



Environmental Monitoring Report

Project Number: 38255-033
October 2014

Period: April 2013 – March 2014

IND: MFF - Uttarakhand State-Road Investment Program (Subproject 2)

Submitted by
Project Management Unit, Public Works Department

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Asian Development Bank

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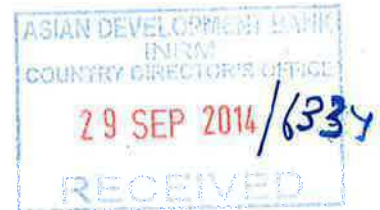
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No- 1493/09 PMU Transport-Uttarakhand /2014

Dated- 25 / 09 /2014

To

The Country Director
Asian Development Bank
India Resident Mission
4, San Martin Marg, Chanakyapuri
New Delhi, 110021



**Sub: Submission of Environmental Monitoring Report for reporting period April 2013 -
March 2014 (Loan 2458) for USRIP II**

Dear Sir,

Please find enclosed herewith the Environmental Monitoring Report for Loan No. 2458
Uttarakhand State Road Investment Programme, for reporting period April 2013 – March 2014.
This is for your kind consideration and necessary action please.

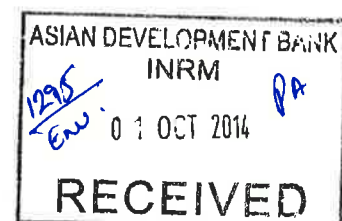
Thanks and Best Regards

Encl: As above

(G.S. Bansal)

Project Director/Chief Engineer

10.09.14



Environmental Monitoring Report

Loan No: 2458 - IND

Reporting Period: April 2013- March 2014

Uttarakhand State Road Investment Programme (USRIP)-Phase II

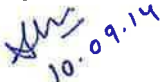
Prepared by : Project Management Unit, Public Works Department
Executing Agency : Public Works Department

Signed by:-



(G.S Bansal)

Project Director



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 Multitranche 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

S. No	Contract Package No	District	Name of Road	Environmental Category	Road Length (Km)
1	1	Almora	Harda - Bhikiyasen	B	7.560
2			Ganyadoli - Amyari	B	10.650
3			Ganyadoli - Vishalkoat	B	7.690
4			Chaukhutiya - Bachuaben	B	10.940
5			Dhola - Sinar	B	6.960
6	2	Almora, Bageshwar & Pithoragarh	Jalikhhan - Naubada	B	11.330
7			Kalnaband - Pantquari	B	6.810
8			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	4	Nainital& Champawat	Narsinghdanda-Garoli ^a	B	6.300
13			PCS Mandalak	B	11.550
14			Lohaghat- Balikh	B	45.710
15			Kitcha - Dabreu Motor B	B	8.680
16	5	Nainital	Malla Talla - Ramgarh NBathuwakhan	B	13.160
17			Nabinital - Pangot	B	12.860
18			ManBgoli - Kamari	B	4.900
19	6	Chamoli	Chamboli -Sartoli	B	8.740
20			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			Bhagwanpur – Kheri- Shikohpur	B	13.431
36	15	Haridwar	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			Satpuli - Dudharkhal	B	24.530
43	17	Pauri	Samkhal - Suyalband	B	6.400
44			Dudharkhal - Tadkeshwar	B	6.400

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

^a Narsingdanda – Guroli road has been deleted because the land has not been transferred to PWD.

1.1 Project Objectives:

- Upgradation/improvement of 925.163 km of Ordinary District Roads, Village Roads and Light Vehicle Roads.
- Improving the conditions of the existing road network by carrying out rehabilitation and reconstruction works that are mostly confined within the existing right-of-way (ROW).
- Strengthening /reconstruction of the existing carriageway, bringing the roads to standard width, improvement of the safety features and making provisions of adequate signage.

1.2 Environment category

All 56 roads are existing and no realignments are proposed. All impacts are site specific, few are irreversible and related to minor alignment correction and road widening, and all impacts can be readily mitigated. Therefore all the contract packages fall under B Category as per ADB categorization criteria based on ADB's Environmental Assessment Guidelines 2003, and Safeguard Policy Statement (SPS) 2009. The packages required only IEE for meeting the environmental requirements under the ADB's policy. Environmental Management Plan (EMP) was formulated for mitigating and managing the anticipated adverse environmental impacts and enhancing the efficiency of environmental components wherever it is possible. The recommended EMP was included in domain of detailed and bid document or all the packages. There is a separate budgetary allocation for implementation of EMP and have been included in the contracts.

1.3 Scope of report

The present report is the Fifth Environmental Monitoring Report covering the period from April 2013 to March, 2014. The report reviews the compliances of environmental activities set in EMP during the period and processes practices/innovations leading to improved and sustainable environment in the future.

1.4 Progress of Civil works

Construction work on Package no. 8, 12, 17 and 20 completed in the monitoring period while work on package no 1, 3, 4, 6, 7 and 18 are in progress. The status of construction work under different packages is given below:

Table 2: Progress of Civil works under different packages

Contract Package No.	Name of Districts	Length (km)	Date of commencement	Date of completion	Project progress (%)
1	Almora	43.800	6/1/2013		52%
2	Almora, Bageshwar & Pithoragarh	64.420	2/12/2010	25/12/2012	100%
3	Pithoragarh	59.130	23/3/2009		86.19%
4	Nainital & Champawat	57.260	2/3/2013		57%
5	Nainital	39.600	17/11/2009	31/03/2013	100%
6	Chamoli	53.950	11/05/2010		98.00%
7	Tehri	36.550	15/05/2013		65.00%
8	Tehri	34.000	21/04/2010	31/12/2013	100.00%
9	Tehri	37.792	21/04/2010	13/11/2011	100.00%
10	Tehri	25.013	25/04/2010	15/01/2011	100.00%
11	Tehri	62.310	11/04/2009	31/03/2012	100.00%
12	Tehri	26.493	21/04/2010	31/03/2014	100.00%
13	Haridwar	9.158	21/03/2009	20/09/2010	100.00%
14	Haridwar	39.362	21/03/2009	20/09/2010	100.00%
	Haridwar	32.269	20/05/2009	31/01/2011	100.00%
16	Pauri	60.870	22/11/2009	31/12/2011	100.00%
17	Pauri	62.370	08/02/2010	30/09/2013	100.00%
18	Pauri	47.030	15/04/2010		95.00%
19	Pauri	47.550	1/10/2010	31/03/2010	100.00%
20	Pauri	50.100	1/10/2010	10/03/2014	100.00%

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 56 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), all the contractors have obtained the CTE and COP for Hot mix plant. PWD and civil works contractors have obtained permission under the statutory environmental requirements. Out of the 20 contract packages all the contractors have obtained for establishment of HMP and Consent to Operate (COP).

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 3. (a)	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 3. (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 7	Implement the project accordance with the EARF under ADBs environment policy, 2002, and applicable laws and regulation of	Complied

	the borrower and the state. 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.	
Schedule 5 10. (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 10. (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 11.	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 for the respective contract have designated Environmental Officers for the sound implementation of EMP.

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 on May 23, 2013 at Pauri.

5.0 Approach and methodology engaged for environmental monitoring of the project

Environment is important to ensure that environmental impacts are prevented and mitigated in conformity with the EMP ADB safeguards to ensure that sound road developmental practices are followed for the protection of the environment and social aspects.

In Phase II project work only under contract package 1,3,4,6,7 and 18 is under progress. Construction work is in progress. PWD has commissioned the services of Scott Wilson India Private Limited in association with Rodic Consultants Pvt. Ltd to supervise the construction activity including implementation of Environmental Management Plan by Contractor.

Constant monitoring of EMP implementation on under construction projects is being carried out SC of Garhwal and Kumaon region and PIU. Concerned staff of SC regularly visit the construction sites and report to their Team Leader about issues related to the environment and non-compliances or measures as given in EMP. Necessary directions, in case of non-compliances, are being given to the contractor on the site and through the writings about the procedures to resolve the issues or requirements.

The supervision consultant submits periodic report that includes information on implementation of EMMP. The environmental information captures in these reports includes statutory clearances obtained by contractor, environmental; monitoring status of construction sites, pollution control measures being adopted, and measures for workers safety at construction site and camp site etc.

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.

Env. Components	Parameters	Duration/Frequency of monitoring	Instrument used
Air	SPM, SO ₂ , NO _x , 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)

Out of the 20 packages, works on contract packages no 8,12,17 and 20 were completed during the current monitoring period whereas work on contract packages 1,3 4,6,7 and 18 are ongoing

During the reporting period the environmental monitoring was carried for contract packages 1, 3, 6, 17, 18, and 20. The monitoring results under these packages reveal that the levels observed were within the regulatory limits.

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 other than the non-compliance reported on monitoring of environmental parameters.

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.

9.0 Follow-up actions and conclusions

1. The Contractors of contract packages 1,3, 4 and 7 have been advised to conduct the ambient air, drinking water, and noise monitoring and also to submit the results.
2. Contractors of contract packages 1, 4 and 7 have been instructed to extend the validity of CFO/renew consent for operation of HMP.
3. The civil works contractors have been instructed through the supervision consultants to ensure the usage of PPE for further strengthening the implementation of EMMP.