



Environmental Monitoring Report

Project Number: 47273

Loan Numbers: Tranche 1 – 3171

Tranche 2 – 3221 /3222

Tranche 3 – 3325 /3326

Annual Report

January to December 2016

SRI: Integrated Road Investment Program PIC 03 – Sabaragamuwa, Central Provinces and Kaluthara District

Prepared by the Road Development Authority, Ministry of Higher Education and Highways for the Asian Development Bank.

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Asian Development Bank

ADB Funded Integrated Road Investment Program

(ADB Loan: 3171-SRI(SF))

Annual Environment Compliance Monitoring Report

PIC 03 – Sabaragamuwa, Central Province and Kalutara District



Draft

“Reporting period – January to December 2016

“27th March 2017”

Report prepared by

Egis International In Joint Venture with Consulting Engineers &
Architects Associated (Pvt) Ltd (CEA)

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Asian Development Bank

On behalf of

Road Development Authority

Ministry of Higher Education and Highways



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1. INTRODUCTION

1.1 Background of the Project

The Asian Development Bank's (ADB's) interim country partnership strategy 2015-2016 for Sri Lanka is closely aligned with the priorities of the Sri Lankan government and reconfirms continuing ADB assistance for the development of the transport sector development. Special focus has been made on improvements to existing rural roads which are important for rural development as it provides access to commercial, health, education and other state bodies.

Integrated Road Investment Program or iRoad program also follows above strategy and includes Conventional Road Contracts (CRC) to rehabilitate and improve rural access roads including post construction performance based maintenance. The iRoad program is now in the implementation stage in Southern, Central, Sabaragamuwa, North Central, North Western Provinces and Kaluthara District in Western Province.

Project Implementing Units (PIUs) have been established at Provincial level while three Project Implementing Consultants (PICs) have been established to assist contractors in carrying out civil work contracts. PIC 3 is established to assist civil work contractors in Central, Sabaragamuwa Provinces and Kaluthara district.

There are 328 No. of rural roads spread over 1,344 km in Central, Sabaragamuwa Provinces and Kalutara District of Western Province which are to be rehabilitated and improved under this program. The program is funded by ADB as a Multi Tranche Financing Facility (MFF) loan and is now in to its third tranche. Roads selected in Central, Sabaragamuwa Provinces and Kalutara district in Western Province have been divided in to 18 Contract Packages and these are summarized in Table 1.1.

As per the Environmental Assessment Review Framework (EARF) for iRoad program it is required to prepare an environmental compliance monitoring report on annual basis and this report is prepared to fulfill this requirement. This report covers the period from January to December 2016.

Table 1.1.1: Classification of Project Road Sections (As at 31 of December 2016)

District	No. of Package	PS / (km)	PRDA / (km)	PS & PRDA / (km)	MC / (km)	PS & MC / (km)	UC / (km)	Estate	PS & Estate	PS, PRDA & Estate	PRDA, PS, MC & Estate	Total
Mathale	3	109.9	29.9	24.3	25.8						4.1	194.0
Kandy	3	71.8	72.5	76.7								221.0
Nuwara Eliya	3	61.05	12.5	32.9				2	62.05	9.5		180.0
Kegalle	3	108.36	66.65	41.24			0.87					217.0
Ratnapura	3	28.01	149.44	77.55								255.0
Kalutara	3	232.1	21.1	18.9	1.7	3.2						277.0
Total length/ km	18	611.22	352.09	271.59	27.5	3.2	0.87	2	62.05	9.5	4.1	1344.0

1.2 Objectives of the project

Specific objectives of this project are

- To improve the road condition between rural communities and socioeconomic centres of the Sabaragamuwa, Central Provinces and Kalutara District of Western Province.
- To upgrade and maintain the 1,344km of rural access roads connecting rural communities to all-weather standard,
- To improve connectivity between production centres and market places and improve linkage with the other districts and provinces,
- To facilitate the increase of mobility by improving road network which link up with other provinces,
- To open up rural areas for development,
- To facilitate to generate efficiency gains by lowering the unit cost of individual producers through transport efficiency which will lead to increase their margins and profits thus making them generating another round of investments,

- To reduce rural poverty through improved access to markets and economic centers social, health, and education infrastructure and new employment opportunities.

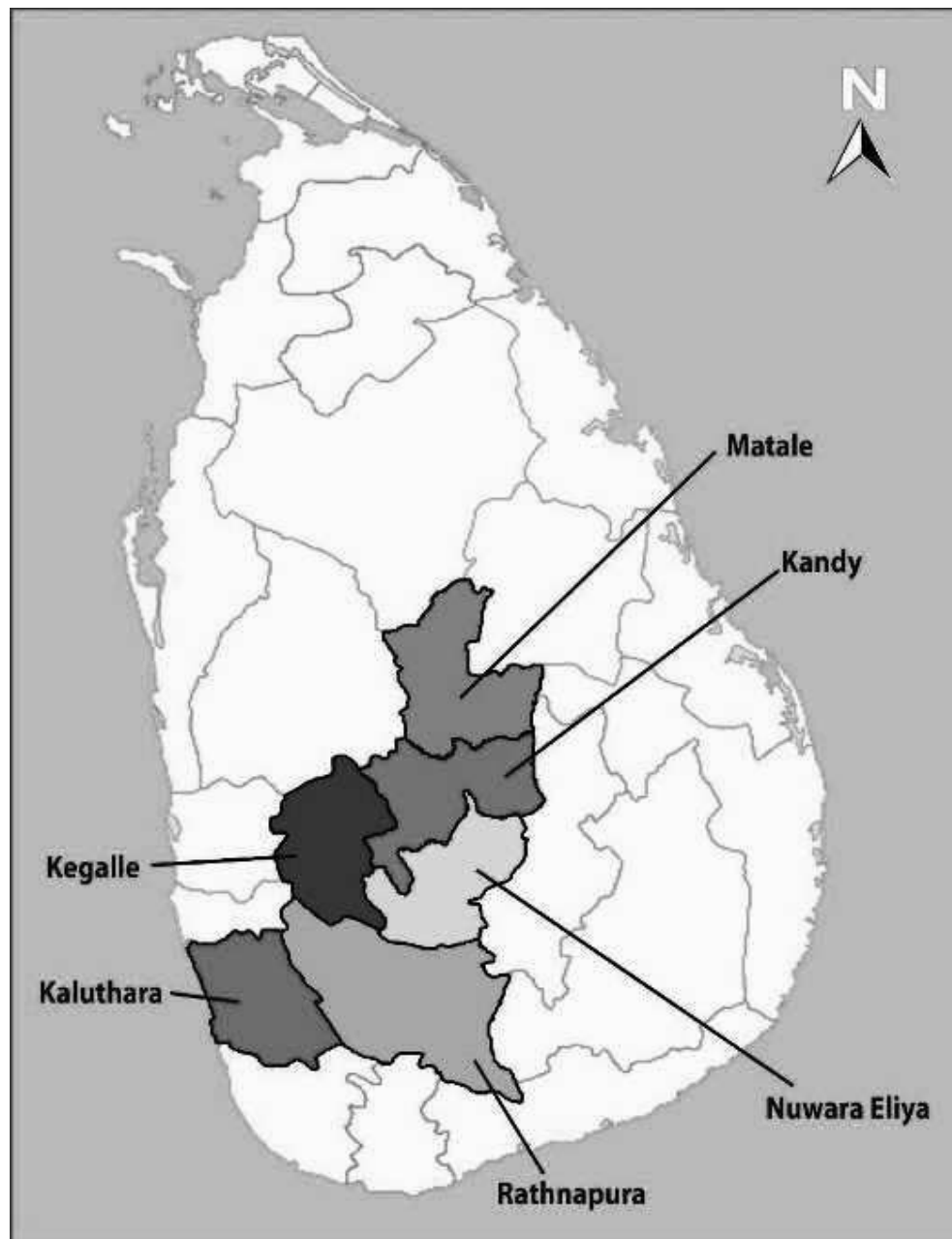
By amplifying the benefits of the country's rural road network, the project will contribute to one of the Government of Sri Lanka's key development goals, which is to reduce all constraints for rapid economic growth and lower poverty levels in the country. It will also improve access to economic opportunities, as well as basic social, health, and education facilities.

In addition, the project will ensure that women are closely involved in the design, improvement, and maintenance of this rural access roads.

1.3 Project locations

There are 6 administration Districts included in projects two and three¹. Those are Matale, Kandy and Nuwara Eliya Districts in Central Province, Kegalle and Rathnapura Districts in Sabaragamuwa Province and Kalutara District in Western Province.

Map1.1: Project Location

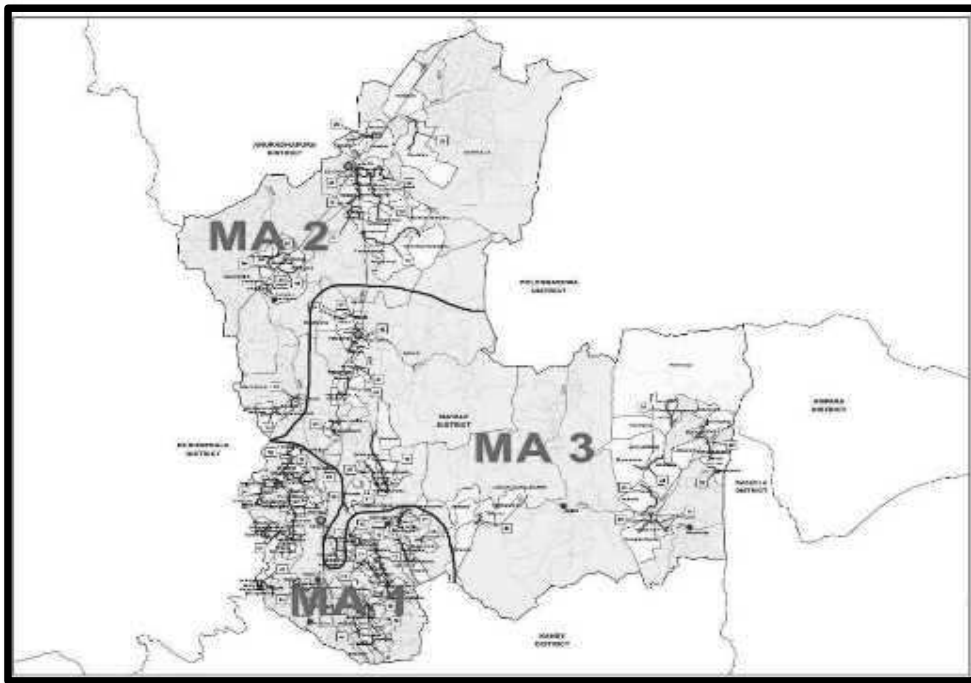


¹ Sabaragamuwa Province and Kalutara district are considered as project two (2) and Central Province as project three (3) of tranche two and in subsequent tranches of the MFF loan.

1.4 Conventional road contracts

The locations of 51 Nos. (194.0km) roads in Matale District are shown in Map1.2 below.

Map1.2: Locations of 51 Nos. (194 km) roads in Matale District

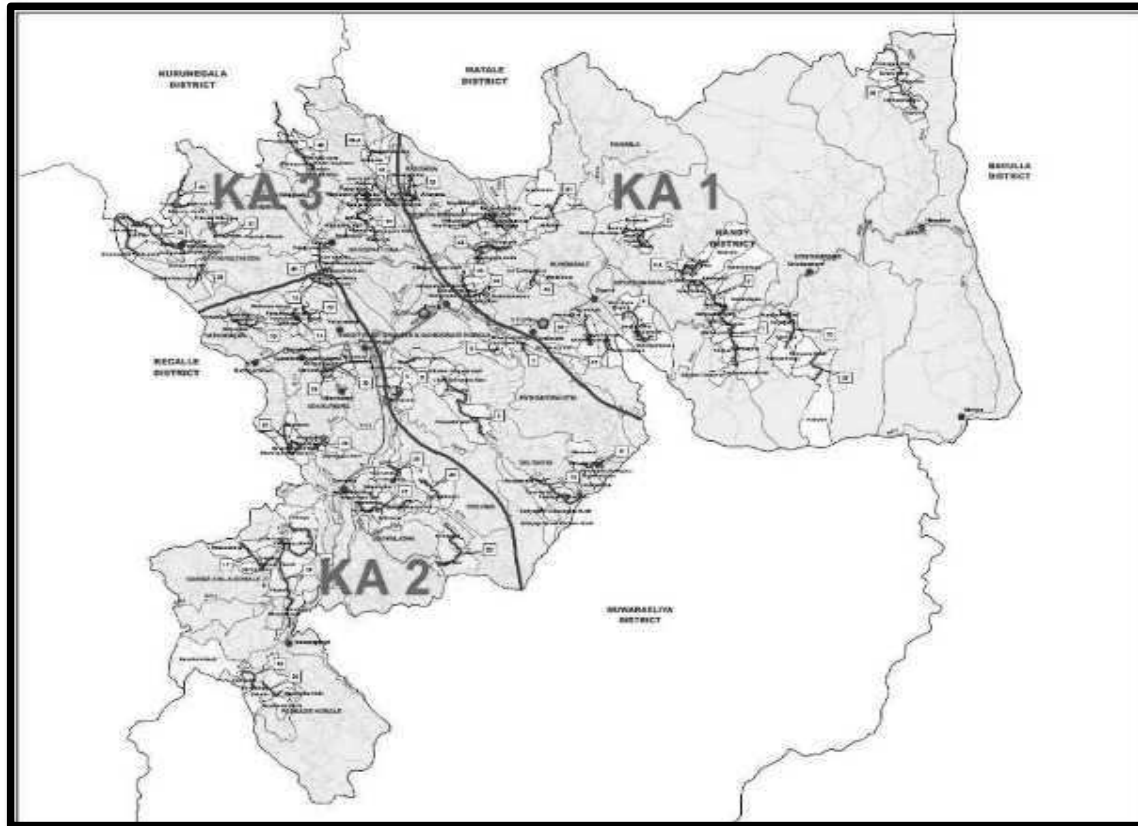


The three (3) CRCs in Matale District are listed in Table 1.2.

Table 1.2 CRCs in Matale District (As at 31 of December 2016)

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of roads civil works in process
MA1	K. D. Ebert & Sons Holdings (Pvt) Ltd	1,622	17.12.2015	18	75.7	6
	Edward and Christie	1,249	17.12.2015	14	57.0	5
	CML-MTD Construction Ltd	1,408	17.12.2015	19	61.3	8
Sub Total Matale District		4,279	-	51	194.0	19

The locations of 50 Nos. (221.0km) roads in Kandy District are shown in Map1.3 below



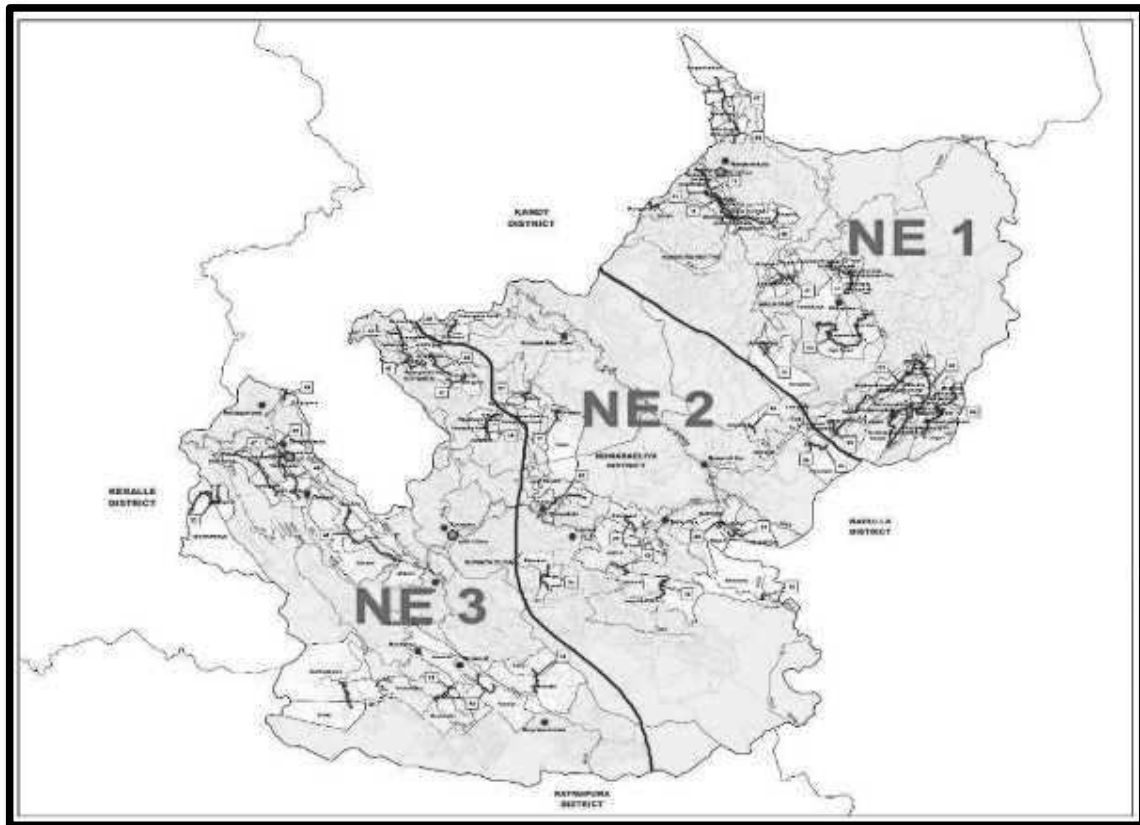
Map1.3. Locations of 50 Nos. (221.0 km) roads in Kandy District

The three (3) CRCs in Kandy District are listed in Table 1.3.

Table 1.3: CRCs in Kandy District (As at 31 of December 2016)

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road	No of roads civil works in process
KA1	Sierra Construction (Pvt) Ltd	1,756	17.12.2015	17	76.2	6
KA2	Sierra Construction (Pvt) Ltd	1,924	17.12.2015	17	70.85	9
KA3	Edward and Christie	2,097	17.12.2015	16	73.95	7
Sub Total Kandy District		5,777	-	50	221.0	22

The locations of 43 Nos. (180.0 km) roads in Nuwara Eliya District are shown in Map1.4 below



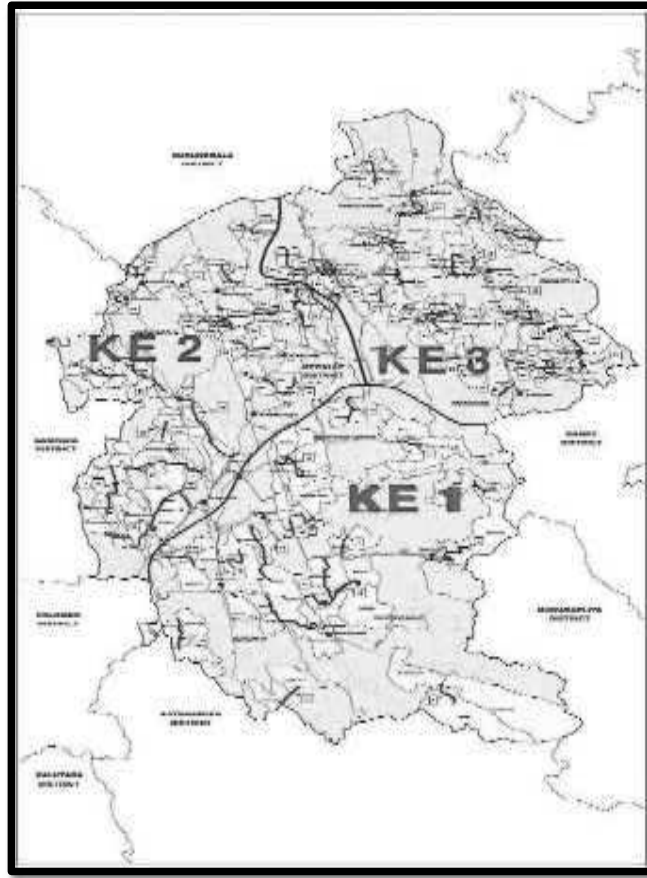
Map1:4. Locations of 43 Nos (180.0 km) roads in Nuwara Eliya District

The three (3) CRCs in Nuwara Eliya District are listed in Table 1.4.

Table 1.4 CRCs in Nuwara Eliya District (As at 31of December 2016)

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of roads civil works in process
NE1	Sierra Construction (Pvt) Ltd	2,298	17.12.2015	14	76.6	8
NE2	Sierra Construction (Pvt) Ltd	1,242	17.12.2015	14	38.5	6
NE3	Sierra Construction (Pvt) Ltd	2,070	17.12.2015	15	64.9	8
Sub Total Nuwara Eliya District		5,610		43	180.0	22

The locations of 63 Nos. (217.0 km) roads in Kegalle District are shown in Map1.5 below



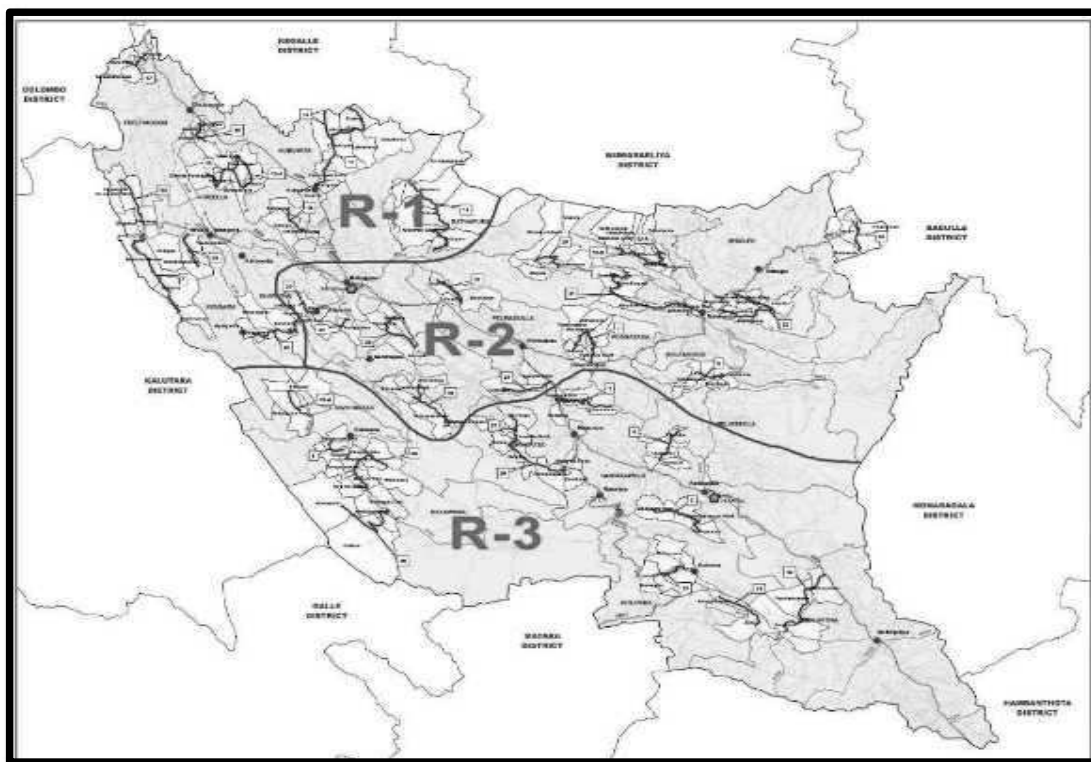
Map1.5. Locations of 63 Nos. (217.0 km) roads in Kegalle District

The three (3) CRCs in Kegalle District are listed in Table 1.5.

Table 1.5. CRCs in Kegalle District (As at 31 of December 2016)

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of roads civil works in process
KE1	K. D. Ebert & Sons Holdings (Pvt) Ltd	1,973	17.12.2015	17	74.75	5
KE2	Nawaloka Construction (Pvt) Ltd	1,817	17.12.2015	21	78.25	2
KE3	Nawaloka Construction (Pvt) Ltd	1,632	17.12.2015	25	64.12	2
Sub Total Kegalle District		5,422	-	63	217.0	9

The locations of 38 Nos. (255.0km) roads in Ratnapura District are shown in Map1.6 below



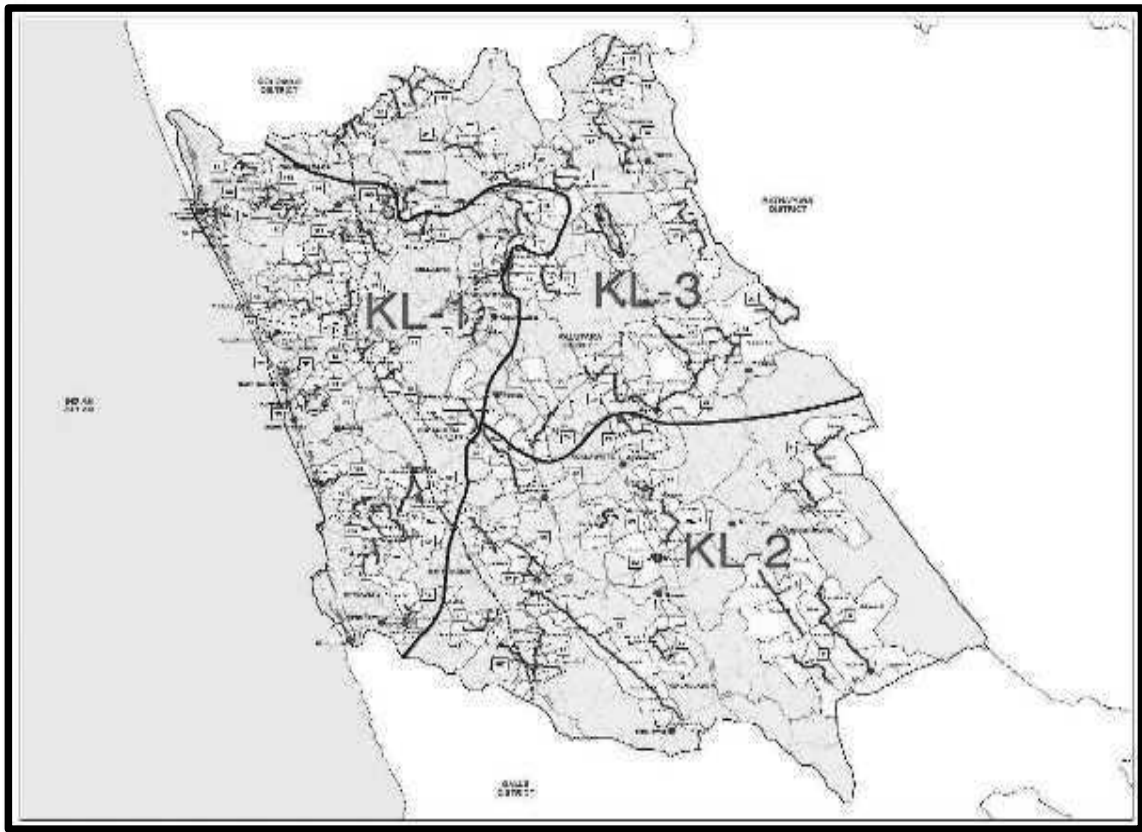
Map1.6. Locations of 38 Nos (255.0 km) roads in Ratnapura District

The three (3) CRCs in Ratnapura District are listed in Table 1.6.

Table 1.6 CRCs in Ratnapura District (As at 31 of December 2016)

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of roads civil works in process
R1	K. D. Ebert & Sons Holdings (Pvt) Ltd	2,022	17.12.2015	12	82.95	3
R2	K. D. Ebert & Sons Holdings (Pvt) Ltd	2,384	17.12.2015	14	91.7	7
R3	RR Construction (Pvt) Ltd	2,021	17.12.2015	12	80.35	5
Sub Total Ratnapura District		6,427		38	255.0	15

The locations of 83 Nos. (277.0km) roads in Kalutara District are shown in Map1.7below



Map1.7. Locations of 83 Nos. (277.0 km) roads in Kalutara District

The three (3) CRCs in Kalutara District are listed in Table 1.7.

Table 1.7CRCs in Kalutara District (As at 31of December 2016)

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length	No of roads civil works in process
KL1	Maga Engineering (Pvt) Ltd	1,926	28.08.2016	42	94.0	02
KL2	Olympus Construction (Pvt) Ltd with Rani Construction (Pvt) Ltd	1,811	29.09.2016	19	89.0	01
KL3	Olympus Construction (Pvt) Ltd with Rani Construction (Pvt) Ltd	1,817	29.09.2016	22	94.0	00
Sub Total Kalutara District		5,554		83	277.0	03

1.5 Consultancy services for project implementation

Egis-CEA (JV) has been appointed as the Project Implementing Consultant (PIC) of the projects 2 and 3, from 15th November 2015 as the PIC03.

The PIC shall monitor and ensure that all the requirements of the construction contract are adhered by the contractor. And in case of any discrepancy/ deviation the PIC shall instruct the contractor to undertake corrective action. The contracts are governed under the International Federation of Consulting Engineers (FIDIC) construction contract conditions of contract for building and engineering works designed by the employer, DB Harmonized Edition, June 2010.

The duties and responsibilities of the consultants are being set out in the Terms of Reference (TOR) provided in the contract for consultant's services as follows:

- a) Oversee the activities of the Contractors during the design development and execution of the construction of the projects.
- b) Review and approve contractors' detailed designs and the cost for each civil work contract.
- c) Safeguard compliance monitoring.
- d) Project performance and monitoring survey.
- e) Prepare and implement local and overseas capacity development program for staff of implementation agency.
- f) To train counterpart staff from the client's organizations.
- g) Reporting requirements.

1.6 Purpose and structure of the report

As the Section VI, para 52 of Environmental Assessment and Review Framework (EARF) on "Monitoring and Reporting" it is required to prepare an Annual Monitoring Report on the Environmental safeguard complaints of the project.

It overviews the conducted environmental safeguard activities by the PIU, PIC and Contractors during the reporting period (1st January 2016 to 31st December 2016) and describe the environment safeguard monitoring process executed by the PIU and PIC.

1.7 Overview of institutional framework

The Executing Agency (EA) of the iRoad Investment Program is Ministry of Higher Education and Highways (MOHEH) and the implementing Agency is the Road Development Authority (RDA) Project Implementing Consultant (PIC) for Central, Sabaragamuwa Provinces and

Kalutara District of Western Province.is Egis-CEA JV. The overall project organization chart is given below.

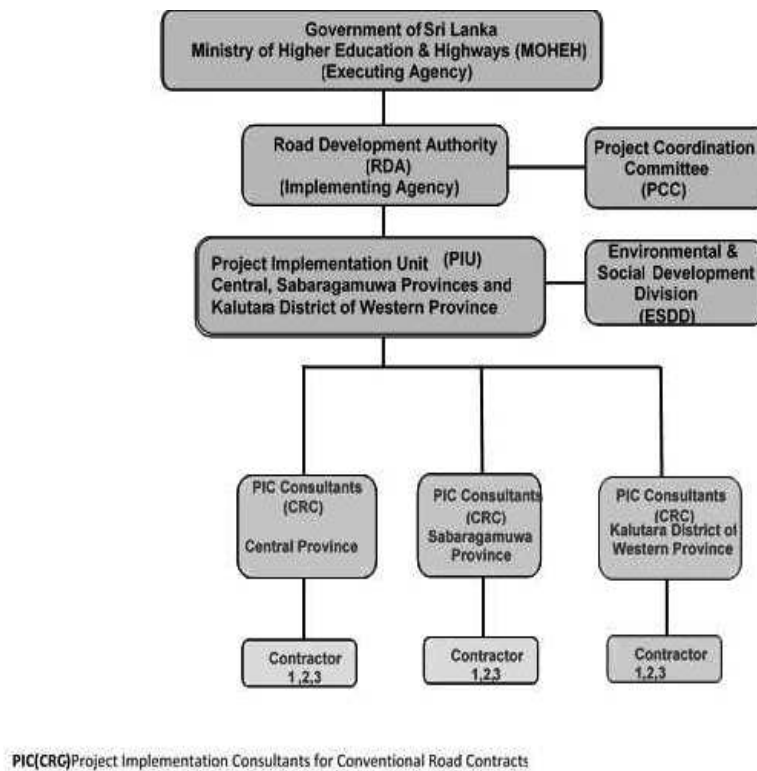


Figure 1. 1 Overall Organizational Chart for Central, Sabaragamuwa provinces and Kalutara District of Western province

PIC is headed by Team Leader (TL) assisted by Resident Engineers for each district with Assistant Resident Engineers, Construction Engineers & Technical Officers. A full time Environmental Specialist (ES) and Social, Gender and Resettlement Specialist (SGRS) directly assist the TL on environment, Social/ Gender and resettlement aspects.

Duties of Environmental Specialist are;

- Assist in reviewing the Environmental checklists and contract package specific EMPs for all project roads and ensure that they have been prepared in accordance with requirements of the environmental assessment and review framework (EARF) for all tranches.
- During preparation of subsequent tranche ensure all nominated roads comply with the selection criteria provided in the EARF and prepare due diligence reports on 20% of randomly selected sample of roads for all ongoing project tranches.
- Check compliance of the IEE and standard EMP prepared by SAPE team with requirement of the EARF

- d) The contract package specific EMP with requirement of the EARF and respective province level IEE
- e) Prepare monitoring report on an annual basis based on monitoring checklists completed for each project road during pre- construction and post construction or operation stage

To carry out his duties following staff members from PIU, PIC and Contractors assisting him.

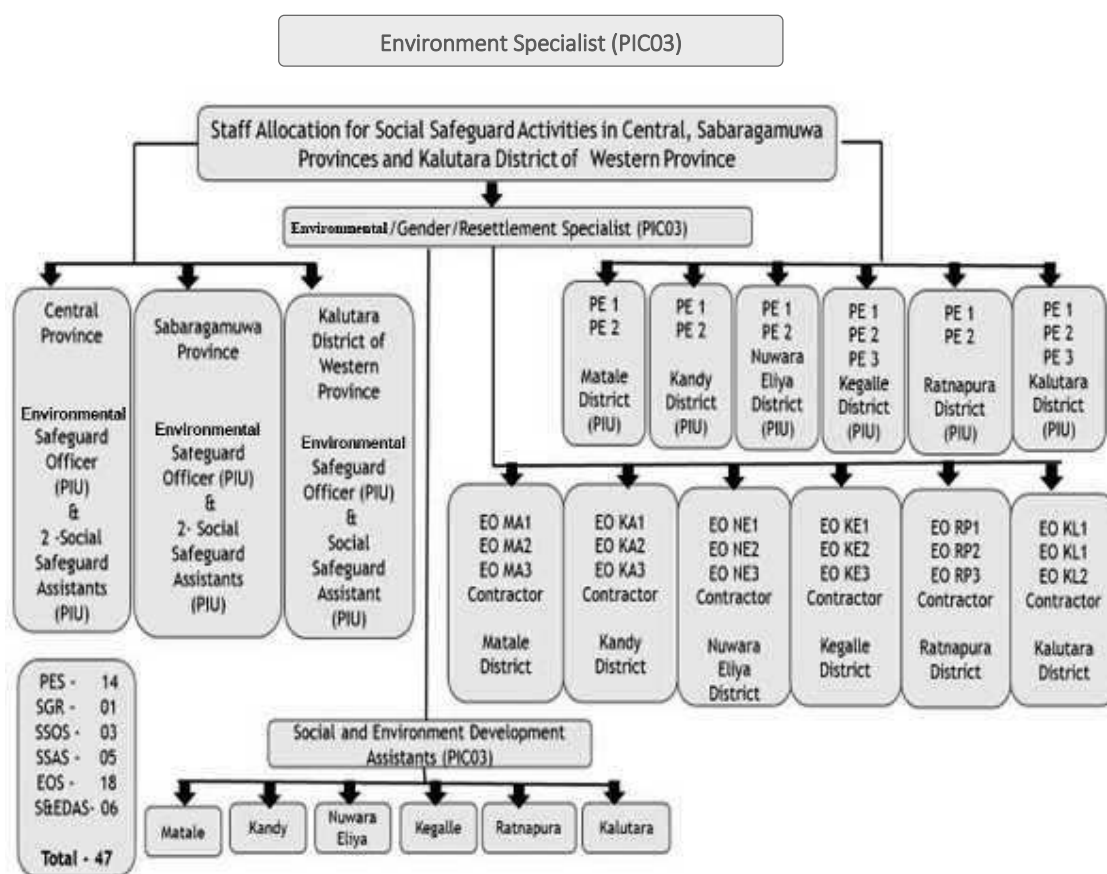


Figure 1. 2 Staff Allocation for Environmental Activities in Central, Sabaragamuwa Provinces and Kalutara District of Western Province

Other than above staff CSD and Safeguards Specialist (Contract No. TA8473) and ESDD staff also give their support in training field staff by exchanging their experiences in PIC-1 and PIC-2.

2. OVERALL PHYSICAL PROGRESS OF 18 PACKAGES

All contract packages from Central province ,package 1 in Kegalle district and all packages in Rathnapua District of Sabaragamuwa Provinces commenced on 17th of December 2015, Package 2 and Packages 3 in Kegalle commenced on 29 March 2016 and in Kalutara district package

commenced on 28th of August 2016 and package 2 and package 3 commenced on 29th of September 2016. Overall physical progress of above Districts are as follows.

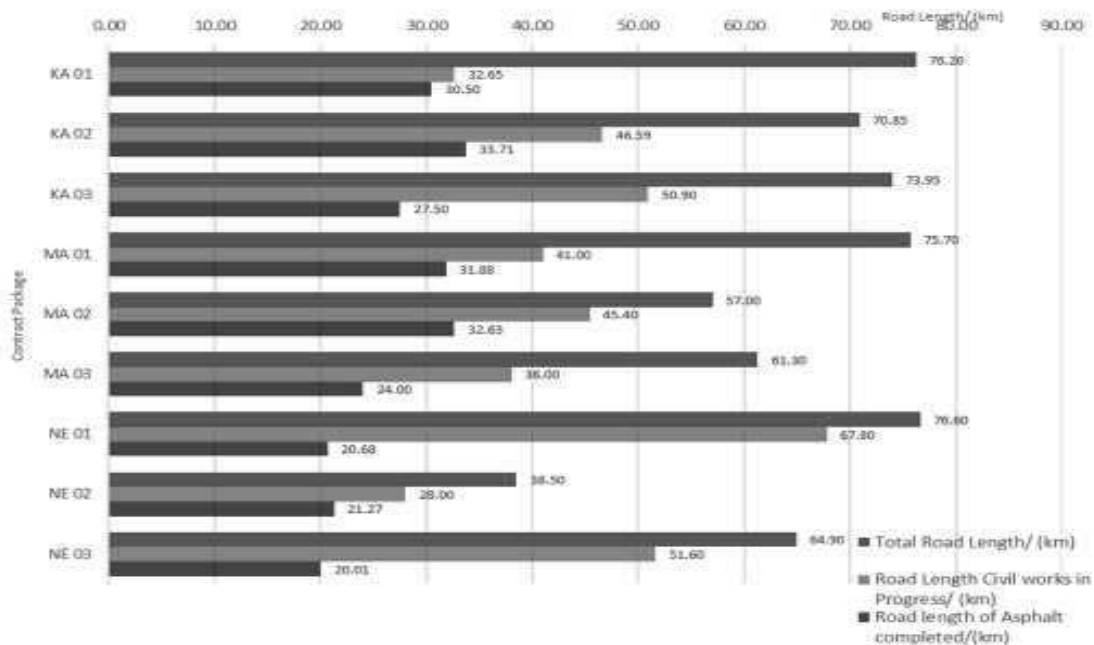
2.1 Overall Physical Progress of Central Province

Table 1.8 Overall Physical Progress of Central Province (As at 31st of December 2016)

Package No.	Contractor	Accepted Contract Amount/ (Rs. Million)	No. of Roads	Roads Length/ (km)	No.of Roads; Civil Works in Progress	Asphalt Completed /(km)	Physical Progress as at 30 th of November- 2016 Actual (%)	Physical Progress; Cumulative Status up to 31 st of December-2016 / (%)	
								Target (Revised)	Actual
KA1	Sierra	1,756	17	76.2	12	30.50	35.03	42.88	41.03
KA2	Sierra	1,924	17	70.85	12	33.71	44.81	56.03	49.82
KA3	Edward & Christie	2,097	16	73.95	10	27.50	33.57	64.53 (39.38)	38.21
MA1	KD Ebert	1,622	18	75.7	10	31.88	31.07	52.43 (35.33)	35.18
MA2	Edward & Christie	1,249	14	57	10	32.63	43.40	35.85	48.53
MA3	CML-MTD	1,408	19	61.3	12	24.00	36.01	47.82 (39.37)	40.27
NE1	Sierra	2,298	14	76.6	12	20.68	36.40	42.00	40.50
NE2	Sierra	1,242	14	38.5	9	21.27	57.00	53.89	63.00
NE3	Sierra	2,070	15	64.9	11	20.01	44.00	46.28 (47.68)	46.92
Total/Avg.		15,666	144	595	98	242.18	40.14	43.60	44.83

Graphical presentation of Overall Physical Progress of Central Province

Graph 1.1 Overall Physical Progress of Central Province (As at 31 of December 2016)



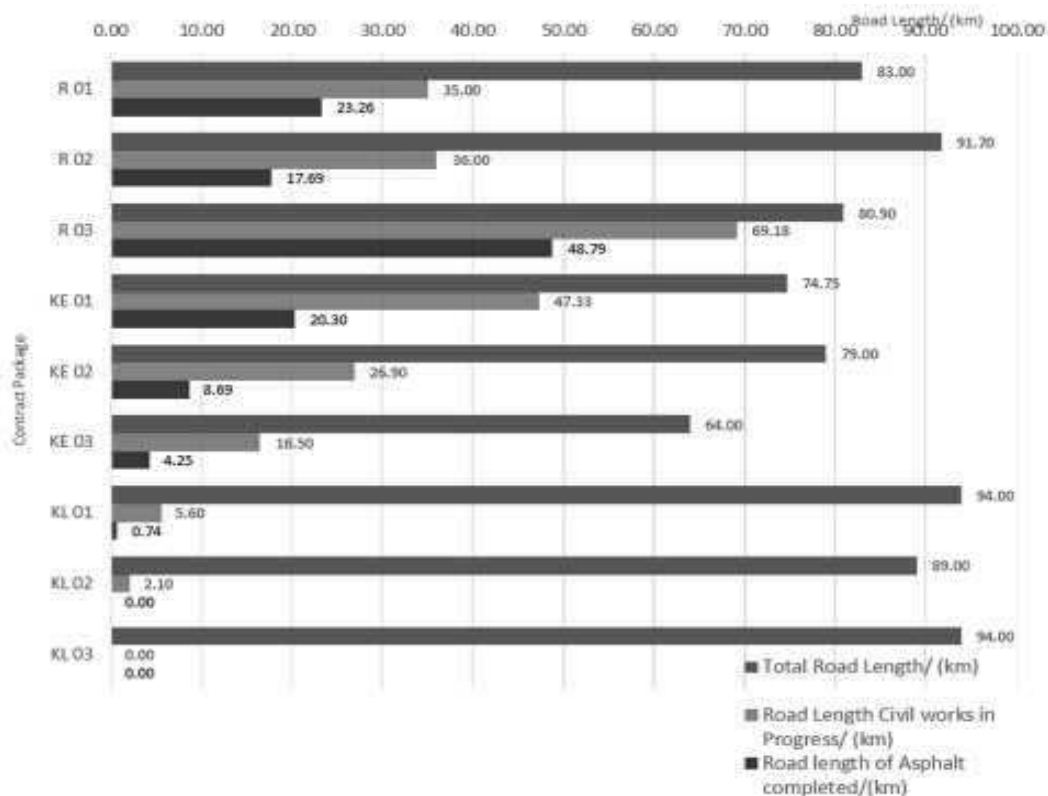
2.2 Overall Physical Progress of Sabaragamuwa Province

Table 1.9 Overall Physical Progress of Sabaragamuwa Province (As at 31 of December 2016)

Package No.	Contract or	Accepted Contract Amount/ (Rs. Million)	No. of Roads	Road Length/ (km)	No. of Roads; Civil Works in Progress	Asphalt Completed / (km)	Physical Progress; Cumulative Status up to 30 th November/ (%)	Physical Progress; Cumulative Status up to 31 st of December 2016 / (%)	
								Target (Revised)	Actual
R1	KD Ebert	2,022	12	83	10	23.26	27.45	46.48 (33.37)	31.60
R2	KD Ebert	2,384	14	91.7	9	17.69	23.51	48.89 (28.97)	27.10
R3	RR Cons.	2,021	12	80.9	10	48.79	44.68	71.30 (51.87)	53.15
KE1	KD Ebert	1,973	17	74.75	11	20.30	24.78	43.65 (33.07)	29.39
KE2	Nawaloka	1,817	21	79	10	8.69	14.14	31.00 (24.73)	17.73
KE3	Nawaloka	1,632	25	64	10	4.25	5.22	29.00 (22.11)	8.61
Total/ Avg.		11,849	101	473.35	60	122.98	23.30	32.42	27.93

Graphical presentation of Overall Physical Progress of Sabaragamuwa Province

Graph 1.2 Overall Physical Progress of Sabaragamuwa Province (As at 31 of December 2016)



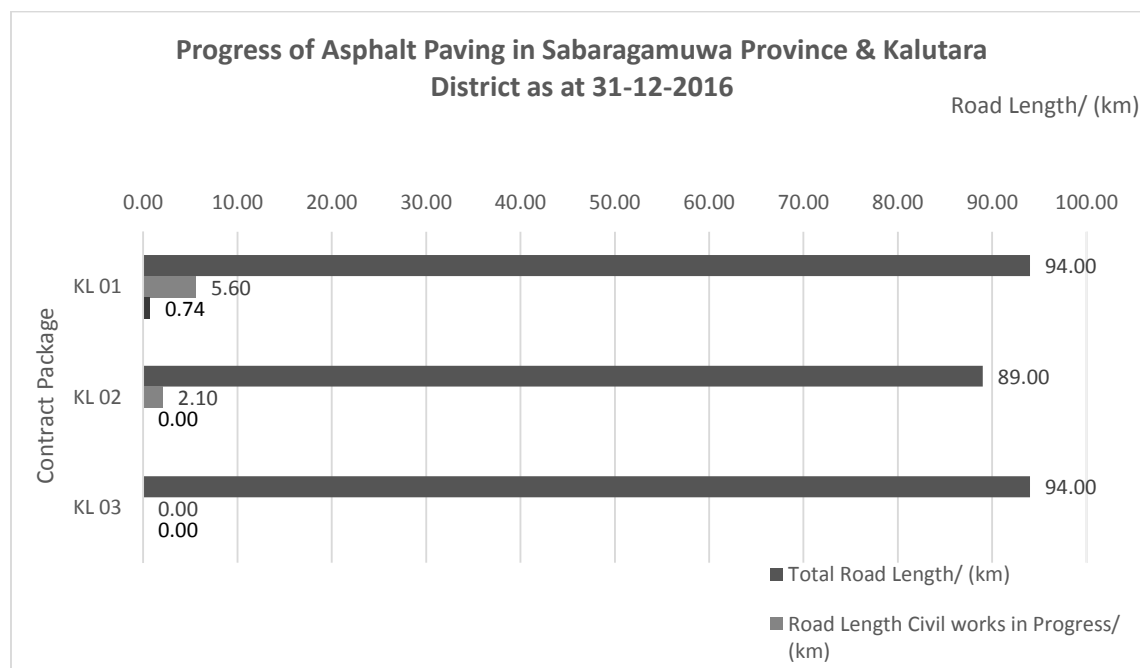
2.3 Overall Physical Progress in Kalutara District of Western Province

Table 1.10 Overall Physical Progress in Kalutara District of Western Province (As at 31 of December 2016)

Package No.	Contractor	Accepted Contract Amount/ (Rs. Million)	No. of Roads	Road Length/ (km)	No. of Roads; Civil Works in Progress	Asphalt Completed / (km)	Physical Progress; Cumulative Status up to 30 th November/ (%)	Physical Progress; Cumulative Status up to 31 st of December 2016 / (%)	
								Target (Revised)	Actual
KL1	Maga	1,926	42	94	2	0.74	0.67	2.65	1.10
KL2	OCPL Jv RCPL	1,811	19	89	1	0	0.00	8.72	0.03
KL3	OCPL Jv RCPL	1,817	22	94	0	0	0.00	7.66	0.00
Total/ Avg.		5,554	83	277	3	0.74	0.22	6.34	0.38

Graphical presentation of Overall Physical Progress in Kalutara District of Western Province

Graph 1.3 Overall Physical Progress in Kalutara District of Western Province (As at 31 of December 2016)



3 COMPLIANCE WITH ENVIRONMENT SAFEGUARDS REQUIREMENTS IN THE LOAN DOCUMENTS

The environmental safeguards requirements stipulated in the loan agreement (Tranche), updated FAM (August 2015) and EARF.

3.1 Compliance with respect to provisions in the loan agreement

Sabaragamuwa province and Kalutara district are considered project 2 while Central province is considered as project 3 of Tranche 2 and in subsequent tranches. The requirements stipulated in the loan agreement of Tranche 3, have been or are being complied with as detailed in the below table 3.1

Table 3.1 Compliance with environmental safeguards requirement stipulated in loan agreement

Item/ Section/ Schedule	Description	Status of Compliance
Schedule 4 Condition of award of contract	5. The Borrower shall not award any Works contract which involves environmental impacts until RDA has (a) Obtained the final approval of the IEE from CEA and (b) Incorporated the relevant provisions from the EMP into the Works contract	Clearance from CEA has been obtained by RDA on province basis for Central Sabaragamuwa province and Western province for project implementation. Standard EMPs developed in province level IEEs were incorporated in to the relevant province Works contracts
Schedule 5 Safeguards	2.The Borrower shall ensure, or cause RDA to ensure, that the preparation design construction, implementation , operation and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environmental , health and safety, (b) the Environmental Safeguards as set out in ADB's Safeguard Policy Statement;(c)	.These conditions are being follows by all designs and construction staff of contractors and PIC staff and PIC staff monitor weather these conditions are follows by the constructor's staff

Item/ Section/ Schedule	Description	Status of Compliance
	the EARF and IEE's (d) all measures and requirements set forth in a Safeguards Monitoring Report	
Schedule 5 Safeguards-Related Provisions in Bidding Documents and Works Contracts	<p>6.The Borrower shall ensure, or cause RDA to ensure that all bidding documents contain provisions that require Contractors to:</p> <p>(a) comply with the measures relevant to the contractor set forth in any safeguards document (including relevant IEEs, EMPs and road specific EMPs), and any corrective or preventative actions set forth in the Safeguards Monitoring Report;</p> <p>(b) make available a budget for all such safeguard measures; and</p> <p>(c) provide the Borrower with a written notice of any unanticipated environmental, resettlement or small ethnic community peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEEs, EMPs and any other safeguard plans.</p>	To ensure the above conditions, the Borrower included relevant clauses to the agreement signed between RDA and Contractors.
Schedule 5 – Safeguards Monitoring and Reporting	<p>7, The Borrower shall do the following or cause RDA to do the following:</p> <p>(a) Annual Environmental Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEEs, EMPs, and any</p>	<p>First annual Environmental Safeguard monitoring report for period from January to December 2016 is submitted on March 2017</p> <p>Unanticipated environmental and/or social risks and impacts were not raised during the construction, implementation or</p>

Item/ Section/ Schedule	Description	Status of Compliance
	safeguard documents, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan	operation of the Project that were not considered in the IEEs, EMPs, and any safeguard documents up to now
Loan Agreement (Ordinary Operations) numbered 3325-SRI Clause - 32	The environment component of Tranche 3 has been categorized as category B such as Tranches 1 and 2.	Accordingly, three IEEs for Central, Sabaragamuwa and Western province have been prepared by the RDA

3.2 Compliance with Requirements in the Environmental Assessment Review Framework (EARF)

EARF guide selection, screening categorization impact assessments, projects implementation and monitoring of environment safeguards according to requirements of the Government of Sri Lanka (GoSL) as well as the ADB safeguard Policy Statements (SPS). The requirements stipulated in the EARF have been or are being complied with as detailed in the below table 3.2

Table 3.2 Compliance with Environmental Assessment Review Framework (EARF)

Item/ Section/ Schedule	Description	Status of Compliance
II, LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY A, GoSL legal framework on environmental safeguards	7. The National Environment Act (NEA) No. 47 is the key environmental policy framework which is administered through the Central Environment Authority (CEA) of the Ministry of Environment and Renewable Energy (ME & RE). NEA No. 47 was enacted in 1980 and NEA amendment Act No. 56 of 1988 stipulated the regulations for assessing and managing environmental impacts and obtaining the environmental clearance in a timely and systematic manner. The environmental clearance process is implemented through the designated Project	Environmental Clearances have been taken by RDA in province basis for Central, Sabaragamuwa and western province.

Item/ Section/ Schedule	Description	Status of Compliance
	<p>Approving Agency (PAA) as prescribed by the Minister under section 23 Y of the NEA. The procedure that should be followed for obtaining environmental clearance is described under section 23CC and 32 of the NEA.</p> <p>8. The environmental clearance process should be initiated by submitting the completed Basic Information Questionnaire (BIQ) to CEA with preliminary information about the project including exact locations of the project components, extent and environmental sensitivity related to project activities. Based on this CEA decides whether the project is a “Prescribed Project”² or not and who the PAA will be for administering the IEE or EIA process to obtain environmental clearance if the proposed project is a prescribed project.</p> <p>9. The scope of the investment program includes rehabilitation and upgrading of existing rural and national roads with no widening. According to the Gazette Extra-Ordinary No. 772/22 of 24th June 1993 and subsequent amendments all rehabilitation works for existing highways</p> <p>² Under the NEA, a prescribed project means that the project requires a full Initial Environmental Examination or Environmental Impact Assessment (EIA) study depending on the TOR issued by CEA for securing the environmental clearance and roads do not fall within the category of Prescribed Projects. Hence, it is likely that the project roads under the investment program will not be required to prepare an IEE or EIA for securing an environmental clearance</p>	<p>As existing roads are only rehabilitated and improved within the existing road corridors under the investment program, it is likely that the project roads or improvement works does not fall within the prescribed list of projects under NEA which require an environment assessment.</p>

Item/ Section/ Schedule	Description	Status of Compliance
	<p>10 If a project road falls adjacent to the boundary or inside a protected area, necessary clearance will need to be sought from the Department of Wildlife Conservation (DWLC) and the Forest Department even if there will be no widening of the road ROW. Depending on the sensitivity of the protected area, the DWLC and Forest Department may require conduction of an IEE or EIA study for the respective road. No works are allowed in project roads falling inside Strict Nature Reserves</p> <p>11 While the NEA is key environmental legislation under GoSL there are a number of other environmental laws and regulations that are applicable to the investment program as given in Annex --</p> <p>15, The Project Implementation Unit (PIU) under RDA, MOHPS is responsible for overall conduction of environmental assessments, implementation and monitoring of environment safeguards for specific project roads under the investment program. Within RDA there is a separate unit, the Environment and Social Development Division (ESDD) to cover social and environment safeguards. The division is responsible for developing manuals and guidelines, providing assistance in conduction of proper safeguard assessments, and implementation and monitoring of environment and social safeguards in accordance with environmental policies of GoSL and donor agencies. However, since ESDD is responsible for all projects under RDA and given the large scale of the investment program this division will not have adequate time and resources to implement and monitor</p>	<p>None of the project road falls adjacent to the boundary or inside a protected area. Hence clearance is not required from the Department of Wildlife Conservation (DWLC) and the Forest Department</p> <p>All the conditions stipulated in the NEA and other related National laws regulations list in Annex 1 are being followed by all design and construction staff of contractor and PIC staff. Also the PIC staff monitor whether these conditions are established in ground by the constructor's staff (during construction works).</p> <p>RDA has appointed safeguard team under the guidance of ESDD of the RDA, this safeguard team comprise one Environmental Safeguard Officer(ESO), one Social Safeguard Officer(SSO), one Environmental Safeguard Assistant(ESA) two Social Safeguard Assistants (SSA)</p>

Item/ Section/ Schedule	Description	Status of Compliance
	<p>safeguards for the investment program. Therefore, a separate safeguards team dedicated to the investment program will be created within the PIU for managing safeguards. ESDD will provide technical support and monitor the implementation of safeguards under the investment program on a biannual basis as necessary</p> <p>16 The safeguards team will comprise of sufficient social and environment safeguards officers as necessary to cover the quantum and geographic distribution of works in all provinces under the investment program. The safeguards team will be supported by a team of environmental consultants under the Project Implementation Consultants (PIC) for daily monitoring of EMP implementation and compilation of monitoring checklists and reports. Environmental assessments for succeeding tranche's will be carried out by a Survey and Preliminary Engineering (SAPE) team under RDA. A detailed safeguards training workshop will be conducted for the PIU, safeguards team, SAPE and PIC to clarify the roles and responsibilities of each party, method of consultation and record keeping and reporting requirements before the conduction of environmental assessment studies for each tranche. After the award of civil works contract and before the start of physical works another training</p>	<p>for central province, one ESO, one SSO, one ESA one SSA for Sabaragamura province and one SSO, one ESA and SSA for Western province. The ESO for Western Province had to leave due to a personal health issue.</p>
III ANTICIPATED ENVIRONMENTAL IMPACTS	<p>During the construction phase activities such as removal and re-establishment of public utilities; removal of road side trees, mining of gravel and sand; quarrying of metal; transportation of construction materials;</p>	<p>EMAP submitted by each and every contract consists these possible impacts with specific locations and mitigations measure for the impacts. Implementation of</p>

Item/ Section/ Schedule	Description	Status of Compliance
	<p>disposal of construction waste; establishment of construction material processing plants, storage yards, labor camps, vehicles and equipment service yard and other facilities will have to be implemented. These activities can cause several negative impacts on the local environment in the form of air pollution, water pollution. Generation of noise, soil erosion, generation of solid waste, loss of vegetation and aesthetic beauty and safety issues as people and vehicles will still be using the road during construction. Mitigation measures that will be implemented to address these issues will include but not be limited to: wet spraying to control dust; limiting working hours to minimize disturbance; regular maintenance of construction vehicles and equipment; proper disposal of construction debris; maintenance of proper hygiene and safety standards and facilities in the camps and working areas; development and implementation of erosion control and silt management measures, compensatory afforestation and enforcement of road safety measures for local people and traffic</p> <p>If any of the roads fall inside or near protected areas such as national parks, wildlife sanctuaries or other forms of conservation areas, proper consultation will be held with the respective national and local wildlife authorities. To the extent possible all efforts will be made to include technical measures in the road design to minimize or mitigate negative impacts on wildlife and enhance habitat conditions or migratory pathways for wildlife</p>	<p>EMAP is a contractual agreement between contractors and RDA.</p> <p>None of the roads in Sabaragamuwa, Central Provinces and Kalutara district fall inside or near protected areas such as national parks, wildlife sanctuaries or other forms of conservation areas.</p>

Item/ Section/ Schedule	Description	Status of Compliance
	<p>26. During the operation and maintenance phase minor physical works will still be implemented such as clearing drains, filling of potholes, maintaining saplings that were planted and others. The improved road conditions will result in increased number as well as speed of vehicles. This can cause an increase in accidents and other safety issues. Minor increase in greenhouse gas (GHG) emissions and noise can also be expected from the increased traffic. The contractor will be responsible to ensure that all road safety measures such as speed breakers, safety signs and others are well maintained for a period of three years for the case of the rural roads and seven years for the case of the case of the national road. Compensatory afforestation is expected to offset the increased GHG emissions up to a certain extent. If noise levels exceed the prescribed standards the contractor will be responsible for implementing suitable mitigation measures such as construction of noise barriers and others.</p>	<p>Road Safety Audits have been carried out to ensure contractors include necessary designs and signage on road user safety.</p>
<p>IV ENVIRONMENTAL ASSESSMENT PROCEDES C. Environmental Assessment and Environmental Management Plan</p>	<p>33 For this investment Program, since there a large number of short roads Preparation of individual IEE's for each and every road will be difficult and time consuming. Hence one IEE report will be prepared per province based on information collected in the environment checklists.</p> <p>34. The environment checklists with annexes on trees, utility structures, community structures, strip plans and photographs will be completed for each end every road. Based on the completed environment checklists for each road including bridges, one IEE report will be prepared for each province. However, the report must clearly present information and</p>	<p>IEEs were prepared by RDA in provincial basis for Central, Sabargamuwa and Western province.</p> <p>Environmental checklists were prepared for each and every road under projects 2 and 3.</p> <p>During the reporting period 16 EMAPs were submitted by Contractors to PIC. PIC has accepted these EMAPs after reviewing.</p>

Item/ Section/ Schedule	Description	Status of Compliance
	<p>issues that may be unique to a district or geographic area or project road. All sensitive issues identified in the environment checklists for each project road must be clearly documented in the IEE report. The IEE report will include one general or standard EMP that will cover all impacts and mitigation measures possible within the respective province. Contract package specific EMP's will be prepared by the contractor by referring to the standard EMP, road specific information in the environmental checklists and the detailed design (level 1 design). The province level draft IEE report including standard EMP will be prepared in accordance with Safeguard Requirement one of the SPS and submitted to ADB for review and approval in a timely manner to allow disclosure of the draft final report on the ADB website before the Management Review Meeting (MRM) or approval of the respective tranche (if there is no MRM). The road specific EMP prepared by the contractor will be reviewed and approved by the PIC and/or the PIU prior to the start of any physical works by respective contractor</p>	
<p>V. CONSULTATION, INFORMATION DISCLOSURE AND GRIEVANCE REDRESS MECHANISM A. Public Consultation</p>	<p>37. The public consultation and information disclosure is an important part of the environmental safeguard requirements under ADB SPS (2009). In addition, the NEA of GoSL also considers stakeholder engagement as a key element for successful management of environmental impacts.</p> <p>38. Meaningful public consultations will be held early on and continuously throughout the project development stage to allow the incorporation of relevant views of the stakeholders in the final project road design,</p>	<p>Effective public consultation process implemented project designing stage while preparing IEE reports, Environmental Checklists and during the transect works.</p> <p>Public consultation also done during joint inspections by PIU, PIC and contractor for each road before</p>

Item/ Section/ Schedule	Description	Status of Compliance
	<p>mitigation measures, implementation issues, and enhance the distribution of benefits. Stakeholders will include project beneficiaries, local affected people, government bodies, and non-governmental organizations. The consultations must encourage participation of women and vulnerable groups (handicapped people, senior citizens, school children) and engage as many stakeholders as possible.</p> <p>39. Consultations will be carried out in environment free influences and will be done during conduction of transect walk while completing the environment checklists and/or through focus group discussions and/or household level or key person interviews which will start with the description of the project road design and initial identification of potential impacts. Feedback and recommendations received during the consultations will be addressed and where relevant incorporated in the environmental assessment and EMP. These consultations must be completed before finalization of the respective Periodic Financing Request (PFR) and all proceedings documented clearly in the IEE report.</p>	<p>construction (during initial awareness meetings).</p> <p>Complied with in under road packages of PIC3.</p>

Item/ Section/ Schedule	Description	Status of Compliance
A. Information Disclosure	<p>According to the requirements of the ADB SPS, for environment category B project roads the respective draft IEE will be disclosed before the Management Review Meeting (MRM) or equivalent meeting or approval of the respective tranche, if there is no MRM. Signboards with project information including details on nature of construction work, road length, construction period, name of contractor, contract sum and contact information for reporting complains or grievances will be posted in three languages (Sinhala,Tamil and English) for rural roads. For the national (OPRC) roads there will be sign boards on period of works and contact information for reporting complaints or grievances in three languages.</p> <p>42. During project implementation, annual environmental monitoring reports will be prepared per province and submitted to ADB for disclosure on the ADB website.</p>	<p>Complied within under for all provinces under PIC3.</p> <p>This report is the first annual report on environment compliance monitoring for PIC3.</p>
C. Grievance redress mechanism	<p>Grievances from the affected people on social and environmental issues during project implementation will be addressed mainly through the existing local administrative system. Depending on the nature and significance of the grievances or complaints, grievances will be addressed at three levels. The first will be at the grass level where complaints will be directly received and addressed by the contractor, PIC or PIU representative on site. Grievances which are simple but still cannot be addressed at the grass roots level will be addressed at the Grama Niladari (GN) level. More complex greivances which cannot be addressed at the GN level will be addressed at the Divisional</p>	<p>Grievance redress mechanism is being implemented successfully at all project roads under PIC3.</p>

Item/ Section/ Schedule	Description	Status of Compliance
	Secretariat (DS) level. There will be a Grievance Radress Committee (GRC) at the GN and DS levels	

2.1 Compliance to the Environmental Requirements under the Project Facility Administration Manual (FAM)

The requirements stipulated in the updated Facility Administration Manual (FAM) of October 2015 for the iRoad program have been or are been fulfilled. Details of each item is summarized in below table 3.3.

Table 3.3 - Compliance with Facility Administration Manual (FAM) (Environmental Safeguards)

Item/ Section/ Schedule	Description	Status of Compliance
VII Safeguards B. Environment	49. Tranche 2. The scope of work under Tranche 2 involves rehabilitation of existing rural and national roads. Some of the national roads will require only routine maintenance work to keep the roads in good riding condition. Project roads inside unclassified forestlands, forest plantation, and forest reserves may be included in the project provided no widening of roads will take the place and subject to approval Department of Forest. No project roads will be located inside legally protected areas or critical habitat such as strict nature reserves, wildlife sanctuaries, national parks, and nature reserves. No project road will be allowed inside the boundaries, including prescribed buffer zone, of internationally or nationally recognized heritage and archaeological sites. Finally, based on the environmental checklist, no road where the presence of threatened or critically threatened or endangered species	Condition for compliance environmental requirement of the project, incorporated in to contract agreements. Environmental checklists for each and every roads of the project were prepared. EMAP prepared base on the standard EMP at contract documents including site specific possible environmental impacts and mitigation measure were submitted by 16 contracts to the PIC within the project reporting period and acceptances was given by these EMAP by PIC

Item/ Section/ Schedule	Description	Status of Compliance
	<p>has established shall be included in the project. Therefore, Tranche 2 has been categorized as “B” in accordance with ADB SPS. Since there is a large number of short roads under the investment program, preparation of individual initial environmental examinations(IEEs) for each and every road will be difficult and time consuming. Hence a consolidated province- level IEE and one covering all RMC roads have been prepared for all roads in the Ratnapura and Kegalle districts of Sbaragamuwa Province, Kandy, Matale and Nuwara Eliya districts of Central Province, Anuradhapura and Polonnaruwa districts of North Central Province, Puttalam and Kurunegala districts of North West Province and Kalutara districts of Western Province. The IEE reports were prepared based on completed road specific environmental checklists with baseline data, public consultation and literature reviews. All project roads were selected based on the screening criteria provided in the environmental assessment and review framework (EA</p> <p>50. Tranche 3. Tranche 3 has been categorized as “ B” consistent with Tranches 1 and 2.</p>	

Item/ Section/ Schedule	Description	Status of Compliance
	<p>53. The EMOP is a plan for monitoring various environment quality parameters and checking the effectiveness of the EMP. It comprises activities on testing the quality of air, water, and noise through laboratory tests and physical monitoring of problems of soil erosion, tree plantations and habitat enhancement activities carried out and occupational health and safety issues. Quality testing of air, water and noise will be outsourced by the contractor to recognized and approved laboratories. The PIC will conduct monthly monitoring of EMP and EMOP implementation and review monthly monitoring records maintained by the contractors. Environment and Social Development Division (ESDD) will also conduct on site monitoring and review of documents at least bi-annually and provide technical advice to enhance EMP implementation as necessary</p>	<p>Implementation of EMAP by contracts is being monitored by PIC staff and PIU staff monthly by reviewing progress reports and by conducting field inspection randomly or at selected worksites.</p> <p>Representatives of ESDD and ADBCSD/SG specialist also conducted numbers of field inspections during the reporting period</p>
	<p>54 All required clearances, permits and licenses as applicable will be obtained by project implementation unit (PIU) before start of construction works in the respective roads sections. Permits, licenses, etc for activities such as operation of asphalt, quarries, borrow areas etc must be obtained by the contractor before the implementation of the respective construction activity</p>	<p>Clearance from the CEA has been taken by RDA for implementation of project activities for each province separately (Central, Sabaragamuwa and Western province)</p> <p>Permits, licenses, etc for activities such as operation of asphalt, quarries, borrow areas etc are obtained by the contractor before the implementation of the respective construction activity. PIC staff and PIU staff continually monitor availability and evaluability of these permits and licenses should be taken by relevant contractors</p>

4. MONITORING OF ENVIRONMENTAL SAFEGUARD COMPLIANCE AT FIELD LEVEL

4.1 The documents that the contractor should submit

As per the contract agreements and EARF the contractors should submit EAMP, EMCs and monthly progress reports. In addition, approvals, licenses permits should be taken for some of the road construction activities, yards, quarries and material extraction pits by contractors. Status of the submission of EMAPs, SSEMAPs and EMCs by contractors and acceptance given by PIC are in below table no 4.1.

Table 4.1 Status of the submission of EMAPs, SSEMAPs and EMCs by contractors as per 31 December 2016

Package	EMAP Submission		SSEMAP Submission		EMC Submission									
	Submitted by Contractor	Accepted by PIC	Submitted by Contractor	Accepted by PIC	Preconstruction		25%		50%		75%		100%	
					Submitted by Contractor	Accepted by PIC	Submitted by Contractor	Accepted by PIC	Submitted by Contractor	Accepted by PIC	Submitted by Contractor	Accepted by PIC	Submitted by Contractor	Accepted by PIC
KA1	ok	ok	4	4	7	6	5	5					2	2
KA2	ok	ok	7	7	11	3								
KA3	ok	ok	4	4	7	4	5	4	3	3	3	3		
MA1	ok	ok	7	7	3	1								
MA2	ok	ok	3	3	7	2	8	2	4	1	4	1	2	1
MA3	ok	ok	3	3	8	7	5	3	2	2	2		1	
NE1	ok	ok	4	4	11	4	6		2		1		1	
NE2	ok	ok	4	4	10	10	5	3	1	1				
NE3	ok	ok			7		3		2		2		2	
R1	ok	ok	6	5	10	9	6	3	4	2	4			
R2	ok	ok	7	7	12	7	8	5	3	2	2	2		
R3	ok	ok	5	5	7	4	6	3	3	2	2	1		
KE1	ok	ok	8	4	11	8	4				1			
KE2	ok	ok	1	1	10	10								
KE3	ok	ok	3	3	13	11								
KL1	ok	ok	4	4	5	4	1	1						
KL2														
KL3														
Total			65	65	139	90	62	29	24	13	21	7	8	3

4.1.3 Licenses and Approvals

Section II of EARF, legal framework and institutional capacity, 12, para, table 3 stipulated applicable approvals required for the investment program in the Table 3 page no 7 of EARF as applicable approvals required for the Investment Program

Status of license and approval of the contracts as per the above table, as per the 31 of December 2016 are given in the annex 1

4.1.4 Submission of monthly environmental progress report

As per the closure 4.21 in contract condition of the contract agreement, each contractor should submit a monthly progress report. Hence monthly environmental progress monitoring report is being submitted by each and every contractor with monthly construction work progress report. This monthly progress report includes, summary of weather report, summary of road construction activities, environmental issues identified and action taken or applied mitigation measures, status of submission of EMAP, SSEMAP, EMC, status of tree removal and tree planting, status of licenses and approvals and details of yards. A sample of monthly progress report of a contractor is attached as annex 2

4.1.5 Grievance Redress Mechanism (GRM) of the project

Section C of EARF and Section 6.1 of the CPF, and Section vi of RF explain the need of handling public grievances especially during the project implementing period of I Road program

The Grievance Redress Mechanism (GRM) is necessary to support general public to resolve their problems due to project activities through mutual understanding and consensus reaching process with relevant parties. Most of these problems such as loss of access or emission of dust are temporary in nature could become a nuisance if they are not attended promptly by the civil works contractors.

Up to 31 December 2016, the progress of establishing GRCs at GN and DS level could be summarized as in the table no 4.2

Table No 4.2. Status of establishing GRCs at DS and GN level in provinces under PIC3

District	Package	Total No. of DSDs	DSD level		Total No. of GNDs	GND level	
			Established	To be Established		Established	To be Established
Matale	MA1	03	03	00	34	22	12
	MA2	03	03	00	29	29	00
	MA3	05	05	00	19	18	01
Sub total		11	11	00	82	69	13
Kandy	KA1	06	06	00	57	57	00
	KA2	06	06	00	20	19	01
	KA3	07	07	00	56	52	04
Sub total		19	19	00	133	128	05
Nuwara Eliya	NE1	02	02	00	14	11	03
	NE2	02	02	00	18	17	01
	NE3	02	02	00	15	14	01
Sub total		06	06	00	47	42	05
Kegalle	KE1	04	04	00	30	22	8
	KE2	03	03	00	44	21	23
	KE3	04	04	00	52	23	29
Sub total		11	11	00	126	66	60
Ratnapura	R1	06	06	00	31	27	04
	R2	08	08	00	30	30	00
	R3	06	06	00	30	30	00
Sub total		20	20	00	91	87	04
Kalutara	KL1	07	04	03	32	02	30
	KL2	04	01	03	34	04	30
	KL3	03	02	01	22	06	16
Sub total		14	07	07	88	12	76
Total		81	74	07	567	404	163

4.1.6 Public request, suggestion and complaint handling process.

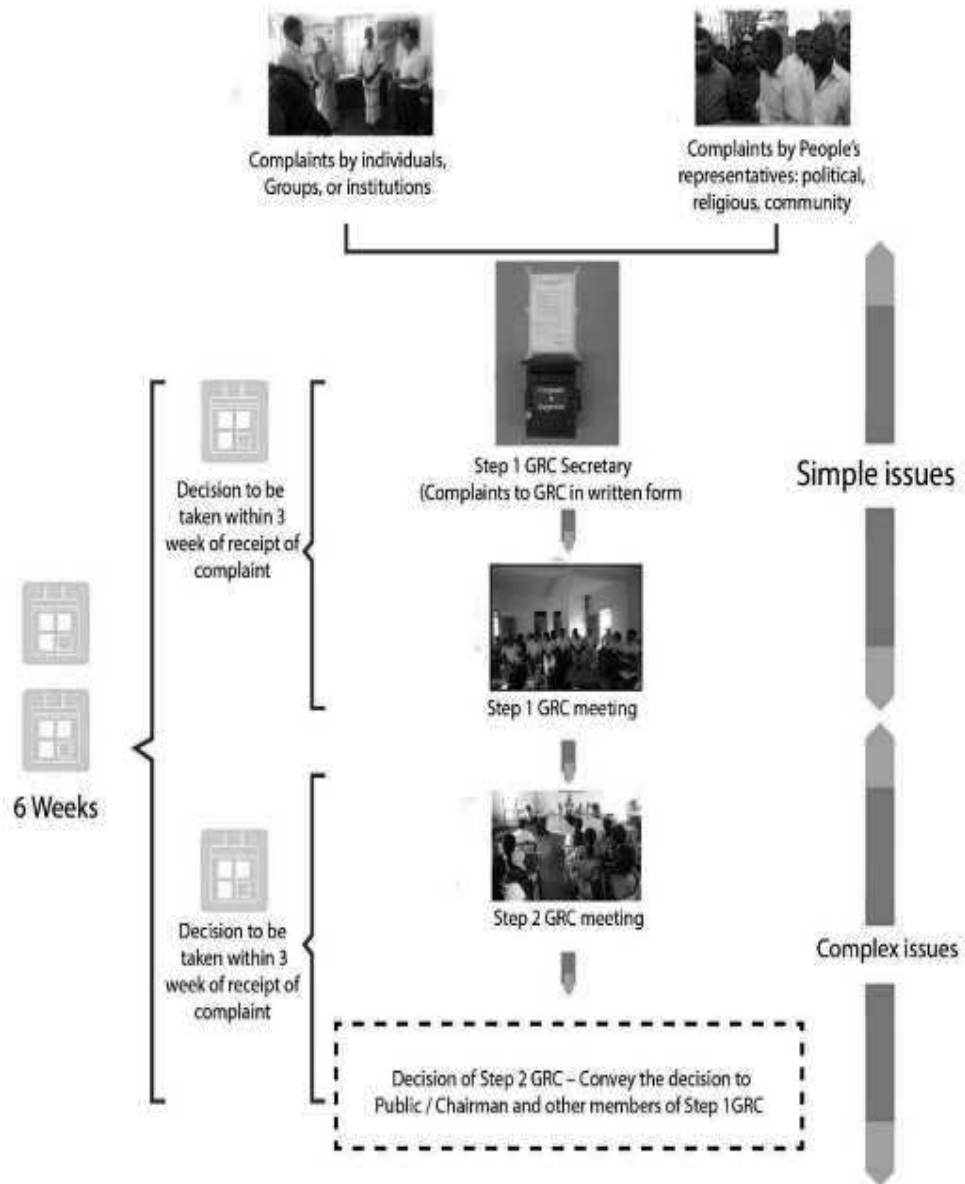
During the reporting period PIC-3 of iRoad Program handled complaints and Environmental and Social issues as stated in section C of EARF and section VI of Resettlement Framework (RF). According followed following procedures.

A Three level GRM has been adopted in iRoad PIC 3 to address public complaints

- First level is establishing at grate root level where request suggestions are directly received and addressed by the contractor PIC and PIU representatives.
- Level two is grievances which are simple but still cannot be addressed at the grate root level. This grievances are address at the GS level GRC committee which is chaired by the GN of the area and report by the PE (PIU)
- Level three GRCS establish for solve more complex grievances which cannot be address at the GN level GRCS This GRCs are chaired by the DS of the area and reported by the PE (PIU) of the package. Any complaint received to the GRC level one decision will be taken within 3 weeks of receipt of complaint. GRC level two also take the decision within same period and convey the decision to the complained person

Standard Public request, suggestion and complaint register common for all contractors is being maintained by each and every ESO of contractor. Figure 4.1 shows process of Public request, suggestion and complaint handling process though GRM with the project

Figure 4.1 Public request, suggestion and complaint handling process through GRM



4.2 Environmental safeguard compliances field monitoring

Field monitoring of environmental safeguard compliance is being carried out by PIC, PIU and ESDD. In addition, ADB, CSD/ SG Specialist of TA8473 participated many occasions during the reporting period for monitoring of environmental safe compliance at filed.

4.2.1 Environmental safeguard compliances field monitoring by ADB CSD/ SG Specialist of TA8473 and representatives of ESDD

ADB CSD/ SG Specialist of TA8473 and representatives of ESDD conducted number of workshops to create awareness and capacity building among the PIC. PIU and contractor's employees on CSD concept and Environmental safeguards compliances and requirements.

Details of the workshops and training programs conducted by ADB, CSD/ SG Specialist of TA8473 and representatives of ESDD given in table 4.3

Table 4.3 workshops and training programs conducted by ADB, CSD/ SG Specialist of TA8473 and representatives of ESDD

Date	Place	Resource persons	Participants	Contents of the workshop
2 Feb	Kandy	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe - Hydrogeologist ESDD of RDA MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> PIU (Employer) <u>central provinces staff</u> DP, PEs. ESO, SSO PIC, TL office and <u>Central province staff</u> TL, SGRS ES, REs AREs CEs Contractors <u>central province staff</u> PM, DPM, Design E SEO 	<ul style="list-style-type: none"> Concept Sensitive Design (CDS) and its application in rural road development Environmental safeguard requirements and compliance of the project and Preparation of EMAP GRM and Gender consideration of the project
11 Feb	Rathnapura	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe - Hydrogeologist ESDD of RDA 	<ul style="list-style-type: none"> PIU (Employer) <u>Sabaragamuwa provinces staff</u> DP, PEs. ESO, SSO 	<ul style="list-style-type: none"> CSD and its application in rural road development Environmental safeguard requirements and

Date	Place	Resource persons	Participants	Contents of the workshop
		<ul style="list-style-type: none"> MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> PIC TL office and Sabaragamuwa province staff TL, SGRS ES, REs AREs CEs Contractor Sabaragamuwa province staff PM, DPM, Design E, SEO 	<ul style="list-style-type: none"> compliance of the project and Preparation of EMAP GRM and Gender consideration of the project
8 April	Kandy	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist 	<ul style="list-style-type: none"> PIU (Employer) Sabaragamuwa and central provinces staff DP, PEs. ESO, SSO 	<ul style="list-style-type: none"> Land donation process of the investment program
16 August	Kandy	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Azar- PD Central Province Dr S.B.Wijekoon -Team Leader -PIC03 	<ul style="list-style-type: none"> PIU (Employer) Central Provinces staff ESO, SSO, ESA SSA PIC TL office and Central Province staff SGRS ES, SEDA and TOs Contractor central province staff SE, TO and, SEO 	<ul style="list-style-type: none"> CSD and its application in rural road development Environmental safeguard requirements and compliance of the project and Preparation of EMAP GRM and Gender consideration of the project
22 August	Rathnpura	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Premathilaka – PD Sabaragamuwa Province 	<ul style="list-style-type: none"> PIU (Employer) Sabaragamuwa Provinces staff ESO, SSO, ESA SSA 	<ul style="list-style-type: none"> Concept sensitive design and its application in rural road development. Environmental safeguard requirements and

Date	Place	Resource persons	Participants	Contents of the workshop
		<ul style="list-style-type: none"> • Dr S.B.Wijekoon Team Leader 	<ul style="list-style-type: none"> • <u>PIC TL office and Sabaragamuwa province staff</u> SGRS ES, SEDA and TOs • <u>Contractor Sabaragamuwa province staff</u> SE, TO and, SEO 	<ul style="list-style-type: none"> compliance of the project and Preparation of EMAP. • -GRM and Gender consideration of the project.
21 Oct		<ul style="list-style-type: none"> • Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist • Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA • MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> • <u>PIU (Employer) central provinces staff</u> DP, PEs. ESO, SSO • <u>PIC TL office and Central province staff</u> TL, SGRS ES, REs AREs CEs • <u>Contractor central province staff</u> PM, DPM, Design E SEO 	<ul style="list-style-type: none"> • CSD and its application in rural road development • Environmental safeguard requirements and compliance of the project and Preparation of EMAP • GRM and Gender consideration of the project



Photo: 4.1 and 4.2. Workshop conducted on CSD and Safeguards requirement of the project by ADB, CSD/SG specialist for PIU, PIC and Contract field staff on 16 August 2016 in Kandy



Photo: 4.3 and 4.4. Workshop conducted on CSD and Safeguards requirement of the project by ADB, CSD/SG specialist for PIU, PIC and Contract field staff on 16 August 2016 in Kandy



Photo: 4.5 and 4.6. Workshop conducted on CSD and Safeguards requirement of the project by ADB, CSD/SG specialist for PIU, PIC and Contract field staff on 21 October 2016 in Kalutara

Field inspections were conducted by ADB CSD/ SG Specialist of TA8473 and representatives of ESDD jointly with PIC, PIU and contractor's staff to monitor the filed implementation of environmental safeguards compliance during the reporting period. A meeting was conducted at end of each field inspection conducted by ADB, SCD/SG Specialist of TA8473 and representatives of ESDD with PIC, PIU and contractor staff to discuss the observations made during the field inspection. Details of the key field inspections conducted by ADB SCD/SG Specialist of TA8473 and representatives of ESDD jointly with PIC, PIU and contractor's representative are given in table 4.4. Other than these the ES with TA consultant has made inspections to roads with specific environmental issues during the reporting period.

Table 4.4 Details of the key field inspections conducted by ADB SCD/SG Specialist of TA8473 and representatives of ESDD jointly with PIC, PIU and contractor's representative

Date	Places	Participation from ESDD and ADB	Description of the event
29 January	PD office, DS office Dehiovita and Field visit at KE1 road	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist	<ul style="list-style-type: none"> • Training on PIU staff of Sabaragamuwa on Social and Environmental safeguards of the project and CDS concept • Training on completion of EMC
29 Feb	Road ID no 13 in R1 package	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist	<ul style="list-style-type: none"> • Inspection of public request for chaining road tract
7 March	CE office NE3 , Contractor office NE3 ,stock yards and Road no 33 in NE3 and Road no 30	<ul style="list-style-type: none"> • Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist • Mr Malaka Wijesinghe Hydrogeologist ESDD of RDA • MS Lakmali Liyanage Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> • Meeting with PIU, PIC and contractor staff of Nuwara Eliya District • Inspection of stores, Batching plants • Inspection road worksites
8 March	PD office, stores , asphalt plant, crusher, Road No 12,13,and 30 in KA2 and 10 and 7	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist	<ul style="list-style-type: none"> • Meeting with PIU, PIC and contractor staff of Kandy District • Inspection of stores, asphalt plant, crusher and main stores

Date	Places	Participation from ESDD and ADB	Description of the event
	in KA3	<ul style="list-style-type: none"> Mr Malaka Wijesinghe Hydrogeologist ESDD of RDA MS Lakmali Liyanage Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> Inspection of road worksites
9 March	RE office Matale stores Road No 15 in MA1 ,Road No 18,21 and Road no 27 and 28 in KA3	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> Meeting with PIU, PIC and contractor staff of Matale District Inspection of main stores and site office Inspection of road worksites
10 March	RE office Kandy	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> Discussion with PIU , PIC and contractor by resource person on finding of field visit conducted at three districts of central province .
15 March	Stores and Road ID no 26 in R3 and Road no 16 in R3	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist 	<ul style="list-style-type: none"> Inspection of main stores and site office. Inspection of road worksites.

Date	Places	Participation from ESDD and ADB	Description of the event
16 March	DP office Road ID no 70 and 19 in KE1	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist 	<ul style="list-style-type: none"> Inspection of main stores and site office. Inspection of road worksites. Meeting with PIU PIC and contractor staff of social and environmental safeguards by resource person on finding of field inspection.
9 May	RE office Rathnapura, Road ID no 22 in R2 ,Road ID no 26 and 33 in R3	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> Inspection of main stores and site office Inspection of road worksites
10 May	Road ID no 11 and 16 in R1 ,Road ID no 19 and 70 in KE1	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> Inspection of main stores and site office Inspection of road worksites
12 May	Meeting at PD office Sabaragamuwa	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> Meeting with PIU PIC and contractor staff of social and environmental safeguards by resource person on finding of field inspection

Date	Places	Participation from ESDD and ADB	Description of the event
16 May	Road no 29 and 13 in KA2 and Road no in 7, 10, and 11 KA3	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist	<ul style="list-style-type: none"> • Inspection of main stores and site office • Inspection of road worksites
17 May	RE office Nuwara Eliya Stores m Road ID 7and 10 in NE 1	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist	<ul style="list-style-type: none"> • Meeting with PIU, PIC and contractor staff in Nuwara Eliya District • Inspection of main stores and site office • Inspection of road worksites
18 May	RE office Matale, Stores , Road ID no: 15 and 11 in MA1, Road ID no 18 and 21 in MA2 and Road ID no and in 27 and 38 MA 3	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist	<ul style="list-style-type: none"> • Meeting with PIU, PIC and contractor staff in Nuwara Eliya Districts • Inspection of main stores and site office • Inspection of road worksites
19 May	DP office central province	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist.	<ul style="list-style-type: none"> • Meeting with PIU PIC and contractor staff of social and environmental safeguards by resource person on finding of field inspection
20 May	DP office Sabaragamuwa and Road ID no in R2	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist.	<ul style="list-style-type: none"> • Meeting with PIU, PIC and contractor staff of social and environmental safeguards in Sabaragamuwa Province • Inspection of main stores and site office • Inspection of road worksites
24 August	CE office KE3, Road ID no 46 and 31 in KE3 , Road ID no 22 and 33 in KE 2	<ul style="list-style-type: none"> • Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist • Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA • MS Lakmali Liyanage - Environmental and 	<ul style="list-style-type: none"> • Meeting with PIU, PIC and contractor staff of social and environmental safeguards in KE3 • Inspection of main stores and site office • Inspection of road worksites

Date	Places	Participation from ESDD and ADB	Description of the event
		Social safeguard officer ESDD of RDA	
24 August	PD office Sabaragamuwa	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Mr Malaka Wijesinghe -Hydrogeologist ESDD of RDA MS Lakmali Liyanage - Environmental and Social safeguard officer ESDD of RDA 	<ul style="list-style-type: none"> Meeting with PIU PIC and contractor staff of social and environmental safeguards by resource persons on finding of field inspection
6 December	Road ID no 10 and 38 in R3	<ul style="list-style-type: none"> Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist 	<ul style="list-style-type: none"> Inspection of environmental issues in visited road in R3



Photo: 4.7 and 4.8. Field inspection conducted by ADB, CSD/SG Specialist and representative form ESDD of RDA at NE3 main stores and proposed land for install Asphalt plant by Sierra construction (Pvt) Ltd on 8 March 2016.



Photo: 4.9 and 4.10. Field inspection conducted by ADB, CSD/SG Specialist and representative form ESDD of RDA at KA2 Package at Road ID no 10 and 7 on 9 March 2016.



Photo: 4.11 and 4.12. Field inspection conducted by ADB, CSD/SG Specialist and representative form ESDD of RDA at R2 Package (Photo: 4.11, Road ID no 22) and R3 Package (Photo: 4.12, Road ID no 26) on 10 May 2016.



Photo: 4.13 and 4.14. Field inspection conducted by ADB, CSD/SG Specialist at MA3 Package (Photo: 4.13, Road ID no 38) and R3 (Photo: 4.14, MA 1 site office) on 18 May 2016.



Photo: 4.15 and 4.16. Field inspection conducted by ADB, CSD/SG Specialist at NE01 Package (Photo: 4.15, Road ID no 7 and Photo: 4.16, Road ID no 10) on 19 May 2016

4.2.2 Environmental safeguard compliances field monitoring by PIC and PIU staff

PIC staff of environmental safeguards (Environmental specialist and Social and Environmental Development Assistants), PIU staff of environmental safeguards (Environmental Safeguard Officer and Environmental Safeguard Assistants) conducted field inspections on road construction sites / plants / yards and material excavation sites randomly or selected sites as per the requirements. Monitoring field implementation of environmental safeguards compliances, checking submitted EMC by contractor and verification of the information given by contractors in monthly environmental monitoring reports were done during these field visits

PIC03 comprise six districts where all types of agro ecological zones in Sri Lanka are situated and where central high land of Sri Lanka where high steep areas and high rain fall received areas (except MA2 and part of R3 and NE1) including landslide areas are situated.

5. ENVIRONMENTAL ISSUES OBSERVED AND STATUS OF COMPLIANCE

Possible environmental impacts from project activities and migratory actions to be adopted for these impacts were clearly included in EMAPs submitted by contractors by indicating specific locations of the project sites. Hence most of the environmental impacts were mitigated while ongoing project activities. Contractor's own EO, PIC staff and PIU staff continued monitoring of environment compliance and the public also assisted in raising environment best practices and issues related to road construction. Some of the public views on environment issues such as high dust levels were made as complaints. Below section discuss the impacts observed, mitigation measures adopted with road specific examples.

5.1 Environmental Issues observed by contractor's staff and Environmental Issues reported by public and status of compliance

Environmental issues observed by contractor's staff and Environmental issues reported by public as public complaints were rectified by contractor staff at field level. Instructions required for rectify these environmental issues were taken from PIC staff as and when required (especially for issues that were not mitigatable through standard practices given in the EMAPs). These environmental issues and migratory action taken by contractor for these environmental issues were reported by contractors in monthly progress reports. During the reporting period some of the contract packages changed their environment officers and this situation had a negative impact on such packages at the initial stage of project.

Summary of environmental issues observed by contractor's staff and environmental issues reported by public during the reporting period and migratory action taken by relevant contractors are given in following table 5.1

Table 5.1, Summary of environmental issues observed by contractor's staff and reported by public during the reporting period and migratory action taken by relevant contractors.**Table 5.1.1 Environmental impact observed during the reporting period and mitigation taken by the KA 01 contractor in Kandy District**

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
01,02,04,04A,21, 36,41,42,43,44,45, 46,47,52,53	<ol style="list-style-type: none"> 1. Spreading dust 2. Soil erosion 3. Soil erosion at disposal site 	<ol style="list-style-type: none"> 1. Watering the roads 2. Scupper drain 3. Stone Barriers 4. Grass sodding

1. Soil erosion control

Photo 5.1.1.1 Constructed concrete drain
46 (1+050 RHS)



Photo 5.1.1.2 Stone Barriers 02 (0+400
LHS)



Photo 5.1.1.3 Grass sodding
45(0+910.0+940)



Photo 5.1.1.4 Grass sodding
45(0+910.0+940)



Photo 5.1.1.5 Tuffing the eroded



Photo 5.1.1.6 Tuffing the eroded embankment
46(0+092 RHS)



Photo 5.1.1.6 Tuffing the eroded embankment



Photo 5.1.1.7 Grass sodding (44)-1+990-1+210(LHS)

2. Air Pollution controlling



Photo 5.1.1.8 Watering 47/02/42



Photo 5.1.1.9 Watering
01/21/41/43/47/02/42

Table 5.1.2 Environmental impact observed during the reporting period and mitigation taken by KA 02 contractor in Kandy district.

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
13,16,18,27,29, 30	<ol style="list-style-type: none"> 1. dust generation during the transport of excavated soil & debris 2. possibility of soil erosion from newly constructed embankment 3. possibility of soil erosion & washout of ABC 4. Possibility of soil erosion 	<ol style="list-style-type: none"> 1. Aware truck drivers to cover the debris during the transport 2. Protected the embankment by turffing. 3. Built earth fringe & turf 4. turffing

**Photo 5.1.2.1 Built earth fringe & turf****Photo 5.1.2.2 KRN 13**



Photo 5.1.2.3 Protected the embankment by turffing. Fig. 03, 04 & 05



Photo 5.1.2.4 KRN 30 (0+000)

Table 5.1.3 Environmental impact observed during the reporting period and mitigation taken by KA03 contractor in Kandy District

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
8,9,10,11,38,39,48, 49,50	1. Soil erosion at disposal yards and stock yards 2. Dust generation	1. Construction of retaining walls using rock boulders and soil bags 2. Construction of Drains 3. Covering of Transporting vehicles 4. Watering of roads 5. Soil erosion control and slope protection by Turfing

Soil erosion control



Photo 5.1.3.1 Before KRN 10



Photo 5.1.3.2 After KRN 10



Photo 5.1.3.3 Before KRN 10



Photo 5.1.3.4 After KRN 10



Photo 5.1.3.5 KRN 11 Stock Yard



Photo 5.1.3.6 KRN 11 Stock Yard



Photo 5.1.3.7 KRN 49 Stock Yard

Dust Generations



Photo 5.1.3.8 KRN 39 and KRN 10



Photo 5.1.3.9 KRN 39 and KRN 10



Photo 5.1.3.10 KRN 39 and KRN 10



Photo 5.1.3.11 KRN 39 and KRN 10

Soil erosion control and slope protection by Turfing



Photo 5.1.3.12 KRN 10



Photo 5.1.3.13 KRN 39



Photo 5.1.3.14 KRN 39

Table 5.1 4 Environmental impact observed during the reporting period and mitigation taken by the contractor(NE1)

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
2,3,6,7,8,10	<ol style="list-style-type: none"> 1. Soil erosion from the dumping site 2. Handled solid waste in incorrect manner at residences and offices 3. Selected trees to be removed in either side of the road accordance to the road construction requirement 4. Spreading MC30 over the tea plants which are situated at edge of road 5. Continuous water flow can be caused severe erosion 6. Soil erosion from completed shoulders 7. Cutting failure at the slope areas 8. Proper restoration of dumping yard 	<ol style="list-style-type: none"> 1. Developed a boulder wall and controlled the erosion 2. Introduced the solid waste separation methods and handover to Local Authority 3. Action taken to reserve the selected trees with considering the road construction 4. Cover the tea plants while priming 5. Concreted “U” drains were constructed necessary locations 6. Grass turfing was done for edge protection 7. Construction of “L” drains with raised arm where necessary 8. Land is used for cultivate plants that have high growth rate



Photo 5.1.4.1 Developed a boulder wall and controlled the erosion Road No.8



Photo 5.1.4.2 Introduced the solid waste separation methods and handover to Local Authority



Photo 5.1.4.3 Action taken to reserve the selected trees with considering the road construction Road No.2



Photo 5.1.4.4 Construction of "L" drains with raised arm where necessary Road No 3



Photo 5.1.4.5 Land is used for cultivate plants that have high growth rate Road



Photo 5.1.4.6 Grass turfing was done for edge protection Road No. 7



**Photo 5.1.4.7 Cover the tea plants
while priming Road No. 10**



**Photo 5.1.4.8 Concreted "U" drains
were constructed necessary locations
Road No. 2**

Table 5.1 5 Environmental impact observed during the reporting period and mitigation taken by NE 2 contractor in Nuwara Eliya district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 16,23,20,29,30,32 2. Main yard 3. Office premises	1. Soil erosion from the dumping site 2. Selected trees to be removed in either side of the road accordance to the road construction requirement 3. Oil that leak by the vehicle could spread over the yard premises 4. Shoulder erosion due to the heavy rain 5. Handled solid waste in incorrect manner at residences and offices 6. Soil erosion through “L” drain filled with soil 7. Soil erosion from the completed dumping site 8. Erosion of the embankment on 9. Spray prime coat to the vegetation	1. Developed a boulder wall and controlled the erosion 2. Action taken to reserve the selected trees with considering the road construction 3. Developed an oil separation tank series and discharged with treat the water to the environment 4. Developed scuffed drain series crossing the shoulder 5. Introduced the solid waste separation methods and handover to Local Authority 6. Planted flower plants on the filled space 7. Arranged for vegetation the location as vegetable farm 8. Planted creepers on the embankment surface 9. Carry out by covering vegetation by polyphone



Photo 5.1.5.1 Developed a boulder wall and controlled the erosion Road No. 32



Photo 5.1.5.2 Introduced the solid waste separation methods and handover to Local Authority



Photo 5.1.5.3 Developed an oil separation tank series and discharged with treat the water to the environment



Photo 5.1.5.4 Developed scuffed drain series crossing the shoulder Road No.30



Photo 5.1.5.5 Introduced the solid waste separation methods and handover to Local Authority



Photo 5.1.5.6 Planted flower plants on the filled space Road No. 29



Photo 5.1.5.7 Arranged for vegetation the location as vegetable farm Road No.20



Photo 5.1.5.8 Planted creepers on the embankment surface Road No.23

Table 5.1.6. Environmental impact observed during the respect month and mitigation taken by NE 03 contractor in Nuwara Eliya district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 41,46,33	1. Dust due to construction activities 2. Dust due to Material Transport 3. Soil Erosion in Dumping Yards 4. Possibility of Soil Erosion in embankment side of the roads 5. Possibility of Earth slips at Ch 1+450(RHS) in Hitiyegama-Udapolgahawatha-Minuwandeniya – (33)	1. Water Sprinkles are used for duct control 2. Trucks are covered with proper covering material. 3. Turfing 4. “U” Drain has been constructed 5. Turfing & “L” Drain has been constructed 6. Implementing SALT (Slop Agriculture Land Technology) to prevent the earth slips Locations



Photo 5.1.6.1 Water Sprinkles are used for duct control. Road (41)



Photo 5.1.6.2 Hitiyegama-Udapolgahawatha-Minuwandeniya – (33)
1+ 450, RHS



Photo 5.1.6.3 Turffing (RHS) & “L” drain (LHS) has been proposed in in Welioya – Shanon Road (41).



Photo 5.1.6.4 Trucks are covered with proper covering material. Road (41)



Photo 5.1.6.5 Turffing. Htiyegama- Udapolgahawatta-Minuwandeniya Road- (33), 0+100 RHS

Table 5.1 .7. Environmental impact observed during the reporting period and mitigation taken by MA 01 in Matale district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
3,6,11,14	<ol style="list-style-type: none"> 1. Damages to paddy field by earthslip and soil erosion from road boundry. 2. Earth slip and soil erosion very nearest to house. 3. Provide Sand Bags Barrier to prevent Soil Erosion 4. Emission of dust from the laid ABC 	<ol style="list-style-type: none"> 1. Concrete retaining wall along with road boundary. 2. Protection of house boundary through slop stabiization and soil conservation by using turfing by grass against slop 3. Protection of acces road of beneficiary 4. Every day water spraying



Photo 5.1.7.1 Retaining wall construction to prevent damage to agricultural land
Location – 1+300 LHS (R 11)



Photo 5.1.7.2 Figure 1water spray to control dust Location –R 03



Photo 5.1.7.3 Protection of house boundary through slop stabiization and soil conservation by using turfing by grass against slop Location - 2+210 (R 06)

Table 5.1.8 Environmental impact observed during the reporting period and mitigation taken by MA 02 in Matale district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 18,21	1. Soil erosion at disposal yards and stock yards 2. Dust generation 3. Food waste generation	1. Construction of retaining walls using soil bags 2. Construction of silt trap 3. Covering of Transporting vehicles 4. Watering of materials 5. Watering of roads 6. Food dispose method 7. Disposal site selection 8. Soil erosion control and slope protection by Turfing



Photo 5.1.8.1 Construction of retaining walls using soil bags (Road:18, Stock Pile, CH:1+550 LHS)



Photo 5.1.8.2 Construction of retaining walls using soil bags (Road:18, Stock Pile, CH:1+550 LHS)



Photo 5.1.8.3 Construction of silt trap (Road:18, Stock Pile, CH:6+100 LHS)



**Photo 5.1.8.4 Construction of silt trap
(Road:18, Stock Pile, CH:6+100 LHS)**



**Photo 5.1.8.5 Covering of
Transporting Vehicles R-50**



**Photo 5.1.8.6 Watering of materials (Road:
18, Stock Pile)**



Photo 5.1.8.7 Spraying water at Road 49



**Photo 5.1.8.8 Food waste dispose method
at Stock Pile (Road: 18) CH:6+100 LHS**



Before



Photo 5.1.8.9 During dispose period

Abundant Borrow pit is filling by using dispose material (to enhance the Environment)



Photo 5.1.8.10 Slope protection by Turfing
(Road:50)

Table 5.1.9 Environmental impact observed during the reporting period and mitigation taken by MA 03 in Matale district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 27,38,16,42,39,40, 41,36,35,27,43,30,34	1. Dust Generated while travelling vehicles 2. Removal of trees 3. Block the drainage path 4. Soil erosion	1. Sprinkled water 2. Sprinkled water and remove loose dust particles with using air compressor 3. Replant trees 1:3 ratio 4. Change the centreline in Kosgolla Adawela road to minimize the no. of trees to be removed. In other roads also, laid the centreline to minimize the no of cutting trees. 5. Spread Water 6. Excavated earth drains. 7. Turfing, Excavate earth drains 8. Provide sand barriers



Photo 5.1.9.1 Turfing and earth drains at 2+450 km In Gedige Junction Road



Photo 5.1.9.2 Provide Sand Barrier to prevent Soil Erosion 1+170 km in Madawela Junction Road



Photo 5.1.9.3 Protect the Pepper vines without any damaging. : 1+200 km in Kosgolla Muduna to Imbulgolla Road



Photo 5.1.9.4 Turffing to protect the stream 0+420 km in Kanangmauwa-Parawatta Road

Table: 5.1.10 Environmental impact observed during the reporting period and mitigation taken by KE01 in Kegalle district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 17,16,19, 70,05,03, 12,18,09	1. Inundation 2. Soil erosion 3. Dust emission 4. Road Embankment erosion 5. Surface runoff	1. Improved existing drainage 2. Silt barrier was provided 3. Watering 4. Embankment was secured with silt barriers 5. Stone barriers were provided 6. Constructed a cascade system 7. Grass sodding

**Photo 5.1.10.1 Improved existing drainage**



Photo 5.1.10.2 Silt barrier was provided Road No.17



Photo 5.1.10.3 Silt barrier was provided Road No.70



Photo 5.1.10.4 Watering Road No.16



Photo 5.1.10.5 Embankment was secured with silt barriers Road No.19



Photo 5.1.10.6 Side drains were provided Road No.70





Photo 5.1.10. 7 Stone barriers were provided Road No.5



Photo 5.1.10.8 Constructed a cascade system Road No.18,09,5

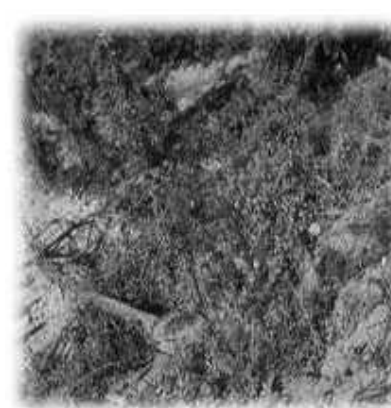


Photo 5.1.10.8 Grass sodding Road No.18,09,5

Table no 5.1.11 Environmental impact observed during the reporting period and mitigation taken by KE02 in Kegalle district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 20,22,24,27,33,34, 35,36,57,63	1. Dust generation 2. Soil erosion due to disposal yards 3. Disturb to flora 4. Disturb to agricultural Property 5. Water flow along the carriage way	1. Watering from bowser 2. Protection wall constructed by using of boulders 3. Actions taken to minimize the damage (by removing the minimum number of trees) 4. Actions taken to minimize the damage (by taking the minimum width from lands) 5. Create and clean the drain paths



Photo 5.1.11.1 Create and clean the drain paths

Watering from bowser Road No. 20,22,24,27,33, 34,35,36,57,63



Photo 5.1.11.2 Actions taken to minimize the damage (by removing the minimum number of trees) Road 34,35,36,57,63



Photo 5.1.11.3 Protection wall constructed by using of boulders Road No. 20,22,24,27,33, 34,35,36,57,63

Table no 5.1.12 Environmental impact observed during the reporting period and mitigation taken by KE03 in Kegalle district

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 47,31,46,50,55,28	1. Soil erosion 2. Dust Generation 3. Soil erosion Water inundation of Houses and siltation of well due to Due to storm water 4. Embankment erosion	1. Establish a rubble around the disposal yard 2. Establish toe wall from sand bags 3. Watering on sunny days 4. Establish toe wall from sand bags & Protected flooding situation 5. Covered by polythene 6. Establish toe wall from stones



Photo 5.1.12.1 Establish a rubble around the disposal yard Road No 47



Photo 5.1.12.2 Covered resident area by polythene Road No.50



Photo 5.1.12.3 Watering on sunny days Road No.46

Table no: 5.1.13 Environmental impact observed during the reporting period and mitigation taken by R1 Package in Rathnapura District

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 11,16,17,19A,19,13,14,12	1. Dust Generation 2. Disturb to flora 3. Soil erosion	1. Water Bowser used to minimize Dust Generation 2. Covered vehicles (with tarpaulin) are using to transport materials to control dust emission. 3. Replanting Programme 4. Turffing 5. Construction of concrete drain & earth drain



Photo 5.1.13.1 Construction of Drain Road ID 11,16,17,19A,19,13,14,12



Photo 5.1.13.1 Covered vehicles (with tarpaulin) are using to transport materials to control dust emission Road ID 11,16,17,19A,19,13,14,12



Photo 5.1.13.1 Turffing of either side of Road, Road ID 11,16,17,19A,19,13,14,12

Table no: 5.1.14 Environmental impact observed during the reporting period and mitigation taken by R2 Package in Rathnapura District

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 22,31,32,5,33B,33A, 03,21	<ol style="list-style-type: none"> 1. Disposall Yards getting washed off due to heavy rains (Soil erosion) 2. Generation of dust & smoke (Air Pollution) 3. In hilly areas especially, the water getting stagnant in pot holes & uneven surfaces created as a result of heavy vehicles travelling. And those pot holes become better places for Mosquito breeding (Water Pollution) 4. Removal of Trees 	<ol style="list-style-type: none"> 1. Construction of Toe walls for disposal yards and the tariffing of the embankment 2. Proper maintenance of vehicles & Daily watering the road surfaces as required 3. Construction of proper drains and carry out routine maintenance works 4. Replanting of trees in a ratio of 1:3



Photo 5.1.14.1 Before 2+250 ID 03



Photo 5.1.14.2 After 2+250 ID 03



Photo 5.1.14.3 1+800 RHS ID 22



Photo 5.1.14.4 1+800 RHS ID 22



Photo 5.1.14.5 Before 15+395 RHS ID no 31



Photo 5.1.14.6 After 15+395 RHS ID no 31

5.1.15 Environmental impact observed during the reporting period and mitigation taken by R3 Package in Rathnapura District

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 1,10,02,36,26,27, 38	1. soil erosion and dust 2. Effect trees to be removed and losing habitat to some animal species 3. Culverts filled with sediments 4. Soil instability when cutting edges which cause soil erosion 5. Impacts at slope cutting Sedimentation 6. Debris which could cause pollution to water, air and visual impacts 7 Collapse the cutting slopes of the earth	1. Water sprinkling and turffing the places where possibility with soil erosion 2. Collection of effected fauna to prevent from losing habitat was prevented by relocating them to the adjacent plant with same SPP 3. Removal of sediments to reused by approved Community or to disposal in a approved methods 4. Temporary Reinforce of soil walls to prevent further erosion using available resources 5. Impacts prevention by applying recommended cutting angle. 6. Prevention of unnecessary trees removal to maintain the stability. 7. Timely removal of debris to avoid erosion to water and dust emission and avoid visual pollution 8. Slope cutting with recommended angle and removal of soil to approved dump yards 9. Construction of Retaining walls 10. Turfing with grass 11. Prevention by laying of aggregate bags



Photo 5.1.15.1 Water sprinkling and turfing the places where possibility with soil erosion



Photo 5.1.15.2 Effect trees to be removed and losing habitat to some animal species

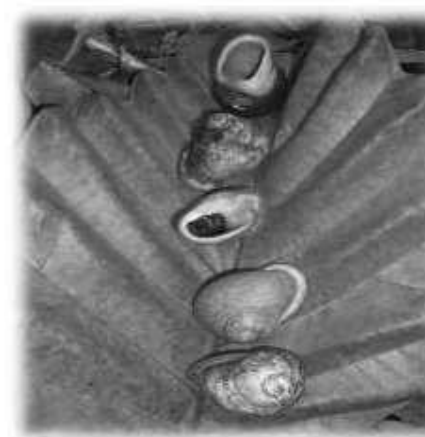


Photo 5.1.15.3 Collection of effected fauna to prevent from losing habitat was prevented by relocating them to the adjacent plant with same SPP

5.1.16 Environmental impact observed during the reporting period and mitigation taken by KL1 Package in Kalutara District

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
1. 83,93,75,92,16,65, 61,02,41 2. Machinery Yard	1. Dust Generation 2. Accumulation of soil beside the roads during excavation Damage to adjacent properties due to the construction activities 3. Temporary traffic diversion due to road construction 4. Loss of house access 5. Difficulties for road users due to damaged road pavement 6. Embankment Erosion 7. Unauthorized electric supply, waste water discharging pipes are along and across the road 8. Children play around construction machine while construction work	1. Watering as per the requirement 2. Loading excavated soil directly to the vehicle for disposal. 3. Rectifying the damage at the level of satisfaction of property owner. 4. Aware road users by notices, sign boards and verbally. 5. Guide for alternative roads. 6. Provide temporary house access 7. Ensure the regular routine maintenance of the road in accordance with appropriate maintenance practices 8. Rubble packing along the embankment 9. Calling GRC meeting and aware the villagers. 10. Incorporate with Local Authority and aware the offended community regarding legal aspect of this issue. 11. Aware the community through the mosque, GRC meeting and verbally. 12. Limit the speed of vehicles 13. Construction of shoe drain 14. Remove the debris and reconstruct the access by cover slabs 15. Remove the contaminated soil.

KL 2 and 3 had not started any substantial physical work during the reporting period.

5.2 Environmental Issues observed by PIU and PIC status of compliance

Some of the environmental issues were observed by PIU staff and PIC staff during their field visits. In such occasions, PIC staff issues instruction to contractor's staff to rectify those observed environmental issues while PIU staff informed to PIC staff to instruct contractor staff to rectify those observed environmental issues. The ES of PIC3 has a challenging task of coordinating environment management in six districts. A network has been setup to manage the communication between PIU, PIC and contractor environment staff in order to effectively carry out environment compliance requirements of the project. Summery details of environmental issues obverted by PIU staff and PIC staff and their status of compliance are given in following table 5.2

Table 5.2.1 Summary details of environmental issues observed by PIU staff and PIC staff and their status of compliance

District	Package and road	Environment Issue observed	Mitigation measure/s taken by contractor	Effectiveness or recommended action by PIC	Status of rectification as per PIC recommendations or remarks
Matale	MA3- No 27 Bobella Bibila Road	<ul style="list-style-type: none"> • Soil erosion at road sites • Lack of drainage • Unauthorized dumping • Unauthorized tree cutting 	<ul style="list-style-type: none"> • Applied erosion control measure to relevant places • Improve drainage system • Removes unauthorised dumping systemized tree removing 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	MA3- No 16 Kosgolla Mudune – Andawala Road via Magallewa, Kubaloluwa Road	<ul style="list-style-type: none"> • Soil erosion at disposal yards • Improper tree removing 	<ul style="list-style-type: none"> • Soil erosion control method applied to relevant places • Reduce tree cutting from 76- 8 by changing road design in a going field visit with PD 	<ul style="list-style-type: none"> • PIC and PIU recommendations helped to effectively mitigate the issue 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	MA2- No 23 Thiththawalga olla, Rathmalgaha a. Road	<ul style="list-style-type: none"> • Unauthorized dumping • Weak housekeeping of the road • Improper tree removing 	<ul style="list-style-type: none"> • Removed the unauthorised dumping at worksite • Improve the house peaking of the at worksite 	<ul style="list-style-type: none"> • PIC and PIU recommendations helped to effectively mitigate the issue 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level

Kandy	KA2 – No 29 Pamunuwa, Daliwala, Mugatiyapol a Road.	<ul style="list-style-type: none"> • Very weak basic housekeeping at worksites • Unauthorized dumping at worksites • Inadequate road safety • Improper tree removing • Dust generation due to road cleaning for priming 	<ul style="list-style-type: none"> • Improve the house peaking of the at worksite • Removed the unauthorised dumping at worksite • Improve the road safety • Cover the house closed to road site while cleaning for priming 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	KA2- No 12 Kobbekaduwa, Gamamedda Road	<ul style="list-style-type: none"> • Very weak basic housekeeping at worksites • Unauthorized dumping at worksites 	<ul style="list-style-type: none"> • Improve the house peaking of the at worksite • Removed the unauthorised dumping at worksite 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	KA2- No18 Nawalapitiya , Udakanda Bus Stand via Veralugashina, Weligodawat ta	<ul style="list-style-type: none"> • Very weak basic housekeeping at worksites • Unauthorized dumping at worksites • Inadequate road safety • Improper tree removing • Dust generation due to road cleaning for priming 	<ul style="list-style-type: none"> • Improve the house peaking of the at worksite • Removed the unauthorised dumping at worksite • Improve the road safety • Cover the house closed to road site while cleaning for priming 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level

Kandy	KA3-No 10 Delthota Town, Gabadagam a Road.	<ul style="list-style-type: none"> • Unnecessary tree removing • Soil erosion and • siltation of water resource at main yard 	<ul style="list-style-type: none"> • Systemized tree removing process • Soil erosion control applied to main yard 	<ul style="list-style-type: none"> • PIC and PIU recommendations helped to effectively mitigate the issue 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
Nuwara Eliya	NE1- No 8 Rikillagaska da, Dimbulkumb ura Road.	<ul style="list-style-type: none"> • Unauthorized dumping at work sites • Soil erosion at disposal yards • Blocking irrigation channels due to road construction 	<ul style="list-style-type: none"> • Remove the unauthorized dumping sites • Applied soil erosion measures to relevant disposal yards • Rectification of blocking irrigation is being rectifying with collaboration of agrarian service department. 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	NE1- No 3 Ragala Starapet Panditha Kumburakot ambe Road.	<ul style="list-style-type: none"> • Unauthorized dumping • Soil disposal dumping to steep embankments • Soil erosion at dumping sites • Disturb to natural vegetation due to disposal 	<ul style="list-style-type: none"> • Remove the unauthorized dumping from worksite • Developed vegetation cover at steep slope where dumped disposal • Remove disposal at vegetation cover 	<ul style="list-style-type: none"> • PIC recommendations helped to effectively mitigate the issue 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
Kegalle	KE1- Backing Plant at Dehiovita, Eheliyagoda	<ul style="list-style-type: none"> • No proper waste water treatment system • Poor housekeeping 	<ul style="list-style-type: none"> • Improve the existed waste water treatment to satisfactory level • Improve the house keeping at batching plants 	<ul style="list-style-type: none"> • PIC has to monitor continuously until complete the ratification of environmental issues at satisfactory level 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level

		<ul style="list-style-type: none"> • Adjoining river contamination by waste of the plant • License were not updated • No proper demarcation 	<ul style="list-style-type: none"> • Developed a soil barrier to private the river water contamination from waste of batching plant • Renew the out dated licences • Demarcate the batching plant area 		
	KE1-No 5 Batakiththa, Mahabage	<ul style="list-style-type: none"> • Unauthorized dumping • Contamination of water bodies • Erosion at disposal site • Disturb to natural flora 	<ul style="list-style-type: none"> • Remove the unauthorized dumping from worksite • Developed vegetation cover at steep slope where dumped disposal • Remove disposal at vegetation cover • Soil erosion control measures were applied at relevant disposal sites 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
Kegalle	KE1- No 19 Debegama, Kelegama, Napawala.	<ul style="list-style-type: none"> • Erosion at line drains • Contamination of water bodies by stock yard • Soil erosion at disposal sites 	<ul style="list-style-type: none"> • Applied soil erosion control measures to line drains • Prevent water contamination at stock yards ‘ • Applied soil erosion control measures at disposal sites 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	KE1- No 70 Maniyamga ma to	<ul style="list-style-type: none"> • Erosion at line drains • Contamination of water bodies by stock yard 	<ul style="list-style-type: none"> • Applied soil erosion control measures to line drains 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level

	Welangalla, Kadamandiy a.	<ul style="list-style-type: none"> • Soil erosion at disposal sites 	<ul style="list-style-type: none"> • Prevent water contamination at stock yards ‘ • Applied soil erosion control measures at disposal sites 		
	KE2- No 22 Kadigamuwa , (Klriwana Junction), Narangasthe nna Temple.	<ul style="list-style-type: none"> • Soil erosion at disposal yard • Unauthorized dumping 	<ul style="list-style-type: none"> • Applied soil erosion control measures to line drains • Prevent water contamination at stock yards • Applied soil erosion control measures at disposal sites 	<ul style="list-style-type: none"> • PIC recommendations helped to effectively mitigate the issue 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	KE3- No 31 Daluggala(J unction)- Bathaburaya Playground.	<ul style="list-style-type: none"> • Contamination of well from runoff rain water • Siltation of well • Soil erosion at dumping yard 	<ul style="list-style-type: none"> • Clean the well from contaminated water • Developed drainage path to avoid the runoff water running to well 	<ul style="list-style-type: none"> • PIC recommendations helped to effectively mitigate the issue 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
	KE3- No 55 Yalapal, Glatara, Erawwala Road	<ul style="list-style-type: none"> • Soil erosion at dumping yard • Contamination of soil from well and chemicals at storage 	<ul style="list-style-type: none"> • Applied soil erosion control measures at disposal yards • Remove chemical contamination at stores 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level
Rathnapura	R1- No 55 Mahingoda, Puwakgahad	<ul style="list-style-type: none"> • Improper by pass • Lack of safety 	<ul style="list-style-type: none"> • Developed by pass with safety measures • Remove unauthorised dumping 	<ul style="list-style-type: none"> • PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> • Rectification was done to a satisfactory level

	eniya road via Viyalagoda	<ul style="list-style-type: none"> Unauthorized dumping 	<ul style="list-style-type: none"> Improve road safety 		
	R1 No 11 Kuruwita, Kendalanda Road via Erathna(From Kuruwita to Diyarwood Tea Factory-4km from Boraluwa Junction to KEndalanda-3km	<ul style="list-style-type: none"> Lack of safety Unauthorized dumping Natural streams are blocking and contamination by unauthorized dumping 	<ul style="list-style-type: none"> Improve the safety of the road sites Remove the blocking of natural stream Remove the unauthorised dumping 	<ul style="list-style-type: none"> PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> Rectification was done to a satisfactory level
Rathnapura	R2- No 33B Gurubevila Helapathdeniya Gallena Kanda Road	<ul style="list-style-type: none"> Unauthorized dumping in to deep Steep slope Soil erosion at disposal yards Disturb to natural vegetation from road excavated disposal 	<ul style="list-style-type: none"> Remove the unauthorized dumping from worksite Developed vegetation cover at steep slope where dumped disposal Remove disposal at vegetation cover Soil erosion control measures were applied at relevant disposal sites 	<ul style="list-style-type: none"> PIC recommendations helped to effectively mitigate the issue 	<ul style="list-style-type: none"> Rectification was done to a satisfactory level

	R3- No 36 ,96 Junction -Panamura Road via Ranchamadama & Ethgala	<ul style="list-style-type: none"> Unauthorized dumping Leader way of culvert were not clear properly Soil erosion at dumping yard 	<ul style="list-style-type: none"> Remove the unauthorized dumping Clear the leader way at repaired or improved culvert Soil erosion control at disposal yards 	<ul style="list-style-type: none"> PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> Rectification was done to a satisfactory level
Rathnapura	R3 Road No 10 Weddagala, Kudawa Wewagama	<ul style="list-style-type: none"> Leader way of culvert were not clear properly Soil erosion at dumping yard Contamination of chemical at stock yard Mosquito breeding point at stock yard Improper Waste management Damaging to crops due to improper disposal sites Waste water discharge to environmental 	<ul style="list-style-type: none"> Remove the unauthorized dumping from worksite Developed vegetation cover at steep slope where dumped disposal Remove disposal at vegetation cover Soil erosion control measures were applied at relevant disposal sites Clean the stores Remove the chemical contamination at stores 	<ul style="list-style-type: none"> PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> Rectification was done to a satisfactory level

	, R3 No 38- Delgoda Balipola Junction, Wathurawa Road	<ul style="list-style-type: none"> Unauthorized dumping Erosion at disposal site Disturb to natural vegetation 	<ul style="list-style-type: none"> Remove the unauthorized dumping from worksite Erosion control at disposal yards Remove disposal at vegetation cover 	<ul style="list-style-type: none"> PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> Rectification was done to a satisfactory level
Rathnapura	. R3 No 8 Thapaswara Kanda Junction, Wiskamgoda Road via Keerupatha Bridge	<ul style="list-style-type: none"> Unauthorized dumping Erosion at disposal site 	<ul style="list-style-type: none"> Remove the unauthorized dumping from worksite Erosion control at disposal yards 	<ul style="list-style-type: none"> PIC monitor continuously until completion of the ratification measures 	<ul style="list-style-type: none"> Rectification was done to a satisfactory level



Photo 5.2.1 and 5.2.2, Environmental impact observed by PIC at MA 03 Road ID no 27 - Unauthorised dumping lack of road safety at 0+080 and soil erosion at 0+ 100



Photo 5.2.3 and 5.2.4. Rectified Environmental impact by removing unauthorised dumping and competing shoulder for improve the road safety (0+080) and controlling soil erosion by constructing L drain and hard shoulder at ((+100) at MA 03 Road ID no 27



Photo 5.2.3 ,5.2.4 and 5.2.5, Environmental impact observed by PIC– eroding at side drain (Photo 5.2.3) and mitigation measured applied by contractor (silt trap by sand bags Photo 5.2.4) and turffing (Photo no 5.2.5 at dumping at KE01 Road ID no 70 ((+850 to 1+350 LHS)



Photo 5.2.6 and 5.2.7 Environmental impact observed by PIC – unauthorised disposals and eroding road site (Photo No 5.2.6) and rectified by contractor removing unauthorised disposals at site and construction of bolder packing for erosion control at R3 Road ID no 10(4+700RHS)



Photo 5.2.8 and 5.2.9 Environmental impact observed by PIC– Erosion at disposal yards at dis unauthorised disposals and eroding road site (Photo No 5.2.6) and rectified by contractor constructing toe wall and allowing grow to vegetation cover at R3 Road ID no 38 ,(3 +965LHS)



Photo 5.2.10 and 5.2.11. Environmental impact observed by PIC, A well was sited and contaminated with rainwater runoff came from road sites (Photo 5.2.10) and rectified by contractor dewatering , desilting and contracting U drain to avoid father rain water following to well (photo 5.2.111) at KE 03 Road ID no 31(1+ 890LHS)



Photo 5.2.12 and 5.2.13. Environmental impact observed by PIC Disposal soil dumping to steep embankment which was highly susceptible soil erosion (Photo 5.2.12) and rectified by contractor constructing toe wall with bolder packing (photo 5.2.13) at KE 01 Road ID no 05 2+100LHS

5.3 Tree removing and tree planning program

Tree removing for road construction work was minimized as much as possible during the reporting period. This was highly emphasized by Team leader of PIC and Project Directors of PIU at monthly progress review meetings. Systematic tree removing process has been practiced in PIC03 as follows

- After the demarcating ROW of the road according to the road design, ESO of contractor will prepare a list of trees to be removed
- This tree list will be send to RE coping to PD/PE by contractor
- Joint inspection will be conducted with representative of PIU, PIC and contractor representing environmental safeguards officers and finalized the tree list to be removed
- This finalized list will be presented at monthly progress reviewed meeting. If unusual list presented at monthly progress meeting, TL of PIC and DP of PIU may query and sometime special field inspection may be done with participation of TL and DP
- Eg : tree list with 76 trees submitted to April 2016 Matale District progress review meeting for removal, PD of Central Province decided conducted a field inspection with all parties and after the field inspection only 8 trees were decided to remove
- After finalizing tree list to be removed, list will be send to relevant Divisional Secretary(DS)
- DS will clarify the information from relevant “Grama Niladhari” and after that, approval will be granted for removal
- Removed trees belong to government land are hand over to State Timber Corporation and trees belong to private land are handover to tree owner through relevant Grama Nila dari
- Contract package NE2 did not remove any tree during the reporting period
- Tree planting program is being implemented in most of the contract packages in PIC 03. Few contractors more number of trees than the requirement (as a CSR program). Table 5.3 shows the summery of the tree removal and tree planning during the reporting period details of tree planting indifferent contracts are given in annex 3

Table 5.3.1 the summery details of the tree removal and tree planning during the reporting period

Central Province

Package	Contractor	Total Trees to be removed	Total Trees removed	Total Trees to be Planted	Total Trees Planted
KA1	Sierra Construction (Pvt) Ltd	12	8	24	0
KA2	Sierra Construction (Pvt) Ltd	0	42	126	0
KA3	Edward and Christie	215	40	106	14
MA1	K D Ebert and Sons Holdings (Pvt) Ltd	65	3	9	0
MA2	Edward and Christie	4	4	12	0
MA3	CML-MTD Construction	0	18	51	3
NE1	Sierra Construction (Pvt) Ltd	1	5	15	0
NE2	Sierra Construction (Pvt) Ltd	0	0	0	0
NE3	Sierra Construction (Pvt) Ltd	3	1	0	300
Total		300	121	343	317

Sabaragamuwa Province

Package	Contractor	Total Trees to be removed	Total Trees removed	Total Trees to be Planted	Total Trees Planted
R1	K D Ebert and Sons Holdings (Pvt) Ltd	22	61	117	66
R2	K D Ebert and Sons Holdings (Pvt) Ltd	167	47	121	20
R3	RR Construction	318	262	166	620
KE1	K D Ebert and Sons Holdings (Pvt) Ltd	223	51	3	150
KE2	Nawaloka Construction	540	118	321	354
KE3	Nawaloka Construction	54	5	162	0
Total		1324	544	890	1210

Kalutara District

Package	Contractor	Total Trees to be removed	Total Trees removed	Total Trees to be Planted	Total Trees Planted
KL1	Maga Construction (PVT) Ltd	1	0	3	0
KL2	Olympus Construction (PVT) Ltd	0	0	0	0
KL3	Olympus Construction (PVT) Ltd	0	0	0	0
Total		1	0	3	0

6 . PUBLIC CONSULTATIONS AND INFORMATION DISSEMINATION

Awareness meetings are conducted at each and every road where improvement and rehabilitation to be done under PIC 03 together with GRC formation meeting with participation of PIU, PIC and contractors staff before any physical works are started. All the information relevant to project activities are explained by all parties at this meeting. Information of construction activities, social and environmental safeguards compliance of the projects, GRM process and community participation in project activities are explained at these meetings. Community can be interacted with project partners at this meeting

In addition to the awareness meetings conducted before the commencement of civil works a public information notice developed in local languages is being displayed at common places in the project area. The main purpose of the notice is to create awareness among communities on the project, understand what extent the community can involve in the project activities and how to make complaints, suggestions and requests to the project authorities. Public information notice brings the key information about the project and contact numbers of relevant officers of the project whom to be contacted regarding social and environment relevant issues. In addition, 05 contact persons are designated to submit complaint within PIU & PIC. They are

<u>PIC</u>	<u>PIU</u>
<ul style="list-style-type: none"> ▪ Environment Specialist ▪ Social/Gender/Resettlement Specialist 	<ul style="list-style-type: none"> ▪ Project Engineer ▪ Environment Safeguard Officer ▪ Social Safeguard Officer

Another information leaflet is distributed among the public who lives along the road corridor. This Leaflet contains information on road survey marking which some people tend to misunderstand leading to complaints. This leaflet attached as annex 4

Complaint/Suggestion and Request Boxes at the work sites has been identified as one of the effective methods to share views of public in design stages and Construction stages.

These boxes are installed at Contractor's site Offices, Grama Niladhari Offices of the road related area and public places of the construction sites. The project management team is expected to collect these complaint, suggestions and request from the boxes at each week.

PIC has introduced a common format for the Complaints/Suggestions and Request boxes. This is to avoid any confusion among the public and have uniform set of Complaints, Suggestions and Requests boxes within the Project.

7 PROGRAMS AND ACTIVITIES TO ENHANCE ENVIRONMENT

7.1 Programs and activities conducted by contractors to enhance the environment

Number of programs and activities have been conducted by different contract packages of the PIC03 depending on their capacities and commitments for environmental conservation. Majority of these programs were training and educational programs on environmental conservation for school children and community members. Number of tree planting program were also conducted by few contractors, in addition to contractual tree planting for removal of trees for road rehabilitation and improvements. Summary of programs and activities conducted by different contractors for this requirement is in Table 7.1 .Details of program and activities conducted by different contractors for this requirement are given annex 5 and details of training – awareness program conducted by different contractors are given annex 6

Table 7.1. Summary of programs and activities conducted by different contractors for enhance environment**Table 7.1.1 Summary of programs and activities conducted by KA01 contractor in Kandy District**

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. 04,41,42,43,44,46 2. School Environmental Pioneers Group 3. Staff of the office and site	1. Aware the people about the invasive species of Yoda Nidikumbha (Mimosa Pigra) 2. Aware the tree planting and environment 3. Aware the snakes, snake bite prevention and first aids	1. Prepare the hand-outs and distributed among the people 2. Facilitate for the programme 3. Facilitate for the programme	1. Prevent the threatened of invasive plant of Yoda Nidikumbha 2. Educated about the environment and tree planting 3. Educated about the snakes, biodiversity and first aid for the snake bite



Photo 7.1.1.1 Identify the invasive species of Mimosa Pigma (Yodha Nidikummba)

Snake bite awareness program



Photo 7.1.1.2 Snake bite awareness program



Photo 7.1.1.3 Snake bite awareness program



Photo 7.1.1.4 Snake bite awareness program



Photo 7.1.1.5 Snake bite awareness program



Photo 7.1.1.6 Snake bite awareness program Certificate

Table 7.1.2 Summary of programs and activities conducted by KA03 contractor in Kandy District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. No 2. 30 3. 14 4. 27	1. Introduced solid waste management system to the site office 2. No of Packed sand bag at one of the disposal sites 3. Preserved mash land adjoining to the road	1. Solid waste separation at the site office & hand over to Local Authority 2. Protected Historically valuable tree 3. provided man power & materials 4. Supplied manpower & materials	1. enhance working environmental condition 2. preserve the tree

**Photo 7.1.2.1 Introduced solid waste management system to the site office**



Before KRN 30 (0+980) LHS Before Construction



After



Photo 7.1.2.3 KRN 14 Disposal site restoration – Packed sand bag

Photo 7.1.2.2 Protect historical valuable tree

Table 7.1.3 Summary of programs and activities conducted by KA03 contractor in Kandy District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. 7	1. Rehabilitate a community solid waste disposed location	1. Provided JCB and unload disposed soil to rehabilitate	1. Improve scenic value of the land



**Photo 7.1.3.1 Rehabilitate a
community solid waste disposed
location**

Table 7.1.4 Summary of programs and activities conducted by NE2 contractor in Nuwara Eliya District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. NE2(For the package area) 2. Residences and main offices 3. Nanu Oya	1. Discussion with DoF –NE for implement a tree planting program 2. Place display boards for save water and solid waste management 3. Support for handling the solid waste dumping site that conducts by LA-Nuwara Eliya	1. Supply plants 2. Cost for boars 3. Supply the backhoe	1. Environmental protection 2. Solid waste management in the area

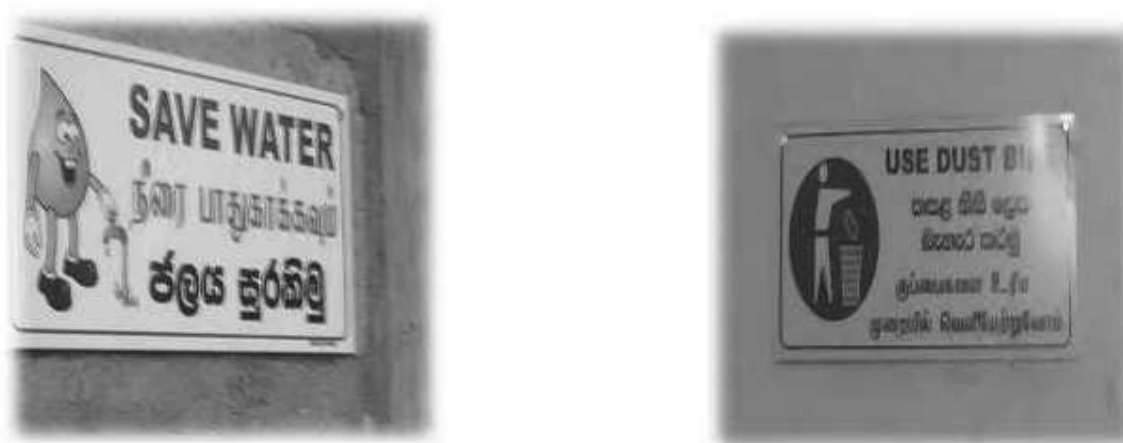
**Photo 7.1.4.1 Display boards for save water and solid waste management**

Table 7.1.5 Summary of programs and activities conducted by NE3 contractor in Nuwara Eliya District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. Main Yard Badupola	1. Dengue Prevention Programme (Nation's dengue prevention week)	1. Labours allocated for that programme.	1. Clean environment. of



Photo 7.1.5.1 Dengue Prevention Programme (Nation's dengue prevention week)

Table 7.1.6 Summary of programs and activities conducted by MA 01 contractor in Malate District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. 3,6,11,13,14,15 2. Main office,site offices	1. Applying sloping agricultural land technology(SALT) and brush layering. 2. Wasted stone used for construction of stone bund against soil erosion near water conveying canal.(Thennawatta oya) 3. Bio silt trap to avoid debris of catch fit of culvert. 4. Vegetable farming over the filling wasted soil by using retaining wall. 5. Gansarapola -Stone bunds arranged by using wasted stone to protect erosion of bank of water conveying canal and conservation of water catchment. 6. Protection measures to avoid Soil erosion and potential earth slip nearest to house by using grass turfing . 7. Clearance of land for children park of Riththota pradesheeya Saba 8. Creation of awareness on dengue prevention and site clearance,proper waste management in main offices and sites. 9. Creation of awareness on dengue prevention and site clearance,proper waste management in main offices and sites in laboratory 10.Waste sorting in separate dust bins(red color for nondecomposable waste polythene),Green color for perishable waste,brown color for paper waste) and facilitating recycling.	1. Labour and resource person Demonstration effect 2. Filling wasted soil more than 100 cubes Labourer Resource person 3. Filling, levelling the land and disposal of wasted water, facilitate waste water draining systematically. 4. Joint inspection took action with AEO of RE office. 5. Supplied waste bins,	1. Concrete retaining wall along with road boundary. 2. Protection of house boundary through slope stabilization and soil conservation by using turfing by grass against slope 3. Protection of access road of beneficiary 4. Every day water spraying 5. Soil conservation and slope stabilization 6. Soil conservation and protection of water catchment of Thennawatta oya)



Photo 7.1.6.1 Applying sloping agricultural land technology(SALT) and brush layering.

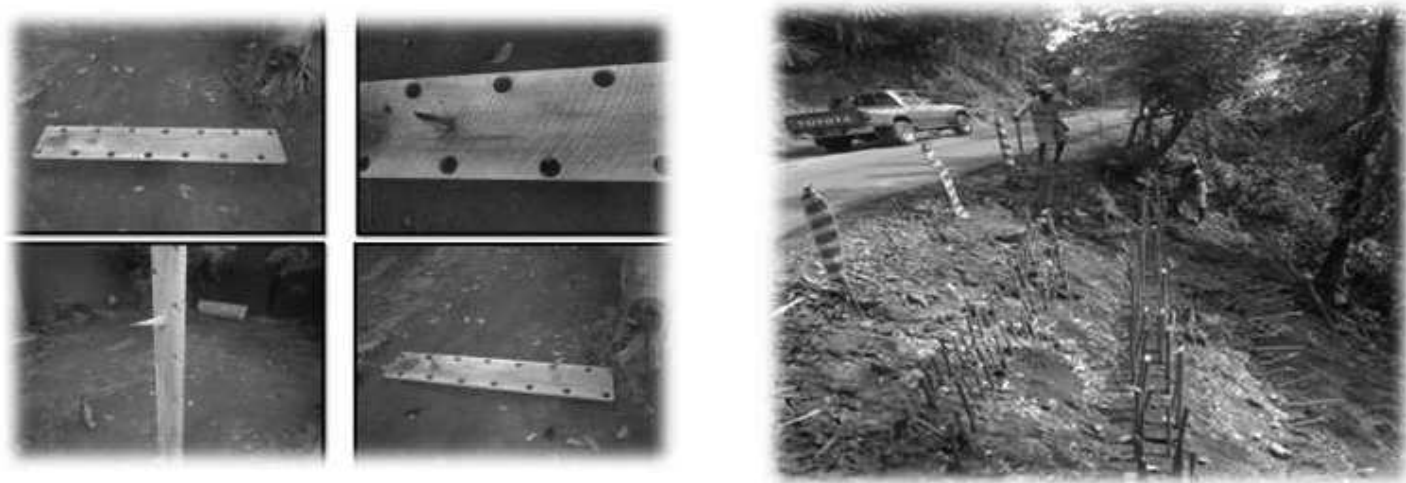


Photo 7.1.6.2 Planting pad used to plant pegs of Glyricidia for better soil (slope stability)



Photo 7.1.6.3 Protection of water source from Soil Erosion by using rock boulders Location: Udaweraga Thennewatta Gansarapola Road (R 13), Chainage 3+330 LHS



Photo 7.1.6.4 Bio silt trap to avoid debris of catch fit of culvert Location – R 14

Table 7.1.7 Summary of programs and activities conducted by KE 01 contractor in Kegalle District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. concrete batching plant 2. 18	1. Tree planting program was carried out at concrete batching plant premises 2. A poverty alleviation program for villagers of Katulanda	1. 12 trees were planted along the river bank area with appropriate intervals. 2. Distributed 600 pepper plants for 60 families in the village and conducted few lecture series on how to grow pepper plants in home garden	1. To control soil erosion 2. Help to balance the carbon sink in the environment



Photo 7.1.7.1 Tree planting program



Photo 7.1.7.2 Tree planting program



Photo 7.1.7.3 Tree planting program

A poverty alleviation program for villagers of Katulanda



Photo 7.1.7.4 A poverty alleviation program



Photo 7.1.7.5 A poverty alleviation program



Photo 7.1.7.6 A poverty alleviation program



Photo 7.1.7.7 A poverty alleviation program



Photo 7.1.7.8 A poverty alleviation program



Photo 7.1.7.9 A poverty alleviation program

Table 7.1.8 Summary of programs and activities conducted by KE 01 contractor in Kegalle District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. 11,16,17,19A, 1,13,12,19,14, 17A	<ol style="list-style-type: none"> 1. Construction of Structures 2. Construction of Protection Wall Rock Blasting 3. Construction of Drain 4. Removal of trees close to the road 	<ol style="list-style-type: none"> 1. Construction of new Culvert & Repairing of existing culvert Where the 2. protection wall necessary. That are provide by company 3. Suitable method uses for rock blasting for relevant place. (Chemical, blasting, Rock breaker) 4. Provide Earth Drain & Concrete Drain By company 5. Tree removal cost pay by company 	<ol style="list-style-type: none"> 1. Contributed to mitigate soil erosion & contamination of ground water by soil 2. Prevent soil erosion & landslides. 3. Provide the road safety & Mitigate the risk of removal of rock 4. Prevent the contamination of Runoff water & Contributed to avoid the soil erosion 5. Replanting of tree 1:3 ratio. Avoid the Road accident Possibility



Photo 7.1.8.1 Construction of Culvert
11,16,17,19A,1,13,12,19,14,17A



Photo 7.1.8.2 Rock Blasting
11,16,17,19A,1,13,12,19,14,17A

Table 7.1.9 Summary of programs and activities conducted by R2 contractor in Rathnapura District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
31,03	Construction of retaining wall Supported Hunuwala estate to plant 225 mango trees for incensory their trees coverage	We provided rubble & other material and Constructed the retaining wall incorporate our own labour fence Provided mango trees at a cost Rs. 56,250.00	To eliminate possible land slide Way of income generation for the estate

Table 7.1.10 Summary of programs and activities conducted by R3 contractor in Rathnapura District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
	1. Tree planting in the accommodation premises	1. Company worker	1. Enhancement of the quality of environment by providing clean air absorbing CO2 and preventing soil erosion, food variety

Table 7.1.11 Environmental training/awareness programs conducted during the reporting period by KA1 contractor in Kandy District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 43	1. Aware the good	1. Environmental Officer	1. 25	1. 20	Facilitate and conduct the programme
2. School Environmental Pioneers Group of Mahanama College Kandy	housekeeping practices and road use the environmental sound manner to the community	2. Forest Department	2. 20	2. 15	
3. KA 1 Office staff		3. Environmental Officer	3. 15	3. 01	
4. Staff of the office and site	2. Aware the tree planting and environment	4. Youth Explore Society of Royal Botanical Garden, Peradeniya	4. 20	4. 18	
	3. Aware the good housekeeping at the office environment				
	4. Aware the snakes, snake bite prevention and first aids				

Environment and safety meeting for community



Photo 7.1.11.1 Environmental awareness program



Photo 7.1.11.2 Environmental awareness program



Photo 7.1.11.3 Environmental awareness program

Environmental pioneer group Mahanama College Kandy



Photo 7.1.11.4 Environmental awareness program



Photo 7.1.11.5 Environmental awareness program

Environmental awareness and enhance program at knuckles conservation center, Deenstan, Hunnasgiriya



Photo 7.1.11.6 Environmental awareness program



Photo 7.1.11.7 Environmental awareness program

Table 7.1.12 Environmental training /awareness programs conducted during the reporting period by KA 2 contractor in Kandy District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 12,13 2. 12,13,14,29,30	1. Safety awareness 2. Environmental & Safety awareness 3. Medal awarding ceremony organized by Theldeniya National School	1. Environmental & Social Safeguard Officer 2. Project manager and Environmental & Social Safeguard Officer 3. Environmental & Social Safeguard Officer	1. 35 2. 30 3. 80	1. 08 2. 12 3. 65	1. provided personal Protective equipment by the company

**Photo 7.1.12.1 Safety awareness**

Table 7.1.13 Environmental training /awareness programs conducted during the reporting period by KA3 contractor in Kandy District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
	1. Awareness program for School Children - Awareness on wild life	1. Mr.R.M.M.D. Bandara	1. 23 2. 54	1. 55 2. 73	1. lectures Conducted
	2. Biodiversity Awareness Program for School Children - Nugawela Central College	2. Mr.Pradeep Samarawickrama	3. 12 4. 20	3. 46 4. 05	
	3. Biodiversity Awareness Program for School Children- Udahena College	3. Mr.Kithsiri Pathiraja			
	4. Awareness on ISO standards changes - Project office				

Awareness program



Photo 7.1.13.1 Awareness program



Photo 7.1.13.2 Awareness program



Photo 7.1.13.3 Awareness program



Photo 7.1.13.4 Awareness program



Photo 7.1.13.5 Awareness program

Table 7.1.14 Environmental training/awareness programs conducted during the reporting period by NE 1 contractor in Nuwara Eliya District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
	1. Environmental and safety awareness program for the officers for all packages in NE 2. Environmental and safety awareness to site workers and staff	1. Corporate discussion and prepared an action plan			1. Lectured and refreshment, Hall arrangements

**Photo 7.1.14.1 Environmental and safety awareness program for the officers for all packages in NE**

Table 7.1.15 Environmental training /awareness programs conducted during the reporting period by NE 2 contractor in Nuwara Eliya District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 30,17,29,16	1. For the students of Mahavali mahaseya primary collage, as the topic Environment conservation 2. For the students under pioneer brigades programs that conducted by Central Environmental Authority 3. Environmental and safety awareness program for the workers of the site 4. Environmental and safety awareness program for the officers for all packages in NE 5. Awareness program for road safety and environment protection by walking along the road	1. Environmental specialist–Sierra construction 2. Environmental specialist–Sierra construction 3. Environmental specialist, Safety manager–Sierra construction 4. Corporate discussion and prepared an action plan 5. Client, Consultant and Contractor,	1. 15 2. 30 3. 20 4. 5. 50	1. 20 2. 20 3. 4. 5. 70	1. Lectured and refreshment 2. Deliver the lectured 3. Printed hand bills



Photo 7.1.15.1 Awareness program for road safety and environment protection by walking along the road



Photo 7.1.15.2 Environmental and safety awareness program for the officers for all packages in NE



Photo 7.1.15.3 Environmental and safety awareness program for the workers of the site



Photo 7.1.15.4 For the students of Mahavali mahaseya primary collage, as the topic Environment conservation

Table 7.1.16 Environmental training /awareness programs conducted during the reporting period by MA 1 contractor in Matale District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 11,12,14	1.Description of training programs (including topics of the program) 2.Soil conservation,water conrsvation,importance of tree planting. 3.Improvement of temple premises having atavisibodiya,historical trees, and as bio diversity centre 4.Awareness programm on agro forestry and sensitization for tree planting of youth and creation of youth club 5.Tree planting beside water conveing canal near Muthhur Amman Kovil and introduction of importance of Mee tree(Bassica longifolia)	1. EO 2. AEO 3. Chairman 4. Death Donation society 5. Superintendent of Mount Eliza State	1. 16 2. 20	1. 85 2. 36	1 Refreshment cost,Resource persons



Photo 7.1.16.1 Awareness program on agro forestry and sensitization for tree planting of youth and creation of youth club



Photo 7.1.16.2 Tree planting beside water conveying canal near Muthhur Amman Kovil and introduction of importance of Mee tree(Bassica longifolia)

Table 7.1.17 Environmental training /awareness programs conducted during the reporting period by MA 2 contractor in Matale District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company	Remarks
			Male	Female		
	Awareness program for School Children - Awareness on wild life	Mr.R.M.M.D. Bandara Mr.Pradeep Samarawickrama	18	27	lectures Conducted	Fig. 1
	Biodiversity Awareness Program for School Children - Nugawela Central College	Mr.R.M.M.D. Bandara Mr.Pradeep Samarawickrama	54	73	lectures Conducted	Fig. 2
	Biodiversity Awareness Program for School Children - Udahena College	Mr.R.M.M.D. Bandara Mr.Pradeep Samarawickrama	12	46	lectures Conducted	Fig. 3
	Science Education Program for A/L Student's	Mr.Pradeep Samarawickrama	75	75	lectures Conducted	Fig. 4
	Awareness on ISO standards changes - Project office	Mr.Kithsiri Pathiraja	20	5	lectures Conducted	Fig 05
	Environmental Awareness Program for Environmental ministry officers	Mr.R.M.M.D.Bandara Mr.Pradeep Samarawickrama	21	15	lectures Conducted	Fig 06
	HIV/AIDS Prevention and Health Awareness Programme	Youth 4U-Team	211	36	Transport, other facility provided	Fig 07
	Extended school play ground at Rathmalgahaela School	E&C (Pvt.) Ltd.	152	126	Provided company vehicles & Driver	Fig 08
	Excavated toilet pit at D.S.Senanayake primary School	E&C (Pvt.) Ltd	84	76	Provided company vehicles & Driver	Fig 09



Photo 7.1.17.1 Awareness program for School Children - Awareness on wild life



Photo 7.1.17.2 Biodiversity Awareness Program for School Children - Nugawela Central College



Photo 7.1.17.3 Biodiversity Awareness Program for School Children - Udahena College



Photo 7.1.17.4 Science Education Program for A/L Student's



Photo 7.1.17.5 Awareness on ISO standards changes - Project office



Photo 7.1.17.6 Environmental Awareness Program for Environmental ministry officers

Table 7.1.18 Environmental training /awareness programs conducted during the reporting period by KE 2 contractor in Kegalle District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. Relevant for All Roads	1. Awareness programme about health, safety and environment 2. Awareness programme for students about environmental conservations	1. Environmental specialist of egis cea 2. Environmental Officer of the contractor	1. 21 2. 24	1. 9 2. 18	1. Collect the participants and provide the opportunity



Photo 7.1.18.1 ES, PM, DPM and CE



Photo 7.1.18.2 Lecture of ES



Photo 7.1.18.3 Staff members of KE2



Photo 7.1.18.4 Lecture period & video Demonstration on Environmental Conservation

Table 7.1.19 Environmental training /awareness programs conducted during the reporting period by R1 contractor in Rathnapura District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 19A 2. Milavitiya Project office	1. Social Work- Painted Sri Rukhena Temple 2. HIV AIDS program	1 Villages 2 For staff members	1. 6 2. 69	1. 0 2. 11	Provided Relevant Fund By Company.

Table 7.1.20 Environmental training /awareness programs conducted during the reporting period by R2 contractor in Rathnapura District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution company	by
			Male	Female		
1. 32	1. During in augural tree plantation program at Rathmalavinna M .V- Balangoda 2. Laboratory Testing & Feld Density Testing Training program at Student for University of Sabaragamuwa	1. KDESH R2 PM/DPN & EO 2. KDESH R2 QAM/ME	1. 25	1. 30	1. 5500	
			2. 30	2. 46	2. 5000	

Table 7.1.21 Environmental training /awareness programs conducted during the reporting period by R3 contractor in Rathnapura District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 01,02,26,27,36	1. Awareness to workers to remove sediments in culverts to avoid blocking of drains and over flow of waters, and to minimize soil erosion at their cuts.	1. PM	1. 22		
		2. A.K Rohan	2. 18		
		Peris	3. 16		
	2. Awareness to identify areas required turfing and reinforce	3. Mr.	4. 23		
		Bandara	5. 30		
	3. Instructions to workers on proper road cutting with the slope and quick removal of soil as possible as.	(Safety Officer)	6. 32		
	4. Workers in the yard made aware to avoid spills of diesel and lubricants to the soil and methods of proper handling of				
	5. Workers made aware to avoid collection of soil and ABC in the constructed drains by applying proper turfing or filling with aggregates where the places with bents and slops to avoid repeat work and soil erosion.				
	6. Awareness of workers in yard Pallebadda on waste management and prevention of soil erosion by proper draining				
	7. Tool Box meeting				

7.2 Video films on completed roads in PIC03

Best evidence for implementation of environmental compliance of the project is video documentation with previous conditions of the road before rehabilitation/improvement of the road. Hence 7 video films were prepared on completed roads by comparing previous condition of the road with condition of the road after rehabilitation/improvement highlighting compliance of environmental and social safeguards by PIC. These video films were already handed over to ADB through senior Project Director.

Following are details of these videos

District: NuwaraEliya

Package: NE 2

Roads

- 1.Connecting road to Halpola, Road ID no:31
2. Observation Chambers – Kotame Road (Kotmale dam view point), Road ID no: 30
- 3 Henfold Couleena Estate Road, Road no: 32

District: NuwaraEliya

Package: NE 3

Road

- 1 Haranage New Thispane Road, Road ID no 44

District: Kandy

Package: KA1

Roads

- 1.Sirimalwatta Nathtahanpotha, Road ID no:44
2. Manikkahinna (Pitiye Dewalaya) Galawaluwa, Road, Road ID no: 30
- 3 Gagasiriwatta Polgolla Road, Road no: 32,

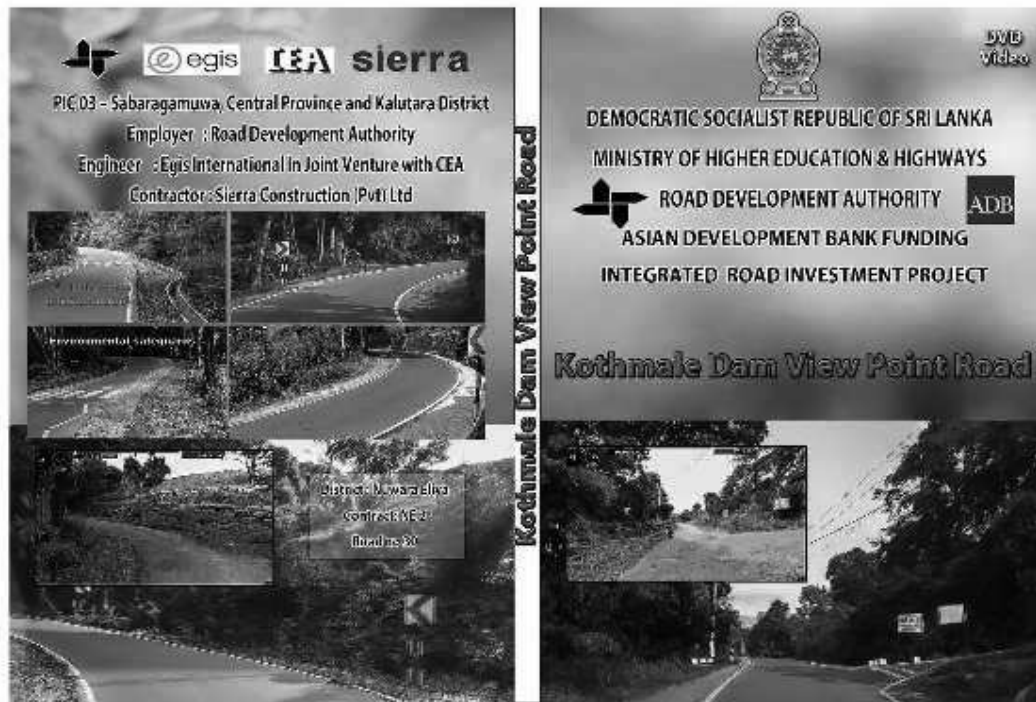


Photo Observation Chambers – Kotame Road (Kotmale dam view point), Road ID no: 30

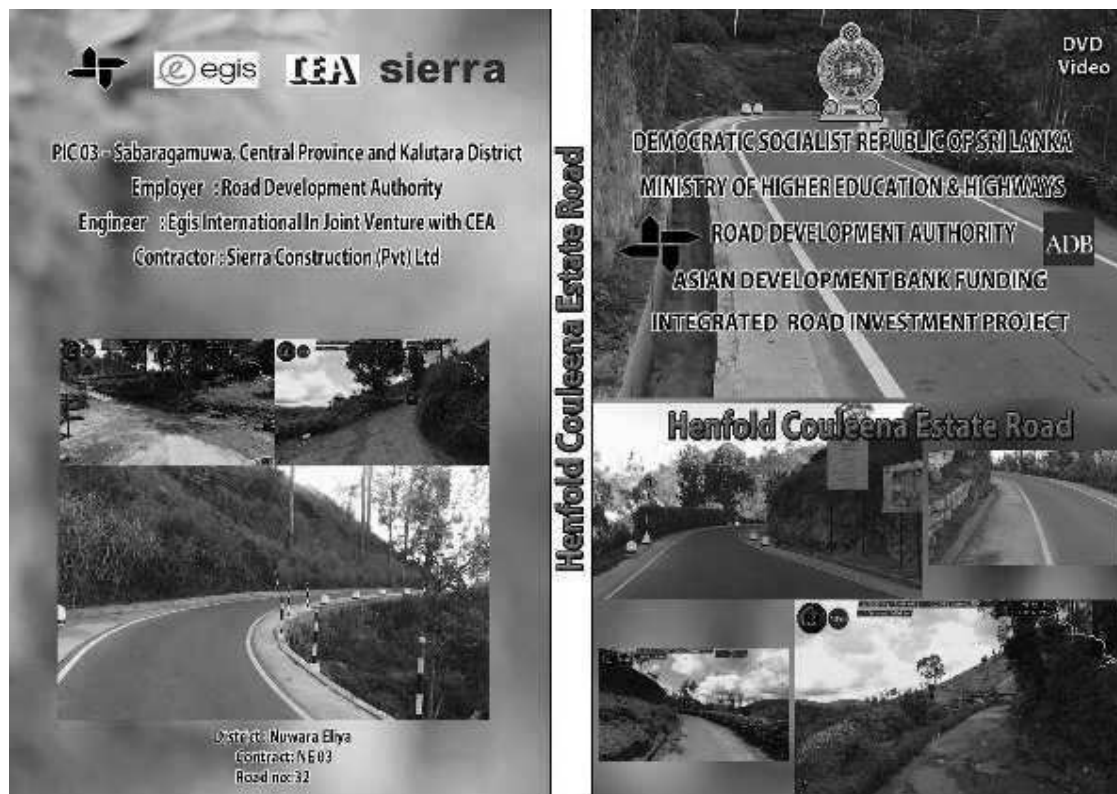


Photo Henfold Couleena Estate Road, Road no: 32

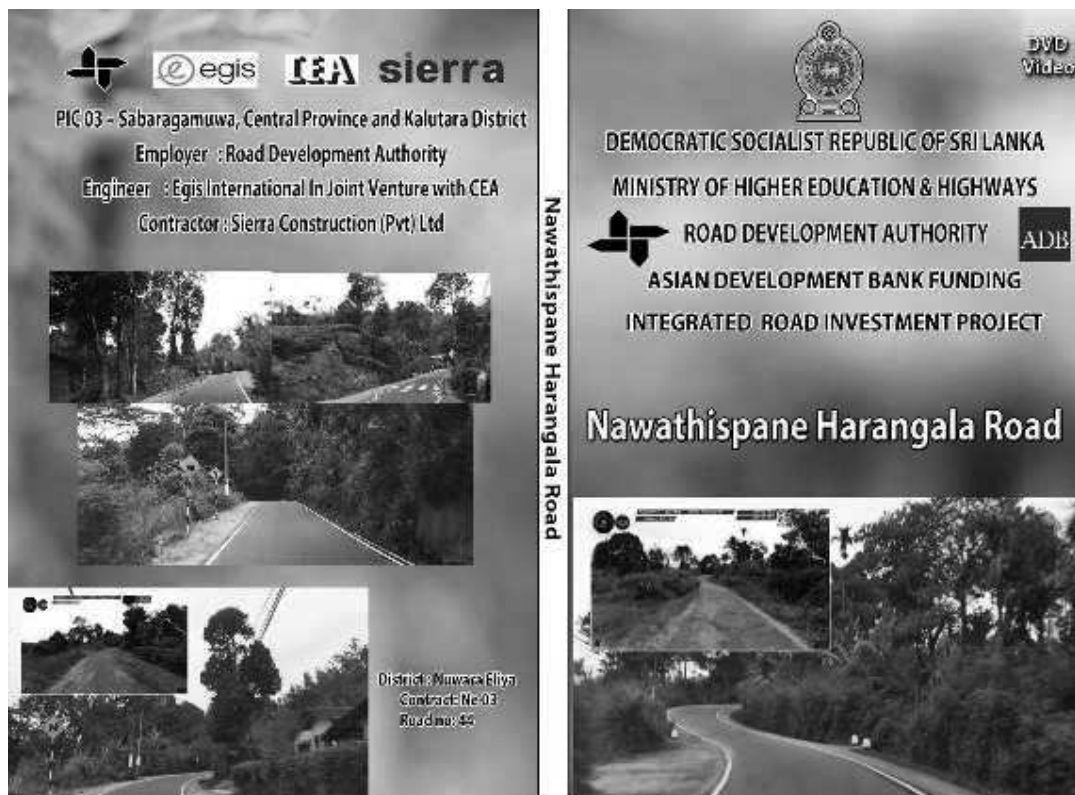


Photo Haranage New Thispane Road, Road ID no 44

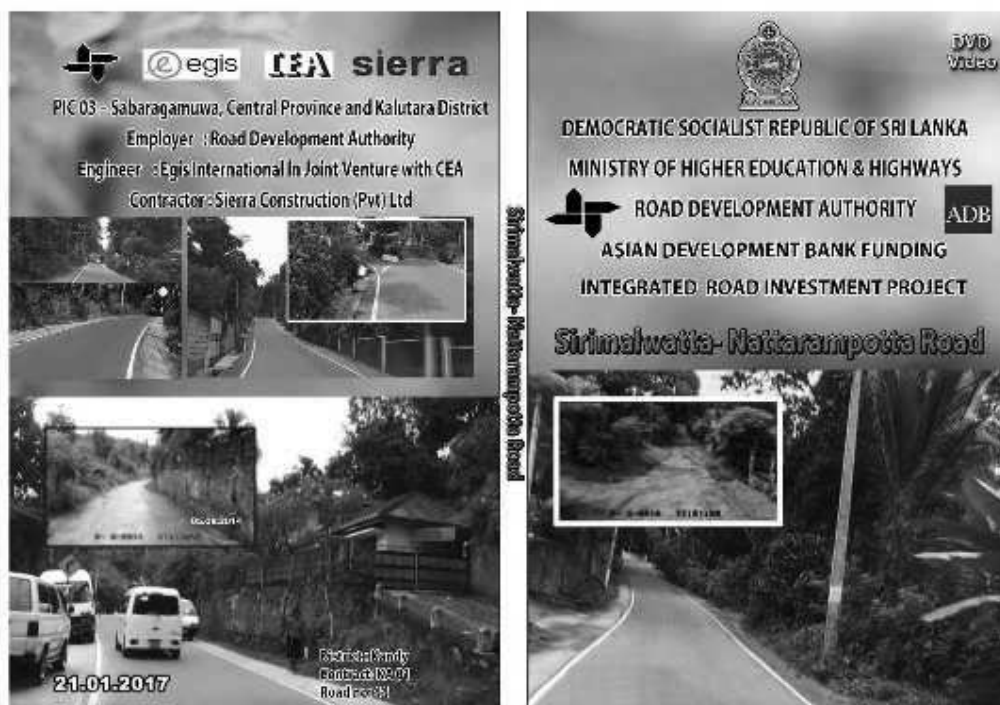
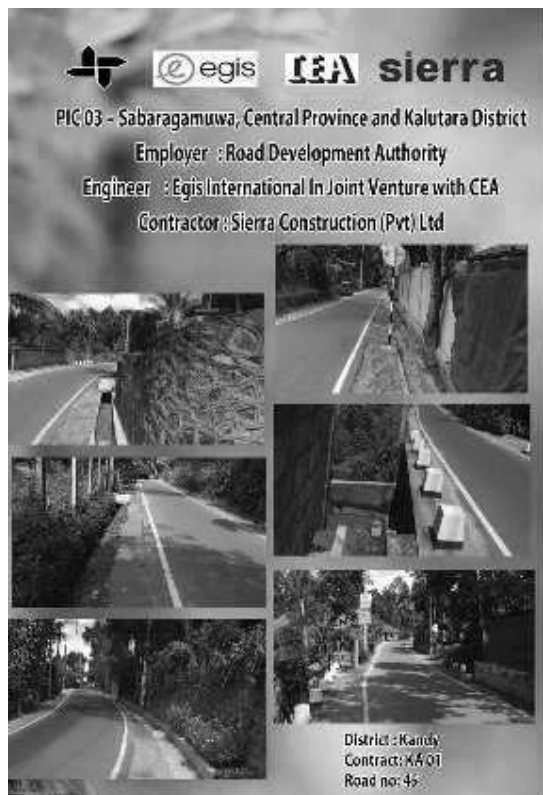


Photo Sirimalwatta Nathtahanpotha, Road ID no:44



(Pitte Dewalaya) Manikkhinna - Galaluwa Road

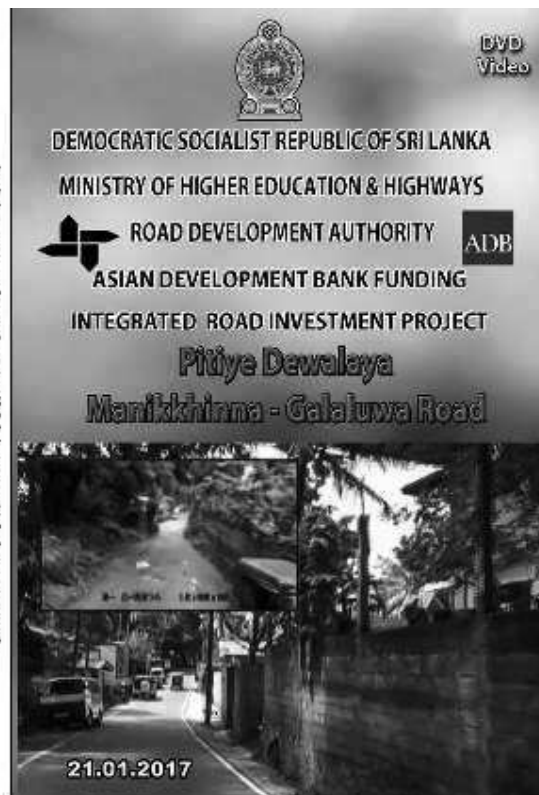
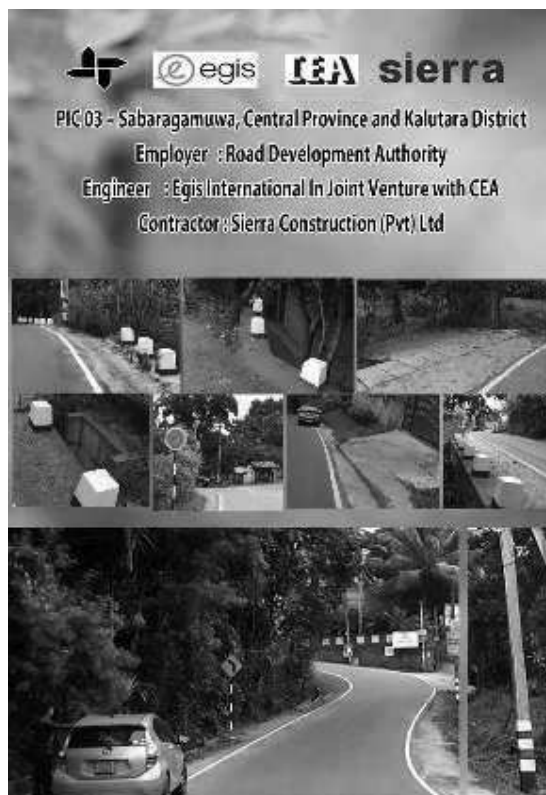


Photo Manikkahinna (Pitiye Dewalaya) Galawaluwa, Road, Road ID no: 30



Gagasiwatta, Polgolla Road

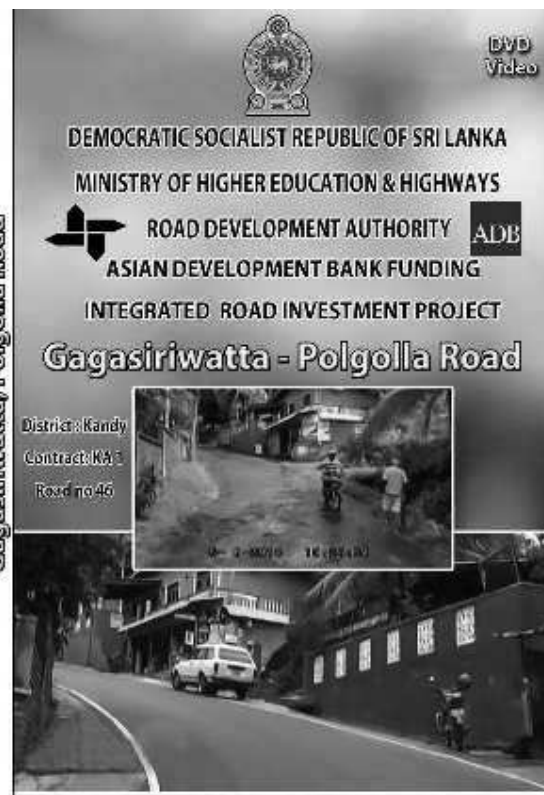


Photo Gagasiwatta Polgolla Road, Road no: 32,

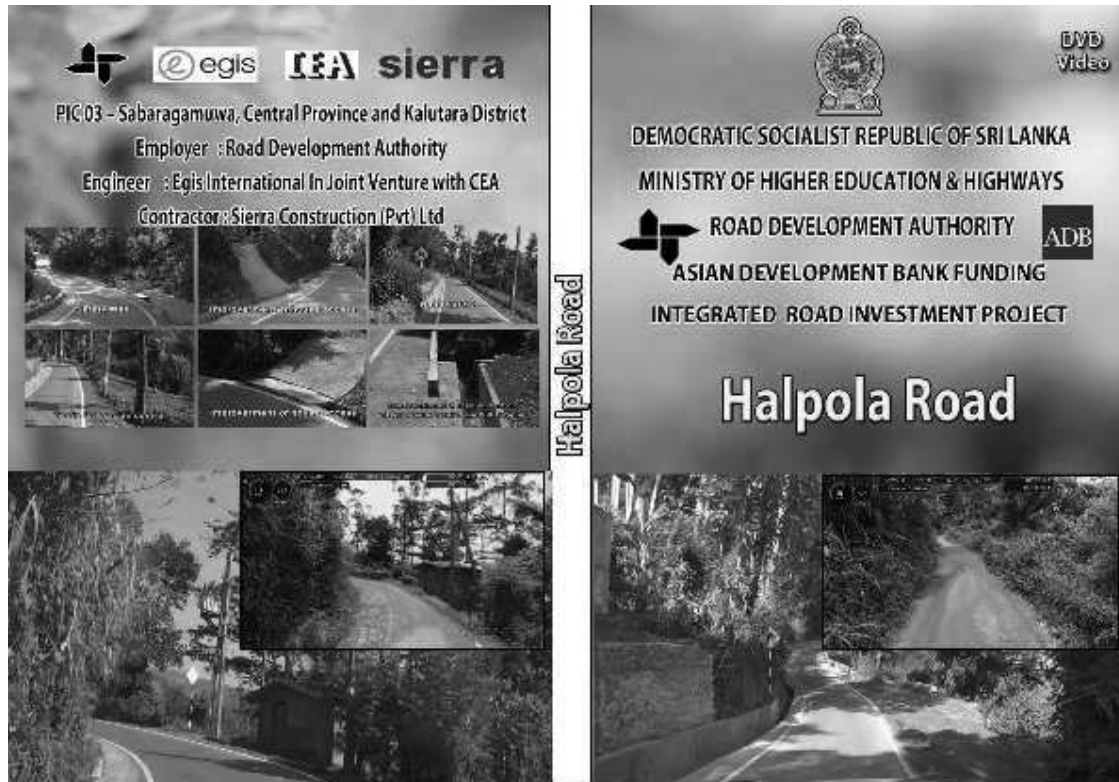


Photo Connecting road to Halpola, Road ID no:31

8 CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

- 1 This report proves steps taken by the Project Implementation Unit (PIU), Project Implementation Consultants(PIC) and Contractors for the compliance with Environmental Assessment Review Framework(EARF), loan conditions and Facility Administration Manual (FAM).
- 2 This report deliberates measures taken by the project team for compliance with Environmental Safeguards requirement as per the loan documents and other relevant documents related environmental safeguards such as Loan agreement, FAM, EARF, IEE and Environmental checklist.
- 3 PIC03 comprise six districts where all types of agro ecological zones in Sri Lanka are situated. Central high land of Sri Lanka where high steep areas and high rain fall received areas (except MA2 and part of R3 and NE1) are also situated in PIC03 including landslide areas. Making it a much challenging task.
- 4 It could be stated the compliance of requirements of the project is in higher level due to commitment of field staff, Site Engineers(SE), and Environmental and Social Officers(ESO) and management of the contractor's staff Project Manager (PM) and Deputy Project Manager (DMM) and guides and advice given by consultant staff, Constriction Engineers(CE), Assistant Resident ARE and RE ,and corporation given by the PIU staff of Environmental Development Assistant (EDA), Environmental Safeguard Officer (ESSO) and Project Engineers (PE) under leadership of Project Directors (PD), Deputy Project Director(DPD) of PIUs and Team Leader(TL) of PIC by working as one team where shows the clear team effort.
- 5 Guides and assistance given by the ESDD of RDA and ADB CSD/SG specialist highly contribute to improve the knowledge base of the project staff on environmental safeguard requirement of the project as well as the successfully compliance the environmental requirements.
- 6 Environmental team (ESO and ESA) attached to PIU worked corporally with PIC and contractor's staff with good commitments for the implementation of safeguards requirements of the project.
- 7 Most of the management of the contractors showed good commitments for implementation of safeguards requirements projects and they have appointed qualified and devoted Social

and Environmental officers which shows successfully compliance of environmental requirements of the project with good physical progress of the packages. NE2, NE3, KA1, MA2 and R2 packages are some examples.

- 8 Attitudes and commitments of engineering field staff highly affected for field implementation of safeguards requirements of the project. It has been observed that successfully compliance of environmental requirements of the project at the field were presented field engineering staff who are highly devoted for environmental conservation and with positive attitudes.

8.2 Recommendation

Following needs can be proposed to improve the environment safeguard component of the iRoad program.

- a) Widen the level of monitoring.
- b) Conduct more workshops on sharing experiences among the staff of contractor, PIU and PIC on environment safeguards
- c) Need of occasional site visits of ADB safeguard coordinating consultant.
- d) Improve the employment facilities for the social and environmental assistants.

In next social safeguard monitoring reporting period (January – December 2017), plan to carry out more environment safeguard activities and to report accordingly.