

## Involuntary Resettlement Due Diligence Report

Project Number: 47273-004 /005 /006 Loan Numbers: Tranche 2 – 3221 /3222 Tranche 3 – 3325 /3326 Tranche 4 – 3610

April 2020

## SRI: Integrated Road Investment Program Improvement, Rehabilitation and Maintenance of Nittambuwa (39.710km) - Kadugannawa (100.000km) section of Colombo – Kandy (A001) Highway

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

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Asian Development Bank



Ministry of Roads and Highways Road Development Authority



## **SRI: Integrated Road Investment Program**

## **Road Maintenance Contract**

Improvement, Rehabilitation and Maintenance of Nittambuwa (39.710km) -Kadugannawa (100.000km) section of Colombo – Kandy (A001) Highway

## Involuntary Resettlement Due Diligence & Socioeconomic Assessment Report

**Final Report** 

April 2020

Submitted by Road Development Authority Ministry of Roads and Highways

> Submitted to Asian Development Bank

#### ABBREVIATIONS

ADB	Asian Development Bank
DS	Divisional Secretary
ESDD	Environmental and Social Development Division
FGD	Focus Group Discussions
GoSL	Government of Sri Lanka
GIS	Global Information System
GN	Grama Niladari
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HH	Household
iRoad	Integrated Road Investment Program
IR	Involuntary Resettlement
LHS	Left Hand Side
MFF	Multi Tranche Financing Facility
MOR&H	Ministry of Roads & Highways
RDA	Road Development Authority
RF	Resettlement Framework
RHS	Right Hand Side
RMC	Road Management Contracts
ROW	Right of Way
SAPE	Preliminary Engineering and Survey

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#### 1. INTRODUCTION

#### A. Background

1. Sri Lanka being an island in the Indian Ocean has shown a positive economic growth in the recent years. Although there is an upward trend in urbanization and improving of living standards about 85% of the country's population still live in peri-urban and rural areas. And out of this population it has been estimated that around 85% is considered as poor. Poverty is mostly concentrated in areas where connectivity to towns and markets, access to electricity, access to health, education and administrative facilities are relatively low.

2. The roads are the main land based transportation mode in Sri Lanka. The current road network of the country comprises of 169.8 km of expressways (in operation), 4215 km of "A class" roads and 7994.7 km of "B class" roads (source: Annual Report of RDA 2015). The length of the provincial roads maintained by provincial councils was approximately 16,000 km. Although the Sri Lanka's road density is comparatively high in relation to the other countries in the region, it needs uplifting to serve the emerging demand. Thus, development of rural roads and continuous maintenance in national roads is necessary to maintain a good network.

3. Taking initiative in this regard, Road Development Authority (RDA) under Ministry of Roads and Highways (MOR&H) introduced an investment program where an efficient road transport will be established between rural communities and socio-economic centers. During the initial studies for the program it was agreed that around 1,000 rural communities would be connected to socio-economic centers. The program includes rehabilitation and upgrading of both rural and national roads. The program is implementing under a Multi Tranche Financing Facility (MFF) obtained from Asian Development Bank (ADB). The program is officially termed as "Integrated Road Investment Program" or simply *iRoad Program*. The investment program will deliver two outputs: (i) improved road conditions between rural communities and socioeconomic centers, and (ii) enhanced capacity of RDA in inclusive road operation and development.

4. The iRoad program is currently implementing in rural roads in Southern, Central, Sabargamuwa, North Central, North Western Provinces and Kalutara District in Western Province. Preliminary Engineering and Survey (SAPE) works for selected roads (rural and national) in Northern, Eastern, Uva and Western Provinces (including more roads in Kalutara District) have been completed to be rehabilitated and improved under second iRoad program. Of this, improvements work of Northern, Eastern and Uva provinces have been commenced.

5. Under the ongoing iRoad program, five (5) national roads/road links have been selected for rehabilitation and improvements. Total length of these road sections will be 292.210km. The roads and road links are listed in table 1.1 below with the respective lengths proposed for rehabilitation and improvements.

No.	Road/road link	Road Section	Length of the Road Section (km)
01	Colombo – Kandy (A001) Road	Nittambuwa to Kadugannawa (39+710 to 100+00km)	60.290
02	Pelmadulla – Embilipitiya – Nonagama (A018) road	Pelmadulla to Padalangala section	66.000
03	Maradankadawela – Habarana – Tirikondiadimadu (A011) road	Maradankadawala to Habarana Section (0+000km to 25+000km)	25.000
04	Galle package road	Karapitiya – Labuduwa – Wanduramba – Nagoda – Udugama – Hiniduma – Thawalama	51.920
05	Roads in North Central Province	Kekirawa – Thalawa, Thalawa – Ganewalpola, Ganewalpola - Dachchahalmillewa	89.000

Table 1.1: National road sections which are proposed for development

Source: PIU, iRoad

6. These national road sections will be developed as Road Management Contracts (RMC) where the rehabilitation and improvement works will be carried out for a period of two (2) years and maintained for another five (5) years. This type of contract significantly expands the involvement and responsibility of private sector civil contractors in infrastructure development, from a simple execution of civil works to management and conservation of national assets (in this case the road infrastructure).

7. During SAPE works for iRoad program a Resettlement Framework (RF) was prepared to guide screening and selection of roads, social impact assessment and involuntary resettlement categorization and to monitor implementation of social safeguards during project implementation. This "Involuntary Resettlement Due Diligence and Socio-economic Profile" report was prepared in accordance with RF.

8. At the outset of the program it has been decided to avoid any acquisition of land which leads to any permanent physical or economic displacement of community. The RF give provision for land acquisition as mentioned in paragraph 8. However, RDA has decided to do the road rehabilitation works within the existing Right of Way (ROW). Considering the present traffic volume and as a measure of reducing accidents caused due to risky overtaking of vehicles along these roads, passing lanes shall be included as a road improvement only at locations where there is sufficient ROW available with no encroachments.

9. This report is on involuntary resettlement due diligence and socioeconomic profile of the communities living between Nittambuwa (39+710km) to Kadugannawa (100+000km) section of (A001) Road. Length of this road section is 60+290km. The report presents the status of involuntary resettlement due diligence and socioeconomic aspects of the communities living along road influence area.

#### B. Objectives of the study

- i. To identify whether IR involve within the road section to be improved under this RMC
- ii. To identify a sample of potential beneficiary population focusing on GN divisions of seven Divisional Secretariat (DS) divisions where the project road is located.
- iii. To establish a set of baseline data on the present demographic conditions in the project area.
- iv. To identify possible beneficial and adverse social impacts that may occur due to the project.
- v. To propose suitable mitigation measures to avoid minimize or manage adverse social impacts generated by the project.

#### C. Project Description

10. Under the RMC of iRoad, Nittambuwa (39+710km) to Kadugannawa (100+000km) section of Colombo – Kandy (A001) Road will be rehabilitated with additional passing lanes where required and where there are no encroachments into the available ROW. The cross section consists of carriageway, hard shoulder, soft shoulder and side drains where necessary as given below. As mentioned, passing lanes having a width of 3.5m each shall be constructed either in a one side or both sides based on the availability of the existing ROW. Proposed cross sections are attached as Annexure 1.

3.5m x 2
1.5m x 2
1.5m x 2
0.9m x 2
14.8m

Table 1.2 below presents the administration divisions crossed by this road section

Province	District	DS Division	GN Division				
		Attanagalla	Nittabuwa south, Kongasdeniya, Nawagamuwa Kalalpitiya, Wedagama, Napagoda,Nittabuw North				
Western Province	Gampaha	Mirigama	Pasyala East, Pasyala, Pasyala West, Muruthawela, Bataleeya South,Bataleeya, Radawadunna, Makkanigoda North, Hedidenikanda, Imbulgasowita, Radawadunna Central, Weweldeniya Ihalagama, Weweldeniya Ihalagama West, Kotadeniya, Wewldeniya Pahalagama,Madabavita Ihalagama, Danowita,Newgala				
	Kegalle	Warakapola	Panihela, Godawela, Dummaladeniya,				

Table 1.2: Project Location
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Province	District	DS Division	GN Division	
Sabaragamuwa			Warkapola, Mahena Colony, Ambepussa,	
Province			Mahena, Tholangamuwa, Nape, Morawaka,	
			Nelumdeniya, Mampita	
	_	Galigamuwa	Ranwala , Uraulla, Ambanpitiya, Paranagampola,, Golahela, Kegalle town, Meepitiya, Puwakdeniya, Emunugalla, Karadupotha	
		Rambukkana	Molagoda, Waragoda,Kumbaldeewela Mangalagama	
		Mawanella	Uthuwankanda, Habankaduwa, Mawanella, Rankothdiwala, Hinguloya, Hingula, Mawana, Beliammana, Owatta, Batawala, Molligoda, Mawela, Ganethanna, Warakapana,	
Central Province	Kandy	Yatinuwara	Ihala Mudaliwatta, Kadawathgama, Kadugannawa Town	

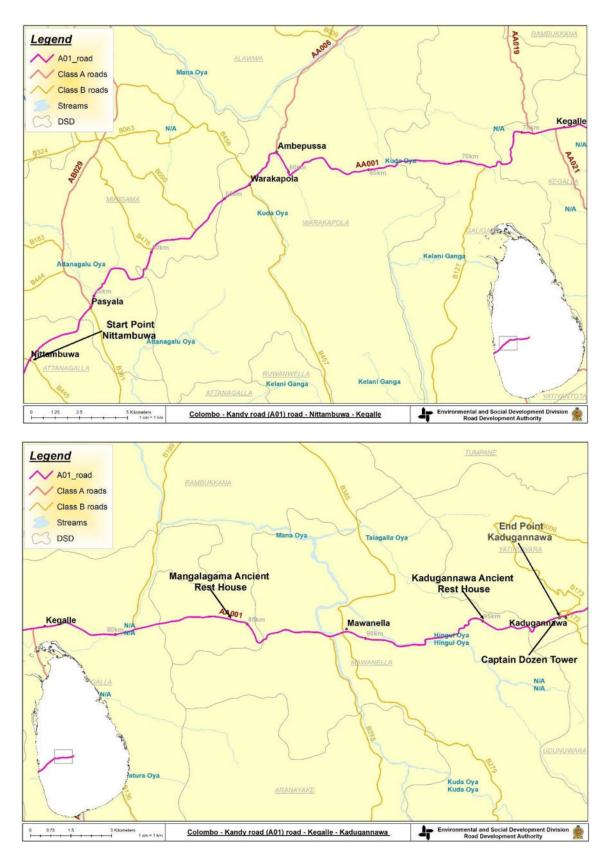


Figure 1.1: Location Map

#### D. Methodology

11. In order to prepare Involuntary Resettlement Due Diligence & Socioeconomic Assessment Report, the field surveys were carried out from December 2016 to June 2019. Focus group discussions and public consultation for preparation of the IR due diligence were carried out by Environment and Social Development Division of RDA. The study methodology is as follows;

#### IR due Diligence

12. Carrying out a field survey along the road identifying and recording the available ROW considering the preliminary designs. Identifying and recording of any structure (permanent or temporary) located within the existing ROW (especially within the road sections for which additional passing lanes were proposed). Existing socially important institutions located away from the ROW were also recorded with location information and with respect to chainage along the road. The study was aided with Google online maps, cross sections developed by PIU.

#### Socioeconomic profile

13. A sample survey covering 20% of the Households (HH) living along the road was carried out using a structured questionnaire which was developed under SAPE works of iRoad (with few improvements to suit the present condition of societies). The survey was outsourced to Institute for Development Research and Consultancy and the survey was enumerated by graduates of University of Kelaniya. The study sample included 6349 of potential beneficiary households.

#### Focus Group Discussions (FGDs) and public consultation

14. Focus Group Discussions (FGDs) and public consultation were carried out during December 2016 to June 2019 and Divisional Secretaries and Grama Niladaries along the road corridor were informed about the project and their views were recorded on proposed road improvements.

15. FGDs were arranged with the assistance of Grama Niladaries to obtain views of communities living along the road on proposed road improvements. A total of seven (7) FGDs were conducted within Nittambuwa (39+710km) to Kadugannawa (100.000km) section of A001 road.

#### 2. INVOLUNTARY RESETTLEMENT AND DUE DILIGENCE

#### A. A brief history of pervious developments and land acquisition along this road

16. Nittambuwa (39+710km) to Kadugannawa (100+000km) section of Colombo - Kandy (A001) Road was rehabilitated and improved during year 2005 to 2009 period under the Road Sector Assistance Project, funded by World Bank (WB). During this development the rehabilitation and improvement works were carried out within the existing ROW, hence no acquisition of private land was envisaged.

# B. Involuntary Resettlement and Due Diligence with respect to present development project

#### **Field Observations**

17. The road section starts from Nittambuwa town center at 39+710km and ends at Kadugannawa at 100+000km. The road section passes through populated main town centers of Nittambuwa (39+710km – 41+000km), Warakapola (56+500km – 57+750km), Kegalle (76+750km - 79+150km) and Mawanella (89+000km - 91+500km). In between these main town centers, there are small town centers such as Pasyala Junction (43+500km - 44+700km), Wewaldeniya (47+500km - 49+000km), Danowita (53+000km - 53+750km), Ambepussa Junction (59+000km - 60+250km), Udukumbura (64+500km - 65+000km), Nelumdeniya (66+500km - 67+000km), Yattogoda (68+000km - 68+500km), Ballapana (70+800km -71+200km), Galigamuwa (72+000km - 72+500km) and Ranwala (75+000km - 75+500km) Karadupana Junction (81.500km - 82.250km), Uthuwankanda (87.600km - 88.000km), Higula (93.000km – 93.400km) and Ganethenna (95.000km – 95.200km). These town areas are comprising with wide range of retail shops, local services and small workshops. At some locations, street vendors operate from kiosks or rolling carts located on the sidewalk or soft shoulder. Apart from townships, road mainly passes through paddy lands, home gardens and mixed commercial and residential areas.



Figure 2.1 Starting point of A001 road section at Nittambuwa



Figure 2.2: Traditional Business along the road section at Weveldeniya



Figure 2.3: A001 road connects with A006 road at Ambepussa Junction



Figure 2.4: A Buddhas Shrine at 68 +800km on RHS



Figure 2.5: Roadside businesses between Galigamuwa and Kegalle

#### Structures within the existing ROW

18. Average ROW of the road varies between 15.7m to 18m. Two lanes are available within this section with lane marking. Earth drains are visible in most sections of the road and built up drains are available at town sections.

19. Colombo – Kandy (A001) road is main route to enter to country from Colombo and there's high volume of traffic. Therefore, there are many business corridors along the trace such as selling of cane products at Randawatuna, Cashew selling at Bataleeya and fruit stalls at Pahala Kadugannawa. Thus, many permanent and temporary structures were observed at close proximity to the existing trace. Although there were no permanent structures observed to be within the existing ROW, there are some temporary structures that have been built projecting towards the existing ROW. Of these temporary structures many are observed to being built over the existing roadside drains and few built inside the ROW.

20. As per the preliminary designs, these temporary structures will not be permanently affected due to the development, but would need to be shifted temporarily to accommodate the construction works. Further, as mentioned in section C of chapter 1, passing lanes will be considered to be developed at locations where there are no permanent/temporary structures. Details of the temporary structures identified during field visits are summarized below.

Way point	Location		Type of structure	Owners details		File Photo	Remarks
on map	North	East		Name	Address		
1848	07º08'688''	080º05'765''	Temporary hut, Mobile Lottery stall	Gunawardana	No. 38, Samagi Pedesa, Nittabuwa		The mobile lottery stall located on the side drain of the RHS. He is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.
1848	07º08'688''	080º05'765''	Temporary hut, Mobile Lottery stall	Yamuna Kumari	No. 170/1, Nigambo Road, Nittabuwa		The mobile lottery stall is edge of the pavement on LHS. She is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as she can continue the

### Table 2.1: Temporary structures observed along this road section

						business/ livelihood.
1848	07º08'688''	080º05'765''	Temporary hut, Small mobile tea shop	Saman Palitha	Kahalanda Watta, Pasyala	The mobile tea shop is at the edge of the pavement on LHS. He is willing to shift the shop if it is required for any road works. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.
WPT 1	7º 18' 35"	80º 13' 22"	Temporary hut, cashew sellers	Sadamali	76A, Bataleeya, Pasyala	Few temporary huts/sheds could be observed on both side of the road edge at the Bataleeya area. They are doing their traditional business in this area. They are willing to shift the hut back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. Main structure not

						affected; no IR impact observed as they can continue the business/ livelihood.
WPT 2	7º18'66''	80º13'97''	Temporary hut, small tea shop	Renuka Nilmini	Samanalapede sa, Kandy road, Radawadunna	The small tea shop is at the edge of the pavement on RHS. She is willing to shift the shop back once the road construction work starts. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as she can continue the business/ livelihood.
WPT 2	7º18'66''	80 <sup>0</sup> 13'97''	A temporary stall, selling fruits	A.G.Gunawarda na	No.3/1A, Kandy road, Radawadunna	The stall has been put adjacent to his shop at the LHS of the edge of the road. He has no objection to shift the structure into the land. He requested that the relevant authorities should inform him in advance when to shift the structure. For this, 30days advance notice and labour support for shifting will be provided.

						Main structure not affected; no IR impact observed as they can continue the business/ livelihood.
WPT 3	7º18'22"	80º14'19''	Shop and house	Priyantha Wickremasooriy a	26/D, Kandy road, Radawadunna	The front portion of the shop is at the edge of the road on the LHS. He has no objection for the project and stated that he would take back the structure if required. For this, 30days advance notice and labour support for shifting will be provided. Main structure not affected; no IR impact observed as he can continue the business/ livelihood.
WPT3	7º18'22"	80º14'19''	House and shop	Darshana Fonseka	No.30, Kandy road, Radawadunna	The front portion of the shop is at the edge of the pavement on the LHS. He has no objection for the project and stated that he would take back the structure if required. For this, 30days advance notice and

						labour support for shifting will be provided. Main structure not affected; no IR impact observed as he can continue the business/ livelihood.
WPT 5	7º19'42''	80º15'24''	Temporary tea shop	Krishanthileka Karunarathna	In front of the Church, Kandy road, Weweldeniya	The stall located on the side drain of the LHS. There is no space to shift back the structure. However, she is willing to remove the hut for any improvements on the roadside drains. Although this structure cannot be shifted to either left or right side of the current position. This way she can continue her likelihood activity. This approach shall avoid any IR impact.

WPT 6	7º19'79''	80º15'45''	A temporary hut, selling musical equipment	Kalinga	Irangani Musical, In front of shed, Weweldeniya	The musical item stall has been put adjacent to his shop at LHS of the edge of the road. He is willing to remove the structure for any improvements. For this, 30days advance notice and labour support for shifting will be provided. Main structure is not affected; no IR impact observed as he can continue the business/ livelihood.
WPT 6	7º19'79''	80º15'45''	A temporary hut	Abandoned		The hut is about 2.0m from the road edge. No IR impact observed as he can continue the business/ livelihood.

WPT 7	7º19'90''	80º15'55''	A temporary hut, small tea shop	Ashoka Kumari	School Junction, Weweldeniya	The small tea shop has been put adjacent to her shop at LHS of the edge of the road. She is willing to shift the shop back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. Main structure not affected; no IR impact observed as she can continue the business/ livelihood.
WPT 7	7º19'90''	80º15'55''	A temporary hut, selling vegetable	W.Karunarathna	No. 152, Kandy road, Weweldeniya	The vegetable stall has been put adjacent to his shop at LHS of the edge of the road. He is willing to shift the temporary structure once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. Main structure not affected; no IR impact

						observed as he can continue the business/ livelihood.
WPT 8	7º19'96''	80 <sup>0</sup> 15'67''	A temporary hut, selling fruit	K.K.Punchi nilame	No. 121/2, Kandy road, Weweldeniya	The fruit stall is 2.0m from the edge of the road at LHS. He is willing to shift the stall back once the road construction works. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.
WPT 10	7º20'11''	80º16'60''	Temporary hut, Selling flowers	R.D Somarathna	Dehigahakotuw a, Karabudeniya, Danowita	The fruit stall is about 2.0m from the edge of the road at LHS. He is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed

						as he can continue the business/ livelihood
WPT 11	7º23'08	80º17'96''	A temporary hut, selling fruit	J.A. Jayarathna	Horagasmanka da, Danowita	The fruit stall is about 2.0m from the edge of the road at LHS. He likes to shift the stall once the road construction work starts. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood
WPT 12	7º23'08''	80º17'96''	A temporary hut, selling fruit	M.R.K. Peiris	99/3, Halagala, Danowita	The stall located on the side drain on the LHS. However, he is willing to remove the hut for any improvements on the roadside drains. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.

WPT 12	7º23'08''	80º17'96''	A temporary hut	. Abandoned		The stall located on the side drain on the LHS. No IR impact observed If there's an owner for the structure, he/she can be contacted during detailed design.
WPT 13	7º21'52''	80º18'25''	A temporary hut	Abandoned		The stall is on the edge of the road at LHS. No IR impact observed If there's an owner for the structure, he/she can be contacted during detailed design.
WPT 13	7º21'52''	80º18'25''	A temporary hut, selling fruits	Darmawathi	Alagala, Danowita	The stall located on edge of the road at LHS. There is no space to shift back the structure. However, she is willing to remove the hut for any improvements on the road. Although this structure cannot be shifted to either left or right side of the current position.

						This way she can continue her likelihood activity. This approach shall avoid any IR impact.
WPT 13	7º21'52''	80°18'25''	A temporary hut, selling corn and king coconut	H.P. Chandralatha	Godawela, Danowita	The fruit stall is about 2.0m from the edge of the road at RHS. She is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as she can continue the business/ livelihood.

WPT 13	7º21'52''	80º18'25''	A temporary hut, selling king coconut	B. Jayantha	Helagala, Danowita	The fruit stall is about 2.0m from the edge of the road at RHS. She is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as she can continue the business/ livelihood.
WPT 13	7º21'52''	80º18'25''	A temporary hut,	Closed		The stall is on the edge of the road at LHS. No IR impact observed If there's an owner for the structure, he/she can be contacted during detailed design.

WPT 13	7º21'52''	80º18'25"	A temporary hut	Closed		The stall is on the edge of the road at LHS. No IR impact observed If there's an owner for the structure, he/she can be contacted during detailed design.
WPT 13	7º21'52"	80º18'25"	A temporary hut	Closed		he stall is on the edge of the road at RHS. Io IR impact observed there's an owner for he structure, he/she an be contacted during detailed design.

WPT 14	7º22'26''	80º19'20''	A temporary hut, Selling fish	J.M. Wimalasinghe	Udaha Aramba, Eknawala, Warakapola	The fruit stall is on the edge of the road at RHS. He is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood
WPT 15	7º21'01"	80º17'92''	A temporary hut	Closed		The stall is about 2.0m from the edge of the road at RHS. No IR impact observed If there's an owner for the structure, he/she can be contacted during detailed design.

WPT 15	7º21'01''	80º17'92''	A temporary hut, tea shop	M.G. Dayawathi	220/4, Kalukanda, Danowita	The stall is about 2.0m from the edge of the road at RHS. She is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as she can continue the business/ livelihood
WPT 15	7º21'01"	80 <sup>0</sup> 17'92''	A temporary hut, selling fruits	N.S. Nawarathna	Kandy road, Kalukanda, Danowita	The stall is about 2.0m from the edge of the road at RHS. He is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood

WPT 16	7º20'91''	80º17'83''	A temporary hut, selling fruits	H.A. Suneetha	Kalukanda, Danowita	The stall is about 2.0m from the edge of the road at RHS. She is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as she can continue the business/ livelihood
WPT 17	7º20'10''	8º16'72''	A temporary hut, tea shop	Dinesh Sampath	Horagaswita, Danowita	The stall is about 2.0m from the edge of the road at RHS. He likes to shift the stall once the road construction starts. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.

WPT 18	7º17'71''	80º12'80''	A temporary hut, selling fruits	Indra Nilanthi	140/A, Bolakanda, Pasyala	The stall is about 2.0m from the edge of the road at RHS. She is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.
WPT 18	7º17'71''	80º12'80''	A temporary hut, selling fruits	Gunaratha	Ama Fruits, No.3/2, Muruthawela, Pasyala	The stall located on the side drain on the LHS. He is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood

WPT 19	7º18'21"	80º12'51''	A temporary hut, selling fruits	D.H.Inoka Anoma Kumari	T 30, Nugadola watta, Pasyala	The stall located about 2m from edge of the road at LHS. She is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided.
						No IR impact observed as he can continue the business/ livelihood.
WPT 19	7º18'21''	80º12'51"	A temporary hut	Abandoned		The stall located on the edge of the road at LHS. No IR impact observed If there's an owner for the structure, he/she can be contacted during detailed design.
WPT 1	07º144'30"	80º0127'66"	A temporary hut, selling corn and king coconut	A.G. Nandawathi	No.506, Kandy road, Warakapola	The stall located on the edge of the road at LHS. She is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided.

						No IR impact observed as she can continue the business/ livelihood.
WPT2	7º1410'10"	80º1903'36"	A temporary hut, selling balloons	W. Ranjith Padmakumara	Galigamuwa town, Galigamuwa	The front portion of the shop is edge of the pavement on the RHS. He has no objection for the project and stated that he would take back the structure if required. For this, 30days advance notice and labour support for shifting will be provided. Main structure not affected; no IR impact observed as they can continue the business/ livelihood.
WPT4	7º1414'56"	80º1857'93"	A temporary hut, selling baloons	M.P.Deepthi Kumara	Kadikumbura, Galigamuwa Town	The stall located on the edge of the road at RHS. He is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. Main structure not affected; no IR impact

						observed as they can continue the business/ livelihood.
WPT5	07º14'220"	80º18'924''	A temporary hut, selling balloons and toys	M.C. Deepani	No.150, Abanpitiya, Galigamuwa town	The front portion of the shop is at the edge of the pavement on the RHS. She has no objection for the project and stated that she would take back the structure if required. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as she can continue the business/ livelihood.
WPT6	7º144'29''	80º127'70''	A temporary hut, tea shop	A.G.D. Stanly	C43, Mahena, Warakapola	The stall located on the side drain of the LHS. He is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. Main structure not affected; no IR impact observed as they can continue the business/

						livelihood.
WPT7	7º1510'61"	80º303'56''	A temporary hut, tea shop	K.W. Luky Thisera	No.19, Pahala Kadugannawa, Higulaapola	The front portion of the shop is at the edge of the pavement on the LHS. He has no objection for the project and stated that he would take back the structure if required. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.
WPT 8	7º1511'24"	80º3012'76"	A temporary hut, selling fruits	D.P. Saman Udaya Nishantha	Pahala Kadugannawa, Higulaapola	The stall located on the edge of the road at LHS. He is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.

WPT 9	7º1513'01"	80º3010'21"	A temporary hut, selling fruits	Densil Dias	Pahala Kadugannawa, Higulaapola	The stall located on the side drain of the road at LHS. He is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/livelihood.
WPT1 0	7º1412'61"	80º1855'18"	A temporary hut, tea shop	W.A. Nalani Podimanike	45 mile post, Galigamuwa town	The front portion of the shop is edge of the pavement on the LHS. She has no objection for the project and stated that he would take back the structure if required. For this, 30days advance notice and labour support for shifting will be provided. Main structure is not affected; no IR impact observed as they can continue the business/ livelihood.

WPT1 1	7º159'97''	80º3016'34"	A temporary hut, selling fruits	Gayan Shanka Fonseka	No.26, Pahala Kadugannawa, Higulaapola	The stall located on the edge of the road at LHS. He is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.
WPT1 3	7º1512'79"	80º3010'68''	A temporary hut, selling fruits	J.P. Wijedasa	50, Poththapitiya, Manikdiwela	The stall located on the edge of the road at LHS. He is willing to shift the stall once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as they can continue the business/ livelihood.

WPT1 4	7º1512'44"	80º3012'02''	A temporary hut, selling fruits and toys	M. Ranasinghe	Welikandawatt a, Pahala Kadugannawa, Higulaapola	The stall located on the edge of the road at LHS. He is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.
WPT1 5	07º144'13"	80º127'79"	A temporary hut, selling corn and King coconut	W. Chandra Irangani	Korasahena, Mahena,Warak apola	The stall located on the edge of the road at LHS. He is willing to shift the stall back once the road maintenance work commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.

WPT1 6	7º1511'24"	80º3012'76"	A temporary hut	Closed		Stalls could be observed to the LHS of the road at Pahala Kadugannawa. They are selling fruits, toy etc. But most of these stall are closed. No IR impact observed If there's an owner for the structure, he/she can be contacted during detailed design.
WPT 01	7º14'215''	80º15'962"	Shop	W.M. Nelka Rekshi Bandara	Bangalathenna, Kandy Road, Nelumdeniya	The front portion of the shop located on the side drain of the road at RHS. She likes to shift the structure on her own as soon as the construction works commence. For this, 30days advance notice for shifting will be provided. No IR impact observed as she can continue the business/ livelihood.

WPT 1520	7º14'405"	80º19'313"	Vehicle repairing shop	Saman Jayakodi	Saman Moters, Abanpitiya,Keg alle	The front portion of the shop is at the edge of the pavement of the road at LHS. He welcomed the road project and stated that he would shift the structure as soon as construction works starts. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/livelihood.
WPT 02	7º14'125''	80º15'955''	shop	S.A.K. Dayarathna	Bangalathenna, Kandy road, Nelundeniya	The front portion of the shop located on the side drain of the road at RHS. He likes to shift the structure on his own as soon as the construction works commences. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.

WPT0 3	7º15'046''	80º22'218"	A retail shop	M.P.R.A. Hettiarachchi	215, Meepitiya, Kegalle	The front portion of the shop located on the side drain of the road at LHS. He is willing to shift the hut for any improvements on the road. For this, 30days advance notice and labour support for shifting will be provided.
WPT 1524	7º15'075''	80º25'390''	A temporary hut, selling fruits and king coconut	K.G. Wimalasiri	Kandy road, Uthuwankanda	No IR impact observed as he can continue the business/ livelihood. The stall has been put adjacent to the shop at LHS. He welcomed the road development and he has no objection to shift the structure. He likes to shift the structure as soon as the any improvements on the road. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.

WPT 04	7º14'992''	80º27'782"	Concrete yard	K.R.Amarasingh e	597, Nadeniya, Mawanella	The concrete yard located on the side drain of the road at RHS. He will temporary shift the concrete blocks store when constructions are on- going. No IR impact observed as he can continue the business/ livelihood.
WPT 1521	7º14'406''	80º19'314''	Shop, selling tile	H.R.Sirisena	201,Rakitha tile shop, kandy road, Meepitiya, Kegalle	This business carried out at the edge of the road. He will temporary shift the bricks store when constructions are on-going. No IR impact observed as he can continue the business/ livelihood.

WPT0 5	7º15'080''	80º22'377"	A temporary hut, selling pillows, bed sheets and curtains	Ashoka Thilakarathna	159, Meepitiya, Kegalle	The front portion of the shop is located at the edge of the road. He is willing to remove the hut for any improvements on the road. For this, 30days advance notice and labour support for shifting will be provided. Main structure not affected; no IR impact observed as he can continue the business/ livelihood.
WPT 06	7º15'081''	80º22'378''	Fruit shop	W.P.Ishara Gunathilaka	Karadupana Junction, Kegalle	The front portion of the shop located on side drain of the road. He will temporary shift the store when constructions are on- going. No IR impact observed as he can continue the business/ livelihood.

WPT0 7	7º14'859''	80º28'066''	A temporary hut, selling vegetable	V.G.A.Sadaruwa na Kumara	621A, Kandy road, Higula	The front portion of the shop located on side drain of the road. He will temporary shift the store when constructions are on- going. No IR impact observed as he can continue the business/ livelihood.
WPT 1527	7º14'890''	80º28'253"	A temporary hut, selling fruit	K.M.Anura Kumara	D75, Mederigama, Mawanella	The stall is at the edge of the road. He is selling king coconut. He likes to shift back to the hut for any improvements on the road. For this, 30days advance notice and labour support for shifting will be provided. No IR impact observed as he can continue the business/ livelihood.

21. Common properties such as schools, temples, churches, shrines and mosques were observed on either side of this road section. Structures of these properties are located away from the existing ROW. Locations of these properties with side of the road are presented in table 2.2 below. During Field observations, three places close to the road were identified as archaeologically protected monuments and sites. They are Mangalagama rest place (Ambalama) at 85+000km, Kadugannawa rest place at 97+150km and Captain Dowsen's Tower at 100+000km.

Table 2.2: Common properties located close to the road along Nittambuwa to Kadugannawa section of A001 road

S/N	Chainage	Type of common/Government property	Road side
1	40+900	Nittabuwa Buddhist Centre	RHS
2	43+900	Pasyala Maha Viddiyalaya	RHS
3	44+100	Pasyala Primary School	RHS
4	44+400	Shrine	LHS
5	45+075	Mosque	LHS
6	45+250	Shrine	LHS
7	48+630	Mosque	RHS
8	51+150	Alhasan Vddiyalaya	LHS
9	51+350	Mosque	RHS
10	52+000	Temple	LHS
11	53+500	Shri Siddartha Maha Vidyalaya	RHS
12	55+825	Mosque	RHS
13	57+000	Warakapola base hospital	LHS
14	57+125	Mosque	LHS
15	57+325	Shrine with Bo tree	LHS
16	58+000	Kovil	LHS
17	58+000	Royal International College	RHS
18	58+300	Kovil	LHS
19	58+850	Church	LHS
20	58+950	Ambepussa Maha Viddiyalaya	LHS
21	59+400	Shrine	RHS
22	59+450	Cemetery	RHs
23	59+840	Church in Ambepussa	LHS
24	59+850	Primary School	LHS
25	61+340	Buddha's statue	RHS
26	61+480	Buddha's statue	RHS
27	61+800	Ambalama and common Well	LHS
28	62+460	Bo tree and Buddha's statue	RHS
29	62+790	Sub Post office-Tholangamuwa	RHS
30	62+790	Government Medical Centre	RHS
31	62+790	Sanasa Bank-Tholangamuwa	RHS
32	62+790	Sunandarama Raja Maha Viharayae	RHS
33	63+060	Tholangamuwa Central collage	LHS
34	64+300	Mosque	LHS
35	65+500	Common well	LHS
36	65+600	Morawaka Primary School	RHS
37	65+690	Bo tree and Buddha's statue	LHS
38	66+000	Samurdhi Bank	LHS

S/N	Chainage	Type of common/Government property	Road side
39	66+540	Buddha's Statue	LHS
40	66+540	Sub Post Office	LHS
41	66+540	People's Bank	RHS
42	66+620	Bank of Ceylon	LHS
43	66+650	Government Central Dispensary	RHS
44	67+510	Elders Home	RHS
45	68+580	Sub post Office	RHS
46	68+800	Buddha's stature	RHS
47	68+940	Agrarian Service Centre	LHS
48	69+070	Yatalathissa School	LHS
49	69+220	Yatalathissa Rajamaha Viharaya	LHS
50	69+970	Technical Development Board	RHS
51	69+970	Divisional Secretariat - Galigamuwa	RHS
52	69+970	Assistant Land Commissioners office	RHS
53	70+800	Buddha's Statue	RHS
54	71+520	Galigamuwa Primary School	LHS
55	72+150	Bisowela Rajamaha Viharaya	LHS/RHS
56	73+220	Road Development Authority	LHS/RHS
57	73+520	Sri Suvisuddarama Temple	RHS
58	73+530	Land title Settlement Department-Galigamuwa	LHS
59	74+130	EE's office – Sabaragamuwa Provincial Council	LHS
60	74+130	Ambanpitiya Special Collage	LHS
61	74+650	Mahanama Maha Vidyalaya	RHS
62	76+220	Elder's Home- Ranwala	RHS
63	76+400	Shrine	LHS
64	76+900	Cemetery	LHS
65	77+100	St. Joshep College	RHS
66	77+140	Tamil School	LHS
67	77+150	St. Marry Boy School	LHS
68	77+150	Kovil	RHS
69	77+160	Church	LHS
70	77+550	Mosque	RHS
71	77+650	Market	RHS
72	77+850	Kovil	RHS
73	78+650	YMBA & Temple	RHS
74	79+750	Buddha Statue	LHS
75	80+000	Royal International College	RHS
76	81+580	Shrine with Bo tree	LHS
77	83+240	Shrine	RHS
78	83+900	Jayapala Maha Viddiyalaya	RHS
79	85+000	Temple	LHS
80	85+000	Mangalagama Ambalama	LHS
81	87+150	Temple	LHS
82	87+200	Bo tree	LHS
83	88+425	School	LHS
84	88+425	Church	LHS
85	89+000	Free school	LHS
86	90+520	Shrine	LHS
87	91+350	Temple	LHS
88	92+000	Mederigama Primary School	RHS

S/N	Chainage	Type of common/Government property	Road side
89	92+750	Mederigama Maha Viddiyalaya	RHS
90	93+200	Shrine	LHS
91	93+200	Dadimunda Devalaya	RHS
92	94+000	Mosque	RHS
93	94+250	Udama Kadawara Viddiyalaya	LHS
94	94+475	Mosque	RHS
95	95+900	Shri Ananda Viharaya	LHS
96	97+000	Purana Gallen RajaMaha Viharaya	RHS
97	97+150	Kadugannawa Ambalama	LHS
98	98+680	Kadugannawa old rock tunnel	LHS
99	99+000	Paramitha Buddhist Centre	RHS
100	100+000	Captain Dowsen's Tower	RHS

Source: Field survey in January 2017

22. According to field observations it is noted that above mentioned common properties will not be affected due to this road rehabilitation and improvement works.

## Anticipated social impacts and proposed mitigation measures

23. Rehabilitation and improvement work on Nittambuwa to Kadugannawa section of A001 road will not cause any physical or economic displacement of people living along the road corridor, thus there will be no IR impacts. The IR categorization checklist for the road section is presented in Annexure 2.

24. The project will bring positive social impact to businesses along the road. Improved road will attract more traffic and business owners will benefit from this. However, following temporary negative impacts which will cause a public nuisance will need to be avoided and mitigated;

• Temporary disruption to businesses along the road

During construction period, there can be temporary disruption to temporary structures located within ROW. PIU will take action to inform owners of such structures in advance and assist them to readjust their structures if required. Thus, PIU will ensure that there is no loss of income for the owners of these structures during construction.

• Temporary disruption of traffic flow during road surface improvement works.

A001 Road generally caters a heavy traffic flow throughout the day therefore closure of lanes and diversion of traffic to facilitate road rehabilitation works will severely affect the traffic flow creating heavy traffic congestions. This will delay the day to day activities of the commuters such as schooling, attending to office works at time etc... Further, emergency vehicles such as ambulances which use the road very often will also be trapped in the traffic congestions.

Following measures shall be implemented to minimize the impacts on existing traffic;

• Preparation of traffic management plan in collaboration with the Police and implementation during the construction phase with the help of Police. Traffic

management plan shall be updated as necessary. Assistance of Police shall be obtained to ensure that traffic will comply with the measures of the traffic management plan

- Providing advance information to the public about the planned construction works,
- Providing properly marked by-passes and one-way section including barriers, reflectors, and night illumination.
- Use of well-trained flagmen to control traffic flows at constricted sites, including safe crossing for pedestrians especially near town areas and schools.
- Public shall be made aware about alternative roads that can be used to bypass construction areas using media and sign boards
- Flagmen shall be instructed to pay especial attention to emergency vehicles in order to allow them to cross the construction sites without delay
- Loss of access.

Loss of access to houses, commercial activities, office premises and other lands located along the road shall be possible due to excavations and other road improvement activities. To minimize the impact;

- Convenient and safety access to all existing residential and commercial lands located along the road section shall be ensured.
- Access to houses, commercial structures and public utilities should be clearly marked within the road reservation and safe temporary access will be maintained until the permanent solution will be in place.
- Dust, noise and vibration impacts

Excavation for shoulders and other earthworks, pavement improvement operations, quarry operations, operation of asphalt plant, batching plant, operation of construction vehicles during construction period will release aerial contaminants (dust and fumes) increasing local air pollution. Heavy machinery used for construction work will create noise and vibration which will cause nuisance to residents in settlements and also animals and also excessive vibration can damage buildings located nearby to the trace. Locations such as schools, and places of worship as given in table 2.2 above are particularly vulnerable to nuisance from noise. Especially, the three archaeologically protected monuments are highly vulnerable to high vibration levels and damages to such sites can be possible if heavy construction activities which result high vibration levels will be practiced at such sites. The impact of construction noise, vibration and emissions at sensitive areas shall be mitigated by;

• Limiting operations to times when they have least impact in settlement areas, especially near schools and other sensitive locations such as hospitals and places of worship.

- Ensuring that construction plant and equipment is maintained to high operable standards, and that exhaust baffles are fitted and maintained in a high serviceable condition.
- Vibration should be controlled with the agreement of the Project Implementation Consultant (PIC) at locations where sensitive receptors are found.
- Regular sprinkling of water to dampen the construction surface will reduce the emission of dust.
- Implementation of all construction activities in compliance with acceptable levels of noise which are specified in National Environmental (Noise Control) Regulations 1996 stipulated by C amendments act 924/12 to mitigate the noise impact.
- A property condition survey will be conducted along the trace within a corridor as specified by PIC. The survey shall record all details related to cracks and construction failures existing in structures along this corridor.
- Buildings cracked due to construction activities should be compensated or repaired to the satisfactory level (which is agreed by the PIC) of the affected person. Here, precondition survey conducted for surrounding buildings located within an agreed area and a corridor with the PIC will be helpful in differentiating cracks caused by construction activities.
- All machinery, plants and vehicles used for the project shall be well maintained and regularly monitored in order to keep their emissions below the threshold levels (as specified in NEA) in order to minimize degradation of air quality
- At archaeologically protected sites and monuments, the recommendations given by Department of Archaeology shall be adhered to avoid any damages to such sites. Precautionary measures such as using small compactors without vibration, avoiding use of heavy machinery, maintaining the air quality below the standards at such sites should be practiced in order to avoid impacts.

# 3. SOCIOECONOMICS ASSESSMENT GENDER PARTICIPATION

#### A. Description of Socioeconomic Features of the Project Area

25. Nittambuwa – Kadugannawa section of Colombo – Kandy (A001) road traverses through Gampaha, Kegalle and Kandy districts. According to Department of Census and Statistics, the population in these three districts was 4,540,379 and Gampaha records the highest population density out of three districts as its 1,719 persons/km<sup>2</sup>. Table 3.1 below summarizes this information.

District	Population (Census 2012)	Population Density (person/ km <sup>2</sup> )	Poverty head count (2016)
Gampaha	2,324,349	1,719	2.0
Kegalle	840,648	499	7.1
Kandy	1,375,382	717	5.5

Source: Department of Census and Statistics, 2012/2016

26. The road impacts eight Divisional Secretariat divisions in three districts. The DS divisions are identified as Attanagalla, Meerigama, Warakapola, Galigamuwa, Kegalle, Rambukkana, Mawanella and Yatinuwara. In 2012, total population in these DSDs is 923,068 persons. Highest population is reported from Attanagalla DSD and it is 179,565 persons. The second highest population is in Meerigama DSD, which has a population of 164,580 persons.

Table 3.2 Distribution of population of project located DSDs by gender

DS division	Male	Male			Total
	No.	%	No	%	
Attanagalla	86,489	48.17	93,076	51.8	179,565
Meerigama	79,185	48.11	85,395	51.9	164,580
Warakapola	54,179	47.92	58,877	52.1	113,056
Galigamuwa	35,581	47.77	38,909	52.2	74,490

DS division	Male		Female		Total
	No.	%	No	%	
Kegalle	43,127	47.47	47,727	52.5	90,854
Rambukkana	38,929	47.03	43,840	53.0	82,769
Mawanella	52,665	47.14	59,062	52.9	111,727
Yatinuwara	50,921	48.03	55,106	52.0	106,027
Total	441,076	47.78	481,992	52.2	923,068

Source: Department of Census and Statistics, 2012

27. Population distribution by ethnicity in eight DSDs is presented below. Around 89.1% population in project area is Sinhalese while 8.9% are Moor.

DS division	Sinhala		Sri La Tamil	nkan	Indiar Tamil	1	Moor		Burg	lher	Othe	r
	No	%	No	%	No	%	No	%	No	%	No	%
Attanagalla	155593	86.65	1020	0.57	595	0.33	22041	12.27	244	0.14	72	0.04
Meerigama	155822	94.68	850	0.52	149	0.09	7560	4.59	107	0.07	92	0.06
Warakapola	103109	91.20	1568	1.39	2124	1.88	6208	5.49	30	0.03	17	0.02
Galigamuwa	70369	94.47	564	0.76	2378	3.19	1133	1.52	4	0.01	42	0.06
Kegalle	87029	95.79	824	0.91	1756	1.93	1198	1.32	29	0.03	18	0.02
Rambukkana	78949	95.38	802	0.97	186	0.22	2759	3.33	16	0.02	57	0.07
Mawanella	76413	68.39	917	0.82	492	0.44	33827	30.28	55	0.05	23	0.02
Yatinuwara	95285	89.87	2565	2.42	426	0.40	7593	7.16	77	0.07	81	0.08
Total	822569	89.1	9110	0.9	8106	0.8	82319	8.9	562	0.06	402	0.04

Table 3.3. Distribution of population by the ethnicity

Source: Department of Census and Statistics, 2012

## B. An analysis of the sample socioeconomic survey

28. The socio economic survey was conducted selecting 6349 houses located within the DS divisions along the road. The sample is distributed in three districts as presented in table 3.4.

Table 3.4. Names of the DSDs through which the A001 highway is located and number of households

District	Name of DSD	No. of households surveyed
Gampaha	Attanagalla	399
	Meerigama	874
Kegalle	Warakapola	747
-	Galigamuwa	719
	Kegalle	769
	Rambukkana	200
	Mawanella	1117
Kandy	Yatinuwara	1524
	Total	6349

Source: Sample HH survey, 2017

29. Findings of the household survey are presented below. The results are discussed under subtopics on key demographic features, housing condition, sanitary and energy, vulnerable groups and gender and perception of community towards the project.

#### Key demographic information of the sample survey

Distribution of households by family size and age

30. Distribution of family size and age of family members in each district and DS are presented in below table 3.5 and 3.6.

Table 3.5: Distribution of households by family size and age

District	Family size (No of members)				
	1 – 2	3 - 4	More than 5		
Gampaha	185	751	335		
Kegalle	539	1955	1057		
Kandy	212	864	451		
Total	936	3570	1843		

Source: Sample HH survey, 2017

31. Out of total households, 56.2% households have an average family size with 3-4 members while 29% households more than five members. The other 14.7% households have 1-2 members.

 Table 3.6 Age distribution of sample household members

District	Age group									
	0 – 14		15-59	15-59		60+				
	Male	Female	Male	Female	Male	Female	Male	Female		
Gampaha	450	465	1507	1645	356	413	2313	2523		
Kegalle	1308	1216	4313	4570	1108	1177	6729	6963		
Kandy	514	516	1998	2105	535	550	3047	3171		

Source: Sample HH survey, 2017

32. Regarding age category of household family members, the highest percentage falls within the age limit of 15 to 59 years, this is also the economically active population of the project area.

#### Average household income, expenditure and movable assets

33. Below table 3.7 presents the distribution of monthly average income among the sample households in Gampaha, Kegalle and Kandy districts.

Table 3.7. Average monthly income of sample households

Income category Average monthly income (SLR)	Number of Households
Less than 5,000	69
5,001 – 14,999	232
15,000 – 49,999	3992
50,000 - 74,999	1287
75,000 – 100,000	484
More than 100,000	285

Source: Sample HH survey, 2017

34. Table 3.7 depicts that majority of surveyed households belong to income category of SLR 15,000-49,999. However, monthly income of 69 households was less than Rs. 5000. Table 3.8 shows the distribution of monthly average expenditure among the surveyed households.

Income Category Average monthly expenditure (SLR)	Number of Households
Less than 5,000	51
5,001 – 14,999	439
15,000 – 49,999	4506
50,000 – 74,999	912
75,000 – 100,000	288
More than 100,000	153

Source: Sample HH survey, 2017

35. It could be observed that most households' average monthly expenditure is between Rs15,000 – 49,999. Monthly expenditure is more than Rs 100,000 only for 153 households. Table 3.9 presents a summary of household assets in each DSD sample.

Type of asset	Attanag	Meeriga	Warak	Galigam	Kegall	Rambu	Mawanel	Yatinuw
	alle	ma	apola	uwa	е	kkana	la	ara
Television	387	835	720	702	758	195	1039	1482
Radio/ CD player	325	713	688	638	689	179	882	1354
Sewing machine	216	456	347	338	427	95	580	797
Electric fan	298	603	521	568	595	160	757	1006
Fridge	305	569	434	490	617	157	809	1164
Gas stove	279	514	318	461	500	162	718	1074
Kerosene stove	29	37	32	36	29	0	14	43
Air conditioner	7	9	3	3	12	2	13	25
Motor cycle	140	205	114	122	158	41	182	278
Bicycle	43	68	31	21	17	10	39	75
Three wheeler	72	158	82	110	124	25	180	205
Motor car/ cab	42	56	23	46	95	25	112	232
Motor bus/ van	16	42	22	23	27	8	42	55
Water pump	248	512	439	288	101	9	78	75
Washing machine	89	107	47	50	134	19	183	324

Table 3.9: A summary of household assets (multiple answers)

Source: Sample HH survey, 2017

36. As per the above Table 3.9 many households in the project area have televisions, radio/ CD players, sewing machines, electric fan and fridges. Most common type of household vehicle in these DS divisions are motor cycle. Very few households in these DS divisions have Air conditioner.

Housing condition, sanitary facilities, energy and water sources of sample households

37. Below Table 3.10 describe the type of housing structures within sample households. As per the information more than 80% of households surveyed had permanent type of housing structures in all DS divisions. About 2% of housing units in all DS divisions are temporary houses.

District	DSD	Type of housing structure				
		Permanent	Semi-permanent	Temporary		
Gampaha	Attanagalle	349	37	11		
	Meerigama	781	79	14		
Kegalle	Warakapola	682	55	9		
	Galigamuwa	503	208	9		
	Kegalle	615	139	16		
	Rambukkana	803	295	19		

Table 3.10. Details of type of housing structure

	Mawanella	1221	259	46
Kandy	Yatinuwara	138	58	3
Total		5092	1130	127

Source: Sample HH survey, 2017

38. Majority (63.9%) of households in the project area has water sealed toilets and around 32.1% households have flush toilets. However, 18 (0.2%) households have no toilet facilities and out of 18, around 9 households are from Yatinuwara DS division.

District	DSD	Type of sanitary system available				
		Flush	Water sealed	Pit latrine	None	
Gampaha	Attanagalle	134	247	14	2	
	Meerigama	183	651	38	2	
Kegalle	Warakapola	127	592	25	2	
	Galigamuwa	155	557	8	0	
	Kegalle	294	437	36	3	
	Mawanella	434	639	44	0	
	Rambukkana	58	141	0	0	
Kandy	Yatinuwara	658	794	65	9	
	Total	2043	4058	230	18	

Table 3.11. Details of sanitary facilities

Source: Sample HH survey, 2017

Table 3.12. Availability of electricity

District	DSD		Source of electricity			
		National grid	Solar power and other sources	No Electricity		
Gampaha	Attanagalle	392	2	3		
	Meerigama	863	4	7		
Kegalle	Warakapola	736	5	5		
	Galigamuwa	717	2	1		
	Kegalle	765	4	1		
	Mawanella	1113	2	2		
	Rambukkana	196	3	0		
Kandy	Yatinuwara	1519	5	2		
	Total	6301	27	21		

Source: Sample HH survey, 2017

39. As per the table 3.11, all most all surveyed households are dependent on electricity through the national grid. Very few (0.4%) households use solar energy and about 0.3% of households have no electricity facilities.

District	DSD	Source of water				
		NSW & DB	Well/ tube well	Community well		
Gampaha	Attanagalle	86	278	33		
	Meerigama	124	671	79		
Kegalle	Warakapola	121	612	13		
	Galigamuwa	194	504	22		
	Kegalle	595	159	16		
	Mawanella	753	318	46		
	Rambukkana	105	84	10		
Kandy	Yatinuwara	1393	119	14		

Table 3.13. Source of water

Source: Sample HH survey, 2017

40. As per above table 3.13, most of the surveyed households in Kegalle, Mawanella, Rambukkana and Yatinuwara DS division depend on the water supply system of National Water Supply and Drainage Board (NWS & DB). Meanwhile, most of the households in Attanagalla, Meerigama, Warakapola and Galigamuwa take water from wells/tube wells.

#### Analysis of vulnerable households and gender related details

41. The current socioeconomic study also focused on vulnerable families in the project area. Details of the findings are summarized below.

Table 3.14. Details of vulnerable households

District	Gampaha	Kegalle	Kandy
Type of vulnerability			
Family with elderly household head (age > 60 years)	417	1222	599
Family with monthly income < SLR 5,000	10	33	25
Female headed families	204	509	233
Families with disabled members	78	155	82
Total	709	1919	939

Source: Sample HH survey, 2017

42. Table 3.14 presents the vulnerable households in three districts. Families with elderly household heads (age above 60 years) are the major vulnerable category. As a percentage this is 58.82%, 63.68%, and 63.79% for Gampaha, Kegalle and Kandy districts respectively. Female headed families are the next highest vulnerable category.

43. Tables 3.15 (a), 3.15(b), 3.15 (c) summarize survey findings with regard to contribution of female members in family matters and community organizations in three districts.

Table 3.15 (a) Contribution of female members in family matters and community organizations – Gampaha district

Type of involvement	Always	Sometime	Rarely	If Request	Do not Participate
Decision making in family matters	753	293	45	103	66
Bread earner	351	157	50	110	586
Participation in CBO activities	510	141	68	376	162
Organize community programs	425	211	45	521	51

Source: Sample HH survey, 2017

Table 3.15 (b) Contribution of female members in family matters and community organizations – Kegalle district

Type of involvement	Always	Sometime	Rarely	If Request	Do not Participate
Decision making in family matters	1995	856	113	305	209
Bread earner	613	469	255	556	1313
Participation in CBO activities	1176	503	231	1035	448
Organize community programs	922	453	224	1355	416

Source: Sample HH survey, 2017

Table 3.15 (c) Contribution of female members in family matters and community organizations – Kandy district

Type of involvement	Always	Sometime	Rarely	If Request	Do not Participate
Decision making in family matters	959	259	84	90	58
Bread earner	211	238	131	243	464
Participation in CBO activities	296	266	144	480	171
Organize community programs	295	225	116	518	192

Source: Sample HH survey, 2017

44. According to above tables it is clear that most of female family members in these three districts have opportunity to play a key role in decision making in family matters and community organizations.

45. The opportunity for the female members getting involved in the project was also analyzed as a gender perspective for the project. Below table 3.16 summarize the analysis of this aspect.

District	Agree to involve	Do not agree to involve
Gampaha	295	964
Kegalle	668	2827
Kandy	533	967

Table 3.16 Willingness of household head to involve female family members in the project

Source: Sample HH survey, 2017

46. According to table 3.16 majority of heads of sample families in all three districts are not willing to let their female family members to get involved in the project.

Table 3.17 Type of involvement of female famil	v members in the pr	oiect (a multiple response)
Table 0.17 Type of involvement of female farm	y members in the pr	ojeet (a maniple response)

District	Gampaha	Kegalle	Kandy
Type of involvement			
Provide wage labour during construction	59	314	163
Provide wage labour for maintenance of road	54	67	44
Provide meals to work force as a small business	238	391	366

Source: Sample HH survey 2017

47. As per the table 3.17, family members' first preference is to provide meals to work force as a small business. Next preference is to Provide wage labor during construction period.

#### Community perception about the project

48. The survey focused to collect information about community's knowledge of the project. Below table presents the percentage of households who had knowledge about the project.

Table 3.18.	Community	awareness	about t	he project
1 4010 01101	Community	anaionooo	about	

District	Know about the project	Do not know about the project
Gampaha	422	828
Kegalle	877	2627
Kandy	488	1007

Source: Sample HH survey, 2017

49. According to the above table 3.18, majority of people do not know about the project. Therefore, it is necessary to carry out more focus group discussions and information dissemination activities during detailed design stage of the project.

50. The survey also focused on the community perception on the present road condition. The findings are summarized in table 3.19.

District	Condition of the existing road surface				
	Good	Fair	Bad	Very bad	Bad in rainy season
Gampaha	327	642	256	28	11
Kegalle	723	1951	672	135	30
Kandy	232	864	331	62	18

Table 3.19. Condition of existing road to be rehabilitated by the project

Source: Sample HH survey, 2017

51. According to Table 3.19, majority of respondents' opinion was existing road condition is fair.

Table 3.20. Impact of existing road condition on day to day activities of women, children and elderly persons

District	Affect the activities	Do not affect the activities
Gampaha	664	602
Kegalle	1505	2039
Kandy	475	1049

Source: Sample HH survey, 2017

52. Table 3.20 shows that more than 58.2% of respondents in Kegalle and Kandy districts express existing road condition do not affect their day today activities.

53. Table 3.21 summarize the willingness of community to participate in the project.

Table 3.21.	Willingness of	community to	participate in	the project

District	Willing to participate	Do not want to participate
Gampaha	354	917
Kegalle	993	2558
Kandy	720	807

Source: Sample HH survey 2017

54. As per the above table majority of the communities in these three districts (surveyed households) would not like to participate in the project.

District Type of contribu			on
	Community awareness creation	Involve in progress monitoring	Involve in maintenance
Gampaha	277	175	84
Kegalle	727	294	235
Kandy	447	144	155

Table 3.22. Type of contribution for the project (multiple responses)

Source: Sample HH survey, 2017

55. As per the table 3.22, it is clear that most of people are willing to involve in road maintenance and community awareness creation activities.

56. Table 3.23 summarizes the perceived benefits of the project.

District	Gampaha	Kegalle	Kandy
Perceived benefits		-	
Develop agriculture sector	341	576	145
Develop education facilities	477	942	469
Develop health and sanitary facilities	527	1011	435
Increase job opportunities for villagers	355	868	365
Road safety for Women, Elders and children	664	1505	475
Develop Public/privet transport for villagers	552	1268	514
Easy travel even at night time or time with poor visibility	502	923	303
Develop industrial sector in rural areas	184	388	189
Reduced the travel cost and time	909	2466	995
Increase cultural values	158	296	121
Improve standards of living	158	396	206
Develop communication with villagers and government institutes	558	1475	529

Table 3.23 Perceived benefits of the project (multiple responses)

Source: Sample HH survey, 2017

## 4. PUBLIC CONSULTATION AND COMMUNITY PARTICIPATION

57. It is important to consult public and other stakeholders regarding project activities. This helps to understand viewpoints of stakeholders and to respond to their concerns and suggestions during the early stages of the project, thereby incorporating valuable suggestions to the designs and reducing objections to the project. One on one interviews and Focus Group Discussions were conducted along the proposed section to be developed in A001.

#### A. One on One Interviews



Figure 4.1: Interviewing a traditional business woman

Figure 4.2:Interviewing a school teacher

58. The key stakeholders of the project were consulted during the field survey. This included Divisional secretaries, Grama Niladaries, Government officers and public. The Divisional Secretaries and other government officers expressed that this development is good and they highlighted the main concerns that need to be addressed during project implementation. Few such concerns were providing sign boards, bus bays, speed boards, side drainage...etc.

59. One on one interviews were conducted with all the persons contacted through the household survey. All most all the people welcomed the development project. A sample of ideas expressed are provided in Annexure 3. Many people highlighted the same concerns expressed by government officers. The females have specially highlighted the road safety issues.

# **B.** Focus Group Discussions (FGDs)

60. The FGDs were conducted to get the ideas of the community. Around seven (7) FGDs were conducted with government officers and public in road section to be developed. The table 4.1 below presents the information on FGDs conducted with number of people participated according to gender. The attendance lists are attached as Annexure 4.

lte m No.	Date	Location	Target Group	Total number of participants	Males	Female s
1	2017/01/04	Mirigama Divisional Secretariat Office	Government officers	08	6	2
2	2017/02/09	Radawadunna GN Division,	Public	43	26	17
3	2017/02/09	House located in Bataleeya GN Division	Public	17	6	11
4	2017/01/06	House located in Kongasdeniya GN Division	Public	14	9	5
5	2017/02/01	Molagoda GN Division	Public	11	10	1
6	2017/02/09	Shop located in Galigamuwa- Ambanpitiya GNDivision	Public	9	6	3
7	2017/02/09	Shop located in Ganethanna GN Division	Public	26	22	4

Table 4.2: Summary of Key points discussed in FGDs with photographs

Location	Key points	Photographs
Mirigama DS Division	<ul> <li>No color lights at Pasyala junction.</li> <li>There is a bus halt at the Pasyala junction. When buses stop near the pedestrian crossing It's difficult for pedestrians to cross the road.</li> <li>Pasyala junction should be widened.</li> <li>The three wheeler park and Sunday fair should be removed.</li> <li>A bypass should be introduced between Meerigama road to Kandy road. Then there will be less traffic at Pasyala junction</li> <li>There's no proper bus halt at Pasyala junction towards Colombo.</li> <li>The Kandy road need to be widened. The road from Warakapola to Ambepussa is narrow</li> <li>Huge traffic is created when buses stop at</li> </ul>	

Location	Key points	Photographs
	<ul> <li>Ambepussa junction towards Kurunagala.</li> <li>Color lights should be introduced at junctions.</li> <li>The traffic is concentrated at Warakapola and Pasyala Junction</li> <li>The road section of Wewaldeniya town should be widened</li> </ul>	
Bataleeya 25A (GN Division)	<ul> <li>Speed limits need to be incorporated.</li> <li>It's better to have a pedestrian crossing near the Bataleeya school.</li> <li>There's no bus stop near the Anura School</li> <li>Street lamps are not sufficient and signal lights are out of order and they have to be replaced.</li> <li>There need to be a drainage system along the road.</li> <li>The main income of about 250 families is the cashew business. And about 80 businessmen carry out the business in the road side.</li> <li>It is good if white lines are marked removing yellow lines.</li> <li>It's better white lines are marked.</li> <li>A speed limit will help to continue our business.</li> <li>If the parking is incorporated, it's good for our business.</li> </ul>	
Molagoda GN Division	<ul> <li>There is no drainage system on both sides of the road.</li> <li>The water that flows along the road goes into private properties, 83 km post and 84 km post)</li> <li>Better to have color lights as drivers neglect pedestrian crossings.</li> <li>Accidents could be reduced if speed limit is reduced from 70 to 40.</li> <li>A lane should be reserved for pedestrians</li> <li>Bus halts should be incorporated in populous areas.</li> <li>Street lamps are not adequate.</li> <li>Drainage systems should be maintained properly. When there's rain, the drain get blocked.</li> <li>The drain near the Molagoda shed and the drain near craft council (near bodiya) is always blocked.</li> <li>New culverts need to be incorporated at some locations.</li> </ul>	

Location	Key points	Photographs
Radawadun na GN Division	<ul> <li>The construction period should not drag. Its easy for our businesses.</li> <li>If drains are constructed, the access should be provided.</li> <li>The drainage system should be covered with slabs.</li> <li>Accidents will reduce if road is widened.</li> <li>When road is asphalted and if road edges are not constructed properly it's difficult for vehicles.</li> <li>The road drains have not been constructed and maintained since 2012.</li> <li>The speed limits should be introduced.</li> <li>Street lamps are not working properly and need to be replaced (48km).</li> <li>When the road is raised and asphalted, need to consider about utility lines as vehicles with height can get affected.</li> <li>When manholes are not closed, water fills and mosquitoes breed.</li> <li>There are no pedestrian crossings from Ganethanna to Kadugannawa area.</li> <li>Accidents take place at Pahala Kadugannawa where there's a bend and rock tunnel.</li> <li>At present there are about 50 fruits stalls at Pahala Kadugannawa area.</li> <li>It's difficult for shop owners to adjust their structures if affected.</li> </ul>	<image/>
Kongasdeni ya GN Division	<ul> <li>The pedestrian crossings need to be changed for most needed locations such as to Napagoda temple.</li> <li>There are no drains at some sections. Hence water flows into private garden. Therefore, the drainage system needs to be constructed.</li> <li>Please continue the construction of drainage up to culvert near the police station.</li> <li>Water gets stagnated near some locations.</li> <li>Color light is required at Kongasdeniya .It's difficult to cross the road.</li> <li>Road should be widened. Or accidents will take place after asphalting the road.</li> <li>The road should be widened. The middle line should be marked.</li> <li>Drainage system needs to be maintained properly for water to flow.</li> </ul>	

Location	Key points	Photographs
Galigamuwa - Ambanpitiya GN Division	<ul> <li>Its good if the road is constructed with minimum time as it will affect our businesses.</li> <li>If 10 toys are brought only 5 can be sold others have to be left out as it gets dirty after keeping in road side.</li> <li>Therefore, it's difficult to gain profit through this business.</li> <li>Its good if the drainage system of the road is developed.</li> </ul>	

61. Further consultations were held with public as one on one interview on 27<sup>th</sup> June of 2019 at Chief Engineer's office Kegalle. The attendance lists are attached as Annexure 5.

## 5. CONCLUSION AND RECOMENDATION

62. In general, it is expected that the national roads selected under RMC packages will assist in improving the connectivity of rural areas with economic centers of the country. As such proposed rehabilitation and improvement of Nittabuwa Junction to Kadugannawa section of Colombo Kandy (A001) highway under RMC component of iRoad program will have a positive impact on the rural and regional socioeconomic development of the people living particularly in Gampaha, Kegalle and Kandy districts in Western, Sabargamuwa and Central Provinces in Sri Lanka.

63. There will be no permanent physical or economic displacement due to the proposed improvements as per the preliminary designs. However, project team observed temporary structures within the ROW, especially close to the roadside drains. They may need to adjust or shift back their structures during construction period. During field visits, the owners of these structures didn't object the project and they agreed to shift back or adjust their structures if needed. Shifting of these structures shall be done in advance and within a very short period of time avoiding any permanent or temporary income loss to their occupants. The PIU shall take measures to avoid or minimize other social impacts that would occur due to the proposed activities.

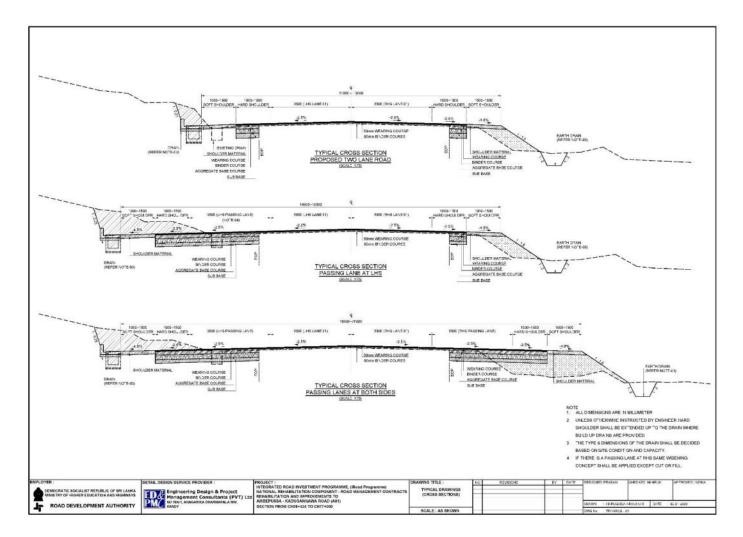
64. The road improvement will include passing lanes having a width of 3.5m each either in a one side or both sides based on the availability of the existing ROW. During detailed design, PIU will make sure that no permanent or temporary structures are affected due to incorporation of these passing lanes. Thus, there shall be no physical or economic displacement due to the project activities.

65. The consultation with public revealed that the communities require a safe road with improved hard shoulder, placing necessary sign boards, color lights, street lamps, pedestrian crossings and introducing speed limits. These suggestions will greatly improve the safety of all road users.

66. The roadside drainage is another aspect that needs to be considered even if the main focus will be on maintenance. The point of improving roadside drainage was pointed out by many during the one on one interview and in FGDs. The necessity of proper drainage was also observed by the field team.

67. Establishment of the Grievance Redress Committees before commencement of improvements and maintenance works is also an important aspect with regard to social safeguards compliance. As revealed in the socioeconomic analysis the public welcome this project as a positive factor in economic development.

## **Typical Cross sections**



# INVOLUNTARY RESETTLEMENT IMPACT CATEGORIZATION CHECKLIST

Project: Improvement of Nittambuwa Junction to Kadugannawa section of Colombo Kandy (A001) Road.

Probable Involuntary Resettlement Effects	Yes	No	Not Known	Remarks
Involuntary Acquisition of Land				
1. Will there be land acquisition?		V		The existing average RoW is between 15.7m – 18m. The road improvement works are envisaged to carry out within the existing RoW.
2. Is the site for land acquisition known?		√		The existing average RoW is between 15.7m – 18m. The road improvement works are envisaged to carry out within the existing RoW.
3. Is the ownership status and current usage of land to be acquired known?	1			Field team observed and recorded temporary structures located within existing RoW and close proximity to the road edge.
4. Will easement be utilized within an existing Right of Way (ROW)?		$\checkmark$		
5. Will there be loss of shelter and residential land due to land acquisition?		$\checkmark$		The road improvement is to be carried out withing the existing Row without affecting any permanent or temporary structures. However, the owners of temporary structures may have to shift their structures temporarily for the development.
6. Will there be loss of agricultural and other productive assets due to land acquisition?		V		
7. Will there be losses of crops, trees, and fixed assets due to land acquisition?	V			The trees within the existing ROW may have to be removed.
8. Will there be loss of businesses or enterprises due to land acquisition?		$\checkmark$		The road improvement is to be carried out withing the existing Row without affecting any permanent or temporary structures. However, the owners of businesses may have to shift their structures temporarily for the development.
9. Will there be loss of income sources and means of livelihoods due to land acquisition?		V		
Involuntary restrictions on land use or on access to	egally	designa	ted parks	and protected areas
10. Will people lose access to natural resources, communal facilities and services?		$\checkmark$		There may be temporary disturbances during construction.

11. If land use is changed, will it have an adverse impact on social and economic activities?		$\checkmark$				
12. Will access to land and resources owned communally or by the state be restricted?		$\checkmark$				
Information on Displaced Persons:						
Any estimate of the likely number of persons that will be displaced by the Project? [] No [] Yes If yes, approximately how many? <u>Not Applicable</u>						
Are any of them poor, female-heads of households, or vulnerable to poverty risks? [] No [] Yes						
Not Applicable						
Are any displaced persons from indigenous or ethnic minority groups? [] No [] Yes						
Not Applicable						

Note: The project team may attach additional information on the project, as necessary.

# A sample of One on one interviews Carried out with Stakeholder and Public during the Preparation Social Assessments for Nittambuwa Junction to Kadugannawa section of Colombo Kandy (A001) Road

Name of the Respondent	Sex	Designation/ Address	Date	Views
Mr.Lakmendra Dayamantha Kumara Thenuwara	Male	Divisional Secretary, Divisional Secretariat Division, Warakapola	2017-01-06	There are many accidents taking place near Dummaladeniya due to slippery condition of the road. The road gets flooded close to the post office of Warakapolla. The crossing point at Ambepussa junction need to be changed and taken towards Kegalle. Bus stand or the crossing point at Udukumbura junction also need to be changed. There, the bus stand is located at the double lane. There are no speed boards. RDA should take responsibility in maintaining the ROW. It is better if RDA can build a guard rail near Tholangamuwa Central. RDA need to remove harmful trees in the ROW as well. Further, when the road is developed and asphalted, the road gets raised. Due to this, the road is higher than the shops located along the road side and during rainy days, the water flows in to shops. After the development, Telecom and Water Board may dig the road to lay their wires and pipes. It is better to coordinate with these agencies to do the development together.
Ms. Nadeesha Amarasinghe	Female	Assistant Divisional Secretary, Divisional Secretariat Division, Meerigama	2017-01-06	It is better if a colour light system can be established for Pasyala junction. There is lot of traffic in the junction due to long distance buses and the three-wheel park in the junction also need to be changed. There's weekly fair at the junction that need to be removed too. Usawiyawatta road can be improved and used as a bypass when there's traffic at Pasyala junction. The ROW is encroached in many places. There are no flooded sections along the road.

Name of the Respondent	Sex	Designation/ Address	Date	Views
Ms. Nalika Piyasena	Female	Divisional Secretary, Divisional Secretariat Division, Kegalle	2017-02-01	The Kegalle town has already been developed. Therefore, a redevelopment is not necessary. However, the traffic condition in the town should be minimised.
Mr. M.P.I. Senarathna	Female	Assistant Director (Planning), Divisional Secretariat Division, Galigamuwa	2017-02-01	Many accidents take place from DS office junction up to Ballapana junction. It's very difficult to cross the road from the crossing near the DS office. It is better to establish a crossing right across DS office.
Ms. Yamuna Kumari	Female	Shop owner,170/1 Negambo Rd ,Nittabuwa	2016-12-02	There are accidents taking place near shed at Nittambuwa. I do this business of selling lotteries for last 2 and half years. I earn Rs. 900 – 1000 per day.
Ms. A.D. Shamali	Female	Cashew shop owner, Kandy road.	2016-12-02	The road development is good. We are doing this Cashew business for last 10 years. We can have a good income on April and August months. Daily we sell cashew worth of Rs. 2000/=. However, the business will be reduced after constructing the Central Expressway as tourists use that route to Kandy or Kurunegala.
Mr. Chaminda Ranasingha	Male	Shop owner 141 , Fancy,House, Warakapola	2016-12-02	During rainy days, the storm water stagnates near the hospital and water drains after about 1 hour. There's traffic in the evening for around 1 and half hours. There's no space to park vehicles in the town, because of that the traffic aggravates.
Mr. H. Thilakarathna	Male	Shop owner,335, Main	2016-12-02	During rainy days, the road gets under water for about 2 feet. This will disturb the transportation for about 2 hours.

Name of the Respondent	Sex	Designation/ Address	Date	Views
		Street ,Warakapola		However, the duration the water goes under water depend on the intensity of rain. The drain system along the road is blocked and not enough to drain the storm water. There are many developments carried out in the town such as buildings. The ground was developed by Urban Development Authority by filling low lands. These are the reasons for flooding. From 7 a.m. to 11 a.m. in morning and 2 to 3 hours in evening are the peak time for traffic. I do business in the town since 1978. It is good to develop the bypass road.
Mr. P.W.G. Kulathunga	Male	Shop owner, No : 25 Warakapana, Uduwella (Pahala Kadugannawa)	2016-12-02	I do this business here for last nine years. The shop is open from Sunday to Friday and on Saturday its closed. On October and November the business is not portable as there's lack of fruits. There are landslides taking place in this area. On heavy rainy days rock fall and small land slides are visible.
Ms. Sadamali ,	Female	Shop owner, No: 76/A Bataleeya ,Pasyala	2016-12-02	The road development is good. Accidents take place near Bataleeya bus halt as vehicles go very fast in this area. As there is no proper drain system, the water flows on the road. The drain along the road need to be constructed. We earn around Rs. 1000 – 2000 per day from selling cashew.
Ms. Sumana Rajapaksha	Female	Shop owner, Kandy road, Radawadunna	2016-12-02	There are accidents taking place in this area due to speeding of vehicles. There is not much income as we bring cane from other areas and sell here. Some days. There's no income at all.
Ms. Wasana	Female	Shop owner, Kandy Road Warakapola .	2016-12-02	On heavy rainy days, the road goes under water. The main reason for this is drains are blocked. Further, the traffic also take place due to flooding. When there are

Name of the Respondent	Sex	Designation/ Address	Date	Views
				some functions in the community ground there's lot of traffic in the town.
Ms. Chandra Pathirana	Female	Shop owner, Warkapola	2016-12-02	On heavy rainy days, the road goes under water and there's traffic as it is difficult for vehicles to move.
Ms. Irangani	Female	Shop owner, Pahala,Kadugannawa, Higula	2016-12-02	Accidents take place in Pahala Kadugannawa as vehicles do not have enough space. We pay a rental of Rs. 150/= for the Pradeshiya sabaha for this business. We don't do the business everyday. The business is good on Kandy possession days and season for climbing Adam's peak.

## Sign Sheets of the Focus Group Disscussions for Nittabuwa Junction to Kadugannawa section of Colombo Kandy Road

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Date Time Venue	: 27 <sup>th</sup> June 2019 : 11.00 a.m : CE's Office,RDA, Ambanpitiya, I	Kegalle	* 1	\     \	REC	
Ser.	Name	Organization	Designation	Contact Number	Signi	
No.	R.W.M.T.B. Wieleremaning	Le ROA	chirat Rugineau	077403097+	K	
2	K.A. Halschadn	RDA.	Et bagille	0718062951	14	
3	L.S. Senowth	iRoJ - Rono	Se-A- Himper-62	07222740 11	+	
4	Schage Regarage	ADIS	TA Guan/Jack	0779225893	1	
5	L.H.R.A.B. Janathila	RDA	T.0	071-8067993	1	
6	I.D Jayonothint	RD.P	Tio	071-900 9482	34	
2.9	B.m. c.m. Sendhipathiy	RDA	9.0	071-8234200	and	
8	A. D. L. Gunaciardon	R DA	Engineer	071-8095607	K/DZ	
. 9	W-A. Samarnjeewa	PDA-ESD	SIAO	0711104751	500	
10	M.P.N. Madhumogani	RDA. ESD	R/r	071 8088854	CP:G	
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