



# Environmental Monitoring Report

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Project Number: 38255-03  
August 2010

## IND: Uttarakhand State Road Investment Program (Project 2)

Prepared by

Project Management Unit, Public Works Department, Government of Uttarakhand

For

Executing Agency

Public Works Department, Government of Uttarakhand, Uttarakhand

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**Asian Development Bank**

# Environmental Monitoring Report

Loan No: 2458 - IND

Reporting Period: March 2009- March 2010

## Uttarakhand State Road Investment Programme (USRIP)

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Signed by:-

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Project Director/Chief Engineer

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## **1.0. Introduction**

The Public Works Department (PWD) of Government of Uttarakhand has initiated Uttarakhand State Road Investment Programme (USRIP) to implement the up-gradation and improvement work of road stretches in the state of Uttarakhand for capacity augmentation for safe and efficient movement of traffic through loans from Asian Development Bank (ADB). The ADB Loan was provided by using Multitranches Financing Facility (MFF). Project -2 or Phase II of the MFF was approved on 10 February 2009.

The road improvement will focus on improving the condition of the existing road network by carrying out rehabilitation and reconstruction works, which are mostly confined within the existing right of way (ROW). The project basically comprises of up gradation/improvement of existing road sections under public works department (PWD) involving strengthening /reconstruction of the existing carriageway, bringing the roads to standard width, improvement, of the safety features and making provision of adequate signage's. The existing bridges and culverts are to be rehabilitated / reconstructed wherever required. The (USRIP) Project - 2 is running in eight districts of Uttarakhand. There are a total of 55 road sections have been taken under Project -2. Narsighdanda – Guroli Road has been deleted as the land has not been transferred to PWD by forest department. All the sub projects have been assessed to be of environmental category B as per ADB's environment policy 2002 and environment assessment guidelines 2003. These 55 road sections have been divided into 20 packages of which 19 packages have been awarded and are presented in Table 1.

Table 1. List of roads and their environmental category under USRIP Project – 2

S. No	Contract Package No	District	Name of Road	Environmental Category	Road Length (Km)
1			Harda - Bhikiyasen	B	7.560
2			Ganyadoli - Amyari	B	10.650
3	1	Almora	Ganyadoli - Vishalkoat	B	7.690
4			Chaukhutiya - Bachuaben	B	10.940
5			Dhola - Sinar	B	6.960
6			Jalikhhan - Naubada	B	11.330
7			Kalnaband - Pantquari	B	6.810
8	2	Almora, Bageshwar & Pithoragarh	Bejnath - Gwaldam	B	3.190
9			Seraghat - Udiyari	B	43.090
10			Thal - Ogla	B	33.180
11	3	Pithoragarh	Pithoragarh - Jhulaghat	B	25.950
12			Narsinghdanda-Garoli <sup>a</sup>	B	6.300
13	4	Nainital& Champawat	PCS Mandalak	B	11.550
14			Lohaghat- Balikh	B	45.710
15			Kitcha - Dabreu Motor B	B	8.680
16			Malla Talla - Ramgarh NBathuwakhan	B	13.160
17	5	Nainital	Nabinital - Pangot	B	12.860
18			ManBgoli - Kamari	B	4.900
19			Chamboli -Sartoli	B	8.740
20	6	Chamoli <sup>a</sup>	Chamoli - Guptkashi	B	25.774
21			Pokhari - Karanpryag	B	19.437

22	7	Tehri	Kirtinagar - Tehri	B	48.886
23	8	Tehri	New Tehri - Ghansali	B	37.792
24	9	Tehri	New Tehri - Ghansali	B	46.02
25	10	Tehri	Chamba - Mussoorie	B	25.013
26	11	Tehri	Kirtinagar - Sorakhal	B	45.210
27			Kirtinagar - Dangdhari	B	20.503
28	12	Tehri	Chatiyara - Kepras	B	11.680
29			Partapnagar - New Tehri	B	14.410
30	13	Haridwar	Biharigarh - Buggawala	B	9.158
31			Rahulki - Sahdevpur	B	4.792
32	14	Haridwar	Pirankaliyar-Muzzahidpur- Satiwala	B	14.656
33			Raisi - Sahpur	B	21.654
34			Bhagwanpur – Baheri Bhurj	B	5.159
35	15	Haridwar	Bhagwanpur. – Kheri- Shikohpur	B	13.431
36			Choriyala - Bindukhark	B	9.770
37			Orngabad - Telliwala	B	4.648
38			Santodhar - Pabo	B	30.100
39	16	Pauri	Sangarkhal - Jwalpadevi	B	30.770
40			Kamtholiya - Jhandadevi	B	15.310
41			Banekh - Thapla	B	9.730
42	17	Pauri	Satpuli - Dudharkhal	B	24.530
43			Samkhal - Suyalband	B	6.400
44			Dudharkhal - Tadkeshwar	B	6.400

45	18	Pauri	Chaubutyakhal - Chorikhhal	B	25.960
46			Khirsu - Adibadri	B	21.070
47			Matiyali - Dwarikhhal	B	17.220
48	19	Pauri	Hanumanti - Fatehpur	B	5.950
49			Kandakhal – Chelusen - Devikhet	B	13.960
50			Chelusen - Devikhet	B	10.420
51			Dhumakot - Nainidanda	B	13.080
52			Soparkhal - Lalitpur	B	8.650
53	20	Pauri	Kheludanda - Aplosera	B	11.100
54			Rikhnikhal - Thalisen Vaya Panas	B	6.460
55			Rikhnikhal - Thalisen Vaya Jaspurkhal	B	5.020
56			Rikhnikhal-Thalisen Vaya Bhagwatiya	B	5.790
<b>Total</b>					<b>925.163</b>

<sup>a</sup> Narsingdanda – Guroli road has been deleted because the land has not been transferred to PWD.

<sup>b</sup> Contract package 6 has yet not been awarded

## 2.0 Compliance status with National/State/Local statutory environmental requirements

With regard to the phase II, there is no road project required environmental clearance from MOEF as the project roads has been categorised by ADB as 'B' project. There is so far no permit required for permission of using water from the 'Water Board'. The NOC was obtained from the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB) for all 55 road sections under 20 Contract Packages of Garhwal and Kumaon Zone. The NOC from UEPPCB was granted to PMU on 27.04.09 and 09.02.09. The environmental statutory approvals/clearances for phase II are related with the establishment and operation of Hot Mix Plant (HMP) in different contract packages and that is to obtained from UEPPCB. PWD and civil works contractors have obtained few permission under the statutory environmental requirements. These include permission for cutting trees, consent for establishment of Hot Mix Plant, Labour License etc. These have been obtained from the various departments such as Forest, Labour, and Uttarakhand Environment Prevention and Pollution Control Board.

## 3.0 Compliance status with the environmental covenants as stipulated in the Loan Agreement

As per the Loan Agreement for Uttarakhand State-Road Investment Program – Project II, Environmental Impact Assessment Review Framework under Schedule 5 to the FFA describes the environment assessment requirements and authorities responsibilities. Some of the responsibilities are described below.

Clause and Para No.	Description	Compliance Status
Schedule 5 2. (a)	The PMU set up by the State under the Facility shall remain adequately staffed and functional for the project and the facility. The PMU shall comprise a Project Director and at least one road design and pavement manager, environment specialist, and social and resettlement specialist and coordinator, to assist implement the RF, IPDF and EARF. The project Director shall report to the Chief Engineer of the PWD. The secretary PWD would be responsible for the interdepartmental coordination and overall supervision of the Investment Programme and the project.	Complied
Schedule 5 2. (b)	The PMU shall be responsible for day to day operation of the project and Investment Programme and periodic functions such as	Complied

	preparation of PFRs for project under the Facility, engagement of consultants and contractors, preparation of reports, approvals from relevant authorities and ADB, and overall supervision of consultants.	
Schedule 5 2. (c)	The EA shall engage Programme Support Consultants, within two months of the Effective Date to assist the PMU to coordinate with supervision and infrastructure management consultants and facilitate timely processing and implementation of the project.	Complied
Schedule 5 3. (b)	Each PIU shall be headed by a superintendent engineer, assisted by an executive engineer and at least two other technical staff including staff with expertise in social development and environment management, and accounts officer and two support/ administrative staff. The head of each PIU shall coordinate and lies with the Project Director of the PMU, and shall be supported as needed, by the Programme Support Consultants.	Complied
Schedule 5 6. (a)	The State shall delegate necessary authority to designated staff of PMU for timely processing of PFRs and implementation of individual projects under the facility. In this regard State shall ensure active coordination with ADB for strict adherence to implementation schedules including, but not limited to, recruitment of consultants and safeguard compliances, as agreed under the facility as well as for individual projects under the facility	Complied
Schedule 5 6. (b)	The EA shall ensure that detailed project reports for all components of subsequent projects under the facility are prepared in accordance with the social, environmental and indigenous people frame works agreed with ADB during processing of the facility, as amended from time to time.	Complied
Schedule 5 7. (a)	Implement the project accordance with the EARF under ADBs environment policy, 2002, and applicable laws and regulation of the borrower and the state.	Complied so far for contract packages 1, 2, 3, 5, 7, 10, 11, 13, 14, and 15 and will be complied for other contract packages

Schedule 5 7. (b)	Provide training to engineers to be assigned for environmental management and to ensure that the requirements of the EARF are fully implemented in consultation with the relevant contractor and construction supervision consultants.	Complied so far for contract packages 3, 7, 10, 11, 13, 14, and 15 and will be complied for other contract packages
Schedule 5 9. (a)	Subject to compliance with the requirement of the RF, IPDF and EARF and related RP, IEE / EIA, and IPDP, respectively, it shall (i) make available land and right in land, free from encumbrances, and (ii) clear the utilities, trees and any obstruction on such land, on a timely bases, i.e., strictly in accordance with the schedule as agreed under the related works contract, as required for activities relating to each road or section of a road in the works contract.	Complied
Schedule 5 9. (b)	Subsequent to the award of the contract package to a contractor, ensure that road or section of roads (sites} in that package are not handed over to the contractor unless all provisions of the RF, EARF and IPDF and related RP, IEE and EIA and IPDP (as applicable) respectively, are satisfied.	Complied
Schedule 5 10.	The EA shall provide adequate funding for independent monitoring of activities relating to land acquisition, resettlement, environment and other social issues under the project.	Complied

#### **4.0. Compliance status with environmental management and monitoring plans as stipulated in the environmental documentation as agreed with ADB**

The project management unit through its environmental officer closely monitors the implementation of environmental management and monitoring plan (EMMP) for all the sub projects through meetings with the environmental experts of the supervision consultants and by physical verification at the construction sites. For the effective management, implementation of the EMMP, the supervision consultants have designated their existing site staff for environmental coordination. Few of the contractors have also designated environmental officers for the respective contract packages.

The supervision consultants submit quarterly environment monitoring report (EMR) to the PMU that includes information on implementation of EMMP. The information shared in these monitoring reports includes environmental monitoring status at construction sites, measures for workers safety at construction site and camp site, and control measures being adopted

etc. As most of the contractors were mobilized by the end of 2009 and March 2010, the implementation of EMMP assessed during the reporting period was found to be satisfactory and needs to be strengthened in the areas such as safety arrangements and usage of personal protective equipments by the workers. Project Management Unit, through his supervision consultants have conducted workshop/training on implementation of environmental management plan for its PIU staff and contractors for contract packages 3, 7, 10, 11, 13, 14, 15, 16, 17, 19, & 20.

**5.0. Approach and methodology engaged for environmental monitoring of the project**

PMU have been ensuring that the monitoring of components such as ambient air quality, water quality and noise levels are being carried out by the civil work contractors as per the agreed monitoring plans. It describes monitoring program for various parameters, methods of monitoring, duration and frequency of monitoring, sampling location and site of monitoring, description of responsibilities and authorities for implementation of mitigation measures and monitoring requirements.

<b>Env. Components</b>	<b>Parameters</b>	<b>Duration/Frequency of monitoring</b>	<b>Instrument used</b>
Air	SPM, SO <sub>2</sub> , NO <sub>x</sub> , and CO	One working day, thrice in a year except monsoon	Respirable dust sampler
Water	pH, Turbidity, TDS, TSS, Total hardness, Faecal coliform	Random sample thrice in a year	
Noise	dB(A)	15 seconds interval for 15 minutes for every and then Leq should be estimated, thrice in a year	Sound level meter

**6.0. Monitoring of environmental receptors/attributes (e.g. ambient air, surface water, ground water and Noise)**

During the reporting period the environmental monitoring was carried out as per the agreed monitoring plan only for contract package 15. The monitoring results under this package reveal that the levels observed were within the regulatory limits.

As most of the contractors were mobilized by the end of 2009 and March 2010, the environmental monitoring was not carried out for the rest of the packages during the reporting period. PMU have informed the respective contractors of packages except 15, to carry out the monitoring of environmental components immediately.

**7.0. Any other environmental aspects, impacts observed during implementation which were not covered earlier**

There is no such environmental aspect that was not covered earlier.

## **8.0. Details of Grievance Redress Committee**

So far, no complaints from public have been received regarding any items, especially EMP, of construction works in different contract package.

## **8.0 Follow-up actions and conclusions**

1. The contractor has been advised to obtain consent and permission from various government agencies at different stages of the project as soon as possible. Few of the contractors have already received the consent from various departments.
2. Organization of AIDS-awareness & health check-ups camps in different contracts packages.
3. The Contractor has been advised to conduct the ambient air, drinking water, and noise monitoring and also to submit the results.
4. The civil works contractors have been instructed through the supervision consultants to ensure the usage of PPE for further strengthening the implementation of EMMP.