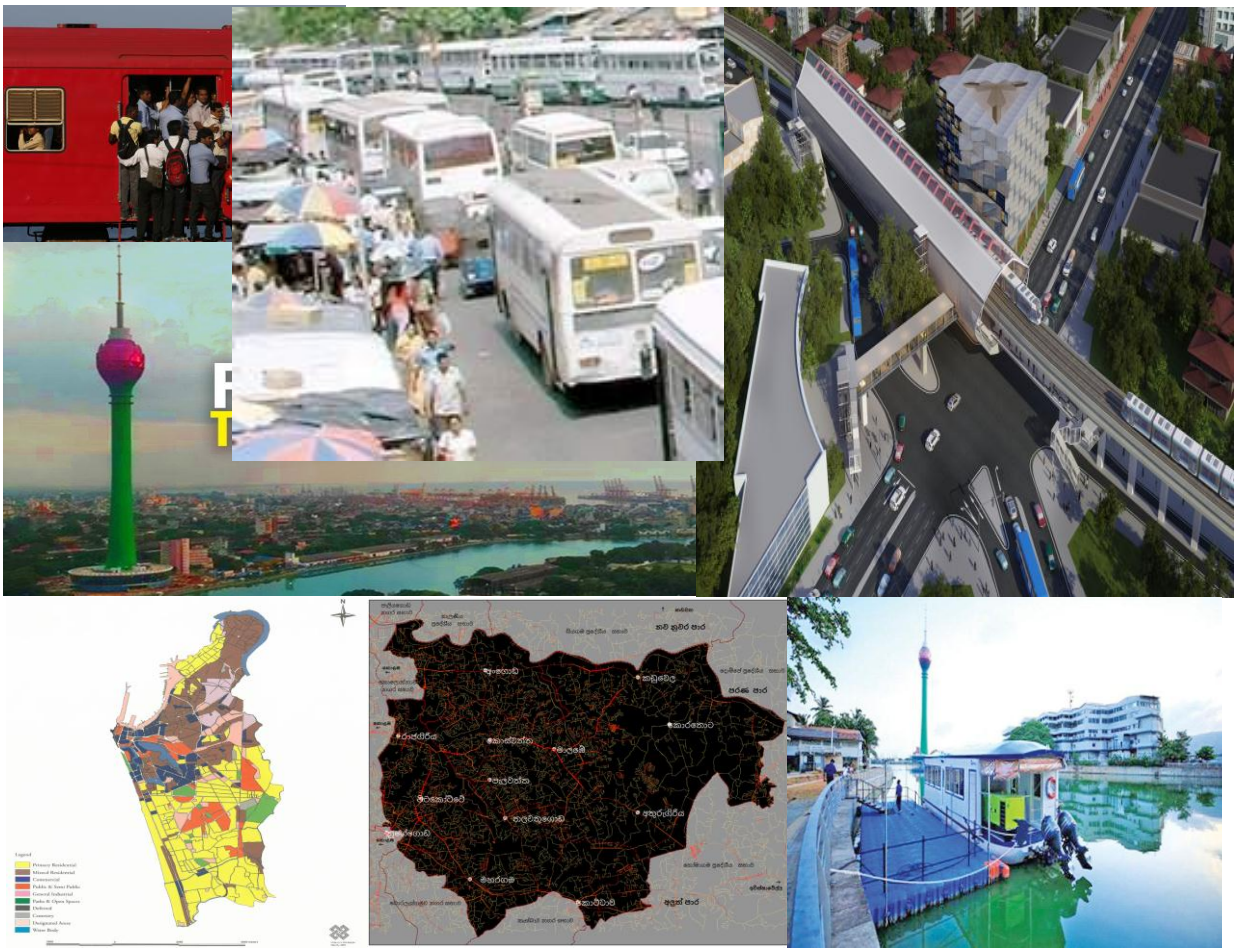
Evaluating The Role of Related Government Institutions to Reduce the Traffic Congestion in Colombo City and Surrounding Access Road.



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National Audit Office

Content

01. Executive Summary

Among the essential infrastructures for the development of a country, a regular road system should be an adequate and quality infrastructure spread according to the needs. Also, the road system should be improved along with the development works taking place in the city. For this, road systems have been prepared to suit the present and the future on a scientific basis in developed countries, but in developing countries like Sri Lanka, it remains as an unsolved problem. It is unique in the Western Province since Colombo is the commercial city and Sri Jayewardenepura Kotte is the administrative city and creates social, administrative, economic and environmental obstacles within the city limits and in the approaches to it. Due to the large number of vehicles entering the commercial city of Colombo through 07 approach roads including Galle Road, High Level Road, New Kandy Road, Low Level Road, Negombo Road, Kandy Road and Horana Road, there is a large number of vehicles running daily.

The main objective of this performance audit was to evaluate the efficiency and effectiveness of the role played and to be played by the Government and the agencies responsible for transport management in providing short and long term solutions to manage the heavy traffic in and around the city of Colombo. Here, the performance of Government institutions related to transport, traffic management, urban development and road development was examined in accordance with the National Physical Plan as well as Urban Planning and Road Planning.

Not turning urban development, transport, and road development plans into legal documents through gazette notices, not identifying the causes of traffic congestion and measures to be taken to reduce them and not identifying their priority, by coordinating all aspects of urban development, road development and transport, the state problems of non-recognition of responsibilities of institutions were observed during planning. It was observed that the minimum level of the economy, efficiency, and effectiveness of the implementation of the main plans such as Road Development Plan, National Physical Plan and Urban Development Plan have been affected for above issues. Also, since the national policies related to transportation and road development were in the draft stage, it was observed that the measures taken to reduce the traffic congestion were not uniform and were not implemented continuously. It was observed that the action plans of the relevant institutions were not prepared in

parallel with these main plans and the measures to be taken to reduce traffic congestion were not covered by those action plans.

Due to non-conduct of proper feasibility study, it was not possible to achieve the desired objectives of the projects like Bus Priority Lanes, Flexible Office Hours, Waterfront Transport, and the Millennium Project, which were implemented in the metropolitan plan since 2017. The Light Rail Transit Project from Malambe to Fort had been planned to start with foreign financial support and the preliminary work had been completed and the preliminary feasibility studies of the Western Regional Light Rail Line Project had been completed. Despite this, these two projects have been abundant at the beginning and accordingly the expenditure of Rs. 11,537 million incurred till 31December 2019 had been realized.

Also, proposals such as parking lot management, intersection control, traffic control, pre-paid card bus fare system, driver improvement point system and charging of tolls for vehicles entering the city center have not been implemented in 2019. It was observed that only 9 luxury buses were able to be purchased and office and school transport services were not improved according to the need. Inadequate follow-up to assess the traffic congestion and its impact (TIA) caused by unauthorized construction and development works in Colombo and surrounding suburbs, inadequate parking facilities in the greater Colombo area had led to heavy traffic congestion. Also, it was observed that the lack of traffic police staff for the Colombo area, untrained traffic police staff between 78 percent and 86 percent had affected the traffic management.

Therefore, the factors that cause traffic congestion, the priority of the measures to be taken for it and the responsibility of the relevant institutions should be correctly identified and all the institutions should unite to prepare a single plan to reduce the traffic congestion and legalize it through a gazette notification and implement those plans in due time and assigning a trained traffic police staff to the Colombo area as per the need, speedily implementing the driver improvement points system, speedily implementing the projects proposed to improve passenger transport, preparing a formal program for school and office transport services, Urban Development Authority and other local authorities together go for a follow-up system be put in place to prevent further occurrence of combined and unauthorized constructions are the recommendations for overcome those issues.

2. Introduction

2.1 Background

With the increase in people's income, the consumption of private vehicles has increased and the inefficiency of public passenger transport has also been a major reason for that. Despite the increase in the use of vehicles, traffic congestion has become a serious problem in Colombo city and its surrounding access roads due to the lack of other infrastructure. According to the metropolitan plan, under an efficient transport system, 20 km per hour should be the optimum driving speed within the urban limits, but due to the fact that it is currently a minimum driving speed increases the cost of transport and wastes the time of passengers, reduces the efficiency of the workforce and wastes fuel. According to Central Bank of Sri Lanka data as indicated in the above plan, the cost of transportation is 11.3 percent of the gross national product. Exceeding the above figure of 10 percent is not very good for the economy and due to that the daily economic loss is about 1 billion.

2.1.1 National Physical Plan – 2030

The National Physical Planning Department has prepared the National Physical Plan for the next decade and beyond, covering the entire country with the primary objective of providing guidance to absorb the disparity in geographically strategic location of the world so as to facilitate the physical environment for Sri Lanka to become a friendly country and a competitive economy in the world. It is a plan prepared based on all economic plans of the country. As one of its components, it provides guidance on how to optimally use the country's existing land and thus makes suggestions on how the country's road system should be developed. A national level physical plan is prepared on a physically very high scale, and this is a conceptual plan that provides guidance on how the physical development of a country should take place.

2.1.2 Western Regional Metropolitan Planning

As the transport system currently operating in the country, especially in the Western Province, requires a strong strategic intervention, special attention has been paid to this in the Western Regional Metropolitan Plan. Here, the Japan International Cooperation Agency (JICA) had prepared a comprehensive urban transport plan for Colombo and the urban region based on the JICA Comtrans Planning Study conducted in 2013/2014.

Through this transport plan, the problems based on the railway system, buses and highways along with the existing problems of the road system and the problems related to vehicle control and management were identified as follows.

i. Traffic congestion at intersections.

ii. Limitation of traffic capacity due to roadside parking.

iii. Rapidly increasing road accidents.

The following objectives were planned to be carried out at the sector level to provide solutions to the transport problems identified in the area by the Japan Cooperation Agency (JAICA) and the Western Metropolitan Plan.

i. Transportation Demand Management
ii. Improvement of public transport services
iii. Development of road infrastructure
iv. Environmental sustainability.

2.1.3 Government agencies contributing to reducing traffic congestion on Colombo and surrounding access roads

The following government agencies directly and indirectly contribute to reducing traffic congestion.

i. Ministry of Transport Services Management
ii. Ministry of Urban Development, Water Supply and Housing
iii. Traffic Police Headquarters
iv. road development Authority

v. Urban Development Authority

vi. Department of National Physical Planning

vii. Colombo Municipal Council

viii. Kaduwela Municipal Council

ix. Sri Jayawardenepura Kotte Municipal Council

x. Dehiwala Municipal Council

xi. Kolonnawa Municipal Council

xii. Ministry of Lands

xiii. Divisional Secretariats (Thimbirigasaya, Dehiwala, Sri Jayawardenepura, Kaduwela etc...)

xiv. Western Provincial Council

xv. Passenger Transport Authority

xvi. Transport Commission

xvii. University (Moratuwa)

xviii. Department of Motor Transport

The main functions of the directly contributing government agencies are as follows.

(a) Traffic Police Headquarters

The Traffic Police Headquarters contributes directly to the management of traffic congestion in Colombo city and surrounding access roads.

- **Main functions performed**

i. Enforcement of traffic rules, prevention of traffic violations and prosecution of offenders

ii. Road Accident Investigation

iii. Traffic control on highways

iv. Assisting the public in various social activities and events involving cars.

v. Provide information for planning

- **Functions performed by the Traffic Police Headquarters in relation to traffic management**

i. Acting as a consultant on all traffic related matters.

ii. Training of police officers involved in traffic accident investigation and traffic control

iii. Supervision of Police Traffic Schools established at Training School and Central Garage

iv. Advising concerned agencies regarding traffic management on special occasions and events

v. Investigate any special traffic problems and suggest action to be taken.

vi. Conducting a Traffic Impact Assessment for new development activities at the request of the Urban Development Authority and other local government.

(b) Ministry of Transport

The role of the Ministry regarding transport and traffic management is as follows.

i. Formulation, follow-up and evaluation of policy programs and projects related to the subject of transport.

ii. Taking necessary steps to improve efficiency of integrated passenger and freight rail transport services using new technology and development of railway infrastructure and provision of railway services.

iii. Provision of passenger ferry services

iv. Providing safe and reliable passenger transport services

v. Introduction of environment friendly transport system

vi. Regulation of private passenger transport services

vii. Construction of new railways and expansion of existing railways and acquisition of related lands

viii. Registration and licensing of motor vehicles and issuance of driving licenses

ix. Issuance and regulation of rules and guidelines relating to motor vehicles

(c) Ministry of Urban Development, Water Supply and Housing

The following tasks are carried out by this Ministry regarding urban development.

i. Economic, social and physical development of urban areas

ii. Technical City Development Project and related activities

iii. Preparation of National Physical Plans and Regional Physical Plans

iv. Directing and regulating construction activities based on national physical plans to ensure integrated urban development.

(d) Road Development Authority

i. Creation of adequate highway system

ii. Road maintenance at an acceptable level

iii. Working to reduce road user cost

iv. Supporting the development of the local road construction industry

(e) Urban Development Authority

According to the corporate plan of Urban Development Authority for the period of 2022-2024 the strategic goals are included in the development and planning of physical plans in all urban areas and the following tasks are carried out in connection with that,

(i) Carry out and coordinate integrated planning and physical development within declared areas and implement programs related to development activities and services.

(ii) Completion of major development projects

(iii) Formulation and implementation of an urban land use policy

(iv) Development of environmental standards and schemes for environmental improvements

(v) Carrying out building, engineering, and consultancy operations in connection with the development

(vi) Planning and implementation of projects as per development plans in urban areas,

Completion of approved development projects by default

(vii) Preparation, coordination, implementation and monitoring of development planning proposals.

2.1.4 Vehicle registration trends in Sri Lanka

In the analysis of vehicle registrations in Sri Lanka from 2012 to 2019, new registrations of private modes of transport such as motor cars, three-wheelers and motorcycles as a percentage of total vehicle registrations had increased from 81 percent to 92 percent. The details are given below.

Statistical data on vehicle registration (Unit base)

year	2012	2013	2014	2015	2016	2017	2018	2019
Buses	3,095	1,805	3,851	4,140	2,685	3,331	2,957	1,613
Motor Cars	31,546	28,380	38,780	105,628	45,172	39,182	80,776	38,232
Three-wheelers	98,815	83,673	79,038	129,547	56,945	23,537	20,063	15,490
Dual Purpose Vehicles	37,397	24,603	20,799	39,456	26,887	16,742	16,931	13,459
Motor Cycles	192,284	169,280	272,885	370,889	340,129	344,380	339,763	284,301
Motor Vehicles carrying goods	12,266	5,872	5,121	7,142	7,563	11,432	9,371	5,223
Land related vehicles	21,892	13,038	9,082	12,105	13,947	13,049	10,282	7,666
Other	-	-	-	-	-	-	656	-
Total	**397,295**	**326,651**	**429,556**	**668,907**	**493,328**	**451,653**	**480,799**	**365,984**

Source – Sri Lanka Central Bank Report - 2019

2.1.5 Vehicle Active Population by Province

According to the National Road Master Plan (2018-2027) of the Road Development Authority, the active vehicle density and percentage value by province from 2010 to 2018 was as follows.

Percentage of Active Vehicle Population by Province (Percentage)

Province	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Western	43	40	39	38	38	37	36	36	35	31
Central	8	9	8	8	8	8	8	8	8	9
South	12	12	12	12	12	12	13	13	13	13
North	2	2	4	6	5	4	5	5	5	5
Easter	5	7	6	6	6	6	6	7	7	7
North West	15	13	13	14	14	14	13	13	13	14
North Central	5	7	6	6	7	7	7	7	7	7
Uva	4	4	4	4	4	4	5	5	5	5
Sabaragamuwa	5	6	6	6	7	7	7	6	7	7
Whole Island	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

According to the above data, the number of active vehicles in the Western Province shows a large value when compared with the other 8 provinces and the number in 2017 is 1,763,267. It was 31 percent in the year 2018, though it is 35 percent as per the way it is analyzed as a percentage.

Analyzing the active vehicles whose revenue licenses were renewed and new licenses obtained in the year 2020 in the Western Province, the total number of active vehicles in Colombo District was 545,031. It was 31 percent of the total number of vehicles in the Western Province which is 1,757,626.

As a major factor affecting the traffic congestion, the use of private vehicles had increased as compared to public vehicles for passenger transportation. According to reports related to the vehicle composition of the Colombo Municipality, the vehicular traffic from 7 main access roads to the city of Colombo is as follows for the first quarter of 2019.

Vehicle Category	Motor Cycles	Three wheelers	Motor Cars	Vans	Medium type Buses	Large Buses
Percentage (%)	24.5	29.7	34.6	3.4	0.6	1.8

According to the above data, 88 percent of the vehicles are composed of private vehicles such as motorcycles, three-wheelers, cars, and a minimum figure of 2.4 percent has been contributed to bus travel that can carry a large number of passengers. Accordingly, as revealed in the analysis of this data, the main reason for the increase in traffic congestion was the large number of private vehicles entering the city of Colombo.

2.2 Audit Approach

(a) Due to the problem of increasing vehicle usage beyond the capacity of the existing roads within the Colombo metropolitan area, as a direct result of this, there has been heavy traffic congestion in the Colombo city and surrounding access roads. As a result of under an efficient transport system, the optimum driving speed within the urban limits expected to be 20 km per hour in the western region but it is 8 km per hour for a bus and the average speed of a three-wheeler or a car is 16 km per hour.

(b) Traffic congestion in Colombo city and suburbs has become a socio-economic and environmental problem as it affects the efficiency of Sri Lanka's workforce as well as air pollution and noise pollution.

(c) The Government of Sri Lanka had to resort to various strategies to manage the traffic congestion and incur huge costs, and the loss to the economy is about 1 billion rupees per day due to the wastage of fuel and time to be considered.

(d) To address this problem, the government has taken a number of policy decisions, identified various short-term and long-term projects and it is important to evaluate the level of performance of some projects as they are in progress.

(e) A number of economic, social, and environmental issues have arisen here. This topic was chosen to evaluate the efficiency and effectiveness of the role that the government and the agencies responsible for transport management play and should play in providing short-term and long-term solutions to this problem. For that purpose, the role of government agencies in reducing the heavy traffic in Colombo city has been considered in this audit.

2.3 Audit Objectives and Criteria

Primary audit objective: To evaluate the efficiency and effectiveness of the role played and to be played by the government and the agencies responsible for transport management in relation to providing short- and long-term solutions to manage the heavy traffic congestion in and around the city of Colombo.

Sub Audit objective	criteria	Sources
a). To evaluate the economy and effectiveness of the planning process for managing the heavy traffic congestion in Colombo city and surrounding access roads.	i. Plans and revisions are made to identify current as well as future needs	National Physical Planning, City Planning • City and Country Planning (Amendment) Act No. 49 of 2000 • Urban Development Authority Act No. 41 of 1978 • Section 32 of the National Environment Act No. 47 of 1980 • Road Development Master Plan • Action Plans of relevant institutions • Western Region Metropolitan Planning
(b) Evaluating the cost-effectiveness, efficiency, and effectiveness of the plan implementation process	i. Achieving targets in terms of financial and physical progress of the respective projects ii. Carrying out development activities in accordance with legal regulations	• Action plans of projects • Vehicle evaluation report provided for construction

(c) Evaluating the effectiveness of the coordination process of government agencies implementing the functions related to traffic management	i. Coordination among agencies	• Coordinating Committee Reports • Traffic Committee recommendations
(d) Evaluation of the role of the traffic police department, which handles traffic on the roads to reduce traffic congestion in the city of Colombo and its suburbs.	i. Role of traffic police in reducing traffic congestion ii. Optimum utilization of capacities of traffic police department	Sub-sections (a) and (b) of the Motor Vehicles (Amendment) Act No. 18 of 2017 No. 133 • Approved staff • Action plans and progress reports
e) Assess the social, economic and environmental impact of traffic congestion.	i. Achieving relevant targets in terms of Sustainable Development Goals.	• Sustainable Development Goals 9; Build strong infrastructure, encourage sustainable industrialization and innovation • Sustainable Development Goals 11; Making cities and settlements complementary, safe, equitable and sustainable • Sustainable Development Goals 13; Rapid action against climate change and its impacts

2.4 Audit Scope

(a) The audit was carried out in accordance with the Supreme Audit Institutions International Standards of Auditing (ISSAI 3000-3200). Our performance audit is conducted in accordance with the guidelines issued by the International Organization of Supreme Audit Institution (INTOSAI) and the provisions of Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka and the provisions of the National Audit Act No. 19 of 2018. In order to reach a conclusion based on the observations and recommendations of our performance audit, we obtained an understanding of the organization's operations and internal controls as a basis for determining how far the stated objectives have been achieved and what are the risks associated with achieving those objectives.

(b) The work done in the years 2017, 2018 and 2019 has been taken into account in the government agencies that are performing the roles related to traffic congestion prevention on the basis of limited staff, other resources and time allowed. Among the traffic congestion areas identified by the Traffic Police Headquarters, more attention was paid to Battaramulla city, Maradana and Fort areas.

c). Among the programs and projects implemented to reduce traffic congestion by the ministries in charge of transport, highways and urban development, the objectives of the programs and projects implemented by domestic and foreign funds at that time and the basic problems arising in their implementation were identified in this audit.

2.5 Scope Limitations

(a) Our tasks were pre-planned and linked to the audit plan. It has been changed accordance with the results of our findings during the performance audit. Accordingly, we innovated the audit scope and limited the scope of the performance audit to sample procedures based on the available time frames and human resources for the audit.

(b) Agencies involved in traffic regulation, agencies implementing road projects and agencies implementing urban planning and legal regulations can be identified as agencies directly involved in reducing traffic congestion. Also, the institutions that work indirectly to reduce the traffic congestion in Colombo city and surrounding roads such as Kaduwela Municipal Council, Sri Jayawardenepura Kotte Municipal Council, Dehiwala Municipal Council, Kolonnawa Municipal Council as well as the Ministry of Lands, Regional Secretariats, Provincial Council and Passenger Transport Authority are related. Although they can be identified as institutions, the measures taken by those institutions to control traffic congestion have not been thoroughly examined. Furthermore, the measures taken by the Sri Lanka Railway Department to improve the railway transport service and the measures taken by the National Transport Commission to regulate the private bus service have not been subjected to this audit.

(c) The impact of policy decisions taken on changes in public policy was not taken into account.

(d) During the development of the relevant observations, the observations are developed based on the information obtained by the relevant related agencies and the reports published by the relevant agencies.

2.6 Authority to Audit

This performance audit was conducted under my direction in accordance with the provisions contained in Article 154 (1) of the Constitution of the Democratic Socialist Republic of Sri Lanka and in accordance with Sections 3(1) (d), 5(2) and 12(h) of the National Audit Act No. 19 of 2018.

3. Detailed audit findings

3.1 Planning

Availability of Proper city plan and road and transport plan help to reduce traffic congestion. In examining Sri Lanka's city planning, the attention has been drawn on the National Physical Planning Policy, the National Physical Plan, the Western Regional Municipal Planning and the provincial plans of the Urban Development Authority, as well as the road and transport plans, the road policy, the transport policy and the Road Development Authority's main Action plans etc. of the implementing agencies were directly linked with the long-term plan. The following matters were observed in this regard.

3.1.1 Current National Physical Plan -2030

In the year 2007, the established National Physical Plan 2011 - 2030 was prepared based on economic, social, and environmental sustainability principles and for the purpose of updating the plan and the revised National Physical Plan No. 2127/15 was published on12 June 2019. The total estimated cost of updating the National Physical Plan was Rs. 3 million and the relevant periods have been identified as short-term period (2020-2025), medium term period (2025-2030) and long term period (2030-2050).

The overall objective of the proposed plan was to provide guidance for exploiting the potential of being geographically located at a strategic location in the world to provide physical environment facilities for Sri Lanka to become a friendly country and a competitive economy in the world in the next decade and beyond that.

According to its sub-section 5.22, since efficient, affordable, and reliable public transport system is a fundamental factor for improving the livability of an urban area, the National Physical Plan 2050 has been proposed to improve public transport by paying special attention to urban collectives by the year 2025. Reorganization of transport media integration and the necessity of making a strategic investment for systematic preparation of the sector had been emphasized. Development along the highways will cause traffic congestion on major roads and urban areas and reduce the speed of flow on those roads. It was emphasized that this problem should be

addressed through urban development plans and active urban development strategies implemented at the regional level.

However, since the economic, social, and environmental impact caused by traffic congestion in the suburbs of Greater Colombo area, Sri Jayawardenepura and Battaramulla, which belong to the commercial and capital cities of Sri Lanka, is significant and the plans for traffic congestion in the establishment of the new administrative city are centered on this area. It was not created simultaneously and even after that, no permanent solution to the problem has been taken until now.

3.1.2 Other relevant policies and plans

In addition to the National Physical Plan, the policies related to urban development, road development and transportation affecting traffic congestion, the action plans of the relevant government agencies and the Metropolitan Plan prepared by the Ministry of Metropolitan and Western Development had been implemented. The following matters were observed in this regard.

3.1.2.1 Western Regional Municipal Plan

No. 1933/13 and established by the Extraordinary Gazette Notification dated 21 September 2015, the Ministry of Metropolitan and Western Development has prepared the Western Regional Metropolitan Plan and its fifth chapter was devoted to transportation. It focused on the traffic congestion in the city of Colombo and its suburbs, and thus the problems of transportation in the Colombo urban area, problems related to the railway system, problems of highway-based public transport services including buses, problems of the road system and related to traffic control and management were identified. However, the following matters were observed in this regard.

(a) Legal Background

The Western Regional Metropolitan Plan was not submitted for the approval of Cabinet and the relevant approvals were received for the projects where the measures mentioned therein were being implemented. Therefore, in order to make this plan more effectively, it is necessary to inform the general public and other interested parties through a gazette notification, but this plan was not announced through a gazette notification.

Also, although it is very important to have a specific period in which it applies in any plan, there was no specific period for the implementation of the above-mentioned methods in this city plan.

(b) Co-ordination with concerned agencies

It was observed that the short-term and long-term plans of the institutions such as Road Development Authority, Sri Lanka Railway Department, Motor Transport Department, Sri Lanka Transport Board, Sri Lanka Police, National Transport Commission, relevant local authorities, Ministry of Transport and Ministry of Highways Development have no direct relationship with the western regional municipal planning to efficiently and effectively implement the methods presented by the plan. Also, the functions and responsibilities of the above institutions were not specified along with the recommendations proposed in this plan. Accordingly, there were no targets and periods to achieve the targets for those institutions. Also, no coordination system was prepared to coordinate the functions of the relevant institutions.

Therefore, it was observed that the municipal plan covers various fields and emphasizes on the methods to be performed by various institutions under it, due to the absence of a specific method for their implementation, the recommendations to be implemented simultaneously have not been fulfilled in the required time.

(c) Implementation

According to the government budget estimate, the allocation for this planning project for the years 2016 and 2017 are Rs. 87,401,000 and Rs. 200,000,000 had been allocated. However, this plan was implemented during the period from 2016 to 2019, but in 2019 it was stopped due to a policy decision of the government, and it became a uneconomic expense and it was observed that this plan is not currently operational.

3.1.2.2 Road and Transport Policy

(a) Road Development Policy

It was observed that a sectorial road policy is being prepared to streamline road development in Sri Lanka and it is in the draft stage. According to the 2030 Agenda of the United Nations, Sustainable Development Goals 9, (building strong infrastructure, promoting thorough and sustainable industrialization and encouraging innovation)Sustainable Development Goals 11,(Making municipal settlements perfect, safe, robust and sustainable) Sustainable Development Goals 12, (to ensure sustainable consumption and production patterns, Sustainable Development) Goals 13, (to act quickly against climate change and its effects and achieve goals) related to road development are very important but it was observed that its contribution to road development have not been identified.

(b) National Transport Policy

The Transport Policy approved by the Cabinet on 27th November 1991 was amended on 14th October 2009. An amounting to 2.5 million rupees from the existing funds under the National Transport Commission was earmarked for the policy formulation process including conducting workshops, short-term consultant fees, public inquiry conferences, newspaper advertisements etc. for the purpose of updating it. Nevertheless, Rs. 334,735 had been spent for the draft of the National Transport Policy, for obtaining public comments, producing newspaper advertisements and its translation fees.

Accordingly, it was observed that even though more than 12 years have passed since the year 2009 to 18 July 2022 for updating the policy, and the National Transport Policy is still in the draft stage. Thus, it appears that the transport system, which can be considered as a major infrastructural facility affecting the country's progress, should operate in a good relationship with other related institutions, but the need for a transport policy is not fulfilled, which is also an obstacle to create that situation.

Therefore, the expenditure incurred by the National Traffic Commission had been realized and it was observed that the measures taken to reduce traffic congestion were not uniform and were not implemented continuously.

3.1.2.3 Road Development Authority Master Plan

Although the National Road Master Plan 2018-2028 was prepared to review, analyze and identify the new needs that were not included in the previous National Road Plan 2007-2017, the audit observed that this plan is still in draft status.

The plan identified traffic congestion as a major problem and increased use of vehicles as the cause of traffic congestion. As solutions for that, it was proposed to establish an advanced traffic management system, to develop the necessary connections for the efficiency of the road network, to improve public transportation, and to manage transportation demand. Even though the methods outside the scope of the Road Development Authority were also proposed, it was not mentioned how to coordinate with other relevant institutions to follow such methods. Although the tasks that should be done simultaneously with the road development have been identified, it was observed that the above-mentioned methods are not being implemented as they are outside the scope of the Road Development Authority. An expenditure of Rs. 11,579,281 and USD 124,822 was incurred for the preparation of this national road master plan. Thus, due to the non-implementation of the National Road Master Plan, the expenditure incurred for it had become unrealized.

3.1.2.4 Action Plans of the Ministry of Transport Services Management and the institutions under the ministry

According to the action plan of the Ministry of Transport Services Management for the year 2019, various measures were taken to improve the public transport by drawing attention to the sustainable development goals and targets. The following facts were observed during the inspection of the action plans of the Sri Lanka Railway Department, Sri Lanka Transport Board, National Transport Commission, and Motor Transport Department to implement them.

(a) Ministry of Transport Services Management

In order to improve the public transport, the municipal plan had mentioned the improvement of buses, trains as well as water transport. Accordingly, for the action plan of the Ministry of Transport Services Management, attention should be paid to these three means of transport. However, the ministry's action plan for the year 2019 mainly mentioned only the Colombo Suburban Railway Project and the Railway Efficiency Improvement Project. Further actions related to buses and water transports were not mentioned and it was observed that the passenger water transport pilot project is being carried out by the Land Reclamation and Development Corporation under the Ministry of Urban Development. Even so, at present, the project has been stalled, and being an additional task to the specific tasks assigned to each institution, it is a project implemented with the help of the Ministry of Transport Service Management, the main institution that should regulate the passenger transport function, which has influenced the conclusion that the project has failed. It was observed that the possibility cannot be ruled out.

(b) Sri Lanka Transport Board

According to the 2011-2020 National Physical Plan, buses that can provide environmentally friendly and comfortable transportation services should be used for public transportation. According to the action plan of the Sri Lanka Transport Board submitted to the Ministry of Passenger Transport Management, the allocation for 327 such buses was Rs. 3695 million. It was 28 percent of the total number of buses expected to be purchased, while the remaining 72 percent were planned to purchase regular buses. However, according to the revised action plan to attract passengers from private transport to public transport, 4089 comfortable buses and 925 regular buses were expected to be purchased. Despite this, only 2 projects could be implemented out of 11 projects proposed to buy comfortable buses. It was decided to deploy 250 buses in urban areas, and it was

planned to run a number of buses in the Western Province as well. Thus, due to periodic revision of the action plan and the impracticality of the targeted number of buses, it was not possible to reach the expected target and only 9 luxury buses could be purchased in 2019.

3.1.2.5 Metropolitan and commercial city planning

In accordance with the National Physical Plan 2020-2050, the Urban Development Authority had specifically identified Sri Jayawardenepura Kotte, the capital city of Sri Lanka and its surrounding area, and Colombo the commercial city, and its surrounding area and had prepared separate plans for those areas and identified traffic congestion as a major problem. The following matters were observed in this regard.

(a) Legal Background

Although the Colombo Commercial City and Metropolitan Plans were published in the Gazette No. 2129/94 dated 28th June 2019 of Democratic Socialist Republic of Sri Lanka which was more than 1 ½ years late to promulgate Part II, which included the regulations of both the plans. Therefore, as the planning and building regulations were not updated, the previously used planning and building regulations had to be used in the same way. And the developments at that time had taken place with the help of these plans.

(b) Colombo Commercial City Plan

As Colombo is the commercial city and spontaneous large scale development projects within the commercial city limits of Colombo without regard to existing infrastructure as problems caused by changing development trends, current development trends challenging the existing planning and building regulations based on zoning and busy hours along the main roads and the inconvenience and economic losses caused to the public due to the traffic jams were identified city of colombo is the commercial city of Sri Lanka and mainly connected with adjacent and remote areas by seven main entrances to Negombo, Kandy, Low Level Road, Malambe, High Level Road, Horana and Galle.

The traffic police departments, which are engaged in traffic management and had recognized that the traffic jams, were due to the reasons mainly; unauthorized constructions, trades on the pavements, lack of sufficient parking spaces.

However, due to lack of proper coordination with the traffic police department, which handles traffic on the highways, the above factors were not recognized as causes of traffic congestion during the preparation of the commercial city plan. Therefore, although it is essential to identify solutions for those problems, but this plan has missed it.

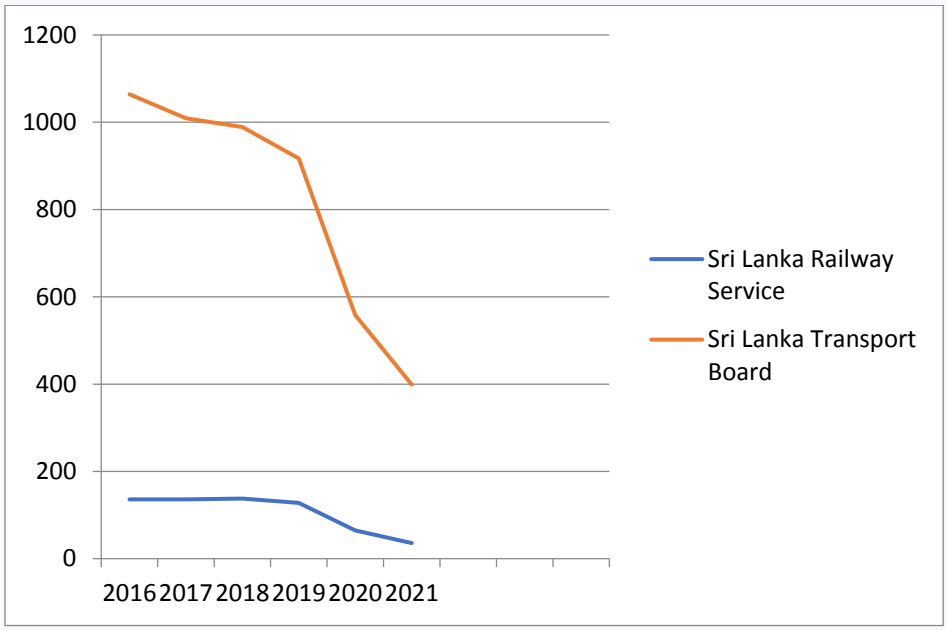
3.2 Execution of Plans

3.2.1 Government Contribution to Public Transport

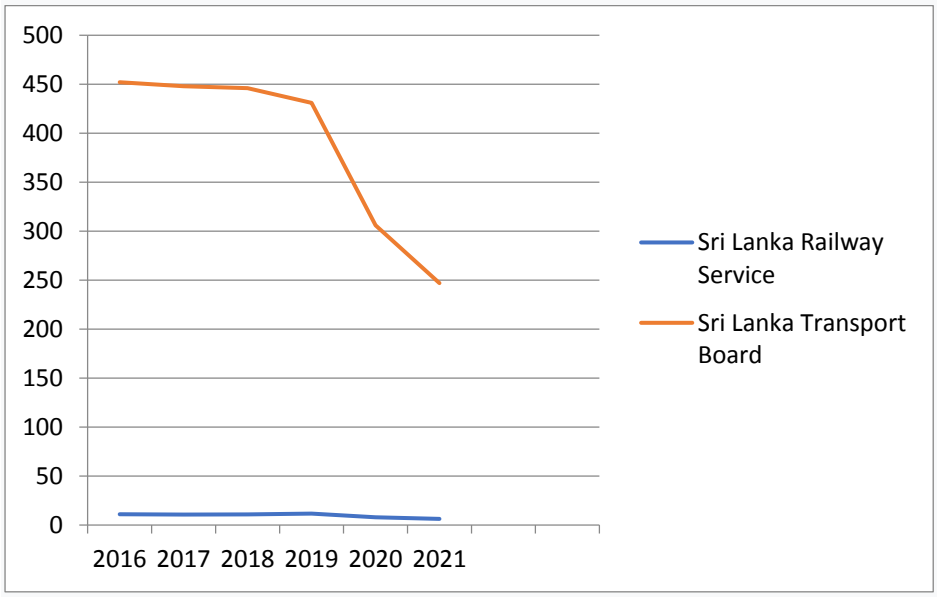
According to the current national physical plan, the development of the bus network and the development of the railway network have been proposed to improve inter-city and intra-city connectivity, but as shown in the table below, there has been no significant growth in public transport services during the period from 2016 to 2021 and there has been some setback in the period from 2016 to 2021, but with bus and train fare revision, a change in this situation can be expected at present.

Year	Sri Lanka Railway Service				Sri Lanka Transport Board	
	Number of Passenger Transport Kilometers Operated (Million)	Number of Passengers (Million)	Number of Goods Transport Kilometers Operated (Million)	Quantity of Goods (Tons) (Million)	Number of Kilometers Operated (Million)	Number of Passengers (Million)
2016	11.1	136	0.4	2.0	452	1,064
2017	10.7	136	0.5	2.0	448	1,009
2018	10.8	138	0.5	1.8	446	989
2019	11.7	128	0.5	1.9	431	917
2020	8.0	65	0.5	1.8	306	558
2021	6.3	36	0.5	1.8	247	399

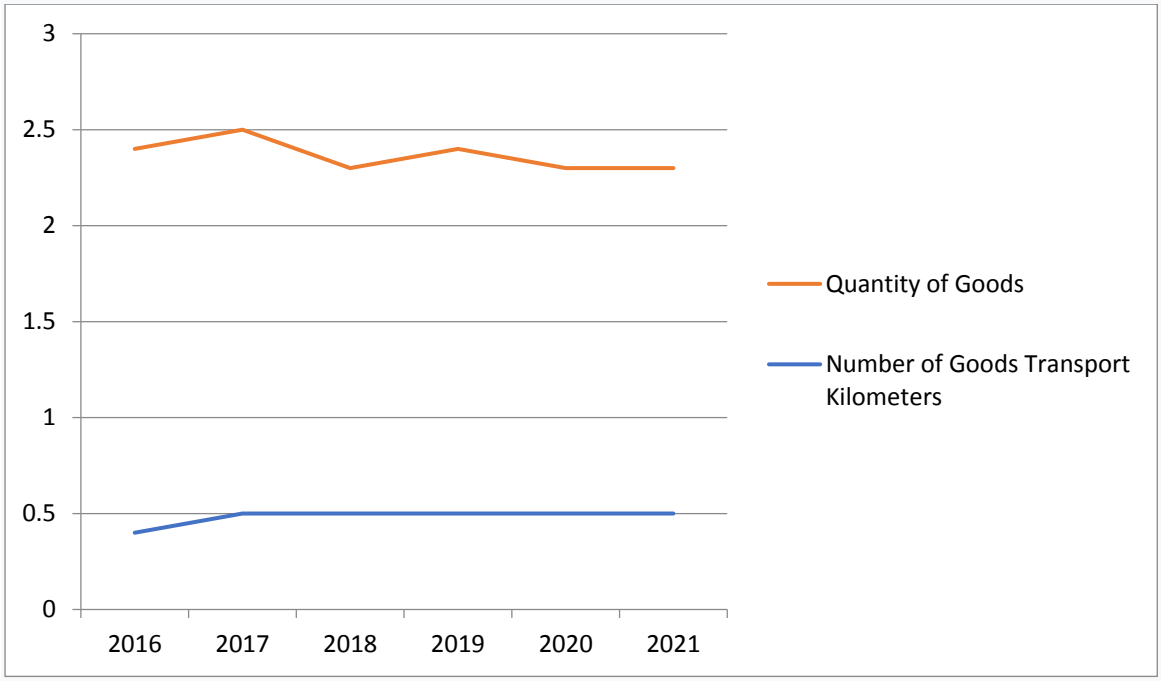
Number of Passengers Transported



Number of Kilometers Operated



Railway Goods Transport Service



3.2.2 Railway Projects

3.2.2.1 Colombo Suburban Rail Project

(a) Preparation for Transport Project preparatory Facility

For the purpose of establishing a passenger train service in the suburbs of Colombo with the aim of making the railway service more efficient, funds of Rs. 1,456.5 million and Rs. 9,798.4 million respectively from the Asian Development Bank Loan Fund and the Government Consolidated Fund were used to complete this project within 06 years had started in the year 2016. The total amount of this project cost Rs.11,254.9 million expenditure is only for the preparation of a feasibility study report for the establishment of a passenger train service in the suburbs of Colombo. Although it is more effective to start the necessary works for the construction of railway lines proposed in this feasibility study report, but not starting the necessary works for the construction of those railway lines properly, so as the Rs. 4,327 million expenditure was observed as to be idle.

The actual cost incurred from 2017 to 2020 is as follows.

Year	Loan from Asian Development Bank Rs.(000)	Consolidated Fund Rs.(000)	Total Rs.(000)
2017	115,070	88,470	203,540
2018	371,390	693,450	1,064,840
2019	368,910	784,910	1,153,820
2020	509,150	1,396,000	1,905,150
Total	**1,364,520**	**2,962,830**	4,327,350

(b) Railway Efficiency Improvement Project

This project was started in the year 2019 with funds of Rs.28,232 million and Rs.5,646.4 million respectively from the Asian Development Bank Loan Fund and the Government Consolidated Fund for the implementation of 17 sub-projects in order to improve the existing railway service. Under this programme, 32 development tasks were expected to be carried out and it was observed that by 31 December 2020, only 5 sub-projects have been implemented.

From the year 2019 to the year 2020, from the Asian Development Bank loan and joint fund, Rs. 505.22 million had been incurred. The details are as follows.

Year	Loan from Asian Development Bank Rs.(000)	Consolidated Fund Rs.(000)
2019	84,030,000	1,640,000
2020	409,990,000	9,560,000
Total	**494,020,000**	**11,200,000**

3.2.2.2 Light Rail Transit Project

The Metropolitan Transport Master Plan had introduced the Light Rail Transit System to improve public transport. As the first step to start the light rail transit project in Sri Lanka, a loan agreement was signed with the Japan International Cooperation Agency on 11 March 2019 to establish a light rail transit system from Malambe to Fort, along with the then secretary of the Ministry of Metropolitan and Western Development. The project period was from 01 April 2019 to 01 November 2026.

The total estimated cost of its project is Rs. was 4,381.52 million. The total loan amount obtained for the project was Rs.4,886.75 million and had a loan period of 40 years including a period of 12 years. According to the loan agreement, the Sri Lanka government had agreed to repay it in two installments. Also, the borrower shall pay the relevant interest semi-annually to the Japan International Cooperation Agency at the annual rate of 0.01 percent on 20th November and 20th May annually. However, due to the grace period of 12 years, no premium has been paid so far. Also no interest value has been paid so far and the relevant interest value was added to the loan amount once every 06 months. The following matters were observed in this regard.

(a) Route plan of the Malambe to Fort light rail project

There were 16 stop stations were planned on the 16 km long light rail route. This route was planned above the main road from Malambe to Fort and this route was planned above Diyawanna Oya from Setshiripaya to Rajagiriya. The following matters were observed in this regard.

i. The route was planned to be above the main road due to the high cost of land acquisition in this area and the fact that these areas are already overpopulated. Since at least 2.5 square meters should be separated from the main road for its pillars, the Road Development Authority had planned to widen the road from Chandrika Kumaratunga Mawatha Junction to Koswatta and the remaining parts of this road have the necessary places to get the space required for traffic. The work to widen the road was planned; however, it was observed that they have not been implemented in proper time.

ii. Although a significant amount of land is required for the buildings and parking facilities required for access to the 16 stop stations for passengers, the space required for the same was not specifically mentioned in the feasibility study report.

(b) Increasing the effectiveness of the project

This project will provide more efficient public transport to the public and it is essential to attract the public, otherwise the project will not achieve the objectives that expected to achieve and will not be able to achieve the result compared to the expenditure incurred for it.

The 16 stop stations selected are highly populated areas where a significant number of buildings have already been constructed and are being constructed. It was observed that only the railway stations Malambe Junction and Malambe "Thorathuru Thakshana Udyanaya" have been identified as the places where vehicles should be parked and discussions have been held to get the support of private land owners to establish car parks near them. Other stop stations were identified as not requiring parking facilities.

(c) Current situation

According to the letter of the Secretary, Ministry of Urban Development and Housing bearing the number MUD&H/P&M/Audit and dated 15th August 2022, this project has been stopped at present as per the policy decision of the government. Therefore, the Cabinet Paper dated 28th June 2022 had been submitted to the Cabinet regarding compensation to JICA and OCGJV for the losses due to the project being stopped midway. By the time the decision to cancel the project is taken, Rs. 10,677,82 million had been incurred and that expenditure had become ineffective. Also, Rs.6,296.3 million had been spent beyond the total estimated cost of the project. The cost is as follows.

Description	Value Rs. (Mns.)
Purchases - Capital	6.00
- Recurrent	5,335.91
Consultancy Charges	4,940.17
Personnel Emoluments	196.70
Other	199.03

3.2.2.3 Western Regional Light Rail Project

In addition to the Malambe-Petta light rail line, the feasibility study of Light Rail Line Project in the Western Region is being implemented by the Transport Development Project under the Ministry of Urban Development Water Supply and Housing Facilities identified 03 light railway lines as follows.

i. Red Way

From Ragama to Kirulapana via Kadawata, Kiribathgoda, Kelaniya, Peliyagoda, Fort, Kompanjaveediya, Kollupitiya.

ii. Green Way

From Moratuwa to Dematagoda via Katubedda, Piliyandala, Boralasgamuwa, Narahenpita, Nugegoda, Borella

iii. Blue Way

From Kottawa to Manelgama via Pannipitiya, Thalawathugoda, Isurupaya, Koswatta.

According to the letter No. WRTDP/PRO/VEH/2019 dated 10 February, 2020, these 03 light rail lines have been considered as works to be done jointly by the government and private investors and related proposals have been invited and the environmental evaluation report and social evaluation report were in the final stage.

However, according to the policy decision of the government, this project has been stopped after 31st March, 2022 and till that date Rs. 860.36 million had been incurred and that cost had been realized as an uneconomical. The details are as follows.

Description	Value Rs.(Mns)
Purchases - Capital	5.60
- Recurrent	2.30
Consultancy Charges	472.63
Personnel Emoluments	151.82
Other (Other expenses like fuel and transportation)	228.02

3.2.3 Ministry of Urban Development, Water Supply and Housing

In addition to the light rail transit project, projects such as creating flexible office hours, creating water transportation, and creating multi-modal centers had been started in order to reduce the traffic congestion in the commercial city of Colombo and the upper city by improving public transportation. The following matters were observed in this regard.

(a) Flexible Office Hours Regulatory Project

As a regulatory project to reduce traffic congestion during peak hours in Colombo city and suburbs, The decision of flexible office hours had been implemented in government institutions in Battaramulla area for a period of 06 months from 17 December 2017. Although the aim of this project is to increase the average speed of vehicles from 10 kmph to 25 kmph during peak hours, the desired result could not be achieved due to the following reasons.

(i) Agreement for flexible office hours not as expected due to busy schedule of officers using private vehicle

(ii) Limitation of range in respect of flexible office hours as all officers are on duty at one time for a period of 6 hours as per Public Administration Circular.

(iii) Difficulty for the administrative officers of the institutions to maintain the monitoring activities related to the attendance of employees.

It was stated by the project that although the government officials who use private vehicles were targeted for this purpose and it was not possible to achieve the expected goals due to the fact that the officials who used public transport were the most agreeable. Therefore, it was observed that although flexible office hours were mentioned in the municipal plan as a measure to reduce congestion, it was not an effective measure.

(b) Passenger transport service along local water bodies

Due to the failure of the tender procedures held with the aim of getting private sector investment, the government decided to start the passenger transport service based on local water sources according to the Cabinet paper number 2018/NC/20 and dated 30 July 2018.

The main objective of this was to reduce the traffic around the city of Colombo and Battaramulla. The Sri Lanka Land Reclamation and Development Corporation was assigned for implementation for a period of 02 years as a pilot project from Fort to Union Place via Beira Lake with the assistance of Sri Lanka Navy including navigation and lifesaving services. The following matters were observed in this regard.

i. For the implementation of this project, the project cost including vessels will be Rs. 18.90 million and 2.36 million were spent on publicity expenses, but the project could not achieve the desired objectives due to lack of popularity among the public. The average number of passengers transported from 1st January to 11th January 2020 average was 37 and accordingly the daily income was Rs. was 1,110. The cost per day was Rs.25,000, therefore, only 0.04 per cent of the cost per day of the project could have been covered and vessels and other infrastructure remained underutilized.

ii. Based on the pre-feasibility study report of the Canal-related Passenger Transport Project prepared by Infoconsult Inc (2004) as a basic document, it was observed that only the pre-feasibility study has been updated in relation to this project and it has not reflected the correct situation.

3.2.4 Other measures proposed in the Western Regional Municipal Plan

The Western Regional Municipal Plan has proposed measures to manage traffic such as parking lot management, intersection control, traffic control and tolling for vehicles entering the city center. However, those measures have not been implemented up to now.

3.2.5 Improvement of office and school transport services

According to the traffic police reports, it was observed that there is heavy motor traffic during the school opening and closing times and the main reason for this is that school children are brought to school by private vehicles. The following matters were observed while examining the measures taken by the government agencies in this regard.

(a) The National Transport Commission had introduced the "Sisusariya" programme to transport school children in Sri Lanka. According to the 2020 annual school census report, there were 124 public schools in the Colombo school zone in the year 2020, which includes Colombo and suburbs, and the number of schools covered by the Sisu Sariya program was only 47schools. That is only 38 percent. The number of buses run for this service by the Sri Lanka Transport Board and the private sector in the years 2017, 2018, 2019, 2020 and 2021 were 199, 205, 151, 164 and 157 respectively and there was no budget allocation for this program from 2017 to 2022. The success of this service, which provides school transport services based on the requests of school principals and parents of students, has the potential to reduce the number of private vehicles to some extent, but due to the less number of schools covered and the necessary provisions and financial deficiencies, the obstacle to the maximum success of the program is also related to this problem and it had the opportunity to make an impact to this matter. Therefore, it was

observed that the improvement of the school transport service is not done as per the requirement.

(b) There are 124 public schools in the congested Greater Colombo area, in addition to 34 private schools and 48 international schools located along main roads (Colombo Commercial City Development Plan 2019-2030). According to the letter of the Station Officer (Traffic) of Kurunduwatta Police Station dated 14 November 2019, the number of vehicles arriving in the morning for 05 government schools accompanied by students and teachers was 1100-4000 and for 08 private and international schools accompanied by students and teachers was observed that the number of vehicles was 750 – 3500. Accordingly, in order to reduce the traffic during these busy hours, the intervention of the Ministry of Transport to transport school children by public transport services instead of transporting school children by private vehicles is essential.

Nevertheless, according to the letter of the Ministry of Transport No. MT/04/12/02 dated 17 June 2020, with the approval of the Council of Ministers, a committee was appointed with the participation of the Ministry of Transport and the chairman of the National Transport Commission, and after long discussions, criteria were prepared regarding the role of the regulatory authority expected to be established for school buses and the role of relevant institutions at the national and provincial levels, but due to the unwillingness of the school bus owners' associations, a final decision Could not be reached.

(c) By implementing an office transport service from the Colombo main railway station to Battaramulla by the Sri Lanka Transport Board for the office workers working in the institutions in Battaramulla area, there has been an increasing trend in the transportation of government officials, and for high way roads as well as other roads at the institutional level and those services have been started at the private sector level. This method of transportation, which is carried out by charging subsidized rates, provides an efficient service for office workers, but the possibility of further expansion was not taken into account through a regulatory process for it and the possibility of extending this

service to office workers as well as to the people being served was not taken into account.

3.2.6 Priority Bus Lane Introduction Programme

At that time, the Ministry of Municipalities and Western Development had implemented a Bus Priority Lane Project for a distance of 40 kilometers covering Gall road, Parliament Road, Thurston Road, Kompanjaveediya, Fort to Petta with the aim of improving public transport services from the year 2017. The Ministry of Urban Development and Housing had incurred an expenditure of Rs. 421.46 million for improving the road up to 06 lanes, creating bus stops and installing signboards, and Rs. 8.17 million for consultation fees. The Ministry of Urban Development and Housing has implemented this project as a pilot project and handed it over to the Ministry of Transport for further work. According to the inspection, it was observed that this priority lane system is not working in the Parliament Road and the signboards that were installed for the implementation of this project from the Parliament Roundabout to the Rajagiriya Ayurveda Roundabout are still in place, but there was a situation that misleads the drivers of the vehicles.

3.2.7 Millennium project to improve public transport facilities

The Cabinet Paper No. 17/0718/724/024 and the President's letter dated 23August 2017 under the heading of "Improving Bus Service to Promote Public Transport in Sri Lanka" with the objectives of provide a modern and efficient bus service to the public, to reduce traffic congestion, to optimize the efficiency, comfort and profitability of the private and public transport system, to develop employee safety and dignity in the bus service profession, developing the reliability of bus service and encouraging the bus fleet to deploy to public transport service, the dated letter had entrusted the Ministry of Transport and the Ministry of Metropolitan and Western Urban Development with the responsibility of implementing a project called "Sahasara" at the national level. The following matters were observed in this regard.

(a) Although the Cabinet Memorandum No. 2018/CP/94 dated 07 September 2018 had proposed to implement the Millennium Project at the national level, the necessary approvals in this regard had been obtained only for the Central

and Western Provincial Councils. It was observed that there is a delay in the implementation of this project.

(b) It had been decided that a national mobility card system with multiple card issuing facilities based on technology that can be used for both bus and train transport services should be implemented by an appropriate competitive agency structure under the regulatory authority of the Central Bank and a provision of one million had been allocated for the year 2018. However, no progress has been reported so far.

(c) Estimated cost of bus renovation Rs. 26,861 million for the year 2019 and Rs. 1,000 million had been provided in the budget. But the project report did not specify how the remaining allocations would be made available.

(d) A pilot project to reduce the problems faced by Sri Lanka's public transport service system and develop public transport service facilities by the Office of the President and the Central Provincial Ministry of Transport for a period of 03 months from 02 August 2016 in relation to 46 bus routes selected in the Kandy district. It was implemented under the name of "Millennium Pilot Project" using 350 vehicles. The weaknesses and opportunities of the project had been identified in the research conducted by a research institute to evaluate the pilot project under the purposive sampling method with the participation of the main stakeholders, bus owners, bus workers, and officials of the Road Transport Authority.

(e) Although an expenditure of Rs. 123.72 million was incurred for this project from the year 2018 to the year 2020, the project was not properly managed during the implementation of the project, were not fulfilled, so as its objectives have not been achieved.

3.2.8 Road Development Authority

(a) Advanced Traffic Management System Project

Advanced Traffic Advanced Traffic Management System Project had been started with aim of manage the vehicles after developing the132 high-traffic intersections according to the geometric plans and installing electric signal systems, cameras and variable message signs boards and connecting those to a traffic management center through a communication network. The technical plans of this project were completed in February 2017 with the grant of 2.5 million dollars given by KOICA in 2014 based on the recommendations of a study conducted by Japan International Cooperation Agency in 2010. However, the project was stalled by the Korean government as the lack of funding for construction. Although the request had been submitted to the National Planning Department for the necessary financial allocations to implement it and it was observed that the expenditure of 2.5 million dollars incurred from the grant received by Sri Lanka has become ineffective due to the non-availability of the necessary allocations.

(b) Progress of recent measures taken to reduce traffic congestion

The number of planned projects and quantity of completed for improvement of intersections, installation of light signaling systems, construction of by-passes and construction of overpasses to reduce traffic congestion according to the National Road Master Plan (2007-2017) prepared by the Road Development Authority, as follows.

Development Project	Number of Plans	Number completed	Difference
Development of intersection	33	9	-72.7%
Road signs	33	24	-27.3%
Byways	25	5	-80.0%
Flyovers	20	6	-70.0%
Bridge development	261	583	123.4

According to the above data, the progress of the implementation of projects other than the improvement of bridges is at a minimum level, so the needs to be developed in the road system to reduce the traffic congestion are basic and the related progress is not satisfactory, so the contribution of this project to reduce the traffic congestion had not been received.

3.2.9 Implementation of Driver Improvement Score System

According to the reports of the Sri Lanka Police Department, 73 percent of the number of cases were offenses caused by driving in such a way as to block the roads. As a result, traffic jams were caused by driving faults assigned in the period from 2016 to 2018. Therefore, in order to reduce the problems during driving and to produce disciplined drivers, driver improvement point system had been established according to the Gazette no. 1726/12 and dated 5th January 2011. Instead of this improvement point system, It has been revised as the negative point system and arrangements have been made to prepare the necessary legal provisions in the Motor Vehicles Act.

It has been observed that the amendment of the Motor Vehicles Act has not been completed even 09 years have passed for this project and but also the purchases has been started of equipment required for the implementation of the project.

3.2.10 Urban Development Authority

The major function of the Urban Development Authority is issuing planning and building regulations. Every plan submitted with the application form for the purpose of obtaining permission to carry out development work shall specify the number of parking spaces required within the building site itself or at a place acceptable to the Authority. A Traffic Committee shall be appointed to parking the vehicles and approve the traffic control program in accordance with condition of 3.7.2 “4” of the Development Plan prepared for Municipal Councils, Urban Councils and Local Councils in accordance with the Urban Development Authority Regulations, where by the developer shall provide a full and detailed assessment of how travel to or from the

development project will affect the public road network and public transport convenience. Accordingly, it is decided to give permission to carry out the development activities. The following facts were observed in this regard.

(a) Establishment of Traffic Committees

All development activities in areas declared by the authority must comply with Urban Development Authority plans and building regulations and all such development plans must be approved by the Planning Committee. Accordingly, while giving recommendations, it is mainly the development activities that require more than 50 parking spaces and the accessibility due to any development activities that will affect the road and if the Planning Committee deems it necessary, the Planning Committee is authorized to submit a traffic assessment report for the respective developments on the recommendation of the respective Committee. It was observed that there was no focus on objectives as recommendation of the Traffic Committee was not informed for various development works which were 185, 196 and 127 respectively within the city of Colombo which has heavy traffic congestion from the year 2017 to July 2019.

(b) Terms of Reference for Traffic Impact Assessment

A fee of Rs.50,000 shall be paid for administrative purposes along with a report submitted by a qualified person after the planning committee recommends that a traffic assessment report should be submitted. The form should be included the minimum design dimensions of the traffic stopping booths, the minimum width limits of the gap spaces, the minimum limits of access to those places, the facilities for turning vehicles, the space for turning vehicles, and the semi-diameter of inside and outside turns when entering and exiting a street. Therefore, completion of the form should be done by a consultant with subject knowledge of traffic engineering or transport planning. The traffic committee will be able to carry out physical inspections based on the consultant's report as because the consultant will receive payment from the developer who will carry out the related development work.

(c) Traffic Committee Meetings

The Authority shall appoint a Traffic Planning Committee for each community development to evaluate and recommend the approval of parking and traffic control agreements for any development referred by the Planning Committee. According to the letter of Deputy Director General No. DDG/P/1/10 and dated 02 January 2020 submitted to the audit, the Planning Traffic Committee consists of the following officers under the chairmanship of Deputy Director General of Planning.

- Director or representative of Traffic Police Headquarters
- Traffic Director or representative of Colombo Municipality
- Director General of Road Development Authority or a representative
- A station officer or representative of the concerned police station
- A representative of the relevant local authority is required
- Provincial Director or representative
- Director of Survey and Development
- A representative of the Audit and Monitoring Unit
- Greater Colombo Director
- An officer of the Deputy Director General Planning Office
- Relevant representatives of other institutions
- A facilitation officer appointed by the Deputy Director General of Planning

The following facts were revealed in this regard.

i. The 38 traffic committee meetings were held in the year 2018 and 13 copies of those meeting reports submitted to the audit and out of that 08 were related to the development activities of Greater Colombo city limits, but it was observed that the Traffic Division of the Colombo Municipal Council had not participated in 06 of those meetings.

ii. The participation of the relevant local government body in these meetings is very important and the local government body is also a member of the committee and out of the 27 committee reports submitted for audit, 14 local

government institutions had been participated. Accordingly, it is observed that the participation of local government institutions bodies in committee meetings is 52 percent, so there is a problem of not fulfilling the expected role of the committees.

(d) Development activities in Colombo, Kaduwela and Kotte Municipal Councils

The following table shows the information presented by the Urban Development Authority regarding the obtaining of permission from the Urban Development Authority for construction and development activities in the years 2017, 2018 and 2019 in the areas belonging to the Municipal Councils of Colombo, Kaduwela and Kotte.

Colombo Municipal Council	**2017**	**2018**	**2019**
Number of applications received for building approval	188	221	139
TIA Report - Appling	3	25	12
Issuing	2	13	4
Percentage of TIA report requests from building applications	1%	11%	9%
Issuance of building permits	41	69	47
Kaduwela Municipal Council			
Receiving of applications for building approval	106	81	25
TIA Report - Appling	1	4	3
-Issuing	-	1	2
Percentage of TIA report requests from building applications	1%	5%	12%
Issuance of building permits	112	145	106
Kotte Municipal Council			
Applications received for building permits	Information was not submitted for audit.		
TIA Report - Appling	-	2	-
- Issuing	-	2	-
Issuance of building permits	4	38	60

The following facts were observed in this regard.

i. Traffic congestion is also caused by side roads within the city limits of Colombo and even within that limit, only 1 percent, 11 percent and 9 percent had been directed for obtain the TIA reports by the Planning Committee of the applications received for obtaining permission for construction activities in the years 2017, 2018 and 2019 respectively.

ii. Urban constructions in the area belong to Kaduwela Municipal Council can also be caused the traffic congestion. However, it was observed from the above data that between 1 percent and 12 percent of the constructions carried out in those areas were directed to obtain Traffic Assessment (TIA) reports. Information about the number of applications for building permits of the Kotte Municipal Council was not submitted to the audit and TIA reports were not requested for the years 2017 and 2019 and there were only 02 requests in the year 2018.

iii. The number of applications of the building permit for development projects in the area belonging to the Colombo Municipality was 188, 221 and 139 for the years 2017, 2018 and 2019 respectively, and the percentage of applications for development activities for construction of apartments were 33 percent, 22 percent and 35 percent respectively. Although this area is considered to be the commercial city of Sri Lanka and it was observed that the traffic congestion in the city of Colombo may be affected further by investing a higher percentage of apartments.

(e) Construction of buildings approved after traffic impact assessment

Information related to building constructions approved after traffic impact assessment was revealed during the physical inspection conducted by the audit and the following facts were observed related to building constructions approved and not approved after traffic impact assessment.

i. The proposed Ken Towers housing complex of Ken Home Property Developers, which is built at Frances Road, Colombo 06, was under construction during the physical inspection. It was observed that may increase traffic congestion of the 11-storey building which will be constructed adjacent to Frances Road, an existing 4.7-meter-wide one-way road between the busy Galle Road and Marine Drive Road. Due to a legal problem arising during the grant to the Colombo Municipal Council, the traffic evaluation details of the authority were included and thus the work related to the file had been delayed.

		
How the panels are presented regarding the construction	The adjacent road is a narrow road and there are several multi-story buildings nearby	Construction work in progress

ii. It was observed that the construction of the headquarters office building complex proposed to be constructed at Swarna Place in Rajagiriya , Nawala Road has not yet started in the year 2018 , approved by the Traffic Impact Assessment Committee and it is being used as a car park.

	
Access road to construction	Presently using the proposed land as a car park

iii. According to the letter No. DR/TR/OUT/2500/2018 of the traffic police headquarters dated 01 October 2018, it has been mentioned that the space for parking 23 vehicles on the ground floor and 02 vehicles for visitors has been allocated to the proposed housing complex to be constructed at Havelock Road, Colombo 06, with 23 houses of 08 floors. The employees of that institution stated that due to the construction work, the access road has been used for parking the vehicles belonging to the housing complex adjacent to the said housing complex.

The proposed building is under construction

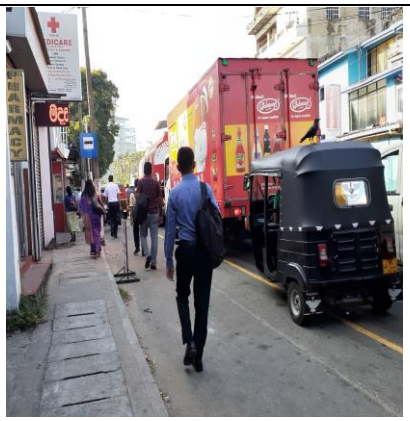
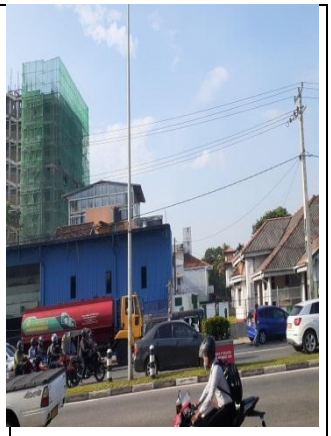
(f) Follow-up of the construction

Although the audit has been required for information accompanying to the obtaining of building permits related to the areas within the city limits of Sri Jayawardenepura Kotte and Kaduwala in Greater Colombo and information about to construction related to government institutions that have not obtained certificates of compliance in those areas from 2012 to July 2019, the authority had been failed to provide that information. Therefore, it was observed that the authority does not have the ability to obtain all the information related to the construction during the follow-up of the development activities to prevent unauthorized construction.

3.2.11 Other factors causing the current traffic congestion

(a) Traffic congestion caused by heavy vehicles

Land vehicles and freight traffic accounted for 07 percent of the total vehicles in Sri Lanka in 2017 as mentioned in the master plan of the Road Development Authority. It had been recognized by the Colombo Commercial City Plan the 03 times of traffic congestion which is taken place commonly of the periods of time, from 7.00 am to 8.00 a.m., from 1.00p.m. to 3.00 p.m. and also from 5.00 p.m. to 7.00p.m. It was observed that there is heavy traffic due to the running of oil bowsers and container trucks in the city of Colombo during these hours. It was observed that there should be required proper management for control this kind of traffic but the attention for that, has not been paid by the relevant responsible agencies.

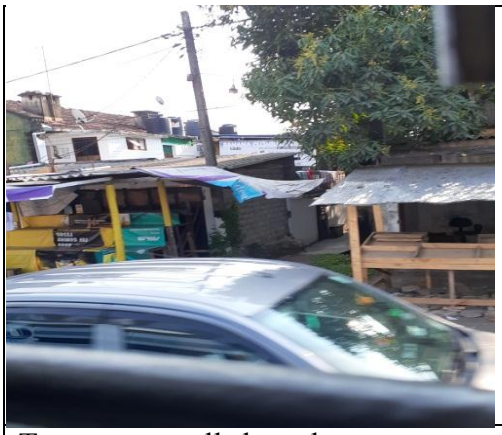
		
Traffic jam on Kolonnawa road due to oil bowser travel during busy hours - 09.01.2020 at 8.00 am	Traffic jam on Obeysekarapura road due to travel oil bowser and container trucks during busy hours - 01.09.2020 at 8.15 am	Traffic jam near Rajagiriya flyover due to oil bowser travel during peak hours - 2020.01.09 at 8.45 am

(b) Traffic congestion during the heavy rainy days.

It was observed that floods occur during heavy rains due to unauthorized constructions, blockages in the drain system and defects in the road, thereby causing heavy traffic congestion. Although such places should be identified and necessary action should be taken by the concerned local government institutions or the Road Development Authority, as the sample audit it was revealed in the sample audit that there are 31 such places in Colombo city and it had been caused to the increase in traffic congestion in Colombo.


Armor Barber Street flooded with rain water at Colombo 14

(c) It was observed that the Pedestrians walking off the sidewalk and there are situations where walking on the pavements are unsafe as the lack of space in the areas around the main bus stops such as Malambe, Talahena, Battaramulla, Setshiripaya, Borella, National Hospital and Fort at present and the presence of thrown off stones on many pavements, and trading on the pavements.



Temporary stalls have been set up on the pavement of "Punchi Borella" intersection.

A place where pedestrians may be at risk near Suhurupaya

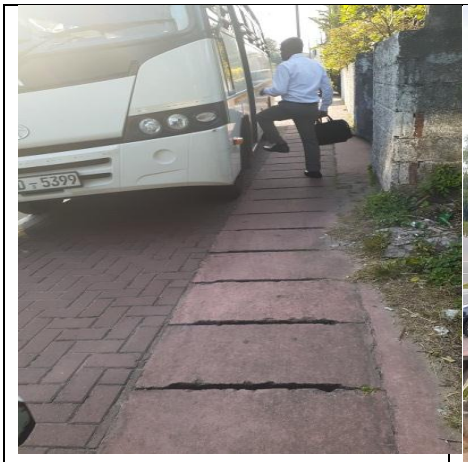
(d) Parking of buses

It was observed that the buses were parked on the left lane of the main road in front of the Bo tree in Petta on the 120-bus route until their turn.

The traffic congestion caused by the parking at main road of buses on the 120-bus route on the Petta

(e) Traffic congestion in Battaramulla city

Majority of the officers working in the government institutions in Battaramulla, arrive to Battaramulla daily from areas outside Colombo, and many people use private office transport services. Since there is no system for parking the vehicles of those private transport services, it was observed that the manner in which the vehicles are parked in the lanes of Polduwa Road and the fact that the officers are being dropped off and picked up at the beginning and end of the offices is a matter of causing traffic jams during the opening and closing times of the offices.

	
Parking vehicles of private transport services on pavements and picking up officials	How the vehicles of those private transport services are parked in the lanes of Polduwa Road

3.3 Measures taken by the Sri Lanka Police to reduce traffic congestion

3.3.1 Misdemeanors that block roads while driving

The Sri Lanka Police had issued 02 circulars of Inspector General of Police Circular No. 2435/2013 and Traffic Circular No. 137/2013 dated 19 June 2013 in order to reduce traffic congestion in Colombo and other cities. It had been identified 08 reasons affecting traffic congestion in major cities and included in these circulars.

A major factor affecting traffic congestion is mistakes done in traffic in and around Colombo. According to the information about the number of cases received by 05 police divisions in and around Colombo regarding traffic offenses affecting traffic during the period of 2016-2018, there were 370,173 cases in the year 2016, 426,182 cases in the year 2017 and 330,208 cases in the year 2018 and the total number of cases were 1,126,633. The details were as follows.

Police Division	**Year**			**Total**
	2016	**2017**	**2018**	
Colombo Central	109,102	127,223	101,206	337,531
Colombo South	123,396	134,662	106,618	364,676
Colombo North	63,712	66,219	48,131	177,062
Division of Emergency Calling	30,843	36,200	34,524	101,567
Urban Traffic Division	44,190	61,878	39,729	145,797
	370,173	**426,182**	**330,208**	**1,126,633**

In connection with the offenses mentioned in the Motor Vehicle Act, committed by the drivers, driving in such a way as to block the road and causing traffic jams due to the 15 offenses, according to the information of the police division in Colombo city, out of 1,126,633 cases related to traffic law violations in the last three years, offenses happened when vehicle parking and there were 826,145 cases related to 03 offenses of blocking by changing lanes and driving. It was accounted for 73 percent of the total related to offences of road blocking driving.

Omission that contributes to traffic congestion	Number of cases assigned			Total
	2016	2017	2018	
Violation of Traffic Laws	139,014	173,409	105,764	418,187
Error caused when parking vehicles	58,183	68,209	60,428	186,820
Blocking by driving switching the columns	88,270	87,532	45,336	221,138
Total	**285,467**	**329,150**	**211,528**	**826,145**

3.3.2 Personnel

(a) Adequacy of Staffing

The following information confirms that despite the increasing of duties of the traffic department, the police does not have enough staff to perform those duties.

i. According to the letter No. T1/7/3536/2019 dated 15 July 2019, addressed to all the Traffic Station Commanders by the Director of the Urban Traffic Division, Colombo, the following was stated regarding the number of officers currently attached to the Police Traffic Sections.

"When you compare the number of officers currently attached to the traffic departments in your places with the number of officers two years ago or so the number of officers currently attached to your departments is half less than those days. Although the number of officers has decreased, your duties have increased." Accordingly, it was observed that the staffing requirements of the vehicle sector have not been fulfilled.

ii. It was observed that there is a shortage of 35, 46, 22 and 37 police officers for traffic duties in Borella, Cinnomangarden, Petta and Maradana police stations respectively. The details are as follows.

Police Station	Total number of officers required for traffic duties	Number of officers on traffic duty	Shortage
Cinnomongarden Police	125	79	46
Petta Police	50	28	22
Maradana Poice	76	39	37

iii. Thus, due to the continuous decrease in the number of officers belonging to the traffic departments and due to the assignment of additional duties to the existing officers, the number of cases related to traffic offenses in the year 2018 and the first 6 months of the year 2019 had decreased as compared to the previous years as follows.

Serial Number	Division of Police	Violation of Traffic Law				Blocking by drive switching the columns			
		2016	2017	2018	2019 First 06 Month	2016	2017	2018	2019 First 06month
1	Division of Colombocentral	33,977	43,994	25,982	4,565	14,297	17,462	7,872	2,714
2	Division of Colombo south	40,929	43,654	28,864	7,815	35,906	38,035	19,462	5,334
3	Division of Colombo north	31,245	31,766	15,542	2,416	12,678	8,584	7,588	2,215
4	Division of Emergency Calling	15,838	20,211	16,043	735	10,060	9,181	5,714	374
5	Division of Urban Traffic	17,025	33,784	19,333	1,989	15,329	14,270	4,700	1,363
	Total	139,014	173,409	105,764	17,520	88,270	87,532	45,336	12,000

Because these officers are busy with other duties, they are unable to detect the offenses made by the drivers, so it can also be identified as a reason for the increasing of the traffic.

(b) Adequacy of training of officers

The traffic headquarters is being conducted three weeks course regarding traffic handling as a junior and a senior course. The details of the officers who attached to the traffic section of police stations belonging to five police divisions in and around Colombo city have attended traffic courses as at 10.02.2019 as follows. Accordingly, it was observed that the officers in 5 police divisions a range of 73 percent to 86 percent have not studied the relevant courses. Accordingly, this had avoided the participation of trained officers in managing traffic congestion.

Police Division	Number of officers attached to Traffic Division	The number Officers who have completed Traffic Course (Senior/Junior)	The number Officers who have not completed Traffic Course (Senior/Junior)	Percentage of courses not completed
Colombo North	121	32	89	73%
Colombo South	319	42	277	86%
Colombo Central	195	32	163	83%
Nugegoda	241	52	189	78%
Mountlavenia	174	37	137	78%
Total	**1050**	**195**	**855**	**81%**

(c) Health condition of the officers

It was observed that the officers attached to the traffic section of the police stations suffer from various respiratory disorders due to not using face masks while engaging in traffic management activities during busy hours. Although the police department should pay special attention in this regard, it was observed that the health condition of the officers is not investigated.

3.3.3 Inadequate technical support of Police CCTV Division

The Police Close-up Surveillance Camera Division has been established on 29.12.2010 through the Gazette No. 1701 and dated 13 April 2011.The following objectives are prominent, among the objectives of establishing this division.

i. Minimize traffic violations by drivers by monitoring traffic violations and taking legal action against offenders.
ii. Providing necessary support by providing CCTV footage for a research conducted by the Faculty of Information Technology of the University of Moratuwa.
iii. Daily monitoring of road blockages/blockages caused by road accidents in Colombo city and blockages caused by other obstacles and inform the control station in this regard and avoid those blockages.
iv. To take legal action against the drivers who violated the traffic rules and to educate the public by traveling around the city of Colombo with CCTV mobiles.
v. Live transmission of the scenes observed by the CCTV mobiles to the operation room of the Inspector General of Police of the police headquarters through 3G technology.

The observations in this regard were as follows.

(a) Technical deficiencies in the camera system of the close-up surveillance camera division

The operation of the system had been hampered due to the existing technology of the camera systems used in the police surveillance camera division which was not being properly updated. Had not been taken action to correct it so far. This sector has to face many problematic situations and the details are as follows.

i. Inability to perform any data analysis automatically in the camera system, which is based on several years old analog technology.

ii. In the system established on the advice of the University of Moratuwa, automatic number plate recognition at 02 locations and automatic criminal face recognition technology was proposed to be used, but it was not implemented.

iii. Because the data storage method is based on old technology, the data storage capacity is limited to 05 days only.

iv. It is impractical to detect a dangerous situation or to detect traffic violations by capturing the videos of 20 cameras for one officer within 08 hours.

v. Inability to detect at night

vi. Difficulty with cameras detecting when headlights of the vehicles are on.

Because of this, the camera system of the police CCTV division should be transformed to suit the modern technology, and thus data analysis capability, clarity of video data, data transmission capability, the capability to increase data storage capacity, special situations that are required instead of looking at the video channel with the naked eye, the efficiency and effectiveness of tasks such as the ability to automatically point on screens can be further improved.

Accordingly, the audit observed that instead of 10-year-old camera systems, there is a strong need for a camera system that matches the new technology with software and hardware with up to dated technology in the modern world that advances technology day by day.

(b) Inadequate staffing of the Police CCTV Camera Division

The division had 37 staff vacancies as at 31 August 2019 and the details are as follows.

position	approved Nos	Actual Nos	Nos of vacancies
A.S.P	01	-	01
C.I.P	01	-	01
I.P./S.I.P.	06	05	01
C.P.	60	26	34
Total	**68**	**31**	**37**

Due to the existence of these vacancies, the following problematic situation can be observed while the relevant system is operating.

i. Difficulty in deploying officers for all 05 consoles while referring console operators on leave/sicknesses/special duty/courses.
ii. Inability to occupy an officer of the rank of inspector to cover 24 hours as duty officers of the division.
iii. Lack of sufficient officers to carry out daily maintenance of the system.
iv. Lack of officers for mobile tours.
v. Lack of sufficient officers to refer to requests to obtain footage related to investigations carried out by outstations and special departments.
vi. Insufficient staff for office duties.
vii. Lack of trained officers for technological sector.

(c) Insufficient number of mobile vehicles.

The division currently has 3 mobile vehicles numbered as NA 7778, NA 7795 and NA 7796 and the number of traffic cases received by those mobiles are 30,192 since 2011. However, the audit observed that the camera system of mobile vehicles NA 7778 and NA 7795 is currently inactive, so the expected workload of these mobile vehicles is not being performed properly.

3.4 Colombo Municipal Council

3.4.1 Providing of parking facilities

Where providing of parking spaces as per Planning and Building Regulations 3 (ii) is not practicable, service charges shall be levied as specified in the Fifth Schedule as decided by the Planning Committee. Accordingly, the Colombo Municipal Council had charged the following fees in accordance with No. 7.29 of Colombo Development Plan (Revised) – 2008 and No. 07 of Document i (A) in the years 2017, 2018 and 2019, while approving the plans.

Description	2017	2018	2019
Number of Plan Approvals	06	04	01
Total Service Fee Value Charged (Rs.)	6,500,000	4,000,000	1,000,000

It was observed that the charges have been maintained in its deposit account for a long time, although it is the responsibility of the Colombo Municipality to provide parking facilities for the approved buildings through these charges. it was observed that car parks have not been constructed using these charges although the total of such charges from 2017 to 2019 is Rs. 11.5 million and a significant number of car parks have been permitted on major roads and charges are being levied.

02 lanes of the main road adjacent to the Sri Lanka Police Headquarters and the Port Authority are permitted for traffic parking.

3.4.2 Car parks and three-wheeler parks within the jurisdiction of the Colombo Municipal Council

There are 339 authorized three-wheeler parking lots in 17 police domains within the municipality and 76 roads where parking is permitted on both sides of the roads for a total of 4,322 vehicles. According to this information, the following facts were revealed in the manner of the information obtained from several police stations belonging to that road.

(a) It was revealed that there are places where three-wheelers are operated without approval in addition to approved three-wheeler parking lots in the manner of the information submitted by the police domains. According to that, 85 three-wheel parking lots are maintained in the Borella police domain and 1029 three-wheelers have been deployed there. But the number of three-wheel parking registered in that police domain was 29. According to that, there are 56 unauthorized three-wheel parking lots that are being run outside of formal registration. It is directly caused by the blockage of its functional pathways.

(b) It was observed that about 20 three-wheeler parking lots are operated on the main roads of Base Line Road, Kota Road (Maradana Road) in the said police domain according to the information .Those roads are the roads with high traffic and traffic jams.

(c) The facts had been mentioned in the report which was summoned by the officer in charge of traffic of the Colombo region, that the 50 three-wheel parking lots that have been approved and operated without approval should be removed immediately because of the obstructions caused to pedestrians and vehicular traffic.

(d). Permission had been given to park the vehicles in both sides of the road as there are not enough public parking lots for the traffic entering the city limits. Those roads were the main roads in the city center as well as other busy roads. The fact that the space available on the road has been allocated to parking the vehicles has also leaded to road blockages on this road and the alternative roads used for it.

3.5 Economic, social and environmental impact of not taking action to reduce traffic congestion

3.5.1 Economic impact

(a) Traffic congestion has a major impact on the economy of Sri Lanka. According to the research report (S.A.C.S. Jayasuriya and Yapa M. Bandara) published in 2017 under the title of Measuring the Economic Costs & Traffic Congestion, the damage to the economy is estimated as 32 billion rupees annually and Sri Lanka's gross domestic That figure represents roughly 1.5% of production. Also, according to the Metropolitan Development Plan 2019-2030, it has been estimated that 1.8 percent of the gross national product of the Sri Lankan economy is lost annually due to traffic congestion.

(b) During the daily peak hours, the vehicular travel speed from Colombo city to Colombo suburbs has decreased from 28 km/h to 9 km/h, according to the survey carried out in the period 1997-2001. Thus, commuters and private car drivers spend a lot of extra time in traffic and have to spend 21 percent of the transportation cost on fuel. In comparison with neighboring countries like India, Thailand and Malaysia, it was observed that Sri Lanka is ahead of them as a country with a higher percentage of fuel in transportation.

(c) According to research reports based on the Galle Corridor (from Moratuwa to Pettal), the economic costs caused by traffic congestion were analyzed as follows. Accordingly, it was observed that more costs are caused by buses and vans, while cars, motorcycles and three-wheelers cause less but significant costs.

Type of Transport	Buses	Mortor car	Vans	Mortor bicks	ThreeWheels
Oppertunity cost	3.12	2.00	7.40	0.21	0.22
Cost of Fuel	4.73	0.65	0.65	0.10	0.03
Cost per day	7.85	2.65	8.05	0.32	0.25
Total cost per Year	2865.25	967.25	2938.25	116.80	90.16

3.5.2 Social impact

The details were as follows.

(a) As indicated in the Colombo Commercial City Development Plan 2019-2030, the main adverse social impact is health related issues due to traffic congestion. One of the main health problems caused by air pollution is respiratory diseases. There is a risk of people falling ill when the air quality index in Colombo city goes up to extreme levels during heavy traffic.

(b) The slow and unsatisfactory transport system within the city limits of Colombo causes frustration, stress etc. to its users. Because of this, there is a risk of long-term health problems for Colombo residents and people who visit Colombo daily.

(c) When it takes more time to come and go back to work, it also causes less time to spend on other social interactions or for personal satisfaction, and this problem can affect badly to the productivity of office workers in various ways.

3.5.3 Environmental impact

(a) The fumes emitted by vehicles is one of the main factors affecting air pollution in Sri Lanka. The increasing number of the vehicle day by day, as well as the lack of satisfactory maintenance of the vehicle affects the increase in air pollution. The reason of this is heavy traffic congestion in urban areas, due to lack of adequate roads and the maintenance of those is not done

properly. The air quality index (AQI) in Colombo city is at a moderate level between 51-100 according to the air quality indicators prepared by the United States Environmental Protection Agency. The index takes a relatively low value as the number of vehicles travelling to Colombo city is high on Mondays, and it is a condition that contributes to health damage.

(b) Congested roads also adversely affect air pollution and noise pollution and motor vehicle emissions are one of the largest sources of air pollution in Sri Lanka and more than 60 percent of which occur in the vicinity of Colombo. It has been confirmed that there is a tendency to increase the density of visible gases such as nitrogen dioxide, sulfur dioxide and carbon dioxide during rush hour, and it can be inferred that the adverse condition in the atmosphere, on both sides of the roads as shown in the Colombo Commercial City Plan (2019-2030).

(c) As shown in the Colombo Commercial City Plan, gasoline-powered vehicles such as motorcycles and three-wheelers contribute to about 90 percent of the hydrocarbon emissions, while further facts out that buses and lorries contribute between 60 percent and 70 percent of emissions by emit nitrogen oxides and particulates from diesel-powered vehicles. Generally, PM 2.5 accounts for between 50 percent and 60 percent of the total PM 10 in a city. In Colombo city, Mondays are considered higher because the number of vehicles travelling to Colombo increases on Mondays. The highest traffic in Colombo city is between 7.00 am - 8.00 am and 1.00 pm - 3.00 pm and 5.00 pm - 7.00 pm. It was indicated that the QUI value is higher during these hours due to the exhaust gases from vehicles due to heavy traffic during these hours**.**

4. Recommendations

4.1 By properly identifying the need for a national transport policy, speedy approval of an appropriate transport policy for a sustainable transport system that includes multiple sectors.

4.2 In accordance with the National Physical Plan, the plans in the fields of urban transport and highways as well as the plans of the local government bodies related to those fields should be integrated and legalized through a gazette notification, and the necessary steps should be taken for the timely implementation of those plans simultaneously.

4.3 When carrying out the studies that prepare the relevant national plans for use, the impact on other sectors should be taken into consideration and evaluate in a very broad way.

4.4 To consider the analysis of loan conditions and their effectiveness in relation to the high cost incurred for obtaining academic and consulting services for the proper implementation of the relevant projects.

4.5 Prepare and implement national plans based on national needs in order to properly study and evaluate and implement projects to reduce traffic congestion and for an efficient transportation system, and to prevent unreasonable changes in decisions about it.

4.6 Strengthening the coordination of other institutions involved in a national transport system.

4.7 To increase the traffic management training of the officers of the traffic police divisions, to identify the police divisions where the traffic congestion is high and to assign the required number of officers to those divisions, to provide the necessary facilities and to make necessary arrangements to minimize the adverse effect on the health of those officers.

4.8 To arrange for prompt approval of all proposed projects.

4.9 Establishment of public passenger transport services from major railway stations to Battaramulla for officials of government institutions in the Battaramulla area and improvement of facilities for the public coming to get the services of those institutions.

4.10 Reduce the number of people visiting government agencies to get services by using new technologies and streamlining office work.

4.11 Allocate suitable places for traffic parking in Colombo city and Battaramulla city and consider the necessary options to meaningfully control the entry of vehicles into Colombo city.

4.12 Encouraging the use of solar and electric vehicles for public passenger transport to reduce emissions

4.13 Introduction of high capacity air-conditioned buses with foot board for passenger transport. (Providing facilities in short-distance buses as well as long-distance buses.)

4.14 Regular continuous operation of short distance buses for a specified period.

4.15 To see the possibilities to expansion of passenger transport using canals and oceans to cover the region from Moratuwa to Negombo

4.16 Taking into consideration the need to include multi-storied and their parking floors in the building plans in the construction of high traffic areas in the suburbs and then work to prevent it as those floors are used for other needs.

4.17 Taking in to account the following measures to reduce exposure to urban environment and create clean air.

(a) Introduction of electric/solar powered vehicles.
(b) Construction of charging stations for electric vehicles.
(c) Creating taxi facilities at reasonable fares for short-distance travel to the people visiting the city and increasing the use of electric/solar powered taxis.

4.18 Reconsider the zoning plan prepared by the Urban Development Authority and revise the building density so that the polluted air coming from the city's vehicles is re-emitted by the winds coming from the land towards the ocean.

4.19 The Urban Development Authority and other local government agencies should jointly establish a follow-up system to prevent unauthorized construction and evaluate the progress in time.

Sgd./W.P.C. Wickramaratne
Auditor General

W.P.C.Wickramarathne
Auditor General

17 November 2022