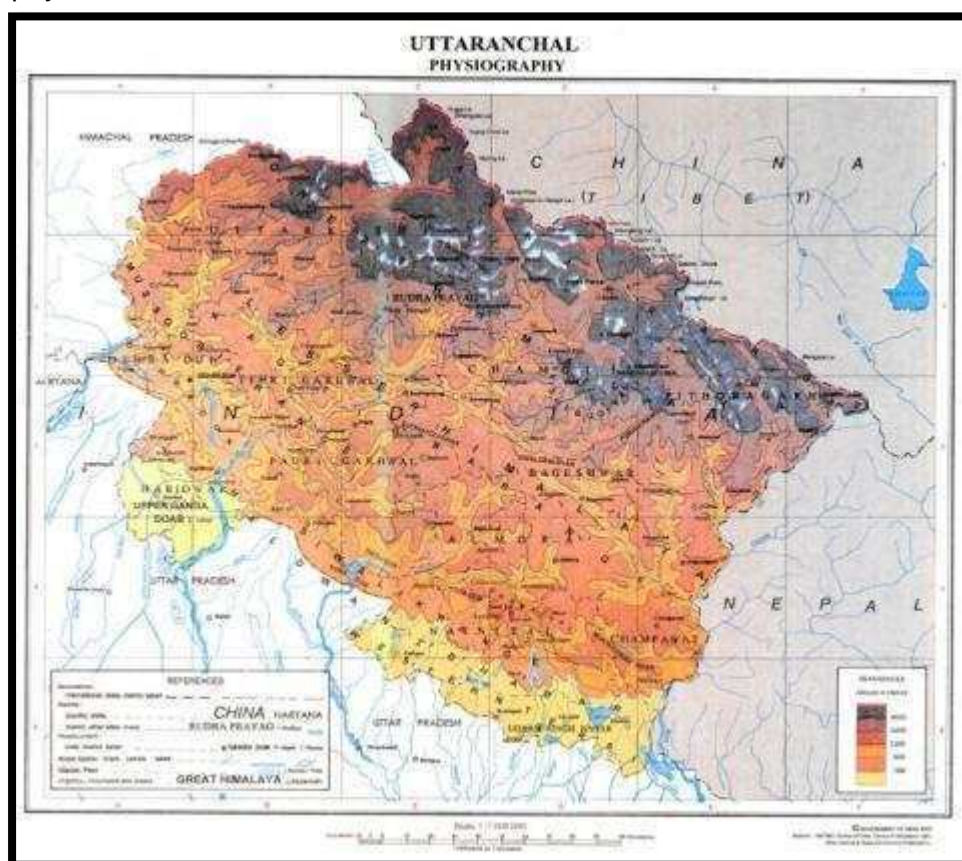


Figure 3: Physiography Map of Uttarakhand

Climate

58. The climate of Uttarakhand is sharply demarcated in case of its two distinct divisions: the predominant hilly terrain and the smaller plain region. The climate in the northern part of Uttarakhand is typically Himalayan. This mountain range itself exerts an appreciable extent of influence on monsoon and rainfall patterns. Within the Himalayas, climate differs depending on altitude and position. Climate ranges from subtropical in the southern foothills, averaging summer temperatures of about 30°C and winter temperatures of about 18°C. Warm temperate conditions prevail in the Middle Himalayan valleys, with summer temperatures usually hovering about the mark of 25° C and cooler winters. Cool temperate conditions dominate the higher areas of the Middle Himalayas, where the summer temperatures are usually around 15 to 18°C and winters drop below the freezing point. At altitudes over 4,880 m (16,000 feet), the climate is bitterly cold with temperatures consistently below the freezing point and the area perennially shrouded in snow and ice. The eastern flanks of the Himalayan ranges are subject to heavy rainfall while the western section is relatively dry.

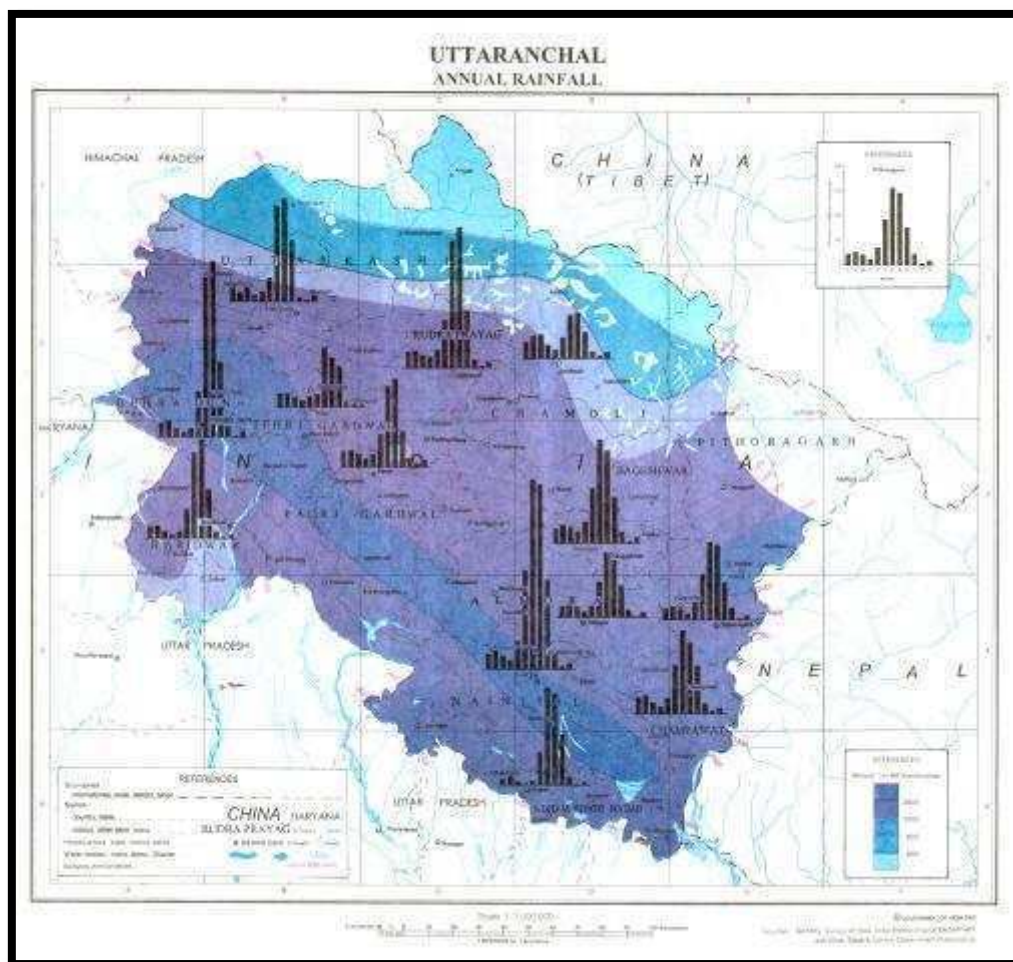


Figure 4: Rainfall Map of Uttarakhand

Geology

59. The continuing evolution of the Himalayas is reflected in Uttarakhand's seismicity and active land movements. The global geo-tectonic environment has left a strong imprint on the

region and is continually altering it to present dynamic landforms and distinct changes that are not only restricted to Uttarakhand but to the entire Himalayan-Indo-Gangetic region of India and continuum of mountain along Hindu Kush Himalayas. Most of Uttarakhand is hilly, except the districts of Haridwar, Udham Singh Nagar, and part of Dehradun.

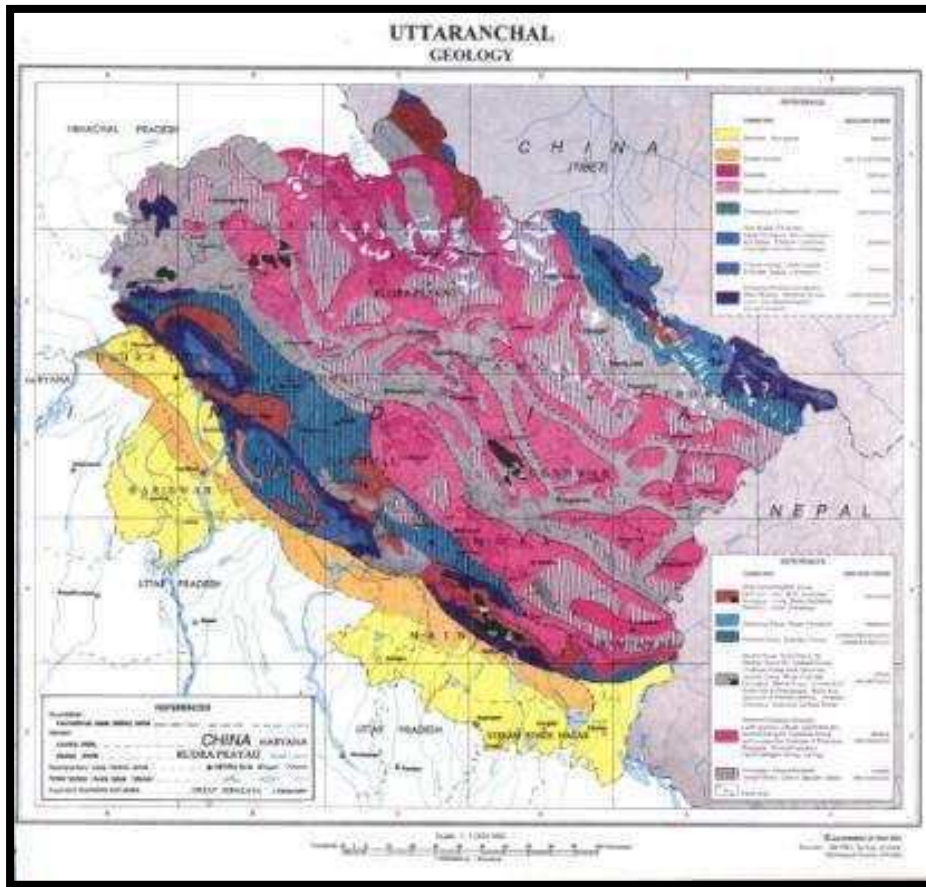


Figure 5: Geology Map of Uttarakhand

Seismicity in Uttarakhand

60. The entire state is prone to earthquake hazards which are expected in the two highest seismic zones, IV and V, as per the seismic zoning map of India (BIS: 1983-2002). Out of 13 districts in Uttarakhand large parts of 11 districts have PGA (Peak Ground Acceleration) values above 0.4g, which indicates a very high level of seismic hazard. This includes Almora, Bageshwar, Chamoli, Champawat, Dehra Dun, Nainital, Pauri, Pithoragarh, Rudrapur, Tehri and Uttarkashi districts. Only two districts, Haridwar and Udham Singh Nagar, south of the MBT, show accelerations below 0.3g. These phenomena often result in adverse consequences such as damage to the built environment and loss of life and injuries.

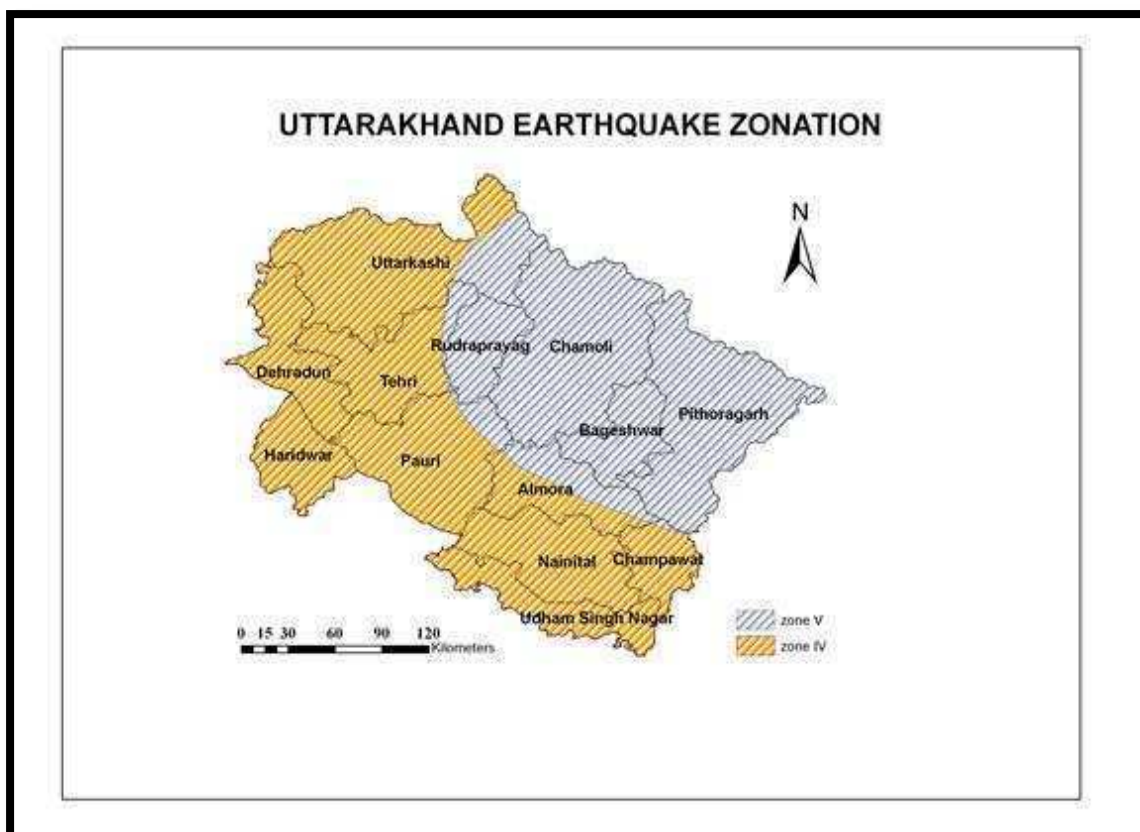


Figure: 6 Earthquake zonation Map, Uttarakhand

61. The proposed sites have been selected in view of the threats due to seismic hazard as the districts in the sub project lie in seismic zone V.

62. The southernmost zone is the Foothills fault that is all along the foot of the Shiwalik hills. This is not a single fault extending throughout but a series of overlapping and sometime interlacing faults across which the land mass has moved significantly. The relative movement between the plains and the Shiwaliks can be seen from the perspective of the hundreds of meters of alluvial material that has accumulated with a thickness of over 500 m and the heights of nearly 1,600 m attained by these hills. This continual upheaval and burial has brought about a unique physiographic situation in the region south of the Shiwaliks.

63. The streams of Shiwalik form a system of coalescing alluvial fans and cones due to their high gradient and dramatic decline in slope. The zone close to the hills, called *Bhabbar*, is almost wholly comprised of boulders and conglomerates, and is highly permeable. The streams lose their watercourse into this zone and are mostly seen as dry beds of boulders. During monsoons these stream flow as torrents for very short durations. The streams, which lose their course in the *Bhabbar*, reappear as springs marking the northern edge of the *Terai*. The *Bhabbar* belt is 7 to 15 km wide, and away from the Shiwalik hills, it grades into a 10 to 40 km wide belt of *Terai*. The *Terai* belt immediately to the south of the *Bhabbar* is composed of the fine material at the edge of the fans and cones. This is often marshy with very shallow ground water levels and water bodies.

64. The Duns (Doon valleys) are longitudinal valleys formed between the northern slopes of the Shiwaliks and the southern slope of the first ranges of the Lesser Himalayas. The Dehradun is the best pronounced of these valleys and is nearly 100 km long with a

maximum width of about 45 km. As we proceed eastward the valleys become smaller in dimension. The Duns are composed of gravels, conglomerates, sand and silt and form excellent groundwater aquifers.

65. Beyond the Duns is the Lesser Himalayas which forms a belt largely comprised of meta-sediments. The Lesser Himalayas have numerous thrust sheets that move older rocks above the younger ones to great distances resulting to inverted stratigraphy. The Lesser Himalayas attain a maximum height of around 3,500 m.

66. The Higher Himalayas or the '*Himadri*', in which lies the zone of permanent snow, attains a maximum of nearly 8,000 m. Mount Everest is in the eastern continuation of this zone. The rocks are crystalline in nature and are often called the Central Crystallines. The Indus Suture Zone separates the Higher Himalayas and the Tibetan Plateau, which is the physical expression of the co-joining of the two large continental masses. The rocks here are marine sedimentary with fossils.

Soils

67. The soils in the Uttarakhand are alluvial, riverine, non-calcareous to moderately calcareous soils, and have been carved out by the fast flowing rivers draining the Himalayas. Limited distribution of red soil is also found in the Garhwal region. Forest soils, which occur under coniferous and deciduous forest in the Shiwaliks and lower Himalayas, are rich in organic matter. Himalayan foothill/*Tera*i soil is found along a narrow zone in the foothills. *Dabar* soils or mountain/hill soils is the collective terminology used for various types of soils occurring at very high elevations, under a wide range of forest types.

68. The soil erosion map for India indicates soil erosion rate of 20 tons per hectare per year (tons/ha/year) in Uttarakhand. The maximum erosion of >80 tons/ha/year occurs in the regions adjoining Shiwalik range. The degradation rate in some parts of plains of Udham Singh Nagar and Haridwar is slightly lower (nearly 5 tons/ha/ year). Soil erosion is more in regions lying in Himachal Pradesh where mining activities have been taking place from long. Soil erosion rates in the lower and middle hill districts of Uttarakhand are also approximately 5 tons/ha/year; in some areas they are lower due to the presence of dense forests.

Drainage

69. Most of the perennial rivers are snow fed and originate in the Tibetan plateau or the Himadris. Most rivers form part of the Garhwal Himalayas, the drainage system of which falls under: (i) the Ganga System; (ii) the Yamuna System; and (iii) the Ramganga System.

70. Uttarakhand has tremendous water resources such as glaciers, lakes, rivers and other water bodies. Most of these have tourism importance like Milam, Pindari, Sunder Dhunga and Heeramani Glaciers; Seven Lakes in Nainital; and some wetlands. However these water bodies are located far from the road corridors.

71. Most of adventure sports will be conducted in river system. The river map clearly depicts about importance of river in the state. Most of the rivers are perennial in nature, so adventures activity will not hamper due to scarcity of water

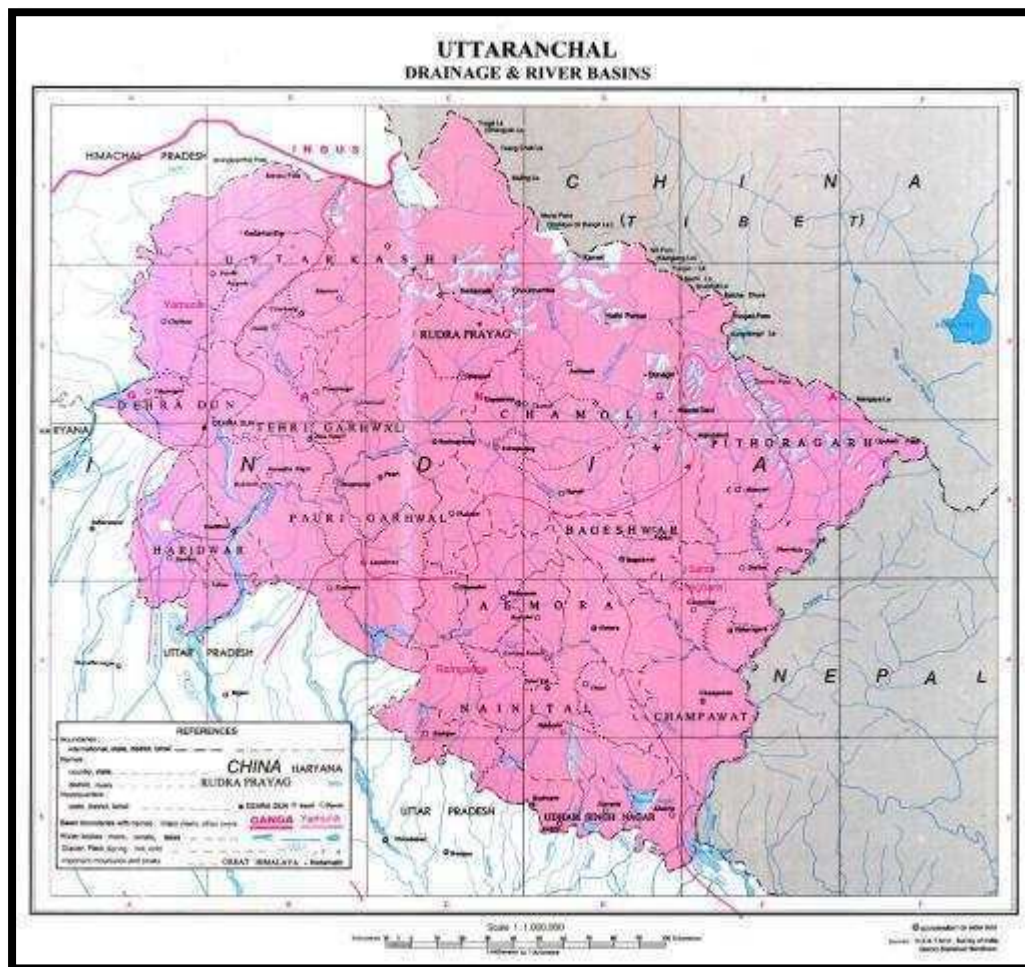


Figure 7: Drainage Map of Uttarakhand

Land Use

72. Forest land is the major land use in the hills of Uttarakhand and the forest department is the sole owner of the forest land. A clear distinction can be made between land use patterns in the hill and the plain districts in terms of net area sown, barren land, culturable waste, permanent pastures. Some of these classifications show degradation in the upland lowland ecosystems and the others indicate the important role certain land use(s) play in maintaining the ecological balance. For example, the culturable waste land and fallow lands are generally lands left fallow temporarily to regain soil fertility. The districts of Pauri Garhwal, Chamoli and Rudrapur have considerable percentage of barren and fallow lands probably because of the cultivation practices. A mere 10% of the area is sown in the hill districts, given the constraints of irrigation and physiography; whereas the sown area in plain districts is more than five times that of hills.

Surface Water

73. The river systems demarcate the boundaries with neighboring states of Himachal Pradesh, separated by Tons River in the northwest, and Kali River separating it from Nepal in the eastern region. Tons is formed by two rivers the Rupin and Supin with their confluence at Naitwar. The flow recorded at Tons downstream of Naitwar is an average of 78.9 cum/sec. The total quantum of water estimated over the year at Paonta Sahib after the confluence of Tons is nearly 80 million cubic meters, which flows down to the plains.

74. Two of India's mightiest rivers, the Ganges and the Yamuna take birth in the glaciers of Uttarakhand, and are fed by myriad lakes, glacial melts and streams in the region. The northern parts of districts of Chamoli and Uttarakashi, most of which lie in the snow covered zone, provide the most important reservoirs of water. The flow of Yamuna recorded at Naugaon is 86 cubic meters per second.

75. East of Yamuna is the river system which forms the Ganga. The main rivers in the upper reaches are the Bhagirathi, Bhilangana, Mandakini, and Alaknanda. Bhilangana joins Bhagirathi at Tehri, just upstream of the Tehri Dam. Mandakini joins Alaknanda at Rudrapur. The Dhuli Ganga, Vishnu Ganga, Pindar and Nandakini are important tributaries draining into Alaknanda before its confluence with Mandakini. The confluence of Bhagirathi and Alaknanda is at Deoprayag, beyond which it is called the Ganga. The estimated flow of Ganga at Rishikesh is 27 billion cubic meters.

Groundwater

76. The Central Groundwater Board has estimated the annual replenishable quantum of groundwater resources in Uttarakhand to be nearly 0.28 million hectare meter. The estimation of groundwater in the mountainous terrain is very complex and very little empirical data exists. The groundwater occurs often in pockets, depending largely on the secondary porosity developed due to fractures, joints, and faults and is restricted in extent due to topographical features. In the Bhabbar zone the groundwater is very deep, though often in artesian conditions, while in the Terai it is shallow and causes water logging.

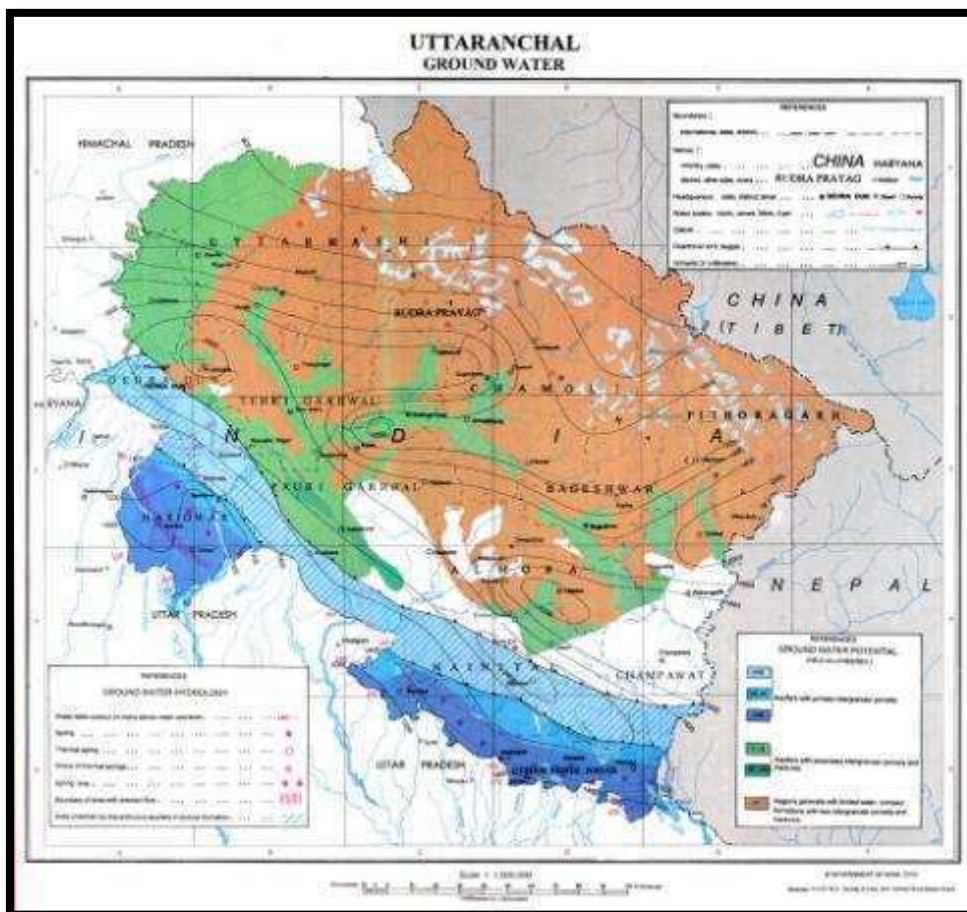


Figure 8: Ground Water Map of Uttarakhand

Ambient Air quality

77. All the project site locations are much away from urban setup. Therefore chances of presence of air pollutant in ambient air are negligible. Only source of emission is from movement of vehicles (not continuous), which is also very less.

Ambient Noise Levels

78. All the project locations, areas are much away from urban setup. Therefore background noise level at project locations is negligible. Only source of noise is from movement of vehicles, which is also very less.

B. Ecological Resources and Biodiversity – Uttarakhand

Forests of Uttarakhand

79. The recorded forest area of Uttarakhand is 34,651 sq km, which is around 64% of the state's total geographic area. The forests in the state are spread between a very broad altitudinal range of 300 m and 3,500 m. The eight of the sixteen known forest types in India exist here. These forests have varied vegetation types ranging from tropical deciduous to alpine vegetation. The forests can be broadly categorized into two categories: the hill forests and the lower Shiwalik hill forests, more commonly known as *Bhabbar* and *Terai* forests. Of the 34,651 sq km of recorded forest area, 24,643 sq km fall under reserved forests and 9,885 sq km under protected forests. About 24,261 sq km of reserved forest and 99 sq km of protected forest is under the control of the forest department. About 5,000 sq km of protected forest is under civil, *soyam*, *panchayat* and private land; this area is accessible to communities dependent on the forests. Apart from the forests there are six national parks and 6 wildlife sanctuaries in the state covering a total forest area of 7,335 sq km. Forest cover map of the state is shown in **Figure 9**.

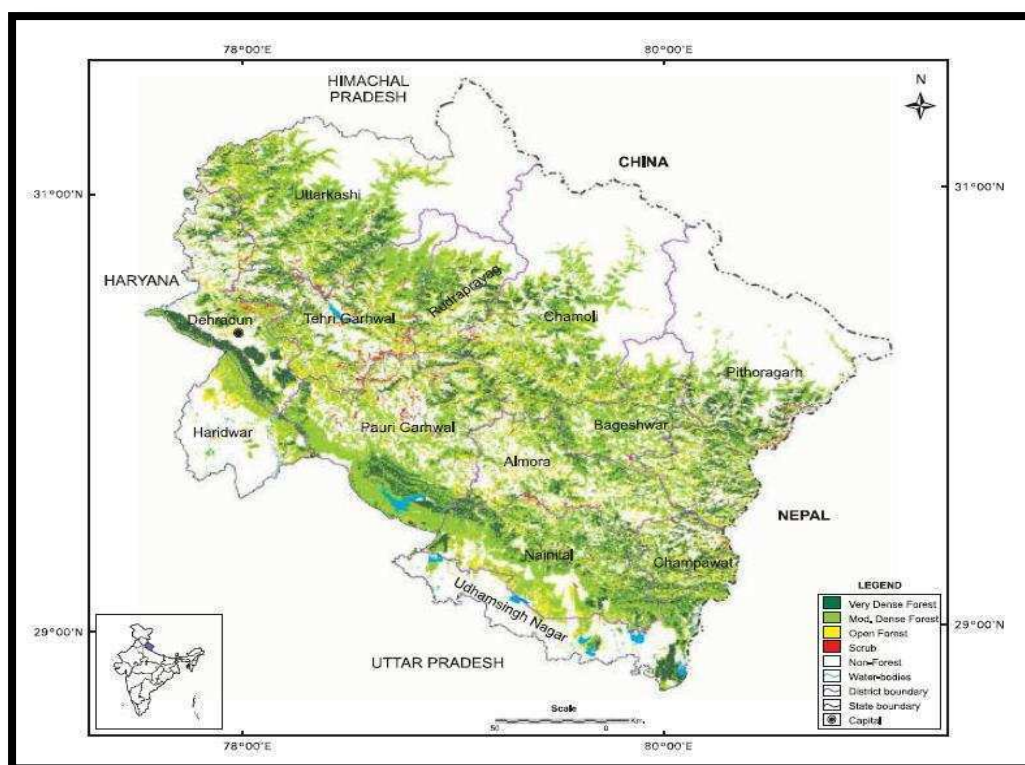


Figure 9: Forest cover Map of Uttarakhand

Vegetation

80. The vegetation varies greatly with elevation, from glaciers at the highest elevations to subtropical forests at the lower elevations. The highest elevations are covered by ice and bare rock. Below them, between 3,000 and 5,000 m (9,800 and 16,000 ft) are grasslands and shrub lands. Temperate coniferous forests, the western Himalayan subalpine conifer forests, grow just below the tree line. At 3,000 to 2,600 m (9,800 to 8,500 ft) elevation they transition to the temperate western Himalayan broadleaf forests, which lie in a belt from 2,600 to 1,500 m (8,500 to 4,900 ft) elevation. Below 1,500 m (4,900 ft) elevation lie the Himalayan subtropical pine forests. The Upper Gangetic Plains moist deciduous forests and the drier *Teral-Duars* savanna and grasslands cover the lowlands along the Uttar Pradesh border. These lowland forests have mostly been cleared for agriculture, but a few pockets remain.

81. Grasslands and other grazing resources occupy a very important position in the hill agriculture and the grassland utilization is an important component of the hill farming system. Grasslands are found in plains and high altitude. In the plains they are called *chaurs* and comprise of typical grasses, which grow up to a height of 2 m. These habitats are ideal for predators while providing forage and fawning cover for herbivores. The alpine grasslands, locally called *bugyals*, occur at altitudes above 1,000 m

Flora and Fauna

82. The floristic analysis of Angiosperm and Gymnosperm in Uttarakhand reveals that there are about 4,048 species belonging to 1,198 genera under 192 families. The floristic diversity reveals that the state harbors 4,000 species of vascular plants of which nearly 116 species are endemic to Uttarakhand as they have confined their distribution to the state. The state has 500 algal species, 751 species of mosses, 18 endemic species of pteridophyta, 435 species of lichens.

83. More than 350 species of plants are threatened and endangered in all forested areas of the state, including 161 species belonging to rare and threatened categories based on IUCN guidelines. Most of these threatened plant species, which grow in the hills, are over-exploited for their medicinal, aromatic or commercial value. Among the tree species members of the family *Aceraceae* are more threatened. All members of the family *Orchidaceae* are indeterminate, rare or endangered. Species of the family *Woodsiaceae* such as *Woodsia andersonii* and *Woodsia cycloba* are believed to be extinct or highly endangered. The status of more than 80% of plants is either indeterminate or has no information, necessitating long term research for area-wise profiling of plant species of the state.

84. Uttarakhand is home for many species of birds, mammals, reptiles as also for the threatened and endemic species. The scientists of Northern Regional Station, Dehradun have compiled a baseline data on the faunal diversity of western Himalaya. An annotated list of 2,248 species of animals, including 1,405 invertebrates' species and 843 vertebrates species have been reported. Important wild animals in Uttarakhand include tigers, leopards, elephants, musk deers, black bears, sloth bears, and brown bears.

C. Economic Resources

Industries

85. The State is rich in mineral deposits like limestone, marble, rock phosphate, dolomite, magnesite, copper, gypsum, etc. The number of small scale industries is 25,294 providing employment to 63,599 persons. As many as 1,802 heavy and medium industries with an investment of Rs 20,000 crore employ 5 lakh persons. Most of the industries are forest-based. There is a total of 54,047 handicraft units in the state.

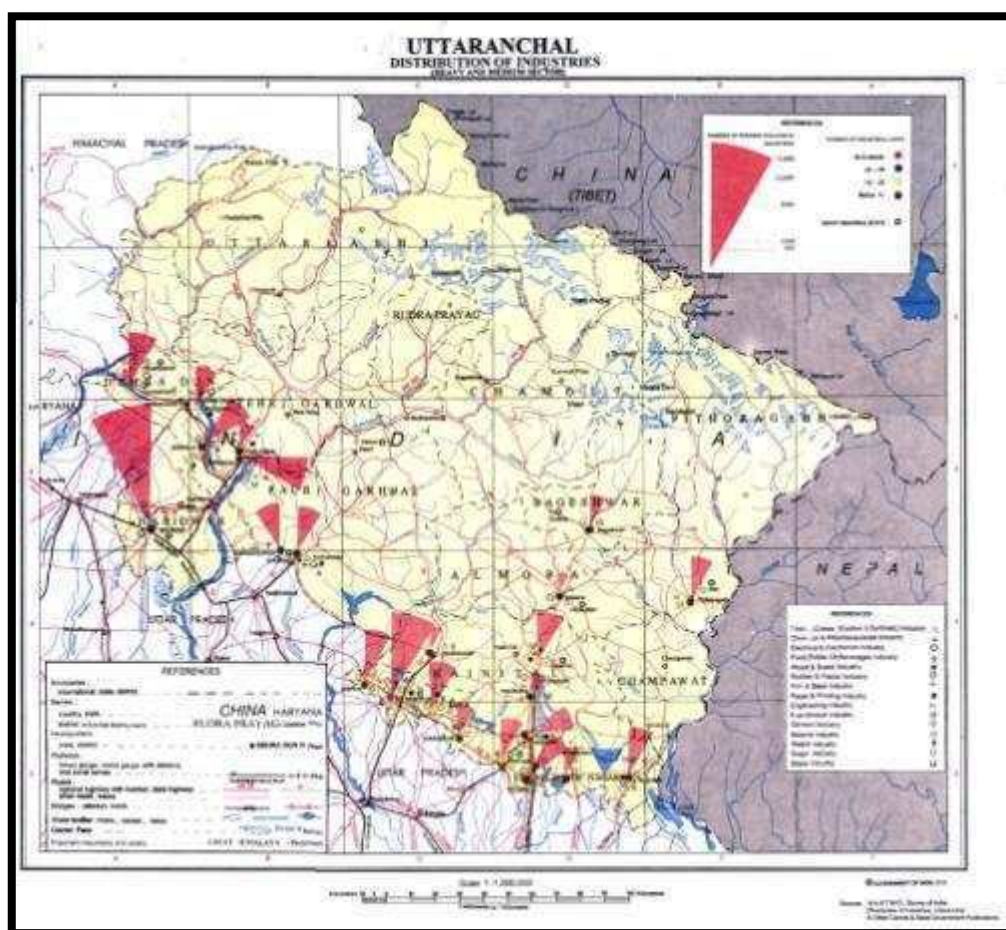


Figure 10: Industry Map of Uttarakhand

Agriculture

86. Major crops include (i) cereals (rice, wheat, barley, maize, manduwa, and sanwan); (ii) pulses (urad, masoor, peas, gahat, rajma, gram, and black soybean); (iii) oil seeds (rape and mustard, seasmum, groundnut, and soyabean); and (iv) other crops (sugar cane and onion).

Livelihood

87. The hill economy and sustenance systems are typically dependent on primary sector activities, with high number of cultivators in the hill region and small proportion as agricultural laborers in the plain areas. Women dominate as cultivators, especially in the hilly districts in addition to the duty towards animals. Agricultural labor jobs in the hill districts are very minimal and increase in the districts (Dehradun, Udham Singh Nagar, and Haridwar). The hill

district of Pithoragarh also shows significant involvement of women in household industry as compared to other districts largely because of the continuation of the tradition of weaving and wool based activities. Services, trade and commerce also lead in the Terai areas. It is estimated that, within one year of the intervention of the project in 13 adventure centers directly 2.6 lakh and indirectly 1.3 lakh population will be benefited from the project.

D. Social and Cultural Resources

Demographic Profile

88. The Geographical and demographical data of Uttarakhand is as follows (**Table 5**): The total population estimated for 2011 is 101.17 and density of population is 189 per sq km. Other relevant information is summarized in **Table 5**.

Table 5: Uttarakhand General Information

1	Geographical Area of Uttarakhand	53,483 Sq Km
2	Altitudinal Variation(above mean sea level)	200-8000 m
3	Avg. Annual Rainfall	1547 mm
4	Total Forest Area(Km ²) under various classes	34,651
5	Total Forest Area of the state as percentage of geographical area	64.79%
6	Per Capita Forest Area (ha)	0.41
7	Total Forest Cover(Km ²)	24495 (45.70%)
8	Total Forest Area under Forest Department	24,414.804
9	Forest Area under Forest Department as percentage of geographical area	45.65%
10	Area under Agriculture & Allied Activities (lakh ha)	13.37 (23.6%)
11	Population (Census- 2001)	84,89,349
12	Population (Census- 2011)	101,16752
13	Floating Population	300-350 lakh
14	Decadal Growth Rate (2001-11)	19.17%
15	Sex Ratio (Provisional 2011)	963
16	Population Density (Per Sq Km)	189
<i>Source: Uttarakhand Forest Statistics, 2010-11, www. Census.gov.in</i>		



Figure 11: Administrative Map of Uttarakhand

Table 6: Project District wise Population, sex ratio, literacy and its density: Uttarakhand

Sr. No.	District	Population	Growth Rate	Sex Ratio	Literacy	Density
1	PauriGarhwal	687,271	-1.41 %	1103	82.02 %	129
2	Almora	622,506	-1.28 %	1139	80.47 %	198
3	Pithoragarh	483,439	4.58 %	1020	82.25 %	68
4	Chamoli	391,605	5.74 %	1019	82.65 %	49
5	Uttarkashi	330,086	11.89 %	958	75.81 %	41
6	Bageshwar	259,898	4.18 %	1090	80.01 %	116
7	Champawat	259,648	15.63 %	980	79.83 %	147
8	Rudraprayag	242,285	6.53 %	1114	81.30 %	122

As per Census 2011

Rural and Urban Population

89. Uttarakhand is predominantly rural with only 25% urban population, which is mainly concentrated in the three districts of Haridwar, Udham Singh Nagar, and Dehradun. Urban

population in the plain districts is 39%.

Tribal Communities

90. Apart from the mainstream populations, Uttarakhand is the home to the following tribal communities: (i) Van Rajis found in the border area of Pithoragrah, Champavat, and Udham Singh Nagar; (ii) Buxas found in Udham Singh Nagar, Terai of Nainital, Haridwar, Pauri and Dehradun; (iii) Jadh found in Neelang and Jadhag Villages of Uttarkashi; (iv) Bhotia and Marchas found in the border district of Chamoli, Uttarkashi, Bageshwar and Pithoragarh; (v) Tharu found in Udham Singh Nagar; and (vi) Jaunsari found in Chakrata Block and Dehradun. Among these the Van Rajis are among the rare groups in the country, which are threatened with extinction. No tribal community within the project intervention centers.

Physical Infrastructure Services

Education:

91. Based on 2011 data, Uttarakhand has 22,379 schools/colleges offering basic/secondary education, 106 degree/post degree colleges, 1 central university, 106 industrial training institutes, and 37 polytechnics.

Public Health and Family Welfare:

92. Based on 2010 data, Uttarakhand has 12 district level hospitals, 3 base hospitals, 55 community health centers, 2 women and child welfare centers, 540 ayurvedic hospitals. There are estimated 8,075 beds in government hospitals.

Electricity and Water Supply:

93. The installation capacity for Uttarakhand as of 2010 is 1,305.9 megawatts. Population covered by drinking water supply is 62.58 lakh, of which 50.24 lakh is fully covered while the remaining 12.34 lakh is partially covered.

Transport and Communication

94. Roads in Uttarakhand are maintained by Public Works Department, BRTF, local bodies (district panchayats and urban local bodies), and other departments (irrigation, cane development, forest, and others). As of 2010, 745.56 km roads are maintained by district panchayats and 1,928.48 km by urban local bodies. Postal and communication services in Uttarakhand include post offices, telephone exchanges, telegraph offices, public calling offices, landlines, and mobile providers. Detail road and rail network of Uttarakhand is depicted in **Figure 12**.

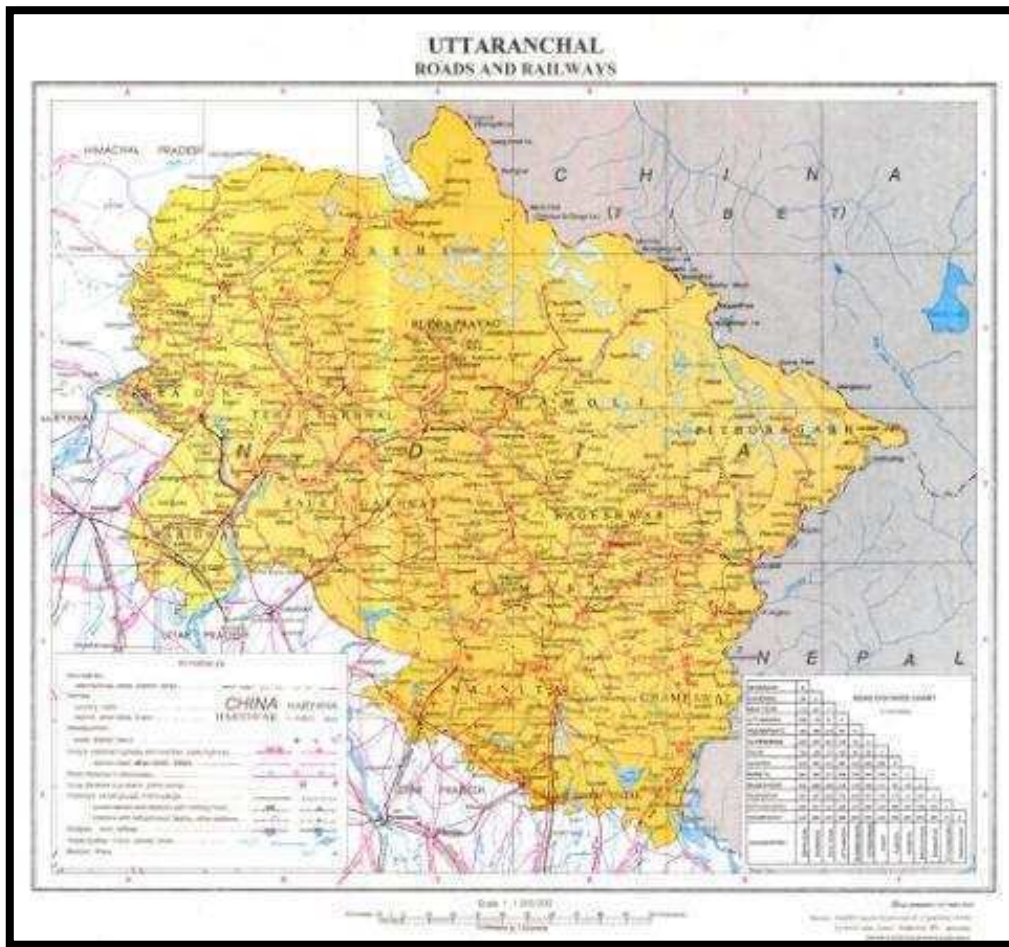


Figure 12: Roads and Railways Map of Uttarakhand

Adventure Tourism in Uttarakhand:

95. Uttarakhand Tourism Development Board is the highest state government body responsible for policy, planning, regulation, marketing & promotion of tourism affairs in Uttarakhand. District adventure sports/tourism officers are appointed to manage the adventure tourism affairs in their respective districts. Garhwal Mandal Vikas Nigam Ltd. & Kumaon Mandal Vikas Nigam Ltd. are the two state bodies responsible for providing tourist services in Garhwal & Kumaon region respectively.

96. The state of Uttarakhand has vast adventure tourism resource base, there are:

- ✓ 83 climbable peaks,
- ✓ More than 123 trek routes ,
- ✓ 14 Important Birding Areas (IBA)
- ✓ 6 National Parks, 6 Wild Life Reserves & 1 Biosphere Reserve,
- ✓ 22 Angling sites identified on 19 rivers & lakes,
- ✓ Numerous gushing Himalayan rivers for white water rafting & numerous lakes & reservoirs for water sports,
- ✓ Wide open Himalayan valleys & hills offering great potential for aero Sports

97. In statistical terms, tourists coming for rafting have increased from 26,678 in 2008 to 56,933 in 2012 showing an increase of 113.40 % in last five years. Also the number of rafting companies increased from 107 in 2008-09 to 134 in 2012-13 showing an increase of 25.23% in last five years. The statistical details for rafting are presented below:

Table 7: Number of Tourists for River Rafting for the period of 2003 to 2012

S.No.	Year	Indian	Foreign	Total
1	2003	15,145		17,760
2	2004	18,002	2861	20,863
3	2005	22,577	3085	25,662
4	2006	26,798	2720	29,518
5	2007	28,271	3589	31,860
6	2008	23,499	3179	26,678
7	2009	23,366	2017	25,383
8	2010	65,320	6911	72,231
9	2011	59,508	4,665	64,173
10	2012	52,190	4,768	56,933

Table 8: Year wise Details of Rafting Companies & Fee collected for the period of 2003-04 to 2012-13

S.No.	Year	No. of Rafting Companies	No. of Rafts	Fee Collected (In Rs. Lacs)
1.	2003-04	29	74	1.65
2.	2004-05	38	96	2.40
3.	2005-06	46	130	3.25
4.	2006-07	55	136	3.40
5.	2007-08	76	214	5.35
6.	2008-09	107	276	6.90
7.	2009-10	106	274	6.85
8.	2010-11	131	321	8.025
9.	2011-12	139	338	8.450
10.	2012-13	134 (Permits not issued to 05 firms due to non-submission of fee)	328	7.750

98. Though various initiatives taken by the government has yielded positive results but more sustained efforts are needed to realize the true potential of adventure tourism in the state and to make Uttarakhand as one of the most sought after adventure tourism destination for both domestic as well as international tourists. The proposed adventure center will give more vigor to the state tourism department in the international arena.

99. With the above mentioned objectives of relating adventure to employment and by proper training of local youth the project intends to realize the true potential of adventure tourism in the state.

IV. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

100. Urban development projects like tourism infrastructure development projects may cause impacts upon environment in many ways. The impacts anticipated from the proposed project may be on Physical, Biological, Socio-economic and Cultural Environment. The IEE helps to identify those negative impacts that are anticipated in the project under consideration and to suggest the mitigation measures to minimize the negative impacts. The assessment for the subproject namely “ Development of Adventure Tourism Center In Uttarakhand” has been carried out for potential impacts during the following stages of the project planning and implementation:

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

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

Location Impact:

102. The subproject sites are located at 8 districts (Chamoli, Pauri, Rudraprayag, Almora, Bageshwar, Pithoragarh, Uttarakashi, and Champawat) and there are no significant ecological resources in the subproject region (protected areas or rare or important species or habitats). All project related activities will be planned as per Rules & Regulations of UTDB and District Sports authority. No significant impacts can arise due to project location as the sites involving the project components do not pass through/ near any environmentally sensitive areas.

103. One anticipated locational impact is the lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created and the architectural character of the surroundings. In order to overcome this, design should include provisions for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability.

A. Land Acquisition and Resettlement

104. The proposed subproject locations and construction activity are within the Government lands. All camping sites will be located within the Govt Land. The implementation of the sub project will not involve dislocation or involuntary resettlement of people. Positive impact is anticipated in terms of employment opportunity as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during

construction phase.

105. The subproject will not result in any permanent land acquisition and resettlement impacts because it will be undertaken within the government owned land. The land belongs to Tourism department and users' right is with the department.

B. Environmental Impacts

106. The Environmental Management Plan for this sub project provides the potential environmental impacts and the mitigation measures including the responsibilities for implementing the measures. An overview of the proposed impacts is summarized as follows.

Design Impacts & Pre Construction Impacts

107. Impacts arising from the inappropriate designs of proposed facilities would in general include the inadequate drainage provisions, contemporary designs for the traditional and cultural environment etc. These have been addressed through careful selection of materials, so as to not adversely impact the ecological and aesthetic appeal of the surroundings. The results of interventions are unobtrusive and will be integral part of the overall ambience so as to avoid impacts on the aesthetics of the site. Further, very less civil work is proposed for the construction of Interpretation center on Govt. own land.

Construction Impacts

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

109. Ground water will not be used for construction purposes and the problem of ground water contamination is not anticipated during the construction phase as there will be proper disposal of the sludge.

110. Generation of dust is anticipated during transportation, excavation and construction activities. Certain volumes of dust and gaseous emissions will also be generated during the construction period from construction machineries like mixers, vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include Respirable and Suspended Particulate Matter (SPM) and gaseous emissions (NO_x, SO₂, CO, etc). However, transportation of construction materials will be confined to adequate trips per day depending upon extent of construction activity. Therefore, impact at this stage will be temporary and restricted to the close vicinity of the construction activities only.

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

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

conducted. The Contractor will submit annual emission monitoring results required by the SPCB as part of the annual consent to operate (CTO) renewal.

113. During construction phase, some noise will be generated from the various construction activities like equipment and vehicles engaged in transportation of construction materials. However, transportation of construction materials will be confined to the requirement per day, depending upon extent of construction activity. Further the noise associated with the equipment shall be reduced with the application of the lubricant. The increase in noise levels is expected to be between 5 -10 %. However, these noise levels will be confined to the work sites only and will be temporary in nature and also short duration as well.

114. The construction activity will be carried out away from environmentally sensitive area. Therefore, no adverse impact on fauna and flora is anticipated due to the proposed activity. Debris/solid waste will be generated due to dismantling of pavement, excavated earth material and waste generated from construction camps if any. Debris/ excavated earth material will be reused subject to the approval of the Engineer during the construction. Bituminous material will be disposed off as per established law and at the approved site. Waste generated from the construction camps will be disposed off as per law to the satisfaction of the Engineer.

115. The clean-up and restoration operations are to be implemented by the contractor prior to demobilization. The contractor will clear all temporary structures and dispose of all garbage. All construction zones used/affected by the sub-project will be left clean and tidy, at the contractor's expense as per the satisfaction the Engineer

116. The Contractor is likely to engage local labour for various construction activities. However, in case of engaging migratory labour for the purpose, the contractor has to establish properly designed labour camp with all basic amenities such as potable drinking water supply (quality as per Indian standard, BIS: 10500, 2012) and sanitation facilities (gender specific toilets – ratio of one toilet for 20 heads). EMP envisages mitigation measures for likely adverse impacts associated with the labour camps.

117. The implementation of the sub project will not involve dislocation or involuntary resettlement of people. Positive impact is anticipated in terms of employment opportunity as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction phase.

118. Most of the predicted impacts are generic, associated with the construction process. 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.

119. The project is relatively small in scale and involves straightforward construction and low-maintenance operation, so it is unlikely that there will be major impacts. 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 and operation phase. Added residential developments, commercial and business facilities and increased densities are expected to develop and enhance the subproject area,

120. The major benefits from implementation of the project will be:

- To bring adventure centers on the Tourist map of Uttarakhand and India.
- To develop greater awareness and understanding of the significant contributions that adventure tourism can provide to the environment and the economy.
- To promote equity in development.
- To improve the quality of life of the host community.
- To provide a high quality of different experience to the visitor.
- To maintain the quality of the environment on which the foregoing objectives depend.
- Build environmental and cultural awareness and respect.
- To provide positive experiences for both visitors and hosts.
- Provide financial benefits and empowerment for local people.

121. As the subproject location is away from any environmentally sensitive area, no adverse impact on fauna and flora is anticipated due to the operation of the sub project.

Operation & Maintenance (O & M) Impacts

122. The adventure centers developed under the sub project will be operated and maintained by Bidder/Renter under an agreement with UTDB for which formal tenders will be invited for all centers as per the Terms & Conditions set forth by the Board. Since it is Major initiative by Uttaranchal Govt. constant Monitoring by UTDB through District Adventure Tourism Officer shall be done for smooth functioning and imparting Training.

123. The implementation of the sub project will not involve dislocation or involuntary resettlement of people. The objective of the IDIPT is to have enhanced and sustainable economic growth of Uttarakhand with emphasis on promoting commerce and improvement of livelihood of the poor by exploring potential of Adventure Tourism sector. The Investment Program envisages improvement of Tourist infrastructure, urban environment and better living conditions in the state, as well as for the increasing number of tourists visiting the State. Positive impact is anticipated in terms of employment opportunity as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction phase. During operations of the improved infrastructures and services, added residential developments, commercial and business facilities are expected to develop and enhance the subproject area. This can be considered a long-term cumulative benefit of the subproject. The subproject site is located sufficiently away from Protected Areas and the components proposed will not impact any environmentally sensitive or protected areas. Interventions are proposed within available government lands and existing right-of-way. Following **Table 9** shows the environmental impacts and mitigation measures to be followed in this project

Table 9: Environmental Impacts and Mitigation measures

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
1.	Location Impacts				
1.1	Lack of sufficient	Permanent	Major	Design will include provisions	PIU / DSC

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
	planning to assure long term sustainability of the improvements and ensure protection of the assets created and the architectural/archaeological character of the surroundings			for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability. Designs will be worked out and implemented in accordance with the provisions and will strictly conform to Uttarakhand architecture.	
1.2	Location impacts pertain to siting of facilities and improvements within the project sites	Permanent	Moderate	Location of the subprojects within protected areas will be finalized in conformity to the provisions in the management plan. Siting of the components and planning of construction activities will be worked out to avoid sensitive ecological and cultural resource areas. Within radii of 100m and 300m from the "protected property" are designated as "protected area" and "controlled area" respectively. No development activity (including building, mining, excavating, blasting) is permitted in the "protected area" and development activities likely to damage the protected property are not permitted in the "controlled area" without obtaining necessary permit from the concerned department.	PIU/DSC
2.	Design and pre-construction Impacts				
2.1	Layout of components to avoid impacts on the aesthetics of the site	Permanent	Major	The project components siting will avoid impacts on the aesthetics of the site and to ensure minimal impacts.	PIU / DSC
2.2	Slope stability related issues	Permanent	Moderate	Along areas vulnerable to slope failures and along steep stretches, the designs of subproject components will include slope protection measures for uncovered slopes as pitching, vegetation, benching, paving etc.	PIU/DSC
2.3	Increased storm water runoff from alterations of the site's natural	Permanent	Moderate	Design of proposed components will enable efficient drainage of the sites and maintain natural drainage	PIU / DSC

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
	drainage patterns due to landscaping, excavation works in the periphery of construction of parking lots, and addition of paved surfaces.			patterns. The siting of the project components, involving physical construction shall be done to ensure no disruption of natural drainage patterns or flows into the water body/ stream	
2.4	In areas of shallow water table, ensure that the septic tanks developed, do not impact the ground water quality	Permanent	Moderate	At locations with shallow water table, the design of the septic tanks shall be done to ensure that there is a difference of at least 1.5m between the bottom bed of the septic tank and the maximum ground water level, to avoid any contamination of ground water	PIU / DSC
2.5	Selection of materials and construction technologies, if not carefully chosen, will adversely impact the aesthetic appeal of the destinations	Permanent	Moderate	Selection of materials and construction technologies proposed will strictly conform to the Uttarakhand architecture. Any new landscaping elements will only utilize native species.	PIU / DSC
2.6	Socio cultural resources- Ground disturbance can uncover and damage archaeological and historical remains	Permanent	Moderate	Consult Archaeological Survey of India (ASI) or concerned dept. of Uttarakhand Govt. 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; 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.	PIU / DSC
2.7	Integration of energy efficiency and energy conservation programs in design of sub-project components	Permanent	Low	The detailed designs for the sub-project components shall ensure that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization etc. are integrated, and designs accordingly worked out.	PIU/DSC
3.	Pre-construction activities by contractor				
3.1	Construction Camps – Location, Selection, Design	Temporary	Moderate	Siting of the construction camps shall be as per the guidelines below and details	Contractor / DSC

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
	and Layout			<p>of layout to be approved by DSC.</p> <p>Construction camps shall not be proposed within 500m from the nearest settlements to avoid conflicts and stress over the infrastructure facilities with the local community.</p> <p>Location for stockyards for construction materials shall be identified at least 300m away from watercourses.</p> <p>Construction camps will be located away from settlements and drainage from and through the camps will not endanger any domestic or public water supply. Construction camps including sanitation facilities must be adequately drained.</p> <p>The Sewage Treatment Process and solid waste treatment for the camp shall be designed, built and operated. Requirement as follows,</p> <ul style="list-style-type: none"> ▪ Availability of quality water as per Indian drinking water standard (BIS 10500, 2012) ▪ Gender specific toilets (with the ratio of 1 toilet for 20 heads) ▪ Solid waste collection facilities- collection bins for biodegradable and non biodegradable wastes ▪ Septic tanks in toilet 	
3.2	Defining of construction/work areas on ground, for activities within 100m of the boundaries of the protected areas	Temporary	Moderate	<p>Construction work area will be demarcated on ground. Free-standing fencing will be erected in advance of construction works to protect the working areas. No storage of materials will be allowed within 100 m of the boundaries of such protected/sensitive areas. Planning of works to ensure that no entry shall be allowed by employees/construction/site workers to the protected areas during the construction period</p>	Contractor / DSC

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
3.3	Circulation plan during construction in the tourist destinations	Temporary	Moderate	Prior to commencement of site activities and mobilization on ground, the Contractor will prepare and get approved by the Engineer, circulation plan during construction for safe passage of tourists/pilgrims during construction stage, including development of alternative access routes, traffic regulations, signage, etc., during construction. 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.	Contractor/PIU/ DSC
3.4	Site clearance activities, including delineation of construction areas	Temporary	Moderate	Vegetation (mainly shrub) shall be removed from construction site before commencement of construction. All works shall be carried out such that the damage or disruption of flora other than those identified for cutting is the minimum. Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Expert of DSC. All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures like closure of camp, removal of construction/ demolition waste, complete cleaning of the area, re-plantation in case of tree felling etc.	Contractor / DSC
3.5	Drinking water availability	Temporary	Moderate	Sufficient supply of potable water to be provided and maintained. If the drinking water is obtained from an intermittent public water supply then storage tanks will be provided.	Contractor / DSC
3.6	Waste disposal	Permanent	Moderate	The pre-identified disposal location shall be part of Comprehensive Waste Disposal Plan Solid Waste Management Plan to be prepared by the Contractor in	Contractor / DSC

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
				consultation and with approval of Environmental Specialist of DSC. The Environmental Specialist of DSC shall approve these disposal sites after conducting a joint inspection on the site with the Contractor. Contractor shall ensure that waste shall not be disposed off near the water course or agricultural land, Orchards and Natural Habitats like Grasslands.	
3.7	Ensure waste management is addressed in design	Temporary	Moderate	DSC to work with local body to design improved waste management plan for site.	PIU/DSC
4.	Construction Impacts				
4.1	Improper stockpiling of construction materials cause impacts starting from obstruction of drainage, disturbance/ safety hazard to tourists, etc.	Temporary	Moderate	Due consideration will be given for material storage and construction sites such that it doesn't cause any hindrance to tourists movement within the site. Stockpiles will be covered to protect from dust and erosion.	Contractor / DSC
4.2	Stockpiling of construction materials	Permanent	Moderate	Stockpiling of construction materials does not impact obstruct the drainage and Stockpiles will be covered to protect from dust and erosion.	Contractor / DSC
4.3	Arrangement for Construction Water	Permanent	Moderate	To avoid disruption/ disturbance to other water users, the Contractor shall extract water from fixed locations and consult DSC before finalizing the locations.	Contractor / DSC
4.4	Soil Erosion	Temporary	Moderate	Slope protection measures will be undertaken along slopes of the road alignment wherever required. The work will consist of measures as per design, or as directed by the Engineer to control soil erosion, sedimentation and water pollution.	Contractor / DSC
4.5	Blasting, if required	Permanent	Moderate	Except as may be provided in the contract or ordered or authorized by the Engineer, the Contractor will not use explosives. Where the use of explosives is so provided or ordered or authorized, the Contractor will comply with the requirements of the	Contractor / DSC/PIU

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
				<p>following Sub-Clauses of MoRTH 302 besides the law of the land as applicable.</p> <p>The Contractor will at all times take every possible precaution and will comply with appropriate laws and regulations relating to the import, handling, transportation, storage and use of explosives and will, at all times when engaged in blasting operations, post sufficient warning flagmen, to the full satisfaction of the Engineer.</p> <p>The Contractor will at all times make full liaison with and inform well in advance and obtain such permission as is required from all Government Authorities, public bodies and private parties whomsoever concerned or affected or likely to be concerned or affected by blasting operations.</p> <p>Blasting will be carried out during fixed hours (preferably during mid-day), as permitted by the Engineer.</p>	
4.6	Soil and Water Pollution due to fuel and lubricants, construction waste	Temporary	Moderate	The fuel storage and vehicle cleaning area will be stationed such that water discharge does not drain into the surface water bodies. Soil and water pollution parameters will be monitored as per monitoring plan.	Contractor / DSC
4.7	Water Pollution from Construction Wastes	Temporary	Moderate	The Contractor shall take all precautionary measures to prevent entering of wastewater into streams, water bodies or the irrigation system during construction. Contractor shall not wash his vehicles in river/stream water resource area for that purpose.	Contractor / DSC
4.8	Generation of Dust	Temporary	Moderate	The contractor will take every precaution to reduce the levels of dust at construction site. All earthworks to be	Contractor / DSC

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
				protected/ covered in a manner to minimize dust generation. Sprinkling of water particularly during dry season.	
4.9	Emission from Construction Vehicles, Equipment and Machinery	Temporary	Moderate	The discharge standards promulgated under the Environmental Protection Act will be strictly adhered to. All vehicles, equipment and machinery used for construction will conform to the relevant Standard. All vehicles, equipments and machinery used for construction will be regularly maintained to ensure that pollution emission levels comply with the relevant requirements.	Contractor / DSC
4.10	Noise from construction activities and equipment	Temporary	Moderate	The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEF/CPCB noise standards and all vehicles and equipment used in construction shall be fitted with exhaust silencers. At the construction sites noisy construction work such as crushing, operation of DG sets, use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am. Noise limits for construction equipment used in this project will not exceed 75 dB (A).	Contractor / DSC
4.11	Material Handling at Site	Temporary	Minor	Workers employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles. The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The Engineer will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the	Contractor / DSC

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
4.12	Disposal of Construction Waste / Debris / Cut Material	Temporary	Moderate	Contractor. The Contractor shall confirm that Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed around the project site indiscriminately.	Contractor / DSC
4.13	Safety Measures During Construction	Temporary	Moderate	Personal Protective Equipment for workers on the project and adequate safety measures for workers during handling of materials at site will be taken up. The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from fire, etc. First aid treatment will be made available for all injuries likely to be sustained during the course of work.	Contractor / DSC
4.14	Clearing of Construction Camps & Restoration	Temporary	Major	Contractor to prepare site restoration plans for approval by the Engineer. The plan is to be implemented by the contractor prior to demobilization. On completion of the works, all temporary structures will be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Engineer	Contractor / DSC
5.	O&M Impacts				
5.1	Environmental conditions	Temporary	Moderate	The tourism department will undertake seasonal monitoring of water and noise quality through an approved monitoring agency. The parameters to be monitored, frequency and duration of monitoring as well as the locations to be monitored will be as per the Monitoring Plan prepared.	Department of Tourism
5.2	Uncontrolled tourism development can cause congestion, increased pollution,	Permanent	Significant	While the environmental monitoring plan actions during the operation stage will result in monitoring of the environmental impacts after	Department of Tourism

SI No	Environmental Issues	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
	deterioration of destinations. Over commercialization of cultural traditions may degrade the natural and cultural identity of the site			project implementation, the Master Plan will include apart from provision of development controls and regulations in the zone, measures for tourism planning for the key destinations. These plans will be implemented to avoid uncontrolled tourism development at these locations.	
5.3	Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection	Permanent	Moderate	The Tourism department/communities will carry out maintenance of the toilets, and carry out the regular collection of wastes, and will also ensure that: Sanitation improvements proposed do not result in pollution of groundwater. Sanitary facilities do not interfere with other utilities and block access to buildings, cause nuisance to neighbouring areas. The transfer of waste will also ensure no spillage and all wastes will be transported to a designated solid waste treatment site.	Department of Tourism

V. INSTITUTIONAL REQUIREMENTS AND ENVIRONMENT MANAGEMENT AND MONITORING PLAN

A. Institutional Arrangements

124. 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) and Project Implementation Unit (PIU)

125. 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. There is no safeguard specialist position in PIU, in local level DSC's Safeguard Specialist will supervise day to day EMP implementation. A Safeguards Specialist (SS) is within the PMU, and SS is responsible for overall management implementation of the resettlement and environmental safeguard provisions. A Forest Conservation Specialist in PMU and DSC to look the matters of forests in all the proposed adventure sites.

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

126. 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 provided overall direction for management of environmental issues, and provides 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 is responsible for preparation of the Environmental Assessment documents in line with the Environment Assessment Review Framework (EARF) and supervises the implementation of the EMP provisions in the various sub-projects. The PMU, oversee the implementation of the environmental provisions related to subproject implementation, its responsibilities include preparation and updating of IEEs consistent with the ADB's Safeguard Policy Statement 2009 and the environmental compliance requirements of the Government of Uttarakhand and the Government of India.

127. The DSC Safeguards Specialist support environmental management functions including updating sub-project IEEs in respect to environmental management plans, assisting in preparing IEEs, and assist in monitoring impacts and mitigation measures associated with sub-projects. He/she 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 Safeguards Specialist of DSC.

128. 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.

Committee:

129. A sub project Monitoring Committee has been constituted to monitor, supervise and facilitate the execution of works under Adventures centers sub project under the Chairmanship of respective district Collector, Distt. Adventures sports Authority& including the representatives of Forest department& concerned KMVN/GMVN to ensure the compliance of laws pertaining to Forest

B. Environment Management

130. 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. This shall include methods and schedule of monitoring,
- Compliance with all measures required for construction activities in sensitive areas, in line with the regulatory requirements of these protected areas, and the guidelines set forth in the management plans for these areas, and
- 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.

131. The detailed provisions for specific environmental issues shall be as outlined in the EMP table on impacts and mitigation measures. Key clauses are outlined in the following sections.

Debris Disposal

Dismantling of existing structures:

132. A total amount of 52.5 cum stone wall and 10 cum RCC material is expected to be generated from dismantling of Old building at Pauri, 80% of stone wall &RCC from Shelter shall be utilized as raw material for land filling.

Precautions for protection of Environmental Measures

133. The Contractor shall ensure that construction activities do not result in any

contamination of land or water by polluting substances. Unless otherwise provided in the specifications, the Contractor shall ensure that no trees or shrubs or other vegetation are felled or harmed except those required to be cleared for execution of the works. The Contractor shall protect trees and vegetation from damage to the satisfaction of the Engineer.

134. In the conduct of cleaning activities and operation of equipment, the Contractor will utilize such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize air/noise pollution.

Noise and Air Pollution

135. Contractor will take all precautions outlined in the EMP to avoid the air and noise pollution. Emissions need to be 'monitored periodically as specified in the monitoring plan and not exceed Indian legal requirements as well as ADB's requirement for conforming with the standards as indicated in the World Bank Group's Environment, Health and Safety Guidelines of 2007'

136. The Contractor shall monitor all the environmental parameters periodically as specified in the monitoring plan and report to the Engineer.

137. The Contractor shall reduce the dust emission due to construction activities by regular water sprinkling in the affected areas.

138. All the construction equipments and vehicles shall have Pollution Under Control (PUC) Certificate to ensure that no air pollution may be caused due to operation of their equipments and vehicles.

139. All the construction equipments and vehicles should remain all time in good conditions up to satisfaction of site engineers.

140. The Contractor shall indemnify and keep indemnified the Employer from and against any liability for damages on account of noise or other disturbance created while carrying out the work, and from and against all claims, demands, proceedings, damages, costs, charges, and expenses, whatsoever, in regard or in relation to such liability.

Occupational Health and Safety during Construction

141. The Contractor shall, in accordance with the safety and health provisions specified in the EMP, provide workers with a safe and healthy working environment, in the work areas, through application of preventive and protective measures consistent with international good practice, as reflected in internationally recognized standards such as the ADB's and WB's Environment, Health and Safety Guidelines. The borrower/client will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring during the course of work by-

- Providing preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances;
- Providing appropriate equipment to minimize risks and requiring and enforcing its use;
- Training workers and providing them with appropriate incentives to use and comply

with health and safety procedures and protective equipment;

- Documenting and reporting occupational accidents, diseases, and incidents; and
- Having emergency prevention, preparedness, and response arrangements in place.
- Provide first aid facilities in all the work sites and workers camp and having qualified first aider to give first aid at the time of any accident.
- Contractor should provide safe drinking water, clean eating and resting areas and sufficient amenities at work site and workers camps.
- Contractor should have prepared emergency response plan with full details and methods of emergency response during any accident and shall have and display the emergency contract numbers at site.
- Contractor should follow all the applicable rules and regulations for workers safety.

Post Construction Clearance

142. On completion of work, wherever applicable, the Contractor shall clear away and remove from the sites all construction plant, surplus materials, rubbish, scaffoldings, and temporary works of every kind and leave the whole of the sites and works in a clean condition to the satisfaction of the Engineer.

143. Construction camp sites and any other sites temporarily occupied during construction shall be cleared as specified in the contract and handed over to the Owner. It will be ensured by the contractor that the site handed over is in line with the conditions of temporary acquisition signed by both parties.

144. **Table 10** presents a generic EMP to guide the contractor in mitigating environmental impacts.

Table 10: Generic EMP to guide the contractor in mitigating environmental impacts

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
1	Location Impacts				
1.1	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created and the architectural/archaeo logical character of the surroundings	Design will include provisions for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability. Designs will be worked out and implemented in accordance with the provisions and will strictly conform to Uttarakhand architecture.	Subproject site	PIU / DSC	PMU
2	Design Impacts and Pre-construction Impacts				
2.1	Layout of components to avoid impacts on the aesthetics of the site	The project components siting will avoid impacts on the aesthetics of the site and to ensure minimal impacts.	Subproject site	PIU / DSC	PMU
2.2	Slope stability	Along areas vulnerable to	Subproject	PIU / DSC	PMU

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
	related issues	slope failures and along steep stretches, the designs of subproject components will include slope protection measures for uncovered slopes as pitching, vegetation, benching, paving etc.	site		
2.3	Increased storm water runoff from alterations of the site's natural drainage patterns due to landscaping, excavation works, construction of parking lots, and addition of paved surfaces	Design of proposed components will enable efficient drainage of the sites and maintain natural drainage patterns.	Subproject site	PIU/DSC	PMU
2.4	Selection of materials and construction technologies, if not carefully chosen, will adversely impact the aesthetic appeal of the destinations	Selection of materials and construction technologies proposed will strictly conform to the Uttarakhand architecture. Any new landscaping elements will only utilize native species.	Subproject site	PIU / DSC	PMU
2.5	Integration of energy efficiency and energy conservation programs in design of sub-project components	The detailed designs for the sub-project components shall ensure that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, etc.	Subproject site	PIU/DSC	PMU
3	Construction Impacts				
3.1	Construction Camps - Location, Selection, Design and Layout	Siting of the construction camps shall be as per the guidelines below and details of layout to be approved by DSC. Construction camps shall not be proposed within 500m from the nearest settlements to avoid conflicts and stress over the infrastructure facilities with the local community. Location for stockyards for construction materials shall be identified at least 300m away from watercourses. Construction camps will be located away from settlements and drainage from and through the	Construction camps	Contractor	DSC/ PIU

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
		<p>camps will not endanger any domestic or public water supply. Construction camps including sanitation facilities must be adequately drained.</p> <p>The Sewage Treatment Process and solid waste treatment for the camp shall be designed, built and operated.</p> <p>Requirement as follows,</p> <ul style="list-style-type: none"> ▪ Availability of quality water as per Indian drinking water standard (BIS 10500, 2012) ▪ Gender specific toilets (with the ratio of 1 toilet for 20 heads) ▪ Solid waste collection facilities- collection bins for biodegradable and non biodegradable wastes ▪ Septic tanks in toilet 			
3.2	Defining of construction/work areas on ground, for activities within 100m of the boundaries of the protected areas	<p>Construction work area will be demarcated on ground. Free-standing fencing will be erected in advance of construction works to protect the working areas. No storage of materials will be allowed within 100 m of the boundaries of such protected/sensitive areas. Planning of works to ensure that no entry shall be allowed by employees/construction/site workers to the protected areas during the construction period</p>	Subproject site	Contractor	DSC / PIU/ ASI
3.3	Circulation plan during construction in the tourist destinations	<p>Prior to commencement of site activities and mobilization on ground, the Contractor will prepare and get approved by the Engineer, circulation plan during construction for safe passage of tourists/pilgrims during construction stage, including development of alternative access routes, traffic regulations,</p>	Subproject site	Contractor	DSC / PIU

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
		signage, etc., during construction. 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.			
3.4	Site clearance activities, including delineation of construction areas	Vegetation shall be removed from construction site before commencement of construction. All works shall be carried out such that the damage or disruption of flora other than those identified for cutting is the minimum. Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Expert of DSC All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures.	Subproject site	Contractor	DSC / PIU
3.5	Drinking water availability	Sufficient supply of cold potable water to be provided and maintained. If the drinking water is obtained from an intermittent public water supply then storage tanks will be provided.	Subproject site	Contractor	DSC/ PIU
3.6	Waste disposal	The pre-identified disposal location shall be part of Comprehensive Waste Disposal Plan Solid Waste Management Plan to be prepared by the Contractor in consultation and with approval of Environmental Specialist of DSC. The Environmental Specialist of DSC shall approve these disposal sites after conducting a joint inspection on the site with the Contractor. Contractor shall ensure	Waste Disposal sites	Contractor	DSC / PIU

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
		that waste shall not be disposed off near the water course or agricultural land, Orchards and Natural Habitats like Grasslands.			
3.7	Stockpiling of construction materials	Due consideration will be given for material storage and construction sites such that it doesn't cause any hindrance to tourists movement within the site. Stockpiling of construction materials does not impact obstruct the drainage and Stockpiles will be covered to protect from dust and erosion.	Subproject site	Contractor	DSC/ PIU
3.8	Arrangement for Construction Water	The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department. To avoid disruption/ disturbance to other water users, the Contractor shall extract water from fixed locations and consult DSC before finalizing the locations.	Subproject site	Contractor	DSC / PIU
3.9	Soil/land Erosion	Slope protection measures will be undertaken as per design to control soil erosion.	Subproject site	Contractor	DSC/ PIU
3.10	Water Pollution from Construction Wastes	The Contractor shall take all precautionary measures to prevent entering of wastewater into streams, water bodies or the irrigation system during construction. Contractor shall not wash his vehicles in river/stream water and shall not enter riverbed nearby the water resource area for that purpose.	Subproject site	Contractor	DSC/ PIU
3.11	Water Pollution from Fuel and Lubricants	The Contractor shall ensure that all construction vehicle parking locations, fuel/ lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites shall be located at least 300 m away from rivers/streams	Subproject site	Contractor	DSC/ PIU

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
		Contractor shall ensure that all vehicle/machinery and equipment operation, maintenance and refuelling shall be carried out in such a manner that spillage of fuels and lubricants does not contaminate the ground.			
3.12	Soil Pollution due to fuel and lubricants, construction waste	The fuel storage and vehicle cleaning area will be stationed such that spillage of fuels and lubricants does not contaminate the ground. Soil and pollution parameters will be monitored as per monitoring plan.	Subproject site	Contractor	DSC / PIU
3.13	Generation of dust	The contractor will take every precaution to reduce the levels of dust at construction site. All earthworks to be protected/ covered in a manner to minimize dust generation.	Subproject site	Contractor	DSC /PIU
3.14	Emission from Construction Vehicles, Equipment and Machinery	The discharge standards promulgated under the Environmental Protection Act will be strictly adhered to. All vehicles, equipment and machinery used for construction will conform to the relevant Standard. All vehicles, equipments and machinery used for construction will be regularly maintained to ensure that pollution emission levels comply with the relevant requirements.	Subproject site	Contractor	DSC/ PIU
3.15	Noise Pollution	The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEF/CPCB noise standards and all Vehicles and equipment used in construction shall be fitted with exhaust silencers. At the construction sites noisy construction work such as crushing, operation of DG sets, use of high noise generation	Subproject site	Contractor	DSC/ PIU

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
		equipment shall be stopped during the night time between 10.00 pm to 6.00 am. Noise limits for construction equipment used in this project will not exceed 75 dB (A).			
3.16	Material Handling at Site	Workers employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles. The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The Engineer will be given at least 6 working day's notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor.	Subproject site	Contractor	DSC/ PIU
3.17	Disposal of Construction Waste / Debris / Cut Material	The Contractor shall confirm that safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed around the project site indiscriminately.	Disposal site	Contractor	DSC/ PIU
3.18	Safety Measures During Construction	Personal Protective Equipment for workers on the project and adequate safety measures for workers during handling of materials at site will be taken up. The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from fire, etc. First aid treatment will be made available for all injuries likely to be sustained during the course of work.	Subproject site	Contractor	DSC/ PIU
3.19	Clearing of Construction of Camps and	Contractor to prepare site restoration plans for approval by the Engineer.	Subproject site	Contractor	DSC/ PIU

Sl. No.	Environmental Issues	Mitigation Measures	Location	Implementation	Supervision
	Restoration	The plan is to be implemented by the contractor prior to demobilization. On completion of the works, all temporary structures will be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Engineer			
4	Operation and Maintenance impacts				
4.1	Environmental Conditions	The periodic monitoring of the ambient air quality, noise level, water quality, in the subproject area as suggested in pollution monitoring plan through an approved monitoring agency.	Subproject site	Pollution Monitoring Agency	Tourism department / PMU
4.2	Uncontrolled tourism flow	Environmental Monitoring Plan the Tourism Master Plan will be implemented strictly to avoid uncontrolled tourism flow.	Subproject site	Tourism department	PIU/ PMU
4.3	Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection	Tourism department will carry out maintenance of the toilets, and carry out the regular collection and disposal of wastes to a designated waste treatment site.	Subproject site	Tourism department	PIU/ PMU

C. Environmental Monitoring Plan

145. Environmental monitoring will be done during construction in three levels; namely monitoring development of project performance indicators done by the DSC Environmental Specialist, monitoring implementation of mitigation measures done by the Contractor; and overall regulatory monitoring of the environmental issues done by the PMU Environmental Specialist. To ensure the effective implementation of mitigation measures and Environmental Management Plan during construction and operation phase of the sub-project, it is essential that an effective Environmental Monitoring Plan be followed as given in **Table 11** below. The proposed monitoring of all relevant environmental parameters, frequency of monitoring, applicable standards and responsible agencies are presented.

146. Monitoring is an essential component for sustainability of any developmental project. It is an integral part of any environmental assessment process. The monitoring program consists of performance indicators, reporting formats and necessary budgetary provision.

The contractors monitoring methods and parameters should be in accordance with the norms prescribed by the CPCB standards for air and noise.

147. The monitoring will be carried out by the contractor through the approved agency and will be supervised by the Supervision Consultant. The monitoring plan is outlined in **Table 11** below.

Table 11: Monitoring Plan for Adventure Centres

Indicators	Parameters to be Monitored	Frequency	Responsibility
Construction Stage			
Debris disposal	Safe disposal of construction wastes	Random checks	Contractor
Dust suppression	No. of tankers for water sprinkling, Timing of sprinkling, Location of sprinkling	Random checks	Contractor
Ambient air quality	RPM, SPM, SO ₂ , NO _x , CO	Six monthly (except monsoon) for the entire construction period	Contractor, to be monitored through approved Monitoring Agency
Ambient noise	Equivalent Day & Night Time Noise Levels	Six monthly during construction stage	Contractor, to be monitored through approved Monitoring Agency
Heritage/ Archaeological Protection	Visual Inspection of works at adventures centers	Continuous	DSC/KMVN/GMVN/PIU
Supply of PPE	Provision of PPE on site, adequacy of equipment	Continuous	Contractor
Establishing Medical facilities	Access to health facilities for the construction workers	Continuous	Contractor
Accident record	No. of fatal accidents, No. of injuries, No. of disabilities	Continuous	Contractor
Post construction clearance of site	Whether temporary locations for workers camp, site office, batching plant and other construction locations are restored to pre-project conditions	Post construction	Contractor
Operation & Maintenance Stage			
Water quality of River	All parameters as per CPCB standards	Two yearly during operation stage	PMU, Department of Tourism
Ambient noise	Equivalent Day & Night Time Noise Levels	Yearly	PMU, Department of Tourism
Socio economic monitoring	Income levels, livelihood options especially due to tourism	Two yearly during operation stage	PMU, Department of Tourism & Sub project monitoring committee

D. Capacity Building

Institutional Strengthening

148. The Department of Tourism, Government of Uttarakhand is the Executing Agency (EA). Project Management Unit (PMU) established in Dehradun for the overall project management. This sub-project will be implemented by the PIU, Dehradun. A Safeguards

Specialist in PMU, and will be responsible for implementation of the resettlement and environmental safeguard provisions. Project Management Consultants (PMC) and Design and Supervision Consultants (DSC) are recruited to provide assistance to the PMU/PIUs in project implementation. Within the PMC team a Safeguards Specialist will provide overall direction for management of environmental and social issues, and will provide technical support to the PMU including implementation of the environmental and resettlement 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 to assist in preparation of IEE and EMP report and supervise the implementation of the EMP provisions in the sub-projects. The PMU will oversee the implementation of the environmental provisions related to subproject implementation, consistent with the ADBs Environmental Assessment Guidelines and the environmental compliance requirements of the Government of Uttarakhand and the Government of India.

Training and Capacity Building

149. The Environmental Specialist of the PMC and DSC will provide the basic training required for environmental awareness followed by specific aspects of infrastructure improvement projects along with environmental implications for projects located within / in the vicinity of natural and cultural heritage sites. 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. Environmental management training will be imparted during construction of Adventures center. The proposed training program along with the frequency of sessions is presented in **Table 12** below.

Table 12: Training Modules for Environmental Management

Programme	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 Government 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
Session I					

Programme	Description	Participants	Form of Training	Duration/ Location	Training Conducting Agency
Module I	Introduction to Environment: Basic Concept of environment Safeguards, Regulations and Statutory requirements as per Govt of India and ADB Guidelines on Environmental considerations in planning, design and implementing projects	PMU/PIU (including the ES) and Engineering staff of the implementing agencies	Lecture	1/4 Working Day	Safeguards Specialist of the PMC
Module II	Environmental components impacted in construction and operation stages Activities causing pollution during construction and operation stages Environmental Management Environmental Provisions Implementation Arrangements Methodology of Assessment Good engineering practices to be integrated into contract documents	PMU/PIU (including the ES) and Engineering staff of Tourism dept	Workshop	¼ Working Day	Safeguards Specialist of the PMC
Module III	Improved Co-ordination with other Departments: Statutory Permissions – Procedural Requirements Co-operation & Coordination with other Departments.	PMU/PIU (including the ES) and Engineering staff of Tourism dept	Lecture / Interactive Sessions	1 Working Day	Safeguards Specialist of the PMC

B. Construction Stage

Session II

Module IV	Role during Construction- Roles and Responsibilities of officials / contractors / consultants towards protection of environment Implementation Arrangements, safety and Monitoring mechanisms	Engineers and staff of line departments of the Government of Uttarakhand, and PMU/PIU (including the ES)	Lecture / Interactive Sessions	½ Working Day	Safeguards Specialist of the DSC
Module V	Monitoring and Reporting System	Engineers and staff of implementing agencies , and PMU/PIU (including the ES)	Lecture / Interactive Sessions	½ Working Day	Safeguards Specialist of the DSC

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

E. Environmental Budget

150. As part of good engineering practices in the project, there have been several

measures as erosion prevention, rehabilitation of borrow areas, safety, signage, provision of temporary drains, etc., 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.

151. This is a small construction project and there are no major structures to be constructed (except interpretation center building) therefore 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, water and noise).

152. The costs of water sprinkling for dust suppression and providing personal protective equipment 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 **Table13**.

153. Most of the mitigation measures require the contractors to adopt good site practice, which should be part of their normal procedures already, so there are unlikely to be major costs associated with compliance. Only those items not covered under budgets for construction are included in the IEE budget. The IEE costs include mitigation, monitoring and capacity building costs. The summary budget for the environmental management costs for the subproject is presented in **Table 13** below:

Table 13: Environmental Management & Monitoring Costs

Sl. No.	Particulars	Stages	Unit	Total No.	Rate (INR)	Cost (INR)	Source of fund
A. Environmental Monitoring							
1	Air quality monitoring	Construction	Per sample	13x1	9,000	117,000	Cost of contractor
2	Noise Levels – silence zones	Construction	Per location	13x1	1,000	13,000	
							Implementing Agencies cost
3	Ambient Noise Quality	Operation	Per Sample	13x1	1,000	13,000	
4	Water quality	Operation	Per year	13x2	8,000	208,000	
Sub -Total (A)						3,51,000.00	
B. Capacity Building (Includes cost estimates for entire sub project area not included in the package costs)							
1	Capacity Building expenses 26 sessions	Pre-Construction & Construction	Per session 20,000/-	26X1		5,20,000	PMU/DSC
Sub-Total (B)						5,20,000.00	
Total (A+B), INR						8,71,000.00	

F. Environmental Monitoring and Reporting

154. Monitoring and reporting will follow the requirements and structure of the Environmental Management Plan and Environmental Monitoring Plan and report comprehensively on the implementation of all mitigation measures stipulated, on the

project's conformity with all required clearances and permits, as well as on the implementation of all safeguards related capacity building measures. In addition, the adherence to all requirements for institutional arrangements ensuring adequate safeguards expertise, as well as for consulting, information disclosure and grievance redress will be monitored and reported.

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

VI. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A. Consultation Process

156. 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.

157. 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.

158. 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.

159. 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 DPR and IEE, consultations have been held with the officials of Uttarakhand Tourism Department, Garhwal Mandal Vikas Nigam (GMVN), Kumayun Mandal Vikas Nigam (KMVN), District adventures Sports Officer, Forest Department, Water Resource Department, Sarpanch and Panchayat members and villagers of concerned villages and tourists on issues pertaining to the selection of sub-projects and identification of key issues including addressing the current gaps in provision of basic services and improvement of

tourist infrastructure. These consultations (**Table 14** below) provided inputs in identification of the felt needs of the communities, and the relevant stakeholders. Minutes of meeting for stakeholder consultation are attached as **Appendix 5** with this report. The local level consultations were also carried out by Environmental expert of PMC & DSC and Community Mobilisers and Skill Development Trainer of DSC Dehradun.

160. Local level consultation with village community has been done for understanding positive and negative impacts of the proposed project. Summary Suggestions as given by locals are considered in the design and for framing out mitigation measures.

Table 14: Stake Holder Meeting with Villagers for Adventure Sports at Rudraprayag, Chamoli, Almora and Pithoragarh Districts

S. No.	Date	Place	Consulted officials/Persons	Issues Discussed	Outcome of discussions
1	2/6/2014	Rampur, Silli to Tilwara (River-Mandakani),	Mr. Kunwar Singh Rawat Mr. Madan Singh Negi Mr. Puran Lal Mr. Shiv Singh Rawat Mr. Manjeet Singh Mr. Amit Singh Mr. Manoj Mr. Arvind Mr. Gaurav Singh Mr. Anoop	Land belongs to Govt. No industry near by areas Water is not polluted Fresh air Forest land will be not affected Place is easily approachable, No land sliding	Following are few outcome from the meeting Villagers pro for the creation of adventures centers Tourist population will increase Youth will get livelihood opportunities More number of shops will come up in between these two places Local community will be benefited during disaster time Local community will be trained by the adventures center
2	2/6/2014	Kaleshwar to Karanprayag (River-Alaknanda)	Mr. Manoj Kumar Mr. Nari Singh Mr. Chandramohan Mr. Amar Rawat Mr. Navi Kumar Mr. Deepak Dimari Mr. Ashish Dimari Mr. Ajay Rawat Mrs. Damyanti Devi	Adventure site land belongs to Govt. No industry in this area Water is suitable for rafting No sound Pollution No soil erosion and no forest destruction Easy to approach No land sliding No mining activity	Following are few outcome from the meeting Villagers pro for the creation of adventures centers • More shops will come up • Area will be developed • Unemployment youth will be involved in this activity • Community will learn about disaster management • More foreign tourist will come

					<ul style="list-style-type: none"> GDP will increase
3	2/6/2014	Karanprayag (River-Alaknanda),	Mr.DeveshKhanduri Mr.PradeepPurohit Mr.GirishPurohit Mr.SubhashDhyani Mr.NareshPurohit Mr.Neeraj Sharma Mr.Jagdamba Sati Mr.Ashu	-Land Belongs to Govt and villagers -No industry within this area -Water is good for rafting -No noise and sound pollution -No soil erosion -No forest destruction -No land sliding -Easy to approach -No Mining activity	-More domestic and foreign tourist will flow for the adventures sports -Area will be popular for the tourist for amusement and merry making -More hotel and shops will come up -Local People will be financially benefited -People will earn more money -Local people will get employment opportunity -People will be trained through the center
4	2/6/2014	Gauchar (River-Alaknanda),	Mr.D.SBisht Mr.M.S. Lingwal Mr.AshishLingwal Mr.Rajendra Singh Negi Mr.Najakat Ali Mr.RakeshLingwal Mr.RajeshBisht	Land belongs to Govt. department No encroachment to forest land No Industry within the vicinity No air and water pollution No soil erosion No land sliding and mining activity	-Local community and shopkeeper will be benefitted -New tourist destination will come up -Place will be identified in map and as a tourist destination -Local community will be trained for disaster preparedness
5	3/6/2014	KoteshwarRudraprayag (River-Alaknanda),	Mr.Narendra Singh Rawat Mr.Madan Singh Butola Mr.Nagendra Singh Bisht Mr.Raghubir Singh Butola Mr.RajeshSinghle Mr.HamentChukiyal Mr.Ravindra Singh	-One side of the river belongs to Nagar Palika Rudraprayag and Other side of the river belongs to Tarini and Lasmesi Nagar palika -Current is high -village and forest land -No industry -No land sliding -No air and water pollution -No soil erosion -No mining activity	Adventure sports centre will work -local community will be benefitted -Livelihood of the local people will be enhanced -More foreign tourist will come -Temple will be high lighted in tourist map -Local people will be engaged in business activity -Training will help local people to cope with disaster
6	3/6/2014	Maletha (River-	Mr.SubhashBaluni	-site belongs to	More number of tourists

		Alaknanda),	Mr.Sohan Singh Mr.Kripal Singh Mr. Rakesh Singh Mr. Veer Singh Mr.Rajendra Mr.Bhaghat Ram Mr. Sohan Singh Mr. Deepak Lal Mr. Mukesh Chandra Mr. VikramRana	villagers -No forest coverage -No soil erosion -No industry -No mining activity -No land slides	will come -Unemployment youth people will be employed -More shops will come in this area -people will be interested for rafting -
7	27.6.14	Deenapani (Almora).	Ramesh Singh Mehta Madan Singh Bhoj Virendra Singh Mehta Rajendra Singh Mehta Chandan Singh Mehta Rajendra Singh Mehta Bahadur Singh Mehta Sunder Ram	-site belongs to villagers -No forest coverage -No soil erosion -No industry -No mining activity -No land slides	More number of tourists will come -Unemployment youth people will be employed -More shops will come in this area -people will be interested for rafting -
8	27.6.14	Binsar., Almora	Jagdish Bhatt Ravi Jakir Hussain Abdul Malik Puran Singh Ram Singh	Land belongs to Govt. department No encroachment to forest land No Industry within the vicinity No air and water pollution No soil erosion No land sliding and mining activity	-Local community and shopkeeper will be benefitted -New tourist destination will come up -Place will be identified in map and as a tourist destination -Local community will be trained for disaster preparedness
9	28.6.14	Kapkot(Bageshwar), Pithoragarh	Bahadur Singh Laxman Singh Dungar Singh Chandan Ram Kheem Singh Rajendra Singh	Land belongs to Govt. department No encroachment to forest land No Industry within the vicinity No air and water pollution No soil erosion No land sliding and mining activity	-Local community and shopkeeper will be benefitted -New tourist destination will come up -Place will be identified in map and as a tourist destination -Local community will be trained for disaster preparedness

B. Future Consultation and Information Disclosure

PLAN FOR CONTINUED PUBLIC PARTICIPATION:

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

location, an extensive project awareness campaigns will be carried out.

INFORMATION DISCLOSURE:

162. 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.

163. 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

164. The PIU will make the public aware of the Grievance Redress Mechanism (GRM) through public awareness campaigns. Grievances can be filed in writing using the Complaint Register and Complaint Forms or by e-mail or by phone with any member of the PIU. The E-mail IDs and contact phone number of the PIU will serve as a hotline for complaints and will be publicized through the media and placed on notice boards outside their offices and at construction sites. The safeguard documents made available to the public in an accessible version will include information on the GRM and will be widely disseminated by the safeguards officers in the PMU and PIUs with support from the NGO engaged to implement the Community Awareness Program.

165. The PIU will convene Grievance Redress Committees (GRC) within one week of the voiced grievance at the project level consisting of members of local government, NGOs, project staff, and representatives of the affected people. Decisions on the grievance are to be made within 15 days of committee forming. If the grievance cannot be solved, the PMU is notified to further advice on the situation with higher government and legal bodies.

166. The GRC will ensure rights of vulnerable and poor are included. The grievance mechanism will be scaled to the risks and adverse impacts of the Project. It will address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people at no costs and without retribution. The mechanism developed will be in a manner that it shall not impede access to the existing judicial or administrative remedies. The affected people, if any, will be appropriately informed about the mechanism.

GRIEVANCE REDRESS MECHANISM (IDIPT-Uttarakhand)

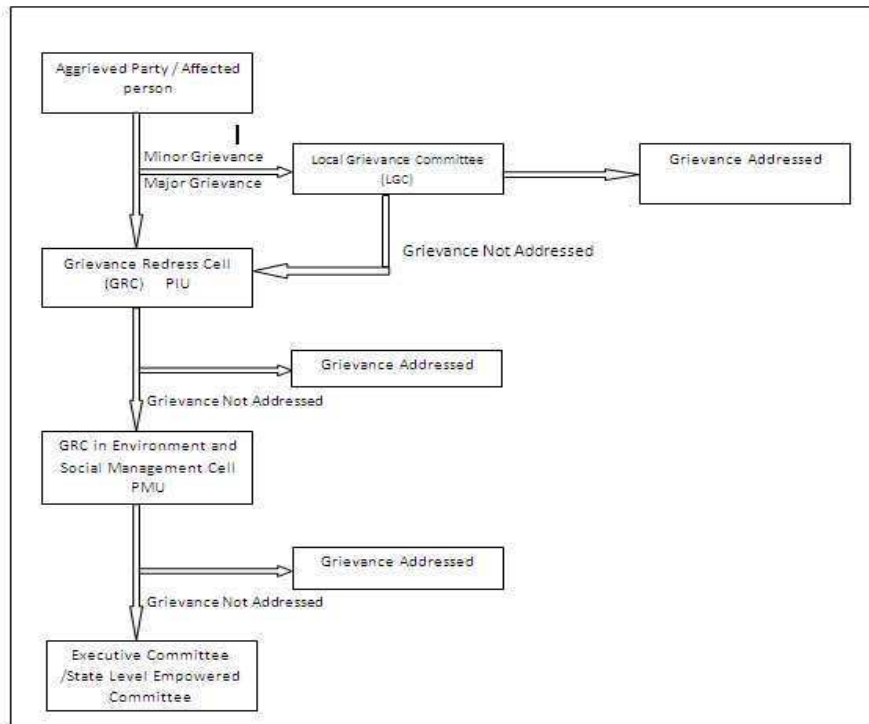


Figure :13 Grievance Redress Mechanism in IDIPT, Uttarakhand

Note:

1. LGC - NGO, SHG, 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, CDS)

VII. FINDINGS AND RECOMMENDATIONS

167. 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 enhance 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.

168. 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 upgrade the environmental conditions by minimizing the solid waste pollution and improvement in aesthetics of the site.

169. 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.

170. On the basis of the IEE It is expected that the proposed project components have only minor, 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. Environmental issues of all program components shall be regularly monitored by the PMU/PIU to ensure the environmental sustenance.

171. In conclusion, the sub-project will have overall beneficial impacts after completion in terms of tourism development. Negative impacts on water, air quality, noise levels, and soil during civil works & operation phase, 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.

VIII. CONCLUSIONS

172. The proposed Investment Program of Development of Adventures Tourism Centers will be done without any major environmental impacts and is beneficial to the society. As per the reconnaissance survey followed by discussion with stakeholders and public no major adverse impacts are anticipated. Further, there are hardly any significant environmental impacts that may arise during construction and operation period, and it will be of short duration and site specific as well.

173. 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. Safety arrangement will be maintained. 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.

174. 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).

Uttarakhand River Rafting / Kayaking Rules, 2013

In pursuance of the provisions of clause (3) of Article 348 of 'the Constitution of India', the Governor is pleased to order the publication of the following English translation of notification No: **160 /VI/2013-01(03)/2013**, dated : January 24, 2014 for general information.

Government of Uttarakhand
Culture, Tourism and Sport Section-1
No.- 160 / VI/2013-01(03)/2013
Dehradun, Dated : 24 January, 2014
NOTIFICATION

Miscellaneous

In exercise of the powers conferred under clause (a) and (b) of sub-section (2) of section 8 of the Uttarakhand Tourism Development Board Act, 2001 (Uttarakhand Act No. 12 of 2001), the Governor is pleased to make Uttarakhand River Rafting / kayaking Rules as follows for carrying out tourism related business in the State of Uttarakhand and to determine the terms for registration, grant of permission, recognition of institutions and fee for such type work —

Uttarakhand River Rafting / Kayaking Rules, 2013

CHAPTER- I

PRELIMINARY

- | | |
|---|---|
| Short title, extent and commencement | 1. (1) These rules may be called Uttarakhand River Rafting/ Kayaking Rules, 2013 .
(2) It shall extend to the whole of the State of Uttarakhand.
(3) It shall come into force on such date as the State Government may appoint in the Gazette. |
| Definitions | 2. (1) In these rules, unless there is any thing repugnant in the subject or context :-
(a) " Act " means the Uttarakhand Tourism Development Board Act, 2001 as amended from time to time;
(b) " State " means the State of Uttarakhand;
(c) " Board " means the Uttarakhand Tourism Development Board (UTDB) established under section 3 of the Uttarakhand Tourism Development Board, Act, 2001;
(d) " Chief Executive Officer " means the Chief Executive Officer (CEO) of the Uttarakhand Tourism Development Board;
(e) " Additional Chief Executive Officer " means the Additional Chief Executive Officer (ACEO) of the Uttarakhand Tourism Development Board;
(f) " Applicant " means any Person/Company/Institution/Firm, willing to seek permission for River Rafting/Kayaking, tour, expedition, training, competition, etc. for commercial or non-commercial purposes; |

- (g) **"Permit issuing Authority"** means the C.E.O. of the Uttarakhand Tourism Development Board or any other officer authorized by him for the propose;
- (h) **"Permit Holder/Operator"** means the person /company/firm holding permit to carryout river rafting/Kayaking activities under these rules;
- (i) **"River rafting Guide / Senior Guide / Safety Kayaker"** means a person holding 'Identity Card' under these rules for safe operation of river rafting /kayaking activities;
- (j) **"Operation"** means conduction of the river rafting/ Kayaking activities under these rules;
- (k) **"Participant"** means a person participating this activity;
- (l) **"Raft/Kayak"** means such floating structure which may be used as a boat to go downstream on a river;
- (m) **"District Tourism Development Officer / District Adventure Sports Officer"** means the Officer in-charge of tourism department/UTDB of the concerned district as the condition prevails;
- (n) **"Technical Committee"** means the committee constituted under Chapter- IV of these rules;

(2) Words and expressions used in these rules but not defined shall have the same meanings respectively assigned to them in the Uttarakhand Tourism Development Board Act, 2001.

Rafting/Kaya-king Season

3. (1) **"Season"** means such period during which rafting/ Kayaking shall be permitted on various rivers.
- (2) The following shall be the seasons for Rafting/Kayaking in various rivers:-
 - (a) 15th of September to 15th of June on river Ganga, Alaknanda, Bhagirathi, Kali;
 - (b) 15th of September to 30th of November and 1st of April to 15th of June on river Yamuna;
 - (c) 15th of September to 15th of June on river Tons , Gori, Saryu, Kosi, Pinder;
 - (d) 15th of September to 30th of November on river Rāmgangā East and Rāmgangā West;
 - (e) Or, the time shall be fixed as per the directions of the Uttarakhand Tourism Development Board in time to time on the basis of the availability of the water of the river.

Off season

4. **"Off season"** means such period during rainy season Rafting / Kayaking activities shall be prohibited completely in all river.

CHAPTER- II REGISTRATION

5. (1) The applicant desirous of seeking river rafting permits for

**Application
for
commercial
river rafting /
kayaking**

commercial purposes shall have to apply to the C.E.O. of the Uttarakhand Tourism Development Board, Dehradun in prescribed form at **Annexure-'A'** in duplicate between 1st of April to 30th of April along with the fee of Rs. 1000/- in form of demand draft (non transferable) in favor of the CEO, UTDB, Dehradun or in cash. Incomplete application forms will not be entertained.

- (2) The application forms for River Rafting / Kayaking for commercial operations shall be obtained from the office of C.E.O, UTDB, Dehradun or download from departmental website. After due scrutiny, the application forms shall be placed before the Technical Committee.
- (3) In case of partnership firm/company/organization, an authorization letter (Power of Attorney) shall have to be furnished along with the application form.
- (4) After inspection by the Technical Committee, all applicants shall be intimated within a maximum period of 45 days by the Uttarakhand Tourism Development Board about the permit along with reasons.
- (5) The applications received for River Rafting / Kayaking permit after the period mentioned in sub-rule-I, shall not be considered.
- (6) It is mandatory that every applicant shall have three year experience in adventure activities. In this respect a certificate issued by any recognized institution /Government department/ organization shall have to be produced.

**Procedure
for
Application
for non-
commercial
river rafting /
kayaking**

6. (1) The applicant desirous of obtaining permit for non commercial rafting / kayaking activities, such as, training, competition, rakee and search etc. shall have to apply to the C.E.O. of the Uttarakhand Tourism Development Board in prescribed form at **Annexure-'B'** at least one month prior.
- (2) The Government Department/Armed forces shall be exempted from obtaining permit for carrying out rafting expedition/training. However, they will be required to inform the C.E.O of UTDB at least one month prior to the date proposed for the event / activity.
- (3) The non-commercial rafting/kayaking/expedition/training activities shall be conducted by the river guide and senior guide approved by the Technical Committee.
- (4) Separate application shall be produce as Rule - 6(1) for the permission of Commercial River Rafting / Kayaking expeditions' at least one month prior. Fee shall be determined by CEO according to number of Participants/ Rafts/ Kayakers.

**Permission
for
commercial
river rafting /
kayaking
expidition**

**Grant of
permit**

7. (1) After the recommendations of the Technical Committee, new applicant shall be issued a permit for a minimum of 2 rafts and maximum of 5 rafts during Ist and IInd year for a period of one year. Thereafter, based on merits and demerits, permit shall be issued for 5 years. In the case of rejection of any application, the applicant shall have to be informed with reason for non-acceptance.

- (2) The operator's already holding permit for more than 5 rafts, shall keep on holding the same until the permission expire / cancelled / rejected.
- (3) Every eligible applicant shall be issued a separate permit for each river and the operators already plying shall have to seek separate permit for each rivers after notification of these rules.
- (4) The permit issuing authority shall issue river-wise permit based on the carrying capacity of each river.
- (5) The applicant shall be granted permit for a maximum period of five years / seasons, which will be necessary to be renewed every year.
- (6) In respect of carrying capacity of each river the applications received in excess, their selection shall be made through lottery or auction.

Renewal of permit

8. (1) Every permit holder/operator shall have to submit application for renewal of permit to the C.E.O. of U.T.D.B in the similar manner as prescribed in rule 5 (1).
- (2) All the applications for renewal shall be examined by the office of CEO and if required shall be sent to the Technical Committee for their evaluation and recommendation.
- (3) The permit, shall be renewed by the CEO, UTDB based on the past experience of the operator or if required on the bases of recommendations of the Technical Committee.
- (4) Each permit holder shall receive the permit renewed within 90 days of commencement of the season after depositing required fee in the office of the permit issuing authority. If the permit is not obtained within this period, the permit shall be canceled accordingly.

River Rafting / Kayaking Fee

9. (1) River rafting / kayaking fee, environmental fee or any other fee as decided by the Uttarakhand Tourism Development Board or State Government from time to time, shall be payable.
- (2) The River Rafting / Kayaking fee fixed for each river in **Annexure-'C'**, shall be amended by the Chief Executive Officer from time to time with the consent of the State Government.

CHAPTER- III

RESPONSIBILITIES AND DUTIES OF PERMIT HOLDER/OPERATOR

- Responsibiliti** 10. (1) The permit holder / operator and his employees shall at all times

**es and duties
of permit
holder /
operator**

- ensure strict compliance of these rules and the provisions therein.
- (2) Every permit holder /operator shall inform the charges for Rafting /Kayaking to UTDB and will publish the same in their brochures, booklets, etc. In case of any change in the charges, the same shall be intimated to UTDB immediately.
 - (3) It will be obligatory for every permit holder applicant to have a well furnished office within 2 months and shall keep a complaint / suggestion book at office reception / camp.
 - (4) Every permit holder shall provide monthly statistics of domestic and foreign tourist to UTDB on prescribed format at **Annexure-'D'** and shall also upload this information on the link provided with the website of UTDB.
 - (5) Every permit holder/operator shall provide employment to the domiciles of Uttarakhand in accordance with the directives issued by the Industries department from time to time.
 - (6) Every permit holder / operator shall have to submit the details of Nepali / foreign river guide / senior guide appointed in his / her firm to local police station. The permit holder / operator shall be fully responsible for such foreign guide. An undertaking shall have to be furnished to the UTDB by the operator.
 - (7) Every permit holder / operator / river guide shall ensure that rafting / kayaking activities will be carried out in accordance with the bearing capacity prescribed by the manufacturing company or as per the bearing capacity determined by the Technical Committee.
 - (8) Every permit holder / operator shall keep the local district administration and Tourism department informed about the VIPs going for rafting / kayaking.
 - (9) In case of any accident /untoward incident, every operator/ guide shall immediately inform to the local district administration, police station and the permit issuing authority at the reasonable time. The entire responsibility for legal action shall be that of the concerned permit holder / operator. Under no circumstances, UTDB shall be not held responsible for vicarious or any other such liability in case of any accident / untoward incident, etc.
 - (10) Every Guide/Senior Guide/ Kayaker shall operate at least two rafts in a rafting trip, or one raft and one safety kayak, in the river stretch. River Rafting / Kayaking operations with single raft or single Kayak shall not be conducted in any condition.
 - (11) Every permit holder / operator shall write the registration number allocated by the Permit Issuing Authority in the front and backside of the raft, in such a manner that the same can be read from a reasonable distance.
 - (12) Every permit holder/operator /river guide shall collect a 'Token' from the check post at the starting point notified by the UTDB for Rafting / Kayaking and shall return the same at the appointed check post at the ending point on completion of rafting / kayaking operation.
 - (13) Every permit holder/operator shall not place his raft/equipments or

vehicles on highway/roads and any public place where traffic is affected.

- (14) Every permit holder/operator shall produce the permit on demand to CEO or his nominated officer or any tourist.

CHAPTER- IV

RIVER RAFTING TECHNICAL COMMITTEE

- | | |
|--|---|
| Constitution of the Technical Committee | <p>11. The UTDB shall by notification constitute a Technical Committee for river rafting activities which shall consist of the following members :-</p> <ul style="list-style-type: none"> (a) An officer of UTDB not below the rank of Joint Director nominated by C.E.O. - Convener; (b) Principal, Mountaineering and skiing Institute ITBP Auli, or his nominee - Member; (c) Director General, Health or a Medical Officer nominated by him - Member; (d) Two Technical experts from the field of rafting / kayaking nominated by CEO - Member; (e) Representative of Forest Department not below the rank of DFO, nominated by PCCF. - Member; (f) Deputy Director, Tourism - Member. (g) Concerned District Adventure Sports Officer - Member. |
| Functions of the Technical Committee | <p>12. The Technical Committee shall have the following responsibilities-</p> <ul style="list-style-type: none"> (a) The Technical Committee shall meet once in a year or as per the directives of CEO; (b) The Technical Committee shall examine all applications technically (new applications/renewal) for seeking river rafting/ kayaking permits; (c) The Technical Committee shall examine the bio-data of the operator / rafting / kayaking guides; (d) The Technical Committee shall examine the technical skills of rafting/ kayaking guide through a practical examination and physical efficiency test (Format - Annexure 'E'); (e) The Technical Committee shall examine the raft / kayak and other equipments in accordance with the specifications laid down by the manufacturing company; (f) The Technical Committee shall examine safety and rescue equipments and other measures taken for the purpose of the safety and rescue; (g) The Technical Committee shall examine the river knowledge, safety and rescue skills and first aid knowledge etc. of the rafting / kayaking guides; (h) The Technical Committee shall ensure that each raft/kayak has a registration number properly displayed on front and back side and clearly visible from a reasonable distance; (i) The Technical Committee shall recommend for issue of an identity card for a period of 5 years based on the experience of each |

individual river guide/Sr. guide,

**The
Regulatory
Committee
and it's
functions**

- (j) The Technical Committee shall also search and identify new stretches in the rivers of Uttarakhand and shall examine the suitability of any operation before starting the activity;
 - (k) The Technical Committee shall assess the carrying capacity of each river for 5 years;
 - (l) The Technical Committee shall perform such responsibilities as assigned to them from time to time by UTDB/ State Government;
 - (m) The Technical Committee shall examine all rafting/ rescue equipments and examine the guide every 3rd year regarding renewal of permit;
13. (1) Regulatory Committee is constituted for rafting/ kayaking activities as follows:-
- (a) Addl. CEO, UTDB - Chairman;
 - (b) The representative of Director General of Police, not below the rank of DIG - Member;
 - (c) The representative of Principal Chief Conservator of Forest, not below the rank of Conservator of Forest - Member;
 - (d) Principal, Mountaineering and skiing Institute, ITBP, Auli, - Member;
 - (e) 2 Experts from the field of rafting/ kayaking nominated by the CEO - Member;
 - (f) Joint Director, Tourism, UTDB -Member Secretary.
- (2) The Regulatory Committee shall have complete control over operation of rafting / kayaking activities and shall also work towards developing basic infrastructure and facilities;
 - (3) The Regulatory Committee shall conduct surprise checking during rafting / kayaking activities in time to time.
 - (4) The CEO of UTDB shall nominate any other member for Regulatory Committee to whom he may consider appropriate.
 - (5) The Regulatory Committee shall give suggestions to make rules and regulations or amend in the rule regarding safety and rescue measures.
 - (6) The Regulatory Committee shall do the work of issuing notification in respect of identified new start and end point and rafting / kayaking stretches identified through the Technical Committee.

**CHAPTER- V
SAFETY MEASURES**

**Safety and
rescue**

14. Each operator shall have to produce the equipments as mentioned in ***Annexure-'F'*** before the Technical Committee. The committee will

equipments	determine the number of equipments and will examine on the basis of their specifications.
Timing	15. Rafting/kayaking activities shall be carried out only in day light between sunrise and sunset.
Insurance cover	16. The permit holder / operator will make sure that all tourist / employees shall be ensured for rafting / kayaking activities. The amount of insurance shall be determined by the order of State Government / UTDB in time to time.
Medical Assistance	17. Every permit holder / operator — (1) Shall keep available a panel of doctors on call and shall co-ordinate to take care of emergency cases with a hospital. (2) It shall be mandatory to keep a first –aid-box in every raft including life saving drugs and first-aid equipments.
Safety Standards	18. (1) People suffering from serious ailments, like Hydro phobia/ Heart Patients / Epilepsy / other chronic patients such as Asthma and respiratory problems should not be allowed for rafting / kayaking. (2) Before commencement of rafting / kayaking trip, every guide / kayaker shall give necessary briefings to all tourists about the river stretches / rapids and their seriousness of about safety and rescue in emergency.
Age restrictions	(3) The tourists below the age of 14 years and above the age of 60 years shall not be allowed for river rafting and those below the age of 18 years and above the age of 50 years shall not be allowed for kayaking. (4) Alcohol / smoking shall be totally prohibited during rafting / kayaking operations. (5) The operator / river guide shall ensure that all rafters / kayakers including guide necessarily wear a proper size life jacket and helmet at all times while on river water. (6) The operator /river guide before crossing high volume repaid shall ensure weather guide/group is capable of crossing the repaid or not.

CHAPTER- VI

QUALIFICATIONS OF THE RIVER GUIDE/ SAFTY KAYAKER

Qualification s of river Guide / safety kayaker	19. (1) The River Guides / Safety Kayaker shall have the following qualifications like each:-- (a) Must be healthy; (b) Age certificate must be enclosed. Age must not be below 18 years and above 50 years or on the basis of fitness; (c) Certificate of educational qualifications shall have to be enclosed. Must be capable of reading, writing and conversing in Hindi / English; (d) Must be capable of swimming; (e) Must possess a certificate relating to first aid (FAC) from Red Cross Society of India or St. Johns Ambulance Society of India
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or any recognized or reputed organization.

(2) That-

- (a) Must be proficient in rafting / kayaking technique;
- (b) Must have knowledge about safety standards and must be proficient in emergency rescue techniques;
- (c) Must be proficient in preparing trip plan and communication;
- (d) Must be proficient in the use of safety and rescue equipments;
- (e) Must have knowledge of the principles of rapids and river signals.
- (f) Must have knowledge about construction of raft and repairing the same or changing any part thereof.

(3) In addition to above, it will be mandatory for every trainee river guide / kayaker to produce log book as a proof of his experience in rafting / kayaking, which must be formally signed by Senior River Guide. The format of this log book shall be framed by the UTDB duly countersigned. Every trainee guide should have the following qualifications-

- (a) Shall have experience of 3 years / seasons of concerned river. Must have conducted a minimum 100 trips of high standard rapids in the area of that river.
- (b) Must have successfully completed the training of a minimum distance of 2000 kms. on the concern river.

(4) In condition of changing the operator (firm) by the guide, the photo identity of such guide shall automatically stand null and void.

Fee of Identity Card

20. The required fees shall be fixed by the CEO of UTDB by the orders passed from time to time, which will be non refundable.

Issue of identity card

21. Every River Guide / Sr. Guide/ Safety kayaker shall have to submit bio-data along with two recent passport size colour photographs for identity card. The identity card will be issued in the format on **Annexure-'H'** for a period of five years by the UTDB on the recommendations of the Technical Committee.

Qualifications of Senior Guide

22. (1) River Guide who must have worked efficiently for more than 10 years as a Guide and must be proficient in river reading, knowledge of trip planning, white water techniques, first-aid knowledge, rafting signals and efficient in safety and rescue operations etc.
- (2) Senior River Guide should have minimum 50 trip experience of rafting / kayaking expeditions in high volume of river rapids.
- (3) Such Guide shall be eligible for Senior Guide to whom against any accident/ complaint/ offence should not be registered.

Renewal of Identity Cards

23. The renewal of identity card shall be issued by UTDB after every five years. The fees in this regard will be as rules laid down in Rule 20. In case of change of employer firm / operator by the guide, the issued photo identity card shall be automatically cancelled and will have to apply for a new identity card.

CHAPTER- VII

STANDARDS RELATING TO ENVIRONMENTAL SAFETY

**Standards for
Environmental
Safety**

- 24.** Every operator / permit holder shall ensure compliance of the following standards :-
- (a)** Shall conserve the eco-system and wild life in view of the eco-sensitivity of the Himalayan region.
 - (b)** Shall ensure disposal of garbage in a pit prepared for the purpose or at a designated place. In no case the garbage shall be disposed off into river.
 - (c)** In no circumstances, polythene and plastic shall not be consumed.
 - (d)** All non degradable substances such as, empty bottles, tin etc. shall be handpicked and kept in the waste bin of municipality and the same shall be disposed off through appropriate method.
 - (e)** Rivers, streams and springs shall be kept pollution free from contamination by soap (detergent).
 - (f)** No guide / employee / tourist shall use Radio, Tape Recorder or any other electronic entertainment device in high volume.
 - (g)** Taking away of tree / plant cuttings, seeds and roots from Uttarakhand shall be deemed illegal.

**CHAPTER- VIII
GENERAL**

**Permission
for Temporary
Camp**

- 25.** (1) Under rule 7, permit holder shall apply to the concerned department/ Concern District Magistrate for revenue land seeking permission for temporary beech camping on forest /revenue land situated along with the river banks.
- (2) Private land owners along river bed will be considered for grant of permission for establishing beech camping for rafting / kayaking on priority basis keeping in view the bearing capacity of the river.

**CHAPTER- IX
LEGAL IMPLICATION**

Penalty Clause

- 26.** (1) Without a seeking permit, rafting / kayaking operation shall be punishable under the provisions of Indian Penal Code Act.
- (2) In case of any operator / participant / guide is found not adhering to the environmental rules / guidelines, the permit will be cancelled and shall be punishable under the provisions of relevant Forest, Wildlife and Environment Act and Rules made there under.
- (3) Any operator /guide, willfully makes a false statement / suppresses a material fact / intention to mislead to permit issuing authority, his permit shall be cancelled and black listed.
- (4) Any operator / permit holder who transfers or assigns his rafting / kayaking permit to any other person shall be illegal, In this condition his permit shall be cancelled and black listed.

- (5) Every operator / permit holder shall display his permit at the reception of his registered office / camp office essentially. Failing in that a warning shall be issued and in continuation the same his permit shall be cancelled.
- (6) Any operator / permit holder / guide is found guilty in any accident / misbehavior with tourist, malpractices etc. in rafting / kayaking operations after confirmation or the complaint lodged under FIR, his permit shall be suspended / cancelled.
- (7) Every operator / permit holder shall ensure the implementation of provisions made under these rules and in case of breach of any rule, his permit shall be revoked / suspended / cancelled/ black listed or his earnest money shall be forfeited .

CHAPTER- X MISCELLANEOUS

Classification of rapid grading

27. Under the international standards, the Technical Committee through a panel of experts shall grade all the rivers identified for rafting/kayaking purposes in the following manner, namely —
 - (a) **Class -1:** Easy moving water, water moving in small waves with no obstacles (rapids);
 - (b) **Class-2:** Water flowing along an easy passage but having medium level obstacles;
 - (c) **Class- 3:** Difficult, high irregular waves, narrow clear passage, needing precise maneuvering;
 - (d) **Class-4:** Very difficult long rapids and powerful & irregular waves requiring knowledge of hydraulics and precise maneuvering;
 - (e) **Class-5:** Extremely difficult, long violent and highly congested rapids for team of experts only;
 - (f) **Class-6:** Very dangerous and unfit for rafting/kayaking

Other Important Instructions for Permit Holder / Operators

28.
 - (1) The decision of the Chief Executive Officer, Uttarakhand Tourism Development Board in regard to any complaint made by a tourist shall be final and binding.
 - (2) Angling without the prior permission of the competent authority shall be prohibited. Use of explosives of any kind or net and polluting river water shall be a criminal offence.
 - (3) The permit holder / operator shall protect the area of river rafting / kayaking and shall not disturb the life of locals and the peace of that area.
 - (4) Every permit holder / operator shall maintain the holiness of all rivers.
 - (5) All permit holders / operators will cooperate and communicate in a friendly and professional manner with each other and other parties.
 - (6) Non-swimmers shall not be allowed to body surf in the flowing river water.
 - (7) All operator / permit holder shall also have to necessarily ensure that rafting / kayaking activity will not be carried out in bad weather.
 - (8) The trainee guide shall not be permitted alone to carry out rafting / kayaking operations during training period.
 - (9) All Permit Holders will ensure that throwing of burning cigarettes is

not allowed in the forest area. Use of drugs by rafters, guide, staff etc. at camp site or during rafting / kayaking operation shall be strictly prohibited.

- (10) Every permit holder shall ensure that no local children are allured by offering them foodstuff or sweets. They will respect local traditions. When taking photographs, shall respect privacy and seek prior permission for photography.
- (11) Every operator shall advise all tourists not to take their valuables, etc. while going for rafting / kayaking.
- (12) Plying of any kind of motor boats in river rafting / kayaking area shall be prohibited.
- (13) The authorized officer of the UTDB/Forest/District administration may inspect the rafting / kayaking equipments and camp site.

Protection

29. For any action taken or proposed to be taken in good faith under these rules, there shall be no legal action against the Government, or any person of the Government/ Board.

Power to remove difficulties

30. If any difficulty arises in giving effect to the provisions of these rules, the State Government may, by order, not inconsistent with the provisions of these rules, remove the difficulty :

Provided that no such order shall be made after the expiry of a period of two years from the commencement of these rules shall be laid, as soon as may be after it is made before the house of State Legislature.

By Order

(Dr. Umakant Panwar)
Secretary

Appendix- 2

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.
	2. Will avoid resettlement/relocation. If unavoidable the extent of resettlement will be minimized.	No such impacts anticipated as sub project locations are within own land.
	3. Will not result in destruction of or encroachment onto protected areas, including National Parks, Sanctuaries, Conservation Reserves and Community Reserves, environmentally sensitive zones and Biosphere reserves.	No environmentally sensitive zones in the vicinity
	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	NO
	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 not within archaeologically significant/ ASI 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	NA
	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	Locations are not within cultural heritage sites
	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, around the interpretation centre shall include 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 DPR and responsibility entrusted to the executing department to ensure environment management sustainability.

Component	Criteria	Remarks
	12. Will reflect inputs from public consultation and disclosure for site selection	Inputs from major stakeholders like District Authorities, villagers have been incorporated in the designs and planning.
Conservation measures and excavation measures-in and around Cultural properties and protected Monuments/ Structures.	13. Will observe the principle of not altering the historic condition and shall involve treatment of damage caused by natural processes and human actions and prevention of further deterioration, using both technical and management measures.	Sub project is not a conservation project and not nearby any historic monument/ structure
	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
	15. Will ensure that intervention be minimal. Every intervention proposed shall have clear objectives and use tried and proven methods and materials.	Design of the centre shall be as per local architecture of the state
	16. Will ensure that physical remains are conserved in their historic condition without loss of evidence. Respect for the significance of the physical remains 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	Sub project is not a conservation project and not nearby any historic monument/ structure
	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	NA Sub project is not a conservation project and not nearby any historic monument/ structure
	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 for the centre are based on guidelines conforming to Uttarakhand architecture
	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 Not a Heritage site
	20. Will ensure that during archaeological excavation care be taken to conserve the physical remains. A practical plan for the conservation of a site-both during and after excavation-should be submitted for all site programmed for excavation	NA Not a Heritage site

Component	Criteria	Remarks
	<p>21. Will ensure that treatment of the cultural heritage site and its environs is a comprehensive measure to prevent damage from natural processes and human actions, to reveal the historic condition of a site, and to allow its rational use.</p> <p>Service building should be as far as possible from the principal area of the site.</p> <p>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.</p>	<p>NA</p> <p>Sub project is not a conservation project and not nearby any historic monument/ structure.</p>
Conservation and habitat protection measures- in and around the natural heritage assets and protected areas.	<p>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.</p>	<p>NA</p> <p>Not near protected area and no significant biodiversity noticed in and around the site for adventure centres.</p>
	<p>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.</p>	<p>NA</p> <p>Not in or near protected area</p>
	<p>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.</p>	<p>Site is not in core or buffer zone of any protected area.</p> <p>Proposed sub project interventions shall provide facilities and training for adventure water sports including, Kayaking, Zorbing, Jet Ski, Jet Boating, Angling, mounting etc.</p>
	<p>25. Will ensure that the areas of significant habitat diversity habitats are conserved in their natural condition.</p>	<p>Proposed locations for the centre are not in any significant habitat diversity areas.</p>
	<p>26. The results of intervention should be unobtrusive when compared to the original fabric or to previous treatments, but still should be distinguishable</p>	<p>NA</p>
	<p>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.</p>	<p>No new materials and techniques shall be used</p>
	<p>28. Service buildings should be as far as possible from the principal area of the site.</p>	<p>NA</p>
Water supply	<p>29. Will be taken up from existing potable treatment systems nearby, unless no such systems are available in the vicinity.</p>	<p>No new water supply system is proposed in the sub project and all water requirements shall be met from the already existing source in the vicinity</p>

Component	Criteria	Remarks
	30. Will not result in excessive abstraction of ground water or result in excessive groundwater pumping impairing ground water quality	Not envisaged
	31. Will ensure adequate protection from pollution of intake points	No new water supply system is proposed in the sub project and all water requirements shall be met from the vicinity
	32. Will not result in unsatisfactory raw water supply (e.g. supply with excessive pathogens or mineral constituents)	Not a water supply project. Provisions of safe drinking water shall be ensured as per provisions of EMP, for the workers during construction
	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 in the centres
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	At locations with shallow water table, the design of the septic tanks shall be done to ensure that there is a difference of at least 1.5m between the bottom bed of the septic tank and the maximum ground water level, to avoid any contamination of ground water
	35. Will ensure that sanitation improvements proposed do not result in pollution of groundwater.	Toilet facilities proposed in the adventure centres, will not result in pollution of ground water (as per 34 above)
	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.
	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 are proposed
	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
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	Proper waste management shall be ensured through provision of waste segregation at source through separate Bio-degradable and Non- Biodegradable Waste bins and suitable disposal arrangements. During project implementation necessary instructions will be given to avoid pollution of any sort, which is also covered under Uttarakhand river rafting rules.
	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.

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, no protected area
	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
	44. Will ensure on dislocation and involuntary resettlement of people living in right of way.	No dislocation and involuntary resettlement envisaged
	45. Will not lead to alteration of surface water hydrology of streams/waterways that may result in increased sediment load due to erosion from construction sites.	Erosion from construction sites will be controlled as per EMMP provisions.
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	NA
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 as per carrying capacity of the area (study simultaneously undertaken by the Gol for the state tourism destinations)
	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 of the site, through careful designs in terms of built form, construction materials etc.	Not envisaged. Project shall lead to the upgradation in the quality of life of local residents through better livelihoods and proper training

APPENDIX – 3

RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST

URBAN DEVELOPMENT

Instructions:

- 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 the Director, RSES and for approval by the Chief Compliance Officer.
- 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.
- 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: IITDP: Uttarakhand, Development of Tourism Infrastructure for Adventures centers.

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

Screening Questions	Yes	No	Remarks
A. PROJECT SITING IS THE PROJECT AREA			
• DENSELY POPULATED?		√	The proposed adventure centres are not having any population/habitation
• HEAVY WITH DEVELOPMENT ACTIVITIES?		√	There are no any developmental activities within the proposed adventure centers locations
• ADJACENT TO OR WITHIN ANY ENVIRONMENTALLY SENSITIVE AREAS?		√	The proposed adventures centres are not adjacent to environmentally sensitive area.
• CULTURAL HERITAGE SITE		√	There are no any cultural heritage site in the proposed adventures center
• PROTECTED AREA		√	The proposed adventures center are not coming under any protected area
• WETLAND	√		Though during project execution, the activities of rafting will be undertaken in river stretches, yet due care will be taken to avoid any impact on environment as per Uttarakhand River Rafting and Kayaking Rules, 2013
• MANGROVE		√	No

• ESTUARINE		√	No
• BUFFER ZONE OF PROTECTED AREA		√	The proposed adventures sites are not coming any buffer zone of the protected area.
• SPECIAL AREA FOR PROTECTING BIODIVERSITY		√	The proposed adventure centres are not coming in special area for protecting biodiversity.
• BAY		√	

B.POTENTIAL ENVIRONMENTAL IMPACTS WILL THE PROJECT CAUSE...			
• Impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services.	√		During construction only excavated soil and demolition waste is expected as solid waste which shall be disposed or reused as per approved management plan.
• Deterioration of surrounding environmental conditions due to rapid urban population growth, commercial and industrial activity, and increased waste generation to the point that both manmade and natural systems are overloaded and the capacities to manage these systems are overwhelmed?		√	This is a small project which will involve small groups of workers therefore no significant interference with existing environmental conditions of the area is expected.
• Degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)?		√	Proposed construction activities for adventure centres are planned outside wetland areas.
• Dislocation or involuntary resettlement of people?		√	Not envisaged. No habitation inside the proposed adventures centres, except the GMVN/KNVN tourist huts and office, no other commercial activities are running near the site
• Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable group?		√	No habitation inside the proposed project areas
• Degradation of cultural property, and loss of cultural heritage and tourism revenues?		√	There are no any cultural property within the proposed adventure centres.
• Occupation of low-lying lands, floodplains and steep hillsides by squatters and low-income groups, and their exposure to increased health hazards and risks due to pollute industries?		√	No such conditions in the proposed site
• Water resource problems (e.g. depletion/degradation of available water supply, deterioration for surface and ground water quality, and pollution of receiving waters?		√	Surface water quality will not be degraded due to construction activities

• Air pollution due to urban emissions?	√		During construction phase only dust may arise which should be mitigated through water sprinkling, no other significant emission is expected as no use of heavy equipment is proposed
• Risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation?	√		Only physical hazards to workers due to accidents may come across during construction for which safety of workers should be taken in priority.
• Road blocking and temporary flooding due to land excavation during rainy season?		√	Road blocking and flooding is not expected in the project
• Noise and dust from construction activities?	√		Envisaged during the construction activities, Adoption of the mitigation measures shall effectively address such impacts during construction.
• Traffic disturbances due to construction material transport and wastes?		√	There are no significant traffic around the proposed adventures centers locations
• Temporary silt runoff due to construction?	√		Temporary silt runoff is expected due to construction activities which is required to be mitigated by silt traps
• Hazards to public health due to ambient, household and occupational pollution, thermal inversion, and smog formation?		√	No significant ambient, household and occupational pollution is expected
• Water depletion and/or degradation?		√	Water depletion or degradation is not expected in this project
• Overpaying of ground water, leading to land subsidence, lowered ground water table, and salinization?		√	No excessive use of underground water is required which may lead to depletion of ground water table or salinization
• Contamination of surface and ground waters due to improper waste disposal?		√	Waste disposal shall be done in legitimate manner and will not cause water pollution
• Pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems?		√	Construction activities will not cause surface water pollution and loss of fisheries
• Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		√	Only small number of workers shall execute the construction works, therefore no burden on social infrastructure and services is expected
• Social conflicts if workers from other regions or countries are hired?		√	No social conflicts is expected due to workers
• Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during operation and construction?		√	All the works shall be carried out within the GNVM/KNVM, where there is no habitation, therefore no risk to community health and safety is expected
• 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 construction area shall be isolated from visitors movement area and therefore no risk of community safety will exist

the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			
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Climate Change and Disaster Risk Questions	Yes	No	Remarks
The following questions are not for environmental categorization. They are included in this checklist to help identify potential climate and disaster risks.			
<ul style="list-style-type: none"> Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes (see Appendix I)? 		√	Uttarakhand, as a whole is sensitive to seismic disturbances, earthquakes and landslides. But this is small construction project which is not expected to culminate in such hazards
<ul style="list-style-type: none"> Could changes in temperature, precipitation, or extreme events patterns over the Project lifespan affect technical or financial sustainability (e.g., increased extreme rainfall increases flooding, damaging proposed infrastructure)? 		√	This is only small construction project with short duration which is not expected to lead to such hazards
<ul style="list-style-type: none"> Are there any demographic or socio-economic aspects of the Project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)? 		√	No such problem exist at this site
<ul style="list-style-type: none"> Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., by paving vulnerable groundwater recharge areas, or using water from a vulnerable source that is relied upon by many user groups, or encouraging settlement in earthquake zones)? 		√	Not envisaged

* Hazards are potentially damaging physical events.

Photo illustration

Kumaon and Garhwal Region-Photo Gallery for Adventures Sport Centers

➤ **DISTRICT : - Almora**

Centre : Bhikyasain, Almora, & Kumariya



➤ DISTRICT : - Bageshwar

Centre : Kapkot, Song



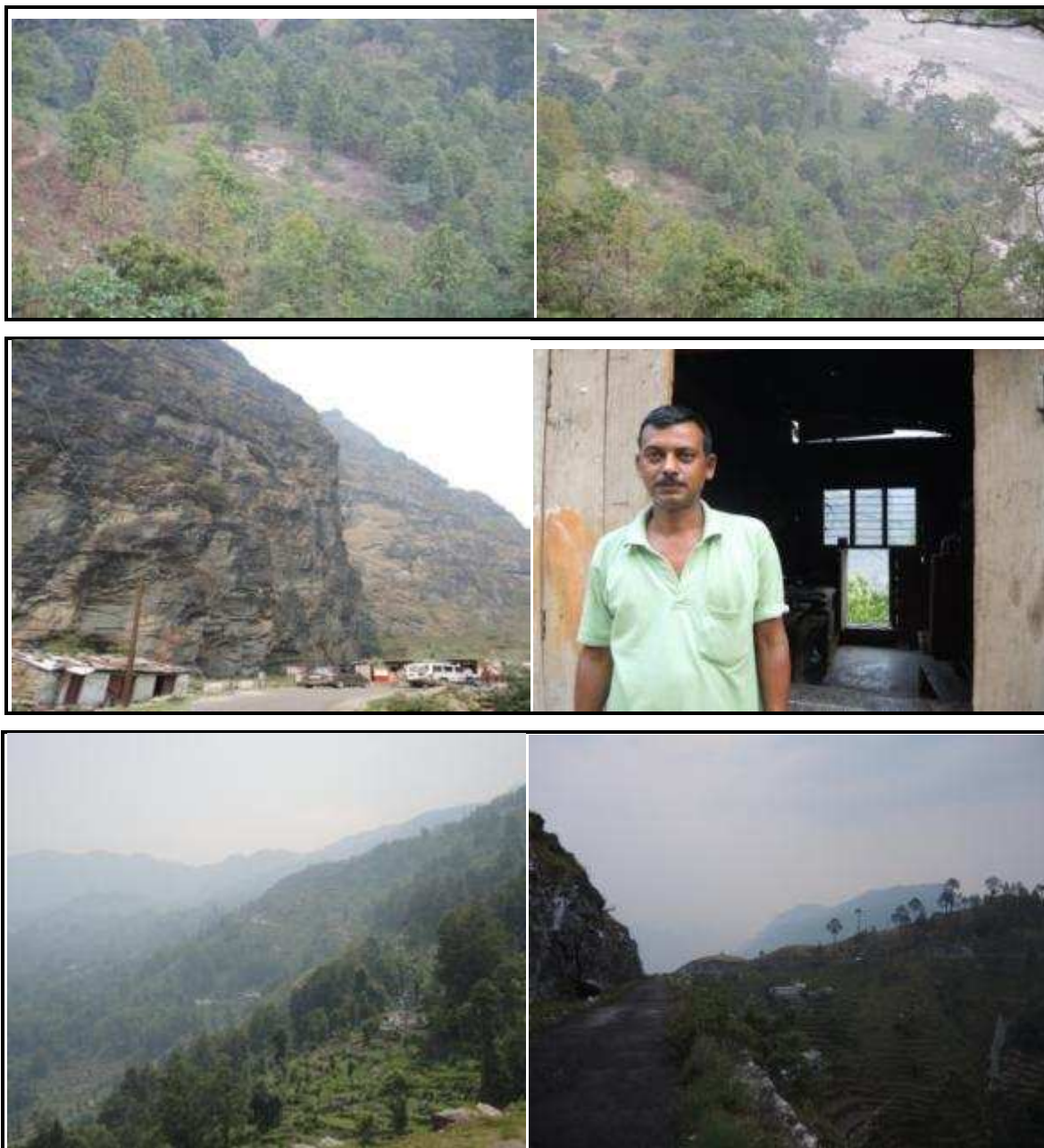
➤ DISTRICT : - Champawat

Centre :Lohaghat, Pancheshwar



➤ DISTRICT : - Pithoragarh

Centre :Munsiyari, Baldhar, Pithoragarh





ANNEXURE- 5

MINUTES OF MEETING OF STAKEHOLDER CONSULTATION

Summary of the Meeting:

It is decided that in the presence of all the community members, PMU, and the DSC staff. Community will cooperate with UTDB/IDIPT for adventure sports activity in proposed center and if required necessary land will be given to the Govt for operation of the center.

Date: 03/06/14, Village: Maletha

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

स्थानीय निवासियों के साथ बैठक:-

आज दिनांक 3/06/2014 को स्थान मलेथा के स्थानीय लोगों के साथ U.T.D.B.T.P.I.P.T. से आये P.M.V. नेवेश चमोली, को स्थानीय लोगों के साथ 0.50 एकर जमीन पर सत्रिक केब जाई स्पेशलिस्ट प्रशिक्षण के साथ बैठक आयोजित की गई।

इस बैठक में स्थानीय निवासियों के साथ स्थानीय वन्य जीव संरक्षण, रक्षकों, प्रशिक्षण और अनुसंधान के क्षेत्र के संबंध में समझौता जमानों के संबंध में चर्चा हुई इन सभी बर्षों के संबंध में व प्रशिक्षण के मिली छान का अनुमान नहीं है। उपरोक्त में अंतर प्रतीति के आवश्यकता परी के मान जाल प्रती देने में सहमत है।

अतः स्थानीय का यह निष्कर्ष निकला कि सभी प्रभावों ने उपरोक्त विषय में अपनी सहमति व्यक्त की और अपने क्षेत्र में इन आवश्यकताओं को करने का निर्णय लिया।

क्र.सं.	नाम	हस्ताक्षर	फ़ोन नं.
1	Sushash Baloni		9760376492
2	सुदेश सिंह		7836035480
3	अमोह		9410392753
4	राजेश सिंह		9412324438
5	रजिष्ठा		8006917750
6	राजिष्ठा		9627523232
7	महेश सिंह		
8	दीपक मोह		
9	Mukesh Chander		9412324438
10	विक्रम राणा		8192861952

स्थानीय निवासियों के साथ बैठक


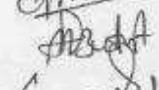
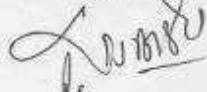
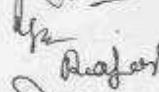
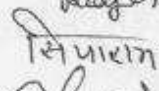
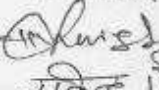
आज दिनांक 2/06/2014 को स्थान कोटेश्वर (Rudraprayag) के स्थानीय लोगों के साथ U.T.D.B. I.D.I.P.T. से जॉय PMU, नैरेखचमेली, वन सेल्यक विशेषज्ञ D.S.C. रंजन कुमार मालिक सेक गार्ड एक्सेलिसिट पर्यवर्ण के साथ बैठक आयोजित की गई,

इस बैठक में स्थानीय निवासियों के साथ वार्तालाप करके (पर्वतारोहण, राफटिंग, ट्रेकिंग और सस्वेच एगोर्ट के सम्बन्धित सभी जानकारी के सम्बन्ध में चर्चा हुई। इन सभी कार्यक्रमों के

Date: 02/06/14, Village: Koteshwar, Rudraprayag

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

और अपने क्षेत्र में इन कार्यक्रमों को करने का निर्णय किया है,

नाम	हस्ताक्षर	मोबा नं
① नरेन्द्र सिंह शर्मा		9627273920
② सदानंद सिंह उदाला		8979302629
③ नागेन्द्र सिंह बिष्ट		9759968411
④ रविशंकर कुशवा		9634194943
⑤ राजेश सिंह		
⑥ हेमन्त गोस्वामी	सिपाराग अग्रवाल	
रविन्द्र सिंह		9639584969

स्थानीय निवासियों के साथ बैठक

आज दिनांक 2/06/2014 को स्थान गाँव के
स्थानीय लोगों के साथ U.T.D.B. P. P. 2. P. T. से
आपके P.M.U. नरेश चमोली, नन सरदार विशेषज्ञ
D. SC वल्लभ कुमार मलिक सेन गार्ड स्पेशलिस्ट पर्यावरण
के साथ बैठक काहुल की गई,

उस बैठक में स्थानीय निवासियों के साथ बालिका
करे पंचायत, बालिका, बालिका, बालिका, बालिका
स्पोर्ट के समक्ष सभी जानकारी के साथ
में क्या है इन सभी कार्यों के बालिका
न, पर्यावरण के बिना

Date: 02/06/14, Village: Gauchar

Community was apprised with sub project objectives and its impact on environment, local livelihood.
In the presence of all the community members, PMU, and the DSC staff, Community agreed to
provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if
required, land will be given to the Govt for operation of the center.

जिस क्षेत्र में इन कार्यों के बारे में
निर्णय लिया,

नाम	हस्ताक्षर	फोन नं.
1. D.C. Bhatt		9568794787
2. M.S. Lingum		9412907468
3. Ashish Kumar		9411158437
4. राजेश्वर सिंह		9012283558
5. राजेश्वर सिंह		
6. राजेश्वर सिंह		
7.		
8.		

स्थानीय निवासियों के साथ बैठक




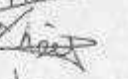



आज दिनांक 02/06/2014 को स्थान कर्नाप्रयाग के स्थानीय लोगों के साथ U.T.D.B. + D.U.P.T. से जाये P.M.U. - नरेश-चमोली, वन संरक्षक विशेषज्ञ D.S.C. रंजन कुमार मालिक सेक बार्ड एक्सलिसिट पर्यावरण के साथ बैठक आयुत की गई,

इस बैठक में स्थानीय निवासियों के साथ चर्चा के (पर्वतारोहण, राफ्टिंग, टैकिंग को सहेजना)

Date: 02/06/14, Location: Karnaprayag

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

आज दिनांक 02/06/2014 को यह बैठक निकला की सभी आगवसी ने उपरोक्त विषय में अपनी सहमति व्यक्त की और अपने क्षेत्र में इन कार्यवाही को करने का निर्णय लिया,

① Name	Sign	Contact NO
Devach Khandun		983751 2494
Pradab Purohit		9412032594
G'nish Purohit		9410300159
Subach Dehpant		9411379124
Narech Purohit		812625 4783
Ehecras Sharma		9536496856
Jaydharma Satti		8171529081
ASHU	AS	9319725699

स्थानीय निवासियों के साथ बैठक

आज दिनांक 2/6/2014 को स्थान कालेश्वर कर्नाप्रयाग
के स्थानीय लोगों के साथ U.T.D.B, I.P.J.P.T.
से जोड़े P.M.U नरेश चमोली, वन संरक्षक विवेका
D.S.C रंजन कुमार मलिक सेक गार्ड स्पेशलिस्ट पर्यावरण
के साथ बैठक आहूत की गई,

Date: 02/06/14, Village: Kaleshwar, Karnaprayag

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

गांव वाले भूमि देने की सहमत हैं

अतः नालाघाट का यह निष्कर्ष निकला की सभी
ग्रामवासी ने उपरोक्त विषय में अपनी सहमति
प्रकट की और अपने क्षेत्र में इस कार्यकलापों
की नींव का निर्माण लिया।

Mansaf Kumar — 8743945675

Narain Singh —

- 1) लक्ष्मण सिंह
- 2) अमन रावत
- 3) राम कुमार
- 4) दीपक डिमरी
- 5) आशीष डिमरी
- 6) अजय रावत
- 7) अशोक देवी
- 8) जयदीप
- 9) अशोक

अशोक सिंह

अशोक

9012673866

9837502472

2500302482

अजय सिंह

दमयन्ती देवी

ज्योति देवी

...

स्थानीय निवासियों के साथ बैठक -

भाग दिनांक 2/6/2014 को स्थान रामपुर सिल्ली
तिलवाड़ा के स्थानीय लोगों के साथ U.T.D.B,
I.D.I.P.T से आये PMU नरेश तगोनी, वन-
संरक्षक विशेषज्ञ, D.S.C रंजन कुमार मलिक, सैफ
गार्ड स्पेशलिस्ट पर्यवेक्षण के साथ बैठक आहूत
की गई,

इस बैठक में स्थानीय निवासियों के साथ
बार्नलाप करके (पर्यवेक्षण, सफाई, ट्रेनिंग और
एडवेंचर स्पोर्ट के सम्बन्धित सभी जानकारी के
सम्बन्ध में चर्चा हुई, इन सभी कार्यों के

Date: 02/06/14, Village: Rampur, Silli Tilwara

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

किस का निवेदन किया।

① अंजु सिंह खन्ना	9761195295
② मदन सिंह नेगी	9759484613
③ पूरन लाल	
④ शिव सिंह खन्ना	
⑤ मंगीत सिंह	9759937833
⑥ अमित सिंह	9758515794
⑦ मनोज	9758505613
⑧ अरविन्द	9761429918
⑨ गोरेव सिंह	9761795235
⑩ अरविन्द अग्रवाल	9530930260
⑪ शकुन	9627616996
⑫ प्रवीण	9758515794
⑬ रामीला देवी	
⑭ अमिता देवी	
⑮ राजेश्वरी देवी	

स्थानीय निवासियों के साथ बैठक

आज दिनांक 27/06/2014 को स्थान देनपानी (मल्हो) के स्थानीय लोगों के साथ U.T.D.B, IDIPT से आये P.I.U. श्रीमल के प्रतिनिधि एवं D.S.C देहरादून से श्री रंजन कुमार मलिक सेफ गार्ड स्पेशलिस्ट पराविष्य के साथ एक बैठक आदर की गयी।
इस बैठक में स्थानीय निवासियों के साथ वार्तालाप करके (परिवारेण सफरिंग ट्रेकिंग और एडवेंचर स्पेड

Date: 27/06/14, Village: Deenapani, Almora

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

ने उपरोक्त विषय से अपनी सहमति व्यक्त की और अपने क्षेत्र में इन कार्यवाहियों को करने का निर्णय लिया।

क्रम	नाम	मोबाइल नं.	ह.
1-	रमेश सिंह मेहता	05962-251003	श्रीमल
2-	मदन सिंह भोज	9411525235	अनिल
3-	वीरेंद्र सिंह मेहता	9411346521	अनिल
4-	शमश सिंह मेहता	9456587833	अनिल
5-	चन्दन सिंह मेहता	94115 74863	अनिल
6-	रजिन्द्र सिंह मेहता	9456763013	अनिल
7-	वहदुल सिंह मेहता		अनिल
8-	सुंदर राम		अनिल
9-	रवि मेहता	7534882245	अनिल
10-	शशि-कुमार		अनिल
11-	राहुल मेहता	9410184434	अनिल
12-		9756266060	अनिल
13-			अनिल
14-			अनिल
15-			अनिल

स्थानीय निवासियों के साथ बैठक

आज दिनांक 27/6/2014 को स्थान बिनार के स्थानीय लोगों के साथ U.T. D.O, IDIPT के साथ P.I.U. भीमताल के प्रतिनिधि एवं D.O. देवगढ़न से श्री रंजन कुमार मलिक, सीमा आई स्पेशलिस्ट पर्यवेक्षण के साथ एक बैठक आयुक्त की गयी, इस बैठक में स्थानीय निवासियों के साथ चर्चा

Date: 27/06/14, Village: Binsar

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

अतः वातावरण का यह निम्नलिखित निष्कर्ष निकला कि सभी निवासियों ने उपरोक्त विषय से अपनी सहमति व्यक्त की और अपने क्षेत्र में इन सभी कार्यों को करने का निर्णय लिया,

क्र.सं.	नाम	मोबा.नं.	ह.
1-	अश्विनी -भट्ट	08650002537	मल
2-	रवि	08650002537	मल
3-	Sakir Hussain	07500124072	Sakir
4-	Abdul Malik	0955788301	Malik
5-	Puram Singh	09411518056	Puram
6-	Ram Singh	08857141056	Ram
7-			

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

Date: 28/06/14, Village: Kapkot, Bageshwar

Community was apprised with sub project objectives and its impact on environment, local livelihood. In the presence of all the community members, PMU, and the DSC staff, Community agreed to provide its cooperation with UTDB/IDIPT for adventure sports activity in proposed center and if required, land will be given to the Govt for operation of the center.

Stakeholder's Meeting at Almora, Pithoragarh, Rudraprayag and Chamoli district Photo



Activity: stakeholder meeting at Almora

Date: 27.06.2014

Place: Almora



Activity: stakeholder meeting at Almora

Date: 27.06.2014

Place: Almora



Activity: stakeholder meeting at Almora

Date: 27.06.2014

Place: Almora



Activity: stakeholder meeting at Pithoragarh

Date: 28.06.2014

Place: Pithoragarh



Activity: stakeholder meeting at Pithoragarh

Date: 28.06.2014

Place: Pithoragarh



Activity: stakeholder meeting at Pithoragarh

Date: 28.06.2014

Place: Pithoragarh



Activity: stakeholder meeting at Pithoragarh

Date: 28.06.2014





Place: Pithoragarh



Activity: stakeholder meeting at Rudraprayag

Date: 02.06.2014

Place: Rudraprayag

	<p>Activity: stakeholder meeting at Rudraprayag</p> <p>Date: 02.06.2014</p> <p>Place: Rudraprayag</p>
	<p>Activity: stakeholder meeting at Rudraprayag</p> <p>Date: 02.06.2014</p> <p>Place: Rudraprayag</p>
	<p>Activity: stakeholder meeting at Rudraprayag</p> <p>Date: 02.06.2014</p> <p>Place: Rudraprayag</p>
	<p>Activity: stakeholder meeting at Rudraprayag</p> <p>Date: 02.06.2014</p> <p>Place: Rudraprayag</p>

	<p>Activity: stakeholder meeting at Chamoli</p> <p>Date: 03.06.2014</p> <p>Place: Chamoli</p>
	<p>Activity: stakeholder meeting at Chamoli</p> <p>Date: 03.06.2014</p> <p>Place: chamoli</p>
	<p>Activity: stakeholder meeting at Chamoli</p> <p>Date: 03.06.2014</p> <p>Place: Chamoli</p>