

Environmental Monitoring Report

Project Number: 47273-004
47273-005

Annual Report
January to December 2017

SRI: Integrated Road Investment Program

– Tranches 2 & 3

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.

This environmental management and monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature. Your attention is directed to the "terms of use" section on ADB's website.¹ In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF HIGHER EDUCATION & HIGHWAYS
ROAD

DEVELOPMENT AUTHORITY

**ADB Funded Integrated Road Investment
Program PIC03 - Central, Sabaragamuwa
Provinces and Kalutara District of
Western Province**

**ENVIRONMENTAL SAFEGUARD
MONITORING ANNUAL REPORT**

[January – December 2017]



Final Report

12th of March 2018

Submitted to

Project Implementation Unit
(PIU) Road Development
Authority

Prepared by

Egis International Joint Venture with
Consulting Engineers and Architects Associated (Pvt.) Ltd
(Egis-CEA JV)



LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AF	Affected Families
BIQ	Basic Information Questionnaire
BOQ	Bills of Quantities
CE	Constriction Engineer
CEA	Central Environmental Authority
CRC	Conventional Road Contracts
CSD	Context Sensitive Design
DWLC	Department of Wildlife Conservation
DS	Divisional Secretary
DSD	Divisional Secretariat Division
E&C	Edward & Christy
EIA	Environmental Impact Assessment
ES	Environmental Specialist
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EMAP	Environmental Management Action Plan
EMP	Environmental Management Plan
EMC	Environmental Monitoring Checklist
EPL	Environmental Protection License
ESA	Environmental Safeguard Assistant
ESDD	Environmental and Social Development Division
FAM	Project Facility Administration Manual
FGD	Focus Group Discussion
FS	Feasibility Study
GAP	Gender Action Plan
GN	Grama Niladari
GND	Grama Niladari Division GOSL
	Government of Sri Lanka
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IEE	Initial Environmental Examination
IML	Industrial Mining License
IPPS	Indigenous Peoples Planning Framework
IPP	Indigenous Peoples Plan
IR	Involuntary Resettlement
iRoad	Integrated Road Investment Program
KA	Kandy
KE	Kegalle
KL	Kaluthara
MA	Matale
ME	Ministry of Environment
MFF	Multi Tranche Financing Facility
MOHEH	Ministry of Higher Education and Highways
MOHPS	Survey and Preliminary Engineering

MOU	Memorandum of Understanding
MOHEH	Ministry of Higher Education and Highways
NE	Nuwala Eliya
NEA	National Environment Act
OPRC	Output and Performance Base Contracts
PAA	Project Approving Agency
PD	Project Director
PE	Project Engineer
PIC	Project Implementing Consultant
PIU	Project Implementing Unit
PPTA	Project Preparatory Technical Assistance
R	Ratnapura
RDA	Road Development Authority
RE	Residential Engineer
RF	Resettlement Framework
ROW	Right of Way
RMC	Road Maintenance Contract
SAPE	Survey and Preliminary Engineering Consultants
SEO	Social and Environmental Officer
SGRS	Social Gender Resettlement Specialist
SPS	Safeguards Policy Statement
SSA	Social Safeguards Assistant
SSEMAP	Site Specific Environmental Management Action Plans
SSO	Social Safeguard Officer
TL	Team Leader
TO	Technical Officer
TOR	Terms of Reference

CONTENTS

List of abbreviations	2
List of Tables	5
List of Maps	7
List of Graphs	7
List of Figures	7
List of Images	8
1. INTRODUCTION	17
1.1 Background of the Project	17
1.2 Objectives of the project	18
1.3 Project locations	19
1.4 Consultancy Services for Project Implementation	26
1.5 Purpose and Structure of the Report	26
1.6 Overview of Institutional Framework	26
2. OVERALL PHYSICAL PROGRESS OF 18 PACKAGES	29
2.1 Overall Physical Progress of Central Province	29
2.2 Overall Physical Progress of Sabaragamuwa Province	31
2.3 Overall Physical Progress in Kalutara District of Western Province	32
3 Compliance with environment safeguards requirements in the loan documents	33
3.1 Compliance with respect to provisions in the loan agreement	33
3.2 Compliance with Requirements in the Environmental Assessment Review Framework (EARF)	36
3.3 Compliance to the Environmental Requirements under the Project Facility Administration Manual (FAM)	46
4. Monitoring of ENVIRONMENTAL SAFEGUARD compliance at field level	49
4.1 The Documents Contractor should submit	49
4.1.3 Licenses and Approvals	51
4.1.4 Submission of monthly Environmental Progress Report	53
4.1.5 Grievance Redress Mechanism (GRM) of the project	53
4.1.6 Public Request, Suggestion and Complaint Handling Process.	54
4.2 Environmental safeguard compliances field monitoring	55
4.2.1 Field inspection by ADB mid-term review mission	56
4.2.2 Field inspection by ADB CSD Expert team	58
4.2.3 Field inspection by ADB CSD/ SG Specialist and representatives of ESDD	60
4.2.2 Environmental safeguard compliances field monitoring by PIC and PIU staff	65
4.2.3 Site specific monitoring of environmental safeguard compliances	66

5. Environmental Issues observed and status of compliance	68
<i>5.1 Environmental Issues observed by contractor's staff and Environmental Issues reported by public and status of compliance</i>	<i>68</i>
<i>5.2 Environmental Issues observed by PIU and PIC</i>	<i>93</i>
<i>5.3 Workshops and training programs conducted by PIC</i>	<i>113</i>
<i>5.3.1 Workshop on educating on approval process of barrow materials</i>	<i>113</i>
<i>5.3.2 Training programs on environmental safeguard compliances</i>	<i>114</i>
<i>5.4 Tree removing and tree planting program</i>	<i>116</i>
<i>5.5 Monitoring maintaining planted trees</i>	<i>120</i>
6. Public consultations and information dissemination	124
7. Programs and activities to enhance environment	125
<i>7.1 Programs and activities conducted by contractors to enhance the environment</i>	<i>125</i>
<i>7.2 Video films on completed roads in PIC03</i>	<i>146</i>
8 CONCLUSION and RECOMMENDATIONS	147
<i>8.1 Conclusion</i>	<i>147</i>
<i>8.2 Recommendation</i>	<i>148</i>

LIST OF TABLES

Table 1.1:	Classification of Project Road Sections	17
Table 1.2:	CRCs in Matale District	20
Table 1.3:	CRCs in Kandy District	21
Table 1.4:	CRCs in Nuwara Eliya District	22
Table 1.5:	CRCs in Kegalle District	23
Table 1.6:	CRCs in Ratnapura District	24
Table 1.7:	CRCs in Kalutara District	25
Table 2.1:	Overall Physical Progress of Central Province (Up to 31st of December 2017)	29
Table 2.2:	Overall Physical Progress of Sabaragamuwa Province (As at 31st of December 2017)	31
Table 2.3:	Overall Physical Progress in Kalutara District of Western Province (As at 31st of December 2017)	32
Table 3.1:	Compliance with environmental safeguards requirement stipulated in loan Agreement	34
Table 3.2:	Compliance with Environmental Assessment Review Framework (EARF)	36
Table 3.3:	Compliance with Facility Administration Manual (FAM) (Environmental Safeguards)	46

Table 4.1:	Status of submission of EMAPs, SSEMAPs and EMCs by contractors as per 31 December 2017	50
Table 4.2:	Status of establishing GRCs at DS and GN level in provinces under PIC3 as at 31 December 2017	53
Table 4.3:	Details of ADB mid- term review mission's in PIC	56
Table 4.4:	Details of field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff	58
Table 4.5:	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	60
Table 4.6:	Details of training workshops conducted by Dr. K.M.P.S Bandara, Focal Point (Natural Resource & Environmental) ADB SRM to introduce site Specific monitoring system	66
Table 5.1.1:	Key Environmental impact observed during the reporting period and mitigation taken by the KA 01 contractor in Kandy District	69
Table 5.1.2:	Key Environmental impact observed during the reporting period and mitigation taken by KA 03 contractor in Kandy district.	70
Table 5.1.3:	Key Environmental impact observed during the reporting period and Mitigation taken by NE 1 contractor in Nuwara Eliya	74
Table 5.1.4:	Key Environmental impact observed during the reporting period and Mitigation taken by the NE 2 contractor in Nuwara Eliya District	76
Table 5.1.5:	Key Environmental impact observed during the reporting period and Mitigation taken by NE 3 contractor in Nuwara Eliya district	78
Table 5.1.6:	Key Environmental impact observed during the respect month and Mitigation taken by MA 01 contractor in Matale district	80
Table 5.1.7:	Key Environmental impact observed during the reporting period and Mitigation taken by MA 02 in Matale district	82
Table 5.1.8:	Key Environmental impact observed during the reporting period and Mitigation taken by KE1 in Kegalle district	84
Table 5.1.9:	Key Environmental impact observed during the reporting period and Mitigation taken by KE 02 in Kegalle district	86
Table 5.1.10:	Key Environmental impact observed during the reporting period and Mitigation taken by R 1 in Rathnapura district	88
Table 5.1.11:	Key Environmental impact observed during the reporting period and Mitigation taken by R 3 in Rathnapura district	89
Table 5.1.12:	Key Environmental impact observed during the reporting period and Mitigation taken by KL 1 in Kalutara district	91
Table 5.1.13:	Key Environmental impact observed during the reporting period and Mitigation taken by KL 1 in Kalutara district	92
Table 5.2.1:	Summery of environmental issues obverted by PIU staff and PIC staff and their status of compliance	94
Table 5.3.1:	Details of training programs conducted by PIC to improve the knowledge and capacity of the contractor's staff on E nvironmental Safeguards compliances	114
Table 5.4.1:	The summery details of the tree removal and tree planning during the reporting period	118
Table 7.1.1:	Summary of programs and activities conducted by MA 02 contractor in Mstale District	126
Table 7.1.2:	Summary of programs and activities conducted by NE 01 contractor in Nuwara Eliya District	127
Table 7.1.3:	Summary of programs and activities conducted by NE 02contractor in Nuwara Eliya District	128

Table 7.1.4:	Summary of programs and activities conducted by KA 01 contractor in Kandy District	129
Table 7.1.5:	Summary of programs and activities conducted by KA 02 contractor in Kandy District	131
Table 7.1.6:	Summary of programs and activities conducted by KA 03 contractor in Kandy District	132
Table 7.1.7:	Summary of programs and activities conducted by MA 02 contractor in Matale District	136
Table 7.1.8:	Summary of programs and activities conducted by MA 03 contractor in Matale District	138
Table 7.1.9:	Environmental training /awareness programs conducted during the reporting period by NE 01 contractor in Nuwara Eliya District	139
Table 7.1.10:	Environmental training /awareness programs conducted during the Reporting period by NE 02 contractor in Nuwara Eliya District	140
Table 7.1.11:	Environmental training /awareness programs conducted during the Reporting period by KE 01 contractor in Kegalle District	142
Table 7.1.12:	Environmental training /awareness programs conducted during the Reporting period by KE 02 contractor in Kegalle District	143
Table 7.1.13:	Environmental training /awareness programs conducted during the Reporting period by R 3 contractor in Rathnapura District	144

LIST OF MAPS

Map 1.1:	Project Location	19
Map 1.2:	Locations of 51 Nos. (194 km) roads in Matale District	20
Map 1.3:	Locations of 50 Nos. (221.0 km) roads in Kandy District	21
Map 1.4:	Locations of 43 Nos (180.0 km) roads in Nuwara Eliya District	22
Map 1.5:	Locations of 63 Nos. (217.0 km) roads in Kegalle District	23
Map 1.6:	Locations of 38 Nos (255.0 km) roads in Ratnapura District	24
Map 1.7:	Locations of 83 Nos. (277.0 km) roads in Kalutara District	25

LIST OF GRAPHS

Graph 2.1:	Overall Physical Progress of Central Province (As at 31of December 2017)	30
Graph 2.2:	Graph 1.2 Overall Physical Progress of Sabaragamuwa Province (As at 31of December 2017)	31
Graph 2.3:	Overall Physical Progress in Kalutara District of Western Province (As at 31of December 2017)	32

LIST OF FIGURES

Figure 1.1:	Overall Organizational Chart of project implementation consultant for Central, Sabaragamuwa provinces and Kalutara District of Western province	27
Figure 1.2:	Staff Allocation for Environmental Activities in Central, Sabaragamuwa Provinces and Kalutara District of Western Province	28
Figure 4.1:	Public request, suggestion and complaint handling process though GRM	55

LIST OF IMAGES

Image 4.1:	Field inspection conducted by ADB mid- term review mission at R3 package Road ID no10 on 26 April 2017.	56
Image 4.2:	Field inspection conducted by ADB mid- term review mission at R3 package Road ID no10 on 26 April 2017.	56
Image 4.3:	Field inspection conducted by ADB mid- term review mission at KE1 package Road ID no 3 on 26 April 2017.	57
Image 4.4:	Field inspection conducted by ADB mid- term review mission at KE1 package Road ID no 3 on 26 April 2017.	57
Image 4.5:	Field inspection conducted by ADB mid-term review mission at NE 1 Road ID no 8 on 27 April 2017.	57
Image 4.6:	Field inspection conducted by ADB mid-term review mission at at KA 3 package Road ID no 10 on 27 April 2017.	57
Image 4.7:	Field inspection conducted by ADB mid- term review mission at KL1 package Road ID no 86 (Image 4.5) and at KL 3 package Road ID no 82 on 9 May 2017.	57
Image 4.8:	Field inspection conducted by ADB mid- term review mission at KL 1 package Road ID no 86 (Image 4.5) and at KL 3 package Road ID no 82 on 9 May 2017.	57
Image 4.9:	Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at KL 3 package Road ID no 82 on 16 May	59
Image 4.10:	Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at KL 3 package Road ID no 82 on 16 May	59
Image 4.11:	Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at KA 3 package Road ID no 10 on 19 May	59
Image 4.12:	Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at KA 3 package Road ID no 10 on 19 May	59
Image 4.13:	Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at NE 2 package Road ID no 31 on 20 May	59
Image 4.14:	Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at NE 2 package Road ID no 31 on 20 May	59
Image 4.15:	ADB, CSD/SG Specialist addressing Sabaragamuwa environmental team at Team Leader office on 1st February 2017.	62
Image 4.16:	Field inspection conducted by ADB, CSD/SG Specialist and representative form ESDD of RDA at KL3 Package Road ID no 82 on 2 August 2017.	62
Image 4.17:	Field inspection conducted by ADB, CSD/SG Specialist and representative form ESDD of RDA at KL3 Package Road ID no 82 on 2 August 2017.	62
Image 4.18:	Field inspection conducted by ADB, CSD/SG Specialist at MA 3 Package ID no31 on 16 October 2017.	63
Image 4.19:	Field inspection conducted by ADB, CSD/SG Specialist at MA 3 Package ID no31 on 16 October 2017.	63
Image 4.20:	Field inspection conducted by ADB, CSD/SG Specialist at NE 3 Package Rd 46.	63
Image 4.21:	Field inspection conducted by ADB, CSD/SG Specialist at NE 3 Package Rd 48.	63
Image 4.22:	Field inspection conducted by ADB, CSD/SG Specialist at KA3 Package, Road ID no 39 and addressing GRC by ADB CSD/SG Specialist on 23 October 2017	64

Image 4.23:	Field inspection conducted by ADB, CSD/SG Specialist at KA3 Package, Road ID no 39 and addressing GRC by ADB CSD/SG Specialist on 23 October 2017	64
Image 4.24:	Field inspection conducted by ADB, CSD/SG Specialist at KE2 Package, (Road ID no 26)	64
Image 4.25:	Discussing with beneficiary community members by GRC ADB by CSD/SG Specialist (Road ID no 21)	64
Image 4.26:	Field inspection conducted by ADB, CSD/SG Specialist at KE3 Package, (Road ID no 65)	64
Image 4.27:	Discussing with beneficiary community members by CSD/SG Specialist (Road ID no 65)	64
Image 4.28:	Inspection of concrete batching plant by PIC staff and contractor staff at KL 2 Road No23 on 6 June	65
Image 4.29:	Inspection of concrete batching plant by PIC staff and contractor staff at KL 2 Road No23 on 6 June	65
Image 4.30:	Field inspection conducted by PIU, PIC and contractors staff with community members at NE1 Road No2 on 18 August	65
Image 4.31:	Field inspection conducted by PIU, PIC and contractors staff with community members at NE1 Road No2 on 18 August	65
Image 4.32:	Field inspection conducted by PIC staff and contractor staff with community members at R3 Road No 10 on 13 September	66
Image 4.33:	Field inspection conducted by PIC staff and contractor staff with community members at R3 Road No 10 on 13 September	66
Image 4.34:	Conducting training workshop by Dr. K.M.P.S Bandara, Focal Point (Natural Resource & Environmental) ADB SRM on site specific monitoring system for Sabaragamuwa province	67
Image 4.35:	Conducting training workshop by Dr. K.M.P.S Bandara, Focal Point (Natural Resource & Environmental) ADB SRM on site specific monitoring system for Sabaragamuwa province	67
Image 4.36:	Conducting training workshop by Dr. K.M.P.S Bandara, Focal Point (Natural Resource & Environmental) ADB SRM on site specific monitoring system for Central province	68
Image 4.37:	Conducting training workshop by Dr. K.M.P.S Bandara, Focal Point (Natural Resource & Environmental) ADB SRM on site specific monitoring system for Central province	68
Image 5.1.1:	Watering for dust control Road No 25 at 0.375 in KA1	69
Image 5.1.2:	Turfing for erosion control Road No 44 ,1+990-1+210 LHS in KA1	69
Image 5.1.3:	Turfing for erosion control Road No 45, 0+9701+210 RHS in KA1	69
Image 5.1.4:	Construction of rock wall for erosion control Road No.... in KA 3	70
Image 5.1.5:	Construction of rock wall for erosion control Road No.... in KA 3	70
Image 5.1.6:	Construction of rock wall for erosion control Road No.... in KA 3	70
Image 5.1.7:	Construction of rock wall for erosion control Road No.... in KA 3	70
Image 5.1.8:	Stockyard, during construction Road No 10 ,1+700 in KA3	71
Image 5.1.9:	After restoration of stack yard, Road No 10, 1+700 in KA3	71
Image 5.1.10:	Disposal yard, during construction Road No 10, 4+060 in KA3	71
Image 5.1.11:	Disposal yard of stack yard, Road No 10, 4+060 in KA3	71
Image 5.1.12:	Disposal yard, during construction Road No 10, 2+110 in KA3	71
Image 5.1.13:	Disposal yard of stack yard, Road No 10, 2+110 in KA3	71
Image 5.1.14:	Stockyard, during construction Road No 11, 2+890 RHS in KA3	71
Image 5.1.15:	After restoration of stack yard, Road No 11, 2+890 in KA3	71
Image 5.1.16:	Covering of construction transport vehicle for avoid pollution from dust	72
Image 5.1.17:	Covering of construction transport vehicle for avoid pollution from dust	72
Image 5.1.18:	Covering of construction transport vehicle for avoid pollution from dust	72
Image 5.1.19:	Watering for control the dust generation	72
Image 5.1.20:	Watering for control the dust generation	72
Image 5.1.21:	Turfing for erosion control Road No 10 in KA 3	73

Image 5.1.22: Turfing for erosion control Road No 10 in KA 3	73
Image 5.1.23: Turfing for erosion control Road No 48 in KA 3	73
Image 5.1.24: Turfing for erosion control Road No 48 in KA 3	73
Image 5.1.25: Turfing for erosion control Road No 49 in KA 3	73
Image 5.1.26: Turfing for erosion control Road No 49 in KA 3	73
Image 5.1.27: Turfing for erosion control Road No 49 in KA 3	73
Image 5.1.28: Turfing for erosion control Road No 49 in KA 3	73
Image 5.1.29: Watering for dust control Road No8, 2+345 RHS in NE1	73
Image 5.1.30: Construction of rock wall for erosion control at disposal yard Road no11, 2+500 RHS in NE1	75
Image 5.1.31: Construction of rock wall for erosion control at disposal yard Road no 8, 3+400 RHS in NE 1	75
Image 5.1.32: Construction of rock wall for erosion control at disposal yard Road no 3, 7+120 RHS in NE 1	75
Image 5.1.33: Construction of U drain for erosion control at disposal yard Road no 8, 2+050 RHS in NE 1	75
Image 5.1.34: growing vegetation cover and construction rock wall for erosion control at Road no 3, 6+670 RHS in NE 1	75
Image 5.1.35: growing vegetation cover and construction rock wall for erosion control at Road no 3, 7+020 RHS in NE 1	75
Image 5.1.36: turfing for erosion control at Road no 23, 2+620 RHS in NE 1	75
Image 5.1.37: Planting hedge rows for erosion control Road No 23, 2+620 RHS in NE2	76
Image 5.1.38: Planting hedge rows for erosion control Road No 23, 3+650RHS in NE2	76
Image 5.1.39: Oil separation tank series at main yard in NE2	76
Image 5.1.40: solid waste separation at site office Rd 16, 0+200RHS In NE2	76
Image 5.1.41: Removing spread material from tea land at Road No 24 in NE2	77
Image 5.1.42: Removing spread material from tea land Road No 16 in NE 2	77
Image 5.1.43: Construction of L drain for protection of embankment from erosion Road No 24 In NE2	77
Image 5.1.44: Construction of L drain for protection of embankment from erosion Road No 24 In NE2	77
Image 5.1.45: Compaction in wet condition for dust generation control Road No 24, 3+300RHS NE2	77
Image 5.1.46: Turfing for erosion control Road no 32, 0+030 RHS in NE2	77
Image 5.1.47: Turfing for erosion control Road no 30 in NE2	77
Image 5.1.48: Developing steps to the outlet of the culvert for erosion control Road no 29 in NE2	77
Image 5.1.49: Material transport Trucks were covered to private dust generation Road no 46 2+350 in NE3	78
Image 5.1.50: Constructing boulder wall for erosion control at dumping yard Road no 45, 3+100 RHS in NE3	78
Image 5.1.51: Turfing for Erosion Control Road no 46, 0+655 RHS in NE3	78
Image 5.1.52: Before construction of “L” Drain & Turfing LHS) for erosion control Road no 45 in NE3	79
Image 5.1.53: After construction of “L” Drain & Turfing LHS) for erosion control Road no 45 in NE3	79
Image 5.1.54: Construction of boulder wall at dumping yard for erosion control Road no 36, 0 +890 RHS in NE3	79
Image 5.1.55: Construction of De silting tank to wash the Truck Mixtures Road 47, 6+221 RHS in NE3	79
Image 5.1.56: Before construction of protection Road no 45, 0+450 LHS in NE3	79
Image 5.1.57: After construction of protection Road no 45, 0+450 LHS in NE3	79
Image 5.1.58: Turfing for erosion control Road no in MA1	80
Image 5.1.59: Turfing for erosion control Road no in MA1	80
Image 5.1.60: Filling sloppy area of near a house by using wasted soil and sand to protect the house Road no MA 1	80
Image 5.1.61: Filling sloppy area of near a house by using wasted soil and sand to protect the house Road no MA 1	80

Image 5.1.62: Construction of rock wall for erosion control Road no 22, 2+010 in MA2	82
Image 5.1.63: Construction of rock wall for erosion control Road no 22, 2+010 in MA2	82
Image 5.1.64: Turfing for erosion control Road no 55 in MA 2	82
Image 5.1.65: Construction of hard shoulder & „L” for erosion control Road no: 19, 2+018 in MA2	82
Image 5.1.66: Construction of House accesses & “U” drain Road no 23 3+100 in MA2	83
Image 5.1.67: Construction of House accesses & “U” drain Road no 23 3+100 in MA2	83
Image 5.1.68: Oil Trap at vehicle’s washing place in MA3	83
Image 5.1.69: Road marking, Road No 25 2+640 in MA 2	83
Image 5.1.70: Watering for control for dust generation Road No in KE1	84
Image 5.1.71: Watering for control for dust generation Road No in KE1	84
Image 5.1.72: Watering for control for dust generation Road No in KE1	84
Image 5.1.73: Watering for control for dust generation Road No in KE1	84
Image 5.1.74: constriction of rock wall for erosion control Road no 18, 2+367 LHS in KE1	85
Image 5.1.75: Preparing sand bags barriers for erosion control Road No 17, 7+500 LHS in KE1	85
Image 5.1.76: 86Preparing sand bags barriers for erosion control Road No 17, 7+500 LHS in KE1	85
Image 5.1.77: Preparing sand bags barriers for erosion control Road No 18, -7+800 LHS in KE1	85
Image 5.1.78: Preparing sand bags barriers for erosion control Road No 18, 8+400 RHS in KE1	85
Image 5.1.79: Constriction of rock wall for erosion control Road no5, 2+100 LHS in KE1	85
Image 5.1.80: constriction of L drain and hard shoulders for erosion control Road no 19, 0+820 LHS in KE1	85
Image 5.1.81: Rock flowing stream was blasted & removed Road no 27, 4+905 in KE 2	87
Image 5.1.82: Stream silted with Soil removed & cleaned Road no 36, 1+700 in KE2	87
Image 5.1.83: constriction of rock wall for erosion control Road no in KE2	87
Image 5.1.84: Constriction of rock wall for erosion control Road no in KE2	87
Image 5.1.85: Constriction of rock wall for erosion control Road no in KE2	87
Image 5.1.86: Constriction of rock wall for erosion control Road no in KE2	87
Image 5.1.87: Watering for dust control Road no in KE2	87
Image 5.1.88: Watering for dust control Road no in R1	87
Image 5.1.89: Covering of material transport Vehicle for avoiding pollution Road no 13 in R1	88
Image 5.1.90: Turfing for erosion control Road no in R1	88
Image 5.1.91: Construction of concrete “U” drain for erosion control Road no in R1	88
Image 5.1.92: Water for dust control Road no 16 in R3	88
Image 5.1.93: Construction of retaining wall for protection of embankment Road no in 36 R3	89
Image 5.1.94: Turfing for erosion control Road no 8 in R3	89
Image 5.1.95: Turfing for erosion control Road no 26 in R3	89
Image 5.1.96: Constriction of rock wall for erosion control Road no 26 in R3	89
Image 5.1.97: Constriction of rock wall for erosion control Road no 10 in R3	90
Image 5.1.98: Turfing for erosion control Road no 10 in R3	90
Image 5.1.99: Turfing for erosion control Road no 8 in R3	90
Image 5.1.100: Turfing for erosion control Road no 8 in R3	90
Image 5.1.101: Constriction of rock wall for erosion control Road no 35, 1+890 in R3	90
Image 5.1.102: Constriction of rock wall for erosion control Road no 35, 1+680 in R3	90

Image 5.1.103:Constriction of protection wall Road no 2 in R3	90
Image 5.1.104:Contamination of soil from bitumen Road no in KL1	91
Image 5.1.105:After removing Contaminated soil from bitumen Road no in KL1	91
Image 5.1.106:Removing overgrown aquatic vegetation from water bodies Rd 83	91
Image 5.1.107:construction of retaining wall Road no in KL1	91
Image 5.1.108:Provided suitable drains for water logging places Road no 81 ,1+180 in KL 3	92
Image 5.1.109:Before Turfing of the sloppy area to prevent soil erosion Road no 82 0+503 - 0+555 LHS in KL 3	92
Image 5.1.110:After turfing of the sloppy area to prevent soil erosion Road no 82 0+503 - 0+555 LHS in KL 3	92
Image 5.1.111 :Shifting the culvert to protect the retaining wall in Road no 82 0+678 in KL3	92
Image 5.2.1: Unauthorized dumping Road No 22 at 4+420 in MA 02	101
Image 5.2.2: after removing unauthorized dumping Road No 22 at 4+420 in MA 02	101
Image 5.2.3: soil erosion and construction waste at worksite Road No 22 at 7+276 in MA 02	101
Image 5.2.4: Erosion control by turfing and after removing construction waste Road No 22 at 7+276 in MA 02	101
Image 5.2.5: Unauthorised dumping Road No 23 at in MA2	101
Image 5.2.6: After removing unauthorised dumping Road No 23 at in MA2	101
Image 5.2.7: Unauthorised disposals Road No 23 at in MA 2	102
Image 5.2.8: After removing unauthorised disposals and restored the place Road No 23 at in MA 2	102
Image 5.2.9: siltation of eroded soil at road side paddy field Road No 52 at 0+515 in MA 2	102
Image 5.2.10: After removing silted soil from road side paddy field Road No 52 at 0+515 in MA 2	102
Image 5.2.11: Unauthorized disposal and soil erosion Road No 26 at 0+020 in MA 3	102
Image 5.2.12: After removing unauthorized disposal and erosion control by turfing Road No 26 at 0+020 in MA 3	102
Image 5.2.13: Before proper restoration of Stock yard Road No 26 at 0+620 in MA3	103
Image 5.2.14: After proper restoration of Stock yard Road No 26 at 0+620 in MA3	103
Image 5.2.15: Unauthorized dumping Road No 25 at 375 in KA2	103
Image 5.2.16: After removing unauthorized dumping Road No 25 at 375 in KA2	103
Image 5.2.17: Unauthorized dumping Road No 25 at 375 in KA2	103
Image 5.2.18: Unauthorized dumping Road No 25 at 460 in KA2	103
Image 5.2.19: Unauthorized dumping Road No 25 at 375 in KA2	104
Image 5.2.20: After removing unauthorized dumping Road No 25 at 375 in KA2	104
Image 5.2.21: Unauthorized dumping Road No 39 at 2+846 in KA3	104
Image 5.2.22: After removing unauthorized dumping Road No 25 at 375 in KA2	104
Image 5.2.23: Unauthorized dumping Road No 39 at 2+861 in KA3	104
Image 5.2.24: After removing unauthorized dumping Road No 39 at 2+861 in KA3	104
Image 5.2.25: Unauthorized dumping Road No 11 at 2+240 in NE1	105
Image 5.2.26: After removing unauthorized dumping Road No 39 at 2+240 in NE1	105
Image 5.2.27: soil erosion at roadside Road No 3 at 7+900 in NE1	105
Image 5.2.28: growing vegetative creepers for erosion control Road No 3 at 7+900 in NE1	105
Image 5.2.29: Soil erosion at roadside Road No 5 at 2+140 in KE1	105

Image 5.2.30: growing vegetation cover for erosion control Road No 5 at 2+140 in KE1	105
Image 5.2.31: soil erosion at roadside Road No 5 at 2+240 in KE1	106
Image 5.2.32: Construction of tore wall for erosion control Road No 5 at 2+240 in KE1	106
Image 5.2.33: Irrigation canal was blocked with eroded soil from road sites Road No 36 at 1+690 in KE2	106
Image 5.2.34: Soil erosion at roadside Road No 36 at 1+690 in KE2	106
Image 5.2.35: Stagnation of rainwater runoff due to lack of proper drainage with eroded Road No 55 at 0+822 in KE3	106
Image 5.2.36: After improvement of drainage Road No 55 at 0+822 in KE3	107
Image 5.2.37: Stagnation of rainwater runoff due to lack of proper drainage with eroded Road No 52 at 2+255 in KE3	107
Image 5.2.38: After improvement of drainage Road No 52at 2+255 in KE3	107
Image 5.2.39: 41 Well was polluted from runoff water with eroded soil Road No 52 at 2+265 in KE3	107
Image 5.2.40: Concrete wall was constructed to avoid runoff water following to well soil Road No 52 at 2+265 in KE3	107
Image 5.2.41: Soil erosion at disposal body and water bodies to be silted Road no 27 4+786 in KE2	107
Image 5.2.42: Constructed a rock wall for present soil erosion and siltation of water Road no 27 4+786 in KE2	107
Image 5.2.43: Soil erosion at disposal site and water body to be silted Road no 26 at 1+320 in KE2	108
Image 5.2.44: Constructed a rock wall for prevent soil erosion and siltation of water body Road no 26 1+320.in KE2	108
Image 5.2.45: Construction of rock wall for erosion control at disposal yards Road no 33 at 3+390 in R 2	108
Image 5.2.46: Construction of rock wall for erosion control at disposal yards Road no 3 at 4+900 in R 2	108
Image 5.2.47: High risk of soil erosion at disposal Road no 35 at 1+860 in R 3	108
Image 5.2.48: Construction of rock wall for erosion control at disposal yards Road no 35 at 1+860 in R 3	108
Image 5.2.49: Improper covering main stockyard to void pollution from dust and noise at Road no 35 in R3	109
Image 5.2.50: Proper covering main stockyard to void pollution from dust and noise at Road no 35 in R3	109
Image 5.2.51: Soil erosion at disposal Road no 10 at 3+ 600 in R 3	109
Image 5.2.52: After restoration of disposal yard by turffiing for erosion control and cultivated tea plants Road no 10 at 3+ 600 in R 3	109
Image 5.2.53: Unauthorized dumping Road no 37 at 2+140 in KL2	109
Image 5.2.54: After removing unauthorized dumping Road no 37 at 2+140 in KL2	109
Image 5.2.55: Unauthorized dumping Road no 37 at 0+570 in KL2	110
Image 5.2.56: After removing unauthorized dumping Road no 37 at 0+570 in KL2	110
Image 5.2.57: Drainage block with construction waste Road no 37 at 0+770 in KL2	110
Image 5.2.58: After clearing drainage Road no 37 at 0+770 in KL2	110
Image 5.2.59: Unclean Main stores of KL2	111
Image 5.2.60: After cleaning main stores of KL2	111
Image 5.2.61: Private property (House and land was polluted with prime which as wash out with heavy rain at Road 44 in KL 1	111
Image 5.2.62: After cleaning by laying ABC and colour washing at Road 44in KL1	111
Image 5.2.63: Unauthorized dumping at Road no 81 in KL3	111
Image 5.2.64: after removing unauthorized dumping at Road no 81 in KL3	111
Image 5.3.1: Workshop on educating on approval process of Barrow materials – Kandy	113
Image 5.3.2: Workshop on educating on approval process of Barrow materials – Kandy	113

Image 5.3.3:	Conducting awareness programme on tree removal processes of the project by PIC at Kalutara RE office	116
Image 5.3.4:	Conducting awareness programme on tree removal processes of the project by PIC at Kalutara RE office	116
Image 5.3.5:	Conducting awareness programme on tree removal processes of the project by PIC at Kalutara RE office	116
Image 5.3.6:	Conducting awareness programme on tree removal processes of the project by PIC at Kalutara RE office	116
Image 5.5.1:	Nine months maintained tree at MA3	120
Image 5.5.2:	Nine months maintained tree at MA3	120
Image 5.5.3:	Four months maintained tree at KE 3	121
Image 5.5.4:	Four months maintained tree at KE3	121
Image 5.5.5:	Tree planting at MA2	121
Image 5.5.6:	After month six maintaining same tree (at Image 5, 5,5) on at MA2	121
Image 5.5.7:	Tree planting at MA2	122
Image 5.5.8:	After six months maintaining same tree (at Image 5, 5, 7) at MA2	122
Image 5.5.9:	Four month maintained tree at KA3	122
Image 5.5.10:	Four month maintained tree at KA3	122
Image 5.5.11:	Tree planting Road no 31 at KE3	122
Image 5.5.12:	Eight month maintained same (Image 5.5.11) tree Road no 31 at KE3	122
Image 5.5.13:	One year maintained tree at Road no 22 in KE2	123
Image 5.5.14:	One year maintained tree at Road no 22 in KE2	123
Image 5.5.15:	One year maintained tree at Road no 22 in KE2	123
Image 5.5.16:	One year maintained tree at Road no 22 in KE2	123
Image 7.1:	World Environmental Day Education program at Minipe AGA office auditorium conducted by MA2	126
Image 7.2:	World Environmental Day Education program at Minipe AGA office auditorium conducted by MA2	126
Image 7.3:	Supported and joined to the solid waste management program that conducted by sirimawo bandaranayaka girls' college haturanketha by NE1	127
Image 7.4:	Flower planting side of the road, Road no 18 in NE 2	128
Image 7.5:	Flower planting side of the road, Road no 29 in NE 2	128
Image 7.6:	Supply facility for solid waste separation at the function in public event -Ground Radella by NE 2	128
Image 7.7:	Supply facility for solid waste separation at the function in public event -Ground Radella by NE 2	130
Image 7.8:	Aware the Biodiversity and snakes identify, snake bite and first aids by KA1	130
Image 7.9:	Aware the Biodiversity and snakes identify, snake bite and first aids by KA1	130
Image 7.10:	Aware the Biodiversity and snakes identify, snake bite and first aids by KA1	130
Image 7.11:	Aware the Biodiversity and snakes identify, snake bite and first aids by KA1	130
Image 7.12:	Aware the school children on the environment by KA1	130
Image 7.13:	Aware the school children on the environment by KA1	130
Image 7.14:	Conducted awareness programme on environmental management & safety during the road construction. (For University students) by KA2	131
Image 7.15:	Conducted awareness programme for World Environmental Day by KA2	131
Image 7.16:	HIV/AIDS Prevention & Health Awareness Programme (Session 2) in KA2	131.
Image 7.17:	Awareness program for School Children – Mountain Biodiversity of Sri Lanka - Mahamaya Girls College, Kandy by KA3	133
Image 7.18:	Biodiversity Awareness Program for School Children at Viharamahadevi Girls' College, Kandy by KA3	133

Image 7.19:	Biodiversity Awareness Program for School Children at Viharamahadevi Girls' College, Kandy by KA3	133
Image 7.20:	Biodiversity awareness Programme at Pushpadana Girls' College, Kandy by KA3	133
Image 7.21:	Biodiversity awareness Programme at Pushpadana Girls' College, Kandy by KA3	133
Image 7.22:	Biodiversity awareness Programme at Pushpadana Girls' College, Kandy by KA3	133
Image 7.23:	Health Awareness Program at Delthota Muslim School, Delthota by KA 3	134
Image 7.24:	Health Awareness Program at Delthota Muslim School, Delthota by KA 3	134
Image 7.25:	Health Awareness Program at Delthota Muslim School, Delthota by KA 3	134
Image 7.26:	Biodiversity Awareness Workshop for "Parisara Niyamu" Students at Ranabima Royal College, Gannoruwa at Sinharaja Forest Reserve by KA3	134
Image 7.27:	Biodiversity Awareness Workshop for "Parisara Niyamu" Students at Ranabima Royal College, Gannoruwa at Sinharaja Forest Reserve by KA3	134
Image 7.28:	Biodiversity Awareness Workshop for "Parisara Niyamu" Students at Ranabima Royal College, Gannoruwa at Sinharaja Forest Reserve by KA3	134
Image 7.29:	Biodiversity Awareness Program for Students at Viharamahadevi Girls' College, Kandy - Hanthana Mountain Range by KA3	135
Image 7.30:	Biodiversity Awareness Program for Students at Viharamahadevi Girls' College, Kandy - Hanthana Mountain Range by KA3	135
Image 7.31:	Training on Internal Audit at Project Office Haloluwa in KA3	135
Image 7.32:	Book Donation Program conducted on Children's Day at Hanthana by KA3	135
Image 7.33:	Book Donation Program conducted on Children's Day at Hanthana by KA3	135
Image 7.34:	Awareness on ISO standards changes at Wadakada Project Office in KA3	135
Image 7.35:	Training programme conducted at Welihena Maha Vidyalaya – Athuraliya by MA 2	137
Image 7.36:	Environmental Education programme for Athuraliya AGA Division school student's by KA 2	137
Image 7.37:	Environmental Education programme for Athuraliya AGA Division school student's by KA 2	137
Image 7.38:	World children's day Education program by KA 2	137
Image 7.39:	World Environment Day by MA3 by MA 3	138
Image 7.40:	World Environment Day by MA3 by MA 3	138
Image 7.41:	Donation environmental guide book and lectured at UC pre -school, Nuwara Eliya by NE 2	141
Image 7.42:	Conducted a solid waste management program with Department of forest by NE2	141
Image 7.43:	Distributed a leaflet on "Global Warming" by NE2	141
Image 7.44:	Conducting a lecture on 'Environmental Protection and Waste Management by KE1	142
Image 7.45:	Conducting a lecture on 'Environmental Protection and Waste Management by KE1	142
Image 7.46:	Conducting a lecture on 'Environmental Protection and Waste Management by KE1	142

Image 7.47:	Conducting awareness Programme on Importance of water and solid waste management by KE 2	143
Image 7.48:	Conducting awareness Programme on Importance of water and solid waste management by KE 2	143
Image 7.49	Environmental training at Main yard Thunthota Pallededda in R3	145
Image 7.50	Environmental Awareness Notice (Three Language) Board in Sinharaja Rain Forest at Road no 10 in R3	145
Image 7.51	Awareness Program on Community Diseases for the community by R3	145
Image 7.52	Conducting Environmental and safety awareness programme for company staff in R3	145
Image 7.53	Field training on environmental for schoolchildren Sinharaja forest by R3	145
ANNEXURES		
ANNEXURE 1	CIRCULAR NO 2/2015 ISSUED BY MINISTRY OF MAHAWELI DEVELOPMENT AND ENVIRONMENT FOR SOIL AND GRAVEL EXCAVATION	149
ANNEXURE 2	STATUS OF LICENSE AND APPROVAL OF THE CONTRACTS AS PER THE 31 OF DECEMBER 2016	154
ANNEXURE 3	SAMPLE OF MONTHLY PROGRESS REPORT KA 03	167
ANNEXURE 4	ENVIRONMENTAL ISSUES OBSERVED BY CONTRACTOR'S STAFF AND ENVIRONMENTAL ISSUES REPORTED BY PUBLIC AND MEASURES TAKEN	198
ANNEXURE 5	DETAILS OF TREE PLANNING PROGRAM IN DIFFERENT PACKAGES	240
ANNEXURE 6	SAMPLE OF PROGRESS REPORT OF TREE PLANTING PROGRAMME	282
ANNEXURE 7	KEY PROGRAMS AND ACTIVITIES TO ENHANCE ENVIRONMENT	296
ANNEXURE 8	ENVIRONMENTAL TRAINING /AWARENESS PROGRAMS CONDUCTED DURING THE PROGRAM	302

1. INTRODUCTION

1.1 Background of the Project

Integrated Road Investment Program (iRoad Program) was initiated in order to improve the connectivity between rural communities with developed socioeconomic centers in Sri Lanka. It is considered as a part of ADB's policy on interim country partnership strategy 2015-2016 and funded under Multi tranche Financing Facility (MFF). The program is executed under the Ministry of Higher Education and Highways (MOHEH), while Road Development Authority (RDA) is the project implementing agency. Roads in five Provinces and one District in Sri Lanka expect to improve under this program. Central, Sabaragamuwa Provinces and Kalutara District of Western Province are under one project consultant, it considered as PIC 3¹. There are three Project Implement Units (PIUs) have established in provincial level for PIC 3. 325 Nos. of rural roads(1,344Km) expect to be improved in above six Districts. Each District have divided in to 3 civil contracts. Description of all contracts have summarized in Table 1.1.

Table 1.1: Classification of Project Road Sections

Province	District	No. of Packages	PS/(Km)	PRDA/(Km)	PS & PRDA/(Km)	MC/(km)	PS & MC/(Km)	UC/(Km)	Estate (Km)	PS & Estate (Km)	PS,PRDA & Estate (Km)	PRDA, PS, MASL (Km)	Total (Km)
Central Province	Matale	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
Sabaragamuwa Province	Kegalle	3	108.36	66.65	41.24			0.87					217.0
	Ratnapura	3	28.01	149.44	77.55								255.0
Western Province	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

The program is currently in Tranche three and as per the Resettlement Framework (RF) for iRoad it is a requirement to prepare a compliance monitoring report with respect to Social Safeguard and Implementation of Gender Action Plan (GAP) on a semi-annual basis and this report is prepared to fulfill this requirement. This report covers the period from 01st of July to 31st of December 2017.

1.2 Objectives of the project

Specific objectives of this project are:

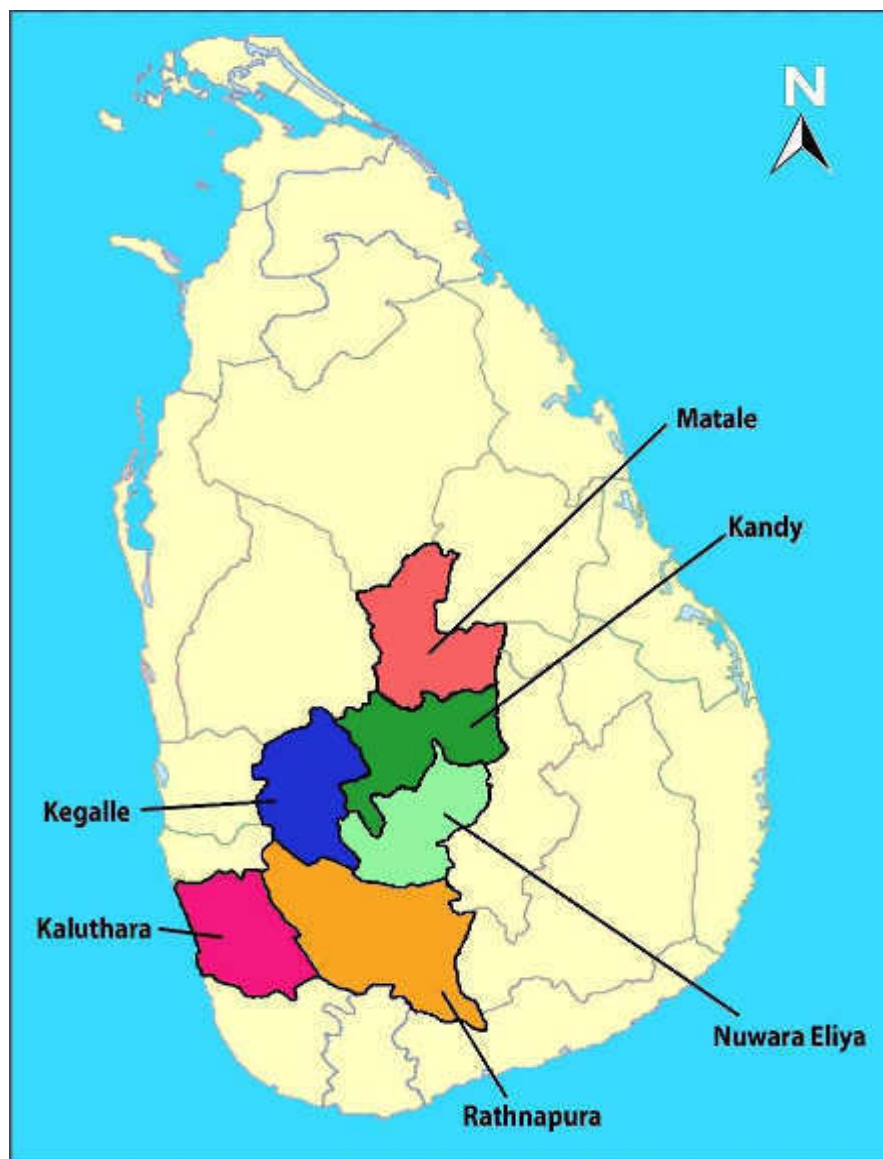
- To improve the road condition between rural communities and socioeconomic centers of the Sabaragamuwa, Central Provinces and Kalutara District of Western Province.
- To upgrade and maintain 1,344km of rural access roads connecting rural communities to all-weather standard,
- To improve connectivity between production centers 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 and 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, construction, and maintenance of these rural access roads.

1.3 Project locations

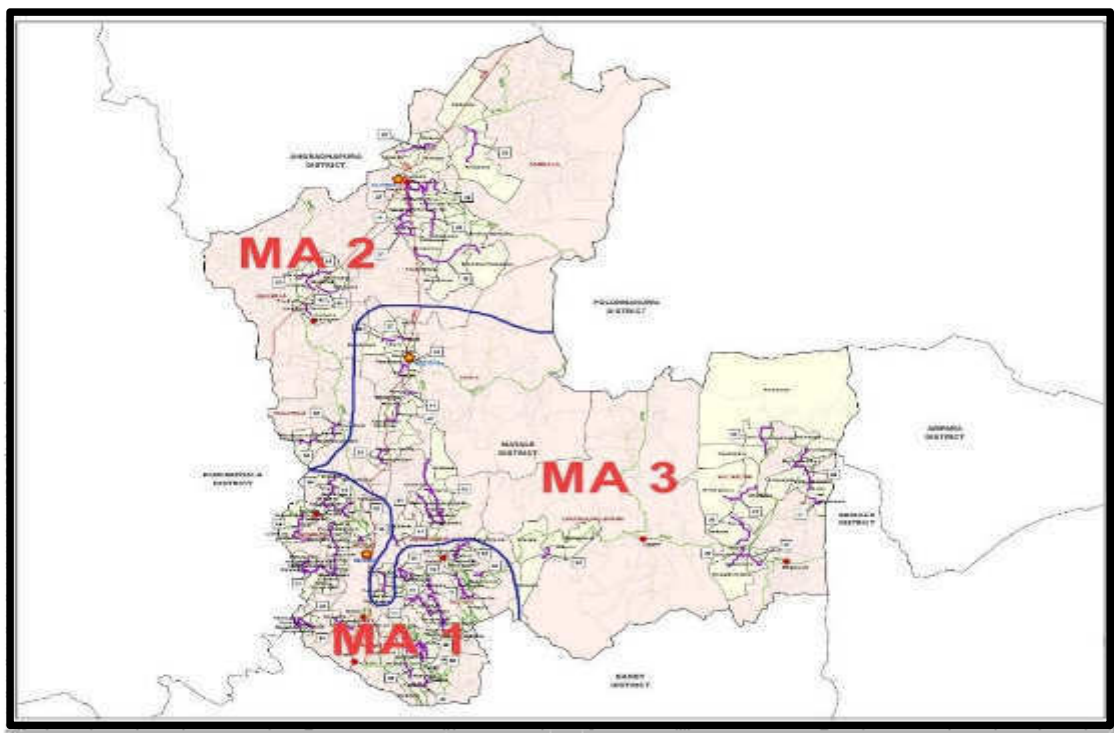
There are six administrative Districts covered by PIC 3. They are Ratnapura and Kegalle Districts of Sabaragamuwa Province, Kalutara District from Western Province, Kandy, Matale and Nuwaraeliya Districts of Central Province.



Map1.1: Project Location

1.4 Conventional Road Contracts

Map 1.2 and Table 1.2 describes the CRC packages in Matale District. A total of 51 roads with 194km have been listed under 3 CRC packages. They are MA1, MA2 and MA3

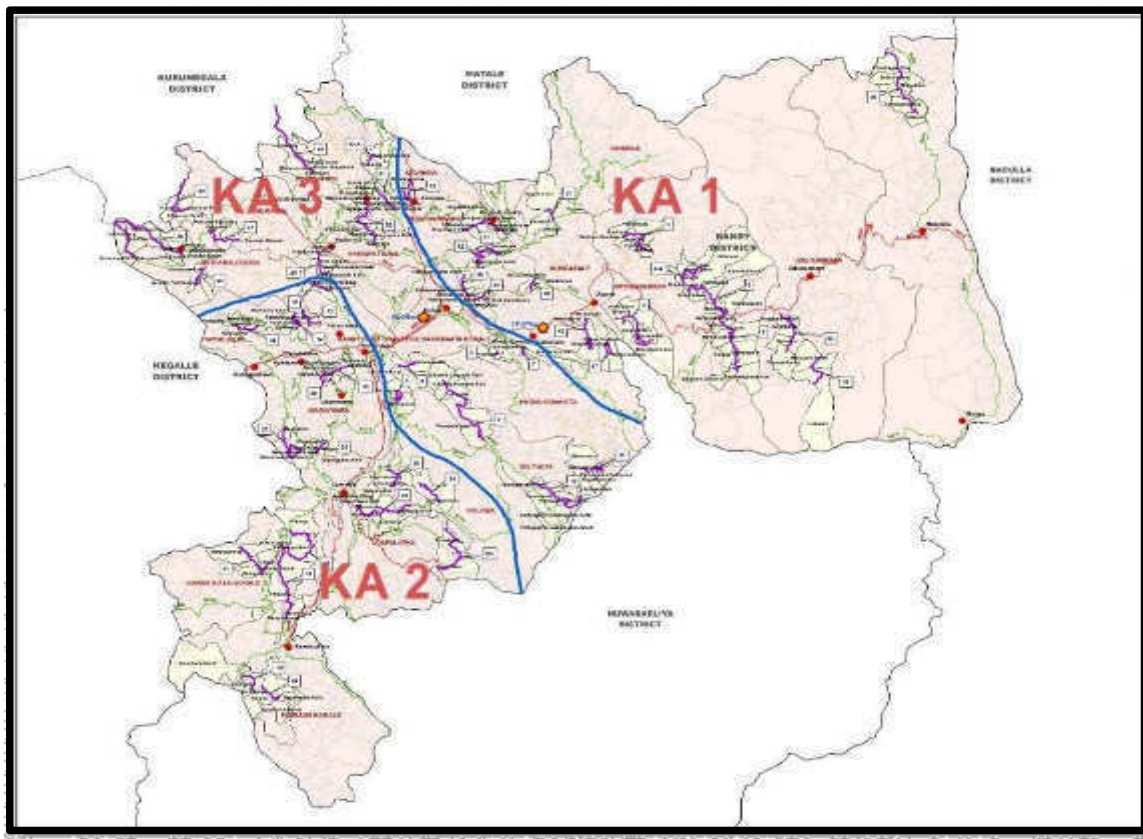


Map1.2: Locations of 51 Nos. (194 km) roads in Matale District

Table 1.2 - CRCs in Matale District

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of roads Civil Works in Progress	No. of Handed Over Roads (As at 31 st of Dec. 2017)
MA1	K. D. Ebert & Sons Holdings (Pvt) Ltd	1,622	17.12.2015	18	75.7	16	-
MA2	Edward and Christie	1,249	17.12.2015	14	57.0	09	05
MA3	CML-MTD Construction Ltd	1,408	17.12.2015	19	61.3	15	04
Sub Total Matale District		4,279	-	51	194.0	40	09

Map 1.3 and Table 1.3 describes the CRC packages in Kandy District. A total of 50 roads with length of 221km have been listed under 3 CRC packages. They are KA1, KA2 and KA3.

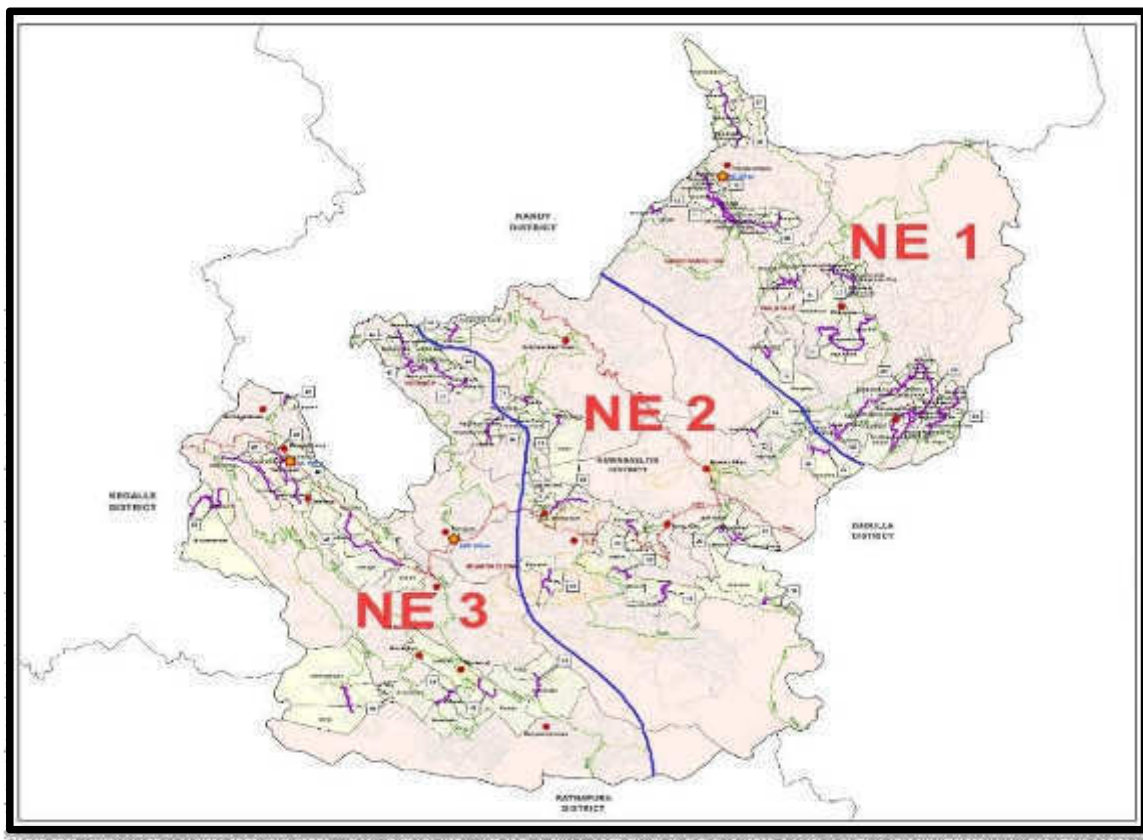


Map1:3. Locations of 50 Nos. (221.0 km) roads in Kandy District

Table 1.3 - CRCs in Kandy District

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of Roads Civil Works in Progress	No. of Handed Over Roads (As at 31 st of Dec. 2017)
KA1	Sierra Constriction (Pvt) Ltd	1,756	17.12.2015	17	76.2	13	4
KA2	Sierra Constriction (Pvt) Ltd	1,924	17.12.2015	17	70.85	15	2
KA3	Edward & Christie	2,097	17.12.2015	16	73.95	12	4
Sub Total Kandy District		5,777	-	50	221.0	40	10

Map 1.4 and Table 1.4 describes the CRC packages in Nuwaraeliya District. A total of 43 roads with length of 180km have been listed under 3 CRC packages. They are NE1, NE2 and NE3.

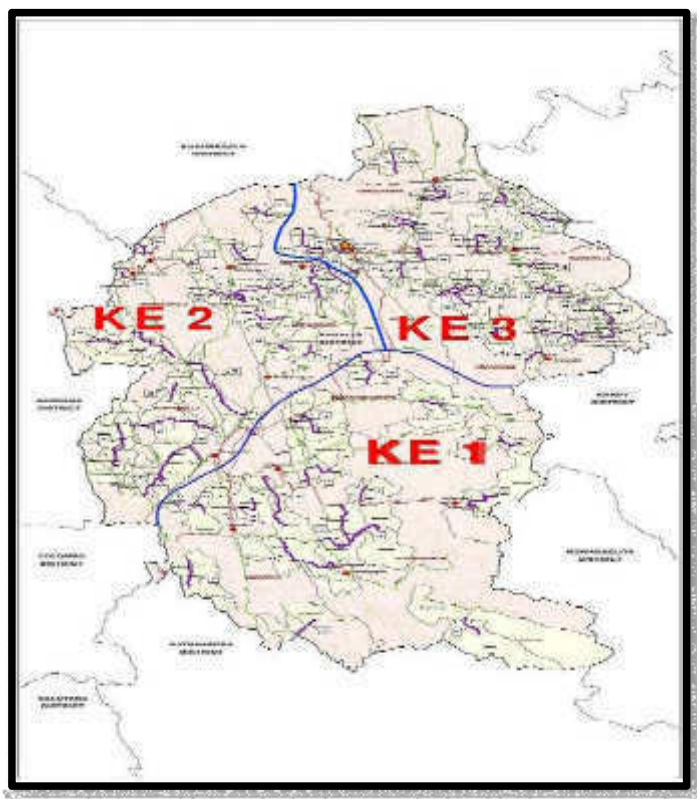


Map1:4. Locations of 43 Nos (180.0 km) roads in Nuwara Eliya District

Table 1.4 - CRCs in Nuwara Eliya District

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of Roads Civil Works in Progress	No. of Handed Over Roads (As at 31 st of Dec. 2017)
NE1	Sierra Constriction (Pvt) Ltd	2,298	17.12.2015	14	76.6	12	1
NE2	Sierra Constriction (Pvt) Ltd	1,242	17.12.2015	14	38.5	10	4
NE3	Sierra Constriction (Pvt) Ltd	2,070	17.12.2015	15	64.9	13	2
Sub Total Nuwaraeliya District		5,610	-	43	180.0	35	7

Map 1.5 and Table 1.5 describes the CRC packages in Kegalle District. A total of 63 roads with length of 217.0km have been listed under 3 CRC packages. They are KE1, KE2 and KE3.

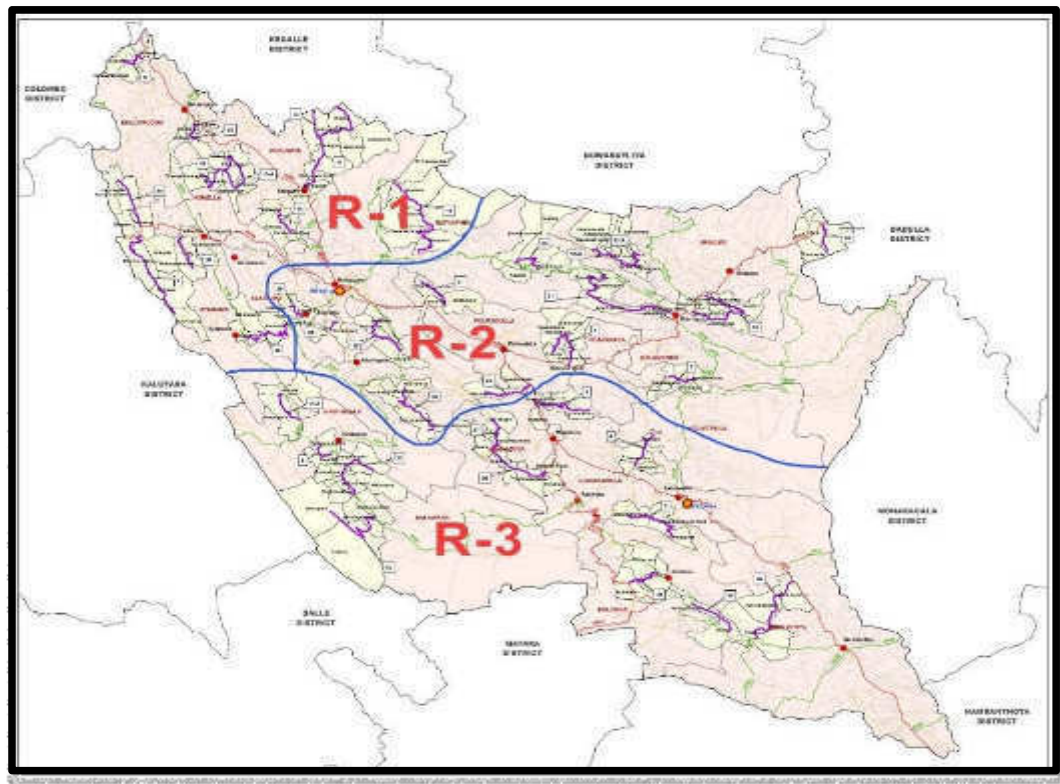


Map1:5. Locations of 63 Nos. (217.0 km) roads in Kegalle District

Table 1.5. - CRCs in Kegalle District

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of Roads in Civil Works in Progress	No. of Handled Over Roads (As at 31 st of Dec. 2017)
KE1	K. D. Ebert & Sons Holdings (Pvt) Ltd	1,973	17.12.2015	17	74.75	13	-
KE2	Nawaloka Construction (Pvt) Ltd	1,817	17.12.2015	21	78.25	19	-
KE3	Nawaloka Construction (Pvt) Ltd	1,632	17.12.2015	25	64.12	21	-
Sub Total Kegalle District		5,422	-	63	217.12	53	-

Map 1.6 and Table 1.6 describes the CRC packages in Ratnapura District. A total of 38 roads with length of 255.0km have been listed under 3 CRC packages. They are R1, R2 and R3.



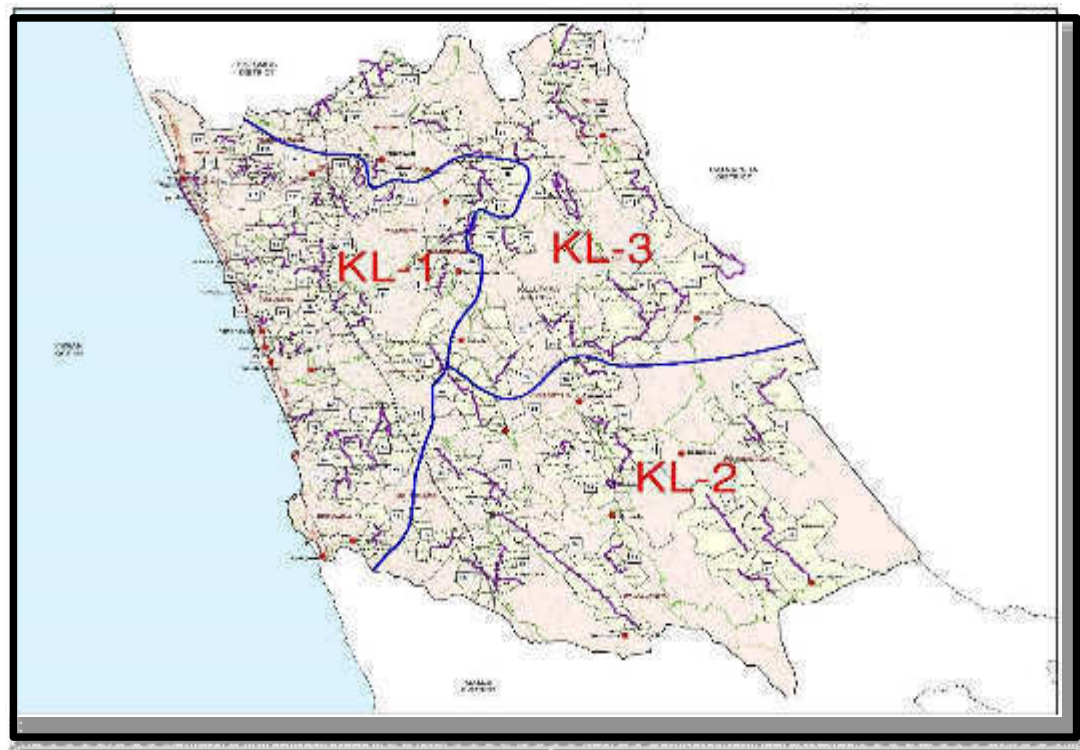
Map1.6. Locations of 38 Nos (255.0 km) roads in Ratnapura District

Table 1.6 - CRCs in Ratnapura District

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of Roads Civil Works in Progress	No. of Handed Over Roads (As at 31 st of Dec. 2017)
R1	K. D. Ebert & Sons Holdings (Pvt) Ltd	2,022	17.12.2015	12	82.95	10	-
R2	K. D. Ebert & Sons Holdings (Pvt) Ltd	2,384	17.12.2015	14	91.7	12	-
R3	RR Construction (Pvt) Ltd	2,021	17.12.2015	12	80.35	10	02
Sub Total Ratnapura District		6,427	-	38	255.0	32	02

(iRoad) – Sabaragamuwa, Central Provinces and Kalutara District (PIC03) ENVIRONMENTAL SAFEGUARD
MONITORING

Map 1.7 and Table 1.7 describes the CRC packages in Kalutara District. A total of 83 roads with length of 277.0km have been listed under 3 CRC packages. They are KL1, KL2 and KL3.



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

Table 1.7 - CRCs in Kalutara District

No.	Contractor	Accepted Contract Amount (Mn)	Commencement Date	No. of Roads	Total Road Length (km)	No of Roads Civil Works in Progress	No. of Handed Over Roads (As at 31 st of Dec. 2017)
KL1	Maga Engineering (Pvt) Ltd	1,912	28.08.2016	42	91.43	23	-
KL2	Olympus Construction (Pvt) Ltd with Rani Construction	1,811	29.09.2016	19	88.44	07	-
KL3	Olympus Construction (Pvt) Ltd with Rani Construction (Pvt) Ltd	1,817	29.09.2016	22	93.35	10	-
Sub Total Kalutara District		5,540	-	83	273.22	40	-

1.5 Consultancy Services for Project Implementation

PIC shall monitor and ensure that all the requirements of the construction contracts are adhered by the contractor. In case of any discrepancy/ deviation the PIC shall instruct the contractor to undertake corrective actions. The contracts are governed under the International Federation of Consulting Engineers (FIDIC) Conditions of Contract for Building and Engineering Works Designed by the employer, DB Harmonized Edition, June 2010.

Egis-CEA (JV) has been appointed as the Project Implementation Consultant for PIC3 with effect from 15th November 2015.

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 the 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 for project.

It overviews Environmental Safeguard activities conducted by the PIU, PIC and Contractors during the reporting period (1st January 2017 to 31st December 2017) 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), Implementing Agency is the Road Development Authority (RDA) and the Project Implementing Consultant (PIC) for Central, Sabaragamuwa Provinces and Kalutara District of Western Province is Egis-CEA JV. Overall project organization chart is shown in figure 1.1 .

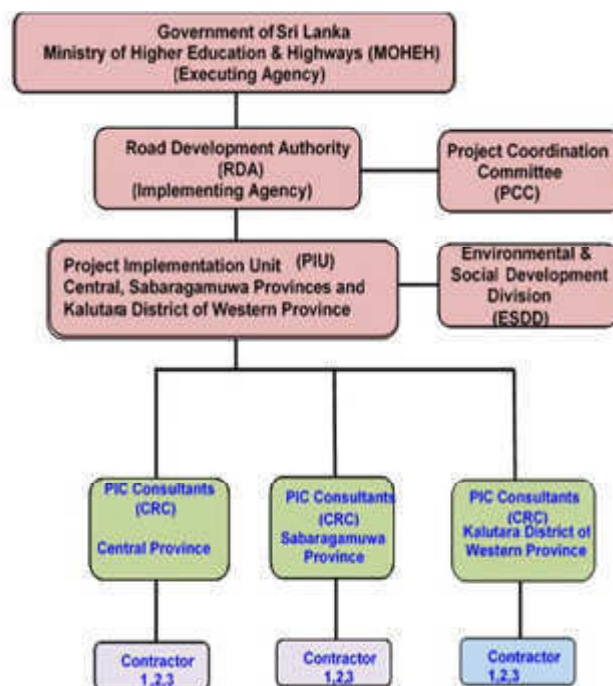


Figure 1. 1 Overall Organizational Chart for Central, Sabaragamuwa provinces and Kalutara District of Western province

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) have been mobilized to assist the TL on environment, Social/ Gender and resettlement aspects.

Duties of Environmental Specialist are;

- a) 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 iRoad environmental assessment and review framework (EARF) for all tranches.
- b) 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.
- c) Check compliance of the IEE and standard EMP prepared by SAPE team with requirement of the EARF

(iRoad) – Sabaragamuwa, Central Provinces and Kalutara District (PIC03) ENVIRONMENTAL SAFEGUARD
MONITORING

- d) Reviewing 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

Staff of PIUs, PIC & contractors assist the ES in complying with his duties in the field. Fig

1.2 Presents the staff who assist the ES

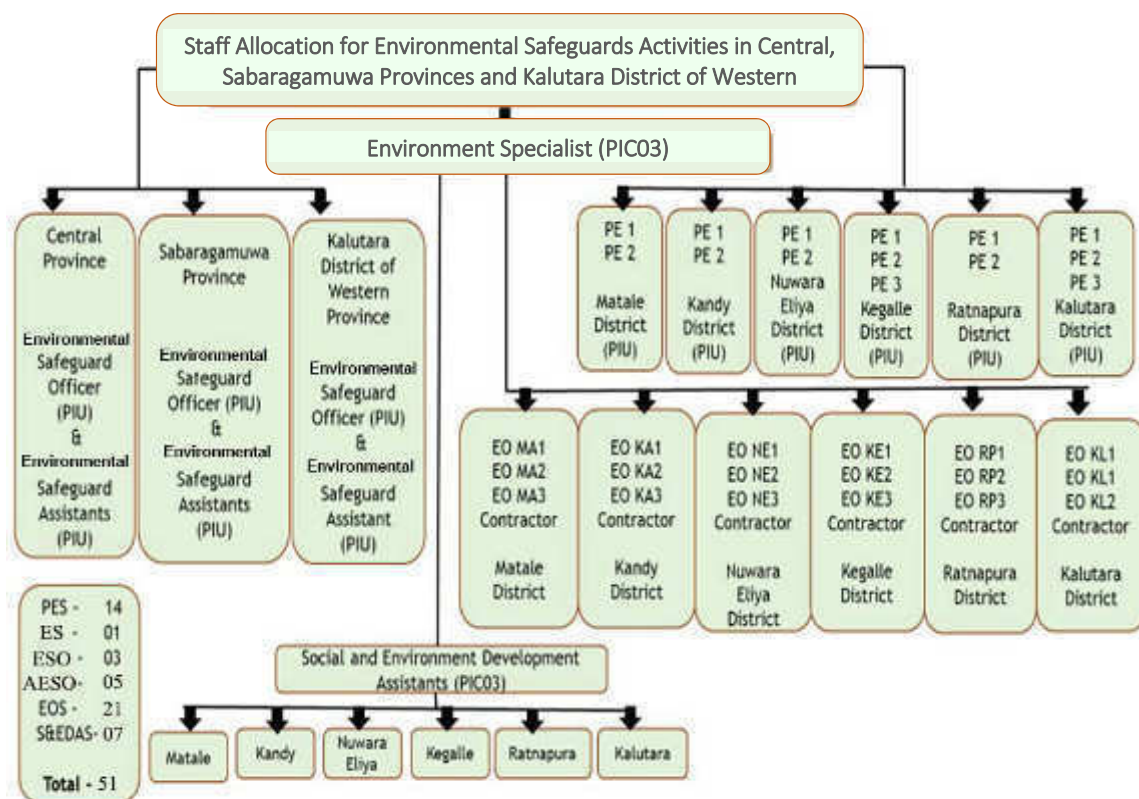


Figure 1. 2 Staff Allocation for Environmental Activities in Central, Sabaragamuwa Provinces and Kalutara District of Western Province

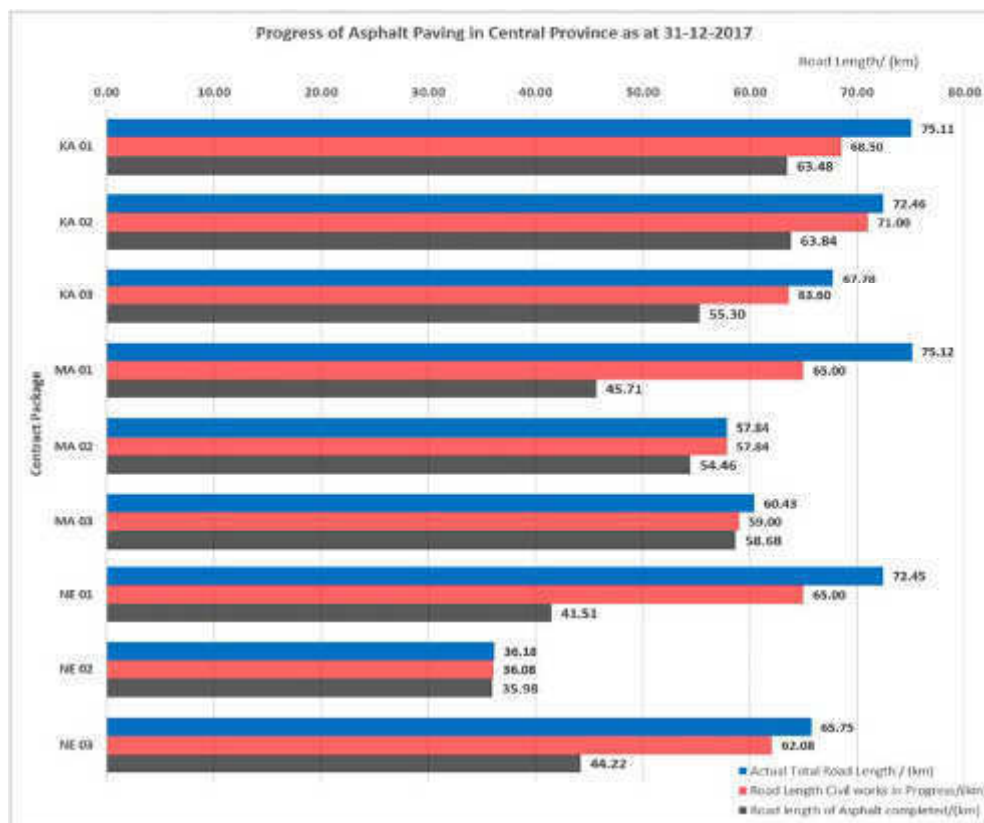
Other than above staff, Context Sensitive Design (CSD) and Safeguards Specialist (Contract No. TA8473) and Environment and Social Development Division (ESDD) staff also give their support in training of field staff, field monitoring and by exchanging their experiences in PIC-01 and PIC-02.

2.1 Overall Physical Progress of Central Province

[illegible]

Graphical presentation of Overall Physical Progress of Central Province

Graph 2.1 Overall Physical Progress of Central Province (As at 31 of December 2017)



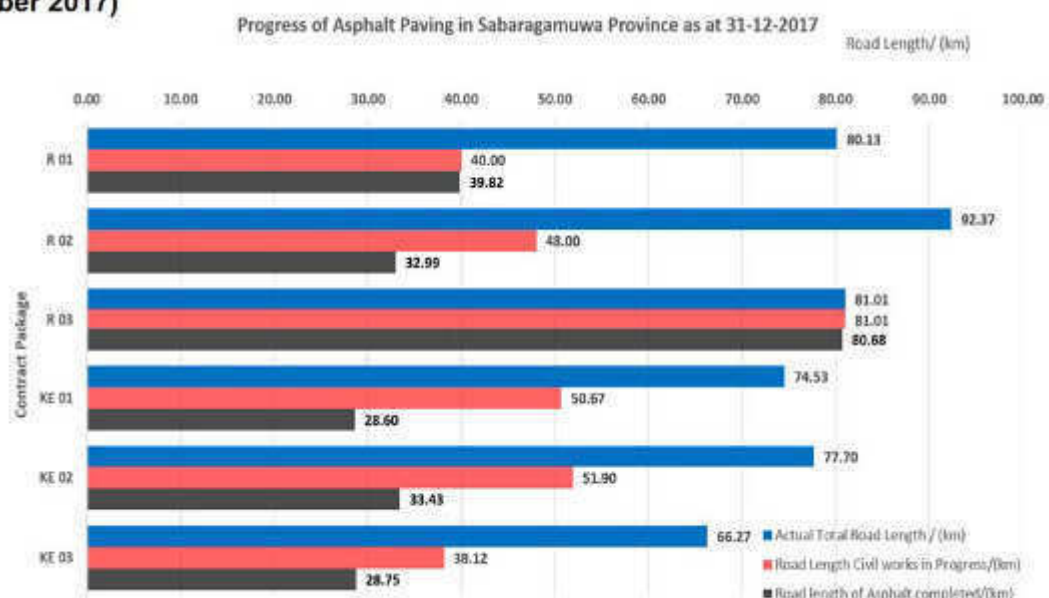
2.2 Overall Physical Progress of Sabaragamuwa Province

Table 2.2 Overall Physical Progress of Sabaragamuwa Province (As at 31st December 2017)

Package No.	Contractor	Accepted Contract Amount (Rs. Million)	No. of Roads	Road Length (km)	No. of Roads; Civil Works in Progress	Asphalt completed (km)	No. of Roads Handed Over	Length of Handed Over Roads (Km)	Physical Progress as at 30 th of Nov. - 2017 Actual (%)	Physical Progress; Cumulative up to 31 st of Dec-2017 Actual (%)	
										Target (Revised)	Actual
R1	KD Ebert	2.022	12	82.95	10	39.82	-	-	55.51%	100.00	55.51%
R2	KD Ebert	2.262	14	91.7	12	33.49	-	-	48.00%	100.00	48.00%
R3	KE	2.021	12	81.01	10	81.01	10	81.01	100.00%	100.00	100.00%
R4	KD Ebert	1.278	13	74.32	12	33.43	-	-	45.00%	100.00	45.00%
R5	KD Ebert	1.847	14	74.22	10	33.43	-	-	45.00%	100.00	45.00%
R6	KD Ebert	1.842	10	66.12	10	33.43	-	-	45.00%	100.00	45.00%
Total		11.272	65	468.28	54	236.68	10	81.01	55.51%	100.00%	55.51%

Graphical presentation of Overall Physical Progress of Sabaragamuwa Province

Graph 2.2 Overall Physical Progress of Sabaragamuwa Province (As at 31st December 2017)



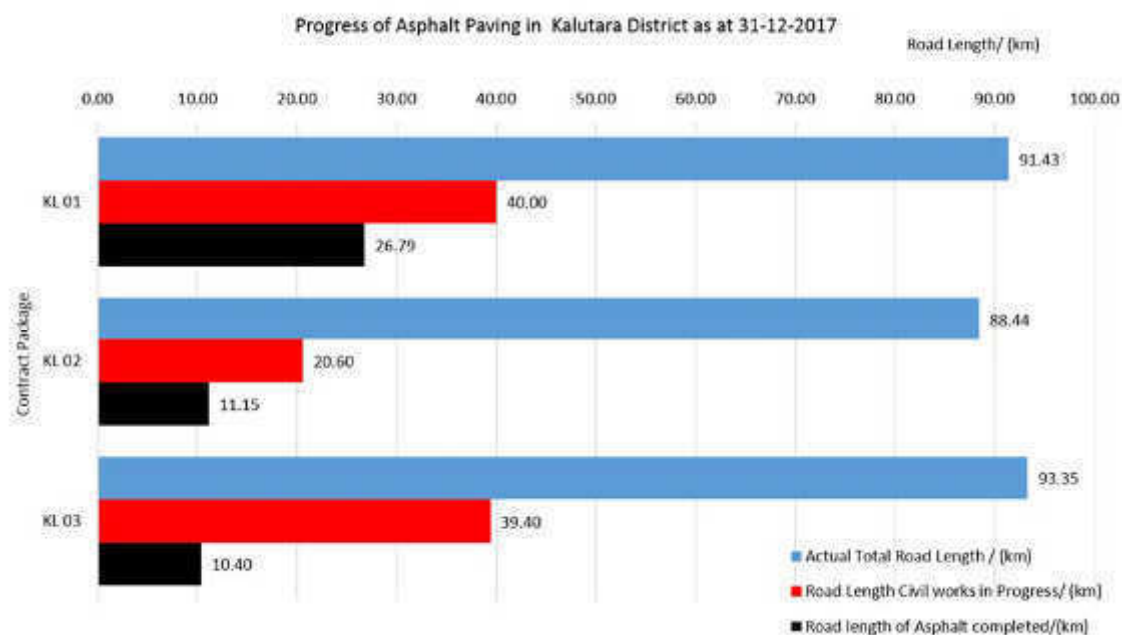
2.3 Overall Physical Progress in Kalutara District of Western Province

Table 2.3 Overall Physical Progress in Kalutara District of Western Province (As at 31 of December 2017)

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 as at 30 th of Nov. - 2017 Actual (%)	Physical Progress; Cumulative up to 31 st of Dec-2017 Actual (%)	
								Target (Revised)	Actual
KL01	62.24	...
KL02	16.40	...
KL03	17.15	...
Total

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

Graph 2.3 Overall Physical Progress in Kalutara District of Western Province (As at 31 of December 2017)



3 COMPLIANCE WITH ENVIRONMENT SAFEGUARDS REQUIREMENTS IN THE LOAN DOCUMENTS

The environmental safeguards requirements stipulated in the loan agreement (Tranche 3) updated FAM (August 2015) and EARF for iRoad program. Sabaragamuwa Province and Kalutara district are considered project 2 while Central province is considered as project 3 of Tranche 2 and in subsequent tranches.

3.1 Compliance with respect to provisions in the loan agreement

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 in loan agreement	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	Already complied 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) the EARF and IEE's (d) all measures and requirements set forth in a Safeguards Monitoring Report	Being complied These conditions are being followed by all designs and construction staff of contractors and PIC and PIC monitor whether these conditions are follows by the constructor's staff
Schedule 5 Safeguards-Related Provisions in Bidding Documents and Works Contracts	6.The Borrower shall ensure, or cause RDA to ensure that all bidding documents contain provisions that require Contractors to: (a) comply with the measures relevant to the contractor set forth in any safeguards document (including relevant IEEs, EMPs and road specific	Already complied To ensure the above conditions, the Borrower included relevant clauses in the agreement signed between RDA and Contractors.

Item/ Section/ Schedule in loan agreement	Description	Status of Compliance
	<p>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>	
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 safeguard documents, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan</p>	<p>Being complied</p> <p>First annual Environmental Safeguard monitoring report from January to December 2016 was submitted March 2017</p> <p>Any unanticipated environmental or social risks and impacts were not observed & recorded during this reporting period</p>

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 table 3.2

Table 3.2 Compliance with Environmental Assessment Review Framework (EARF)

Item/ Section/ Schedule in EARF	Description	Status of Compliance
II, LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY A, GoSL legal framework on environmental safeguards	<p>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 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</p>	<p>Already complied.</p> <p>.Environmental Clearances have been taken by RDA in province basis for Central, Sabaragamura and western province.</p> <p>BIQ on province basis including road specific details submitted to CEA. Project listed as non-prescribed with CEA recommendation.</p>

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	<p>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.</p> <p>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>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</p>	<p>No road widening arranged</p> <p>All design and construction staff of contractor and PIC staff are following the recommendation given in the CEA clearance given for the iRoad projects in province basis. The PIC staff monitor whether these designs are in ground by the property implemented.</p> <p>No road that process through close to wildlife protected area was selected</p> <p>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. As the existing roads are only rehabilitated and improved within the existing road corridors under the investment program.</p>

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	<p>the respective road. No works are allowed in project roads falling inside Strict Nature Reserves</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 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</p>	<p>None of the project roads 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>

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	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	RDA has appointed safeguard team under the guidance ESDD of the RDA. The safeguard team of Central province PIU comprise an Environmental Safeguard Officer (ESO), an Social Safeguards Officer(SSO), an Environmental Safeguard Assistant(ESA) one Social Safeguard Assistants (SSA) . The safeguard team of Sabaragamuwa province PIU comprise one ESO, a SSO, a ESA ,a SSA and The safeguard team of western province PIU comprise a SSO, a ESA and a SSA
III ANTICIPATED ENVIRONMENTAL IMPACTS	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; 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 actives can cause several negative impacts	Being complied Package specific EMAP's have been developed by each contractor based on the IEE's EMP. Those EMAP consists of proposed to mitigate impacts with specific locations and mitigations measure for the impacts. Implementation of EMAP is a

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	<p>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>	contractual requirement in the contract between RDA and the contractors

Item/ Section/ Schedule in EARF	Description	Status of Compliance
		<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> <p>However, three roads in Central province at KA3 (Road No 5,6, and 9) are inside the Hanthana conservation area. Therefore approval was taken from Hnathana conservation</p>
	<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 sigs 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</p>	<p>Being complied</p> <p>Road Safety Audits have been carried out to ensure contractors include necessary designs and signage improve to road user safety.</p> <p>Awareness programs on road safety were conducted for three wheeler drivers at completed roads in some construction packages</p>

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	the contractor will be responsible for implementing suitable mitigation measures such as construction of noise barriers and others.	
IV ENVIRONMENTAL ASSESSMENT PROCEDES C. Environmental Assessment and Environmental Management Plan	<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 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</p>	<p>Already complied</p> <p>IEEs were prepared by RDA in provincial basis for Central, Sabargamuwa and Kalutara district</p> <p>Environmental checklists were prepared for each road under projects 2 and 3.</p> <p>In previous year (2016), contractors submitted 16 EMAPs to PIC. PIC has accepted these EMAPs after reviewing. During this reporting period(2017), balance two EMAPs were submitted to PIC and PIC has accepted these two EMAPs also . Details of progress of submission of EMAPs are given table 4.1 under section. 4,1</p>

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	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	
V. CONSULTATION, INFORMATION DISCLOSURE AND REDRESS MECHANISM A. Public Consultation	<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, 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>Being complied</p> <p>Public consultation also done during joint inspections by PIU, PIC and contractor for all the roads before construction (during initial awareness meetings).</p> <p>Complied under road packages of PIC3.</p>

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	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	
A. Information Disclosure	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.	Complied within project 2 and 3 of iRoad program Province level IEER with EMP were prepared and disclosed Information of the project were dispatched at each iRoad project

Item/ Section/ Schedule in EARF	Description	Status of Compliance
	42. During project implementation, annual environmental monitoring reports will be prepared per province and submitted to ADB for disclosure on the ADB website.	This report is the Second annual report on environment compliance monitoring for PIC3.
C. Grievance redress mechanism	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 grievances which cannot be addressed at the GN level will be addressed at the Divisional Secretariat (DS) level. There will be a Grievance Redress Committee (GRC) at the GN and DS levels	Being complied Grievance redress mechanism is being implemented successfully at all project roads under PIC3.

3.3 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 in the FAM	Description	Status of Compliance
VII Safeguards B. Environment	49. 2017 was under Tranche 3 . 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 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	Already complied Complied with conditions for compliance with environmental safeguards requirements for the programs were incorporated in to contract agreements. Environmental checklists for each road were prepared during SAPE works stage EMAP prepared base on the standard EMP in the contract documents including package specific possible environmental impacts and mitigation measure were submitted by 18 contracts to the PIC as the end of the reporting period and acceptance was given by PIC

Item/ Section/ Schedule in the FAM	Description	Status of Compliance
	<p>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 Sbaragamuva 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>	
	<p>53. The EMOP is a plan for monitoring various environment quality parameters and checking the effectiveness of the EMP. It comprises actives 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</p>	<p>Being complied</p> <p>Implementation of EMAP by contracts is being monitored by PIC staff and PIU staff monthly by reviewing progress reports and by conducting filed inspection randomly or at selected worksites. Representatives of ESDD and ADBCSD/SG specialist also conducted numbers of field inspections during the reporting period</p>

Item/ Section/ Schedule in the FAM	Description	Status of Compliance
	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	
	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, barrow areas etc must be obtained by the contractor before the implementation of the respective construction activity	<p>Being complied</p> <p>Clearance from the CEA has been taken by RDA for implementation of project activates for each province separately (Central, Sabaragamuwa and Western province)</p> <p>Permits. licenses, etc for activities such as operation of asphalt plants, quarries, barrow areas etc are obtained by the contractor before the implementation of the respective construction activities.</p> <p>PIC staff and PIU staff continuously monitor availability and validity of these permits and licenses obtained by the relevant contractors</p> <p>Details of the licenses and permits obtained by the relevant contractors are given in annex 1</p>

4. MONITORING OF ENVIRONMENTAL SAFEGUARD COMPLIANCE AT FIELD LEVEL**4.1 The Documents Contractor should submit**

As per the contract agreements and EARF the contractors require to submit package specific EAMP, EMCs and monthly progress reports. In addition the contractors require to obtain approvals, licenses and permits for road construction activities, yards, quarries and material extraction pits .

Status of the submission of EMAPs, SSEMAPs and EMCs by the contractors and acceptance given by PIC are listed in table no 4.1.

Table 4.1 Status of the submission of EMAPs, SSEMAPs and EMCs by contractors as per 31 December 2017

Package	EMAP Submission		SSEMAP Submission		EMC Submission									
					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	Submitted by Contractor	Accepted by PIC	Submitted by Contractor or	Accepted by PIC
KA1	Yes	Yes	17	17	11	11	13	13	3	3	3	3	5	5
KA2	Yes	Yes	17	17	12	12	3	3	1	1			4	4
KA3	Yes	Yes	16	16	11	11	6	6	4	4	4	4	3	3
MA1	Yes	Yes	7	7	8	8	8	8	4	4	4	4		
MA2	Yes	Yes	3	3	7	7	11	8	8	7	12	12	8	8
MA3	Yes	Yes	3	3	12	12	11	11	8	8	10	10	3	3
NE1	Yes	Yes	13	13	12	12	9	9	4	4	2	2	1	1
NE2	Yes	Yes	14	14	14	13	7	7	7	7	4	4	4	4
NE3	Yes	Yes	15	15	15	14	5	5	4	4	3	3	3	3
R1	Yes	Yes	9	7	10	10	8	8	5	5	4	4		
R2	Yes	Yes	9	9	12	12	9	9	4	4	2	2		
R3	Yes	Yes	6	6	9	9	12	12	10	10	7	7	5	5
KE1	Yes	Yes	12	12	13	13	6	6	2	2	2	2		
KE2	Yes	Yes	16	16	10	10								
KE3	Yes	Yes	21	21	18	16	10	10	9	9	6	5		
KL1	Yes	Yes	8	8	8	8	5	5	1	1	1	1		
KL2	Yes	Yes	3	3	4	4								
KL3	Yes	Yes	5	5	3	3	2	2						
Total			194	192	189	185	125	122	74	73	64	63	36	36

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 Integrated Road Investment Program.

According to the circular (circular no 2/2015) issued by ministry of Mahaweli Development and Environmental on approval process for barrow materials, has to be followed by the contractors to obtain approval for barrow materials. Circular no 2/2015 issued by ministry of Mahaweli Development is given annex 1.. Most of the contractors faced many difficulties while obtaining approval for barrow fits following process given in this Circular. This matter was discussed at Project Coordinating Committee (PCC) in several times. Status of license and approval of the contracts in the PIC03 as at 31 of December 2017 are given in the annex 2

STORY OF A BARROW PIT FROM KA1

When the Paranapolonnaruwa Road (No. 36) work was in progress, a land situated in Thotillagasella village, Minipe Divisional Secretariat Division identified as a suitable land for gravel excavation and got consent from the landowner on 17.02.2017. This gravel excavation land consisted 1500m³ gravel which is 25 % of the gravel requirement of the improvement work of this road (No 36) . This land is given by the government to the above landowner to live there. Hence it should also be obtained consent from the Deputy Land Commissioner of Mahiyangana to use other purposes except living there according to the conditions of the Land Permit. The permission of Deputy Land Commissioner obtained on 22.02.2017 after five days.

An application forwarded to Central Environmental Authority (CEA) to get the Environmental Recommendation (ER) on 10.03.2017. The CEA did a joint inspection in the area on 31.03.2017. The inspected team instructed to prepare a survey plan of this location for their comments.

Accordingly, the land surveyed by the Government Surveyor on 02.04.2017 and issued the survey plan on 12.06.2017.

After surveying it realized that this block of land does not belongs to above landowner. It also confirmed by the Deputy Land Commissioner of Mahiyangana.

Then the Land Commissioner instructed us to apply for the gravel excavation permit. The permit is valid only for one-year period. The company forwarded the application to the Deputy Land Commissioner of Mahiyangana to obtain the permit on 13.06.2017.

The Deputy Land Commissioner requested ER from the CEA for this purpose. The Environment Recommendations of CEA obtained on 12.07.2017 and submitted to the Deputy Land Commissioner on 13.07.2017.

The Deputy Land Commissioner sent with our requested letter, survey plan, Colony Officer's report and ER to the Land Commissioner General with his recommendation for the approval of annual gravel extraction permit on 09.08.2017.

In the meantime, to obtain the supporting documents for mining permit, the company applied to the National Building Research Organization and the Archeological Department on 27.04.2017. The report of National Building Research Organization received on 27.08.2017. The consent letter of Archeological Department received on 05.08.2017.

The Land Commissioner General informed on 06.10.2017, he needs further comments from the Department of Land Use Policy Planning and Geological Survey & Mines Bureau to grant permission to release the land for gravel excavation.

Accordingly, Company requested from the Department of Land Use Policy Planning and Geological Survey & Mines Bureau on 2017.10.17 for their comments. These two letters of comments regarding gravel extraction from this land received on 01.11.2017.

The Land Commissioner General granted his approval for the annual permit on 27.12.2017. The condition is 04% of value of the land should charge from the company.

Environmental Officer of the Company visited and meet the officers of the above institutions to get done quickly as possible.

Even though, almost 10 months have been taken for above process, required permit was not received by contractor for gravel mining from this land within year 2017. Therefore completion of road improvement work of this road (Road No 36) was delayed five months due to lack of gravel.

Reported by

Mr U.A.B. Ekanayaka ,Social and Environmental Officer, KA1 Package

4.1.4 Submission of monthly Environmental Progress Report

According to sub clause 4.21 in contract condition of the contract agreement, each contractor should submit a monthly progress report on environmental issues. This monthly report includes, summary of weather records, summary of road construction activities, environmental issues identified and action taken or applied mitigation measures, status of submission of EMAP, SSEMAP, EMC, tree removal and tree planting, status of Licenses and approvals and details of yards. A sample of monthly progress report is attached in annex 3

4.1.5 Grievance Redress Mechanism (GRM) of the project

Section C of EARF and Section vi of RF explain the need of handling public grievances especially during the project implementing period of iRoad program

The Grievance Redress Mechanism (GRM) is necessary to support general public to resolve their problems arising due to project activities

Progress of establishing GRCs at GN and DS level up to 31 December 2017 are summarized in the table No 4.2

Table No 4.2. Status of establishing GRCs at DS and GN level in provinces under PIC3 as at 31 December 2017

District	Package	Total No. of DSDs	DSD level		Total No. of GNDs	GND level	
			Established	To be Established		Established	To be Established
Matale	MA1	3	3	0	34	34	0
	MA2	3	3	0	29	29	0
	MA3	5	5	0	19	19	0
Sub Total		11	11	0	82	82	0
Kandy	KA1	6	6	0	57	57	0
	KA2	6	6	0	20	20	0
	KA3	7	7	0	56	56	0
Sub Total		19	19	0	133	133	0
Nuwara Eliya	NE1	2	2	0	14	14	0
	NE2	2	2	0	18	18	0
	NE3	2	2	0	15	15	0
Sub Total		6	6	0	47	47	0
Kegalle	KE1	4	4	0	26	23	3
	KE2	3	3	0	38	32	6

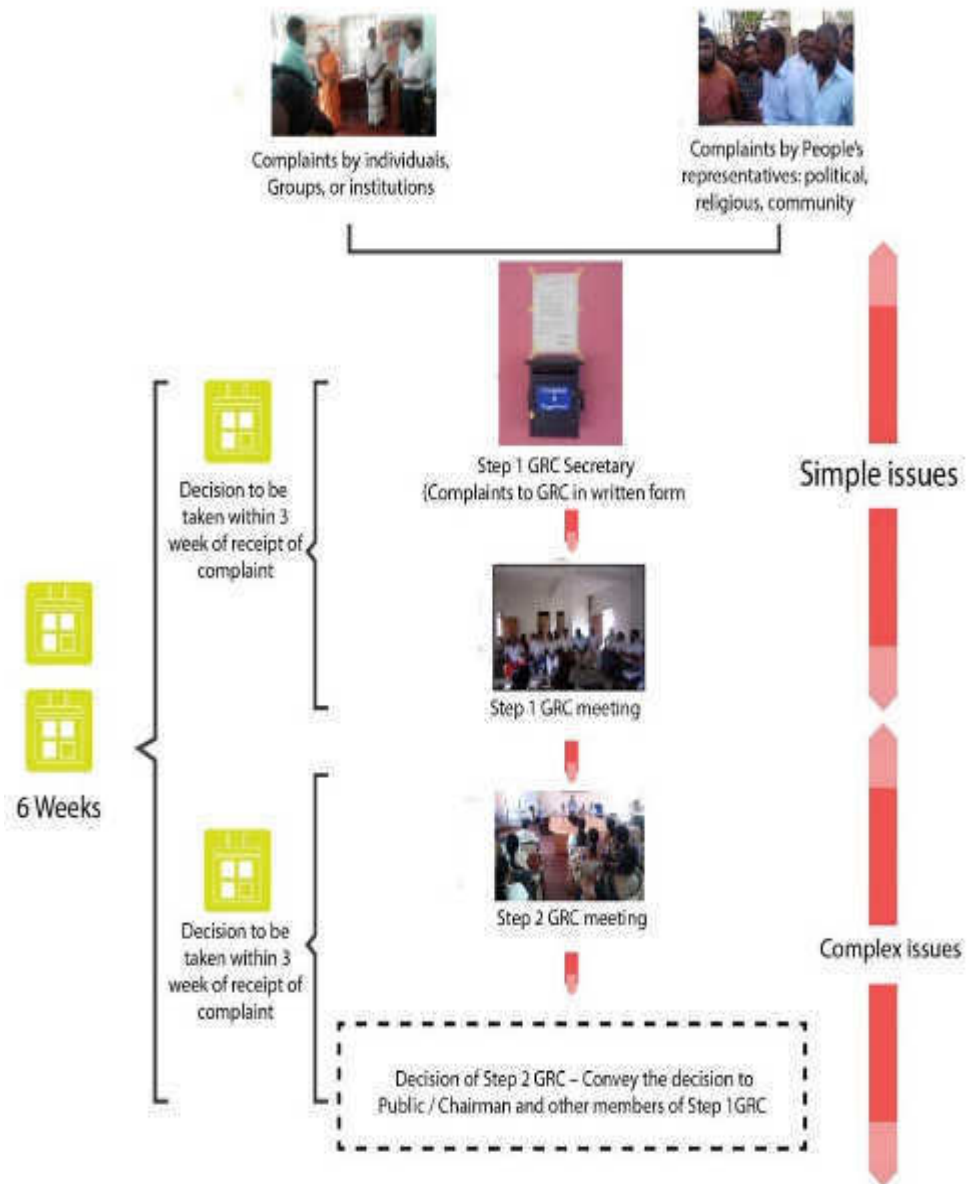
District	Package	Total No. of DSDs	DSD level		Total No. of GNDs	GND level	
			Established	To be Established		Established	To be Established
	KE3	4	4	0	50	46	4
Sub Total		11	11	0	114	101	13
Ratnapura	R1	6	6	0	31	31	0
	R2	8	8	0	30	30	0
	R3	6	6	0	30	30	0
Sub Total		20	20	0	91	91	0
Kalutara	KL1	7	7	0	32	32	0
	KL2	4	4	0	42	42	0
	KL3	3	3	0	22	21	01
Sub Total		14	14	0	96	95	0
Total		81	81	0	563	549	14

4.1.6 Public Request, Suggestion and Complaint Handling Process.

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 request, suggestion and complaints as per guideline in EARF/RF

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 ADB mid-term review mission, ADB CSD/SG International consultants, 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 Field inspection by ADB mid-term review mission

Field inspections were conducted by ADB mid –term review mission jointly with PIC, PIU and contractor's staff to review the overall progress of the project including implementing safeguard activities of the project. ADB mid-term review mission comprised representatives of safeguard experts also. Details of ADB mid- term review mission are given in table 4.3

Table 4.3 Details of ADB mid- term review mission

Date	Places	Description of the event
26 April	Road ID no 10 in R3 package Road ID no 3 in KE 1 package (Image 4.1 ,4.2,4.3.and 4.4)	<ul style="list-style-type: none"> • Inspection of road construction sites including stock yards and disposal yards • Interviewed with beneficiary communities of rural roads
27 April	Road ID no 3 in NE1 package Road ID no 10 in KA3 package Road ID no 38 in MA3 package (Image 4.5 and ,4.6)	<ul style="list-style-type: none"> • Inspection of road construction sites including stock yards and disposal yards • Interviewed with beneficiary communities of rural roads • Meeting with PIU, PIC and Contractors representatives
9 May	Road ID no 86 in KL1 package Road ID no 82 in KL3 package (Image 4.7 and ,4.8)	<ul style="list-style-type: none"> • Inspection of road construction sites • Interviewed with beneficiary communities of rural roads



Image 4.1 and 4.2. Field inspection conducted by ADB mid- term review mission at R3 package Road ID No10 on 26 April 2017.



Image 4.3 and 4.4. Field inspection conducted by ADB mid- term review mission at KE 1 package Road ID No 3 on 26 April 2017.



Image 4.5 and 4.6. Discussing with female workers by ADB social safeguards specialist SLRM (Image no 4.5) at NE 1 package Road ID and field inspection conducted by ADB mid- term review mission at KA 3 package Road ID No 10 (Image no 4.6) on 27 April 2017.



Image 4.7 and 4.8. Field inspection conducted by ADB mid- term review mission at KL 1 package Road ID no 86 (Image 4.7) and at KL 3 package Road ID no 82 (Image 4.8) on 9 May 2017.

4.2.2 Field inspection by ADB CSD Expert team

Field inspections were conducted by ADB CSD Expert team which comprised ,P.K. Kar - Social expert ,Dipak Tirupathi - Environment expert and Subash Nigum - Safety expert jointly with SCD / SG Specialist ,representatives of ESDD ,PIC, PIU and contractor's staff to monitor the filed implementation of environmental safeguards compliance during the reporting period. Details of field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff are given in table 4.4

Table 4.4 Details of field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist consultant, representatives of ESDD, PIC, PIU and contractor's staff

Date	Places	Description of the event
16 May	Road ID no 82 in KL3 package (Image 4.9 and 4.10)	<ul style="list-style-type: none"> • Inspection of road construction sites including stock yards and disposal yards • Interviewed with beneficiary communities of rural roads
17 May	Road ID no 10 in R3 package	<ul style="list-style-type: none"> • Inspection of road construction sites including stock yards and disposal yards • Interviewed with beneficiary communities of rural roads
18 April	Road ID no 11 in R 1 package Road ID no 3 in KE1 package .	<ul style="list-style-type: none"> • Inspection of road construction sites including stock yards and disposal yards • Interviewed with beneficiary communities of rural roads
19 May	Central province PD office Road ID no 10 in KA3 package (Image 4.11 and 4.12)	<ul style="list-style-type: none"> • Meeting with PIU, PIU and Contractor staff • Inspection of road construction sites • Interviewed with beneficiary communities of rural roads
20 May	Road ID no 31 in NE 2 package (Image 4.13 and 4.14)	<ul style="list-style-type: none"> • Inspection of handed over road • Interviewed with beneficiary communities of rural roads
22 May	Road ID no 18 and 25 in MA2 package	<ul style="list-style-type: none"> • Inspection of road construction sites • Interviewed with beneficiary communities of rural roads



Image 4.9 and 4.10 Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at KL 3 package Road ID no 82 on 16 May



Image 4.11 and 4.12 Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at KA 3 package Road ID no 10 on 19 May



Image 4.13 and 4.14 Field inspections conducted by ADB CSD Expert team jointly with SCD / SG Specialist, representatives of ESDD, PIC, PIU and contractor's staff at NE 2 package Road ID no 31 on 20 May

4.2.3 Field inspection by ADB CSD/ SG Specialist Consultant and representatives of ESDD

ADB CSD / SG Specialist Consultants and representatives of ESDD jointly with PIC PIU and contractor's conducted Field Inspections, staff to monitor the filed implementation of environmental safeguards compliance during the reporting period. A meeting was conducted at the end of each field inspection conducted by ADB, SCD/SG Specialist Consultants 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 Consultants and representatives of ESDD jointly with PIC, PIU and contractor's representative are given in table 4.5

Table 4.5 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
30 January	Road ID no 70,19 and 16 in KE 1 package Road ID no 33 and 24 in KE 2 package Road ID no 28 and 48 in KE 3 package.	• Mr. Saranga Gajasinghe - ADB, CSD/SG Specialist Consultant	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities and road safety at roads construction sites. • Inspection of stores managed by contractors
31 January	Road ID no 11 and 12 in R1 package Road ID no 22 and 29 in R 2 package Road ID no 10 and 38 in R 3 package.	<ul style="list-style-type: none"> • Mr. Saranga Gajasinghe - ADB, CSD/SG Specialist Consultant • 	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities and road safety at roads construction sites. • Inspection of stores managed by contractors
1 February	Team Leader Office (Image: 4.15)	<ul style="list-style-type: none"> • Mr. Saranga Gajasinghe - ADB, CSD/SG Specialist Consultant • 	<ul style="list-style-type: none"> • Participated at environmental team meeting Sabaragamuwa
2 August	Road ID no 82 in KL 3 package Road ID no 35	• Mr. Saranga Gajasinghe - ADB, CSD/SG Specialist Consultant	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities and

Date	Places	Participation from ESDD and ADB	Description of the event
	and 37 in KL 2 package (Image 4.16 and 4.17)	<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"> road safety at roads construction sites. • Inspection of stores managed by contractors
16 October	Road ID no 29 30 and 31 in MA3 package (Image: 4.18 and 4.19)	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Consultant	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities and road safety in roads construction sites. • Inspection of stores managed by contractors
17 October	Road ID no 46 48 in NE3 package (Image: 4.20 and 4.21)	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Consultant	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities and road safety in roads construction sites. • Inspection of stores managed by contractors
23 October	Road ID no 39 in MA3 package Image:4.23)	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Consultant	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities and road safety in roads construction sites. (Image: 4.22) • Conducting special GRC meeting (
06 November	Road ID no 5,6 and 9 in KA3 package	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Consultant	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities and road safety in roads construction sites.
21 November	Road ID no 26,21,27,57 and 63 in KE 2	• Mr Saranga Gajasinghe - ADB, CSD/ SG Specialist Consultant	<ul style="list-style-type: none"> • Inspection of environmental safeguard activities

Date	Places	Participation from ESDD and ADB	Description of the event
	package (Image: 4.24 and 4.25).		and road safety in roads construction sites. • Inspection of stores managed by contractor
22 November	Road ID no 83 and 9 in KL 1 package	• Mr Saranga Gajasinghe - ADB, CSD/SG Specialist Consultant	• Inspection of environmental safeguard activities and road safety in roads construction sites. • Inspection of Public complaint
14 December (Image: 4.26 and 4.27)	, Road ID no 65 52 45 and 47 in 3 in KE 3	• Mr Saranga Gajasinghe - ADB, CSD/SG Specialist Consultant	• Inspection of environmental safeguard activities and road safety in roads construction sites. • Inspection of stores managed by contractors



- Image: 4.15 ADB, CSD/SG Specialist Consultant addressing Sabaragamuwa environmental team at team leader office on 1st February 2017.



Image 4.16 and 4.17 Field inspection conducted by ADB, CSD/SG Specialist Consultant and representative from ESDD of RDA at KL3 Package Road ID no 82 on 2 August 2017.



Image: 4.18 and 4.19 Field inspection conducted by ADB, CSD/SG Specialist Consultant at MA 3 Package ID no31 on 16 October 2017.



Image: 4.20 and 4.21. Field inspection conducted by ADB, CSD/SG Specialist Consultant at NE 3 Package (Photo: 4.20 Road ID no 46) (Photo: 4.21 Road ID no 48) on 17 October 2017.



Image: 4.22 and 4.23. Field inspection conducted by ADB, CSD/SG Specialist Consultant at KA3 Package, Road ID no 39 (Photo: 4.22) and addressing GRC by ADB CSD/SG Specialist (Photo: 4.23) on 23 October 2017



Image: 4.24 and 4.25. Field inspection conducted by ADB, CSD/SG Specialist Consultant at KE2 Package, (Road ID no 26 Photo: 4.24) and discussing with beneficiary community members by GRC ADB by CSD/SG Specialist (Road ID no 21 Photo: 4.25) on 21 November 2017



Image: 4.26 and 4.27. Field inspection conducted by ADB, CSD/SG Specialist Consultant at KE3 Package, (Road ID no 65 Photo: 4.26) and discussing with beneficiary community members by CSD/SG Specialist (Road ID no 65 Photo: 4.27) on 14 December 2017

4.2.2 Environmental safeguard compliances field monitoring by PIC and PIU staff

Environmental specialist and Social and Environmental Development Assistants of PIC, Environmental Safeguard Officer and Environmental Safeguard Assistants of PIU jointly or separately conducted field inspections on road construction sites / plants / yards and material excavation sites randomly or selected sites as per the requirements. Monitoring implementing environmental safeguards compliances, checking EMC and verifying information of contractors' monthly environmental monitoring reports were done during these field visits.



Image: 4.28, 4.29. Inspection of concrete batching plant by PIC staff and contractor staff at KL 2 Road No23 on 6 June



Image: 4.30, 4.31. Field inspection conducted by PIU, PIC and contractors staff with community members at NE1 Road No2 on 18 August



Image: 4.32 and 4.33. Field inspection conducted by PIC staff and contractor staff with community members at R3 Road No 10 on 13 September

4.2.3 Site specific monitoring of environmental safeguard compliances

Site specific monitoring system for monitoring environmental safeguard compliances was introduced by Dr K.M.P,S Bandara, Focal Point (Natural Resource & Environmental) ADB SRM to PIC 03. Level of implementing mitigation measures for environmental impact from project activities at site level can be monitored from this system. Two training workshops were conducted by Dr Bandara to introduce this system to PIC 03 during the reporting period. PIC 03 will use this site-specific monitoring system in next year (2018) to monitor the implementation of environmental safeguard compliance at site level. Details of training workshops conducted by Dr Bandara to introduce site specific monitoring system are given in table 4.6

Table 4.6 Details of training workshops conducted by Dr K. M. P.S. Bandara, Focal Point (Natural Resource & Environmental) ADB SRM to introduce site specific monitoring system

Date	Place	Province	Participants		
			Organization	Designation	No
31October	PD office Sabaragamuwa (Image 4.34 and 4.35)	Sabaragamuwa	ESDD – RDA	Hydro geologist	1
				Ecologist	1
				Environmental Safeguard Officers	3
				Project Engineer	1
				Social Safeguard officer	1
				Environmental Safeguard officer	1
			PIU	Environmental Safeguard Assistants	1
				Social Safeguards Assistant	1
				Environmental Specialist	1
				Social and Environmental	2

Date	Place	Province	Participants		
			Organization	Designation	No
			Contractor	Assistants Environmental and Social Safeguard officers	6
27 December	CE 2 office Kandy (Image 4.36 and 4.37)	Central	ESDD – RDA	Chemist Environmental Safeguard Officer	1 1
			PIU	Project Director (CP) Environmental Safeguard Officer Social safeguard Officer Environmental Safeguard Assistants	1 1 1 1 1
			PIC	Social Safeguards Assistant Team Leader (Acting) Environmental Specialist Social/Gender /Resettlement Specialist Social and Environmental Assistants	2 1 1 1 4
			Contractor	Environmental and Social Safeguard officer	8



Image 4.34 and 4.35 Conducting training workshop by Dr K.M.P.S. Bandara, Focal Point (Natural Resource & Environmental) ADB SRM on site specific monitoring system for Sabaragamuwa province



Image 4.36 and 4.37 Conducting training workshop by Dr K.M.P.S. Bandara, Focal Point (Natural Resource & Environmental) ADB SRM on site specific monitoring system for Central province

5. ENVIRONMENTAL ISSUES OBSERVED AND STATUS OF COMPLIANCE

Possible environmental impacts from project activities and migratory actions to be adopted were clearly included in EMAPs submitted by the contractors. Hence most of the environmental impacts were mitigated in the ongoing project activities. Contractor's own ESO, PIC staff and PIU staff continued monitoring of environment compliance and public assisted in raising environmental best practices and issues related to road construction. The impacts observed, mitigation measures adopted with road specific examples are discussed in this section

5.1 Environmental Issues observed by contractor's staff and Environmental Issues reported by public and measures taken

Environmental issues observed by contractor's staff and reported by public were rectified by the contractor's staff at field level with guidance from PIC and PIU staff. CSD/SG specialist Consultant also assisted in specific incidents. Instructions required for rectify some environmental issues were given from PIC staff especially for issues that were not effectively mitigatable through standard practices given in the EMAPs). These environmental issues and action were reported by contractors in the monthly progress reports. During the reporting period, most of the environmental and social officers of contractors resigned and this situation had a negative impact on implementing environmental safeguards activities.

Summary of key environmental issues observed by contractor's staff and reported by public and measures taken during the reporting period presented in table 5.1

Details of key environmental issues observed by Contractor's staff and reported by public and measures taken during the reporting period are given in annex 4

Table 5.1, Summary of key 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 Key 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
25.44.and 45 ,	<ol style="list-style-type: none"> 1. Spreading dust 2. Soil erosion 	<ol style="list-style-type: none"> 1. Watering the roads (Image 5.1.1) 2. Hard shoulder 3. Turffing Image (5.1.2 and 5.1.3)



Image 5.1.1 Watering for dust control
Road No 25 at 0.375 in KA1



Image 5.1.2 Turfing for erosion control
Road No 44, 1+990-1+210 LHS in
KA1



Image 5.1.3 Turfing for erosion control
Road No 45, 0+970,1+210 RHS in
KA1

Table 5.1.2 Key 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
39,10,11,48 49,	<ol style="list-style-type: none"> 1. Soil erosion at disposal yards and stock yards 2. Dust generation 3. Erosion of shoulders & embankments 	<ol style="list-style-type: none"> 1. Construction of retaining walls using rock boulders (Images 5.1.4 to 5.1.7) 2. Restoration of Disposal yards and stock yards (Images 5.1.8 to 5.1.15) 3. Construction of Drains 4. Covering of Transporting vehicles (Image 5.1.16 to 5.1.18) 5. Watering of roads (Images 5.1.19 to 5.1.20) 6. Soil erosion control and slope protection by Turfing (Images 5.1.21 to 5.1..28)



Image 5.1.4 Construction of rock wall for erosion control Road No 39 - 1+025 LHS in KA3



Image 5.1.5 Construction of rock wall for erosion control Road No 39, 1+025 LHS in KA3



Image 5.1.6 Construction of rock wall for erosion control Road No 39, 1+025 LHS in KA3



Image 5.1.7 Construction of rock wall for erosion control Road No 10,1+700 in KA3



Image 5.1.8 Stockyard, during construction Road No 10 ,1+700 in KA3



Image 5.1.9 After restoration of stack yard, Road No 10, 1+700 in KA3



Image 5.1.10 Disposal yard, during construction Road No 10, 4+060 in KA3



Image 5.1.11 After restoration of disposal yard Road No 10, 4+060 in KA3



Image 5.1.12 Disposal yard, during construction Road No 10, 2+110 in KA3



Image 5.1.13 After restoration of Disposal yard, Road No 10, 2+110 in KA3



Image 5.1.14 Stockyard, during construction Road No 11, 2+890 RHS in KA3



Image 5.1.15 After restoration of stack yard, Road No 11, 2+890 in KA3



Image 5.1.16 Covering of construction transport vehicle for avoid pollution from dust



Image 5.1.17 Covering of construction transport vehicle for avoid pollution from dust



Image 5.1.18 Covering of construction transport vehicle for avoid pollution from dust



Image 5.1.19 Watering for control the dust generation



Image 5.1.20 Watering for control the dust generation



Image 5.1.21 Turfing for erosion control
Road No 10 RHS 6+965 - 6+990 in
KA 3



Image 5.1.22 Turfing for erosion
control Road No48 107+190 -
7+220 RHS in KA 3



Image 5.1.23 Turfing for erosion
control Road 48 No 481+ 500 -
1+535 LHS
in KA 3



Image 5.1.24 Turfing for erosion
control Road No 48 1+ 640 -
1+660 LHS in KA3



Image 5.1.25 Turfing for erosion control
Road No 49 LHS 1+600-1+900 in KA 3



Image 5.1.26 Turfing for erosion control
Road No 49 3+420 – 3+435 LHS in KA 3



Image 5.1.27 Turfing for erosion control
Road No 49 LHS 3+040-3+200 in KA 3



Image 5.1 28 Turfing for erosion control
Road No 49 LHS 1+420-1+460 in KA 3

Table 5.1.3 key environmental impact observed during the reporting period and mitigation taken by the NE1 contractor in Nuwara Eliya District

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
3 ,8,11	<ol style="list-style-type: none"> 1. Dust control while ABC compaction 2. Soil erosion at Dumping Yards 3. Soil erosion in earth drains at highly slope areas 4. Falling Soil from road to Adjacent slope 5. Soil erosion from soft shoulders 	<ol style="list-style-type: none"> 1. Water spreading while ABC compaction (Image 5.1.29) 2. Boulder walls were constructed (Image 5.1.30,316 and 5.1.32) 3. Concrete U drains were constructed (Image 5.1.33) 4. Action taken to prevent further erosion by growing vegetation cover (Image 5.1.34 and 5.1.35) 5. Turfing the shoulder.(Image 5.1.36)



Image 5.1.29 Watering for dust control
Road No 8 at 2+345 in NE1



Image 5.1.30 Construction of rock wall
for erosion control at disposal yard Road
no 11, 2+500RHS in NE1



Image 5.1.31 Construction of rock
wall for erosion control at disposal
yard Road no 8, 3+400RHS in NE 1



Image 5.1.32 Construction of rock
wall for erosion control at disposal
yard Road no 3, 7+120RHS in NE 1



Image 5.1.33 Construction of U drain
for erosion control at disposal yard
Road no 8, 2+050RHS in NE 1



Image 5.1.34 growing vegetation
cover and construction rock wall for
erosion control at Road no 3,
6+670RHS in NE 1



Image 5.1.35 growing vegetation
cover and construction rock wall for
erosion control at Road no 3,
7+020RHS in NE 1



Image 5.1.36 turfing for erosion
control at Road no 3, 1+170RHS in
NE 1

Table 5.1.4 Key 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. 32,23,29,16,24,30 2. Main yard at Nanu Oya 3. Site offices	1. Oil that comes from the mechanical yard spreads over the land 2. No proper solid waste management at office premises 3. Soil erosion in the embankment 4. Paving ABC material spread over the tea land 5. Soil erosion at the cut edge of the road 6. Dust emission while compaction 7. Shoulder erosion	1. Developed an oil separation tank series (Image 5.1.39) 2. Introduced solid waste separation bins and hand covered to Local Authority (Image 5.1.40) 3. Turfed the embankment surface 4. Planted hedge row plants on the embankment surface(Image 5.1.37 and 5.1.38) 5. ABC material collected by manually (Image 5.1.41 and 5.1.42) 6. Developed L drain and Planted flower species (Image 5.1.43 and 5.1.44) 7. Developed edge wall 8. Compaction in wet condition (Image 5.1.45) 9. Turf the embankment (Image 5.1.46) 10. Developed scuffed drain (Image 5.1.47) 11. Developed steps at leader way (5.1.48)



Image 5.1.37 Planting hedge rows for erosion control Road No 23, 2+620RHS in NE2



Image 5.1.38 Planting hedge rows for erosion control Road No 23, 3+650RHS in NE2



Image 5.1.39 Oil separation tank series at main yard in NE2



Image 5.1.40 solid waste separation at site office Rd 16, 0+200RHS In NE2



Image 5.1.41 Removing spread material from tea land at Road No 24.3+600 RHS in NE2



Image 5.1.42 Removing spread material from tea land Road No 16.1+220 in NE 2



Image 5.1.43 Construction of L drain for protection of embankment from erosion Road No 24 0+630 in NE2



Image 5.1.44 Construction of L drain for protection of embankment from erosion Road No 24 ,0+380In NE2



Image 5.1.45 Compaction in wet condition for dust generation control Road No 24, 3+300RHS NE2



Image 5.1.46 Turfing for erosion control Road no 32, 0+030RHS in NE2



Image 5.1.47 Turfing for erosion control Road no 30 2+380 in NE2



Image 5.1.48 Developing steps to the outlet of the culvert for erosion control Road no 29.1+ 420 in NE2

Table 5.1.5 Key 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. 47,46,43,45,36,	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 0+450(LHS) in Hapugasthalawa Dabagala Road (45).	1. Water Sprinkles are used for duct control 2. Trucks are covered with proper covering material.(Image 5.1.49) 3. Boulder wall has been constructed required dumped yards(Image 5.1.49 and 5.1.54) 4. Turfing & “L” Drain have been constructed.(Image 5.1.51 to 5.1.53) 5. Construction of protection wall (Image 5.1.56 and 5.1.57) 6. De silt tank to wash the Truck Mixtures - Pallewaththa Dagampitiya Road (47) - CH: 6+221 (RHS).(Image 5.1.55)



Image 5.1.49 Material transport Trucks : were covered to private dust generation Road no 46 2+350 in NE3



Image 5.1.50 Constructing boulder wall for erosion control at dumping yard Road no 45 , 3+100 RHS in NE3



Image 5.1.51 Turfing for Erosion Control Road no 46, 0+655 RHS in NE3



Image 5.1.52 Before construction of “L” Drain & for erosion control Road no 45 0+375 – 0+395 RHS in NE3



Image 5.1.53 After construction of “L” Drain & for erosion control Road no 45 0+375 – 0+395 RHS in NE3



Image 5.1.54 Construction of boulder wall at dumping yard for erosion control Road no 36 , 0 +890 RHS in NE3



Image 5.1.55 De silt tank to wash the Truck Mixtures –Road no 47 - CH: 6+221 RHS in NE3



Image 5.1.56 Before construction of protection Road no 45, 0+450 LHS in NE3



Image 5.1.57 After construction of protection Road no 45, 0+450 LHS in NE3

Table 5.1.6 Key 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
13,45,	<ol style="list-style-type: none"> 1. Soil erosion of bank of the road and risk to slip towards house. 2. Soil erosion nearest to road adjoining the house and risk to landslip 	<ol style="list-style-type: none"> 1. Turfing by grasses (Image 5.1.58 and 5.1.59) 2. Protecting the slopes using bags filled with disposal soil. (Image 5.1.60 and 5.1.61)



Image 5.1.58 and 5.1.59 Turfing for erosion control Road no 13 2+400 LHS in MA1



Image 5.1.60 and 5.1.61 Protecting the slopes using bags filled with disposal soil Road no 45 4+478 RHS MA 1

Concept of Reinforce Wireless Bio-Engineering Fences at MA1 Awarded National and International Awards

The concept of reinforce wireless bioengineering fences is a new innovation of steep slope stabilization in environment management systems. It was field tested at Hulagamuwa Junction along Watagoda Road- 14 1+335 LHS in September 2016. It has won few national and international awards. Son and daughter of Environmental and Safeguard officer (ESO) of the MA1 contract package suggested this great Idea.

National awards

The competition organized by The New Inventors Commission, Ministry of Science under environment section offered bronze medal. Bio-Engineering fence won a gold medal in the competition organized by “Shasak Nimawum” national invention in 2017. Two silver medals awarded by Sri Lankan inventors Commission of the government. First prize won in Winner - green innovation technology interschool completion organized by faculty of Science, Department of Environment Management, University of Kelaniya.

International awards

Reinforce Wireless Bio Engineering Fence won the Silver medal under Ecological Science in Kaohasiung International Invention and Design Expo organized by WIIPA (World Invention Intellectual Property Associations) to gather with Taiwan Invention Development Board. This Reinforce Wireless Bio Engineering Fence was also won two gold medals, a silver medal and a bronze medal. Altogether, they won world best young inventor award from among the 26 countries representatives open competition.

Reported by **J.M. Soorasena** Environmental and Social Safeguard Officer, MA1 Package



Field application of reinforce wireless bioengineering fences at Road No 14, 1+335LHS in MA1

After one year field application of reinforce wireless bioengineering fences at Road No 14, 1+335LHS in MA1



Son of SEO in MA1 awarded national award for the concept



Awarded awards for the concept

Table 5.1.7 Key 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. 19,22,55 23 and 25	1 Unauthorised Soil Waste (unwanted material from soil)	1. Waste material re-used by villagers
2. Vehicles yard area	2 Soil erosion at road shoulders	2. Construction of rock wall for erosion control (Image 5.1.62 and 5.1.63)
	3 Waste water generate from vehicle's washing place	3. Turfing, and Hard shoulder construction (Image 5.1.64 and 5.1.65)
	4 Disability to rain water discharge	4. Introduced Oil Trap (Image 5.1.68)
		5. Introduce Earth drain & 'U',(Image 5.1.66 and 5.1.67)L and Disk Drain



Image 5.1.62 and Image 5.1.63 Construction of rock wall for erosion control Road no 22, 2+010 in MA2



Image 5.1.64 Turfing for erosion control Road no 55 in MA 2



Image 5.1.65 Construction of hard shoulder & , "L" for erosion control Road no: 19 , 2+018 in MA2



Image 5.1.66 Construction of House accesses & "U" drain Road no 23 3+100 in MA2



Image 5.1.67 Construction of House accesses & "U" drain Road no 23 3+100 in MA2



Image 5.1.68 Oil Trap at vehicle's washing place in MA3



Image 5.1.69 Road marking, Road No 25 2+640 in MA 2

Table: 5.1.8 Key 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
3,5,9,17,18,19	<ol style="list-style-type: none"> 1. Soil Erosion of disposal yards 2. Dust emission 3. Disposal yards are getting washed off due to heavy rains 4. Surface runoff 5. Removal of trees 	<ol style="list-style-type: none"> 1. Watering (Image 5.1.70 to 5.1.73) 2. Stone and sand barriers were provided (Image 5.1.74 to 5.1.77) 3. Construction of toe walls for disposal yards and turfing of the embankment (Image 5.1.78 to 5.1.79) 4. Constriction of L drain and hard shoulders for erosion control Road Image 5.1.80 5. Construction of proper drains and carry out routine maintenance work 6. Replanting of trees in a ratio of 1:3 7. Apply silt barriers 8. Applied toe wall with rubble and bags for e disposal yard. 9. Stone tracks available 10. Drain available 11. Drain clearing



Image 5.1.70 Watering for control for dust generation Road No 3, 1+200 in KE1



Image 5.1.71 Watering for control for dust generation Road No 3, 1+200 in KE1



Image 5.1.72 Watering for control for dust generation Road No 9, 2+200 in KE1



Image 5.1.73 Watering for control for dust generation Road No 17, 3+600 in KE1



Image 5.1.74 construction of rock wall for erosion control Road no 18, 2+367 LHS in KE1



Image 5.1.75 Preparing sand bags barriers for erosion control Road No 17, 7+500 LHS in KE1



Image 5.1.76 Preparing sand bags barriers for erosion control Road No 17, 7+500 LHS in KE1



Image 5.1.77 Preparing sand bags barriers for erosion control Road No 18, -7+800 LHS in KE1



Image 5.1.78 Preparing sand bags barriers for erosion control Road No 18, 8+400 RHS in KE1



Image 5.1.79 Construction of rock wall for erosion control Road no 5, 2+100 LHS in KE1



Image 5.1.80 construction of L drain and hard shoulders for erosion control Road no 19, 0+820 LHS in KE1

Table no 5.1.9 Key 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
22,26,27,32,39	<ol style="list-style-type: none"> 1. Falling of rock to water body while road construction 2. Soil dumped to water stream while road construction 3. Soil erosion due to disposal and stock yards 4. Dust generation 5. Unauthorised dumping 	<ol style="list-style-type: none"> 1. Rock blasted & removed (Image 5 .1.81) 2. Soil removed & cleaned the stream (Image 5.1.82) 3. Making of retaining walls by using boulders and soil poly bags (Image 5.1.83 from 5.1.87.) 4. Watering from bowser (Image 5.1.88) 5. Removed unauthorised dumping



Image 5.1.81 Rock flowing stream was blasted & removed Road no 27, 4+905 in KE 2



Image 5.1.82 Stream silted with Soil removed & cleaned Road no 36, 1+700 in KE2



Image 5.1.83 Constriction of rock wall for erosion control Road no22 0+030RHS in KE2



Image 5.1.84 Constriction of rock wall for erosion control Road no 22 0+200 RHS in KE2



Image 5.1.85 Constriction of rock wall for erosion control Road no 20,1+270LHS in KE2



Image 5.1.86 Constriction of rock wall for erosion control Road no 26 0+850RHS in KE2



Image 5.1.87 Constriction of rock wall for erosion control Road no 22+110 RHS in KE2



Image 5.1.88 Watering for dust control Road no 39 CH2+110RHS in KE2

Table no: 5.1.10 Key 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
13,14,16,19A,	<ol style="list-style-type: none"> 1. Dust Generation 2. Tree removal 3. Soil erosion 	<ol style="list-style-type: none"> 1. Sprink water to reduce dust (Image 5.1.89) 2. Covered the material transporting vehicles (with tarpaulin) to control dust emission. (Image 5.1.90) 3. Replanting Program 4. Turfing (Image 5.1.91) 5. Construction of concrete drain & earth drain (Image 5.1.92)



Image 5.1.89 Watering for dust control
Road no 13 4+450 in R1



Image 5.1.90 Covering of material
transport Vehicle for avoiding pollution
Road no14 0+400 in R1



Image 5.1.91 Turfing for erosion control
Road no 19 A 1+800 in R1



Image 5.1.92 Construction of concrete
"U" drain for erosion control Road no 16
0+150 in R1

5.1.11 Key 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
,02,08,10,10A 26, ,35,36,	<ol style="list-style-type: none"> 1. Pollution from dust 2. Soil erosion due to heavy rain 3. Unauthorised dumping 4. Soil at disposal yards 5. Contamination of soil due to construction waste 	<ol style="list-style-type: none"> 1. Dust control by watering (Image 5.1.93) 2. Covering main stock yard to control pollution from dust and noise 3. Establish a retaining wall for protect the embankment (Image 5.1.94 and 5.1.93) 4. Turfing for soil erosion control (Image 5.1.95,5.1.96,5.1.99,and5.1.100) 5. Constriction of rock wall for erosion control Image 5.1.97 and 5.1.98,5.1.101 and 5.1.102) 6. Removed unauthorised dumping 7. Removed contaminated soil 8. Constriction of protection wall (Image 5.1.103)



Image 5.1.93 Water for dust control
Road no 36 in R3



Image 5.1.94 Construction of retaining wall
for protection of embankment Road no 8
0+240 in R3



Image 5.1.95 Turfing for erosion control
Road no 26 0+270 RHS in R3



Image 5.1.96 Turfing for erosion
control Road no 26 in R3



Image 5.1.97 Construction of rock wall for erosion control Road no 1010 Ch 2+025 LHS in R3



Image 5.1.98 Construction of rock wall for erosion control Road no 10A 1+350 LHS in R3



Image 5.1.99 Turfing for erosion control Road no 8, 0+500 in R3



Image 5.1.100 Turfing for erosion control Road no 8, 0+750 in R3



Image 5.1.101 Construction of rock wall for erosion control Road no 35, 1+890 LHS in R3



Image 5.1.102 Construction of rock wall for erosion control Road no 35, 1+680 LHS in R3



Image 5.1.103 Construction of protection wall Road no 2, 6 + 150 LHS in R3

5.1.12 Key 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. 83,92 2. Main Yard	1. Soil contaminate with Bitumen (Image 5.1.114) 2. Flooding constructing road due to blockage of irrigation canal due to over grown aquatic vegetation 3. Embankment erosion	1. Remove contaminated soil.(Image 5.1.104 Image and 5.1.105) 2. Remove the aquatic vegetation from the irrigation channel and allow the smooth water flowing to avoid the flooding (Image 5.1.106) 3. Retaining wall construction (Image 5.1.107)



Image 5.1.104 Contamination of soil from bitumen at main yard in KL1



Image 5.1.105 After removing Contaminated soil from bitumen at main yard no in KL1



Image5.1.106 Removing overgrown aquatic vegetation from water bodies Road no 83 2 + 890



Image 5.1.107 construction of retaining wall Road no 92 !+850 LHS in KL1

5.1.13 Key environmental impact observed during the reporting period and mitigation taken by KL3 Package in Kalutara District

Road No	Environment Issue observed	Mitigation measure/s taken by contractor
81,82,32,17,	<ol style="list-style-type: none"> 1. Water logging due to raising of the road. 2. Erosion of few locations in sloppy embankment. 3. An old retaining wall was found near the culvert 4. Erosion was occurred throughout the road trace due to lack of suitable side drains(CH 0+960) 5. Removing some trees which were located adjacent to road by land owners according to their desire 	<ol style="list-style-type: none"> 1. Provided suitable drains (Image 5.1.108) 2. Turfing for erosion control (Image 5.1.109 and 5.1.110) 3. shifting the culvert without harming the retaining wall (Image 5.1.111) 4. Provided suitable drains for these locations 5. A awareness program was organized for site in chargers and supervisors about tree removal process



Image 5.1.108 Provided suitable drains for water logging places Road no 81 ,1+180 in KL 3



Image 5.1.109 Before Turfing of the sloppy area to prevent soil erosion Road no 82 0+503 - 0+555 LHS in KL 3



Image 5.1.110 After turfing of the sloppy area to prevent soil erosion Road no 82 0+503 - 0+555 LHS in KL 3



Image 5.1.111 Shifting the culvert to protect the retaining wall in Road no 82 0+678 in KL3

5.2 Environmental Issues observed by PIU and PIC

Environmental issues observed by PIU staff and PIC staff during their field visits. Instruction were given by PIC staff to relevant contractor staff to rectify those observed environmental issues. The ES of PIC3 had 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. Social and Environmental Development Assistant (SEDA) of PIC highly contributed for observation of environmental issues at field level and guide and assist to contractor staff for rectify those environmental issues. Summary of key environmental issues observed by PIU and PIC staff and measures taken to mitigate such issues are given in table 5.2

Table 5.2.1 Summary details of key 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	MA-2 No 22 Kandalama Rotawewa Road	<ul style="list-style-type: none"> • Soil erosion at road sites • Poor waste management • Unauthorized dumping (Image 5.2.1) • construction waste at road worksite (Image 5.2.3) 	<ul style="list-style-type: none"> • Applied erosion control measure to relevant places • Proper waste management • Removes unauthorised dumping (Image 5.2.2) • Removing construction waste from worksite (Image 5.2.4) 	PIC and PIU recommendations helped to effectively mitigate the issue	Rectification was done to a satisfactory level
	MA 2 No 23 Thiththawalgolla Rathmalgahaela road	<ul style="list-style-type: none"> • Soil erosion at road sites • Poor waste management • Unauthorized dumping (Image 5.2.5 and 5.2.7) • Lack of drainage 	<ul style="list-style-type: none"> • Applied erosion control measure to relevant places • Proper waste management • Removes unauthorised dumping (Image 5.2.6 and 5.2.8) • Improving drainage 	PIC and PIU recommendations helped to effectively mitigate the issue	Rectification was done to a satisfactory level
	MA 2 No 52 Akuramboda temple road	<ul style="list-style-type: none"> • Soil erosion at road sites • Unauthorized dumping • Siltation of eroded soil at road side paddy field (Image 5.2.9) 	<ul style="list-style-type: none"> • Applied erosion control measure to relevant places • Removes unauthorised dumping • Removing silted soil from road side paddy field (Image 5.2.10) 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level

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
	MA 3 No 36 Ellapola Kalupalama Road	<ul style="list-style-type: none"> • Soil erosion at road sites • Unauthorized dumping (Image 5.2.11 and 5.2.15) • Disposal yards were not properly restored (Image 5.2.13) 	<ul style="list-style-type: none"> • Applied erosion control measure to relevant places • Removes unauthorised dumping (Image 5.2.12 and 5.2.16) • Disposal yards were restored properly (Image 5.2.14) 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level
Kandy	KA 2 No 25 Boralu Mankada Junction – Millagahawatta Junction via Grohill Road Angammana Drate Kahawatta Road	<ul style="list-style-type: none"> • Soil erosion at road sites • Unauthorized dumping (Image 5.2.17 , 5.2.19 and 5.2.21) • Disposal yards were not properly restored 	<ul style="list-style-type: none"> • Proper waste management • Removes unauthorised dumping (Image 5.2.18 ,5.2.20 and 5.2.22) • Disposal yards were restored properly 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level
	KA3 No 39 Hatharaliyadda Rabukkana main Road to Dedunupitiya post office to Weniwella Road via Kalotuwwa	<ul style="list-style-type: none"> • Soil erosion at road sites • Unauthorized dumping (Image 5.2.23 ,and 5.2.25) • Disposal yards were not properly restored 	<ul style="list-style-type: none"> • Proper waste management • Removes unauthorised dumping (Image 5.2.24 ,and 5.2.26) • Disposal yards were restored properly 	PIC and PIU recommendations helped to effectively mitigate the issue	Rectification was done to a satisfactory level
Nuwara Eliya	NE 1 No 3 Ragala Starapet Panditha KUBura Kotambe Road	<ul style="list-style-type: none"> • Soil erosion at road sites (Image 5.2.29) • Unauthorized dumping 	<ul style="list-style-type: none"> • Growing vegetation cover for soil erosion control (Image 5.2.30) • Removes unauthorised dumping 	PIC and PIU recommendations helped to effectively mitigate the issue	Rectification was done to a satisfactory level

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
	NE 1 No 11 Hapuwela Rikillagaskada Road	<ul style="list-style-type: none"> • Soil erosion at road sites (Image 5.2.27) • Unauthorized dumping 	<ul style="list-style-type: none"> • Construction of rock wall for erosion control (Image 5.2.28) • Removes unauthorised dumping 	PIC and PIU recommendations helped to effectively mitigate the issue	Rectification was done to a satisfactory level
Kegalla	KE 1 No 5 Batakitta – Mahabage Road	<ul style="list-style-type: none"> • Over excavation • Soil erosion at road sites (Image 5.2.29, 5.2.31 and 5.2.33) • Unauthorized dumping • Disposal yards were not properly restored • Silting water bodies from excavated materials 	<ul style="list-style-type: none"> • Controlled the road way excavation as per the road designing (Image 5.2.30 and 5.2.32) • Construction of rock wall for erosion control (Image 5.2.34) • Implement suitable soil conservation measures • Removes unauthorised dumping • Disposal yards were restored properly • Desilted water bodies 	<p>TL temporally suspended construction activities unit rectify the environmental issues</p> <p>PIC monitor continuously until completion of the ratification measures</p>	Rectification was done to a satisfactory level

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
	KE 2 No 36 Etikeeriyagalla – Naberiyawa Atugoda Road	<ul style="list-style-type: none"> • Irrigation canal was blocked with excavated soil (Image 5.2.35) 	<ul style="list-style-type: none"> • Cleaned the obstructed canal (Image 5.2.36) 	PIC and PIU recommendations helped to effectively mitigate the issue	Rectification was done to a satisfactory level
	KE 2 No 21, Kihalangamuwa Batuwana Road	<ul style="list-style-type: none"> • Soil erosion at road sites • Unauthorized dumping • Disposal yards were not properly restored • Silted water bodies from excavated disposal soil 	<ul style="list-style-type: none"> • Implement suitable soil conservation measures (Image 5.2.46) • Removes unauthorised dumping • Clean the silted water bodies 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level
	KE 2 No 27, Imbulana Weddawala Gonagaldeniya Road	<ul style="list-style-type: none"> • Soil erosion at road sites • Unauthorized dumping • Disposal yards were not properly restored • Silted water bodies from excavated disposal soil (Image 5.2.43) 	<ul style="list-style-type: none"> • Implement suitable soil conservation measures • Removes unauthorised dumping • Disposal yards were restored properly • Clean the silted water bodies (Image 5.2.44) 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level
	KE3 No 55 Yalapala-Galatara –Erawwala Road	<ul style="list-style-type: none"> • Stagnation of rainwater runoff due to lack of proper drainage with eroded soil (Image 5.2.37) 	<ul style="list-style-type: none"> • improvement of drainage by construction proper drain (Image 5.2.38) 	PIC monitor continuously until completion of the ratification measures	PIC monitor continuously until completion of the ratification measures

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
	KE 3 No 52 Thalгамuwa – Attapitiya	<ul style="list-style-type: none"> • A well was polluted from rain runoff water contaminated with road side eroded soil (Image 5.2.41) • Rain water was stagnated at road side due blocking of drain path (Image 5.2.39) 	<ul style="list-style-type: none"> • Well was clean by dewatering • Concrete wall was constructed to avoid rain water following to well again (Image 5.2.42) • Drain path was cleared and improved (Image 5.2.40) 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level
Rathnapura	R2 Hunuwala Junction –Hallinna junction via Matihakwala & Polwattahena	<ul style="list-style-type: none"> • Soil erosion at disposal yard 	<ul style="list-style-type: none"> • Construction of rock wall for erosion control (Image 5.2.47) 		
	R3 No 10 Weddagala Kudawa Wewagama Road	<ul style="list-style-type: none"> • Unauthorized dumping • Disposal yards were not properly restored • Soil erosion at disposal yard (Image 5.2.53) • Silted water bodies from excavated disposal soil 	<ul style="list-style-type: none"> • Removes unauthorised dumping • Disposal yards were restored properly • Restoration of disposal yard by growing vegetation cover for erosion control and cultivated tea plants (Image 5.2.54) • Clean the silted water bodies 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level
	R 3 No 35 Nawanaliya Temple – Iththekanda Road via Hedola	<ul style="list-style-type: none"> • Pollution from dust and noise generated from main yards • Unauthorized dumping 	<ul style="list-style-type: none"> • Cover the stock yard to control noise pollution and air pollution from stock yard 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level

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
		<ul style="list-style-type: none"> Disposal yards were not properly restored (Image 5.2.49) 	<ul style="list-style-type: none"> Regular watering to control dust generation from main yards Removes unauthorised dumping Disposal yards were restored properly Proper covering main stockyard to void pollution from dust and noise (Image 5.2.50) 		
Kalutara	KL1 No 44 From Kandana to Ilimba thotupola road	<ul style="list-style-type: none"> Wash out prime in to private land (Image 5.2.63) Water stagnated due lack of proper drainage 	<ul style="list-style-type: none"> Removed contaminated prime and layered ABC (Image 5.2.64) Colour washed the house wall Improved drainage path to avoid the water stagnation at road sites 	Contract activated immediately after informed by PIC staff	Rectification was done to a satisfactory level
	KL 2 No 37 Walipanna Junction to Rameeya Junction Road	<ul style="list-style-type: none"> Unauthorized dumping (Image 5.2.55 and 5.2.57) Disposal yards were not properly restored Silted paddy field by eroded soil from road sites Drainage was block from construction waste (Image 5.2.59) 	<ul style="list-style-type: none"> Removes unauthorised dumping (Image 5.2.56 and 5.2.58) Disposal yards were properly restored Removed silted soil from paddy field Clearing drainage (Image 5.2.60) 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level

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
	KL 3 Road 81 From kadanapitiya sawgus junction to Degamthilaka Mawatha	<ul style="list-style-type: none"> Unauthorized dumping (Image 5.2.65) Disposal yards were not properly restored Silted water bodies from excavated disposal soil 	<ul style="list-style-type: none"> Removes unauthorised dumping (Image 5.2.66) Disposal yards were properly restored 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level
	Main stores KL2	<ul style="list-style-type: none"> Unclean and unorganized main stores (Image 5.2.61) 	<ul style="list-style-type: none"> Organize and clean main stores at KL2 (Image 5.2.62) 	PIC monitor continuously until completion of the ratification measures	Rectification was done to a satisfactory level



Image 5.2.1 Unauthorized dumping
Road No 22 at 4+420 in MA 02,



Image 5.2.2 after removing unauthorized dumping
Road No 22 at 4+420 in MA 02



Image 5.2.3 soil erosion and construction waste at
worksite Road No 22 at 7+276 in MA 02



Image 5.2.4 Erosion control by turffing and after removing
construction waste Road No 22 at 7+276 in MA 02



Image 5.2.5 Unauthorised dumping Road
No 23 at 6+190 in MA2



Image 5.2.6 After removing unauthorised
dumping Road No 23 at 6+190 in MA2



Image 5.2.7 Unauthorized disposals Road No 23 at 6 +330 in MA 2



Image 5.2.8 After removing unauthorized disposals and restored the place Road No 23 at 6 +330 in MA 2



Image 5.2.9, siltation of eroded soil at road side paddy field Road No 52 at 0+515 in MA 2



Image 5.2.10, After removing silted soil from road side paddy field Road No 52 at 0+515 in MA 2



Image 5.2.11 Unauthorized disposal and soil erosion Road No 36 at 0+020 in MA 3



Image 5.2.12 After removing unauthorized disposal and erosion control by turfing Road No 36 at 0+020 in MA 3



Image 5.2.13 Before proper restoration of Stock yard Road No 36 at 0+620 in MA3



Image 5.2.14 After proper restoration of Stock yard Road No 36 at 0+620 in MA3



Image 5.2.15 Unauthorised dumping Road No 25 at 375 in KA2



Image 5.2.16 After removing unauthorised dumping Road No 25 at 375 in KA2



Image 5.2.17 Unauthorised dumping Road No 25 at 375 in KA2



Image 5.2.18 Unauthorised dumping Road No 25 at 460 in KA2



Image 5.2.19 Unauthorised dumping
Road No 25 at 375 in KA2



Image 5.2.20 After removing
unauthorised dumping Road No 25 at
375 in KA2



Image 5.2.21 Unauthorised dumping
Road No 39 at 2+846 in KA3



Image 5.2.22 After removing
unauthorised dumping Road No 25 at
375 in KA2



Image 5.2.23 Unauthorised dumping
Road No 39 at 2+861 in KA3



Image 5.2.24 After removing
unauthorised dumping Road No 39 at
2+861 in KA3



Image 5.2.25 Soil erosion at road site
Road No 11 at 2+240 in NE1



Image 5.2.26 Construction of rock wall for
erosion control No 39 at 2+240 in NE1



Image 5.2.27 soil erosion at roadside
Road No 3 at 7+900 in NE1



Image 5.2.28 growing vegetative creepers for
erosion control Road No 3 at 7+900 in NE1



Image 5.2.29 soil erosion at roadside
Road No 5 at 2+140 in KE1



Image 5.2.30 growing vegetation cover
for erosion control Road No 5 at 2+140
in KE1



Image 5.2.31 soil erosion at roadside
Road No 5 at 2+240 in KE1



Image 5.2.32 Construction of toe wall
for erosion control Road No 5 at 2+240
in KE1



Image 5.2.33 Irrigation canal was blocked
with eroded soil from road sites
Road No 36 at 1+690 in KE2



Image 5.2.34 Soil erosion at roadside
Road No 36 at 1+690 in KE2



Image 5.2.35 Stagnation of rainwater runoff
due to lack of proper drainage with eroded
Road No 55 at 0+822 in KE3



Image 5.2.36 After improvement of
drainage Road No 55 at 0+822 in KE3



Image 5.2.37 Stagnation of rainwater runoff due to lack of proper drainage with eroded Road No 52 at 2+255 in KE3



Image 5.2.38 After improvement of drainage Road No 52 at 2+255 in KE3



Image 5.2.39 Well was polluted from runoff water with eroded soil Road No 52 at 2+265 in KE3



Image 5.2.40 Concrete wall was constructed to avoid runoff water following to well soil Road No 52 at 2+265 in KE3



Image 5.2.41 Soil erosion at disposal body and water bodies to be silted Road no 27 4+786 in KE2



Image 5.2.42 Constructed a rock wall for present soil erosion and siltation of water Road no 27 4+786 in KE2



Image 5.2.43 Soil erosion at disposal site and water body to be silted Road no 26 at 1+320 in KE2



Image 5.2.44 Constructed a rock wall for prevent soil erosion and siltation of water body Road no 26 1+320.in KE2



Image 5.2.45 Construction of rock wall for erosion control at disposal yards Road no 33 at 3+390 in R 2



Image 5.2.46 Construction of rock wall for erosion control at disposal yards Road no 3 at 4+900 in R 2



Image 5.2.47 High risk of soil erosion at disposal Road no 35 at 1+860 in R 3



Image 5.2.48 Construction of rock wall for erosion control at disposal yards Road no 35 at 1+860 in R 3



Image 5.2.49 Improper covering main stockyard to void pollution from dust and noise at Road no 35 in R3



Image 5.2.50 Proper covering main stockyard to void pollution from dust and noise at Road no 35 in R3



Image 5.2.51 Soil erosion at disposal yard Road no 10 at 3+ 600 in R 3



Image 5.2.52 After restoration of disposal yard by growing vegetation for erosion control and cultivated tea plants Road no 10 at 3+ 600 in R 3



Image 5.2.53 Unauthorised dumping Road no 37 at 2+140 in KL2



Image 5.2.54 After removing unauthorised dumping Road no 37 at 2+140 in KL2



Image 5.2.55 Unauthorised dumping
Road no 37 at 0+570 in KL2



Image 5.2.56 After removing unauthorised
dumping Road no 37 at 0+570 in KL2



Image 5.2.57 Drainage block with
construction waste Road no 37 at 0+770 in
KL2



Image 5.2.58 After clearing drainage Road
no 37 at 0+770 in KL2



Image 5.2.59 Unclean Main stores in KL2



Image 5.2.60 After cleaning main stores in KL2



Image 5.2.61 Private property (House and land) was polluted with prime which as wash out with heavy rain at Road 44 in KL1



Image 5.2.62 After cleaning by laying ABC and colour washing at Road 44 in KL1



Image 5.2.63 Unauthorised dumping at Road no 81 in KL3



Image 5.2.64 after removing unauthorised dumping at Road no 81 in KL3

Daily cleaning and improving aesthetic environmental of the completed road by community members voluntarily

During the field inspection conducted by PIC, PIU staff and CDS/SG Specialist consultant, it has been observed that some community members who lived closed to the road sides clean the road surface by sweeping and improve aesthetic environment of the road side closed to them by planting flowering and ornamental plants. Some communities also do clearing of roadside drains. They do these all works voluntarily.

People say that rehabilitation and improvement of their road is a dream, which become a reality. They have faced many difficulties before rehabilitation and improvement the road in their mobility. Cleaning roadside is one of the daily item of their life. These communities always gratefully thank



Cleaning and planting flowering plants at road side by community member voluntarily at Road no 46 3+325 in NE 3



Cleaning road site by community member voluntarily at Road no 48 0+510 in NE 3



Before rehabilitation and improvement Road no 7 0+350RHS



After rehabilitation and improvement and Cleaning and planting flowering plants at road side by community member voluntarily at Road no 7 0+650RHS



Before rehabilitation and improvement Road no 7 0+650RHS



After rehabilitation and improvement and Cleaning and planting flowering plants at road side by community member voluntarily at Road no 7 0+650RHS

5.3 Workshops and training programs conducted by PIC

As per the observation made during the field inspections by PIC staff for monitoring environmental safeguards compliances and request made by the contractor staff, one workshop and several training programs were conducted to create awareness and improve the capacity of the contractor staff on compliance during the reporting period. Following are the details of workshop and training programs conducted during the reporting period.

5.3.1 Workshop on educating on approval process of borrow materials

Contractors staff continuously informed that they were bearing faced many difficulties while obtain approval for borrow materials sites from relevant authorities and this matter already discussed at national level monthly project coordinating meetings. Therefore, PIC 03 jointly with PIU conducted workshop on education on approval process of borrow materials with participation of relevant stakeholders on 1st July 2017 in Kandy for 6 district of PIC 03 (Image 5.3.1 and 5.3.2)

Objectives of this workshop was to make the representative of the Client, the Consultant and the contractors in PIC03 of iRoad project aware of the approval process to be followed on excavation, transportation and storage of borrow materials and to share the experiences from the project participants on obtaining licences and approvals for borrow materials.

Resource persons invited from the following government organizations,

- District Secretary -Kandy district,
- Regional Manager (Central Province), - Geological Survey and Mines Bureau,
- Provincial Director (Central Province) Central Environmental Authority,
- District officer (Kandy District)- National Building Research Organization,
- Research Instructor (Kandy) Archaeological Department
- Head Quarter Inspector (Kandy) Sri Lanka Police

Participants of this workshop were Client: Project Director (Central Province) Project Engineers, Environmental Safeguard Officers, Social Safeguards Officers, Environmental Safeguard Assistants, Social Safeguards Assistants, Consultant: Team Leader, Environmental Specialist, Social/Gender/Resettlement Specialist, Residential Engineers, Social and Environmental Assistants and Contractor: Project Manager and Environmental and Social Assistants.



Image 5.3.1 and 5.3.2 Workshop on educating on approval process of Barrow materials – Kandy

Main outcome of the workshop were participants were educated on approval process of borrow materials, shared the experiences on obtaining approval for borrow materials among the participants and developed the relationships between relevant agencies related to borrow material approvals and project partners

5.3.2 Training programs on environmental safeguard compliances

As per the training needs identified by PIC based on field inspection for monitoring environmental safeguards compliances and request made by contractor's staff several training programs were conducted by PIC. Objectives of these training programs were improving the knowledge and capacity of the contractor's staff on environmental safeguards compliances during the reporting period. Details of training programs conducted by PIC to improve the knowledge and capacity of the contractor's staff on project environmental safeguards compliances are given table 5.3.1

5.3.1 Details of training programs conducted by PIC to improve knowledge and capacity of the contractor's staff on environmental safeguards compliances

Date	Place	Resource person	Participants	Content of the training program
22 February	Horana (Image 5.3.3 and 5.3.4)	<ul style="list-style-type: none"> Environmental Specialist -PIC Social /Gender/Resettlement/specialist – PIC Social Safeguards officer-PIU 	<ul style="list-style-type: none"> Social Safeguards Assistants – PIU Social and Environmental Development Assistants- PIC Environmental and Social Officer –Contractors Safety Officer-Contractor Site engineer – Contactor Technical officer – Contractor Site supervisor- Contractor 	<ul style="list-style-type: none"> ADB safeguards compliances Sri Lankan Environmental Act requirement Approval process of borrow materials, dumping yards and stock yards License and permit requirements Site safety requirements
29 August	KL3 CE office	<ul style="list-style-type: none"> Environmental Specialist -PIC Social /Gender/Resettlement/specialist – PIC Social Safeguards officer-PIU 	<ul style="list-style-type: none"> Social Safeguards Assistants – PIU Social and Environmental Development Assistants- PIC Environmental and Social Officer –KL3 Contractors Safety officer-KL3 Contractor Site engineer – KL3 Contactor Technical officer – 	<ul style="list-style-type: none"> ADB safeguards compliances Sri Lankan Environmental Act requirement Approval process of borrow materials, dumping yards and stock yards License and permit requirements Site safety requirements

			Contractor Site supervisor-Contractor	
22 November	RE office Kalutara (Image 5.3.5 and 5.3.6)	<ul style="list-style-type: none"> • Environmental Specialist -PIC • Social /Gender/Resettle ment/specialist – PIC • Environmental Safeguards officer-PIU 	<ul style="list-style-type: none"> • Site Engineers-PIU • Social Safeguards Assistants – PIU • Residential Engineer-PIC • Assistant Residential Engineer-PIC • Construction Engineers - PIC • Social and Environmental Development Assistants- PIC • Environmental and Social Officer –Contractors • Safety Officer-Contractor • Site engineer – Contactor • Technical officers – Contractor • Site supervisors- Contractor 	<ul style="list-style-type: none"> • Tree removal process of the project • Social and environmental compliances
21 December	KL3 CE office	<ul style="list-style-type: none"> • Environmental Specialist -PIC • Social /Gender/Resettle ment/specialist – PIC • Environmental Safeguards officer-PIU 	<ul style="list-style-type: none"> • Project Engineer –PIU • Social Safeguards Assistants – PIU • Construction Engineer- PIC • Social and Environmental Development Assistants- PIC • Environmental and Social Officer Contractors–KL3 • Safety officer -Contractor- KL3 • Site engineers – KL3 Contactor -KL3 • Technical officers – Contractor -KL3 • Site supervisors- Contractor -KL3 	<ul style="list-style-type: none"> • ADB safeguards compliances • Sri Lankan Environmental Act requirement • Approval process of borrow materials, dumping yards • and stock yards • License and permit requirements • Site safety requirements



Image 5.3.3 and 5.3.4 Conducting awareness programme on tree removal processes of the project by PIC at Kalutara RE office



Image 5.3.5 and 5.3.6 Conducting awareness programme on tree removal processes of the project by PIC at Kalutara RE office

5.4 Tree removing and tree planting program

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

- After 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 sent to RE with copy to the PD/PE by the contractor.
- Joint inspection conducted with representative of PIU, PIC and contractor representing environmental safeguards officers and finalized the list.
- This finalized list will be presented at monthly progress reviewed meeting. After finalizing list it will be send to relevant Divisional Secretary(DS)
- DS will clarify the information from relevant “Grama Niladhari” and after that, approval will be granted
- Removed trees belong to government land are handed over to State Timber Corporation and trees belong to private lands are handed over to the owner through relevant Grama Nila dari

No tree has been removed from contract NE02. However, some trees were identified to be remove at environmental check list of some roads in NE2 package. Trees identified to be removed for road construction in Contract NE2 were saved by using CSD. identified tree planting program is being implemented now in all contract packages in PIC 03 except contract package KL3. Some contractors planted more number of trees than the requirement (as a CSR programs). Most of the tree planting programs are being implemented by some contract packages with collaboration of government institutes such as Divisional Secretarial offices, Agrarian Service Department. Agriculture department, Export Crops department. Most tree planting programs conducted in Kandy District were done with collaboration of Department of Education, schools village level community organizations and temples. Priority was given to fruit, spices and medicinal trees when select the tree species List of tree species suitable to different climatic zones of the contract packages are given to each and every package by PIC. Table 5.4.1 shows the summery of the tree removal and tree planning during the reporting in different contracts during the reporting period. Details of tree planting indifferent contracts are given in annex 5

No tree removal in NE2

During the process of data collection through transect walk in very beginning of this project, it has been identified remove some trees that very close to the road edge of several roads in NE2 contract package.

However, by discussing with site engineers, design engineers and other relevant parties maximum effort was taken to avoid to removing trees using Context Sensitive Designing

Hence, no tree removal in the NE2 package. However 50 trees were planted by NE 2 contract package for, enhance the environment

Reported by

Mr N.M.J.Nisssnake, Social and Environmental Officer, NE2 Package



Saved trees in the road No 26-
Kandapola -Heathrest



Saved trees in the road No
24-Rahanwatta-Maussella

Table 5.4.1 The summary details of the tree removal and tree planning during the reporting period and balance trees to be remove as initial design (Central, Sabaragamuwa Provinces & Kalutara District of Western Province)

Province	District	Package	Contractor	Total Trees to be Removed as Initial Road Design	Total Trees Removed up to 31.12 2017	Balance Trees to be Removed as Initial Road Design	Total Trees to be Planted for Tree removed up to 31 .12 .2017	Total Trees Planted as at 31 st Dec.2017
Central	Kandy	KA1	Sierra Construction (Pvt) Ltd	54	23	31	69	110
		KA2	Sierra Construction (Pvt) Ltd	166	62	104	186	177
		KA3	Edward and Christie	551	205	346	615	370
		Total for Kandy District		771	290	481	870	657
	Matale	MA1	K D Ebert and Sons Holdings (Pvt) Ltd	34	23	11	69	109
		MA2	Edward and Christie	47	10	37	30	46
		MA3	CML-MTD Construction	100	100	0	300	586
		Total for Matale District		181	133	48	399	741
	Nuwara Eliya	NE1	Sierra Construction (Pvt) Ltd	63	06	63	18	60
		NE2	Sierra Construction (Pvt) Ltd	27	0	0	0	50
		NE3	Sierra Construction (Pvt) Ltd	43	18	25	54	300
		Total for Nuwaraeliya District		133	24	88	72	410
Sabaragamuwa	Ratnapura	R1	K D Ebert and Sons Holdings (Pvt) Ltd	330	137	193	411	160
		R2	K D Ebert and Sons Holdings (Pvt) Ltd	226	31	195	93	212
		R3	RR Construction	863	400	463	1200	1170
		Total for Ratnapura District		1419	568	851	1704	1542
	Kegalle	KE1	K D Ebert and Sons Holdings (Pvt) Ltd	1246	175	1246	525	922
		KE2	Nawaloka Construction	1499	348	1499	1044	893
		KE3	Nawaloka Construction	109	23	109	69	60
		Total for Kegalle District		2854	546	2854	1638	1875
Western	Kalutara	KL1	Maga Construction (PVT) Ltd	142	70	72	210	60
		KL2	Olympus Construction (PVT) Ltd	17	10	7	30	12
		KL3	Olympus Construction (PVT) Ltd	70	23	47	69	-
		Total for Kalutara District		229	103	126	309	72
Grand Total				5587	1664	3896	4992	5297

Tree planting with school children by KA3

Trees to be planted by KA3 were done school children in Kandy District with Zonal Education Offices of the area and tree planting was done at school lands. three hundred and twenty-seven trees were planted in ten schools within the reporting period. Environmental educational programs were conducted in each and every tree planting program conducted in schools. Environmental society was formed among school children to maintain the planted trees and each and every planted trees were given to group of school children to maintain planted trees

Map of the tree planted land of school was prepared with marking the planted trees.

Each planted tree was label with name of the species

Continues requests are being made by Zonal Education Offices for tree planting programs even after planting required amount of trees as per the contract agreement.

Some of requests were forwarded to KA1 and KA2 contract packages

Reported by

Mr R.M.M.D.Bandara, Social and Environmental Officer, KA3 Package



Tree planting program at Puspadana Girls school at Kandy by KA3

5.5 Monitoring maintaining planted trees

Maintaining planted trees is important to archived the real benefits. Therefore, different strategies are used to maintain the planted trees depending on the method of the tree planting programs conducted. Workers of the contractors, community members and school students who involved in tree planting program. Agreement was signed with contractors and community members to maintain the planted tree where community members participated. Three level of maps were prepared as follow to identify the places planted trees

- 1 Map shows tree planted places of relevant contract package
- 2 Map shows different locations of tree planted places in one planting area
- 3 Maps shows location of the planted trees

Contractors are submitting tree planting programs reports in stages wise to the PIC. A sample progress report of tree planting program is attached as annex 6. Monitoring marinating plated trees is being done by contractors, PIU, PIC as well as representative of the government institutes which were involved in tree planting programs.



Image 5.5.1. Nine months maintained tree at MA3



Image 5.5.2. Nine months maintained tree at MA3



Image 5.5.3. Four months maintained tree at Road no 47 at KE 3



Image 5.5.4. Eight months maintained tree at Road no 47 tree at KE3



Image 5.5.5 Tree planting at MA2



Image 5.5.6 After month six maintaining same tree (at Image 5, 5,5) on at MA2



Image 5.5.7 Tree planting at MA2



Image 5.5.8 After six months maintaining same tree (at Image 5, 5, 7) at MA2



Image 5.5.9 Four month maintained tree at KA3



Image 5.5.10 Four month maintained tree at KA3



Image 5.5.11 Tree planting Road no 31 at KE3



Image 5.5.12 Eight month maintained same (Image 5.5.11) tree Road no 31 at KE3



Image 5.5.13 One year maintained tree at Road no 22 in KE2



Image 5.5.14 One year maintained tree at Road no 22 in KE2



Image 5.5.15 One year maintained tree at Road no 22 in KE2



Image 5.5.16 One year maintained tree at Road no 22 in KE2

6 PUBLIC CONSULTATIONS AND INFORMATION DISSEMINATION

Awareness meetings were conducted on all roads where improvement and rehabilitation to be done together with GRC formation meeting with participation of PIU, PIC and contractors staff before any physical works started. Information of contraction activities, social and environmental safeguards requirements of the project, GRM process and community participation in projects activities are explained at these meetings. There were interactive meeting where public also actively participated.

In addition to the awareness meetings conducted. Public information notices developed in local languages are being displayed at common places in the project area. The main purpose of this 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.

Details of the, 05 contact persons who are designated to submit complaint within PIU & PIC are also included in the notice as .

PIC	PIU
<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

Complaint/Suggestion and Request Boxes at the work sites are identified as one of the effective methods to share views of public in Design Stage and Construction stage.

These boxes are installed at Contractor's site Offices, Grama Niladhari Offices of the road and public places of the construction sites. PIC has introduced a common format for the Complaints/Suggestions and Request boxes and this is to have a uniformity among all boxes six districts of the PIC (03).

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 the contracts 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 schoolchildren and community members. Summary of key programs and activities conducted by the contractors are included in Table 7.1 Details of key programs, activities conducted by the contractors are given annex 7, and details of training – awareness program conducted by the contractors are given annex 8

Table 7.1. Summary of key programs and activities conducted by different contractors for enhance environment**Table 7.1.1 Summary of key programs and activities conducted by MA2 contractor in Matale District**

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
	<ol style="list-style-type: none"> 1. World Environmental day –school programme. (awareness programme & field trip) 2. Environmental Education programme for Athuraliya AGA Division school student's on 21.07.2017. 3. Contributed Biodiversity survey at Proposed Environmental Sensitive Area, Mathale - Atipola Mountain Range. 4. World children's day Education program for students (Prisara niyamu) (Image 7.1and 7.2) 	<ol style="list-style-type: none"> 1. Company Resource person service Provided. 2. Transport, Accommodation, Food and lecture's Provide by company 3. Company Flora & fauna expert service Provided. 	<ol style="list-style-type: none"> 1. Encourage to Protect Sri Lankan biodiversity 2. Involve to Protect Propose Environmental Sensitive Area in Mathala



Image 7.1 World Environmental Day Education program at Minipe AGA office auditorium conducted by MA2



Image 7.2 World Environmental Day Education program at Minipe AGA office auditorium conducted by MA2

Table 7.1.2 Summary of key programs and activities conducted by NE 01 contractor in Nuwara Eliya District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. 7	1. Supported and joined to the solid waste management program that conducted by sirimawo bandaranayaka girls college haguranketha (Image 7.3)	1. Provided Vehicles, Refreshments and financial support.	1. In this event, solid waste in either side of the road along the haguranketha to randenigala (through kandehaniya and adhikariegama) collected by 12 groups local authority, Divisional Secretariat office Haguranketha and walapne, police, RDA, Mahaweli authority.



Image 7.3 Supported and joined to the solid waste management program that conducted by sirimawo bandaranayaka girls' college haguranketha by NE1

Table 7.1.3 Summary of key programs and activities conducted by NE 2 contractor in Nuwara Eliya District

Road No	Description of the work done	Type of contribution done by company	Benefits to the environmental
1. 24,18,29 2. Public ground /office premises 3. Gamini vidyalaya	1. Action taken to noise level control in blasting activities 2. Flower planting along the side of the road (Image 7.4 and 7.5) 3. Implemented solid waste management during social events/offices (Image 7.6 and 7.7)	1. Carried out chemical blasting 2. Flower plant planting and maintaining 3. Preparation of low cost solid waste separation bins and placed	1. Control the noise pollution by control blasting 2. Enhance the aesthetic value of the road 3. Control environmental pollution



Image 7.4 Flower planting side of the road, Road no 18 in NE 2



Image 7.5 Flower planting side of the road, Road no 29 in NE 2



Image 7.6 Supply facility for solid waste separation at the function in public event - Ground Radella by NE 2



Image 7.7 Supply facility for solid waste separation at the function in public event - Ground Radella by NE 2

Table 7.1.4 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. Office staff 2. Senarathwela School (School Environmental Pioneer Group)	1. Aware the Biodiversity and snakes identify, snake bite and first aids (Image 7.8,7.9 ,7.10 and 7.11) 2. Aware the school children about the environment (Image 7.12 and 7.13)	1. Youth Explores Club, Peradeniya 2. Environmental Officer	1. 25 2. 15	1. 10 2. 20	Facilitate and conduct the program



Image 7.8 Aware the Biodiversity and snakes identify, snake bite and first aids by KA1



Image 7.9 Aware the Biodiversity and snakes identify, snake bite and first aids by KA1



Image 7.10 Aware the Biodiversity and snakes identify, snake bite and first aids by KA1



Image 7.11 Aware the Biodiversity and snakes identify, snake bite and first aids by KA1



Image 7.12 ware the school children on the environment by KA1



Image 7.13 Aware the school children on the environment by KA1

Table 7.1.5 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
1. 13	<ol style="list-style-type: none"> 1. Conducting awareness programme on environmental management & safety during the road construction. (For University students) (Image 7.14) 2. Conducted awareness programme for World Environmental Day Theme – Connecting People with nature.(Image 7.15) 	Dr.Nayana Danapala Dr.Sarath Dahanayaka Dr.Kumudu Bandara



Image 7.14 Conducted awareness programme on environmental management & safety during the road construction. (For University students) by KA2



Image 7.15 Conducted awareness programme for World Environmental Day by KA2



Image 7.16 HIV/AIDS Prevention & Health Awareness Programme. (Session 2) in KA2

Table 7.1.6 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 – Mountain Biodiversity of Sri Lanka - Mahamaya Girls college, Kandy (Image 7.17)	1. Mr.R.M.M.D.Bandara 2. Mr.Pradeep Samarawickrama	1. –	1. 35	1. lectures Conducted
	2. Biodiversity Awareness Program for School Children at Viharamahadevi Girls' College, Kandy - 2017.05.07 at Gannoruwa Forest Reserve (Image 7.18 and 7.19)		2. –	2. 50	
	3. Biodiversity awareness Programme at Pushpadana Girls' College, Kandy - 2017.06.07 (Image 7.20,7.21 and 7.22)		3. –	3. 150	
	4. Health Awareness Program at Delthota Muslim School, Delthota – 2017.07.29 (Image7. 23,7,24 and 7.25)		4. 25	4. 125	
	5. Biodiversity Awareness Workshop for “Parisara Niyamu” Students at Ranabima Royal College, Gannoruwa - 2017.08.04 -2017.08.07 at Sinharaja Forest Reserve (Image 7.26,7.27 and 7.28)		5. –	5. –	
	6. Biodiversity Awareness Program for Students at Viharamahadevi Girls' College, Kandy - 2017.08.16 at Hanthana Mountain Range (Image 7.29,7.30 and 7.31)		6. –	6. 40	
	7. Book Donation Program conducted on Children's Day at Hanthana - 2017.10.01 (Image 7.32,and 7.33)		7. 25	7. 11	
	8. Awareness on ISO standards changes at Wadakada Project Office		8. 23	8. 35	
	9. Awareness on ISO standards changes - Project office(Image 7.34)		9. 12	9. 1	
			10. 15	10. 6	



Image 7.17 Awareness program for School Children – Mountain Biodiversity of Sri Lanka - Mahamaya Girls College, Kandy by KA3



Image 7.18 Biodiversity Awareness Program for School Children at Viharamahadevi Girls' College, Kandy by KA3



Image 7.19 Biodiversity Awareness Program for School Children at Viharamahadevi Girls' College, Kandy by KA3



Image 7.20 Biodiversity awareness Programme at Pushpadana Girls' College, Kandy by KA3



Image 7.21 Biodiversity awareness Programme at Pushpadana Girls' College, Kandy by KA3



Image 7.22 Biodiversity awareness Programme at Pushpadana Girls' College, Kandy by KA3



Image7.23 Health Awareness Program at Delthota Muslim School, Delthota by KA 3



Image7. 24 Health Awareness Program at Delthota Muslim School, Delthota by KA 3



Image7.25 Health Awareness Program at Delthota Muslim School, Delthota by KA 3



Image 7.26 Biodiversity Awareness Workshop for "Parisara Niyamu" Students at Ranabima Royal College, Gannoruwa at Sinharaja Forest Reserve by KA3



Image 7.27 Biodiversity Awareness Workshop for "Parisara Niyamu" Students at Ranabima Royal College, Gannoruwa at Sinharaja Forest Reserve by KA3



Image 7.28 Biodiversity Awareness Workshop for "Parisara Niyamu" Students at Ranabima Royal College, Gannoruwa at Sinharaja Forest Reserve by KA3



Image 7.29 Biodiversity Awareness Program for Students at Viharamahadevi Girls' College, Kandy - Hanthana Mountain Range by KA3



Image 7.30 Biodiversity Awareness Program for Students at Viharamahadevi Girls' College, Kandy - Hanthana Mountain Range by KA3



Image 7.31 Training on Internal Audit at Project Office Haloluwa in KA3



Image 7.32 Book Donation Program conducted on Children's Day at Hanthana by KA3



Image 7.33 Book Donation Program conducted on Children's Day at Hanthana by KA3



Image 7.34 Awareness on ISO standards changes at Wadakada Project Office in KA3

Table 7.1.7 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
			Male	Female	
1. 23	1. Bio-diversity conservation in Sri Lanka. (awareness programme)	1. Environmental Officer- E&C Pvt.Ltd.	1. 25	1. 22	1. Rs. 5000
2. Dambulla			2. 24	2. 23	2. Rs. 15 000
3. Athuraliya			3. 174	3. 187	3. Rs. 35 000
4. Matale	2. World Environmental day – school programme. (awareness programme & field trip) (Image 7.35)		4. 14	4. 23	4. Rs. 5000
	3. Environmental Education programme for Athuraliya AGA Division school student's on 21.07.2017. (Image 7.36and 7.37)				
	4. Contributed Biodiversity survey at Proposed Environmental Sensitive Area, Mathale - Atipola Mountain Range.				
	5. World children's day Education program for students (Prisara niyamu) (Image 7.38)				



Image 7.35 Training programme conducted at Welihena Maha Vidyalaya – Athuraliya by MA 2



Image 7.36 Environmental Education programme for Athuraliya AGA Division school students by MA 2



Image 7.37 Environmental Education programme for Athuraliya AGA Division school students by MA 2



Image 7.38 World children's day Education program by MA 2

Table 7.1.8 Environmental training /awareness programs conducted during the reporting period by MA 3 contractor in Matale District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 27,42,40,41,39	1. World Environment Day (Image 7.39 and 7.40)	1. Environment officer of Naula Pradeshiya Sabha	1. 363	398	1 CML-MTD Construction



Image 7.39 World Environment Day by MA3 by MA 3



Image 7.40 World Environment Day by MA3 by MA 3

Table 7.1.9 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. Delivered a Lecture to A/L teacher about conducting A/L projects about Environment	1. Lecturer/Author; N.M.J. Nissanka –Environmental Specialist, BSc (Geology), PG Dip in Environmental Studies, MPhil (Chemical Science), PhD -in progress	12	26	1. Provided Stationeries, Refreshments

Table 7.1.10 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. Gamini vidyalaya	1. Conducted a solid waste management program (Image 7.42)	1. Senior Officers of Contractor	1. 120	1. 10	1. Organised the program
2. Pre-school	2. Compiled a leaflet on global warming and distributed (Image 7.43)	/Consultant	2. 155	2. 15	2. Donated environmental guide books
3. UC Area		2. Environmental officer	3. 15	3. 18	3. Supply meals and refreshment
4. Over the package	3. Convey the message to protect the environment and road	3. PE,RE,CE and EO	4. 30	4. 20	4. Printing and distribution
5. In the handed over roads	4. Donation environmental guide book and lectured at UC pre -school, Nuwara Eliya (Image 7.41)				5. Organising the program



Image 7. 41 Donation environmental guide book and lectured at UC pre -school, Nuwara Eliya by NE 2



Image 7.42 Conducted a solid waste management program with Department of forest by NE2



Image 7.43 Distributed a leaflet on “Global Warming” by NE2

Table 7.1.11 Environmental training /awareness programs conducted during the reporting period by KE 1 contractor in Kegalle District

Road No	Description of training programs (including topics of the program)	Resource persons	Participants		Contribution by company
			Male	Female	
1. 10 2. 16	1. Conducted a lecture on 'Environmental Protection and Waste Management (Image 7.44,7,45,and 7.46)	1 ESO of RDA, EO of Contractor	1. 200	1. 140	



Image 7.44 Conducting a lecture on 'Environmental Protection and Waste Management by KE1



Image 7.45 Conducting a lecture on 'Environmental Protection and Waste Management by KE1



Image 7.46 Conducting a lecture on 'Environmental Protection and Waste Management by KE1

Table 7.1.12 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 company	by
			Male	Female		
1. 20	1. Awareness Programme on Importance of water and solid waste management (Image 7.47and 7.48)	1. Environmental officer and teachers	1. 65	2. 29	1. Refreshment	



Image 7.47 Conducting awareness Programme on Importance of water and solid waste management by KE 2



Image 7.48 Conducting awareness Programme on Importance of water and solid waste management by KE 2

Table 7.1.13 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. 10 2. 4 3. 26	1. Environmental Awareness Notice (Three Language) Board in Sinharaja Rain Forest (Image 7.50) 2. Environmental training at Main yard Thunthota (Image 7.49) 3. Field training on environmental for schoolchildren (Image 7.49) 4. Field training on environmental for schoolchildren at Sinharaja forest (Image 7.53)	1. Environmental health & safety Manager of the Company 2. Environmental and Safety Officers and Supervisors	1. 20 2. – 3. 60	1. 5 2. – 3. 30	1. RR workers and staff 2. Environmental and safety manager and resource persons hired by the Company



Image 7.49 Environmental training at Main yard Thunthota Pallebedda in R3



Image 7.50 Environmental Awareness Notice (Three Language) Board in Sinharaja Rain Forest at Road no 10 in R3



Image 7.51 Awareness Program on Community Diseases for the community by R3



Image 7.52 Conducting Environmental and safety awareness programme for company staff in R3



Image 7.53 Field training on environmental for schoolchildren Sinharaja forest by R3

7.2 Video films on completed roads in PIC03

One of the best evidence for implementation of environmental compliance of the project is by preparing video presentation with a comparison of video presentation before the construction. Accordingly, seven video presentations 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 within previous reporting period. ADB mission requested to prepare the video presentation for all completed roads. Hence 19 new video films were prepared on reporting period 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 within this reporting. Total number of video films prepared on completed roads is 26 up to now and out of which fourteen video presentations were already handed over to ADB through senior Project Director. Details of videos presentation, which were prepared within reporting period given table

7.2.1

Table 7.2.1 Videos presentation, which were prepared within reporting period

District	Package	Road name	Road No
Matale	MA2	Galapaula-Damunugalla	50
		Damunumulla Yatigalpotta	55
		Damubulu oya Junction Kakundewa	18
		Thiththawalgolla Rathmalgaha	23
		Palwehara, Randeniya, Bulagala	25
	MA3	Kannangamuwa School Parawatta	38
		Gedige Junction Labudeniya via Hapugasyaya Tamil Village	4
		Bobella Bibilla	27
NuwaraEliya	NE1	Adikarigama Ambewella – Merimount	7
NuwaraEliya	NE2	Adikarigama Ambewella Merimount	7
Kandy	KA2	Pamunuwa Dellwalla Mugatipayola	29
		Pamunuwa Junction Elugoda	30

District	Package	Road name	Road No
	KA3	Nawalapitiya Udakanda Bus Stand via Veraluhashinna Weligodawatta	18
		Gurudeniya Bambewela Bus Stand Road	7
		Delthota town Ganadagama Road	10
		Poththapitiya Welligodapola main Road to Patapola post office via Alagalla primary school Road	37
		Bollawella Pahala Higulwala via Miliyedda Road	49
<u>Rathnapura</u>	R3	Kahawatta Godakawela Road via Opatha & Makadura (Eliagewatta Junction onwards)	01
		Thapaswara Kanda Junction – Wiskamgoda Road via Keerupatha Bridge	08

8 CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

- 1 This report is the Annual Report for the Environmental Safeguard Monitoring from January to December 2017 in Central Sabaragamuwa Province Kalutara District of Western Province – PIC03
- 2 The report deliberates measures taken by the project team for compliance with Environmental Safeguards requirement as per the loan documents and other relevant documents related to environmental safeguards such as Loan agreement, FAM, EARF, IEE and Environmental checklist.
- 3 PIC03 comprise of six districts where all types of agro ecological zones in Sri Lanka are included Central High Land of Sri Lanka where high steep areas and high rain fall areas (except MA2 and part of R3)

- 4 Environmental and Safeguards officers (ESO) of contractors and Social and Environmental Development Assistants (SEDA) of consultant are being changed regularly creating many difficulties in maintain compliance with Environmental Safeguards requirement of the project due to complexity of the project. Twenty-Six Environmental and Safeguards officers (ESO) in contractors and six Environmental Development Assistants (SEDA) in consultant were changed up to now
- 5 There is no construction works happen in five contract packages of PIC 3 in last six months creating many environmental issues such as pollution from dust, soil erosion, siltation of water bodies and lack of road safety where road construction work was abandoned
- 6 However, compliance of environmental safeguard requirements of the project is higher satisfactory level due to commitment of staff, Site Engineers(SE), and Environmental and Social Officers(ESO) and the guides and advice given by consultant staff.
- 7 During this reporting period guidance and assistance are given by the ESDD of RDA and ADB CSD/SG specialist consultant highly to improve the project environmental safeguard compliances
- 8 Environmental Team (ESO and ESA) attached to PIU worked with cooperation with PIC and contractor's staff for the implementation of safeguards requirements of the project.
- 9 Attitudes and commitments of engineering field staff highly affected on implementation of safeguards requirements of the project successfully.

The next reporting period is from January to December 2018 where it is forecasted that substantial amount of civil works contract to end they will commence maintain process

8.2 Recommendation

Following recommendations are proposed to improve the environment safeguard component of the iRoad program.

- a) Area for PIC to be limited to one province in future implementing iRoad projects
- b) Improve the level of monitoring further by providing separate officers with facilities for environmental and social safeguards district wise for consultant staff
- c) Separate Safeguards Officers to be appointed for Social and Environmental Safeguards for Contractor for each package
- d) Conduct more workshops/training experiences sharing sessions among staff of contractor, PIU and PIC on environment safeguards activities
- e) Need occasional site visits of ADB safeguard coordinating consultant to assist compliance environmental safeguard monitoring independently.