



# Environmental Monitoring Report

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Project Number: 38255-03  
July 2011

## 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

This report has been submitted to ADB by the PMU (ADB (Transport)/Public Works Department), Dehradun, Uttarakhand and is made publicly available in accordance with ADB's public communications policy (2005). It does not necessarily reflect the views of ADB.

**Asian Development Bank**

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Dated- 06 / 05 /2011

To

The Country Director  
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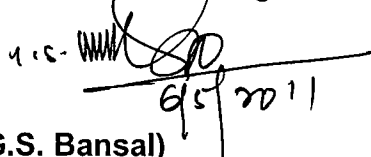
**Sub: Submission of Environmental Monitoring Report for reporting period April  
2010 - March, 2011, USRIP- II**

Dear Sir,

Please find enclosed herewith the Environmental Monitoring Report for Loan No.  
2408, Uttarakhand State Road Investment Programme Project-II, for reporting period  
April 2010 – March, 2011.

This is for your kind consideration and necessary action please.

Thanks and Best Regards.

  
6/5/2011

(G.S. Bansal)

**Project Director/Chief Engineer**

## Environmental Monitoring Report


Loan No: 2458 - IND

Reporting Period: April 2010- March 2011

### Uttarakhand State Road Investment Programme (USRIP)

Prepared by : Project Management Unit, Public Works Department  
Executing Agency : Public Works Department

Signed by:-

  
(G.S Bansal) 6/5/2011  
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 and all the contract packages have been awarded and are presented in Table 1.

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

<b>S. No</b>	<b>Contract Package No</b>	<b>District</b>	<b>Name of Road</b>	<b>Environmental Category</b>	<b>Road Length (Km)</b>
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	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			Kirtinager - 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	Chaubutiya khal - Chorikhal	B	25.960
46			Khirsu - Adibadri	B	21.070
47			Matiyali - Dwarikhal	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.

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

With regard to the phase II, there is no road project requiring 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 'State Pollution Control Board' (SPCB) for all 55 road sections under 20 Contract Packages of Garhwal and Kumaon Zone. The NOC from SPCB 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 be obtained from Uttarakhand Environment Protection and Pollution Control Board (UEPPCB). PWD and civil works contractors have obtained permission under the statutory environmental requirements. Out of the 20 contract packages, all the contractors have applied for establishment of HMP. Out of these 20, 15 contract packages have already secured consent for establishment of HMP. Out of these 15, 11 contractors have applied for consent for operation and 9 contractors have secured the same. Contractors of remaining contract packages have been instructed to secured these consents as soon as possible. These include permission for cutting trees, consent for establishment and operation 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	Complied

	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.	
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 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.	Complied
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	Implement the project accordance with the EARF under ADBs environment policy, 2002, and applicable laws and regulation of	Complied so far for contract packages 3, 4,

7. (a)	the borrower and the state.	5, 7, 9, 10, 11, 13, 14, 15, 16, 17, 19, and 20 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 1, 2, 3, 5, 7, 10, 11, 13, 14, 15, 16, 17, 19, and 20 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. Contractors of contract packages 1, 4, 5, 6, 9 and 18

have not designated environmental officers (EO) for the respective contract packages rest all the contractors have designated EOs for the sound implementation of EMP. The contractors of the above mentioned packages have been instructed to engage EOs for their 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. Implementation of EMMP during the reporting period was found to be satisfactory and needs to be strengthened in the areas such as monitoring of environmental quality, 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 1, 2, 3, 5, 16, 17, 19, & 20. Aids awareness program were also conducted during the reporting period for contract packages, 1, 2, 3, 5, 16, 17, 19, and 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 minutes for every 1 hr for one working day, 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 for contract packages 1, 2, 3, 5 10, 11, 12, 13, 16, 17, 18, 19 and 20. However, all the contractors have been instructed to submit the quarterly (Jan- March 2011) results of the

environmental monitoring at the earliest possible. The monitoring results under this package reveal that the levels observed were within the regulatory limits.

PMU through its PIU and Supervision consultants have instructed the respective contractors of packages 4, 6, 7, and 8 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 of contract packages 1, 6, 8, 12, and 20 have been advised to secure CFE whereas the contractors of contract packages 2, 4, 5, and 9 have been advised to apply for the consent for operation of HMP.
2. The Contractors of contract packages 4, 6, 7, and 8 have been advised to conduct the ambient air, drinking water, and noise monitoring and also to submit the results.
3. Contractors of contract packages 3, 10, 11, 14, 15, 16, 17, 18, 19 have been instructed to extend the validity of CFO/renew consent for operation of HMP.
4. Organization of AIDS-awareness & health check-ups camps in different contracts packages.
5. The civil works contractors have been instructed through the supervision consultants to ensure the usage of PPE for further strengthening the implementation of EMMP.