

**Ministry of Megapolis and Western Development  
Urban Development Authority  
Government of the Democratic Socialist Republic of Sri Lanka**

**PROJECT FOR  
FORMULATION OF GREATER KANDY  
URBAN PLAN (GKUP)**

**Final Report**

**Volume 2: Main Text**

**September 2018**

**Japan International Cooperation Agency (JICA)**

**Oriental Consultants Global Co., Ltd.  
NIKKEN SEKKEI Research Institute  
ALMEC Corporation**

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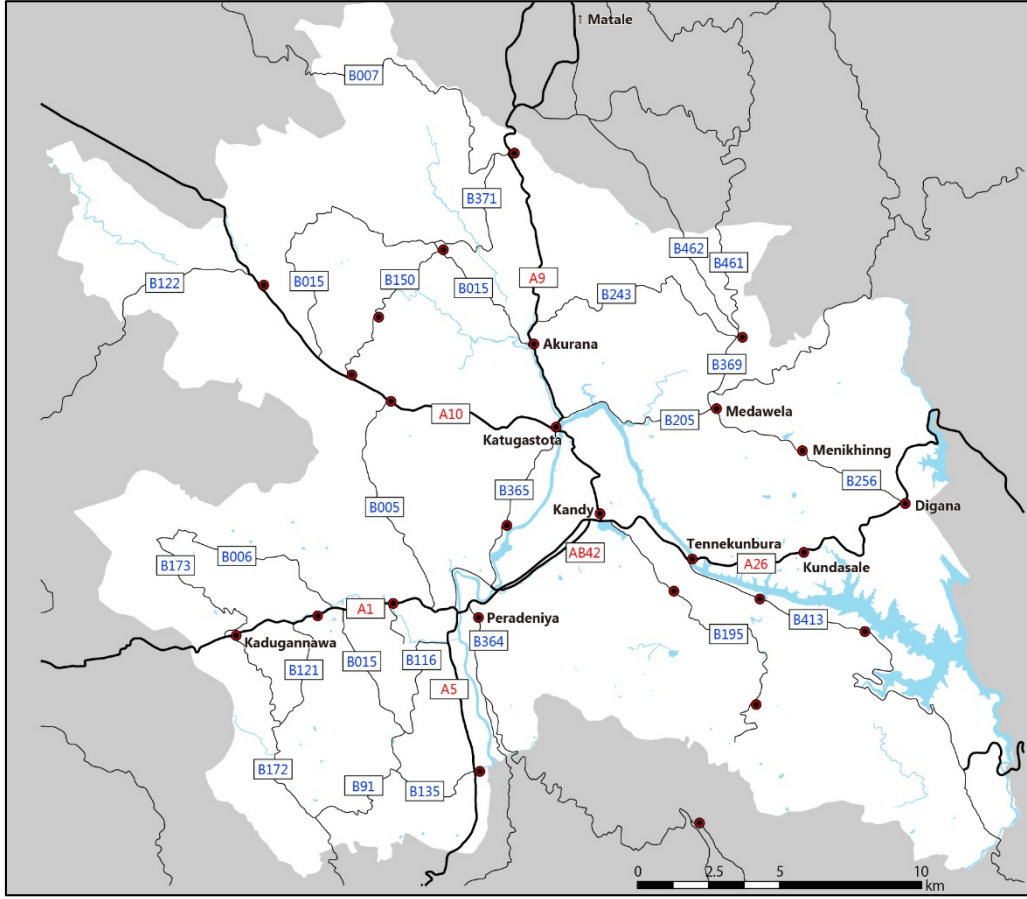
**Currency Exchange Rate**  
**September 2018**

LKR 1 : 0.69 Yen

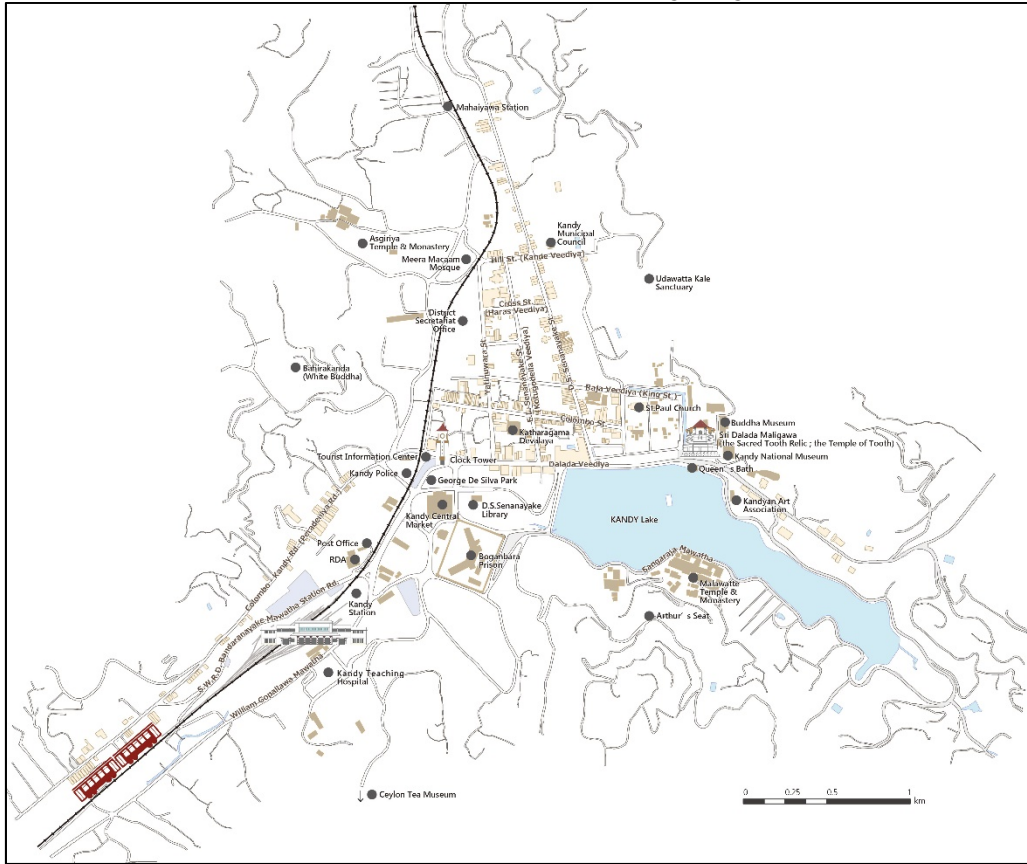
USD 1 : 111.40 Yen

USD 1 : 160.83 LKR

**Map of Greater Kandy Area**



**Map of Centre Area of Kandy City**



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## **List of Abbreviations**

3R:	Reduce, Reuse, Recycle
4R:	Reduce, Re-use, Recycle and Refuse
AI:	Artificially intelligence
AIA:	Archaeological Impact Assessment
BAT:	Best Available Technologies
BEP:	Best Environmental Practices
BPM:	Business Processing Management
BPO:	Business Processing Outsourcing
BOD:	Biochemical Oxygen Demand
BOI:	Board of Investment
BPR:	Bureau of Public Roads
CBD:	Central Business District
CCF:	Central Cultural Fund
CEA:	Central Environmental Authority
CEB:	Ceylon Electric Board
CFA:	Central Fragile Area
CGT:	Capital Gains Tax
CNG:	Compressed Natural Gas
COC:	Certificate of Conformity
COD:	Chemical Oxygen Demand
DEA:	Department of Export Agriculture
DG:	Director General
DIA:	Disaster Impact Assessment
DMC:	Disaster Management Centre
DMO:	Destination Management Organization
DOA:	Department of Archaeology
DOF:	Department of Forest
DOIr:	Department of Irrigation
DOM:	Department of Meteorology
DOWC:	Department of Wildlife Conservation
DRR:	Disaster Risk Reduction
DS:	Divisional Secretary
DSD:	Divisionary Secretariat District
DTCT:	Department of Trade, Commerce and Tourism, Central Province
EAP:	Economically Active Population

EDB:	Sri Lanka Export Development Board
EIA:	Environmental Impact Assessment
EPL:	Environment Protection License
EWS:	Emergency Warning System
FDI:	Foreign Direct Investment
FS:	Feasibility Study
GAP:	Good Agricultural Practices
GDP:	Gross Domestic Product
GHF:	Galle Heritage foundation
GIS:	Geographic Information System
GKUP:	Greater Kandy Urban Plan
GKWSP:	Greater Kandy Water Supply Project
GMC:	Galle Municipal Council
GN:	Grama Niladhari
GND:	Grama Niladhari Division
GOJ:	Government of Japan
GOSL:	Government of Sri Lanka
GRDP:	Gross Regional Domestic Product
GSMB:	Geological Survey and Mines Bureau
HH:	Household
HIAs:	Heritage Impact Assessments
ICOMOS:	International Council of Monuments and Sites
ICT:	Information and Communication Technology
IDB:	Industrial Development Board
IEE:	Initial Environmental Examination
IM:	Institutional Measures
IoT:	Internet of Things
ITS:	Intelligent Transportation Systems
IUCN:	International Union for Conservation of Nature
JETRO:	Japan External Trade Organisation
JICA:	Japan International Cooperation Agency
JPY:	Japanese Yen
KCWMP:	Kandy City Wastewater Management Project
KHWSP:	Kundadale-Haragama Water Supply Project
KIP:	Kandy Industrial Estate
KMC:	Kandy Municipal Council
KMTT:	Kandy Multimodal Transport Terminal
KNPIWSP:	Kandy North Pathadumbara Integrated Water Supply Project
KSWSP:	Kandy South Water Supply Project

KTIP:	Kandy Transport Improvement Program
LA:	Local Authority
LKR:	Sri Lankan Rupee
MASL:	Mahaweli Authority of Sri Lanka
MC:	Municipal Council
MICE:	Meeting, Incentive, Conference/Convention, Exhibition/Event
MIM:	Ministry of Indigenous Medicine (Department of Ayurveda)
MMWD:	Ministry of Megapolis and Western Development
MLIT:	Ministry of Land, Infrastructure, Transport and Tourism
MOA:	Ministry of Agriculture (Department of Export Agriculture)
MODSIT:	Ministry of Development Strategies and International Trade
MOE:	Ministry of Education
MOT:	Ministry of Transport and Civil Aviation
MPI:	Ministry of Primary Industry
MRECO:	Ministry of Rural Economy
MSDVT:	Ministry of Skills Development and Vocational Training,
MSW:	Municipal Solid Waste
MTDI:	Ministry of Telecommunication and Digital Infrastructure
MTDCRA:	Ministry of Tourism Development and Christian Religious Affairs
MYASD:	Ministry of Skills Development and Vocational Training
M/M:	Meeting Minute
NBRO:	National Building Research Organization
NEA:	National Environmental Act
NES:	National Export Strategy
NGOs:	Non-Governmental Organizations
NIBM:	National Institute of Business Management
NIRP:	National Involuntary Resettlement Policy
NPDD:	National Physical Development Department
NPP:	National Physical Planning
NPPD:	National Physical Planning Department
NPPP:	National Physical Planning Policy
NRW:	Non-revenue Water
NSWMSC:	National Solid Waste Management Support Center
NTC:	National Transport Commission
NWSDB:	National Water Supply and Drainage Board
ODA:	Official Development Assistant
OUV:	Outstanding Universal Value
PAA:	Project Approving Agency
PAC:	Powdered Activated Carbon

PAN:	Protected Area Network
PC:	Planning Committee
PCM:	Public Consultation Meeting
PET:	Polyethylene terephthalate
PM:	Particulate Matter
PPC:	Preliminary Planning Clearance
PPS:	Preliminary Planning Clearance
PRDA:	Provincial Road Development Authority
PS:	Pradeshiya Sabha
P&R:	Park and Ride
RAP:	Resettlement Action Plan
RDA:	Road Development Authority
REDA:	Regional Economic Development Authority, Central Province
ROW:	Right of Way
RPTA:	Road and Passenger Transport Authority
Rs.:	Sri Lankan Rupees
R/D:	Record of Discussions
R&D	Research and Development
SAARC:	South Asian Association for Regional Cooperation
SAP:	Strategic Action Project
SC:	Steering Committee
SCDP:	Strategic Cities Development Project
SCDP 2030:	Kandy City Region Strategic Development Plan 2030 (SCDP)
SDP:	Strategic Development Plan
SEA:	Strategic Environmental Assessment
SLASSCOM:	Sri Lanka Association of Software and Service Companies
SLLR&DC:	Sri Lanka Land Reclamation and Development Corporation
SLT:	Sri Lanka Telecommunication
SLTB:	Sri Lanka Transport Board
SM:	Structural Measures
SME:	Small and Medium-sized Enterprise
SWM:	Solid Waste Management
SWOT:	Strength, Weakness, Opportunity, Threat
TAC:	Technical Advisory Committee
TFR:	Total Fertility Rate
TOD:	Transit-oriented Development
THB:	Thai Bahts
TOR:	Terms of Reference
TWG:	Technical Working Group

UC:	Urban Council
UDA:	Urban Development Authority
UN:	United Nations
UNESCO:	United Nations Educational, Scientific and Cultural Organization
USD	US Dollar
WB:	World Bank
WS:	Workshop
WSS:	Water Supply System
WTP:	Water Treatment Plant



# EXECUTIVE SUMMARY

## 1. INTRODUCTION

### 1.1 Background

Kandy is the capital of the Central Province, and is the second largest city in Sri Lanka. Kandy also was the last capital of the kings' era of Sri Lanka, and is recognized as a sacred place of worship in the Buddhist world because of the Temple of the Sacred Tooth. Kandy has a lot of potential in economic, social, and cultural development. However, recent not-well-planned development has caused overcrowded conditions in the historical heritage area such as heavy traffic congestion, and urbanization encroaching into land-disaster vulnerable areas. In addition, the townscape of the historical heritage area has not been conserved or restored in a proper manner, and this deteriorates its value and attractiveness, which prevents the area from realizing its full economic potential. Under this context, the Greater Kandy Urban Plan (GKUP) which consists of (a) revision of urban development vision in Kandy Metropolitan Area, and (b) a detailed plan for the heritage area, is essential.

### 1.2 Objective and Outputs of the Project

The objective of the Project for Formulation of Greater Kandy Urban Plan (GKUP) is to contribute “to enhancement of the value and attractiveness of Kandy as an historical and tourist city through restoration of the historic townscape.”

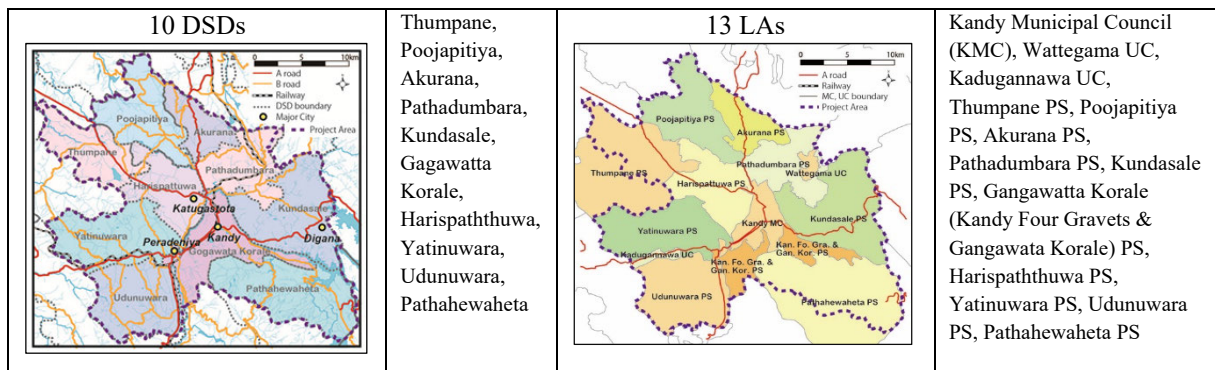
Outputs of the Project are as follows:

- 1) To revise the urban development vision of the Greater Kandy Urban Plan
- 2) To formulate the detail plan for the heritage area of Kandy
- 3) To recommend the implementation including a strategic investment proposal for the Greater Kandy Urban Plan

### 1.3 Project Area

#### 1.3.1 Project Area for Revision of Urban Development Vision

The project area is as shown in Figure 1.1, including 10 DSDs with a population of 897 thousand (in 2012) and an area of 608 km<sup>2</sup>, which is composed of the 13 local authorities (1 Municipal Council (MC), 2 Urban Council (UC), 11 Pradeshiya Sabha (PS)).

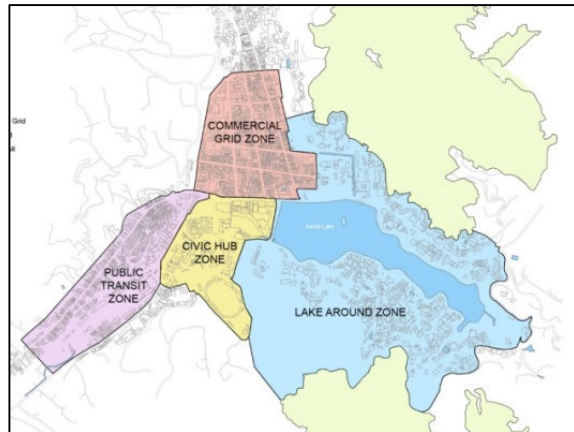


Source: The JICA Team

Figure 1.1 Area for Urban Plan (Greater Kandy)

### 1.3.2 Area for Detail Plan

The target area for the detail plan is as shown in Figure1.2 with a total area of 173.70ha, with four zones as: Commercial Grid Zone (24.59ha), Lake Around Zone (104.24ha), Public Transit Zone (25.66ha), and Civic Hub Zone (19.22ha).



Source: The JICA Team

**Figure1.2 Project Area for Detail Plan (Heritage Area)**

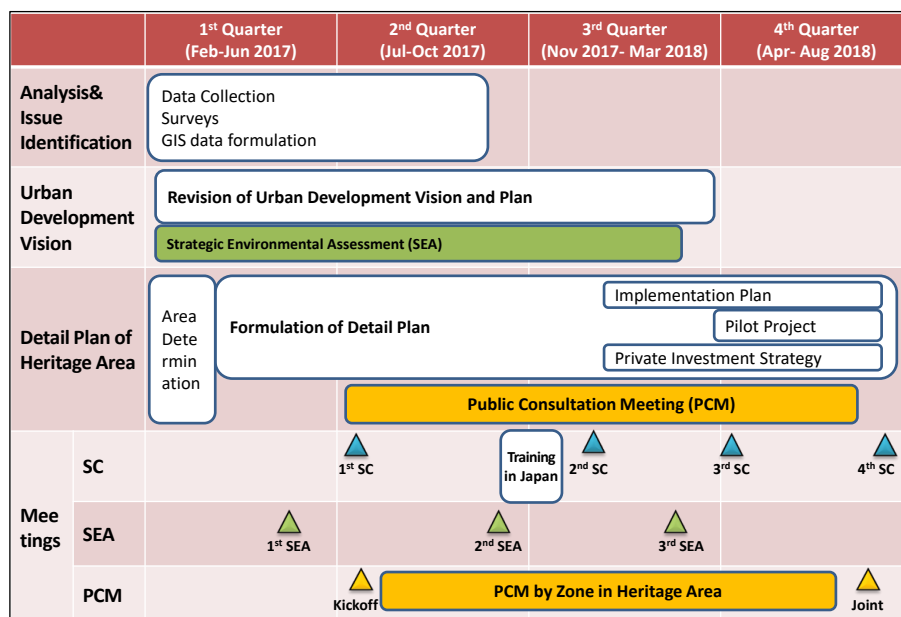
### 1.4 Implementation Organization Structure

To implement the Project effectively and to materialize it, **Steering Committee (SC)** was established, headed by Ministry of Megapolis and Western Development (MMWD), aiming (1) To monitor and supervise the entire project; (2) To discuss and approve the reports; and (3) To coordinate among the relevant organizations; and **Technical Working Group (TWG)** were established to work with the JICA Team for smooth implementation of the Project; composed of 2 groups, “Urban Development Vision” and “Detail Plan”. The main counterparts were Urban Development Authority (UDA) and Kandy Municipal Council (KMC).

In addition, for Strategic Environmental Assessment (SEA) stakeholder meeting were held three times for the Urban Vision; and Public Consultation Meetings (kick-off, 5-times workshops, and joint meeting) were held to reflect the voices of citizens and owners of the conserved buildings in the Heritage Area to reflect the Detail Plan of the Heritage Area.

### 1.5 Work schedule

The GKUP project was commenced at the end of February 2017 and finishes in August 2018 to conduct the major components as shown in Figure 1.3.



Source: The JICA Team

**Figure1.3 GKUP Workflow**

## 2. VISION AND GOALS

### 2.1 Vision

“Greater Kandy shall be Sri Lanka’s repository of historic, natural, cultural and religious heritage.”

### 2.2 Development Goals

To achieve the vision, based on the development issues, the following five development goals were set:

- (1) **Environmental conservation:** To preserve and conserve rich natural resources of greenery and water in the Central Highland by development control towards sustainable growth
- (2) **Conservation/preservation of historic and cultural heritage:** To conserve historic and cultural heritages including that of the Kandyan style, intangible values such as diversity, tolerance, religious faith, with the World Heritage City of Kandy as a centre, and bequeath them to the future generations
- (3) **Vitalization of socio-economic activities:** To vitalize the regional economy by promoting the urban economy and rural local economy through enhancement of the industrial potential based on local-resources
- (4) **Transportation improvement:** To establish an efficient transport system which strengthens the regional linkages, thereby foster economic activities in each local area in the Greater Kandy; and to alleviate traffic congestion by formation of clusters and removal of bottlenecks.
- (5) **Improvement of living environment and urban growth management:** To create excellent, livable urban space and living environment by proper location of urban functions, land use zoning, redevelopment/ development of infrastructure, disaster prevention, etc. and formation of a compact city; and planning and implementation shall be through public participation mechanism.

## 3. DEVELOPMENT ORIENTATION AND URBAN STRUCTURE

### 3.1 Development Framework

Future population in the Greater Kandy area is forecasted to reach 1.05 million in 2035 based on the past population trend of the Greater Kandy area and Sri Lanka, and population framework of the National Physical Plan 2050 (draft)<sup>1</sup>

### 3.2 Orientation of Land use

Land use zoning is proposed by considering (i) the environmental zoning, which identifies developable lands, moderate constraint zones and crucial constraint zones for development, (ii) future urban structure, and (iii) future population framework. It is also considered to sustain home garden, which characterises current land use of low-dense residential area.

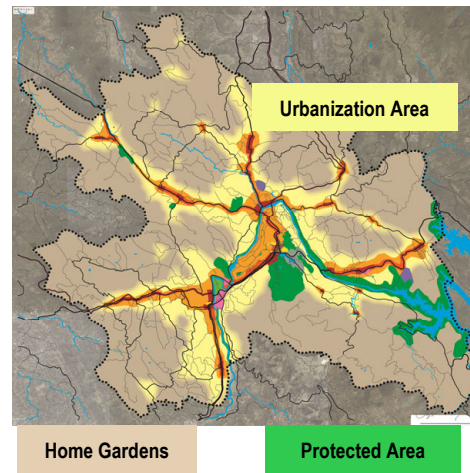
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<sup>1</sup> National Physical Plan is authorised and gazzeted as per the Town and Country Planning (Amendment) Act (No. 49 of 2000) as a broad framework for Sri Lanka to promote and regulate the integrated planning of economic, social, physical and environmental aspects.

As the result, land, totalling 608 km<sup>2</sup>, is categorized into the three major land use categories: (1) urbanization area (app. 159 km<sup>2</sup>), (2) home garden area (app. 420 km<sup>2</sup>), and (3) protected area (app. 29 km<sup>2</sup>). The urbanization area can accommodate the future population of 1.05 million, under the certain population density.

### 3.3 Urban Structure of Greater Kandy

Based on the analysis of existing urban structure and review of the existing regional development plans, the *Multi-Clusters and Transport Corridors*, was proposed in GKUP, composed of the following hierarchical urban centres, with a transportation network connecting them: By forming this hierarchical urban centres system, it is expected to promote economic activities and enhance redundancy of urban functions against disasters within the whole Greater Kandy Area.:



Source: The JICA Team

**Figure 3.1 Land Use Concept Map**

- (1) **Primary Urban Centre:** Kandy City as Urban Service Centre harmonized with historic values by providing various functions of commercial, business, educational and medical services,
- (2) **Cluster Centres:** (a) Gatambe- Peradeniya as Higher Education and Medical Centre, (b) Kundasale- Digana as Advanced Industrial Centre, (c) Katugastota- Akurana as Commercial Service Centre;
- (3) **Tertiary centres (Major Suburban Centres):** Akurana, Galagedara, Kadugannawa, Gelioya, Talatu Oya, Wattegama to be independent Suburban Centres
- (4) **Suburban Centres: Townships/ Villages:** Rural community centre providing services to rural areas

Kandy and the cluster cities are connected with each other, with efficient public transportation system and bypass network. Katugastota and Peradeniya are developed in concomitant with the railway service improvement including railway double tracking and station area development.

### 3.4 Cluster Development Orientation

Cluster cities of Katugastota, Peradeniya and Kundasale-Digana will accommodate the urban functions relocated from the primary urban centre of Kandy to form the core area of the Greater Kandy area with Kandy City as a centre.

- Urban areas are developed in Katugastota as commercial centre, Peradeniya as medical and education centre, and Kundasale –Digana as public administration and advanced industry centre.
- Well balanced socio-economic allocation in the cluster cities area of KMC and the three cluster cities, as the core of the Greater Kandy Area.

### 3.5 City Centre Development Orientation

Kandy City is revitalized as the urban core of Central Region harmonized with historic and cultural values and socio-economic activities. To minimize negative impacts and pressures of traffic, environment and inappropriate development activities, the following concepts are the basis for urban and transport development and improvement:

- Development of an urban service centre of Greater Kandy to be integrated with adjacent urban clusters firstly relocating the urban functions from Kandy to the cluster cities, thereby decongesting the city centre.

- Restructuring urban functions in the city centre to open the urban space for the public
- Preservation and rehabilitation of historic and cultural assets of Heritage Area with the surrounding natural environment
- Creation of pedestrian friendly networks and open spaces

## **4. DETAIL PLAN FOR THE HERITAGE AREA**

### **4.1 Components of Detail Plan**

In addition to the regulation of the Development Plan, the following items are introduced to guide appropriate townscape and project implementation in the Heritage Area.

#### **(1) Criteria and Category of Heritage Buildings**

The proposed Detail Plan can basically be formulated by utilising the framework of the Development Plan that has been devised based on the existing UDA Act. It is proposed to simplify and deregulate the following categories and to position these regulations in the Development Plan: “Category 1: Individual Historic Buildings and “Category 2: Contributing building to the Groups of Historic Buildings (Historic District). For both Category 1 and 2, the regulation only applies to the exterior so as not to prevent the uses of the owners in principle. If the interior of the buildings of Category 1 is proved to be worthy of preservation, they may be protected and alternations to such buildings need to be regulated.

#### **(2) Zoning Regulation**

For the purpose to protect the human-scale historic townscape and affluent urban space for amenity and resilience, (i) keep the existing Development Plan for Floor Area Ratio (FAR) and Height regulation because these regulations are strict enough to protect the historic townscape in the Heritage Area, and (ii) amend Land Use Regulation with (a) Prohibit distribution and wholesale functions (in Commercial Grid Zone), (b) Permit business & commercial functions (in Civic Hub and Public Transit zones), and (c) Prohibit hotel in environmentally sensitive areas (in Lake Around Zone).

#### **(3) Other Regulations**

As new buildings need to observe the historic development pattern that create the harmonious relationship with the remaining historic resources, mainly by façade line, scale and massing, colour, height and fenestration., the following items are to be regulated for new buildings: (i) Straight street wall line, (ii) no segmentation of facade design, (iii) acceptable colors for roof and exterior material, (iv) Signs (size, location, number, etc.)

For flexible regulation on conserved buildings, the heritage building conservation regulation should be relaxed to (1) allow alteration in the interior of the conserved building, and (2) allow reconstruction of additional structure of the back portion. And also the existing conserved buildings should be reevaluated and relisted for appropriate heritage conservation.

#### **(4) Transport Improvement**

One of the most important requirements for realising the proposed basic planning concept is to transform the Heritage Area into a pedestrian priority area through comprehensive transportation policies. In the Commercial Grid Zone, transport improvement strategies should focus on increasing walkability by redefining the street hierarchy, construction of the off-street parking structure and relocation of the wholesale trucks.

### (5) Landscape Management

Height restrictions need to be taken into account in the landscape of the Heritage Area in consideration of the height of the Temple of the Tooth Relic, which is the centrepiece of the district. It can be said that the problem lies not with the content of the regulations (Development Plan), but in improving the effectiveness of regulations cracking down on illegal buildings and strengthening of the monitoring systems. As a short-term response to buildings that have already been constructed, a proposal would be to plant trees in front of buildings and green walls.

### (6) Strategic Action Projects

The areas for strategic action projects in line with urban project management and implementation. This includes:

- **Public Space Improvement Project:** In this area, proposed public space improvement projects will be implemented by priority (in south of Grid Zone). To ensure walking environment between west and south area of the Grid Zone, Colombo Street will be pedestrian priority street with sidewalk widening and improvement, parking management, street furniture instalment, etc.
- **Urban Redevelopment Project:** In this area, urban redevelopment projects will be promoted by relocating public facilities to the cluster cities, and utilizing vacated lands for public and cultural purposes, for example: (a) Existing Sinha Regiment land to be redeveloped as the public transportation hub (railway station/station plaza/parking), (b) Public facilities area to be reorganized as a pedestrian priority space in Civic Hub Zone.
- **Living Environment Improvement Project:** Living environment of unplanned settlement area along Meda Ela is to be improved.

### (7) Urban Design Orientation

The areas are to guide urban design to ensure walking improvement of “Spiritual Walk”. (a) Transformation of the Kandy Station Plaza into pedestrian plaza, (b) Creation of green and open spaces utilizing the public owned lands in the Civic Hub Zone, (c) Development of pedestrian oriented roads by improvement of the existing roads in the Commercial Grid Zone

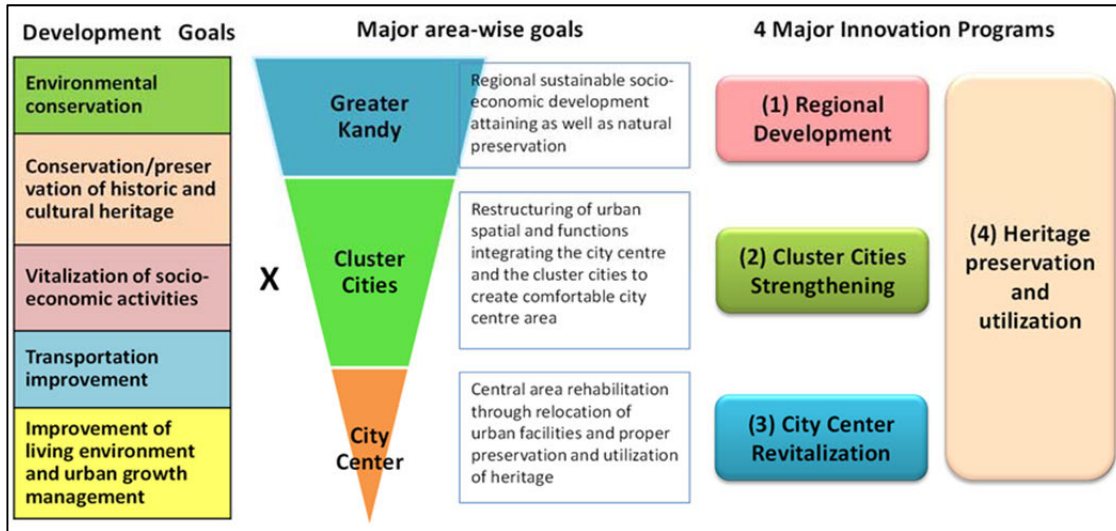
## 4.2 Functions necessary for proper implementation of heritage preservation

At present, the organizations pertinent to the heritage preservation, which are UDA, KMC, DOA, and CCF, do not coordinate with each other properly and the applicants are not well taken care of by them. In order to improve this unsatisfactory situation, it is recommended to establish “**One Stop Service**” by the four relevant organizations. The functions to appropriately implement urban management and conservation are (1) Management, Technical support, (2) Research and Advocacy, (3) Financing, and (4) Revitalization.

For financing to promote private investment to the heritage conservation in the Heritage Area, there are some methods, namely: (1) Grant, Subsidy: Subsidy from government, (2) Grant from international authority such as UNESCO, (3) Finance Loan, Equity Finance: Investment from bank, investors, etc., (4) Crowdfunding, etc.: Voluntary investment through internet towards revitalization of Kandy, (5) Donation, Mécénat: Donation from volunteers, corporations, etc., (6) Other methods (development return allocation, etc.): A part of return allocation from large scale development (UDA)

## 5. DEVELOPMENT PROGRAMMES

Four development programmes are formulated in the framework shown in Figure 5.1.

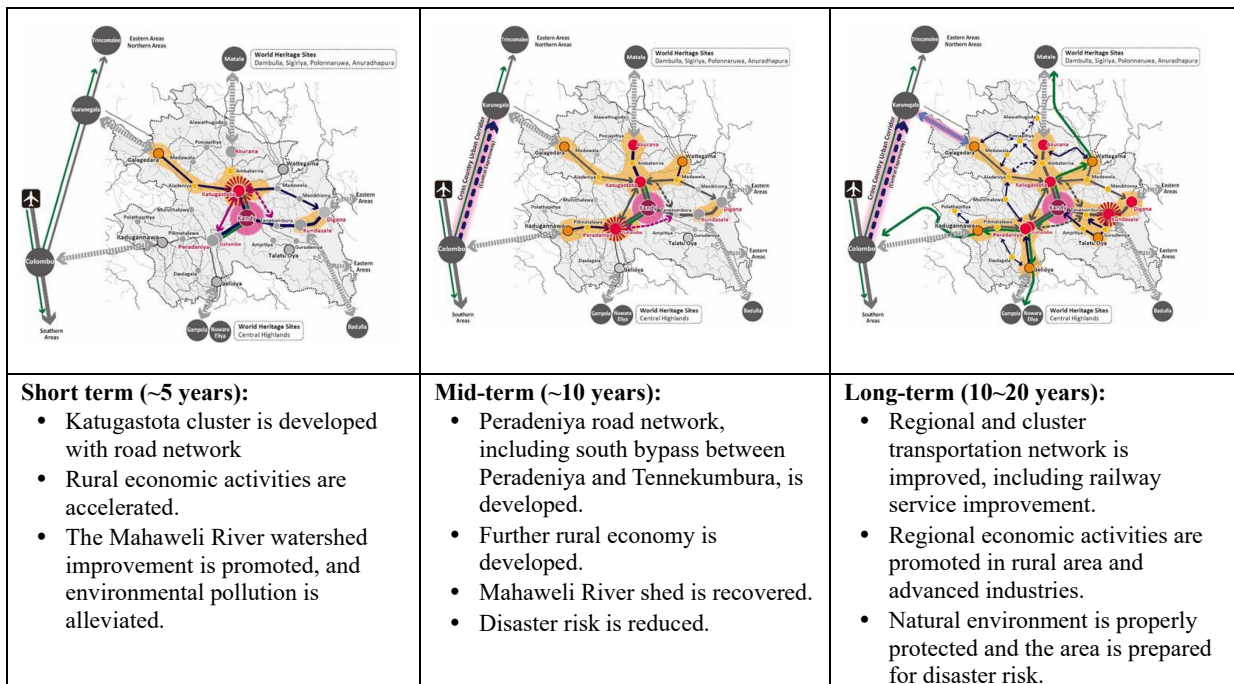


Source: The JICA Team

Figure 5.1: Framework for the Formulation of Development Programmes

### 5.1 Regional Development Programme

This programme's phased development image is as shown in Figure 5.2.

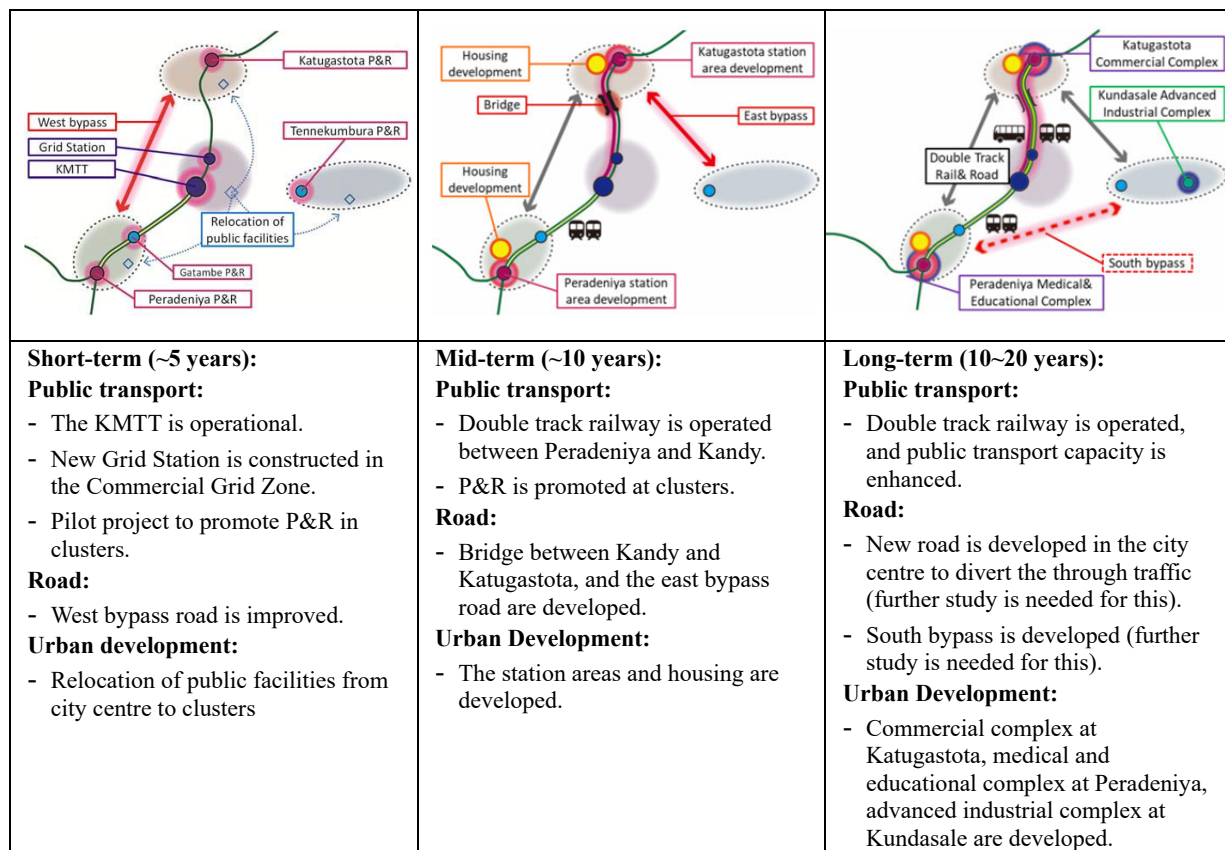


Source: The JICA Team

Figure 5.2: Regional Development Programme by Phase

## 5.2 Cluster Cities Strengthening Programme

This programme's phased development image is as shown in Figure 5.3.

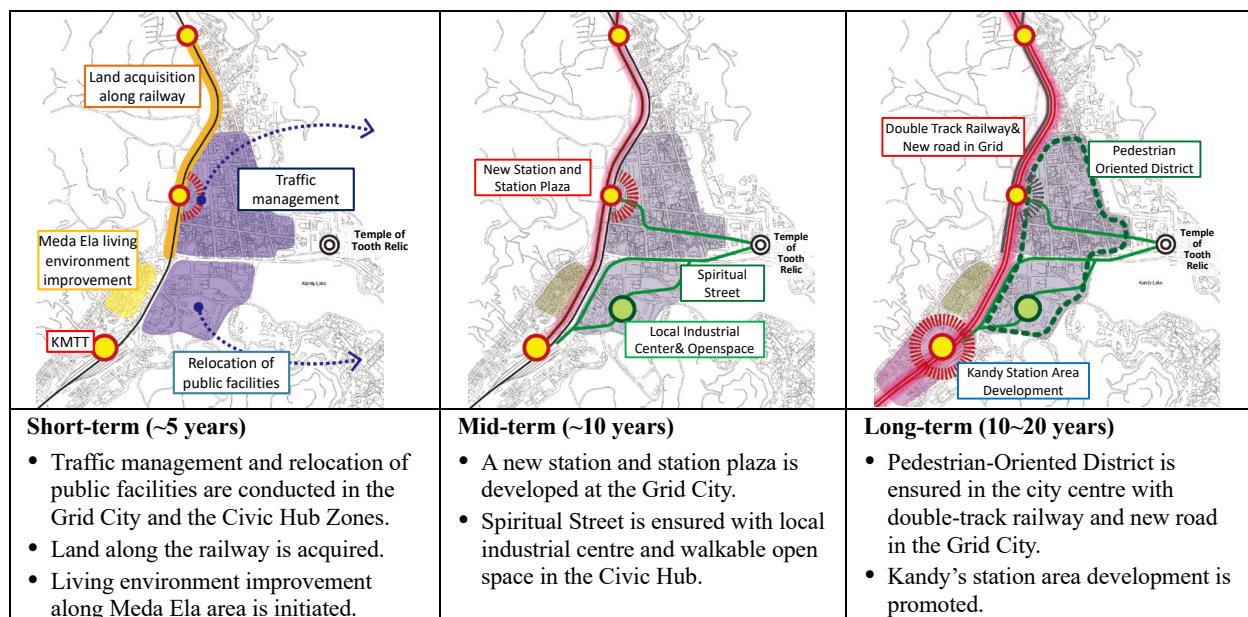


Source: The JICA Team

Figure 5.3: Development of the Cluster Cities and Kandy by Phases

## 5.3 City Centre Revitalization Programme

This programme's phased development image is as shown in Figure 5.4.



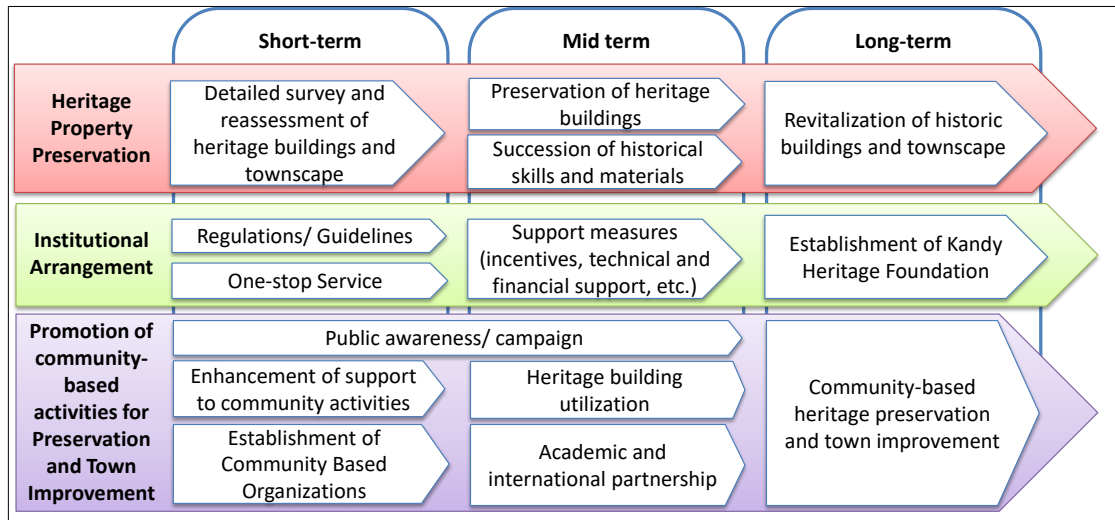
Source: The JICA Team

Figure 5.4: Development of the City Centre Area by Phases



## 5.4 Heritage Preservation and Utilization

This programme is composed of (a) Heritage property preservation, (b) Institutional arrangement, and (c) Promotion of community-based activities for preservation and town improvement. And their phased target image is as shown in Figure 5.5.



Source: The JICA Team

**Figure 5.5: Programme Components of Heritage Preservation and Utilisation Programme by Phases**

## 6. CONCLUSION

The main concept of the Greater Kandy Urban Plan (GKUP) is “to review and respect the values of history, nature and culture of Kandy and to propose the future of Kandy for the next generation”. Kandy does not possess only these values, but also includes the people’s heart as its spiritual value. In this plan, these values of history, nature, culture and people’s heart as well as the present issues are overlaid to reflect the time dimension and the spatial aspect of the plan toward achieving the vision.

In order to restore what Kandy – regarded as “one of the most beautiful cities in the most beautiful region in the world” – had in the past, the GKUP has proposed solutions to enhance the economic value of the region by utilising the values of Kandy. In particular, urban functions such as wholesale and public administration are located in the Heritage Area; however some of them do not need to be located in the Heritage Area. Thus it is proposed to relocate them to clusters of Katugastota, Peradeniya, and Kundasale-Digana; and comfortable spaces will be revitalised in the vacated area in the Heritage Area for the communities, citizens and tourists to enjoy its socio-economic values, in which the area is planned to form a pedestrian-oriented space as “Spiritual Street”.

Nowadays, cities throughout the world are at a turning point to diversify from production and consumption to environmental preservation and sustainable livelihood of the community. Kandy can be a model of a sustainable city as prescribed in the 17 SDGs (Sustainable Development Goals) of the United Nations. In this time of city transformations, cities which are harmonised with the economy and environment as well as people’s inner peace are required.

In the process of formulating this GKUP, local communities participated in a series of meetings continuously, and their proposals were carefully studied and reflected in the GKUP. This is also a significant effort and a valuable step for Kandy. For this, partnerships between communities and governments are indispensable to revitalise the brand of Kandy and to promote the regional development of Greater Kandy based on its natural, historic, cultural and spiritual values.

# **PART 1: INTRODUCTION**

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**CHAPTER 1 INTRODUCTION**

**CHAPTER 2 OVERALL ACTIVITIES OF THE PROJECT**

## CHAPTER 1 INTRODUCTION

### 1.1 Background

Kandy is the capital of the Central Province and is the second largest city in Sri Lanka. Kandy was also the last capital of ancient kings' era of Sri Lanka, and is recognised as a sacred place of worship in the Buddhist world because of The Temple of Tooth Relic.

A popular tourist destination in Sri Lanka, Kandy was declared by UNESCO as a world heritage city in 1988 because of the city's historical and religious importance. Kandy is located 116 km from Colombo, or a distance of about a 3- to 4-hour car ride. Currently, the Road Development Authority is proceeding with the construction plan of the Central Expressway, whose section 3, which is located northwest of Kandy and only 15 km from Katugastota, is planned to be connected to Galagedara in 2020. Thus, Kandy is expected to be connected to Colombo within about a 1.5 hour drive, which will strengthen the linkage between Kandy and Colombo. The economy of the Central Province is promising, consisting predominately of tea plantations, tourism resources, export processing zone activities, and agricultural activities.

As mentioned above, Kandy has a lot of potentials in terms of economic, social, and cultural development. However, recent development activities, which were not well-planned, have caused overcrowding conditions in the historical heritage area. These include heavy traffic congestion and urbanisation encroaching into land areas vulnerable to natural disasters. In addition, the townscape of the historical heritage area has not been conserved or restored in a proper manner, and this deteriorates its value and attractiveness, which prevents the area from realising its full economic potential.

Under this context, the Greater Kandy Urban Plan which consists of (a) revision of urban development vision in Kandy Metropolitan Area, and (b) a detailed plan for the heritage area, is essential.

Given the above situation, the Government of the Sri Lanka (hereinafter referred to as "GOSL") requested the Government of Japan (hereinafter referred as "GOJ") to implement "the Project for Formulation of Greater Kandy Urban Plan (hereinafter referred to as "the Project")."

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the GOJ, has undertaken a study in close cooperation with the concerned authorities from the GOSL. The Minutes of Meeting (hereinafter referred to as "M/M") on the technical cooperation for the Project for Formulation of Greater Kandy Urban Plan, which was agreed upon and signed on 9 September 2016 between the GOSL and JICA, and the Record of Discussions (hereinafter referred as "R/D") on the Project was agreed upon and signed on 10 October 2016 between the GOSL and JICA.

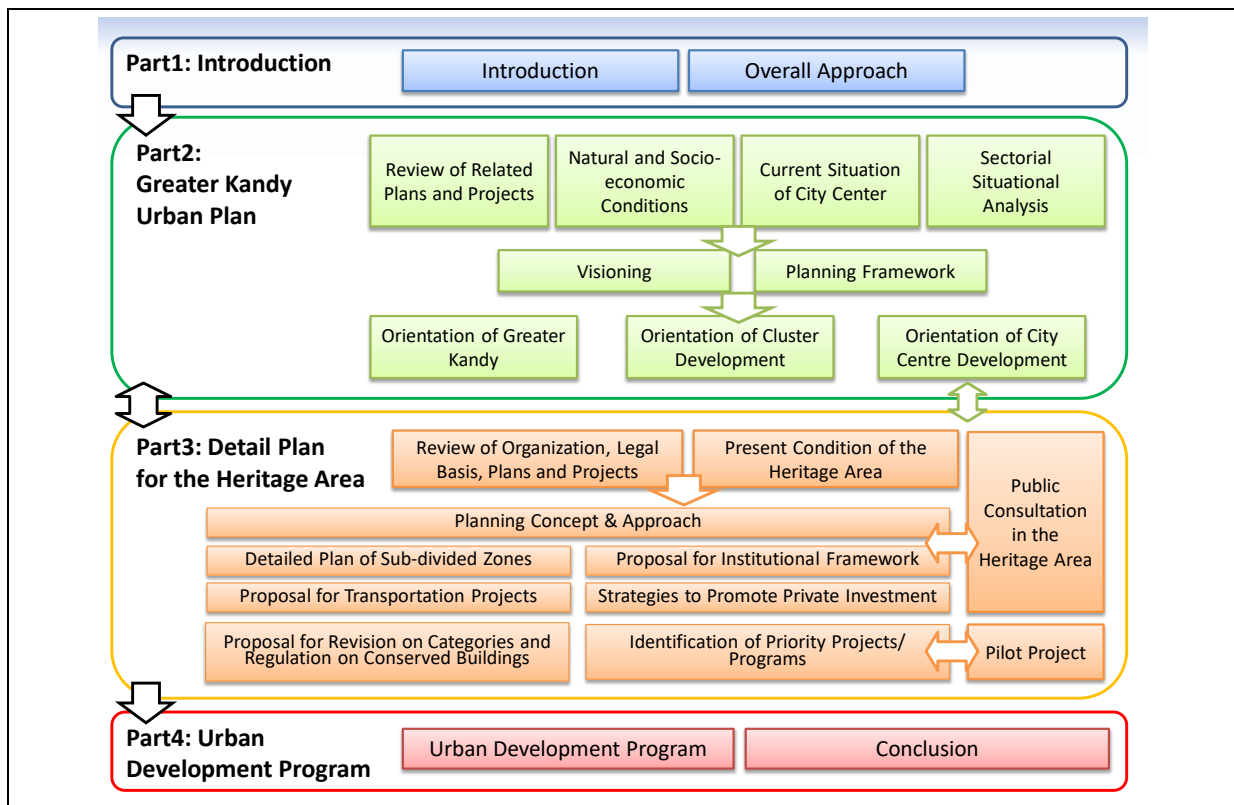
## 1.2 Objective and Outputs of the Project

The objective of the Project for Formulation of Greater Kandy Urban Plan (hereafter referred to as “GKUP”) is to contribute to the enhancement of the value and attractiveness of Kandy as a historical and tourist city through the restoration of the historic townscape.

Outputs of the Project are summarised as follows:

1. To revise the urban development vision of the Greater Kandy Urban Plan;
2. To formulate the detail plan for the heritage area of Kandy; and
3. To recommend the implementation including a strategic investment proposal for the Greater Kandy Urban Plan.

The structure of this report is shown in Figure 1.2.1.



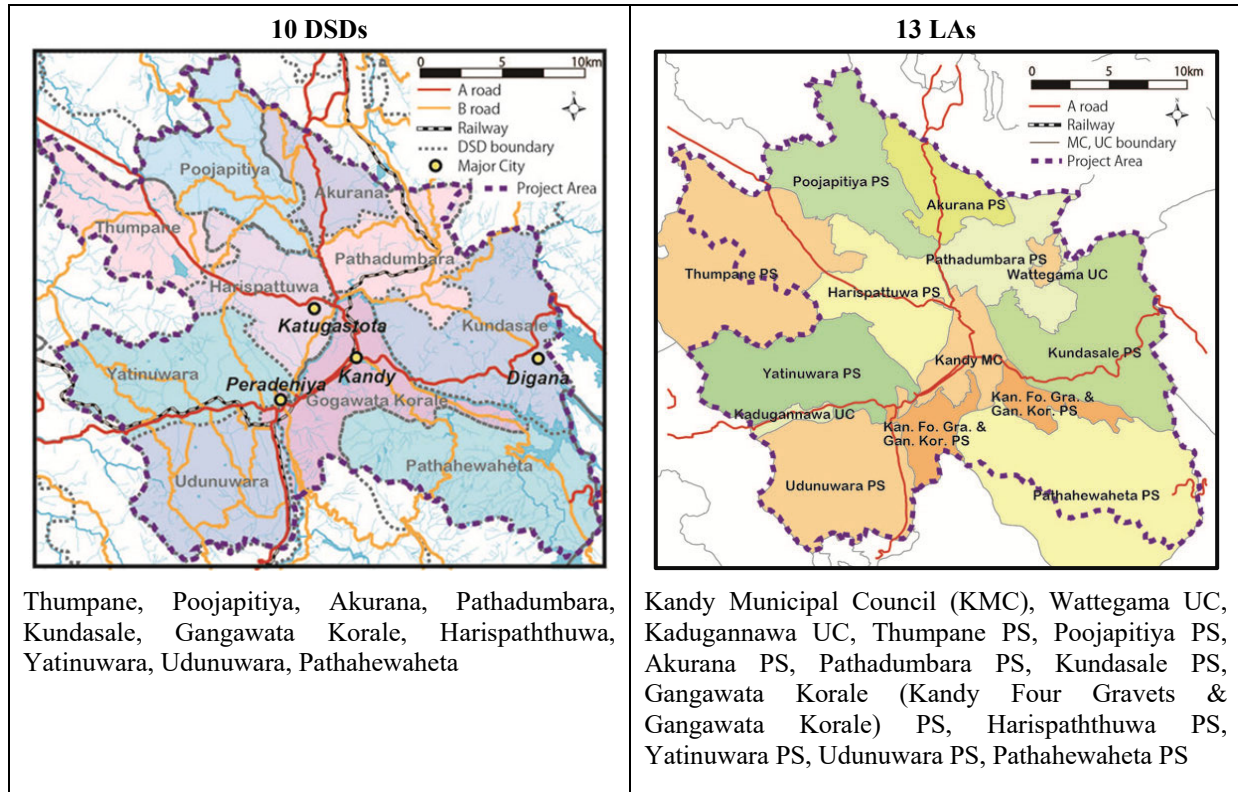
Source: The JICA Team

Figure 1.2.1 Report Structure

### 1.3 Project Area

#### 1.3.1 Project Area for the Revision of Urban Development Vision

The project area is as shown in Figure 1.3.1, including 10 DSDs with a population of 897 thousand (in 2012) and an area of 608 km<sup>2</sup>, which is composed of the 13 local authorities (1 Municipal Council (MC), 2 Urban Councils (UC), 11 Pradeshiya Sabhas (PS)).



Source: Department of Census and Statistics, Census of Population of Housing 2012

**Figure 1.3.1 Area for Urban Plan (Greater Kandy)**

**Table 1.3.1 Population and Area of DSD in the Project Area**

Name of DSD	Population (000)	Area (km <sup>2</sup> )
Thumpane	38	54
Poojapitiya	58	59
Akurana	63	31
Pathadumbara	89	51
Kandasale	127	81
Gangawata Korale	159	59
Harispattuwa	88	49
Yatinuwara	106	72
Udunuwara	111	68
Pathahewaheta	58	84
<b>Total of Project Area</b>	<b>897</b>	<b>608</b>

Source: Department of Census and Statistics, Census of Population of Housing 2012

### 1.3.2 Area for Detail Plan

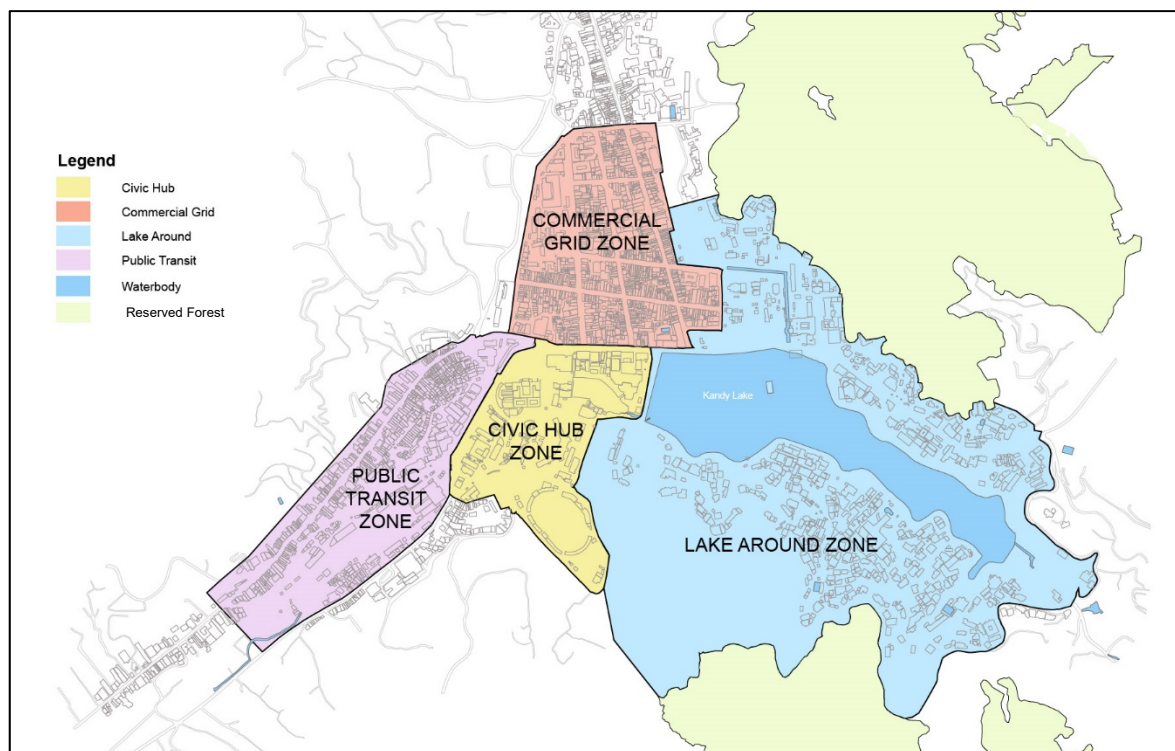
The Greater Kandy Master Plan, which UDA formulated in 2015, designated the heritage city development area where strict building use guideline are required to arrest degradation of the city, including the four (4) zones. Based on it, after consultation with UDA, zone categories and boundaries were amended (see the details in Chapter 10). Consequently, the “Heritage Area” for the Detail Plan of GKUP was set as shown in Figure 1.3.2 with four (4) zones, including Commercial Zone, Lake Around Zone, Public Transit Zone and Civic Hub Zone, with a total area of 1.7 km<sup>2</sup>. The areas of the sub-divided zones are indicated in Table 1.3.2.

**Table 1.3.2 Area of Four (4) Sub-divided Zones of the Heritage Area**

Zone	Area (ha)
Commercial Zone	24.59
Lake Around Zone <sup>1)</sup>	104.24
Public Transit Zone	25.66
Civic Hub Zone	19.22
Total	173.70

Source: The JICA Team

Note) The Cultural Zone around the Temple of the Tooth Relic was merged into the Lake Around Zone.



Source: The JICA Team

**Figure 1.3.2 Project Area for Detail Plan (Heritage Area)**

## 1.4 Implementation Organization Structure

Two organisations were created in order to implement the Project effectively and to enable it to materialise (see Figure 1.4.1).

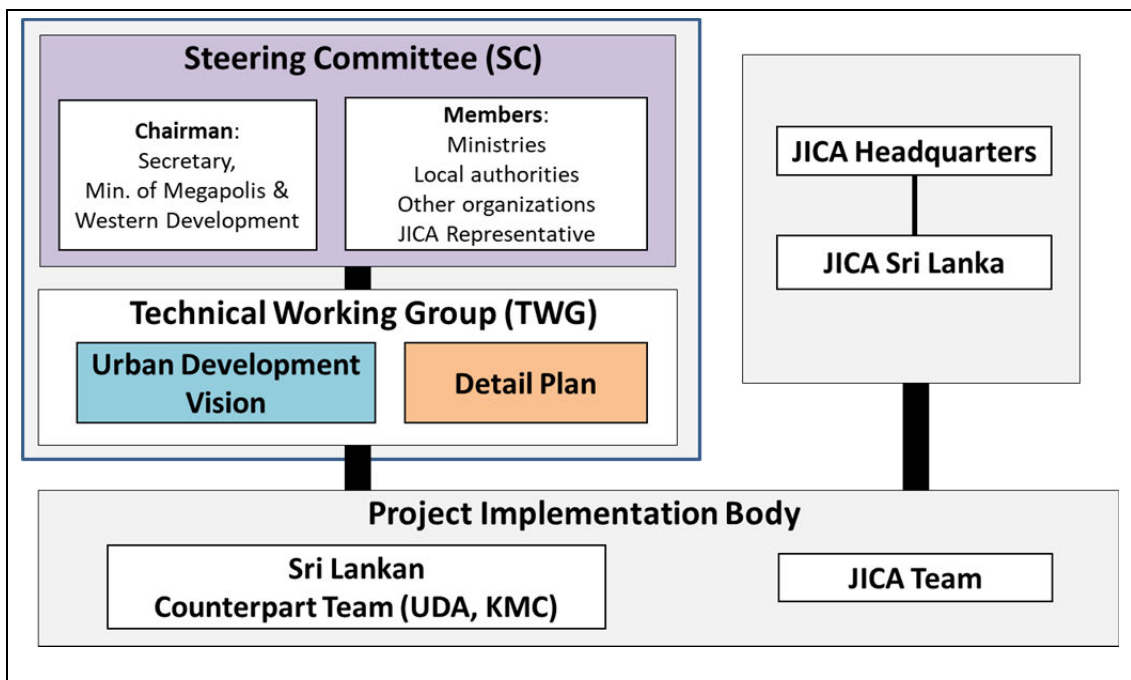
**Steering Committee (SC):** (1) To monitor and supervise the entire project; (2) To discuss and approve the reports; and (3) To coordinate among the relevant organisations.

**Technical Working Group (TWG):** To work with the JICA Team for smooth implementation of the Project; composed of 2 groups: “Urban Development Vision” and “Detail Plan”.

Four SC meetings were conducted to address the following:

- 1) 1<sup>st</sup> SC meeting in July 2017: The Inception Report including the implementation organisation, work approach, tasks, schedule, and outputs of the project.
- 2) 2<sup>nd</sup> SC meeting in November 2017: The Interim Report including the revised Urban plan for Greater Kandy, and progress of Public Consultation Meeting of Heritage Area.
- 3) 3<sup>rd</sup> SC meeting in April 2018: A basic concept of the Detail Plan, and progress of Public Consultation Meeting.
- 4) 4<sup>th</sup> SC meeting in July 2018: The Draft Final Report including the whole project results.

The TWG meetings were conducted before the SCs. Committee members from Sri Lanka and Japan follow up the progress of GKUP project and share their professional opinion on the proposal presented by JICA team since the beginning phrase of the project.



Source: The JICA Team

**Figure 1.4.1 Implementation Organisation Structure**

**Table 1.4.1 List of SC and TWG Organisations**

Organisation (* Secretariat organisation)	Steering Committee	TWG for Urban Vision	TWG for Detail Plan
Ministry of Megapolis & Western Development (MMWD)	✓		
Urban Development Authority (UDA)*	✓	✓	✓
Kandy Municipality (KMC)*	✓	✓	✓
Kandy District Secretariat	✓		✓
Ministry of Transportation	✓		
Ministry of Mahaweli Development & Environment	✓		
Ministry of Higher Education & Highways	✓		
Ministry of City Planning & Water Supply	✓		
Ministry of Education	✓		
Ministry of Agriculture	✓		
Ministry of Social Empowerment, Welfare and Kandyan Heritage	✓		
Ministry of Special Assignments	✓		
Department of External Resources	✓		
Strategic Cities Development Project	✓	✓	
Heritage Committee	✓		✓
University of Peradeniya	✓	✓	
National Building Research Organisation	✓	✓	
Central Cultural Fund	✓	✓	✓
Central Environmental Authority	✓	✓	
UDA Central Province Office (UDA Kandy)		✓	✓
12 local authorities (2 UCs, 10 PSs)		✓	
Central Provincial Council		✓	
Mahaweli Authority of Sri Lanka		✓	
Department of Irrigation		✓	
Transport Authority		✓	
Sri Lanka Central Transport Board		✓	
Sri Lanka Railways		✓	
Kandy District Secretariat		✓	
National Water Supply & Drainage Board		✓	✓
Chief Secretary, Central Province		✓	
Road Development Authority		✓	✓
Ceylon Electricity Board		✓	
Sri Lanka Telecom		✓	
Department of Archaeology		✓	✓
JICA Sri Lanka	✓		
JICA Team	✓	✓	✓

Source: The JICA Team



The members of the JICA Team are listed in Table 1.4.2. Each member is responsible for engaging in a specific field of specialisation in the GKUP project.

**Table 1.4.2 Members of the JICA Team**

Position	Name
1. Team Leader/Urban Development 1	Mr. Toshiaki KUDO
2. Deputy Team Leader/Urban Development 2	Ms. Tomoko ABE
3. Urban Design 1	Dr. Shigehisa MATSUMURA
4. Urban Design 2	Mr. Shunji SUZUKI
5. Land Use Planning	Mr. Junya UMEMURA
6. Planning Framework	Ms. Miharuru HOSONO
7. Transport Planning	Mr. Takanori ODA
8. Historic Preservation	Ms. Benika MOROKUMA
9. Public Consultation 1	Mr. Kunihiko OZAWA
10. Environmental and Social Considerations	Mr. Ken-ichi KURAMOTO
11. Disaster Prevention	Mr. Kiyotaka OHWADA
12. Urban Development Business Mechanism	Mr. Yushi YOSHIDA
13. Training Program / Public Consultation 2 / Project Coordination 1	Dr. Yee Sing TEH
14. Visual Presentation	Dr. Nitin SRIVASTAVA
15. Water Supply and Sewage	Mr. Shimao HIDAKA
16. Waste Management	Dr. Akinori SATO
17. Urban Development Assistant / Project Coordination 2	Ms. Tomoko HATTORI
18. Public Consultation Assistant/ Interpreter	Ms. Ayako TANAKA
19. GIS Expert/ Urban Planning	Ms. P. G. Pushpa GAMAGE
20. Environmental Specialist/ Chief Facilitator	Dr. Shantha K. HENNAYAKE
21. Urban Planning/ Facilitator	Mr. A. J. N. M. BANDARA
22. Survey Assistant	Ms. A.K.G. Ishara H. ABEYKOON
23. Secretary	Ms. Ruvini DEHIDENIYA

Source: The JICA Team

GKUP advisors from Sri Lanka and Japan are listed in Table 1.4.3 Table 1.3.1. They are prestigious professional and academician in urban planning, engineering, social science and diverse specialisation fields.

**Table 1.4.3 GKUP Advisors**

Designation	Name
GKUP advisors (Sri Lanka)	1. Mr. J. Charitha Ratwatte (Senior Adviser to the Hon. Prime Minister)
	2. Dr. Srikantha Herath (Senior Advisor of Ministry of Megapolis and Western Development)
	3. Eng. Nihal Rupasinghe (SC Chairman, Secretary of MMWD)
GKUP advisors (Japan)	1. Prof. Shiro WAKUI (Distinguished Professor, Tokyo City University)
	2. Prof. Monte CASSIM (President of Shizenkan University)
	3. Prof. Takashi ONISHI (President of Toyohashi University of Technology)

Source: The JICA Team

Officials from counterpart organisations (Table 1.4.4) are involved in the project by sharing their expert knowledge with the JICA Team.

**Table 1.4.4 Officials Who are Involved in the GKUP Project**

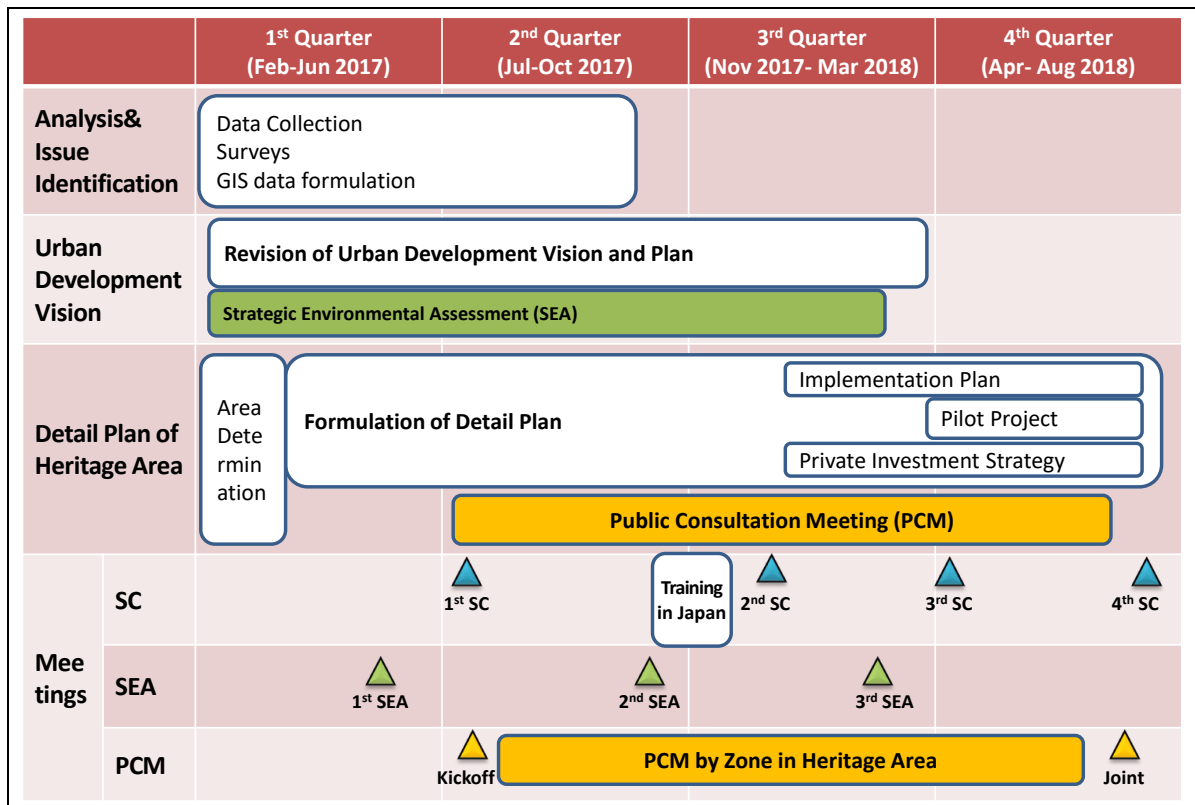
Organisation	Position	Name
Ministry of Megapolis and Western Development	Secretary	1. Eng. Nihal Rupasinghe
Urban Development Authority	Chairman	2. Dr. Jagath Munasinghe
	Director General	3. Eng. S S P Rathnayaka
	Director, Central Province	4. N A S N Nissanka
	Director (Projects)	5. Gamunu Premawardhana
	Deputy Director, Central Province	6. H W Somarathne
	Environmental Planner	7. M L R P Munasinghe
	Architect	8. A.M.S.P. Athauda
	Architect	9. B.W.S. Samarakoon
	Planning Officer	10. A.U.D.B. Athauda
	Planning Officer	11. Senaka Arunasiri
	Planning Officer	12. A G V K Jayasinghe
Planning Assistant	13. N H D Wijethunga	
Kandy Municipal Council	Commissioner	14. Chandana Thennakoon
	Deputy Municipal Commissioner	15. Dileepa Piyadasa
	Chief Municipal Engineer	16. P.B. Abeykoon
Department of Archaeology, Kandy	Assistant Director	17. L.M. Gunathilaka
Central Cultural Fund, Kandy	Project Manager	18. Gamini Lenora

Source: The JICA Team

## 1.5 Project Approach

### 1.5.1 Workflow

Main work components are (i) analysis and issues identification, (ii) urban development vision (see 1.5.2), and (iii) detailed plan of heritage area (see 1.5.4). In the process of completing these tasks, many meetings were held, including those of the Steering Committee (see Chapter 2.2 for detail), the Strategic Environmental Assessment (see Chapter 2.3 for detail), and Public Consultation Meeting (see Chapter 2.4 for details).



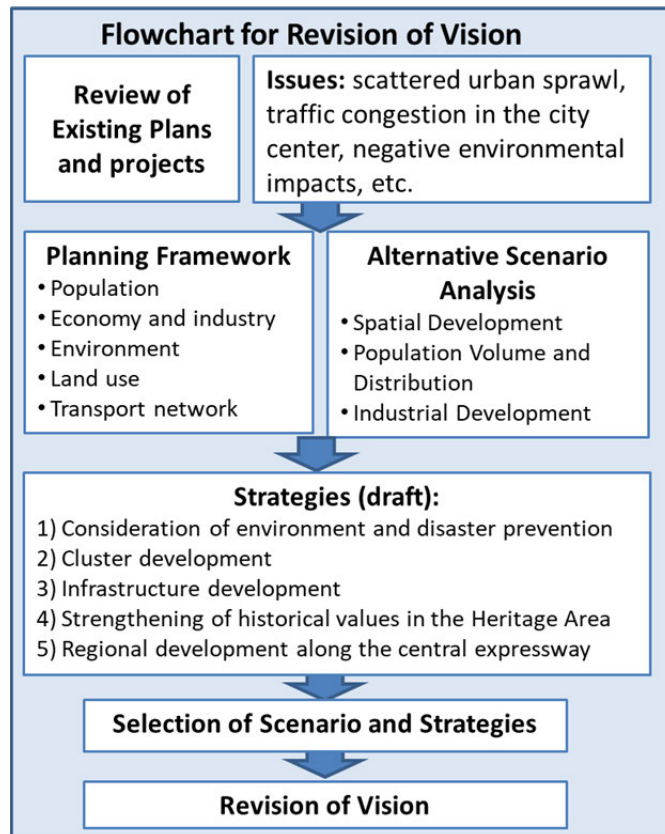
Source: The JICA Team

Figure 1.5.1 GKUP Workflow

### 1.5.2 Revision of the Urban Development Vision for Kandy Metropolitan Area

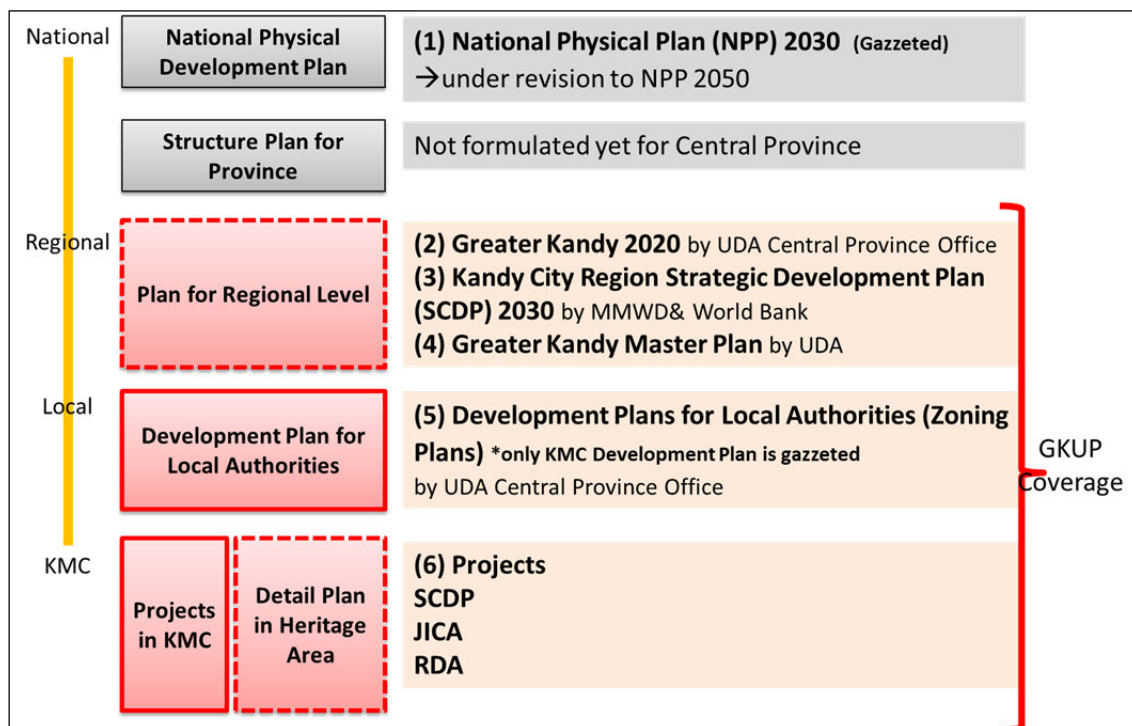
The main issues of the city are to control urbanisation within appropriate limits, to reduce traffic congestion inside the city, to preserve the historical townscape, and to improve the environment. These issues would worsen further because of improved access to surrounding cities and Colombo, the capital city, after construction of highways and bypass roads. To ensure feasibility of the detail plan for historical preservation, it is required to tackle mid- and long-term and regional issues. For this, it is indispensable to revise and share the urban development vision and scenario of the metropolitan area (see Figure 1.5.2).

For this Project, the revision of the urban development vision will be based on existing plans (see Figure 1.5.3), and alternative scenarios will be proposed for discussions with the stakeholders.



Source: The JICA Team

Figure 1.5.2 Flowchart for Revision of Vision



Source: The JICA Team

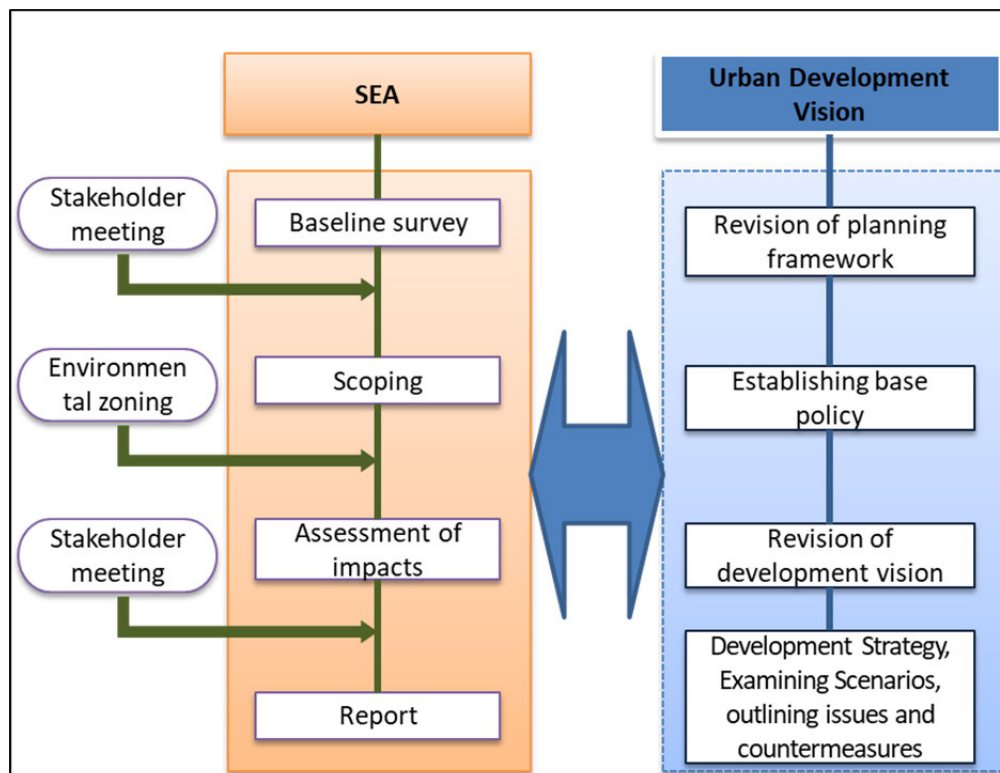
Figure 1.5.3 Hierarchy of Existing Plans for Kandy Region and GKUP Coverage

### 1.5.3 Strategic Environment Assessment (SEA) for the Revision of the Urban Development Vision

Sri Lanka has established an ordinal environmental impact assessment (EIA) system for environmental approval on certain projects while the enactment of a Strategic Environmental Assessment (SEA) is still under way. At present, the Government of Sri Lanka instructs ministries to conduct SEA at the stages of policy, plan and programme. The Sri Lankan SEA system is being established based on a Dutch system and it directs “early implementation at the beginning of the planning stage” and “simple and quick study”. The purpose is clearly different from a project-based EIA.

The main purposes of SEA are “to provide decision-makers with proper information related to environmental and social issues for a sustainable urban development vision” and “to secure accountability on the decision and consensus building with the public”. As such, it is important to conduct SEA in parallel with the process of urban development visioning. This is necessary to exchange information to determine the direction between visioning and environmental-social considerations (see Figure 1.5.4).

For this Project, SEA is applied (a) to provide proper information to make a viable vision on urban development, and (b) to make a better plan through public involvement on the decision and to build consensus among the public.



Source: The JICA Team





**Figure 1.5.4 Process of SEA and Formulation of Urban Vision**

### 1.5.4 Detail Plan for the Heritage Area and Proposal for Implementation Mechanism

To achieve balance between preservation and development of the Heritage Area, the following are proposed: (a) “Guidelines” to regulate preservation and rehabilitation of preserved buildings and for new developments; and (b) “Business model” to provide means of not only preserving the Heritage’s resources and landscapes, but also to encourage economic development including tourism promotion activities in the Heritage.

The Detail Plan Area was designated as the “Heritage Area” with the following four (4) zones. The Detail Plan of the Heritage Area and Guidelines for specific zones was formulated in this Project.

**Table 1.5.1 Characteristics and Outputs of the Four (4) Zones in the Heritage Area**

Zone	Characteristics	Outputs
<p>Commercial Grid</p> 	<p>The area with many historic buildings with commercial functions adjoined to the Temple of the Tooth Relic. It is also commonly referred to as “Grid City”.</p>	<ul style="list-style-type: none"> <li>• Guideline for the conservation of historic townscape for both listed and non-listed buildings</li> <li>• Guideline for signs and advertisements</li> <li>• Basic concept of public space development (e.g. pedestrian spaces)</li> </ul>
<p>Lake Around</p> 	<p>The area which creates an important landscape setting in the Grid City and the Temple of the Tooth Relic.</p>	<ul style="list-style-type: none"> <li>• Guideline for controlling the landscape of hillside areas</li> <li>• Measures to improve the existing landscape</li> </ul>
<p>Civic Hub</p> 	<p>The area where many public facilities are located, including the market, park, old prison and schools. Most of the lands are owned by governmental agencies.</p>	<ul style="list-style-type: none"> <li>• Basic concept of public space development (e.g. pedestrian and public spaces)</li> <li>• Basic concept of redevelopment of public facilities</li> </ul>
<p>Public Transit Zone</p> 	<p>The area where the bus terminal and station are located along Peradeniya Street which is the main gateway to the city centre. SCDP’s construction project of Kandy Multimodal Transport Terminal (KMTT) is ongoing.</p>	<ul style="list-style-type: none"> <li>• Basic concept of public space and building development</li> <li>• Basic development concept of surrounding urbanised areas</li> </ul>

Source: The JICA Team

### **1.5.5 Public Consultation Regarding the Process of Formulating the Detail Plan for the Heritage Area**

#### **(1) Objectives and Expected Outcomes**

Detail plans for historical areas could constrain the rights of land/building owners due to limitations of the land code, such as infrastructure design (e.g. installation of vehicle-free streets, traffic control), which could also disturb the community life. Therefore, a series of public consultation meetings were undertaken in order to minimise these impacts and complaints and to encourage participatory planning and consensus building.

To provide various participatory opportunities for communities in this process, Public Consultation Meetings (PCMs) are organised to promote local community initiatives for the preservation and development of the Heritage Area.

Objectives:

- to provide a forum for the community to participate in the formulation of the detail plan for the historical areas to build consensus among the community, to share understanding/opinion/direction, to raise the community's motivation to willingly participate in meetings and to formulate a solution.

Expected Outcomes:

- Draft detail plan with guidelines based on the consensus of local communities
- Proposal of applicable preservation mechanism

Lessons learned from the Pilot Projects

#### **(2) Overall Schedule of PCM**

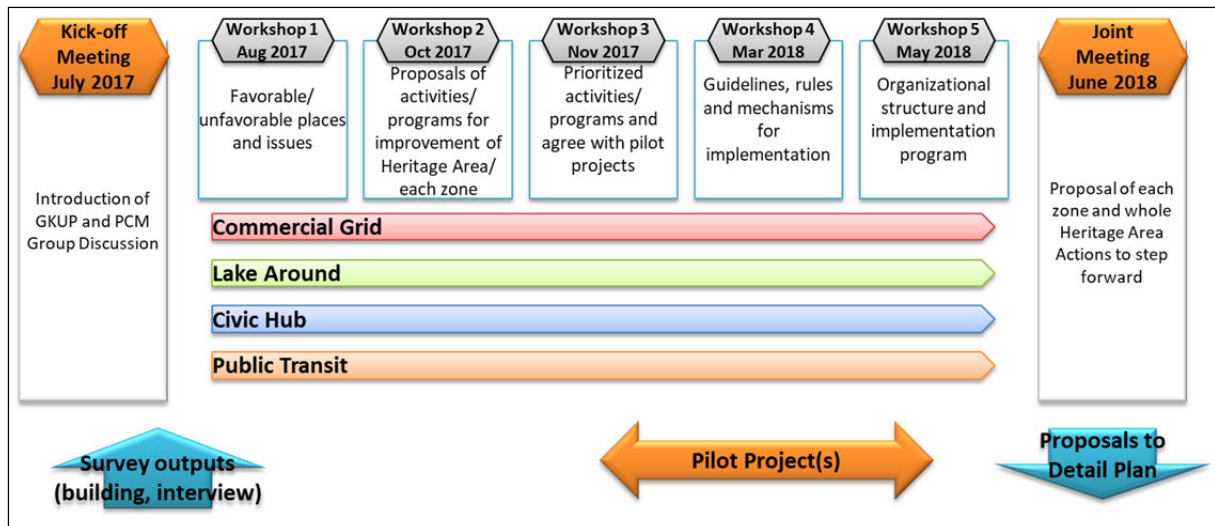
Public Consultation Meetings have been organised to promote local community initiatives for the preservation and development of the Heritage Area. PCMs were held as follows (see Figure 1.5.5):

- Kick-off meeting was held on 28th July 2017 to introduce the Project, and 200 participants from the whole Heritage Area were invited

Workshops for the four (4) zones were held from August 2017 to May 2018 (5 times) to discuss issues and potentials of the Heritage Area and to give feedback on the process of the Detail Plan formulation

- A joint meeting was held in June 2018 to share the results of workshop and to discuss the implementation of the Detail Plan

In each zone, around 25 members were nominated to conduct workshops.



Source: The JICA Team

**Figure 1.5.5 Process of Public Consultation**

### (3) Target Areas

PCMs were held five (5) times in each of the four (4) zones in the Heritage City Development Area. The area for the Detail Plan for the Heritage Area was divided into four (4) zones according to its character, policy on its detail plan, relationship in the community or Grama Niladhari (GN) level through coordination with the counterpart, interim results of the survey, and discussions with communities.

The criterion for the participants of the PCM workshop is to have rights in the Heritage Area. These include residents, business people and property owners (see Chapter 11 for details).

### (4) Steps for Participatory Planning

The workshops were conducted through the following steps:

- Step1: Sharing resource information regarding zone values (i.e. history, culture, tradition, custom, etc.)
- Step2: Sharing issues in the zones (i.e. to be removed, to be preserved, to be added, etc.)
- Step3: Formulating goals, strategies, and actions for preservation and development
- Step4: Listing necessary actions and measures to engage in
- Step5: Selecting priority actions and pilot projects which will be conducted in the PCM process
- Step6: Setting up implementation mechanisms (i.e. role sharing, cost, schedule, etc.)

During this process, the draft Detail Plan were reviewed and discussed among workshop members for feedback.



## CHAPTER 2 OVERALL ACTIVITIES OF THE PROJECT

### 2.1 Project Activities

A series of meetings with various stakeholders has been carried out since the start of the project. Table 2.1.1 shows the list of meetings held from the beginning of the Project until end of August 2018.

**Table 2.1.1 List of Meetings**

Date	Agencies
2017/02/27	<ul style="list-style-type: none"> <li>• JICA Sri Lanka Office</li> </ul>
2017/02/28	<ul style="list-style-type: none"> <li>• Japanese Embassy</li> <li>• Kick-off Meeting in Colombo with the Advisor to the Prime Minister</li> </ul>
2017/03/02	<ul style="list-style-type: none"> <li>• University of Peradeniya (Professor of Dept. of Archaeology)</li> </ul>
2017/03/03	<ul style="list-style-type: none"> <li>• <b>Kick-off Meeting in Kandy</b></li> </ul>
2017/03/09	<ul style="list-style-type: none"> <li>• <b>Kick-off Meeting with DSDs/LAs</b></li> </ul>
2017/03/10	<ul style="list-style-type: none"> <li>• Heritage Committee (Committee Member)</li> </ul>
2017/03/13	<ul style="list-style-type: none"> <li>• MMWD (Head of Investment)</li> <li>• Malawatte Chapter</li> <li>• Asgiriya Chapters</li> </ul>
2017/03/14	<ul style="list-style-type: none"> <li>• Friendship Workshop with UDA Central Provincial Office</li> </ul>
2017/03/15	<ul style="list-style-type: none"> <li>• CCF (Senior Conservation Officer)</li> <li>• Dept. of Archaeology (Regional Assistant Director)</li> <li>• KMC Heritage Unit (Municipal Secretary, Architect, Development Officer)</li> </ul>
2017/03/16	<ul style="list-style-type: none"> <li>• UDA Head Office (Chairman)</li> </ul>
2017/03/21	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Architect)</li> </ul>
2017/03/22	<ul style="list-style-type: none"> <li>• UDA Centsal Provincial Office (Planning Officer)</li> </ul>
2017/03/24	<ul style="list-style-type: none"> <li>• Kandy Industrial Park (BOI), Pallekele Industrial Estate (IDB)</li> </ul>
2017/03/28	<ul style="list-style-type: none"> <li>• SCDP Kandy Office (Deputy Project Director for Kandy City Office)</li> </ul>
2017/03/29	<ul style="list-style-type: none"> <li>• Kandy District Secretariat (Director Planning)</li> <li>• Local Authority (Kundasale and Akurana)</li> </ul>
2017/03/30	<ul style="list-style-type: none"> <li>• KMC Works (Chief Engineer)</li> </ul>
2017/03/31	<ul style="list-style-type: none"> <li>• UDA Head Office (Chairman)</li> <li>• National Physical Planning Department (Asst. Director)</li> </ul>
2017/04/28	<ul style="list-style-type: none"> <li>• Chief Ministry Office of Central Province (Chief Minister)</li> </ul>
2017/05/02	<ul style="list-style-type: none"> <li>• UDA Head Office (Chairman)</li> </ul>
2017/05/03	<ul style="list-style-type: none"> <li>• Central Province (Chief Secretary)</li> <li>• UDA Central Provincial Office (Planning Officer)</li> </ul>
2017/05/04	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> Strategic Environmental Assessment (SEA) Meeting</b></li> </ul>
2017/05/05	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Architect)</li> </ul>
2017/05/08	<ul style="list-style-type: none"> <li>• RDA Kandy (Project Director, Chief Engineer)</li> </ul>
2017/05/12	<ul style="list-style-type: none"> <li>• Disaster Management Centre (District Asst. Director)</li> <li>• SCDP Kandy</li> <li>• Central Provincial Council (Dept. of Tourism)</li> </ul>
2017/05/16	<ul style="list-style-type: none"> <li>• UDA Head Office (Director General)</li> <li>• University of Moratowa (Head of Dept. of Transport and Logistics Management)</li> </ul>
2017/05/17	<ul style="list-style-type: none"> <li>• UDA Head Office (Director General, Director)</li> </ul>

Date	Agencies
	<ul style="list-style-type: none"> <li>• SCDP (Director)</li> <li>• RDA Head Office (Director: Planning)</li> <li>• National Building Research Organisation (NBRO)</li> </ul>
2017/05/18	<ul style="list-style-type: none"> <li>• Advisor to Prime Minister</li> <li>• KMC Financial Dept. (Chief Accountant, Revenue Accountant)</li> <li>• Tamil Traders Association, Muslim Traders Association</li> <li>• Sri Lanka Scout Association (Chief Commissioner)</li> </ul>
2017/05/19	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Estate Management &amp; Valuation)</li> </ul>
2017/05/22	<ul style="list-style-type: none"> <li>• Architect in Kandy</li> <li>• Developer in Kandy</li> </ul>
2017/05/23	<ul style="list-style-type: none"> <li>• Disaster Management Centre (District Asst. Director)</li> <li>• Ministry of Public Enterprise Development (Performing Manager)</li> </ul>
2017/05/24	<ul style="list-style-type: none"> <li>• JETRO Colombo Office</li> </ul>
2017/05/26	<ul style="list-style-type: none"> <li>• KMC (Deputy Municipal Commissioner, Secretary of Establishment Dept. Architects)</li> <li>• JETRO Colombo Office</li> </ul>
2017/05/29	<ul style="list-style-type: none"> <li>• KMC (Municipal Mechanical Engineer)</li> </ul>
2017/05/30	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> Detail Plan TWG</b></li> </ul>
2017/06/01	<ul style="list-style-type: none"> <li>• Sinhala Traders Front / Chamber of Provincial Entrepreneurs</li> </ul>
2017/06/05	<ul style="list-style-type: none"> <li>• KMC (Dept. of Municipal Fire Service)</li> <li>• <b>Disaster Management Workshop</b></li> </ul>
2017/06/07	<ul style="list-style-type: none"> <li>• KMC (Municipal Mechanical Engineer)</li> <li>• Mahaweli Authority</li> </ul>
2017/06/09	<ul style="list-style-type: none"> <li>• NWORKSHOPDB (Department Manager)</li> </ul>
2017/06/12	<ul style="list-style-type: none"> <li>• KMC (Dept. of Solid Waste Management)</li> </ul>
2017/06/13	<ul style="list-style-type: none"> <li>• SCDP (Consultant)</li> </ul>
2017/06/16	<ul style="list-style-type: none"> <li>• NWORKSHOPDB (Deputy General Manager)</li> </ul>
2017/06/22	<ul style="list-style-type: none"> <li>• <b>Solid Waste Management Workshop</b></li> </ul>
2017/06/27	<ul style="list-style-type: none"> <li>• <b>Water Supply Sewage &amp; Drainage Workshop</b></li> </ul>
2017/07/17	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Deputy Director: Planning, Planning Officer)</li> </ul>
2017/07/18	<ul style="list-style-type: none"> <li>• KMC (Dept. of Finance)</li> </ul>
2017/07/19	<ul style="list-style-type: none"> <li>• Ministry of Social Empowerment, Welfare and Kandyan Heritage (Add. Secretary)</li> <li>• KMC (Valuation Dept.)</li> </ul>
2017/07/20	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> Urban Development TWG</b></li> </ul>
2017/07/24	<ul style="list-style-type: none"> <li>• University of Moratuwa (Transport)</li> </ul>
2017/07/27	<ul style="list-style-type: none"> <li>• <b>Steering Committee in Colombo</b></li> </ul>
2017/07/28	<ul style="list-style-type: none"> <li>• <b>Public Consultation Kick-off Meeting in Kandy</b></li> </ul>
2017/07/31	<ul style="list-style-type: none"> <li>• Minister of MMWD</li> </ul>
2017/8/1	<ul style="list-style-type: none"> <li>• Galle Heritage Foundation</li> <li>• Galle Municipal Council</li> </ul>
2017/8/2	<ul style="list-style-type: none"> <li>• SCDP Galle</li> <li>• Disaster Management Centre of Galle</li> </ul>
2017/8/8	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> Public Consultation Workshop at Commercial Grid Zone</b></li> </ul>
2017/8/9	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> Public Consultation Workshop at Public Transit Zone</b></li> </ul>
2017/8/17	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> Public Consultation Workshop at Civic Hub Zone</b></li> </ul>
2017/8/18	<ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> Public Consultation Workshop at Lake Around Zone</b></li> </ul>
2017/8/23	<ul style="list-style-type: none"> <li>• Department of Agriculture (Natural Resources Department)</li> </ul>
2017/9/25	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Deputy Director)</li> </ul>
2017/9/29	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Deputy Director)</li> </ul>
2017/10/3	<ul style="list-style-type: none"> <li>• <b>2<sup>nd</sup> SEA Meeting</b></li> <li>• <b>2<sup>nd</sup> Urban Development TWG</b></li> </ul>

Date	Agencies
2017/10/4	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Pilot Project Meeting)</li> </ul>
2017/10/9	<ul style="list-style-type: none"> <li>• Prof. Kumarage, SCDP</li> </ul>
2017/10/10	<ul style="list-style-type: none"> <li>• JICA Sri Lanka Office and Prof. Mandawala at DoA</li> </ul>
2017/10/12	<ul style="list-style-type: none"> <li>• <b>2<sup>nd</sup> Public Consultation Workshop at Commercial Grid Zone</b></li> </ul>
2017/10/13	<ul style="list-style-type: none"> <li>• <b>2<sup>nd</sup> Public Consultation Workshop at Public Transit Zone</b></li> </ul>
2017/10/19	<ul style="list-style-type: none"> <li>• <b>2<sup>nd</sup> Public Consultation Workshop at Civic Hub Zone</b></li> <li>• UDA Central Provincial Office (Director, Deputy Director, Project Director)</li> </ul>
2017/10/20	<ul style="list-style-type: none"> <li>• <b>2<sup>nd</sup> Public Consultation Workshop at Lake Around Zone</b> and Wrap-up Meeting with UDA Central Provincial Office for 2<sup>nd</sup> PCM</li> </ul>
2017/10/23	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Counterpart Training Programme Briefing)</li> </ul>
2017/11/14	<ul style="list-style-type: none"> <li>• Board of Investment, Kandy</li> <li>• Export Development Board</li> <li>• Tourism Board</li> </ul>
2017/11/15	<ul style="list-style-type: none"> <li>• Industrial Development and Enterprise Promotion Department, Central Province</li> <li>• Department of Rural Development – Central Province</li> </ul>
2017/11/16	<ul style="list-style-type: none"> <li>• BOI Mawathagama Export Processing Zone</li> <li>• Tozai Boeki Colombo</li> </ul>
2017/11/17	<ul style="list-style-type: none"> <li>• Board of Investment, Headquarter</li> <li>• MICE</li> </ul>
2017/11/18	<ul style="list-style-type: none"> <li>• UDA Chairman (2<sup>nd</sup> SC Pre-Discussion)</li> </ul>
2017/11/20	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office</li> </ul>
2017/11/21	<ul style="list-style-type: none"> <li>• Kandy Citizen Front</li> <li>• UDA Central Provincial Office (2<sup>nd</sup> SC Pre-Discussion)</li> </ul>
2017/11/22	<ul style="list-style-type: none"> <li>• KMC (2<sup>nd</sup> SC Pre-Discussion)</li> </ul>
2017/11/27	<ul style="list-style-type: none"> <li>• Malawatte Chapter</li> <li>• Asgiriya Chapter</li> </ul>
2017/11/28	<ul style="list-style-type: none"> <li>• <b>2<sup>nd</sup> Steering Committee Meeting</b></li> </ul>
2017/11/30	<ul style="list-style-type: none"> <li>• <b>3<sup>rd</sup> Public Consultation Workshop at Lake Around Zone</b></li> </ul>
2017/12/1	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office (Intermediate Supporting Organisation)</li> </ul>
2017/12/4	<ul style="list-style-type: none"> <li>• Department of Export Agriculture</li> <li>• UDA Central Provincial Office</li> <li>• Pilot Project (Improvement of Living Environment, Public Toilet Project)</li> <li>• Central Cultural Fund</li> </ul>
2017/12/5	<ul style="list-style-type: none"> <li>• Department of Agriculture</li> <li>• KMC (Parking Management)</li> <li>• Tourism Board (Tourist Map)</li> </ul>
2017/12/6	<ul style="list-style-type: none"> <li>• Department of Archeology</li> <li>• Sinhala Trader Association</li> </ul>
2017/12/7	<ul style="list-style-type: none"> <li>• KMC (Deputy Commissioner)</li> <li>• <b>3<sup>rd</sup> Public Consultation Workshop at Public Transit Zone</b></li> </ul>
2017/12/8	<ul style="list-style-type: none"> <li>• Chamber of Commerce</li> <li>• <b>3<sup>rd</sup> Public Consultation Workshop at Civic Hub Zone</b></li> </ul>
2017/12/12	<ul style="list-style-type: none"> <li>• UDA Central Provincial Office</li> </ul>
2017/12/13	<ul style="list-style-type: none"> <li>• Regional Economic Development Authority</li> </ul>
2017/12/14	<ul style="list-style-type: none"> <li>• Environmental Association</li> <li>• Temple of Tooth Relic</li> <li>• <b>3<sup>rd</sup> Public Consultation Workshop at Commercial Grid Zone</b></li> </ul>
2017/12/19	<ul style="list-style-type: none"> <li>• Central Cultural Fund</li> <li>• KMC</li> <li>• UDA Central Provincial Office (Grid City Guidelines)</li> <li>• UDA, KMC, CCF, DOA (Building Survey)</li> </ul>

<b>Date</b>	<b>Agencies</b>
2018/1/23	• KMC (Deputy Commissioner)
2018/1/24	• KMC (Chief Engineer)
2018/1/25	• UDA Central Provincial Office
2018/1/26	• Chamber of Commerce and Industry of Central Province
2018/2/14	• Kandy District Secretary
2018/2/21	• Tourism Board
2018/2/22	• Asiri Hospital Kandy
2018/2/23	• UDA Central Provincial Office (Pilot Project Kick-off Meeting)
2018/2/24	• <b>Economy Development WORKSHOP</b>
2018/2/26	• <b>3<sup>rd</sup> Urban Development TWG</b>
2018/2/27	• <b>3<sup>rd</sup> SEA Meeting</b>
2018/3/2	• KMC (Deputy Commissioner)
2018/3/5	• UDA Central Provincial Office (Preservation System)
2018/3/19	• <b>4<sup>th</sup> Public Consultation Workshop at Lake Around Zone</b>
2018/3/20	• <b>4<sup>th</sup> Public Consultation Workshop at Civic Hub Zone</b> • KMC (Pilot Project)
2018/3/21	• UDA Chairman (SC Pre-meeting) • Strategic Planning (Financial Model)
2018/3/22	• <b>4<sup>th</sup> Public Consultation Workshop at Public Transit Zone</b>
2018/3/23	• <b>4<sup>th</sup> Public Consultation Workshop at Commercial Grid Zone</b> • Kick-Off Meeting for Pilot Project (Tourism Map)
2018/3/27	• National Building Research Organisation • <b>2<sup>nd</sup> Detail Plan TWG</b>
2018/3/28	• Central Cultural Fund (Open House/Information Centre)
2018/3/30	• UDA Central Provincial Office
2018/4/1	• UDA, KMC, CCF, DOA (Open House/Gallery)
2018/4/3	• Senior Advisor, Ministry of Prime Minister-Mr. J. Charitha Ratwatte • <b>3<sup>rd</sup> Steering Committee</b>
2018/4/6	• <b>1<sup>st</sup> Transportation Workshop</b> • SCDP (Project Cost / List)
2018/4/9	• KMC (Pilot Project) • 1st Community-Based Organisation Meeting
2018/4/10	• Central Cultural Fund (Building Survey Database Management) • KMC
2018/5/3	• UDA, KMC, CCF, DOA (Building Survey)
2018/5/8	• MMWD Secretary
2018/5/9	• <b>1<sup>st</sup> Heritage Building Owners' Meeting</b>
2018/5/10	• UDA, KMC, CCF, DOA (Open House/Gallery)
2018/5/11	• <b>2<sup>nd</sup> Transportation WORKSHOP</b>
2018/5/14	• <b>5<sup>th</sup> Public Consultation Workshop at Lake Around Zone</b>
2018/5/15	• <b>5<sup>th</sup> Public Consultation Workshop at Civic Hub Zone</b>
2018/5/16	• District Secretary • Tourism Board • Road Development Authorities • UDA Central Province (GKUP Proposal) • Green Net
2018/5/17	• <b>5<sup>th</sup> Public Consultation Workshop at Public Transit Zone</b> • Secretary of Minister of Transportation • UDA (KMC Development Plan)
2018/5/18	• <b>5<sup>th</sup> Public Consultation Workshop at Commercial Grid Zone</b>

Date	Agencies
	<ul style="list-style-type: none"> <li>• Central Cultural Fund (Building Survey Database Management)</li> <li>• Sri Lanka Railway</li> </ul>
2018/5/19	<ul style="list-style-type: none"> <li>• Former Mayor</li> </ul>
2018/5/20	<ul style="list-style-type: none"> <li>• Community-Based Organisation Meeting (Commercial Grid)</li> </ul>
2018/5/21	<ul style="list-style-type: none"> <li>• SCDP (Transport Sector)</li> </ul>
2018/6/11	<ul style="list-style-type: none"> <li>• MOT</li> </ul>
	<ul style="list-style-type: none"> <li>• UDA Chairman</li> </ul>
	<ul style="list-style-type: none"> <li>• SCDP, Project Director</li> </ul>
2018/6/12	<ul style="list-style-type: none"> <li>• UDA Central Province (GKUP Proposal)</li> </ul>
2018/6/14-6/17	<ul style="list-style-type: none"> <li>• <b>Pilot Project of “InfoPlace” and “Archi Tour”</b></li> </ul>
2018/6/18	<ul style="list-style-type: none"> <li>• <b>4<sup>th</sup> Urban Development TWG</b></li> </ul>
2018/6/19	<ul style="list-style-type: none"> <li>• <b>3<sup>rd</sup> Detail Plan TWG</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>2<sup>nd</sup> Heritage Building Owners’ Meeting</b></li> </ul>
2018/6/21	<ul style="list-style-type: none"> <li>• <b>Joint Public Consultation Meeting</b></li> </ul>
2018/7/5	<ul style="list-style-type: none"> <li>• Central Province, DSD, LA Meeting</li> </ul>
2018/8/9	<ul style="list-style-type: none"> <li>• <b>Concluding Seminar</b></li> </ul>
	<ul style="list-style-type: none"> <li>• Malawatte Chapter</li> </ul>
	<ul style="list-style-type: none"> <li>• Asgiriya Chapter</li> </ul>
2018/8/10	<ul style="list-style-type: none"> <li>• Community Meeting</li> </ul>

Source: The JICA Team

Among the above-mentioned meetings, key meetings and the main comments raised during the meetings are summarised in Table 2.1.2.

**Table 2.1.2 Discussion Points during Key Meetings**

Key Meetings	Main Discussion Points
Kick-off Meeting in Kandy 2017/03/03	<p>After the presentation of the Project Team, comments were made by UDA, SCDP, and the Heritage Committee. The following are some comments raised in the meeting:</p> <ul style="list-style-type: none"> <li>• <b>Coordination:</b> Need coordination with existing development plans formulated by other institutions/agencies.</li> <li>• <b>SC:</b> Representatives of the selected ministries should be appointed as the members in the Steering Committee.</li> <li>• <b>PC:</b> Need strategy for public consultations and for communication with stakeholders. The plan should reflect opinions and ideas of the residents.</li> <li>• <b>Heritage:</b> Improper monitoring is one of the issues. Awareness of owners, users, and residents shall be promoted. Proper guidelines for the conservation / renovation and for effective utilisation of historical buildings are required.</li> </ul>
DSD & LA Meeting 2017/03/09	<p>Each DSD &amp; LA expressed their issues and development needs. Details are shown below.</p> <ul style="list-style-type: none"> <li>• <b>Issues:</b> Rapid urbanisation and encroachment, traffic congestion and lack of road maintenance, waste disposal, etc. were pointed out in the majority of the DSDs and LAs.</li> <li>• <b>Development Needs:</b> Urban development (Galagedera, Kadugannawa, Katugastota), Tourism development (Gadaladeniya), Road development (Pilimathalawa), Residential projects (Akurana, Harispaththuwa), etc.</li> </ul>
1 <sup>st</sup> SEA Meeting 2017/05/04	<p>A total of 82 people participated. Present issues in the GKUP Area were raised by different stakeholders. The following were the main issues discussed.</p> <ul style="list-style-type: none"> <li>• <b>Urban Plan:</b> Lack of planning capacity of local government was mentioned. Necessity of local area development was also raised.</li> <li>• <b>Detail Plan:</b> Appropriate measures and guidelines to conserve historical buildings</li> </ul>

Key Meetings	Main Discussion Points
	<p>and to promote effective use of conserved buildings shall be in place.</p> <ul style="list-style-type: none"> <li>• <b>Traffic:</b> Issue of traffic congestion was pointed out and the need for improvement measures was expressed. Lack of parking was also cited as a serious issue.</li> <li>• <b>Water:</b> Deterioration of water quality of Mahaweli River and Kandy Lake is an issue.</li> <li>• <b>Waste:</b> Issues on waste management, especially the condition of Gohagoda disposal site.</li> <li>• <b>Social:</b> Raising awareness for environmental management is important.</li> </ul>
<p>1<sup>st</sup> Detail Plan TWG 2017/05/30</p>	<p>Survey approach, progress, and sample cases from other countries were presented. The following were the main points raised during the discussions.</p> <ul style="list-style-type: none"> <li>• <b>Characteristics:</b> Kandy is an “Old and Living City.” But its beauty and heritage appeal is being lost.</li> <li>• <b>Issues:</b> Traffic congestion is a big issue in the Heritage Area. There is a common understanding among the building owners that a heritage plaque could reduce the commercial value of the building.</li> <li>• <b>Awareness:</b> Primary interest of the building owners/occupants is the commercial value and not the heritage significance of the buildings. There is lack of awareness among the locals about the buildings’ historical importance. It is necessary to change the attitude of the people to make them appreciate the heritage city.</li> <li>• <b>Guideline:</b> Existing zoning plan and regulations are not abided by. Implementation/Enforcement is weak.</li> </ul>
<p>Disaster Management WS 2017/06/05</p>	<p>Survey approach and progress were shared by the Project Team followed by discussions. The following points were agreed upon during the meeting.</p> <ul style="list-style-type: none"> <li>• <b>Mitigation Plan:</b> A Disaster Mitigation Plan is yet to be prepared due to lack of capacity to conduct a disaster assessment by DMC/NBRO.</li> <li>• <b>Urban Plan:</b> The results of the disaster management survey will be reflected in the GKUP zoning plan.</li> <li>• <b>Landslide:</b> A hazard map will be prepared based on past records, but no new disaster management related map will be done for GKUP area. Existing mapping classifications will be reviewed to simplify the construction approval processes.</li> <li>• <b>Flood:</b> A hazard map will be prepared based on existing records or documents.</li> <li>• <b>Fire:</b> Fire escape routes should be planned in the Grid City.</li> </ul>
<p>Solid Waste Management WS 2017/06/22</p>	<p>Study scope and examples of SWM projects were presented followed by discussions with emphasis on the following:</p> <ul style="list-style-type: none"> <li>• <b>Segregation:</b> Segregation of degradable and non-degradable wastes is being practiced.</li> <li>• <b>Collection:</b> Lack of personnel dedicated for waste collection process. Amount and types of wastes are not determined. Only saleable wastes are collected at present.</li> <li>• <b>Disposal:</b> Lack of land for the establishment of a waste disposal site.</li> <li>• <b>Issue:</b> Illegal dumping of wastes along the road; in the river, dumping of residual wastes, polyethene, toilet waste, etc. is evident.</li> <li>• <b>Facilities:</b> Composting plant for degradable waste will be introduced.</li> <li>• <b>Institutional Issues:</b> Tax system will be promoted for waste collection. The main issues are scarcity of personnel and insufficient funding for waste management.</li> </ul>
<p>Water Supply, Sewage, and Drainage WS 2017/6/27</p>	<p>On-going and proposed projects were introduced. Issues related to WSSD were shared among the stakeholders. The following were the main findings.</p> <ul style="list-style-type: none"> <li>• <b>Water supply:</b> Currently, water supply sources are NWSDB and tube wells. Water scarcity and lack of water sharing mechanism are the issues. Large-scale drinking water storage reservoir will be developed.</li> <li>• <b>Sewage:</b> Insufficient number of public lavatories and no proper sewage treatment facilities</li> <li>• <b>Drainage:</b> Wastewater discharged in roadside drainage and solid waste disposal in the upstream lead to water pollution. Some areas experience drainage overflow</li> </ul>

Key Meetings	Main Discussion Points
	during rainy days.
1 <sup>st</sup> Urban Development TWG 2017/7/20	<p>Progress of GKUP survey was presented and Q&amp;A followed. Following were the main discussion points:</p> <ul style="list-style-type: none"> <li>• <b>Spatial plan:</b> Question raised was “Should Kandy city be lenient on further population growth or take steps to regulate it?”. Housing development and population concentration areas should be considered. School and hospital facilities are causing traffic problems. Land along the Mahaweli River can be used for developments.</li> <li>• <b>Basic concept:</b> The existing plan was formulated for corridor development. Development between the cities may be introduced also.</li> <li>• <b>Industrial development:</b> Types and locations of industries to be promoted will be considered. Rural development should also be taken into consideration.</li> <li>• <b>Institutional Issues:</b> Lack of personnel for monitoring.</li> </ul>
Public Consultation Kick-off Meeting 2017/7/27	<p>Around 200 people participated and exchanged opinions on issues concerning specific places in the Heritage Area. In this meeting, group discussions by representatives of the 5 zones were actively conducted. They are proud of the Temple of the Tooth, the World Heritage City, historical architecture, natural environment as well as Kandy Lake and forests, etc. as values of Kandy Heritage City. Most of the participants were interested in the participatory planning process for the preservation and development of the place, and expressed appreciation for the great deal of attention given to these.</p>
1 <sup>st</sup> Steering Committee 2017/7/28	<p>The 1<sup>st</sup> Steering Committee Meeting was held at MMWD, with 10 SC members. The major comments are summarised as follows:</p> <ul style="list-style-type: none"> <li>• Coordination with the other on-going projects (water supply project / tunnel as a bypass road/ modernisation of railway, etc.)</li> <li>• Consideration of environmental values such as Victoria Lake and surrounding areas</li> <li>• Consideration of urbanising lands owned by the Ministry of Agriculture</li> <li>• Implementation of plans (i.e., urgent projects should be addressed for implementation)</li> <li>• Implementation of transport projects (KMTT and terminals, highway, bypass, double track railway)</li> <li>• Clear definition of Kandyan architecture is lacking.</li> <li>• Heritage management and usage of heritage assets are important especially for tourism.</li> <li>• There is a need to expand the concept of <i>heritage</i> to include the landscape which consists of the temple surrounded by the beautiful mountains</li> </ul>
1 <sup>st</sup> Public Consultation Meetings 2017 August	<p>The 1<sup>st</sup> Public Consultation Meetings (PCMs) were held on 10<sup>th</sup> August at Commercial Grid Zone, 11<sup>th</sup> August at Public Transit Zone, 17<sup>th</sup> August at Civic Hub Zone, and 18<sup>th</sup> August at Lake Around.</p> <p>GKUP and Public Consultation Meeting (PCM) were introduced, and the following topics were discussed by groups:</p> <ul style="list-style-type: none"> <li>• Our treasures (historical place, old building, viewpoint, traditional event, social custom, etc.) and unfavourable places/matters, and reasons</li> <li>• Opinion of the Zone to live (as a resident), to raise a child (as a housewife), to visit (as an outsider), and to do business (as a business owner)</li> </ul>
2 <sup>nd</sup> SEA Meeting 2017/10/3	<p>There were 72 stakeholders who participated and discussed present issues in the GKUP Area. The main issues discussed were the following:</p> <ul style="list-style-type: none"> <li>• Obtaining a Certificate of Conformity (CoC) is important when implementing a development project.</li> <li>• Old Kandy city should be left as it is and as a World Heritage Site. Development of new and modern cities should be in peripheral areas.</li> <li>• Importance of developing traditional micro-, small-, and medium-level businesses.</li> <li>• Relocation of people should be carried out with a better understanding about their</li> </ul>

Key Meetings	Main Discussion Points
	<p>socio-cultural background.</p> <ul style="list-style-type: none"> <li>• Improvement of walking facilities in the city for pedestrians.</li> <li>• Improve railway transport system for public and goods transportation.</li> <li>• Revise already existing land use policies, rules, regulations, and permit procedures to suit the current socio-political environment.</li> </ul>
<p>2<sup>nd</sup> Urban Development TWG 2017/10/3</p>	<p>Progress of GKUP survey was presented and Q&amp;A followed. The main discussion points are listed below as proposed development areas.</p> <ul style="list-style-type: none"> <li>• Environmental Protection and Management</li> <li>• Historic and Cultural Conservation</li> <li>• Socio-Economic Development</li> <li>• Transportation and Infrastructure</li> <li>• Living Environment and Urban Growth Management</li> </ul>
<p>2<sup>nd</sup> Public Consultation Meetings 2017 October</p>	<p>The 2<sup>nd</sup> Public Consultation Meetings (PCMs) were held on 12<sup>th</sup> October for Commercial Grid Zone, 13<sup>th</sup> October for Public Transit Zone, 19<sup>th</sup> October for Civic Hub Zone, and 20<sup>th</sup> October for Lake Around.</p> <p>The outcomes of the 1st PCM were presented below. The topics were discussed by groups in Carte Sheet to identify the issues and problems emphasised during the 1<sup>st</sup> PCM.</p> <ul style="list-style-type: none"> <li>• What to be preserved?</li> <li>• What to be improved?</li> <li>• What is inadequate?</li> <li>• What are the actions and strategies to be taken?</li> <li>• Who will engage the action and strategy proposed?</li> </ul>
<p>2<sup>nd</sup> Steering Committee 2017/11/28</p>	<p>The 2<sup>nd</sup> Steering Committee Meeting was held at MMWD, attended by 18 SC members. Major comments are summarised as follows:</p> <ul style="list-style-type: none"> <li>• <b>Selection of Potential Industries for Industrial Zones:</b> To be prioritized are manufacturing of hardware, software, and middleware industries; traditional small industries; and how to use proposed water quality research centre at the University of Peradeniya.</li> <li>• <b>Transportation Network:</b> Identify alternative roads to enter Kandy city. Link roads and alternative roads should be included in the plan. More emphasis should on improvement and new proposal for railway network and double tracking railway line from Kadugannawa to Katugastota.</li> <li>• <b>Environment:</b> Take initiatives to improve quality of water table by imposing solid waste management in the area and following land slide zonation map and guide lines.</li> <li>• <b>Urban Development:</b> Cluster towns with good transport network, and development of railway network for schoolchildren will be considered. Bogambara prison development will be included within the plan.</li> </ul>
<p>3<sup>rd</sup> Public Consultation Meetings 2017 December</p>	<p>The 3<sup>rd</sup> Public Consultation Meetings (PCMs) were held on 30<sup>th</sup> November for Lake Around Zone, 7<sup>th</sup> December for Public Transit Zone, 8<sup>th</sup> December for Civic Hub Zone, and 14<sup>th</sup> December for Commercial Grid Zone.</p> <p>In the 3<sup>rd</sup> PCM in December 2017, reference was made to discussions from 1st and 2nd PCMs, and solutions of current issues and problems were determined from different viewpoints. Visions were established in order to cope with the issues. Participants were grouped for the activities below:</p> <ul style="list-style-type: none"> <li>• STEP 1: Note down in Post-It notes the keywords to describe Kandy's town image.</li> <li>• STEP 2: Classify the ideas of the group members into different categories.</li> <li>• STEP 3: Illustrate relationships between the categories, and present the vision / theme to show the town image of Kandy.</li> </ul> <p>Discussion of results was concluded in four aspects: economy, social, infrastructure development, and regulation. Vision of the public will be determined along with the proposal from the government in order to seek the balance and sustainability of</p>



Key Meetings	Main Discussion Points
	development.
Small-Medium Enterprise Workshop 2018/2/24	<p>Workshop for small-medium enterprises was held on 24<sup>th</sup> February 2018 participated in by 44 enterprise owners or merchants in Greater Kandy Area.</p> <ul style="list-style-type: none"> <li>• Identify resources of each region (North, South, East, West, and Central) and each industry to be utilised.</li> <li>- Labour force (skilled, unemployment issue)</li> <li>- Materials (harvested or produce in each region)</li> <li>• Identify challenges of each region and industry</li> <li>• Expected support from Government or others such as Chamber of Commerce, except financial aid</li> <li>• Expected framework to do business easier</li> </ul>
3 <sup>rd</sup> Urban Development TWG 2018/2/26	<p>Progress of GKUP survey and zoning proposal were presented, then Q&amp;A followed. The main discussion points were as follows:</p> <ul style="list-style-type: none"> <li>• Proposed land use categories and population density in urbanised area: Zoning and regulation, density, infrastructure, etc.</li> <li>• Vision and orientation of development clusters by proposing urban structure and land use zoning.</li> <li>• Development orientation of city centre: Orientation and priority projects in cluster cities and city centre.</li> <li>• Economic development orientation: Potential industries (health and medical, educational, tourism, IT, agriculture, and food processing), mechanisms to promote micro and SMEs in rural area.</li> </ul>
3 <sup>rd</sup> SEA Meeting 2018/02/27	<p>A total of 74 stakeholders participated and discussed present issues in the GKUP Area. The main issues raised were the following:</p> <ul style="list-style-type: none"> <li>• <b>Kandy City Centre Development:</b> Necessary infrastructure facilities, such as toilets and parking for the pilgrims / tourists should be developed. City should be developed ensuring the protection of its heritage value. Udawatte Forest and Dunumadalawa Forest Reserves, which provide greenery to the Kandy Area, should be protected.</li> <li>• <b>Gatambe – Peradeniya Cluster Development:</b> Private medical clinics and institutions should be relocated outside the city. International schools and tuition classes should be shifted to peripheral cities.</li> <li>• <b>Kundasale – Digana Cluster Development:</b> Available health services and facilities should be further improved to ensure quality service.</li> <li>• <b>Katugastota - Akurana Cluster Development:</b> More parking facilities and multi-service centres are needed to provide shopping, recreation, and other necessary facilities to the public.</li> <li>• <b>Economic Development:</b> Encourage and strengthen capacities of small- and medium-level local businesses.</li> <li>• <b>Environmental Conservation:</b> Necessary arrangements and a good mechanism are needed to get support and consultations from various community-based organisations and community leaders for development activities.</li> <li>• <b>Specific Topics on Urban Transportation:</b> Necessary to arrange efficient coordination network between all the utility service providers.</li> </ul>
4 <sup>th</sup> Public Consultation Meetings 2018 Mar	<p>The 4th Public Consultation Meetings (PCMs) were held on 19<sup>th</sup> March for Lake Around Zone, 20<sup>th</sup> March for Public Transit Zone, 22<sup>nd</sup> March for Civic Hub Zone, and 23<sup>rd</sup> March for Lake Around Zone.</p> <ul style="list-style-type: none"> <li>• Discussed the projects proposed by government agencies and considered their compatibility with public's vision.</li> <li>• Suggested the collaboration between community and government; new project will be proposed, if necessary.</li> <li>• System of cooperation between community and organisation were determined. Representatives were nominated voluntarily by the participants themselves.</li> </ul>

Key Meetings	Main Discussion Points
2 <sup>nd</sup> Detailed Plan TWG 2018/03/27	<p>Discussions were carried out based on the topics regarding the detailed plan for the Heritage Area.</p> <ul style="list-style-type: none"> <li>• Basic planning concept and approach for Heritage Area</li> <li>• Proposed planning concept and strategies for four subdivided zones in Heritage Area</li> <li>• Proposal for an institutional framework for supporting conservation and rehabilitation of the conserved buildings</li> <li>• Proposal to revise the categorisations and regulation on the conserved buildings</li> </ul>
3 <sup>rd</sup> Steering Committee 2018/4/3	<p>The 3<sup>rd</sup> Steering Committee Meeting was held at the headquarter office of Urban Development Authorities, on 3<sup>rd</sup> April 2018 participated in by 20 Steering Committee members and JICA representatives. Progress of survey was presented, and discussions were focused on the following topics:</p> <ul style="list-style-type: none"> <li>• Regional Strategies Toward Vision: Regional transport and industrial development, cluster development with public transport, rehabilitation of city centre for heritage preservation in a pedestrian-oriented district</li> <li>• Urbanisation Area: Necessity of appropriate zoning system for urbanisation control (unified categorisation, definition of infrastructure coverage and level)</li> <li>• Orientation for Clusters and City Centre Development: Priority of cluster development, public transport promotion measures (multimodal terminal, P&amp;R, etc.), relocation/ rehabilitation of public facilities for pedestrian-oriented district</li> <li>• Development Program: Institutional development</li> <li>• Sustainability of GKUP</li> </ul>
1 <sup>st</sup> Transportation Workshop 2018/4/6	<p>The 1<sup>st</sup> Transportation Workshop was held with 24 participants. Discussion was focused on three main topics: Promotion of Public Transportation, Construction of Road Network, and Mobility Management. Comments of the participants were as follows:</p> <ul style="list-style-type: none"> <li>• Improvement of public transportation (bus) is needed</li> <li>• Comprehensive and incorporate public transportation system should be established</li> <li>• Railway double tracking from Kandy to Kadugannawa, and Kandy to Gampola is needed.</li> <li>• Need proper measures, such as bridges at certain junctions and traffic management.</li> <li>• Focus on implementation strategy is important for transportation plan.</li> <li>• Need to consider social, political, and geographical situation during preparation of strategic plan.</li> </ul>
1 <sup>st</sup> Heritage Building Owners' Meeting 2018/5/9	<p>The 1<sup>st</sup> Heritage Building Owners' Meeting was held with 17 participants. Discussions were focused on the topics below:</p> <ul style="list-style-type: none"> <li>• Perception of owners about process of listing their respective buildings</li> <li>• Difficulties faced by owners in rehabilitating their respective buildings</li> <li>• Review the expectation of owner on the area in the future</li> </ul>
2 <sup>nd</sup> Transportation Workshop 2018/5/11	<p>The 2<sup>nd</sup> Transportation Workshop was held with 24 participants. Discussions were focused on four main topics:</p> <ul style="list-style-type: none"> <li>• School transportation measures</li> <li>• Parking measures (include park and-ride scheme)</li> <li>• Railway capacity improvement (BRT/rail bus - double track railway, station plaza, new station in Grid, etc.)</li> <li>• Countermeasures for traffic problems in cluster cities</li> </ul>
5 <sup>th</sup> Public Consultation Meetings May 2018	<p>The 5<sup>th</sup> Public Consultation Meeting held in May 2018 was the continuation of previous four meetings. Participants joined the 5<sup>th</sup> meeting to evaluate the proposed detailed concept plan prepared by JICA Study Team, and determine the programmes which should be incorporated in the projects proposed by relevant authorities and in the JICA plan. In evaluating the detailed plan proposed by JICA GKUP, group activities were as follows:</p> <ul style="list-style-type: none"> <li>• State the reason for the evaluation in the proposed detailed plan.</li> <li>• Suggest how participants and/or community-based organisation can work together to</li> </ul>

Key Meetings	Main Discussion Points
	<p>improve the detailed plan by proposing activities / programmes.</p> <p>The three main points raised were as follows: 1) implement the guideline based on community perception, 2) propose specific activities to be engaged by community-based organisation, and 3) support initiative to establish community-based organisation.</p>
Pilot Project: “Info Place” June 2018	<p>The pilot project was conducted from 14<sup>th</sup> of June to 17<sup>th</sup> of June 2018 with cooperation from UDA, KMC, CCF, and DOA. It aimed to raise awareness of the historic shophouse buildings listed as “heritage”, but are not well known to the general public. The project consists of two parts:</p> <ul style="list-style-type: none"> <li>• Info Place: An exhibit at the temporarily set-up Information Centre in Grid Zone</li> <li>• Archi Tour: An architectural guided tour of Bogambara Prison, Remand Prison, Kandy City Hall, Queen's Bath, and Meda Wasala</li> </ul>
Joint Public Consultation Meeting 2018/6/21	<p>A Joint Public Consultation Meeting was held on 21<sup>st</sup> June 2018 at Sampath Banquet Hall, Kandy, with the attendance of 100 participants from four (4) zones of the Heritage Area in Kandy, the Mayor of Kandy, JICA Sri Lanka representatives, and representatives from local authorities. The meeting was held for each zone to be able to present and share their respective community-based activities which they will initiate.</p>
4 <sup>th</sup> Steering Committee Meeting 2018/7/3	<p>The 4<sup>th</sup> (Final) Steering Committee Meeting was held at the Headquarter Office of Urban Development Authorities, on 3<sup>rd</sup> July 2018 participated in by 27 Steering Committee members and JICA representatives. The progress of the survey was presented followed by discussions focused on these topics:</p> <ul style="list-style-type: none"> <li>• Vision and Overall Development Scenario (Cluster City, City Centre, Greater Kandy)</li> <li>• Proposal of Detailed Plan (i.e. zoning plan, regulation, guideline, Special Planning Areas, urban design orientations)</li> <li>• Proposal of Urban Development Programme (Regional Development Programme, Cluster City Strengthening Programme, City Centre Revitalisation Programme, Heritage Preservation and Utilisation Programme)</li> <li>• Plan implementation and follow-up task requested from Sri Lankan side</li> </ul>
Central Province, DSD, LA Meeting 2018/7/5	<p>The meeting was held to present the vision and strategies of Greater Kandy, and this was attended by officers, politicians, and engineers of Central Province, Local Authorities, and DSDs in Greater Kandy.</p>
Concluding Seminar 2018/8/9	<p>The final seminar was held on 9<sup>th</sup> August 2018 at Grand Kandyan Hotel attended by about 200 participants, including the Minister of MMWD, the Mayor of KMC, the Ambassador of EOJ, members of SCs, TWGs, and other government officers. After the GKUP presentation, the message from Japan was presented by Prof. Wakui, the JICA GKUP Advisor. The panel discussion followed.</p>
Community Meeting 2018/8/10	<p>The community meeting was held on 10<sup>th</sup> August 2018 at Sampath Banquet Hall, Kandy, inviting 45 community representatives of PCM. The message from Japan was presented by Prof. Wakui, and then the GNs presented the outcomes of PCM.</p>

Source: The JICA Team

## **2.2 Steering Committee Meetings**

### **2.2.1 First Steering Committee Meeting**

The 1st Steering Committee Meeting was held at the Ministry of Megapolis and Western Development (MMWD) on 27<sup>th</sup> July 2017, with participation of representatives from MMWD, Ministry of Social Empowerment, Welfare and Kandyan Heritage, Department of External Resources, University of Peradeniya, Central Cultural Fund Kandy, Central Environmental Authority, Ministry of Agriculture, UDA Central Provincial Office District, SCDP, JICA Sri Lanka Office, and JICA Project Team.

It was proposed during said meeting that Kandy should be compact, regulating physical development in the Heritage Area, guided by a possible realistic framework, while Colombo-Trincomalee Economic Corridor attracts more investments. For this, an investment recovery mechanism should be included in the plan.

It was mentioned that the Master Plan should be drafted by the end of this year and the process is a legal requirement.

Main comments raised during the meeting are summarised as follows:

- Coordination with the other on-going projects (Solid Water Project / Tunnel as a bypass road/ modernisation of railway, etc.)
- Consideration of environmental value (Victoria Lake and surrounding areas)
- Development consideration of urbanising lands owned by the Ministry of Agriculture
- Plan implementation (urgent projects should be addressed for implementation)
- Transportation facilities projects (KMTT and terminals, highway, bypass, double-track railway)
- Lack of clear definition of Kandyan architecture
- Heritage management and usage of heritage assets for tourism purposes, etc.
- Necessity of expanding the concept of heritage to include the landscape which consists of the temple surrounded by the beautiful mountains

### **2.2.2 Second Steering Committee Meeting**

The 2<sup>nd</sup> Steering Committee Meeting was held at the Ministry of Megapolis and Western Development (MMWD) on 28th November 2018 attended by 18 Steering Committee members. Main agenda were the following:

#### **Greater Kandy Urban Plan**

- “Vision” which reflects the Kandyan values and characteristics
- Potential industries for economic development
- Necessity of regional transport strategic projects
- Restructuring of urban functions by utilising public lands/ facilities

#### **Detailed Plan of the Heritage Area**

- Institutional arrangement toward better conservation system
- Basic framework for the formulation of the Detailed Plan
- Mixture of top-down and bottom-up planning and monitoring system to ensure community participation

#### **Major comments are summarised as follows:**

- Selection of Potential Industries for Industrial Zones: Recommended were the manufacturing of hardware, software, and middleware industries along with traditional small industries and how to utilize proposed water quality research centre at the University of Peradeniya.

- **Transportation Network:** Identify alternative roads to enter Kandy city. link roads and alternative roads should be included in the plan. More emphasis should be on improvement and new proposal for railway network and double-track railway line from Kadugannawa to Katugastota.
- **Environment:** Improve water table by including solid waste management in the area. The landslide zonation map and guidelines should be incorporated in the plan.
- **Urban Development:** Cluster towns with good transport network and development of railway network for schoolchildren will be considered. Bogambara prison development will be included in the plan.

### 2.2.3 Third Steering Committee Meeting

The 3<sup>rd</sup> Steering Committee Meeting was held at the headquarter office of Urban Development Authorities on 3<sup>rd</sup> April 2018 attended by 20 Steering Committee members and JICA representatives.

Progress of survey was presented, followed by discussions focused on these topics:

#### Regional Strategies Toward Vision

- Regional transport and industrial development
- Cluster development with public transport
- Rehabilitation of city centre for heritage preservation in a pedestrian-oriented district ]

#### Urbanisation Area

- Necessity of appropriate zoning system for urbanisation control (unified categorisation, definition of infrastructure coverage and level)

#### Orientation for Clusters and City Centre Development

- Prioritise cluster development, public transport promotion measures (multimodal terminal, P&R, etc.), relocation/rehabilitation of public facilities for pedestrian-oriented district

#### Development Programme

- Institutional development
- Sustainability of GKUP

Major comments are summarised below:

- Kandy Multimodal Transport Terminal (KMTT) project will push through while the Central Expressway project will be delayed. The planned bus terminal of Tennekunbulla, Katugastota, and Peradeniya will not be implemented. The existing road from Galagedera to Katugastota will be widened as four-lane trunk road. But tunnel construction will be delayed.
- By the development of KMTT, schoolchildren will be encouraged to use public transport system. School vehicle parking along the road and rerouting of school buses should be considered. More parking areas should be provided.
- Vehicles are permitted to enter this park from Thilak Rathnayake Mawatha, the road behind the railway line where the existing road will be widened and accessed over the railway, and not through the city.
- Double-line railway track from Kadugannawa to Katugastota will be implemented. Rehabilitation of Katugastota to Matale railway line will be carried out. Feasibility

studies are being conducted and projects may commence this year. Suggested was the reduction or completely banning of on-street parking within the city.

- There is a development proposal by the UDA for Sinha Regiment building area, to be allocated for vehicle parking with public convenient place.
- Relocation of Sinha Regiment and police barracks cannot be done since these are listed as heritage buildings. Most of the projects are included in the plan but solid waste management is not addressed properly.
- Development proposal for Low-income housing area should also be included.
- The institutions under the Ministry of Megapolis and Western Development have been changed. Therefore, Kandy City Development Programme has not been discussed at the usual Ministerial Committee Meeting.

#### **2.2.4 Forth Steering Committee Meeting**

The 4<sup>th</sup> Steering Committee Meeting was held at the headquarter office of Urban Development Authorities on 3<sup>rd</sup> July 2018 attended by 27 Steering Committee members and JICA representatives.

The progress of the survey was presented and the discussion was focused on the following agenda:

##### **Vision and Overall Development Scenario**

- Cluster City, City Centre, Greater Kandy

##### **Proposal of Detailed Plan**

- Zoning Plan, Regulation, Guideline, Special Planning Areas, Urban Design Orientations

##### **Proposal of Urban Development Programme (Short-term, Mid-term, Long-term)**

- Regional Development Programme
- Cluster City Strengthening Programme
- City Centre Revitalisation Programme
- Heritage Preservation and Utilisation Programme

##### **Plan Implementation and Follow-Up Request from the Sri Lankan Side (Counterparts of Greater Kandy Urban Plan Project)**

Major comments are summarised as follows:

- Relocation of wholesale trading to other suitable site will bring positive impact.
- Disaster impact assessment should be included when carrying out regional planning, especially site specific planning.
- KMC's support is vital in plan implementation. The request of Greater Kandy Urban Plan is to start some projects immediately with UDA.
- Leverage Japan to get financial and technical assistance, since both Japan and Sri Lanka have similarities in culture and religion. So far, the World Bank has provided assistance to Sri Lanka and within this assistance is Japan's counterpart fund such as Urban Development Authority.
- Publishing of GKUP is very important so that people will be aware of the plan and be informed if GKUP has achieved the objectives of the project.

- Traffic problems near schools and during school time will be minimised by the proposals made under this plan.
- The plan gives high priority for the promotion of indigenous foliage and knowledge with vitalisation of socioeconomic activities in the cluster cities.
- It is highly beneficial that the urban development vision and regional development scenarios have been formulated under this plan. Appreciation was expressed for the GKUP project staff for working very closely with their UDA counterparts.
- Consultations have been carried out with all stakeholder agencies and with the community for the preparation of the GKUP. It was requested that further comments, if any, be sent to the project office.
- Further technical support has been requested from JICA to enhance knowledge of utilising new technology in the preparation of Detailed Guide Plans and in urban planning.

## 2.3 Strategic Environmental Assessment Meeting

### 2.3.1 Principles of Strategic Environmental Assessment

Strategic Environmental Assessment (SEA) is one of the most effective tools to include environmental aspects in development planning in its early stage. In this project, mainly the following tools have been used for the SEA.

- Stakeholder meetings for public involvement
- Environmental zoning to identify environmentally constrained areas (see Section 8.2.3 “Orientation of Greater Kandy’s Environment”)
- Scoping to identify significant environmental impacts and appropriate study methods for environmental assessment

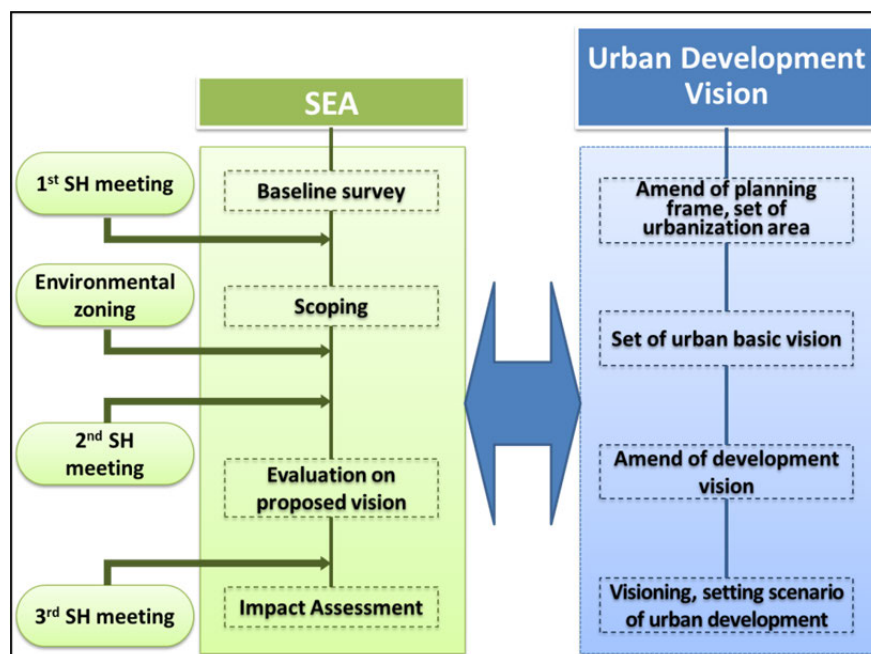
### 2.3.2 Strategic Environmental Assessment Meeting

#### (1) Purposes and Steps

A SEA meeting is a tool for public consultation to secure consensus among stakeholders that environmental and social considerations are adequately given to the Greater Kandy Urban Plan from the early stage of the planning process. Three SEA meetings were conducted.

Main purposes of each step are:

1 <sup>st</sup> SEA Meeting:	<ul style="list-style-type: none"> <li>• Sharing purposes of the SEA and JICA GKUP project</li> <li>• Quick review of current situation</li> </ul>
2 <sup>nd</sup> SEA Meeting:	<ul style="list-style-type: none"> <li>• Proposed vision and strategies</li> <li>• Environmental zoning</li> </ul>
3 <sup>rd</sup> SEA Meeting:	<ul style="list-style-type: none"> <li>• Proposed action plans</li> <li>• Environmental evaluation on the proposed action plans</li> </ul>



Source: The JICA Team

Figure 2.3.1 Process of the SEA



## (2) Selection of Candidate Participants

Participants in the SEA meetings were selected based on the following steps:

- (i) Nominated candidate participant by the UDA Central Provincial Office
- (ii) Finalised participants' list through the coordination between UDA Central Provincial Office and JICA Team. Emphasis was given to respect ethnically / religiously diverse opinions as well as gender issues (see Advice from LAs, DSDs/DNs for nomination of participants)
- (iii) Invitation letter was sent to the representative of each organisation/group; and then he/she appointed an appropriate participant. LAs and DSDs/DNs also nominated a representative of the community based on the characteristic and type of the area.
- (iv) One person can have multiple nominations to become a participant.
- (v) Table 2.3.1).
- (vi) Advice from LAs, DSDs/DNs for nomination of participants
- (vii) Invitation letter was sent to the representative of each organisation/group; and then he/she appointed an appropriate participant. LAs and DSDs/DNs also nominated a representative of the community based on the characteristic and type of the area.
- (viii) One person can have multiple nominations to become a participant.

**Table 2.3.1 Attributes of Participants**

Attribution		Nominated and Participating Groups
1	Gender	30% to half of the participants are female. The following female social parties participated: - Association of War Affected Women and Association of Parents of Servicemen Missing in Action - Women's Chamber of Industry and Commerce
2	Religion/Ethnic	Members from Tamil Traders Association and Muslim Traders Association participated. Muslims who are members of environmental group or community group in Akurana attended and gave useful opinions. Hindu monks as well as members of Tamil-related and Muslim-related groups participated.
3	Types of Organisation	Aside from UDA, the following organisations / groups sent participants: - DN and LAs - Academics (Peradeniya University) - Business association/company (KCC, jewellery shops, hotels, Chamber of Commerce, etc.) - Environmental NGOs (Hanthana Nature Conservancy)

Source: The JICA Team

### 2.3.3 Outline of Each SEA Meeting

#### (1) First Strategic Environment Assessment Meeting

Outline of the first SEA meeting is summarised below.

**Table 2.3.2 Outline of 1<sup>st</sup> SEA Meeting**

Date and Time	4 <sup>th</sup> May 2017, 9.00 A.M. – 2.30 P.M.
Venue	Thilanka Hotel, Kandy
Programme	<ul style="list-style-type: none"> <li>• Introduction of JICA Study</li> <li>• Quick Review of Environmental Background of Kandy Metropolitan Area</li> </ul>

	<ul style="list-style-type: none"> <li>• Approach on Strategic Environmental Assessment and Further Steps</li> <li>• Open Discussion</li> </ul>
Number of Attendants	87
Summary	<p>The following issues were highlighted in the discussion:</p> <p><b>Transportation</b></p> <ul style="list-style-type: none"> <li>• One of the most significant issues is the lack of parking space in the city area which lead to heavy traffic congestion. Also, loading/unloading of materials accelerate this problem.</li> <li>• Air pollution is also one of the problems caused by heavy traffic congestion and by outdated vehicles on the road. Introduction of electric cars within the city is recommended.</li> <li>• Introduction of by-pass road network to let heavy vehicles avoid passing the city area.</li> <li>• Strategic urban development to minimise traffic in the city area is necessary.</li> </ul> <p><b>Waste management</b></p> <ul style="list-style-type: none"> <li>• Proper mechanism to dispose toxic garbage from hospitals is necessary.</li> <li>• 3R approach is important.</li> </ul> <p><b>Water resource degradation</b></p> <ul style="list-style-type: none"> <li>• Water pollution should be considered.</li> <li>• Strategic actions to mitigate water pollution of the Mahaweli River and other water resources shall be introduced.</li> <li>• Public awareness on environmental conservation, such as forest conservation and watershed protection, should take place.</li> </ul> <p><b>Others</b></p> <ul style="list-style-type: none"> <li>• Uncontrolled construction due to shortage of available lands in Greater Kandy shall be considered.</li> <li>• Improper and/or non-effective landscape management degrades historical value of Kandy City.</li> <li>• Lack of positive attitude among people towards social responsibility and environmental protection is critical.</li> <li>• Local authorities need more capacity and knowledge to develop physical plans to improve the area which will be a good investment.</li> <li>• Sedimentation occurs in Mahaweli River due to soil erosion caused by deforestation.</li> <li>• There are many places with historical value in the Patha Hewa Hata Division and a mechanism to preserve them should be implemented.</li> <li>• Guarded pavements and drainage system in the city, buildings' walking tracks, children's park, playgrounds, and gardens are important features to be considered for the sociological aspect.</li> </ul>

Source: The JICA Team

## (2) Second Strategic Environmental Assessment Meeting

Outline of the second SEA meeting is summarised below:

**Table 2.3.3 Outline of 2<sup>nd</sup> SEA Meeting**

Date and Time	3 <sup>rd</sup> October 2017 / 9:15 A.M. to 2:00 P.M.
Venue	Hotel Thilanka, Kandy
Programme	<ul style="list-style-type: none"> <li>• Proposed Vision and Strategies for the GKUP Project</li> <li>• Environmental Management Concept for Urban Plan</li> <li>• Group Discussions</li> </ul>
Number of Attendees	72
Summary	Participants were divided into five (5) groups to discuss separately the five (5) goals proposed by JICA Team.

	<p>Outcome is the the following positive/negative issues to be likely caused by each goal:</p> <p><b>A Environmental Protection and Management</b></p> <p><u>Positive:</u></p> <ul style="list-style-type: none"> <li>• Udawatta Kale Sanctuary, Gannoruwa, and Wakarawatta are some of the environmentally sensitive areas identified in Kandy. Measure to control environmental damages and improvement of rules / regulations are important.</li> <li>• Protection of environmental equilibrium by conserving biodiversity</li> <li>• Protected environment ensures better health for the people.</li> </ul> <p><u>Negative</u></p> <ul style="list-style-type: none"> <li>• Imposing regulation on use of natural resources will limit industrial development.</li> <li>• Objections for new regulations can arise from land owners near environmentally sensitive zones as this could probably reduce the value of their lands.</li> <li>• Environmental regulations will limit large-scale development activities.</li> </ul> <p><b>B Historic and Cultural Conservation</b></p> <p><u>Positive</u></p> <ul style="list-style-type: none"> <li>• Proper conservation will enhance knowledge on Sri Lankan history and culture</li> <li>• Kandyan heritage will be protected.</li> <li>• Tourism industry will be developed.</li> </ul> <p><u>Negative</u></p> <ul style="list-style-type: none"> <li>• Historical monuments and buildings will decay if necessary attention is not provided for conservation</li> <li>• Business communities in the city needs alternative means/places relocate their businesses outside the city.</li> <li>• Unnecessary development of tourism industry will damage the heritage aspect of the city</li> </ul> <p><b>C Socio-Economic Development</b></p> <p><u>Positive</u></p> <ul style="list-style-type: none"> <li>• This will enhance income of people engaged in traditional industries.</li> <li>• Money circulation will increase.</li> <li>• Investment opportunities will increase.</li> <li>• Efficiency in using resources</li> <li>• Better use of new technology and technical knowledge</li> <li>• Number of tourist attractions / tourist services will improve.</li> </ul> <p><u>Negative</u></p> <ul style="list-style-type: none"> <li>• Unique cultural and traditional features will disappear due to technical development.</li> <li>• Environmental pollution will increase.</li> <li>• Social and political issues might arise.</li> </ul> <p><b>D Transportation and Infrastructure</b></p> <p><u>Positive</u></p> <ul style="list-style-type: none"> <li>• Reduce traffic congestion and this will save time.</li> <li>• Walking will be encouraged / promoted.</li> <li>• Sub-roads will be developed.</li> <li>• Trains will be inexpensive compared to other transport systems (i.e., Train ticket fare will be cheaper than bus ticket fare.)</li> <li>• New vehicle parking spots will be established.</li> </ul> <p><u>Negative</u></p> <ul style="list-style-type: none"> <li>• Improved roads will increase number of private vehicles on the road.</li> <li>• Environmental pollution will aggravate.</li> <li>• Train passengers need supporting transport systems to reach locations within the city from the train station.</li> <li>• Taxis will have reduced business opportunities as public services will be improved.</li> </ul> <p><b>E Living Environment and Urban Growth Management</b></p>
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	<p><b>Positive</b></p> <ul style="list-style-type: none"> <li>• Tourism industry will be developed.</li> <li>• Educational, commercial, and transportation facilities will be developed.</li> <li>• Income generation avenues will be improved.</li> <li>• Mental and physical health conditions of people will improve.</li> <li>• Establishment of centralised governing institutions that link other regional institutions will be helpful to the public to obtain services.</li> </ul> <p><b>Negative</b></p> <ul style="list-style-type: none"> <li>• Cultural values will be challenged with the improvement of the tourism industry.</li> <li>• Cost of living will increase.</li> <li>• Governing an improved region can cause issues for the local authorities.</li> <li>• Improved economic activities will lessen time for interpersonal relationships.</li> <li>• Governing authorities will be centralised.</li> </ul>
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Source: The JICA Team

### (3) Third Strategic Environment Assessment Meeting

Outline of the third SEA meeting is summarised below.

**Table 2.3.4 Outline of 3<sup>rd</sup> SEA Meeting**

Date and Time	27 <sup>th</sup> March, 2018, 9.30 A.M. – 2.30 P.M.
Venue	Thilanka Hotel, Kandy
Programme	<ul style="list-style-type: none"> <li>• Proposed Actions of the JICA-GKUP Project</li> <li>• Orientation/Discussion of Environmental Evaluation</li> <li>• Open Discussion</li> </ul>
Number of Attendees	74
Summary	<p>The following issues were highlighted in the discussion:</p> <p><b>Kandy City Centre Development</b></p> <ul style="list-style-type: none"> <li>• Necessary infrastructure facilities, such as toilets and parking, for the pilgrims / tourists should be developed.</li> <li>• City should be developed while ensuring the protection of its heritage value.</li> <li>• Udawatte Forest and Dunumadalawa Forest Reserves which provide greenery to the Kandy area should be protected.</li> <li>• Unauthorized constructions in forest reserves should be demolished.</li> <li>• It is necessary to introduce a daily cleaning/maintenance system in the city.</li> </ul> <p><b>Getambe – Peradeniya Cluster Development</b></p> <ul style="list-style-type: none"> <li>• Private medical clinics and institutions should be relocated outside the city.</li> <li>• International schools and tuition classes should be moved to peripheral cities.</li> <li>• Improve the facilities of existing transport modes and introduce an intercity shuttle service.</li> </ul> <p><b>Kundasale – Digana Cluster Development</b></p> <ul style="list-style-type: none"> <li>• The establishment of a zone for the IT industry is important.</li> <li>• Design separate areas suitable for residential purposes.</li> <li>• Available health services and facilities should be further improved to ensure quality service.</li> <li>• Mahaweli River is being polluted and destroyed by various human activities such as encroachment of reservation area and sand mining. Mahaweli Authority of Sri Lanka (MASL) should take necessary legal measures to protect the river.</li> </ul> <p><b>Katugastota - Akurana Cluster Development</b></p> <ul style="list-style-type: none"> <li>• Introduce suitable measures to control human activities that cause environmental pollution (e.g., burning polythene, dumping garbage on road side).</li> <li>• Provide adequate facilities and necessary awareness for the public on proper</li> </ul>

	<p>garbage disposal.</p> <ul style="list-style-type: none"><li>• Need more parking facilities and multi-service centres which provide shopping, recreation, and other necessary facilities for the public.</li></ul> <p><b>Economic Development</b></p> <ul style="list-style-type: none"><li>• Encourage and strengthen capacities of small- and medium-level local businesses.</li><li>• More attractive activities and locations should be introduced for tourism promotion.</li><li>• Conduct awareness programmes regarding planned development activities for the community, concerned government agencies, and for other socially active groups</li></ul> <p><b>Environmental Conservation</b></p> <ul style="list-style-type: none"><li>• Necessary arrangements and a good mechanism to get support and consultations from various community-based organisations and community leaders are needed for development activities.</li></ul> <p><b>Specific Topics on Urban Transportation</b></p> <ul style="list-style-type: none"><li>• It is necessary to arrange for an efficient coordination network among all the utility service providers.</li></ul>
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Source: The JICA Team

## 2.4 Public Consultation Meetings for the Detail Plan

Public consultation meetings (PCMs) have commenced to provide various participatory opportunities for communities in the process of GKUP preparation. Furthermore, the PCMs were organised to promote local community initiatives for the preservation and development in the Heritage Area.

**Table 2.4.1 Outline of Public Consultation Meetings**

	Date	Meeting	Number of Participants	Discussion Topic / Group Work
1	28 July 2017	Kick-off Meeting (Heritage Area)	About 200	<ul style="list-style-type: none"> <li>• Introduce project objective and request collaboration from public</li> <li>• Explanation of Greater Kandy Urban Plan and Heritage Area Plan's vision and idea sharing</li> <li>• Nominate the representatives</li> <li>• Explanation of household survey and building survey</li> </ul>
2	10-18 August 2017	1 <sup>st</sup> PCM	20~60 × 4 zones Total: 135	<ul style="list-style-type: none"> <li>• Identify the issues and problems at the Heritage Area as indicated by the positive and negative impressions of the participants.</li> <li>• Negative Impression (80 places); Positive Impression (85 places); Total: 65 places</li> </ul>
3	12-20 October 2017	2 <sup>nd</sup> PCM	20~32 × 4 Zones Total: 116	<ul style="list-style-type: none"> <li>• Evaluate the issues and problems by determining which aspects should be improved, inadequate, or should be preserved.</li> <li>• Negative Impression (47 places); Positive (21 places); Total: 68 places</li> <li>• Issues were sorted in Carte Sheet.</li> </ul>
4	30 November-14 December 2017	3 <sup>rd</sup> PCM	17~27 × 4 Zones Total: 98	<ul style="list-style-type: none"> <li>• Solutions to current issues and problems were determined from different viewpoints. Visions were established in order to address the issues.</li> </ul>
5	19-23 April 2018	4 <sup>th</sup> PCM	21~42 × 4 Zones Total: 120	<ul style="list-style-type: none"> <li>• Discuss the projects proposed by government agencies and considered their compatibility with visions of the community.</li> <li>• Suggest the collaboration between community and government, and propose new project, as needed.</li> <li>• Determine the system of community organisation in the Heritage Area.</li> <li>• Let the participants voluntarily nominate their representatives..</li> </ul>
6	14-18 May 2018	5 <sup>th</sup> PCM	15~30 × 4 Zones Total: 83	<ul style="list-style-type: none"> <li>• Evaluate the proposed detailed concept plan prepared by JICA Team</li> <li>• Determine the programmes which should be incorporated in the projects proposed by relevant authorities and JICA plan.</li> <li>• Propose activities and programmes for the Community-Based Organization.</li> </ul>
7	21 June 2018	Joint Meeting of 4 zones	110	<ul style="list-style-type: none"> <li>• Present and share the proposal of each zone.</li> <li>• Determine proposal entire Heritage Area's activities.</li> </ul>

Source: The JICA Team

## 2.5 Surveys in the Heritage Area

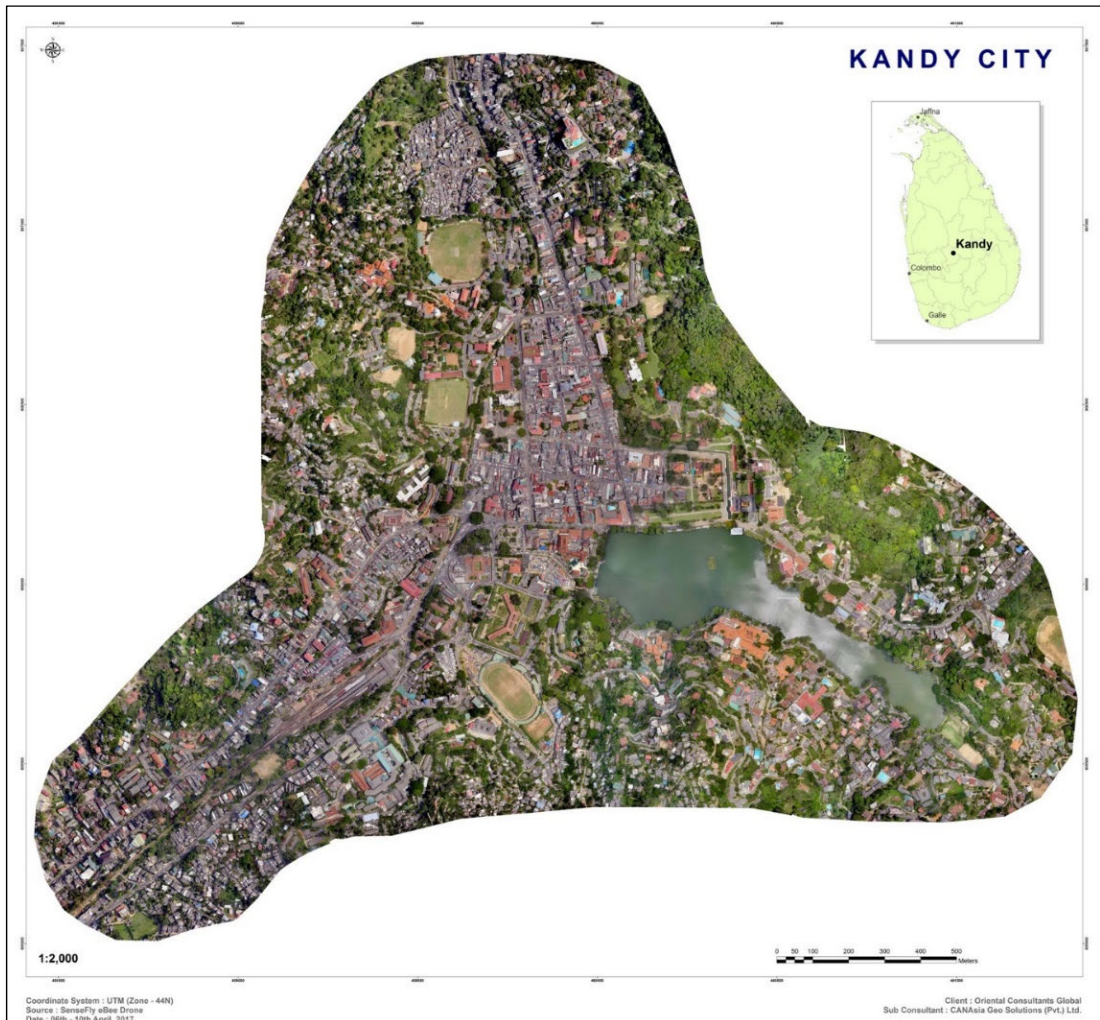
Four (4) surveys were conducted to review the current situation and determine specific issues in the Heritage Area.

### 2.5.1 GIS Database Establishment

Location of heritage buildings and elements of the landscape are to be stored and managed as GIS data in a unified manner to be utilised for the Detailed Plan formulation, land use/building use analysis, landscape analysis, etc.

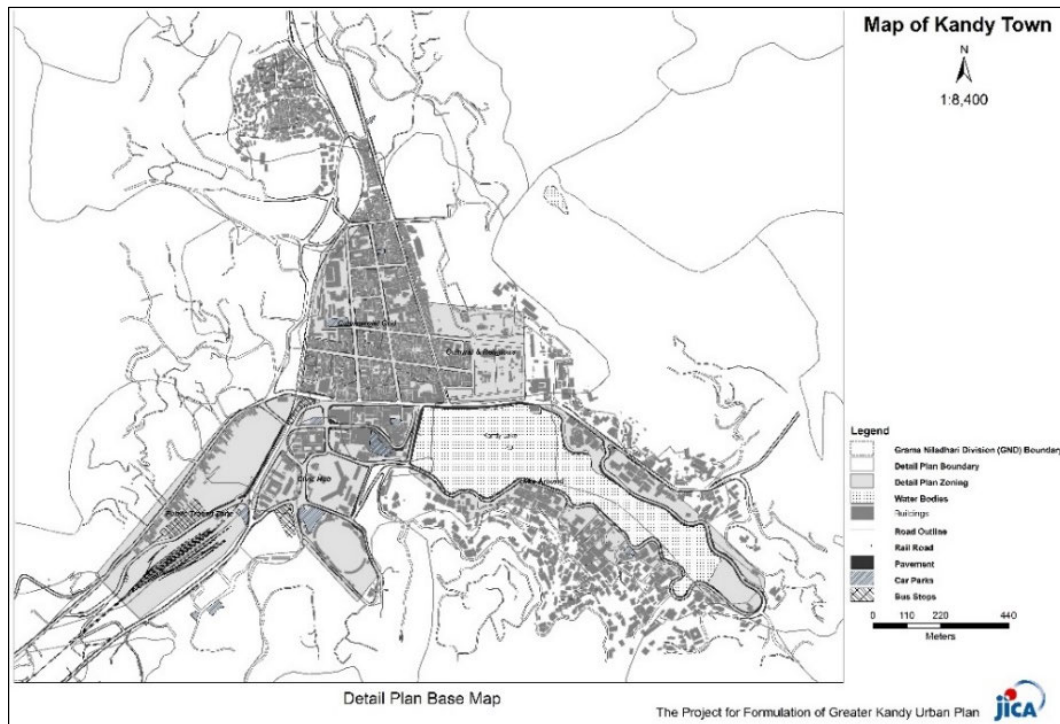
A base map of the Heritage Area with a scale of 1:2,000 was produced based on aerial photos. As this project task requires high-resolution photos, including that of roads and buildings, a drone was used for the purpose (see Figure 2.5.1). Stereo photos were taken. The GIS data were linked with building inventories in the Heritage Area.

The database include: (a) buildings, (b) roads including sidewalks, (c) water bodies, (d) infrastructure such as education, health facilities, bridges, etc. (e) park and open space, (f) transport facilities, and (g) green coverage (see Figure 2.5.1 and Figure 2.5.2).



Source: The JICA Team

**Figure 2.5.1 Drone Photos of the Heritage Area**



Source: The JICA Team

**Figure 2.5.2 GIS Base Map of the Heritage Area**

### 2.5.2 Building Survey

The survey aims to collect general information on the buildings and to obtain photos of each building in the Heritage Area. In addition to these, the production of street elevation views is required so that the community can recognize the historic townscape during opportunities like public consultations, i.e., the focus areas consist the “Commercial Grid”, and there is one major street in the “Civic Hub”.

The survey items were as follows:

- Address
- GIS reference number
- Current Use (ground floor)
- Current Use (upper floor)
- Name of the Building (if indicated on the façade)
- Information on the Signboard (tenant's name)
- Number of Floors (Ground floor=1st floor)
- Façade width(m)
- Approximate Height of the Building (m)
- Roof type
- Roofing Material
- Information on the Heritage Plaque
- Building Construction's Year of Completion (if indicated on the building)

Photos of the façade were taken, and photos were prepared along some of the major streets for streetscape analysis (see Figure 2.5.3).





Source: The JICA Team

**Figure 2.5.3 Streetscape Photo**

### 2.5.3 Interview Survey

To formulate the Detailed Plan of the Heritage Area, it is necessary to understand what the visitors and residents in the Heritage Area say. Specifically, opinions and concerns of households (owners or lessees) within the area are indispensable for validation of the detailed plan and for an effective implementation of the guidelines. For these purposes, an interview survey was conducted in the Heritage Area targeting (1) Sri Lankan and foreign tourists, and (2) owners/ lessees of buildings.

#### (1) Tourists' Interview Survey

In order to increase the image and attractiveness of Kandy as a World Heritage City and other city resources, a tourist interview surveyor was engaged to gather information on the idea of improving the value of the city, promoting its attractiveness, and utilising fully the valuable elements. The information generated is to be used in further planning and actions.

The survey targets were foreign and domestic tourists who visited Kandy City. A total of 600 samples were interviewed, or 300 each for the two types of respondents. Interviewees were randomly selected from those who visited and/or stayed at and/or around the Heritage Area.

An overview of the sampling for each zone is shown in Table 2.5.1.

**Table 2.5.1 Heritage Area's Tourist Survey by Zone**

Zone of Heritage Area	Location of Interview	No. of Domestic Samples	No. of Foreign Samples
Commercial Grid Zone	Hotels, restaurants, cafés, religious places, exit of the Temple of Tooth Relic, shops, etc.	210	210
Lake Around Zone	Hotels, pedestrian street	30	30
Civic Hub Zone	Hotels, shops, restaurants, cafés, etc.	30	30
Public Transit Zone	Railway station, bus terminal, shops, hotels, etc.	30	30
Total		300	300

Source: The JICA Team

The interview items were as follows:

- A: Information regarding the tourist: sex, age, nationality, address
- B: Information regarding travel in Kandy: type of travel to Kandy, period of stay in Kandy, travel mode to Kandy, main travel means in Kandy, place of stay in Kandy, purpose, activities at night-time, places of visit before/ after Kandy, travel information sources, daily travel expense, souvenirs purchased
- C: Impression/Assessment of Opinions: Level of satisfactions on Kandy

**(2) Household/ Business Owners' Interview Survey**

A household/ business owner interview survey was conducted in the Heritage Area to determine the following:

- A: Information regarding household/ business owner: Name, ethnicity, religion, type of house/ building ownership, house/ building ownership period, business operation at home for household, type of activity for business owner, vehicle ownership, parking condition, etc.
- B: Concerns for urban issues of Kandy City: Assessment of urban issues (economic, social, transport, infrastructure), assessment of environmental issues, favourite places
- C: Concerns for historic preservation (experiences of renovation, compliance with zoning regulation, awareness and designation of conserved building, etc.)

The interview sampled 2,000 households/business owners, which covered more than half of all the buildings at the Heritage Area. The number of sample for each zone is shown in Table 2.5.2.

**Table 2.5.2 Samples of Household/ Business Owner Survey by Zone**

<b>Zone of Heritage Area</b>	<b>Sample size</b>
Commercial Grid Zone	1,200
Lake Around Zone	200
Civic Hub Zone	200
Public Transit Zone	400
Total	2,000

Source: The JICA Team

## 2.6 Training Programme in Japan

In October - November 2017, the training programme for Sri Lankan officials was conducted for them to learn Japanese experiences on urban planning and development as well as heritage and townscape preservation.

Main themes and areas covered by the programme were as follows:

- a) Introduction of urban planning system in Japan
- b) Promotion of world heritage with religious and cultural values as well as local industry and tourism development
- c) Townscape preservation with urban management and public participation

There were 16 counterpart members who participated in the programme, including UDA, District Secretariat of Kandy, Central Cultural Fund of Kandy, KMC, Department of Archaeology, and UDA Central Province Office.

**Table 2.6.1 Overall Schedule of Training Programme in Japan**

No.	Date	City	Contents
1	28 Oct (Sat)		Departure
2	29 Oct (Sun)		Arrival at Narita
3	30 Oct (Mon)	Tokyo	Guidance Lecture 1: To Utilise Historic Townscapes - The Collaboration Between the Local Municipality and the Local Neighbourhood Lecture 2: Introduction to Urban Planning System in Japan
4	31 Oct (Tue)	Sawara	Lecture 3: Townscape of Sawara – Government / Private Sector Collaboration in Preservation Efforts Lecture 4: Townscape of Sawara - Riverside Merchant Houses Lecture 5: The Significance and Difficulties of the Participation of High School Students in Town Management in the Historic District of Sawara
5	1 Nov (Wed)	Kamakura	Lecture 6: City Planning in Kamakura City Lecture 7: Preservation of Green Space in Kamakura Lecture 8: Urban Design Kamakura - Preservation of Historic and Scenic Beauty Lecture 9: Traffic Demand Management (TDM) of Kamakura City
6	2 Nov (Thu)	Ise	Lecture 10: Urban Planning of Ise City
7	3 Nov (Fri)	Ise	Lecture 11: Town Planning of Ise Kawasaki Lecture 12: Ise Akafuku: Contribution of the Private Sector in Tourism Development and Residents' Committee / Organisation
8	4 Nov (Sat)	Kyoto	-
9	5 Nov (Sun)	Kyoto	-
10	6 Nov (Mon)	Nara	Lecture 13: Project to Conserve and Utilise the Former Nara Juvenile Prison Lecture 14: Activity of Nara Machidukuri Centre (NMC) in Nara
11	7 Nov (Tue)	Kyoto	Lecture 15: Landscape Conservation in Kyoto
12	8 Nov (Wed)	Yokohama (UR)	Lecture 16: Outline of Housing Supply and Urban Development in Japan Introducing UR's Roles and Urban Design of Yokohama
13	9 Nov (Thu)	Kawagoe	Lecture 17: Community-Based Town Planning Taking Advantage of the Historic Resources-The Case of Kawagoe City
14	10 Nov (Fri)	Tokyo	Wrap-Up Meeting and Closing Ceremony
15	11 Nov (Sat)		Departure

Source: The JICA Team



Source: The JICA Team

**Figure 2.6.1 Photos of the Training Programme in 2017**

## 2.7 Impact of Curfew Issues (March 2018) on Project Content

Due to the social unrest that broke out during March 2018 in Kandy area, the Sri Lankan Government declared a 10-day nationwide state of emergency in March 2018. However, working progress of GKUP was not affected much and the project content was kept on track as planned, as the project was designed in such a way that it would not be affected by temporary incidents of this nature. The GKUP covers the entire area of the Greater Kandy physically and studies the scope / aspect regardless of ethnic or religious differences from the stage of survey until the proposal stage. Furthermore, participation of public / organisations in GKUP meeting or workshop was not limited to certain ethnic or religious groups.

## **PART 2: GREATER KANDY URBAN PLAN**

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**CHAPTER 3 REVIEW OF INSTITUTIONAL SETTINGS AND  
RELATED PLANS AND PROJECTS**

**CHAPTER 4 NATURAL AND SOCIO-ECONOMIC CONDITIONS**

**CHAPTER 5 PRESENT CONDITIONS OF THE CITY CENTRE**

**CHAPTER 6 SECTORIAL SITUATIONAL ANALYSIS**

**CHAPTER 7 VISION, GOAL AND STRATEGIES**

**CHAPTER 8 URBAN STRUCTURE AND DEVELOPMENT  
ORIENTATION**

## CHAPTER 3 REVIEW OF INSTITUTIONAL SETTINGS AND RELATED PLANS AND PROJECTS

### 3.1 Institutional Settings

#### 3.1.1 Authorities Responsible for Urban Development

##### (1) Authorities Responsible and Their Roles

Authorities responsible for planning and implementation of the urban development vary according to the level and coverage of the development plans. The main development planning body at national level is the National Physical Planning Department (NPPD), Ministry of Megapolis and Western Development, and the Urban Development Authority (UDA) for the local level. The powers and functions of relevant authorities are described in the following section:

##### 1) National Physical Planning Department (NPPD)

Under the Town and Country Planning Ordinance No. 13 of 1946 (Amendment No.49 of 2000), the National Physical Planning Department (the former Town & Country Planning Department) is authorised to formulate and implement the national physical plan for the following purposes:

- Formulation and implementation of the National Physical Plan (NPP) to promote and regulate integrated planning of economic, social, physical and environmental aspects of land in Sri Lanka;
- Protection of natural amenities, the conservation of the natural environment, buildings of architectural and historic interest and places of natural beauty; and
- Facilitation of the acquisition of land to give effect to such plan and to provide for matters incidental to or connected with the matters aforesaid.

The powers and functions of NPPD are as follows:

- To formulate a National Physical Planning Policy (NPPP) and National Physical Plan (NPP)
- To prepare physical planning guidelines to be adopted by the local planning authorities
- To prepare any regional or local plan where the planning authority fails in, or requests, the preparation of such plan
- To assist Provincial Councils in the preparation of regional physical plans and make recommendations to the Coordinating Committee on plans in accordance with NPPP
- To review and monitor the NPPP and NPP in operation and to recommend to the Coordinating Committee any changes as necessary

The planning and approval procedure of the development plans are as follows:

- Director General (DG) of National Physical Planning prepares a draft NPPP and NPP guideline
- Advisory committee advises on NPPP and NPP to DG of National Physical Planning, as necessary

- Inter-ministerial coordination council submits NPPP and NPP to the National Physical Planning Council
- National Physical Planning Council approves NPPP and NPP
- National Physical Planning council to require the National Physical Planning Department to ensure funds from its annual budget for the implementation of the plan

## **2) Urban Development Authority (UDA)**

An important agency in physical planning at the local level is the Urban Development Authority (UDA). UDA was established under the Urban Development Authority Law No. 41 of 1978 (Amended multiple times) to promote integrated planning and implementation of economic, social and physical development of the Urban Development Area in the form of a Gazette.

The role of UDA is to formulate, implement, invest in, and regulate the development programme and projects in the Urban Development Area. The powers and functions of UDA are as follows:

- To carry out integrated planning and physical development within the Urban Development Area
- To implement development activities and services in the Urban Development Area and complete approved development projects that are in default
- To formulate and implement development plans, including capital investment plans, and enter into contract for their execution
- To formulate and implement urban land use policy in the Urban Development Area
- To develop environmental standards and prepare schemes for environmental improvements
- To carry out building, engineering, etc. in connection with the infrastructure development
- To acquire and hold any movable or immovable property or dispose of any property acquired
- To prepare, approve, coordinate, provide technical planning services and regulate development projects and planning schemes on behalf of government agencies

Subsequent amendment of the Act makes it mandatory for the UDA to prepare development plans for all areas declared under the UDA law which includes MC, UC, and PS. According to the Town and Country Planning (Amendment) Act, No. 49 of 2000, even for the areas outside of declared areas, upon request from LAs, UDA shall assist with the formulation of a physical development plan. The procedures for the formulation and approval of the development plan, as stipulated by the Planning Procedure in Section 8 of the UDA (Amendment) Act, No. 4 of 1982, re as follows:

- 1) The draft development plan is to be prepared by UDA and submitted to LAs
- 2) The draft plan will be reviewed by LAs, including public views, for 60 days
- 3) The draft plan, together with the comments from the LA, will be examined by the Planning Committee
- 4) Based on the recommendation of the Planning Committee, the plan will be submitted to the Minister for approval or modification
- 5) Upon the approval of the Minister, the development plan will be gazetted and translated into 3 languages: English, Sinhala and Tamil

- 6) Land acquisition for urban development should follow Land Acquisition Act No. 9 of 1950 (Amended No. 39 of 1954, No. 22 of 1955).
- 7) Development Plans by UDA is summarised in 3.3.2 in this chapter.

### **3) Local Authority**

As described earlier, there are two different administrative institutions governing at the local level: LAs and DSDs. LAs are locally elected bodies constituted by legislation namely, the Municipal Councils Ordinance (1947), Urban Councils Ordinance (1939) and Pradeshiya Sabhas Act (No.15 of 1987), while DSDs are administrative arms of the Central Government.

The powers and functions of LAs and DSDs include the following:

#### **LAs**

- Perform regulatory and administrative functions
- Promote public health and sanitation
- Promote environmental sanitation
- Manage public thoroughfares and public utility services

#### **DSDs**

- Collection of primary data

In the planning aspect, LAs prepare their annual budget plan including their infrastructure proposals. The development Plans for LAs is formulated by UDA. DSDs prepare an annual investment plan which is a prioritised list of development projects.

#### **LAs**

- In the formulation of the Development Plan by UDA, LAs review and make comments on the contents of the Development Plan.

#### **DSDs**

- Each DSD collects development proposals from GNs.
- The Divisional Coordinating Committee evaluates and prioritises the proposals.
- The District Coordination Committee evaluates and approves the prioritised proposals.
- Upon the approval, funds will be allocated by each line ministry.

The development needs of Province, LAs and DSDs are summarised in Section 3.5 of this chapter.

## **3.1.2 Development Permits**

### **(1) Urban Development Authority (UDA) Planning and Building Regulations**

Development of lands and buildings in a declared Urban Development Area shall be regulated by the Urban Development Authority Planning and Building Regulations (Gazette: 1986.03.10), as per Section 8J of the Urban Development Authority (Amendment) No.4 of 1982. The regulations stipulate various items to be regulated as shown in Table 3.1.1.



**Table 3.1.1 Items of the UDA Planning and Building Regulations**

Art. No.	Contents
1, 2	Regulations
3 - 7	Submission of Plans
8, 9	Building Categories
10	Preliminary Planning Clearance and Approval of Plans
11	Appeals Against Refusal
12	Development to be in Conformity with the Permit
13	Suitability of Site
14	Use of Site
15	Floor Area Ratio
16	Access
17	Specification as to Lots
18	Height of Buildings
19	Street Lines and Building Lines
20 - 23	Sub-division of Land
24	Layout for Flats and Housing Units
25 - 30	Open Spaces Around Buildings
31	Parking
32	Splaying of Corners of Streets
33	Architectural Control
34	Conservation of Places of Historical, or Architectural Interest of Landscape Value
35	Landscape and Tree Preservation
36	Advertisement Control
37	Airport and Other Zones
38	Clearance from Electric Lines
39 - 43	Part (IV) Building Regulations
44	Staircases
45 - 53	Lighting and Ventilation
54	Mechanical Ventilation and Air Conditioning
55 - 57	Foundations
58	Lifts
59, 60	Water Supply and Sewerage
61	Drainage
62	Waste Disposal
63	Electrical and Plumbing Work
64 - 66	Fire Safety
67, 68	Certificate of Conformity
69	Unsafe Buildings
70	Definitions

Source: Urban Development Authority Planning and Building Regulations, 1986 (Gazette: 32/9-1986, 1986.03.01)

## (2) Approval of Development Plan

For approval of the development plan, (1) a Blocking-Out Plan (BOP) and (2) building plan must be approved by the Planning Committee, as per the formal procedures regulated by the UDA Law, the UDA Planning and Building Regulations, 1986.

### 1) Planning Committee

For the purposes of advising the Authority on all matters pertaining to the preparation, implementation and enforcement of a development plan, a Planning Committee shall be appointed. The LA Planning Committee consists of members shown in the table below.

**Table 3.1.2 Members of LA Planning Committee**

Position	Appointed member
Chairman	Mayor (MC), Secretary (UC), or Secretary (PS)
Members	<ul style="list-style-type: none"> <li>• Technical officer, engineer, works superintendent, building clerk</li> <li>• Town Planner from the UDA, and</li> <li>• Other personnel that the Chairman requests to be included as members such as officers of RDA, CEA, NBRO, NWSDB, etc.</li> </ul>

Source: Practice manual for Planning Committee Officers

### 2) Preliminary Planning Clearance (PPC)

For a smooth approval procedure, a Preliminary Planning Clearance (PPC) is required for the following matters prior to Planning Approval.

- All housing developments over 5,000 sq.ft.
- Non- residential developments over 4,000 sq.ft
- All lands blocking out over five (5) numbers and above
- All building constructions over four [04 (Ground flr + 3)] floor or over 15m in height
- All hotels, guest houses, rest houses and lodges, bedroom capacity of six (6) people and over
- Telecommunication towers
- Warehouses
- Manufacturing industries and service industries
- Special projects (mini hydro, high-tension electrical lines, mining, highways, etc.)
- Filling of paddy lands or lowlands
- If a land plot size is less than 150 square metres for any reason
- A land plot is given to any government agency by the Divisional Secretary or any other government agency
- All other necessary developments determined by the LA Planning Committee.

### 3) Blocking Out Plan Approval

Blocking-out plan approval includes (1) lot size according to the land slope, (2) prior clearance from related agencies, (3) land sub-division approval, and (4) common space.

#### (a) Lot size and slope

As shown in Table 3.1.3, lot sizes of the development are regulated depending on the degree of the slope. Any developments on land over 45 degree slope are prohibited.

**Table 3.1.3 Slope and Lot size**

Slope (Degree)	Minimum lot size (sq.m.)	Minimum width of lots (metre)
0° - 10°	150	6
11°-12°	180	6
13°- 14°	200	6
15°- 17°	250	8
18°-20°	300	8
21°-23°	370	8
24°- 27°	450	12
28°- 30°	500	12
31°-45°	760	20
Over45°	No development allowed	

Note: Land developments blocking out minimum size should not be less than 250 sq.m.

Source: Practice Manual for Planning Committee Officers

#### 4) Approval from Related Organisation

Prior to the PC approval, the following clearance and approvals are required.

**Table 3.1.4 Clearance from Related Organisations**

Approving Organisations	Description
Department of Agrarian Services	Department of Agrarian Service Commissioner General (not any intermediate letters) letter for conversion of paddy land or highland.
Sri Lanka Land Reclamation & Development Corporation (SLLR&DC)	Filling approval
Archaeological Department	If building or site is heritage or archaeological listed.
Mahaweli /LA/DS or Irrigation Dept.	Recommendations for river or canal reservations are required.
National Building Research Organization (NBRO)	If any land instability or strength is low.
Central Environmental Authority (CEA)	If any land plot or building is environmentally sensitive.

Source: Practice manual for Planning Committee Officers

### 3.1.3 Financial Mechanism

#### (1) Financial Situations of UDA, Kandy DS, and KMC

Financial mechanism and fiscal situations of the UDA, Kandy District Secretariat and Kandy Municipal Council (KMC) are described in this section.

##### 1) Urban Development Authority

Finance of UDA is managed by the UDA head office. The recurrent budget of regional offices will be allocated based on their annual budget requests. The budgets for development projects are procured from UDA, Ministry of Finance or through PPP. Most of the large-scale development projects are requested from the Ministry of Finance.

The balance sheet of UDA shows that the total assets are growing over the years and reached Rs. 160.3 billion in 2017 as shown in Table 3.1.5. Non-current assets increased 150% in 5 years, reflecting the increased developments of the property. Liabilities in 2017 are Rs. 83.5 billion to sustain growing development activities. Equity and liabilities ratio is around 1:1. Equity consists of state capital and government contribution of Rs. 1 billion and retained earnings of Rs. 75 billion.

**Table 3.1.5 Draft Balance Sheet of UDA (Rs.in billion)**

Item	2013	2014	2015	2016	2017
Current Assets	16.0	17.0	9.6	8.9	7.3
Non-Current Assets	104.0	116.8	125.2	135.6	153.0
<b>Total Assets</b>	<b>120.0</b>	<b>133.9</b>	<b>134.8</b>	<b>144.5</b>	<b>160.3</b>
Current Liabilities	6.1	26.8	27.7	31.6	15.3
Non-Current Liabilities	33.0	30.9	31.1	37.1	68.2
Equity	80.9	76.2	76.0	75.8	76.8
<b>Total Equity &amp; Liabilities</b>	<b>120.0</b>	<b>133.9</b>	<b>134.8</b>	<b>144.5</b>	<b>160.3</b>

Source: Urban Development Authority Budget Report 2017

The recurrent revenue of UDA in the year 2017 is expected to be Rs. 1,424 million, which increased from the previous year by 17%. The increase resulted from the increase in rent, accounting for 46.8% of the total revenue. Out of the total UDA revenue, contribution from Central Province remains at 1.7%. The recurrent expenditure consists of personnel

emoluments and account for 26.7% and other expenses including maintenance and utility fee of the properties.

**Table 3.1.6 Recurrent Revenue & Expenditure of UDA (Rs. In million)**

Item	2015	2016	2017	Central Province
Rent	1,255	1,352	1,424	0.6%
Sale of Fixed Assets	17	58	70	-
Fee for Service	424	511	507	3.9%
Interest & Dividend & Other	595	679	1,039	2.2%
<b>Total Revenue</b>	<b>2,291</b>	<b>2,600</b>	<b>3,040</b>	<b>1.7%</b>
Personnel Emoluments	915	1,036	1,063	5.0%
Other Expenses	1,243	1,472	2,916	0.7%
<b>Total Expenditure</b>	<b>2158</b>	<b>2508</b>	<b>3,979</b>	<b>1.9%</b>
<b>Operational Profit</b>	<b>133</b>	<b>92</b>	<b>(939)</b>	<b>2.4%</b>
<b>Net Profit After Tax</b>	<b>15</b>	<b>78</b>	<b>(891)</b>	<b>-</b>

Source: Urban Development Authority Budget Report 2015, 2016, and 2017

The main source of recurrent revenue for the UDA Central Province is the fee for approval at 35.8%, consulting service at 25.0% and monthly rent at 13.0%. For the past 3 years, increases in revenue are found in consulting service and fee for approval, including fee for planning approval and the certificate of conformity (COC). The main recurrent expenditure is personnel emoluments accounting for 71.5%.

**Table 3.1.7 Recurrent Revenue & Expenditure of UDA Central Province (Rs. In million)**

Item	2015	2016	2017	Share (2017)
Monthly Rent	18.3	2.7	6.7	13.0%
Lease	3.0	3.0	1.8	3.5%
Consulting Service	7	14.1	12.9	25.0%
Change Use of Building	6.2	4.0	6.1	11.8%
Fee for Approval	9.1	8.6	18.5	35.8%
Other Income	7.9	9.7	5.7	11.0%
<b>Total Income</b>	<b>51.5</b>	<b>42.1</b>	<b>51.7</b>	<b>-</b>
Personnel Emoluments	40.0	51.9	53.2	71.5%
Other Expenses	16.9	19.0	21.2	28.5%
<b>Total Expenditure</b>	<b>56.9</b>	<b>70.9</b>	<b>74.4</b>	<b>-</b>
<b>Net Profit</b>	<b>(5.4)</b>	<b>(28.8)</b>	<b>(22.7)</b>	<b>-</b>

Source: Urban Development Authority Budget Report 2015, 2016, and 2017

Note: Consulting service includes consulting fee for client projects and architectural services

Note: Fee for Approval includes fee for planning approval and processing fees for COC

Apart from the recurrent budget, proposed and planned development projects are financed by the Ministry of Finance, other clients using their own funds, and loans of UDA. The capital expenditure budget depends on the upcoming and in progress projects. The requested budget in 2017 is Rs. 42.8 billion, out of which the total budget requested from UDA Central Province is Rs. 552.7 million which accounts for merely 1.3%.

**Table 3.1.8 Capital Expenditure Budget of UDA (Rs. In million)**

Item	2015	2016	2017	Central Province
Treasury Grants	1,158.0	1,500.0	1,000.0	19.8%
Other Clients	6,177.0	968.8	40.0	-
UDA	25,268.4	16,146.2	41,749.9	0.8%
<b>Total</b>	<b>32,603.4</b>	<b>18,607.0</b>	<b>42,789.9</b>	<b>1.3%</b>

Source: Urban Development Authority Budget Report 2015, 2016, and 2017

## 2) Kandy District Secretariat

The budget of the District Secretariat (DS) comes from each line ministry according to the annual activities of the Kandy District Secretariat.

The recurrent expenditure in 2015 was Rs. 923.3 million, which showed a decrease from the previous year. The main expenditure, including Personal Emoluments, accounted for 80.9%, while Acquisition of Capital Assets accounted for 10.0%.

**Table 3.1.9 Recurrent Expenditure of Kandy DS (in Rs. million)**

Item	2014	%	2015	%
Personal Emoluments	989.3	86.4	747.0	80.9
Other Charges	77.5	6.8	73.3	7.9
<b>Total Recurrent Expenditure</b>	<b>1,066.8</b>		<b>820.3</b>	-
Improvement of Capital Assets	9.6	0.8	9.5	1.0
Acquisition of Capital Assets	67.2	5.9	92.5	10.0
Human Resources Development	1.2	0.1	1.0	0.1
<b>Total Capital Expenditure</b>	<b>78.0</b>	-	<b>103.0</b>	-
<b>Total Expenditure</b>	<b>1,144.8</b>	-	<b>923.3</b>	-

Source: Kandy District Secretariat Performance Report 2014, 2015

Note: Capital Assets include buildings and structures, plant, machinery and equipment

Aside from the expenditures for operational activities, the Kandy District Secretariat is provided with grants for the number of projects carried out each year. The total project budget in 2015 was Rs. 5.7 billion, out of which the Grant for Capital from the Ministry of Home Affairs and Ministry of Housing & Construction were the highest at Rs. 1.5 billion and Rs. 1.2 billion, respectively. As for the Grant for Recurrent Expenditure, the Ministry of Social Empowerment & Welfare<sup>1</sup> and the Ministry of National Policies & Economic Affairs are the main contributors. Some Revenue Collection activities are being conducted by Kandy DS, which amounted to Rs. 251.1 million in 2015. The sources included motor traffic revenue (i.e. driving test, driving license, etc.) which accounted for 36% of the revenue, and various registration fees which accounted for 15%, etc.

**Table 3.1.10 Project Budget of Kandy DS (Rs. In million)**

Item	2014	2015
Grant for Capital	2,528.6	2,708.6
Grant for Recurrent Expenditure	3,894.4	3,010.9
<b>Total Grant</b>	<b>6,427.0</b>	<b>5,719.5</b>
Revenue Collection	126.4	251.1

Source: Kandy District Secretariat Performance Report 2014, 2015

## 3) Kandy Municipal Council

The revenue of KMC is largely from its own activities which accounts for around 80-90% of the total revenue, and the rest is from the budget allocated from the central government.

The recurrent revenue of KMC in the 2017 budget is Rs.3,348 million which is twice the revenue in the 2013 budget. Particularly, the Capital Grants grew significantly from 2013 to 2017 in order to cover the growing Capital Expenditure, most of which is expenditure for development and improvement of roads, drainage, community facilities, etc.

<sup>1</sup> This Ministry was reorganized into the Ministry of Empowerment and Social Welfare and Kandyan Development in 2017.

**Table 3.1.11 Recurrent Revenue & Expenditure of KMC (Rs. in million)**

Item	2013	%	2017	%
Recurrent Revenue	1,624.6	94.3%	2,592.4	77.4%
Capital Grants	98.0	5.7%	755.8	22.6%
<b>Total Income</b>	<b>1,722.6</b>		<b>3,348.2</b>	
Recurrent Expenditures	1,474.6	85.6%	1,871.3	55.9%
Capital Expenditures	219.0	12.7%	1,445.7	43.2%
Other Expenditures (Loans)	29.0	1.7%	31.1	0.9%
<b>Total Expenditure</b>	<b>1,722.6</b>		<b>3,348.1</b>	

Source: Kandy Municipal Council Budget Report 2013, 2017

The breakdown of recurrent revenue is shown in the table below. The recurrent revenue in 2017 amounts to Rs. 3,348.2 million which is almost double compared to 2013 figure, mainly due to a significant increase of Capital Grants. Main revenue sources of KMC in 2017 are Assessment Tax, Water revenue, other revenues which include stamp duties from land transactions and reimbursement in association with salary payment and Capital Grants. The majority of recurrent expenditure consists of Personal Emoluments and Development Contributions which account for 30.6% and 50.5%, respectively.

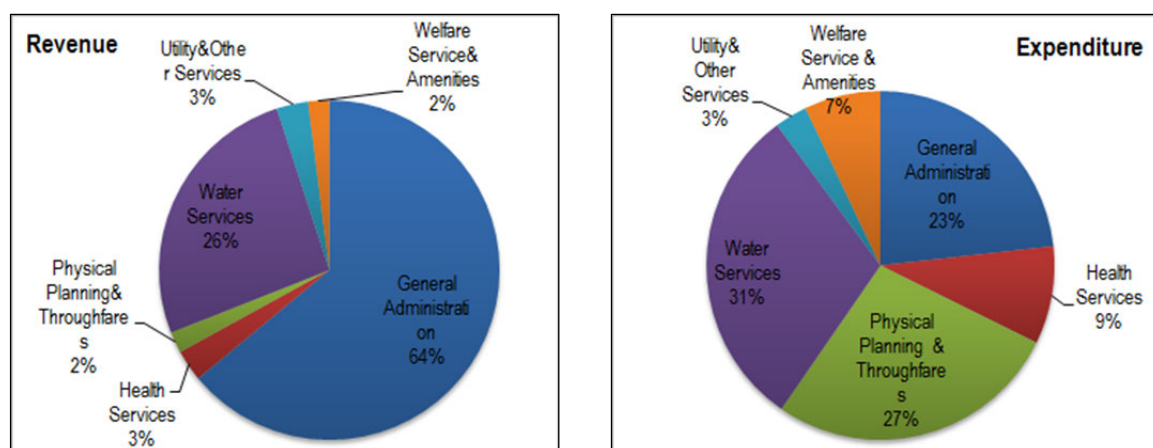
**Table 3.1.12 Breakdown on Recurrent Revenue of KMC (Rs. In million)**

Item	2013	%	2017	%
Assessment Tax	220.0	12.8	349.9	10.5
Water Revenue	418.6	24.3	469.4	14.0
Lease/Rent	64.3	3.7	116.2	3.5
Licence Fees & Utility Service	31.2	1.8	46.2	1.4
Service Charges	144.4	8.4	197.5	5.9
Warrant Costs	65.5	3.8	48.5	1.5
Other Revenue	118.5	6.9	348.2	10.4
Reimbursement	541.8	31.5	943.9	28.2
Internal Adjustments	20.7	1.2	73.0	2.2
Capital Grants	97.8	5.7	755.4	22.6
<b>Recurrent Revenue Total</b>	<b>1,722.6</b>	-	<b>3,348.2</b>	-
Personal Emoluments	657.0	38.1	1,025.9	30.6
Development Contribution	219.1	12.7	1,690.1	50.5
Power, Communication	370.4	21.5	359.9	10.8
Interest Payments	33.4	1.9	24.4	0.7
Contributions	219.1	12.7	67.3	2.0
Pensions	54.4	3.2	19.8	0.6
Maintenance of Capital Assets	75.3	4.4	60.3	1.8
Internal Adjustment	20.7	1.2	69.6	2.1
Payments of Loans	29.1	1.7	30.8	0.9
<b>Recurrent Expenditure Total</b>	<b>1,722.6</b>	-	<b>3,348.1</b>	-

Source: Kandy Municipal Council Budget Report 2013, 2017

Note: Development contribution includes the capital and maintenance expenditure.

Programme wise, budget shows that almost 90% of revenue is generated from two programmes namely, general administration and water services, having shares of 64% and 26%, respectively. The former programme is responsible for collection of tax revenue, provision of legal assistance, etc., and the latter for collecting water fees. In terms of expenditure, water services, physical planning and thoroughfares, and general administration consist of 31%, 27%, and 23%, respectively. Those programmes require larger budget for the development and maintenance of infrastructures and personal emoluments.



Source: Kandy Municipal Council Budget Report 2017

**Figure 3.1.1 Programme Wise Budget Summary of KMC (2017)**

#### 4) Other Local Authorities

The same as KMC, the revenue of other local authorities comes from recurrent revenue and capital grants allocated from the central government. However, the annual budget for the other 12 LAs are considerably small compared to KMC. Among 12 LAs, Kundasale PS and Gangawata Korale PS have the largest total income (recurrent revenue and capital grant) amount Rs. 127.71 million and Rs. 192.77 million, respectively. These amounts account for 6-7% of the total income of KMC, and those of the other LAs between 2-4%.

**Table 3.1.13 Recurrent Revenue & Expenditure of Other LAs (1) (Rs. in million)**

Item	Wattegama UC	Kadugannawa UC	Thumpane PS	Poojapitiya PS
Recurrent Revenue	63.08	55.47	53.97	60.25
Capital Grants	-	12.01	1.00	49.73
<b>Total Income</b>	<b>63.08</b>	<b>67.48</b>	<b>54.97</b>	<b>109.98</b>
Recurrent Expenditures	55.49	50.40	50.42	49.52
Capital Expenditures	7.59	17.05	4.55	49.73
Other Expenditures (Loans)	-	-	-	-
<b>Total Expenditure</b>	<b>63.08</b>	<b>67.45</b>	<b>54.97</b>	<b>99.35</b>

Source: Budget Report 2017 from each LA

**Table 3.1.14 Recurrent Revenue & Expenditure of Other LAs (2) (Rs. in million)**

Item	Akurana PS	Pathadumbara PS	Kundasale PS	Gangawata Korale PS
Recurrent Revenue	63.29	81.91	127.71	91.82
Capital Grants	30.00	26.70	116.00	100.95
<b>Total Income</b>	<b>66.29</b>	<b>108.61</b>	<b>243.71</b>	<b>192.77</b>
Recurrent Expenditures	54.63	64.70	86.44	68.93
Capital Expenditures	11.66	43.90	157.27	32.97
Other Expenditures (Loans)	-	-	-	-
<b>Total Expenditure</b>	<b>66.29</b>	<b>108.60</b>	<b>243.71</b>	<b>101.90</b>

Source: Budget Report 2017 from each LA

**Table 3.1.15 Recurrent Revenue & Expenditure of Other LAs (3) (Rs. in million)**

Item	Harispaththuwa PS	Yatinuwara PS	Udunuwara PS	Pathahewaheta PS
Recurrent Revenue	100.11	99.87	38.54	81.29
Capital Grants	23.94	10.10	52.62	-
<b>Total Income</b>	<b>124.06</b>	<b>109.97</b>	<b>91.61</b>	<b>81.29</b>
Recurrent Expenditures	69.23	63.19	85.44	58.96
Capital Expenditures	51.09	46.77	223.11	-
Other Expenditures (Loans)	-	-	-	35.00
<b>Total Expenditure</b>	<b>120.32</b>	<b>109.97</b>	<b>108.55</b>	<b>93.96</b>

Source: Budget Report 2017 from each LA



## 3.2 National Physical Plan

### 3.2.1 National Physical Plan 2030 (approved)

The National Physical Plan (NPP) 2030 was authorised and gazetted in 1729/15 on 11 October 2011 as per the Town and Country Planning (Amendment) Act (No. 49 of 2000).

The NPP provides a broad framework to secure Sri Lanka's place in the global economy by promoting economic growth. It is a strategic document that outlines a vision for Sri Lanka in 2030. Its role is to promote and regulate the integrated planning of economic, social, physical and environmental aspects of land in Sri Lanka. Another important function of the NPP is to bring the Government, stakeholders and the community together to discuss, review and then make decisions to guide the future of Sri Lanka's economy, environment and communities. The following development principles are stated for the various sectors in the country.

**Table 3.2.1 Development Policy of National Projects proposed in NPP 2030**

Sector	Principles
Cities and settlements	<ul style="list-style-type: none"> <li>• Regulate development in the Protected Area Network</li> <li>• Protect and retain land with environmental values</li> <li>• Create new cities and settlements and encourage an outward movement of population and plantations from the Protected Area Network (PAN) and Central Fragile Area (CFA).</li> </ul>
Infrastructure facilities	<ul style="list-style-type: none"> <li>• Develop bus networks to improve inter-city and intra-city connections</li> <li>• Upgrade and extend the railway network for passenger travel and freight</li> <li>• Maintain and rehabilitate the existing road network and construct regional highways to urban regional centres</li> <li>• Develop regional and international ports and support infrastructure to reinforce sea-based economic gateways to Sri Lanka</li> <li>• Improve domestic and international aviation linkages for passenger transport and expand capacity for air-based cargo transport</li> </ul>
Power & Energy	<ul style="list-style-type: none"> <li>• Improve the availability and reliability of energy supply and encourage the development and use of renewable energy sources to reduce greenhouse emissions</li> </ul>
Water resources	<ul style="list-style-type: none"> <li>• Rehabilitation of all tanks including those inside the forest reserves</li> <li>• Creation of new tanks where appropriate including inside the forest reserves</li> <li>• Reforestation of fragile areas and in newly identified areas</li> <li>• Protect ground water sources and prevent them from becoming polluted by a) flood; b) pesticide/weedicide and fertiliser; and c) landslide and follow-up pollution</li> </ul>
Economic Development	<ul style="list-style-type: none"> <li>• Improve the global advantage of Sri Lanka</li> <li>• Improve agricultural productivity</li> <li>• Encourage industrial development within Metro Cities</li> <li>• Make optimum use of minerals and other non-agricultural resources</li> <li>• Expand the tourist sector</li> <li>• Encourage the sustainable use of offshore resources</li> <li>• Expand the fishery sector</li> </ul>

Source: National Physical Plan 2030

As a guideline for the GKUP, the NPP 2030 clearly states environmental aspects in the Central Region where Greater Kandy Area is located, as below. Accordingly, the GKUP shall be formulated in this line.

*“The Central Fragile Region” has been included in the Protected Area Network to establish its importance in conserving the water resources of the country. In this area, selected towns will continue to exist but their development and expansion will be controlled and restricted.”*



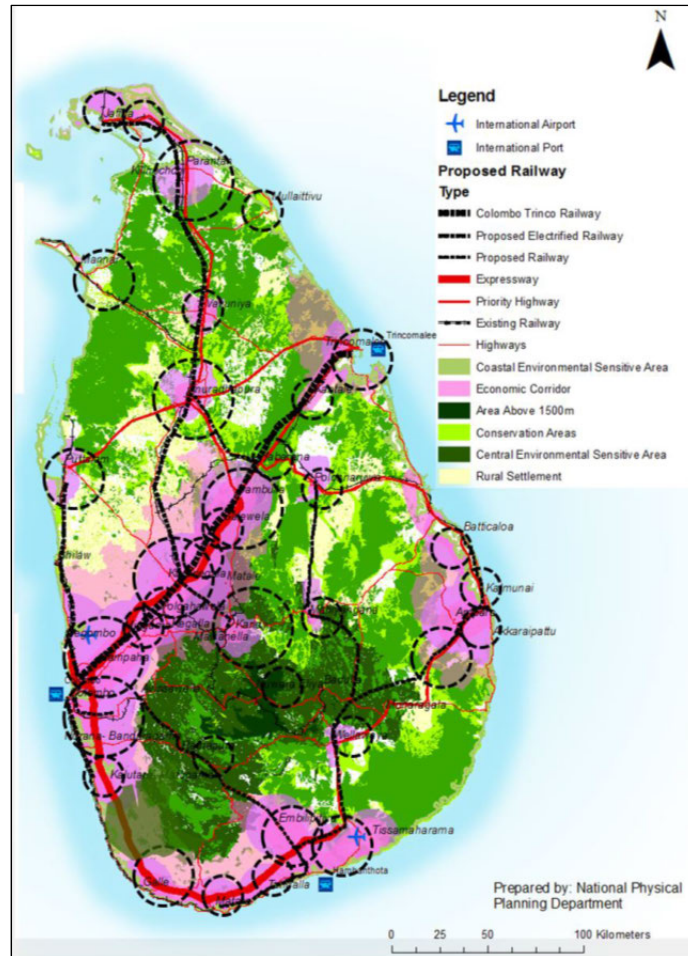
Source: National Physical Plan 2030

**Figure 3.2.1 National Physical Structure Plan – 2030**

### 3.2.2 National Physical Plan 2050 (under revision)

After the new administration began in 2016, the NPP has been revised with the target year of 2050 from 2030. The new NPP is still under the process of revision. A draft development plan proposes four urban corridors, namely: Northern Corridor, Cross Country Urban Corridor, Eastern Urban Corridor, and Southern Urban Corridor, as shown in Figure 3.2.2 GKUP Area is not directly included in the corridors, but is close to the Cross Country Urban Corridor which runs through Colombo to Trincomalee on the eastern coast via Kurunegala, which is accessible by National Road A10 through Galagedara and Kundasale from Kandy.

The NPP 2050 is still in the approval process and must be approved by the following organisations in order, namely: the Inter-Ministerial Committee, the National Planning Committee, the Cabinet Sub-Committee and the Cabinet. After approval by the Cabinet, it shall be submitted to the Parliament and officially legalised and then gazetted.



Source: National Physical Plan 2050 (draft)

**Figure 3.2.2 Urban Corridors in NPP 2050 (draft)**

### 3.3 Existing Plans for Greater Kandy Area

#### 3.3.1 Comparison of Existing Plans

There are some existing development plans which should be studied for the GKUP. In this section, the following existing plans are reviewed briefly. Do note that none of them are officially approved as a statutory plan.

- Greater Kandy Development Plan 2020 by UDA Central Province Office, 2008
- Kandy City Region Strategic Development Plan 2030 by Strategic Cities Development Project (SCDP), MMWD, 2015
- Greater Kandy Development Plan by UDA, 2015

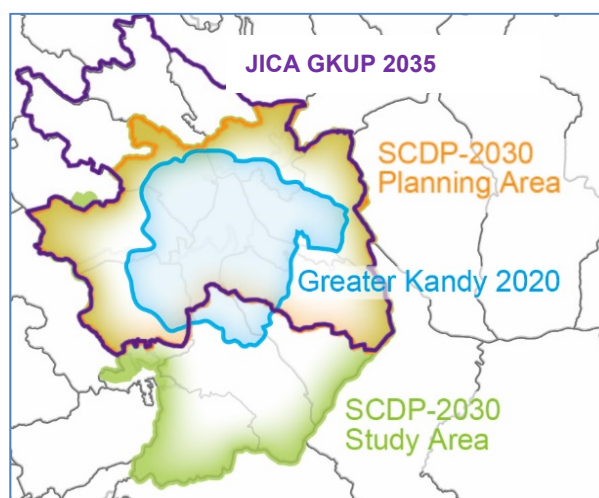
The table below summarises the coverage of the existing plans.

**Table 3.3.1 Comparison of the Plans**

	GKUP 2035	Greater Kandy 2020	Strategic Cities Development Plan 2030
	JICA	UDA Kandy	SCDP
Target year	2035	2020	2030
Area (Km <sup>2</sup> )	608	273	464
Population (2012 Census)	896,606	454,775	742,260
Thumpane DSD	O	-	-
Pujapitiya DSD	O	-	-
Akurana DSD	O	-	-
Pathadumbara DSD	O	△	O
Kundasale DSD	O	△	O
Gangawata Korale DSD	O	△	O
Harispaththuwa DSD	O	△	O
Yatinuwara DSD	O	△	O
Udunuwara DSD	O	△	O
Pathahewaheta DSD	O	△	O
Udapalatha DSD	-	△	-

Note: O: whole local authority (LA) area, △ : part of LA area

Source: The JICA Team



Source: The JICA Team

**Figure 3.3.1 Planning Areas of the Regional Plans**

### 3.3.2 Greater Kandy Development Plan 2020 by UDA

Greater Kandy Development Plan 2020 was formulated by the UDA Central Province Office in 2008. The plan was formulated to address eminent urban issues, especially congestion in the urbanised area.

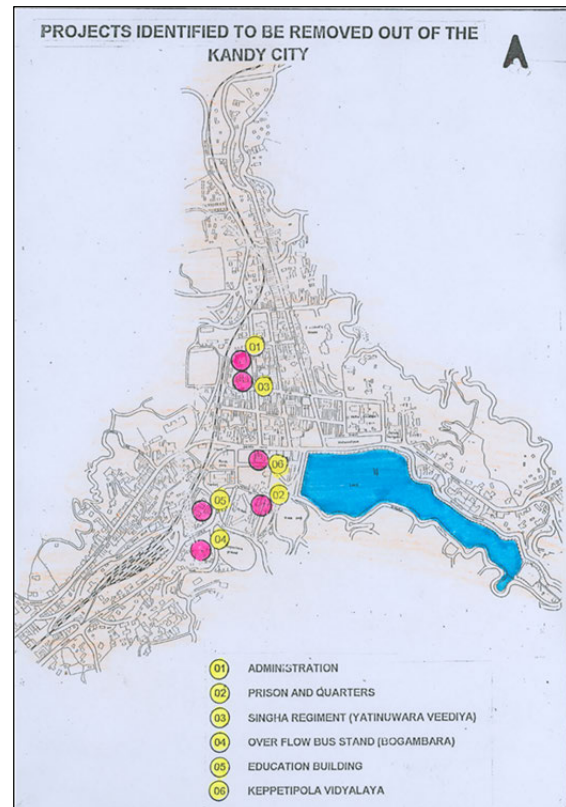
The urban issues could not be solved by considering Kandy Municipality alone, but required an integrated regional plan including the influence areas surrounding Kandy. The plan covers part of Pathadumbara DSD, Kundasale DSD, Gangawata Korale DSD, Harispaththuwa DSD, Yatinuwara DSD, Udunuwara DSD, Pathahewaheta DSD, and Udapalatha DSD, with an area of 273 km<sup>2</sup>.

#### (1) Planning Issues

The plan recognized the importance of Greater Kandy Development Plan 2020, as “Kandy Town to be developed as a World Heritage Town.” The plan aimed to address the overcrowding of Kandy town. To curtail the over-crowdedness, the relocation of the following major urban facilities from the central area to outside Kandy MC has been proposed.

- Administrative Centre
- Educational Centres / Schools & Police Quarters etc.
- Hospitals – Private/Governments etc., channelling centres
- Army Camps within the town
- Bogambara Prison Complex & Quarters
- Overflow bus stand

Among them, the Central Provincial Office and Bogambara Prison Complex and Quarters have been moved to Pallekele, while others are yet to be relocated.



Source: Greater Kandy Development Plan 2020

**Figure 3.3.2 Facilities and Functions to be Relocated Outside KMC**

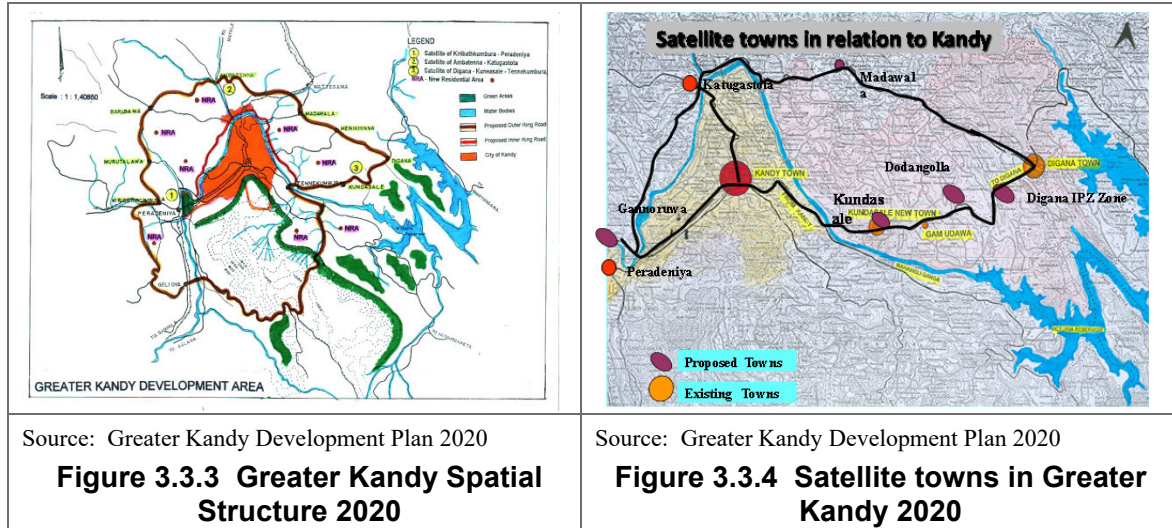
#### (2) Vision

The Plan’s vision is “To Provide New Residential Areas with All Comforts” with the following:

- Convenient transport
- Dynamic economy
- Quality lifestyle
- Sustainable environment

#### (3) Development Framework and Future Spatial Structure

The plan projected the future population of Kandy at 603,464 people in 2020 from 454,775 in 2001. To accommodate the future population and fulfil these visions, the plan proposed “Satellite Towns” in the Greater Kandy Area, linking with the proposed outer and proposed inner ring roads. These road “webs” encompass the city of Kandy and the new residential areas within the Greater Kandy Area.



**(4) Proposed Projects**

The Greater Kandy 2020 proposed various projects shown in Table 3.3.2 and Table 3.3.3

**Table 3.3.2 Projects Proposed in the Greater Kandy 2020**

Sector	Description
Satellite (new) town Development	Kundasale, Dodangolla, Peradeniya, Eriyagama, Gannoruwa, Digana
Infrastructure Facilities	Roads, Water, Electricity, Telecommunication
Social Infrastructure	Schools: (Muruthalawa, Penideniya, Hidagala, Gurudeniya, Dogangolla) Hospitals: (Dodangoda, Wattegama) Training centre: (Pallekele) Court complex: Ambakote Open spaces & recreational areas

Source: Greater Kandy Development Plan 2020

**Table 3.3.3 Proposed Projects by LA in Greater Kandy 2020**

LA	Term	Project
Kandy	Short-term	1.1 Stage II Byrd's Park Redevelopment
		1.2 Façade improvements in Kataragama Devale
		1.3 Landscape Projects
	Mid-term	2.1 Revitalization of Station Road (Relocation of existing shops to a pedestrian mall on top of Meda Ela)
		2.2 Development of Meda Ela
	Long-term	3.1 Cultural Complex at Bogambara Site
3.2 Proposed Lawyer's Complex		
3.3 Colombo-Kandy Express Road		
Gangawatta Korale	Short-term	1.1 Construction of Ampitiya Pradeshiya Sabha Building
		1.2 Landscaping of Road Side in Raja Mawatha
		1.3 Sunday School and Cultural Centre at Haragama
		1.4 Road Development (Meekanuwa to Tennekumbura)
	Mid-term	2.1 Road Widening (Gurudeniya – Pichcha Malwatta Road)
		2.2 Redevelopment of Gurudeniya Vidyalaya (playground, conference hall, agricultural centre, cultural centre and a lab)
		2.3 Children's Park & Recreational Centre at Hantana
		2.4 Industrial Estate Garment Factory
	Long-term	3.1 Eriyagama New Town Development – Stage II: (Overflow bus stand, residential, hardware and tire shops, road improvement)
		3.2 Development of towns (Ampitiya / Gurudeniya / Mahakanda)

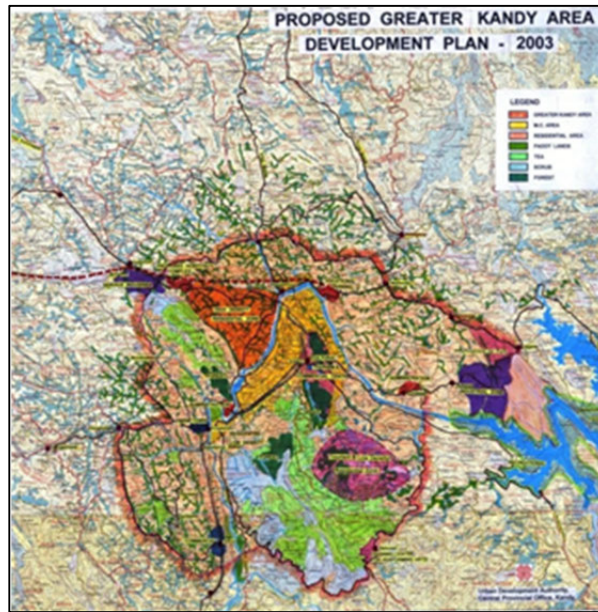
**THE PROJECT FOR FORMULATION OF GREATER KANDY URBAN PLAN**

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LA	Term	Project
		3.3 Development of Hospital at Mahakanda
		3.4 Widening of roads (A Grade) – Ampitiya – Thalathuoya
		3.5 Road Widening (Hantana – Uduwela) (on-going project)
		3.6 Bus Stand and Children’s Park at Haragama
		3.7 Development of Hindagala Viharaya
Kundasale	Short-term	1.1 Children’s Park at Digana
		1.2 Nila Sevana Housing Project
		1.3 Pradeshiya Sabha Building at Menikhinna
	Mid term	2.1 Public Ground at Digana
		2.2 Provincial Council Office at Pallekele
		2.3 Training Centre at Pallekele
		2.4 International Buddhist Centre
		2.5 Kundasale Town Development Project (Commercial Complex, Administrative, IT Park)
		2.6 Menikhinna Town Development
		2.7 Dodangolla Town Development (Bus Stand, Shopping Complex, Hospital, Recreational, Schools, IT Park, Domestic Air Port, Administrative, Cultural Centre)
	2.8 Town Hall & Shopping Complex – Digana	
	2.9 District Court at Ambakotte	
	Long-term	3.1 Pallekele Prison Development Project (Relocation of Bogambara)
3.2 New Railway Line from Nawayalatenna to Pallekele		
3.3 Highway Road Development from Kandy to Digana		
Yatinuwara	Short-term	1.1 Redevelopment of Road – Teldeniya-Kumbura
		2.1 Redevelopment of Road (Kandy-Pilimalatawa / Kandy-Colombo roads ) 4 lane
	Mid-term	2.2 Construction of Yatinuwara Pradeshiya Sabha Building
		2.3 Redevelopment of Pola at Danture
		2.4 Collecting minor crop centre
		2.5 Solid Waste Management
		2.6 Landscaping Kirimetiawatta
		2.7 Development of “Ayurveda” Hospital at Danture
		2.8 Development of Medical Centre at Giragama
		2.9 Development of Hospital at Murutalawa
		2.10 Development of Herbal Garden at Panabokka
		2.11 Development of “Farm State” at Ratmeewala
		2.12 Construction of a Children’s Park at Gannoruwa
		2.13 Construction of a drainage system
		2.14 Construction of Children’s Park & Playground at Poththapitiya
2.15 Construction of IT Centre		
Long-term	3.1 Eriyagama New Town Development (Stage I)	
	3.2 Construction of Parking Centre at Danture	
Harispattuwa	Mid-term	1.1 District Hospital Complex at Hedeniya
	Long-term	2.1 Secretariat Building at Nugawela
Pathadumbara	Mid-term	1.1 Vocational Training Centre at Polgolla
	Long-term	2.2 Proposed Kandy-Colombo Express Way
Udunuwara	Mid-term	1.1 Proposed Commercial Building and Conference Hall
Pathahewahetta	Mid-term	1.1 Tourism and Handicrafts Centre at Belwood
		1.2 Market Complex at Thalathuoya
		1.3 Peoples Bank Building – Deltota
	Long-term	2.1 Performing Arts Centre – Belwood

Notes: Short-term : 2008-2009; Mid-term: 2008-2010; Long-term: 2008-2015

(5) Proposed Greater Kandy Development Plan 2030



Source: Greater Kandy Development Plan 2020

Figure 3.3.5 Proposed Greater Kandy Development Plan

3.3.3 Kandy City Region Strategic Development Plan 2030 by SCDP

Kandy City Region Strategic Development Plan 2030 was formulated by SCDP, funded by the World Bank, in January 2015. The plan covers seven DSDs: Pathadumbara DSD, Kundasale DSD, Gangawata Korale DSD, Harispaththuwa DSD, Yatinuwara DSD, Udunuwara DSD, and Pathahewaheta DSD, which are all included in the GKUP planning area.

(1) Vision, Goals, and Objectives

Vision, goals and objectives of the Kandy City Region Strategic Development Plan 2030 are summarised as follows:

Table 3.3.4 Vision, Goals and Objectives of Kandy City Region Strategic Development Plan 2030

	Description
Vision:	The Kandy City Region (as physically defined) is to carry the image of: “the modern compact city of excellence in the serene mountainous region of Sri Lanka”.
Goals & Objectives:	<p><b>Goal 1:</b> Development that is predominantly compact and is confined to a defined area.</p> <p><b>Objective 1.1:</b> Two complementary urban corridors facilitated along the stretch from Pilimathalawa to Katugastota via Peradeniya, Kandy city centre, and Mahaiyawa, and the stretch from Thennekumbura to Digana via Kundasale, Pallekele and Digana, for high intensity developments. These two corridors will accommodate mixed residential, commercial and institutional developments with the strategic provision of necessary infrastructure and the lands for development.</p> <p><b>Objective 1.2:</b> Satellite Growth centres facilitated in the Peradeniya-Gannoruwa area, Katugastota and Pallekele with strategic attractions. The satellite centres are expected to promote attraction and growth in and around them with the development of major urban facilities such as the transport terminals, shopping centres, medical services and administrative units.</p> <p><b>Goal 2:</b> A moderate urban growth that complies with the growth scenarios specified by the National Physical Planning Policy 2030 of Sri Lanka</p> <p><b>Objective 2.1:</b> Accommodation of a total residential population of up to 600,000 by 2030 within the region, which will be distributed in locations identified in the following manner:</p> <p style="text-align: center;">Pilimathalawa - Peradeniya - Kandy corridor : 150,000</p>



	Description
	<p>Kandy - Katugastota corridor : 100,000 Thennekumbura - Kundasale - Digana corridor: 200,000 Surrounding region : 150,000 Total: 600,000</p> <p><b>Objective 2.2:</b> A new hierarchy of service and employment centres will be developed, with new attractions in the following manner: <u>Main Centres:</u> Peradeniya, Katugastota, Pallekele <u>Secondary Centres:</u> Kiribathkumbura, Pilimathalawa, Madawala, Menikhinna, Kundasale, Ampitiya, Digana The Main Centres will be developed competitively with the Kandy City Centre in terms of service provisions, shopping and employment opportunities for the residents in the region.</p> <p><b>Goal 3:</b> Preservation of the historically known pristine character of the Kandy City Region.</p> <p><b>Objective 3.1:</b> Compact building development with virtually identifiable Kandyan Style architecture with modern fusions promoted along the identified urban corridors and highly regulated low density developments in the lands outside the areas earmarked for the corridors. <b>Objective 3.2:</b> Restricted development in lands located above 550m from mean sea level and Regulated Development in the lands located adjacent to them at lower elevations. <b>Objective 3.3:</b> Preserved and restored hydro-eco systems in all locations of development.</p>

Source: Kandy City Region Strategic Development Plan 2030

## (2) Strategies

The strategies of the Kandy City Region Strategic Development Plan 2030 are summarised as follows:

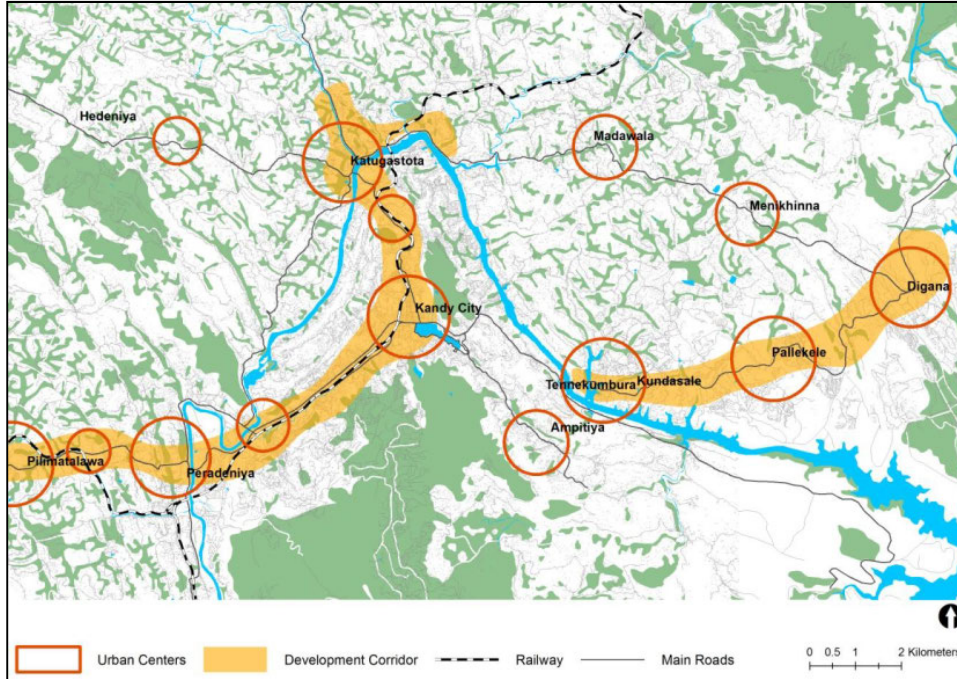
**Table 3.3.5 Strategies of the Kandy City Region Strategic Development Plan 2030**

Sector	Strategies
Spatial strategy	<p>Urban activities are predominantly concentrated in <u>two intensely built urban corridors</u> extending along the main arteries, and <u>a few isolated urban centres as follows:</u></p> <ul style="list-style-type: none"> <li>• <u>North-western Corridor:</u> Pilimathalawa to Katugastota, along Colombo-Kandy Road and Kandy-Katugastota Road including the city centre</li> <li>• <u>Eastern Corridor:</u> Thennekumbura to Digana along Kandy-Mahiyangana Road</li> </ul> <p>Main urban centres:</p> <ul style="list-style-type: none"> <li>• North-western corridor: Pilimathalawa, Peradeniya, Kandy City centre and Katugastota.</li> <li>• Eastern corridor: Kundasale, Pallekele and Digana.</li> </ul> <p>Independent secondary agglomerations:</p> <ul style="list-style-type: none"> <li>• Ampitiya, Madawala and Menikhinna, to serve as satellite service centres to the main development corridors.</li> </ul>
Main development zones	<p>The following are the three zones within the development corridors and the independent urban units: High-density Mixed Development Zone Medium Density Development Zone Green Preserved Zone</p>
Central Area of the City	<p>The central area of Kandy city is divided into three main zones based on the identifiable geographic, functional and land use characteristics. Detail Development Guide Plans (DGPs) are prepared for the three zones.</p> <p>Historic Core Area: the area often named as the “Grid City”, which is identified as the “<i>Historic Core area</i>”. Most of the remnants of British rule in Kandy are found within this sector of the City.</p> <p>Kandy Lake Zone: The area constituted by the Temple Complex along with the sacred area, the Kandy Lake and lands immediately abutting it, Sri Sangaraja Mawatha, Rajapihilla Mawatha, Louis Peiris Mawatha, and the eastern segment of the Dalada Veediya along with all premises accessible from these roads and the local roads connected thereto.</p> <p>Transition Zone: the area between the Kandy Lake and Suduhumpola Road, mainly accessible from William Gopallawa Mawatha, S W R D Bandaranayake Mawatha, Keppetipola Mawatha and the sub roads projecting from them.</p>
Peripheral centres	<p>Kadugastota, Peradeniya, and Pallekele, all of them will be developed into a mix of Service, Transport and Administrative Centres for the corridor, yet each of them will have the following proposed specialization: Katugastota - Transportation and Commercial Hub Peradeniya - Education and Health Hub Pallekele - Administrative Hub</p>

Source: Kandy City Region Strategic Development Plan 2030

**(3) Proposed Urban Spatial Structure**

For future developments, four different possibilities have been considered, including (a) business as usual, (b) outer ring-focused development, (c) corridor dominated development, and (d) outer ring with satellite developments. Among these, (c) corridor dominated development was recommended as the preferable structure based on the criteria of conformity with the geography, functional efficiency, economics of infrastructure and serviceability, effects on environmental systems, and sensitivity to socio-cultural context.



Source: Kandy City Region Strategic Development Plan 2030

**Figure 3.3.6 Corridor Dominated Development**

**(4) Proposed Projects**

In the Kandy City Region Strategic Development Plan 2030, projects shown in Table 3.3.6 have been proposed.

**Table 3.3.6 Proposed Action Projects of Kandy City Region Strategic Development Plan 2030**

Strategy and Project	Action Project
1. Proposed Transportation Management Strategy	Improvements to William Gopallawa Mawatha
	Improvements to Colombo- Kandy Road (A1)
	Improvements to Katugastota Road (A9)
	Improvements to Sri Sangaraja Mawatha and the construction of an aesthetically compatible bridge
	The development of Louis Peiris Mawatha
	Improvements to Kandy - Mahiyangana Road (A32)
	Alternative Road Link between Eriyagama and Gannoruwa
	Alternative Road Link between the Nittawela and Katugastota Railway station
2. Public Transportation Improvement Projects	Multimodal Transport Terminal at Kandy City Centre
	Establishment of Satellite Bus Terminal at Katugastota
	Establishment of Satellite Bus Terminal at Peradeniya
3. Railway Improvement Projects	Improvements to Railway from Kadugannawa to Katugastota
	Improvements to Railway Stations (Peradeniya and Katugastota)
4. Waterways and Drainage Improvement Projects	Kandy City Waste Water Management Project
	Kandy North Waste Water Management

	Kandy West Waste Water Management
	Kandy East Waste Water Management
	Restoration of Waterways
5. Restoration of Historic Characteristics of Kandy City Streets	Restoration of facades in the Historic Core area
	Arcade Formation in Historic Core Area
6. Parking Improvements at the City Centre	Part of the land occupied by Sinha Regiment of the Sri Lanka Army
	The space of Anagarika Dharmapala Mawatha between Tomlin Park and the Dharmaraja Junction
	The space in Sri Sangaraja Mawatha between Tomlin Park and the Children's Playground
	The area at the rear side of the market, which is currently underutilised
7. Pedestrian Facilities and Walkability Improvements	Extending the Raja Veediya up to the railway track to provide access into the parking area.
	Installation of traffic signal systems at the Yatinuwara Veediya, Kotugodella Veediya and D S Senanayake Veediya
	Redefining the high-security area of the Temple Complex.
	Establishment of missing pedestrian links between the Lake Round Zone and the Suduhumpola area via the Municipal Market and the proposed Transport Terminal; the Historic Quarter and the Transport Terminal
	Redevelopment of the open extended market space (with sheds) with a paved, walkable area
	Linking the Police Barracks premises with the proposed Transport terminal with an overhead pedestrian bridge across William Gopallawa Mawatha and the railway line
	Extending the market space into the Keppetipola rest area occupying the space of Keppetipola Mawatha
	Redesigning and developing the forecourt of the market building with a landscape and restricted for parking environment
	Open up and Redevelopment of Meda Ela between Lamagaraya Road and the Good Shed bus stand
8. Urban Centre Developments	Redevelopment of Tomlin Park premises into a two-story building complex
	Adaptive reuse of the Bogambara prison complex
	Extending the existing Municipal Market Building to facilitate more business activities with more pedestrian links provided to other public spaces
9. Peripheral Centres Developments	Katugastota Town Development
	Peradeniya - Eriyagama Town Improvement
	Pilimathalawa Town Development
	Kundasale Town Development
	Digana Town Development
	Ampitiya, Madawala and Menikhinna Town Developments

Source: Kandy City Region Strategic Development Plan 2030

### 3.3.4 Greater Kandy Master Plan by UDA

This plan was prepared by the UDA in January 2015 based on the above two existing plans. This plan does not have a specific target year nor planning area but summarises planning issues, goals, strategies, and project ideas.

#### (1) Planning Issues

Issues addressed in this plan are land use, transport, town identity and environment summarised as follows:

**Table 3.3.7 Urban Issues addressed in the Greater Kandy Master Plan**

Issues	Description
Urban sprawl and ribbon development is out of control	<ul style="list-style-type: none"> <li>Urban sprawl, especially along main road corridors, is causing a range of urban issues;</li> <li>Highest concentration from Peradeniya to Katugastota; and</li> <li>Emerging development pressure due to linear development along Kundasale-Digana corridor</li> </ul>
Traffic problems	<ul style="list-style-type: none"> <li>Traffic flow concentration into the city along three primary axes</li> <li>Insufficient bus transportation system</li> <li>Severe traffic congestion in the City, and</li> <li>underutilized railway system</li> </ul>
Issues regarding town identities	<ul style="list-style-type: none"> <li>Neglected heritages in the World Heritage City of Kandyan heritages, losing towns' characteristics and identities.</li> </ul>
Environmental issues	<ul style="list-style-type: none"> <li>Landslide risk as a result of uncontrolled sprawl;</li> <li>Diminishing green space as a result of low density sprawl;</li> <li>Inadequate infrastructure and services; and</li> <li>Air pollution caused by traffic congestion</li> </ul>

Source: Greater Kandy Master Plan

## (2) Goals

To address these issues, the plan states the following four goals:

### **Goal 1: Formulate a long-term vision for the greater Kandy region that is:**

- responsive to the unique conditions of the city; and
- developed in collaboration with a wide range of stakeholders.

### **Goal 2: Set up a framework to guide and manage the growth of the city**

- to ensure that development is socially, environmentally and economically sustainable.

### **Goal 3: Stimulate economic development of Kandy**

### **Goal 4: Uplift the lives of the people of Kandy**

## (3) Strategies

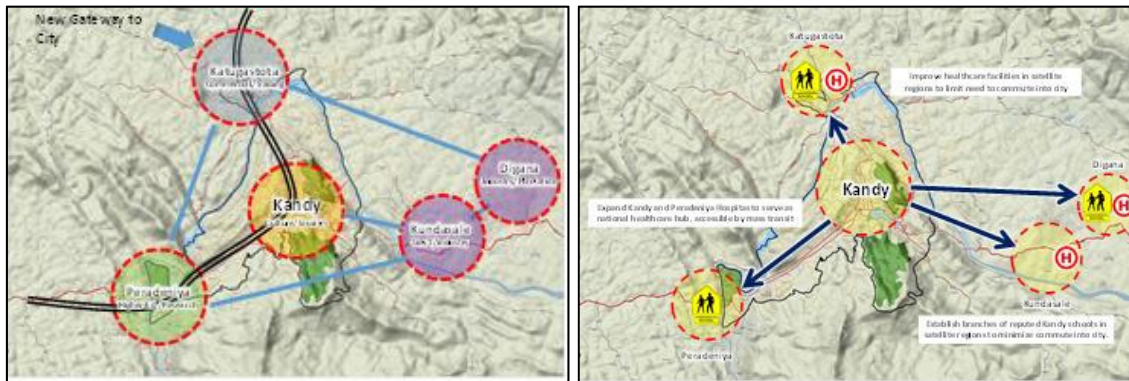
And the following five development Strategies are envisaged in the Plan:

- Organise structure: Region to be structured into four clusters
- Decongest the city: Enable a shift from private to public transport
- Densify land use/ Housing: Enable development of new high-density housing along transit routes
- Reclaim heritage: Restore and adapt historical buildings for modern requirements
- Improve liveability: Parks and open spaces, new schools, improved healthcare facilities, improved infrastructure

### **1) Strategy 1: Organise structure**

Greater Kandy region to be structured into four clusters:

City	Cluster	Strategies
Grid city and vicinity:	Cultural/tourism cluster	
Peradeniya:	Higher education/ research cluster	Expand Kandy and Peradeniya Hospitals to serve as national healthcare hub, accessible by mass transit
Katugastota	Commercial/trading cluster	Improve healthcare facilities in satellite regions to limit need to commute into city
Kundasale to Digana	Manufacturing and Plantations	Establish branches of the well-reputed Kandy schools in satellite regions to minimise commute into city



Source: Greater Kandy Master Plan

**Figure 3.3.7 Development Concept- four (4) Concentrated Activity Clusters**

## 2) Strategy 2: Decongest the City

To facilitate decongestion of the city by enabling a shift from private transport to public transport, and others, the following strategies are stated in the plan:

### (a) Rail transport improvement

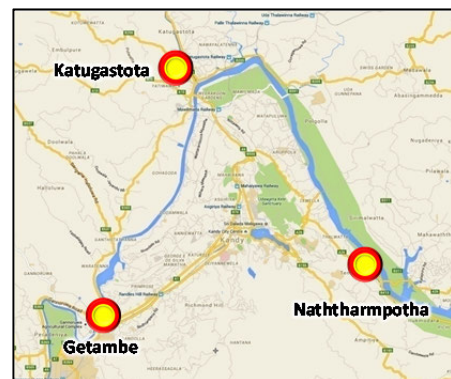
- Existing railway tracks can serve the city efficiently
- Railway upgrading investments:
  - Double track rail corridor: Katugastota - Peradeniya highest priority
  - Improve service quality: air-conditioned power sets and railbuses, higher frequency
  - Upgrade railway stations: improve facilities and linkage to city. Move some stations.
  - Future expansion: Peradeniya-Kadugannawa; Katugastota-Wattegama

### (b) Bus transport improvements: Improve the bus service: satellite terminals & improved routing

- Bus parking to be shifted out of Kandy city
- Planning for bus re-routing and scheduling in progress
- Electronic schedule management system to be introduced
- Land acquisition required for Getambe and Natharampothe

### (c) Multimodal hub at Kandy Station and Good Shed bus terminal

- Railway and bus systems to be integrated in one centralized multi-modal hub



Source: Greater Kandy Master Plan

**Figure 3.3.8 Satellite Bus Terminals**

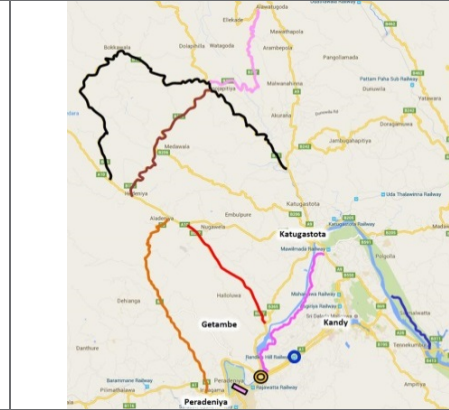
- Elevated pedestrian linkage directly to Kandy hospital and Peradeniya Rd
- Potential for integration of retail space, parking, and other uses

**(d) Junction improvements and pedestrian underpasses**

**(e) Road and junction improvements**



Source: Greater Kandy Master Plan  
**Figure 3.3.9 Short-term Road Improvement**



Source: Greater Kandy Master Plan  
**Figure 3.3.10 Medium-term Road Improvement**

**(f) Parking development**

**(g) Congestion pricing:**

- Congestion pricing is one of the best ways to reduce traffic in the city and encourage public transit. This is recommended in the Kandy Transport Study

**3) Strategy 3: Densify Land Use**

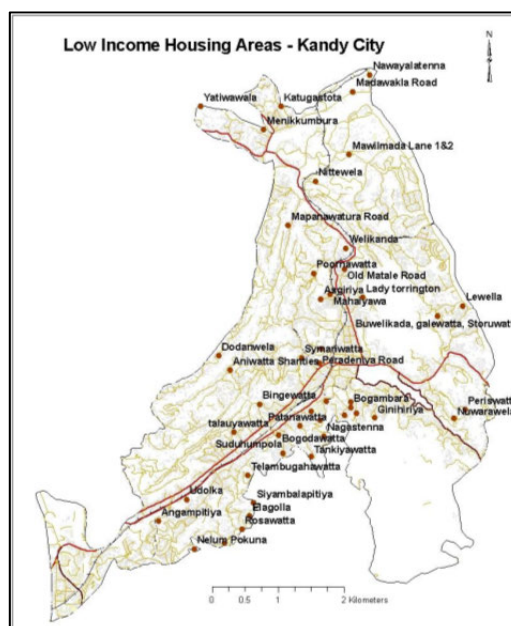
- Develop new, well planned high-density housing precincts accessible by improved rail corridor. The proposed clusters are as follows:
  - Cluster 1 : Near Mahaiyawa tunnel along the Main road
  - Cluster 2 : Near Nithhwela tunnel in Katugastota
  - Cluster 3 : Mawilmada (Proposed to shift the Railway station to near this site)
  - Cluster 4 : Near Katugastota Railway Station
  - Cluster 5 : William Gopallawa Mawatha
  - Cluster 6 : Agricultural Lands along the Gannoruwa Road
  - Cluster 7 : Near the Peradeniya Junction Railway Station
  - Cluster 8 : Elugoda, along the Railway track

**4) Strategy 4: Reclaim Heritage:**

- Realize the potential of Kandy's heritage as a tourism driver
  - Urban design plan and specific guidelines for heritage city area
  - Restore streetscapes and make city pedestrian friendly
  - Programme for restoration of privately owned heritage buildings
  - Restore and adapt landmark heritage buildings for modern uses
  - Raise awareness and promote historical sites

### 5) Strategy 5: Improve Liveability

- Develop infrastructure and open spaces that will improve the quality of life for all citizens in Kandy
  - parks, open spaces & recreation areas: capitalize on water front, and urban parks
  - low income housing settlements: 3,600 families in 48 settlements
  - infrastructure: wastewater management, water supply, solid waste management
  - Industrial estates for SMEs: along Kundasale-Digana corridor
  - Air quality monitoring and improvement



Source: Greater Kandy Development Plan

**Figure 3.3.11 Low Income Housing Area in Kandy MC**

### 3.3.5 Transport Plans and Projects by SCDP

Since 2014, SCDP has worked for transport plans and projects as summarised in Table 3.3.8.

At present, SCDP mainly focuses on implementation of priority projects in KMC, especially in the Heritage Area, including: (a) Traffic Improvements (Public Transport Improvements), (b) Traffic and Parking Management and Roads Rehabilitation), (c) Water Supply Augmentation, (d) Drainage Rehabilitation, and (e) Urban Upgrading and Capacity Building.

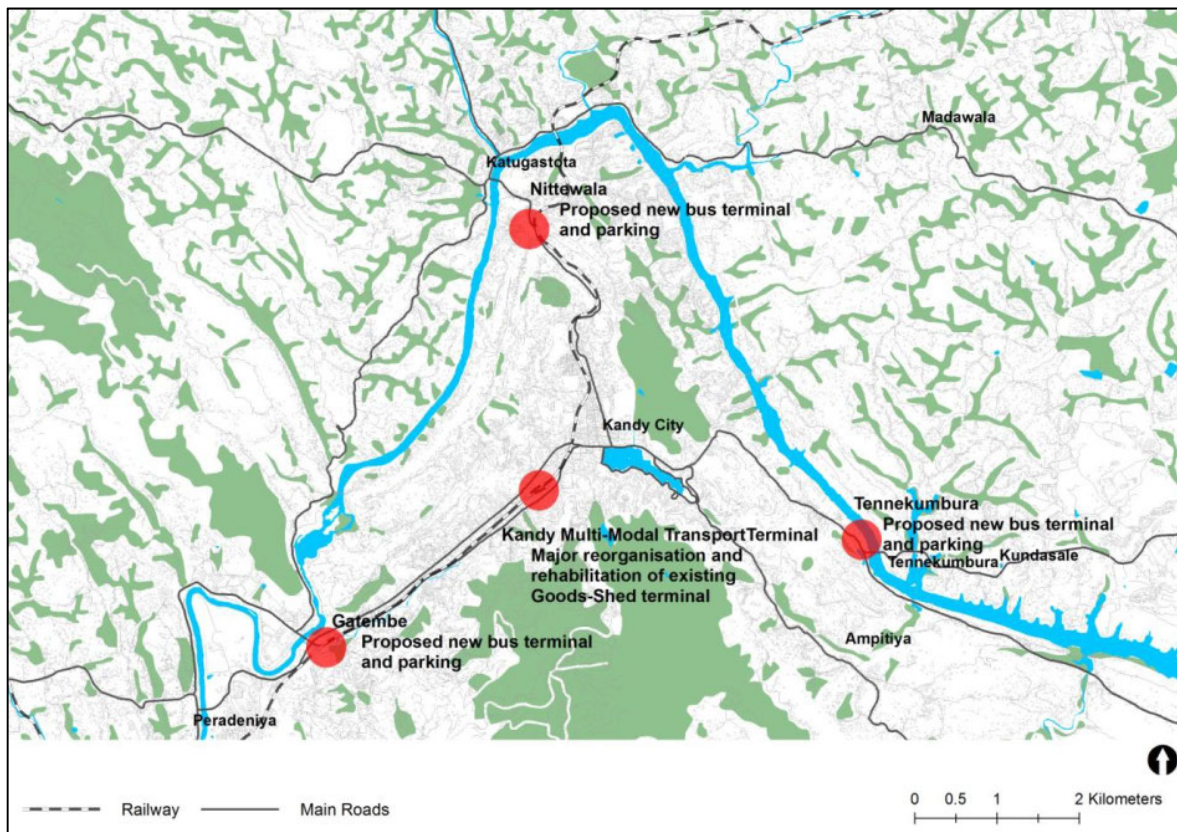
**Table 3.3.8 Transport Plans and Projects by SCDP**

Title of Plan/ Project	Period, Consultant	Main Contents
Kandy Transport Improvement Program (KTIP)	May 2014 University of Moratuwa & Uni Consultancy Services	It is aimed to identify projects in KMC including the following subcomponents: (a) public transport improvements, (b) traffic and parking management, (c) enhanced and safer pedestrian movements, and (d) strategic road improvements.
Kandy City Region Strategic Development Plan – 2030	January 2015 Uni Consultancy Services & University of Moratuwa	It is aimed to prepare a Strategic Development Plan for the Kandy City Region (including KMC, Peradeniya, Katugastota and Digana) and to create the Development Guide Plans for critical development zones / districts under the SCDP. This plan also aims to formulate Strategic Action Projects (SAP) for relieving traffic congestion and upgrading downtown services and liveability to improve and sustain the World Heritage City of Kandy.
Public Transport Design and Operations Management and Strategic Traffic Demand Management & Design Plan for Kandy – Integrated Strategic Public Transport Plan	July 2016 Univ. of Moratuwa & Uni Consultancy Services	It is aimed to (a) develop a public transport design and operations management plan for Kandy, including substantial regional and inter-regional bus services, and (b) develop a strategic traffic demand management plan and required detailed design. Main interventions are bus routing & management, design of Kandy Multimodal Transit Terminal (KMTT), and terminal operating systems.

Title of Plan/ Project	Period, Consultant	Main Contents
Public Transport Design and Operations Management and Strategic Traffic Demand Management & Design Plan for the City of Kandy, Sri Lanka – Strategic Traffic Management and Traffic Circulation Plan Report for Kandy CBD	June 2016 DIMTS & Uni Consultancy Services	It is aimed to design an Integrated Strategic Public Transport Plan (ISPT) for Kandy, including the following tasks: (a) Integrated strategic plan for public transport design, operation and management, (b) Develop ToR, concept design and bid documents for Kandy Multi-Modal Transit Terminal (KMTT), peripheral termini and railway stations, (c) Detailed designs for peripheral terminal and railway station development, and (d) Prepare Request for Proposal (RFP) & ToR for detailed design and supervision contract of KMTT and Terminal Operating System (TOS) procurement, installation and supervision.

Source: Strategic Cities Development Project

As for public transport improvement, one of the major projects is the Kandy Multimodal Transit Terminal (KMTT) at Good Shed (present bus terminal). The detailed design project will be launched soon. Originally, it was proposed to construct 3 satellite bus terminals at Gatambe/Peradeniya, Katugastota and Tennekumbura or Digana, where regional buses originate and terminate at these satellite terminals to avoid overflow parking in the city (see Figure 3.3.12). Until now, satellite bus terminal projects have not been materialised.



Source: Kandy City Region Strategic Development Plan 2030

**Figure 3.3.12 Proposed Locations for Central and Peripheral Bus Terminals by SCDP**

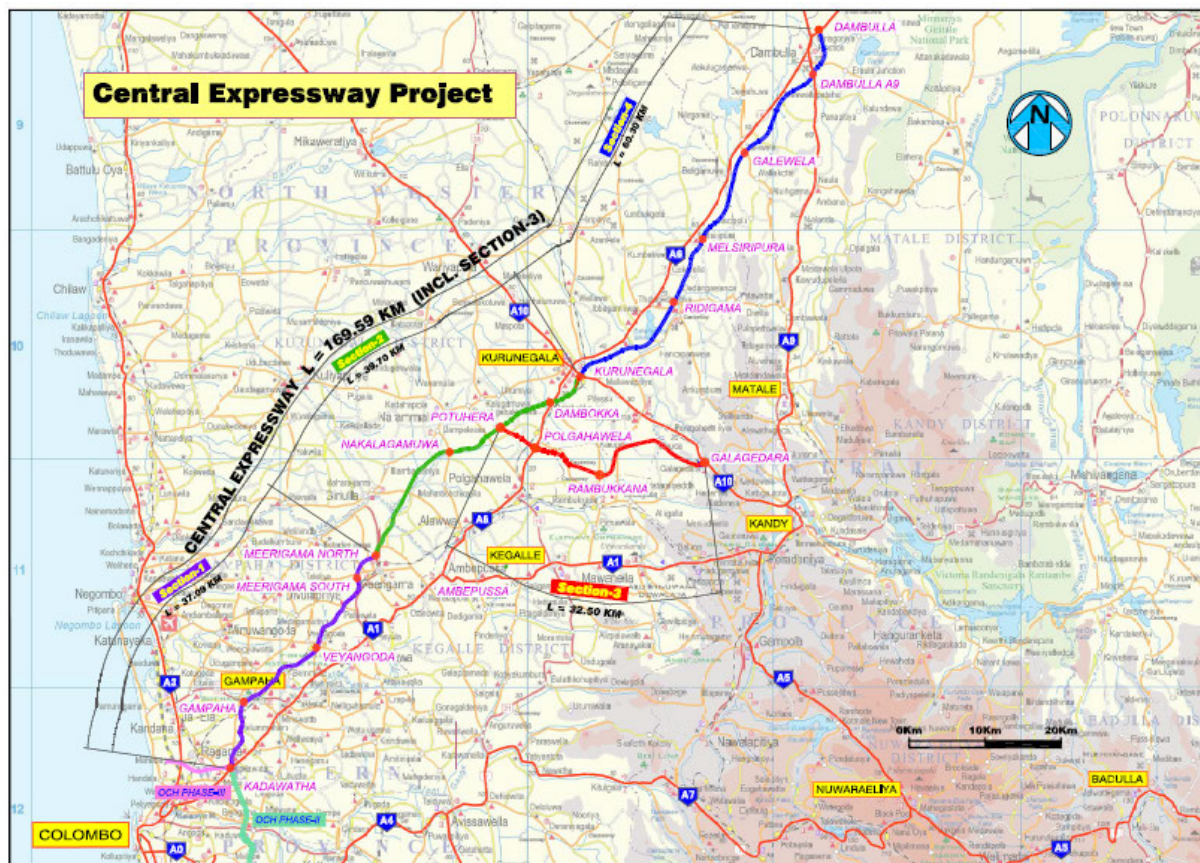


### 3.3.6 Central Expressway Project by RDA

The Central Expressway Project has been commenced by RDA (see Figure 3.3.13). The status of each section is as follows:

- Section 1: Gampaha – Mirigama (under construction)
- Section 2: Mirigama – Kurunegala (planned)
- Section 3: Kurunegala – Galagedara (planned, not toll road)

If the Central Expressway is connected to Galagedara, which is located north-west of Greater Kandy Area, travel time from Colombo to Kandy city centre using the Expressway passing through Katugastota from north will be shorter than that using A1 passing through Peradeniya from south-west.



Source: RDA

Figure 3.3.13 Central Expressway Project Map

### 3.3.7 Double Track Railway Project by Sri Lanka Railways and Ministry of Transport and Civil Aviation

The National Railway is operated by the Department of Sri Lanka Railways (SLR). In the section between Peradeniya to Katugastota, there are 5 hospitals, 19 schools, 14 government offices and other major establishments exist along railway. While buses take 30 min from Peradeniya to Kandy (4 km) and 35 min from Katugastota to Kandy (5.5 km), the train takes only 15 min.

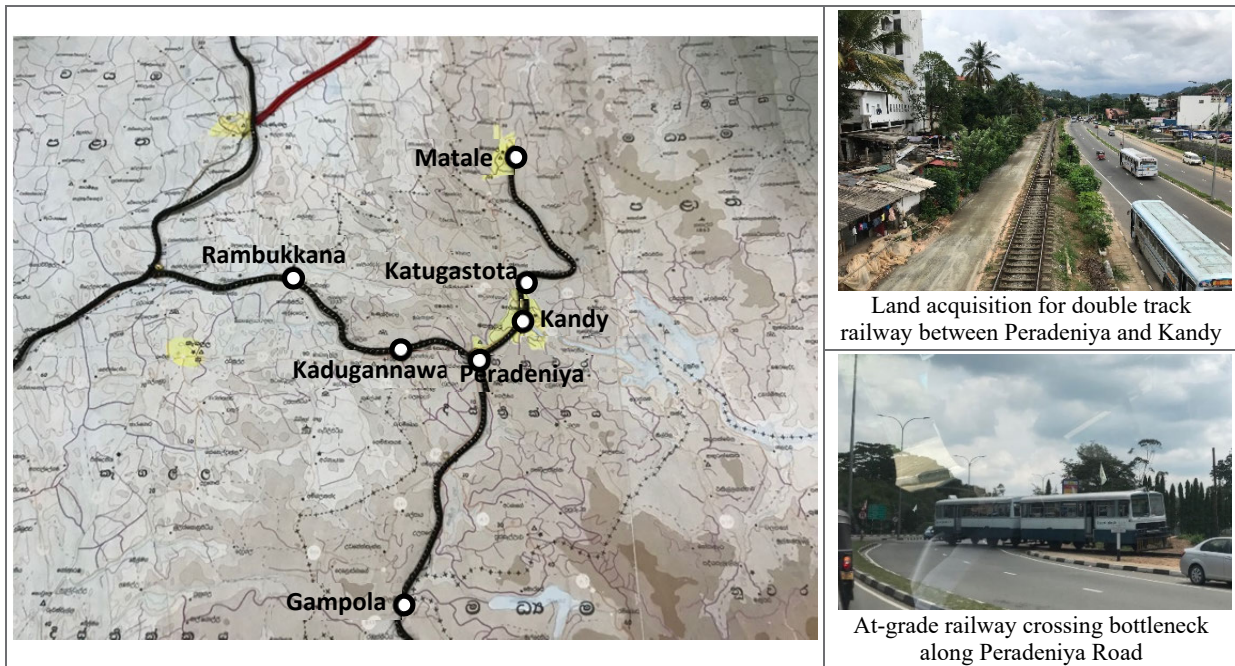
To connect the five economic and administrative centres – Peradeniya, Kandy, Katugastota, Digana and Kundasale – by rail efficiently, the following studies will be commenced by the Ministry of Transport and Civil Aviation (MOT) (see Figure 3.3.14).

- Double tracking from Kadugannawa to Katugastota

- Rehabilitate the section from Katugastota to Matale
- Rehabilitate and/ or double track the section from Peradeniya Junction to Gampola
- Prefeasibility study to explore the possibility of increasing traffic capacity in the gradient section from Rambukkana to Kadugannawa

Among them, SLR has started implementing the double tracking between Peradeniya to Kandy.

A railway bus was operated during peak hour as a trial by SLR, but it was not officially operated since it causes road traffic congestion at intersections.



Source: MOT

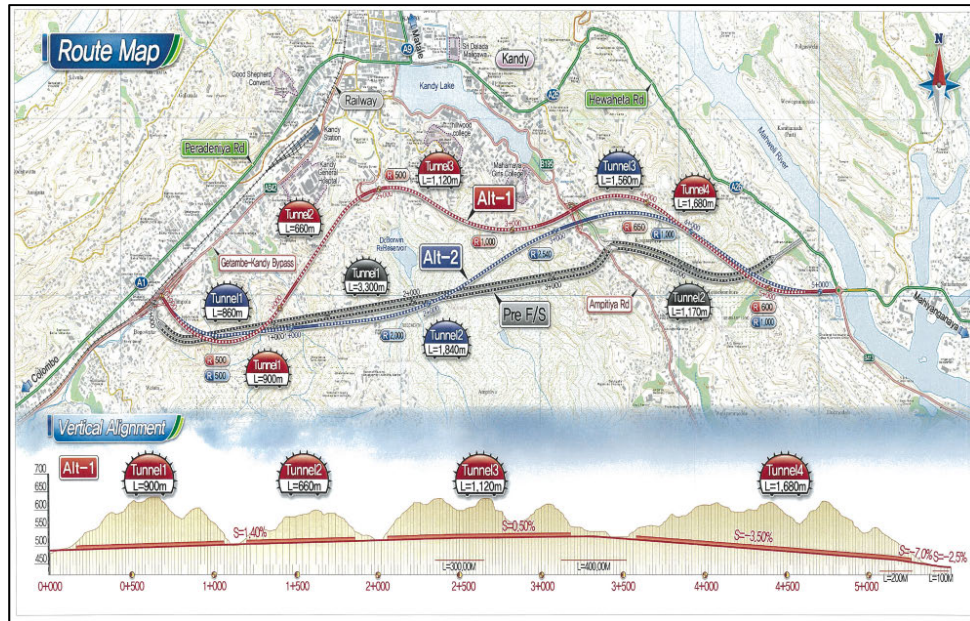
**Figure 3.3.14 Station Location of Double Track Railway Project and Present Photos**

### 3.3.8 South Bypass Feasibility Study

In June 2016, RDA prepared the “Feasibility Study on Kandy Tunnel Construction in Sri Lanka” conducted by a Korean company. In this study, traffic demand forecast, geotechnical investigation and analysis, engineering study, review of environment impact, project cost estimate, economic analysis and necessary items to project implementation were proposed.

The estimated cost is about USD 215 million for 5.5 km length tunnel, connecting between Gatambe and Tennekumbura.

This FS Report has not yet been officially approved by the Sri Lanka Government.



Source: “Feasibility Study on Kandy Tunnel Construction in Sri Lanka”, RDA

**Figure 3.3.15 Alternative Routes of South Bypass in the Korean FS Report**

### 3.3.9 Other Transport Projects

Since the Kandy City Region Strategic Development Plan 2030 (Strategic Cities Development Plan 2030) was formulated in 2015, the SCDP has focused on public transportation and traffic management projects targeting KMC. Strategic Cities Development Plan 2030 is one of the regional plans that cover Greater Kandy Area, but this has not been approved. RDA has formulated the National Road Master Plan.

In existing plans and projects (see Table 3.3.9), to avoid concentrating socio-economic activities and thus traffic to the centre of Kandy city, it is proposed to transfer the city functions to satellite cities and connect the satellite cities with a ring road to avoid concentration of traffic to the city of Kandy.

**Table 3.3.9 Existing Transportation Projects and Agencies Responsible**

No.	Project Name	Contents	Responsible Agency
1	Multimodal Transport Hub	<ul style="list-style-type: none"> <li>Multimodal transport hub by developing and amalgamating the existing railway station and Goods Shed bus stand</li> <li>William Gopallawa Mawatha to Sirimavo Bandaranaike Mawatha via transport hub</li> <li>Road link from Transport hub to Bogambara Car Park</li> <li>Land at Gatambe, Katugastota and Thennakumbura for satellite bus terminal</li> </ul>	UDA
2	Improvement of Rail Service	<ul style="list-style-type: none"> <li>Double track from Peradeniya to Katugastota</li> <li>Improvements to stations and rolling stock</li> </ul>	CGR
3	Improvement of Public Parking Facilities	<ul style="list-style-type: none"> <li>2,600 parking lots (800 lots already provided) in KMC at Sri Wickrama Rajasinghe Mawatha</li> </ul>	UDA/ KMC
4	Road Improvement	<ul style="list-style-type: none"> <li>Improvements to road from Katugastota to Digana via Madawala</li> <li>Kandy - Thalathuoya Road (2 lane)</li> <li>Improvements to Dharmashoka Mawatha</li> <li>Bridge and road near Mahamaya Girls' College</li> </ul>	RDA/ Provincial RDA/ UDA/ KMC/

No.	Project Name	Contents	Responsible Agency
		<ul style="list-style-type: none"> <li>• Improvements to road from Peradeniya to Katugastota (Gohagoda Road)</li> <li>• Development of Hanthana Road from Bogambara to Kandy Hospital into a 4-lane road</li> <li>• Development of Hanthana Road from Hospital junction to Uduwela into 2 lanes</li> <li>• Link road from Hanthana Road to William Gopallawa Mawatha</li> <li>• Construction of 4-lane road from Heerassagala Junction to Clock Tower in Kandy</li> <li>• Alternative Bypass Road connecting Sangaraja Mawatha and Kandy Kirimetiya Road to avoid Ampitiya Junction</li> <li>• Improvements to Dodanwala Aniwaththa - Halloluwa Road including improvements to Aniwatta tunnel</li> <li>• Galaha Junction to Getambe Road to improve into 4 lanes</li> <li>• Improvements to Galagedara - Katugastota Road into 4 lanes as an access road to proposed Colombo Expressway</li> <li>• Providing bus bays and parking bays along Sirimavo Bandaranaike Mawatha, Kandy - Thennekumbura</li> <li>• Katugastota - Kandy Road to develop into a 4-lane road</li> <li>• Development of Louis Peiris Mawatha to a 2-lane road</li> <li>• Halloluwa - Barigama Road identified to develop into a 2-lane road as an access road to the proposed Colombo Expressway (Central Expressway)</li> <li>• Suduhumpola Vihara Mawatha up to Dangolla</li> <li>• Improvements to Heerassagala to Galaha Junction</li> <li>• Improvements to Kandy Mapanawathura Road up to Katugastota</li> <li>• Improvement to Aladeniya - Eriyagama Road to 2 lanes</li> <li>• Improvement to Ambathenna - Bokkawala - Arambakade Road</li> <li>• Improvements to Alawathugoda - Pujapitiya - Hedeniya Road into 2 lanes</li> <li>• Improvements to II Rajasinghe Mawatha &amp; Kudarathwatte Mawatha into 2-lane roads</li> </ul>	SCDP
5	Junction Improvement	<ul style="list-style-type: none"> <li>• Pushpadana Junction at Sirimavo Bandaranaike Mawatha</li> <li>• Dharmashoka Road Junction at Mahaiyawa</li> <li>• Getambe Junction with a flyover</li> <li>• Peradeniya Junction along with an urban renewal project at Gannoruwa Road and Gampola Road</li> <li>• Railway station junction</li> <li>• Wales Park junction</li> <li>• Katugastota - Gohagoda Road Junction at Katugastota</li> <li>• Buwelikada Junction</li> <li>• High school junction</li> <li>• Suduhumpola Junction</li> <li>• Mahaiyawa Junction with a flyover</li> <li>• Bridge expansion at Katugastota located near to the junction (Matale Road, Madawala Road, Ranawana Road)</li> <li>• Mahamaya school junction at Sangaraja Mawatha</li> <li>• Ampitiya Junction at Sangaraja Mawatha</li> <li>• Dharmaraja Junction</li> </ul>	RDA/ UDA/ NBRO
6	Pedestrian Underpasses	<ul style="list-style-type: none"> <li>• Getambe near Peradeniya Hospital junction on Colombo-Kandy Road</li> <li>• Central Market to Lamagara Mawatha</li> <li>• Byrde's Park to Clock Tower</li> <li>• On Peradeniya Road near Pushpadana Girls' College</li> </ul>	UDA/ RDA/ KMC

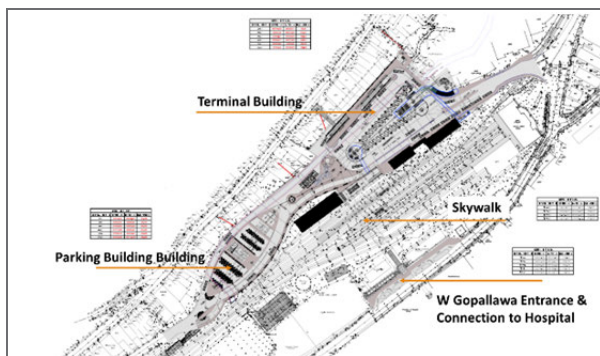
No.	Project Name	Contents	Responsible Agency
		<ul style="list-style-type: none"> <li>• At Bogambara Junction to Library on Mosque Road</li> <li>• Near D.D. Senanayake College at Buwelikada</li> <li>• From Queen's Hotel side to Keerthi Sri Rajasinghe Mawatha on Dalada Veediya up to lake around on Sangaraja Mawatha</li> <li>• On Keppetipola Mawatha near Prison gate</li> </ul>	
7	Overhead Pedestrian Bridges	<ul style="list-style-type: none"> <li>• At St. Anthony's Convent, Katugastota</li> <li>• At Trinity College, Kandy</li> <li>• At Vidyarthi College, Kandy</li> <li>• At Hillwood College, Kandy</li> <li>• At Swarnamali Girls' College</li> <li>• At Kingswood College</li> </ul>	UDA/ RDA/ KMC

Source: The JICA Team based on interviews of relevant agencies

Among various projects proposed by SCDP, KMTT (Kandy Multimodal Transport Terminal) construction project has been implemented (see Figure 3.3.16 and Figure 3.3.17), whose target year to start operation is in 2020.

At present, 97% of bus routes are originated or terminated at Goods Shed bus terminal which causes traffic congestion around the terminal. After KMTT is completed, bus routes will be consolidated and only 37% bus routes will be originated or terminated at KMTT.

In this project, the construction of KMTT building and parking building, a skywalk crossing railway yard connecting to Kandy Teaching Hospital, a commercial building with loading and unloading space in front of the hospital, will be constructed.



Source: Strategic Cities Development Project  
**Figure 3.3.16 Layout Plan of KMTT**

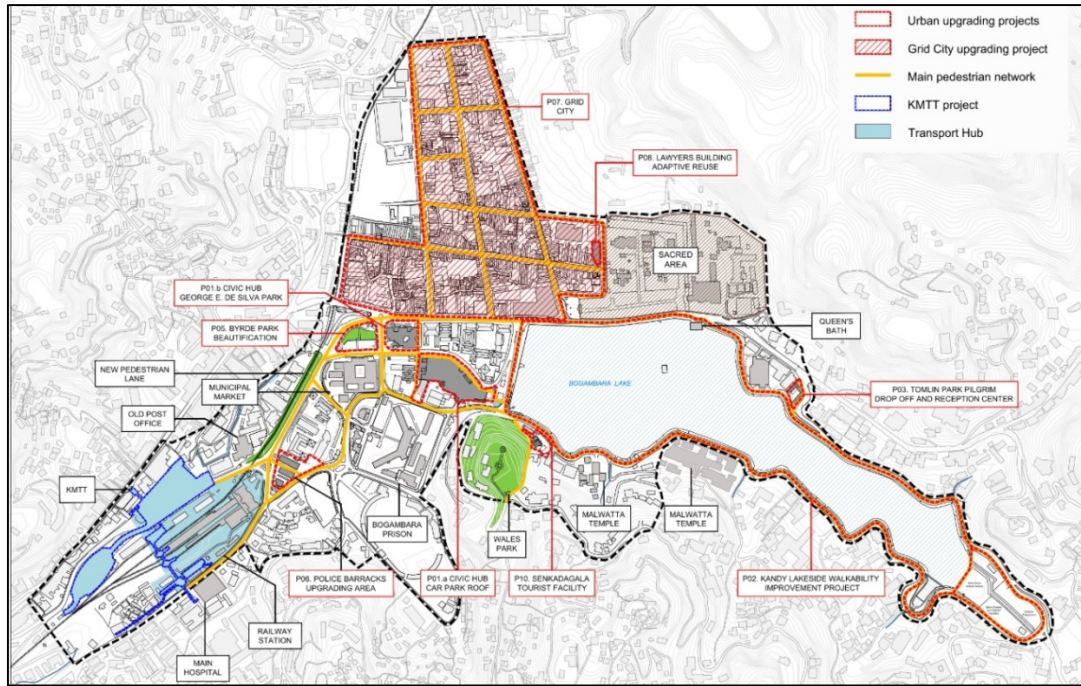


Source: Strategic Cities Development Project  
**Figure 3.3.17 Birds-eye View of KMTT**

### 3.3.10 SCDP Urban Upgrading Interventions

SCDP has conducted the Urban Upgrading Interventions in the city centre. The following projects are the ongoing fast track projects:

- Improvement of Municipal Car Park Roof Top
- Rehabilitation of George E. De Silva Park
- Kandy Lakeside Walkability Improvements
- Tomlin Park - Pilgrim Drop off & Reception Centre
- Grid City Improvements



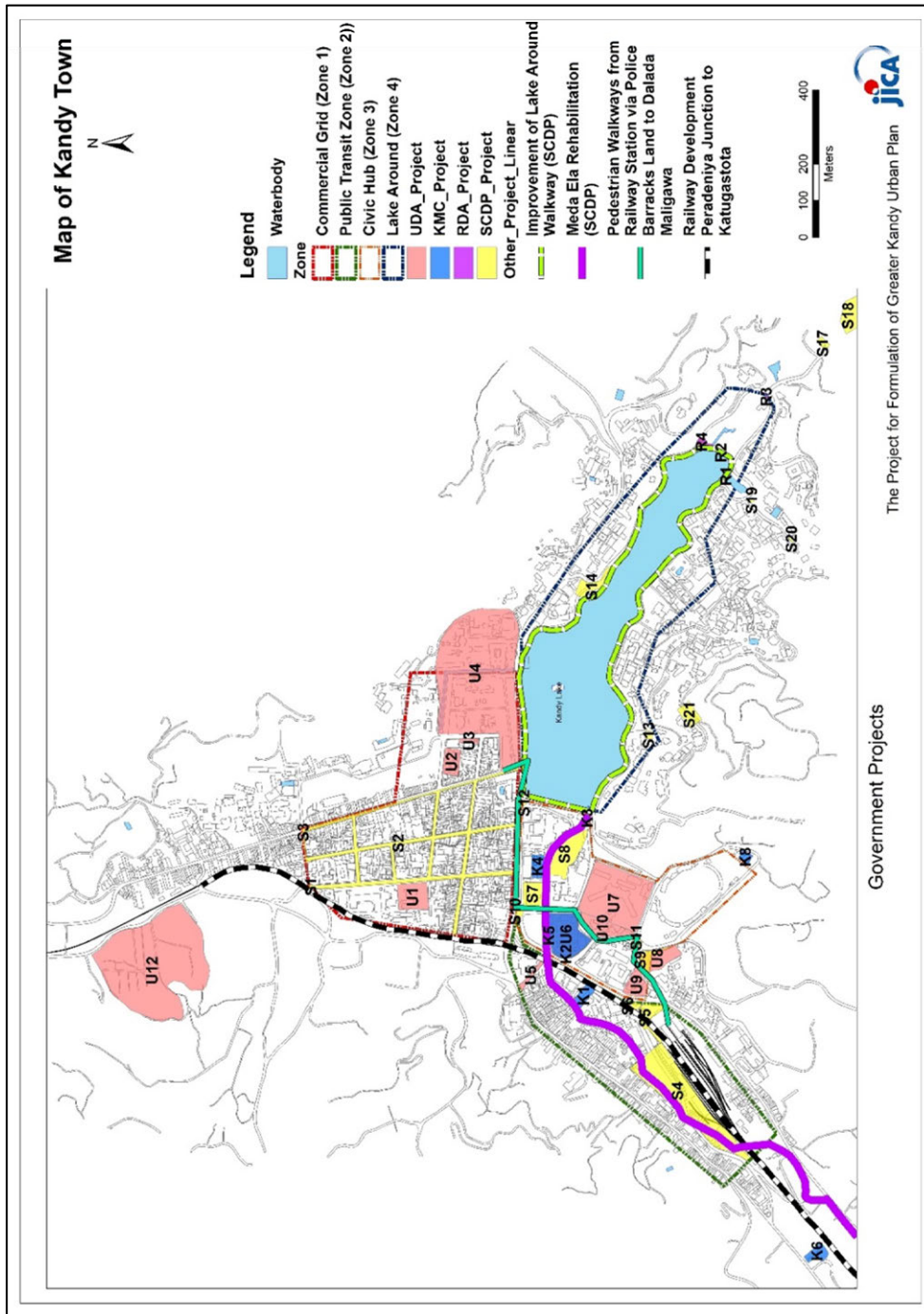
Source: Strategic Cities Development Project

**Figure 3.3.18 Project Map of SCDP Urban Upgrading Interventions**

### 3.3.11 Overall Project Location in the Heritage Area

In the Heritage Area, many projects have been planned by several organisations, such as UDA, KMC, RDA, SCDP, etc. Locations of these overall projects are shown in Figure 3.3.19. It is necessary to consolidate and integrate these projects to implement them efficiently.

Zone	Agency ID	Project
Commercial Grid	SCDP S1	Rehabilitation of Drainage Tunnel
	SCDP S2	Pedestrian Improvement of Grid City
	SCDP S3	Junction Improvement at Grid City
	UDA U1	Improvement of Public Carpark - Yalmuwara Veediya
	UDA U2	Relocation of Singha Regiment
	UDA U3	Renovation of Ehelepola Walaawwa Old Lawyers Building renovation Project
	UDA U4	Landscaping and Infrastructure Improvement of Sri Dalanda Maligawa Premises
	KMC K1	Road Requested by KMC to Shopping Center
	SCDP S4	Kandy Multi-model Transport Terminal
	SCDP S5	Walkability Improvement within the Transit Zone
Public Transit Zone	SCDP S6	Junction Improvement at Station Front
	UDA U6	Walkway Stage II - Lamagaraya Mw to Sirimavo Bandaranayake Mw
	KMC K2	Improvement of Municipal Market Area
	KMC K3	Junction Improvement at Wales Park
	KMC K4	D.S. Senanayake Library Auditorium
	KMC K5	Market Building
	SCDP S7	Renovation of George E De Silva Park
	SCDP S8	Municipal Carpark Roof
	SCDP S9	Bogambara Car Park & Public Space Development
	SCDP S10	Improvement of Police Barrack Area
Civic Hub	SCDP S11	Junction Improvement at Clock Tower
	SCDP S12	Junction Improvement at Bogambara
	SCDP S13	Junction Improvement at Queen's Hotel
	UDA U7	Market Area Development Project
	UDA U8	Bogambara Prison Precinct Development
	UDA U9	Improvement of Public Carpark - Bogambara Land
	UDA U10	Improvement of Police Barrack Area
	UDA U11	Prison Outer Area
	RDA R3	Junction Improvement at Edge of Nuwara Lake
	RDA R4	Junction Improvement at Bridge
Lake Around	RDA R1	New Bridge in front of Mahamaya Girls School
	RDA R2	Bypass Road for Light Vehicles
	SCDP S14	Hillwood Upper Silt Trap
	SCDP S15	Tomlin Park Development
	SCDP S16	Junction Improvement at Edge of Nuwara Lake
	SCDP S17	Junction Improvement at Bridge



Source: The JICA Team based on information of UDA, KMC, RDA, SCDP  
**Figure 3.3.19 Overall Project Location Map of UDA, KMC, RDA, SCDP in the Heritage Area**

### 3.4 Development Plans by UDA Central Province Under Preparation

#### 3.4.1 Status of Formulation of Development Plans by UDA

A “Development Plan” is a planning document for a local authority that was prepared by UDA. UDA declares specific local authorities where development plans should be prepared based on their urbanising situations. Those local authorities are called an “UDA declared area”. Within Greater Kandy Area, 12 out of 13 local authorities are UDA declared local authorities.

Development plans have been prepared with the following volumes and parts:

**VOLUME I: Situation Report**

**Part I:** Introduction, Present Conditions (Natural Settings, Population, Land Use, Infrastructures, etc.) and Objectives, etc.

**Part II:** The Development Plan

**VOLUME 2: Regulations**

A major planning tool is a zoning plan. A Development Plan can propose zoning categories and building regulations within the boundaries of the UDA declared area. Basically, all development activities are regulated by the development plan.

However, only the development plan for KMC was gazetted and is legally effective. Other development plans are either under preparation or has not yet been prepared. Table 3.4.1 shows the status of the preparation of the development plans.

**Table 3.4.1 Status of Preparation of Development Plans within Greater Kandy Area**

Name of LA and Development Plan		Status	Vol. I	Vol. II	Land Use Map	Zoning Map
Kandy MC Development Plan	2002-2016	• Gazetted and effective from 2002. Due to delay of preparation of new development plan, the effective date was extended to 2018	Approved	Approved	Approved	Approved
	2018-2025	• Revised plan has been drafted • Approval by KMC is required	Drafted (Sinhala)	Drafted (Sinhala)	Updated	Drafted
Wattegama UC Development Plan 2009-2020		• Draft was prepared and approval from LA was obtained in 2009. However, no progress has been made.	Drafted (Sinhala)	Drafted (Sinhala)	Updated	Drafted
Kundasale PS Development Plan 2008-2020		• Draft was prepared and approval from LA was obtained in 2008. However, no progress has been made. • New studies and analysis to formulate development plan is on-going. • UDA is willing to gazette prior to the other LAs	Drafted (Sinhala)	Drafted (Sinhala)	Updated	Drafted
Kadugannawa UC Development Plan		• It appears to have been drafted, but the draft document cannot be located. • UDA is willing to gazette prior to the other LAs	Not Obtained Yet	Not Obtained Yet	Updated	Drafted
Gangawata Korale PS Development Plan 2010-2030		• Draft of Volume I was completed, but there is no Volume II. • UDA is willing to gazette prior to the other LAs	Drafted (Sinhala)	Not Obtained Yet	Updated	Drafted
Yatimuwara PS Development Plan 2009-2020		• Only the preliminary draft is available	Pre-Draft (Sinhala)	Unknown	Updated	Drafted
Akurana PS Development Plan		• Only the Land Use Map has been prepared.	Not Obtained Yet	Not Obtained Yet	Updated	Not Obtained Yet
Pathadumbara PS, Harispattuwa PS, Thumpane PS, Udunuwara PS, and Pathahewaheta PS: Nothing has been prepared yet. Poojapitiya PS: Not a UDA Declared Area.						

Note: Except for Kandy MC and Kundasale PS, Land use maps and zoning maps are in non-digital format.

Source: The JICA Team. All information is obtained from UDA Central Provincial Office



### 3.4.2 Development Plan for Kandy Municipal Council

#### (1) Status of Preparation

Kandy MC Development Plan 2002-2016 was gazetted in 2002. Due to delay of preparation of the new development plan, the effective period was extended till 2018. New Kandy MC Development Plan is now under revision through communication with GKUP and series of discussions within UDA Head Office and UDA Central Province Office.

UDA is targeting to finalise the draft by the end of June 2018. UDA should obtain approval from KMC, therefore discussion and coordination between UDA and KMC are also required. After that, the new Development Plan will be finalised and translated into English and Tamil.

The new mayor was appointed on 9th April 2018 after long period of absence. This absence has been one of issues for not being able to obtain an updated development plan for a local authority, but now, UDA is able to obtain approval from local authorities.

In general, the contents include situational analysis, development plans and regulations. For the revised new development plan, some changes of Table of Contents are proposed

At the same time, UDA prepared the general table of contents as the “Draft Preparation of a Development Plan Chapter Breakdown”. It was circulated within UDA, and it is a guideline in order to prepare development plans for local authorities in the country. In this general table of contents, more focus is given to environmental and landscape plans and business plans as additional volumes. However, these are not compulsory contents. Still, each local authority can prepare their own development plan based on the specific context of their territory.

Table 3.4.2 shows a comparison of that table of contents;

- 1) Development Plan for Urban Development Area of Kandy (Kandy Municipal Council Area) 2002-2016
- 2) Proposed Format - Preparation of a Development Plan (KMC Development Plan 2016-2025): Draft for New KMC Development Plan prepared in 2016
- 3) Draft Preparation of a Development Plan Chapter Breakdown
- 4) Chapter Breakdown for Development Plan of Kandy Municipal Council (for the latest draft): Draft for New KMC Development Plan prepared in 2018

**Table 3.4.2 Comparison of Table of Contents of Development Plans**

Development Plan for Urban Development Area of Kandy (Kandy Municipal Council Area) 2002-2016	Proposed Format - Preparation of a Development Plan (KMC Development Plan 2016-2025)	Draft Preparation of a Development Plan Chapter Breakdown	Chapter Breakdown for Development Plan of Kandy Municipal Council (for the latest draft)
<p><b>Volume I: Situation Report</b>  <b>Part I: Situation Report</b>                      1.0 Introduction                      2.0 Natural Setting                      3.0 Heritage                      4.0 Characteristics of Population                      5.0 Land Use Pattern                      6.0 Infrastructure                      7.0 Objectives of the Development Plan and the Method of Achievement</p>	<p><b>Part I Situation Report and Analysis</b>                      01 Introduction                      02 National and Regional Context                      03 Population and Demography                      04 Land Use                      05 Housing                      06 Economic Base                      07 Infrastructure                      08 Environment and Assets                      09 Situational Analysis</p>	<p><b>Volume I</b>                      01 Background Studies (Introduction)                      02 National and Regional Linkages                      03 Demographic Characteristics                      04 Land Use                      05 Housing                      06 Economic Aspect                      07 Infrastructure Facilities                      08 Environment and Assets                      09 Situational Analysis</p>	<p><b>Volume 1 Background</b>                      1 Foreword                      2 Introduction                      3 Preliminary Surveys                      4 Need of the Development Plan                      5 The Planning Framework (Vision / Vision Statement / Goals)                      6 Summary of Detail Analysis</p>
<p><b>Part II The Development Plan</b>                      8.0 The Development Plan (Zoning, Planning, and Building Regulations)                      9.0 Zones (and General Regulations Applicable to the Enforcement of the Zoning Plan)                      10.0 Zoning Regulations  <b>Annex I: Gazette Papers</b>  <b>Annex II: List of Buildings to be Conserved</b>  <b>Annex III: Zoning Map</b></p>	<p><b>Part II The Plan</b>  <ul style="list-style-type: none"> <li>Vision/Objectives/Strategies</li> <li>Proposed Structure with Concept</li> <li>Recommended Action Project</li> </ul> <b>1. Proposed Plan</b>  <ul style="list-style-type: none"> <li>Proposed Zoning Plan</li> <li>Proposed Infrastructure Plan</li> <li>Proposed Environmental and Conservation Plan (including PROS plan)</li> <li>Disaster Management Plan</li> </ul> <b>2. Regulation</b>  <ul style="list-style-type: none"> <li>General Regulation</li> <li>Planning Regulation including Zoning Regulation</li> <li>Building Regulation</li> <li>Special Regulation</li> </ul> </p>	<p><b>Volume II</b>                      01 Plan Overview / Planning Boundaries / Scope / Methodology                      02 Vision / Objectives / Strategies                      03 Zoning (Proposed Zones)                      04 Regulations  <ul style="list-style-type: none"> <li>General Regulations</li> <li>Planning Regulations</li> <li>Building Regulations</li> <li>Special Regulation</li> </ul> </p>	<p><b>Volume 2 The Plan</b>                      7.1 Concept Plan                      7.2 Physical Development Strategy                      7.2.1 Zoning and Permitted Activities                      7.2.2 Residential Density Distribution                      7.2.3 Floor Area Density Distribution                      7.2.4 Built Up Area Distribution                      7.2.5 Street Lines and Building Lines                      7.2.6 Height Limits                      7.2.7 Other Regulations</p>
<p><b>Volume II Planning and Building Regulations</b>                      Part I: General                      Part II: Planning Regulations                      Part III: Building Regulations                      Part IV: Definitions</p>	<p><b>2. Regulation</b>  <ul style="list-style-type: none"> <li>General Regulation</li> <li>Planning Regulation including Zoning Regulation</li> <li>Building Regulation</li> <li>Special Regulation</li> </ul> </p>	<p>04 Regulations  <ul style="list-style-type: none"> <li>General Regulations</li> <li>Planning Regulations</li> <li>Building Regulations</li> <li>Special Regulation</li> </ul> </p>	

<p><b>Development Plan for Urban Development Area of Kandy (Kandy Municipal Council Area) 2002-2016</b></p>	<p><b>Proposed Format - Preparation of a Development Plan (KMC Development Plan 2016-2025)</b></p> <p><b>Part III Development Guide Plan</b></p>	<p><b>Draft Preparation of a Development Plan Chapter Breakdown</b></p> <ul style="list-style-type: none"> <li>• Guide Plan</li> </ul> <p><b>Volume III Environment and Landscape Plan</b></p> <ul style="list-style-type: none"> <li>• Infrastructure Plan</li> <li>• PORS Plan</li> <li>• DRR Plan</li> <li>• Wetland Plan</li> <li>• Management Plan Related to the Environment &amp; Landscape</li> <li>• Solid Waste Management Plan</li> </ul> <p><b>Volume IV Business Plan</b></p>	<p><b>Chapter Breakdown for Development Plan of Kandy Municipal Council (for the latest draft)</b></p> <p>(corresponds to 7.7 Implementation Strategy)</p> <p>7.3 Infrastructure Development Strategies</p> <p>7.3.1 Transportation</p> <p>7.3.2 Water Supply</p> <p>7.3.3 Drainage</p> <p>7.3.4 Waste Management</p> <p>7.3.5 Other Utilities</p> <p><b><u>7.4 Economic Development Strategies</u></b></p> <p>7.5 Environment Management Strategies</p> <p>7.5.1 Conservation</p> <p>7.5.2 Landscape Management</p> <p>7.5.3 Disaster Risk Management</p> <p>7.5.4 Public Open Spaces</p> <p>7.6 Social Infrastructure, <b><u>Cultural and Heritage Management Strategy</u></b></p> <p><b><u>7.7 Implementation Strategy</u></b></p> <p>7.7.1 Strategic Action Projects</p> <p>7.7.2 <b>Development Guide Plans for Selected Areas</b></p> <p>7.7.3 Enforcement Mechanism</p> <p>7.7.4 Institutional Setting</p> <p>7.7.5 Review, Updating and Amendment Process</p>
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Source: UDA Central Provincial Office

**(2) Observation**

Here are some observations for the new draft development plan for KMC.

- The new plan added “Development Guide Plans” as a part of 7.7 Implementation Strategy and “Cultural and Heritage Management Strategy” of 7.6 as additional sections. They deal with the heritage area, and special guidelines and regulations can be enforced based on these guide plans. The Detail Plan which GKUP project will formulate can be situated in this part.
- The new plan considers “Economic Development Strategies” of 7.4 as an additional section. UDA’s general table of contents also proposed to have business plans in a development plan. This will be a new attempt for a development plan. It needs more consideration to formulate the business plan.
- While the existing plan identified 11 objectives and strategies, a draft of the new plan proposed 5 objectives as follows:

**Table 3.4.3 Comparison of Objectives of KMC Development Plan**

Development Plan for Urban Development Area of Kandy (Kandy Municipal Council Area) 2002-2016	Draft Development Plan for Kandy Municipal Council
1) Development of the Kandy City as a historical and cultural centre and the protection of the solemnity of the Sacred Area.	1) Enhance the livability and status of World Heritage City.
2) Making the city an attractive place for all communities	2) Conservation of Natural Environment and to integrate the elements of balance between natural environment and built environment.
3) Provision of efficient functional systems in the city to promote its economy and environmental quality.	3) Improvement of infrastructure to facilitate city dwellers.
4) Protection of the natural scenic beauty of the city as far as practicable.	4) Improvement of living conditions of city dwellers / efficiency of urban function.
5) Conservation of the architectural heritage to the possible maximum level with minimum constraints to the progressive development of the city.	5) Organisation of spatial structure of the city for a more effective urban function and well managed future growth.
6) Reduction of hazards arising from traffic congestion, waste disposal, and user conflict.	
7) Maximisation of the existing amenities and services in the city.	
8) Promotion of investments in the city and thereby creation of employment opportunities in the services and manufacturing sectors.	
9) Improvement of the living conditions of low-income communities by progressive provision of housing, infrastructure and social facilities.	
10) Maintenance of adequate open spaces by way of parks, playgrounds and open spaces.	
11) Maintenance of adequate reservations for public roads and waterways.	

Source: Urban Development Authority

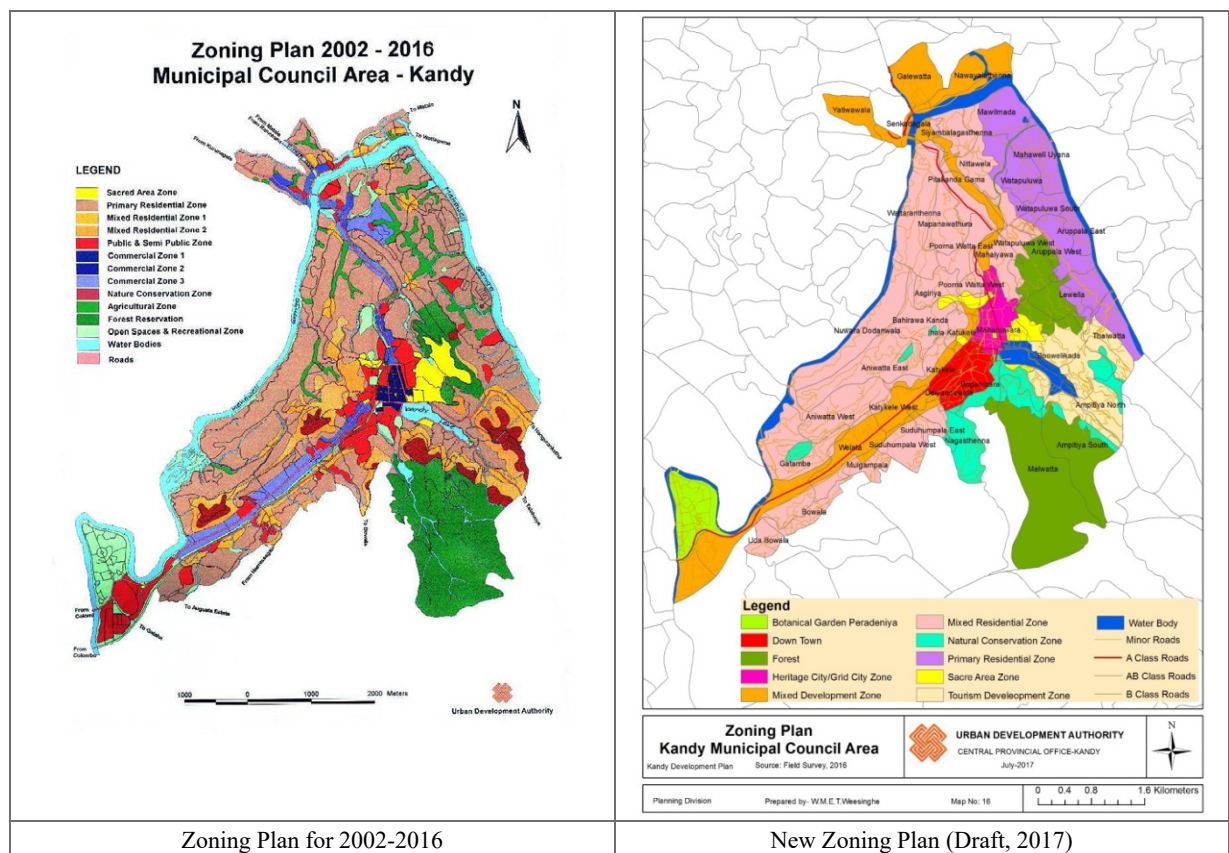
The new plan intended to add environmental management strategies including Conservation, Landscape Management, Disaster Risk Management, and Public Open Spaces.

Proposed zoning of the new plan is considering building height and density controlled by height limitation and FAR, which are stricter than the existing development plan. It is also noted that buildings are regulated by the elevation, and development is not permitted for lands above 2,000 ft. Major building controls are described in the table below. The zoning maps are shown in Figure 3.4.1.

**Table 3.4.4 Characteristics of Major Zoning Categories of KMC Development Plan**

Zoning Category	Characteristics	
Sacred Area Zone	<ul style="list-style-type: none"> <li>The zone is set for the Temple of the Tooth, Asgiriya Temple, Malwatta Temple, Gedige Temple.</li> <li>Activities stipulated in the Gazette No. 1209/19 dated 08/11/2001.</li> <li>Maximum height is 12m from ground level.</li> </ul>	
Heritage City / Grid City Zone	<ul style="list-style-type: none"> <li>The zone is set for around grid city, and a Special Guide plan is to be prepared.</li> <li>Cultural/Tourism-based activities and support activities including residential, retail office, hotels, guest houses, public car parks.</li> <li>Maximum height of a building is 12m from ground level.</li> </ul>	
Utility Service Zone / Downtown	<ul style="list-style-type: none"> <li>Utility service provider for urban functions (transport, hospital, public car park, public place, recreational areas, market, conference hall, etc.)</li> </ul>	
Mixed Development Zone	<ul style="list-style-type: none"> <li>Area for high density development. Development corridor along main roads Getambe to Kandy and Kandy to Katugastota.</li> <li>FAR (floor area ratio) depends on plot size, but maximum FAR is 10.0.</li> </ul>	
Nature Conservation Zone	<ul style="list-style-type: none"> <li>The area above 2000 ft. from MSL (mean sea level).</li> <li>Only plantation activities are allowed.</li> </ul>	
Mixed Residential Zone	Area below 1800 ft. from MSL <ul style="list-style-type: none"> <li>Lot sizes depend on slope angel</li> <li>Plot Coverage 50%</li> <li>Maximum FAR 2.0</li> </ul>	Area between 1800-2000 ft. from MSL <ul style="list-style-type: none"> <li>Minimum lot size is 1000m</li> <li>Maximum plot coverage 25%</li> <li>Maximum floors – 2</li> </ul>
Primary Residential Zone	<ul style="list-style-type: none"> <li>Area for residential activities and facilities for residential.</li> <li>Plot coverage 65%</li> <li>Maximum FAR 2.5</li> </ul>	
Tourism Development Zone	<ul style="list-style-type: none"> <li>Newly introduced for the new development plan</li> <li>Building regulations are same as mixed residential</li> <li>Activities permissible in mixed residential zone and tourist related activities including tourist hotels, guest houses, city hotels</li> </ul>	

Source: UDA Central Provincial Office



Source: UDA Central Provincial Office

**Figure 3.4.1 Zoning Plan for KMC**

### 3.4.3 Other Development Plans within Greater Kandy Area

Draft development plans are available for Wattergama UC, Kundasale PS, and Gangawata Korale PS. These development plans are still underway to gazette and are not yet effective. In addition, draft zoning plans are available in Kadugannawa UC, and Yatinuwara PS.

Contents of the draft development plans are basically the same, namely: situational analysis, zoning plans and regulations. However, the zoning categories of all the draft zoning plans are different. This is remarkable and should be mentioned.

As described above, UDA has prepared the general Table of Contents for Development Plans and has proposed zoning categories. UDA will refer to the zoning categories when they prepare a new development plan for a local authority from now on, but it is still not compulsory. UDA can propose a suitable zoning system for a local authority.

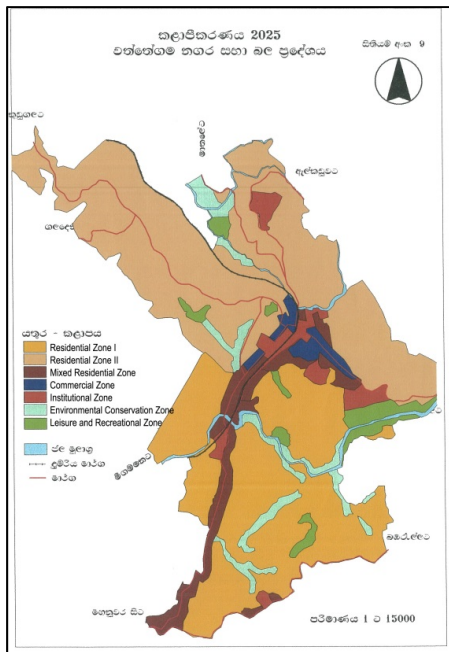
Table 3.4.5 shows the zoning categories of development plans and general zoning categories proposed by UDA.

Figure 3.4.2 shows the draft zoning plan of the local authorities within Greater Kandy Area, except for KMC. All the zoning maps show that the majority of zones are residential and mixed development, and commercial uses are identified in certain areas. Clear urban centres where commercial activities are concentrated are not identified clearly in most of the local authorities.

**Table 3.4.5 Comparison of Zoning Categories**

Type of Zone	KMC 2002-2016	New KMC (Draft)	Kundasale (Draft)	Wattergama (Draft)	Yatinuwara (Draft)	Gangawata Korale (Draft)	General Zoning Categories*
Residential	Primary Residential	Primary Residential	High Density Residential	Residential 1 Residential 2	High Density Residential	Primary Residential I	Residential
	Mixed Residential 1 Mixed Residential 2	Mixed Residential	Low Density Residential	Mixed Residential	Low Density Residential	Primary Residential II	
		Mixed Development	Mixed Development		Mixed Develop	Mixed Development	
Commercial	Commercial 1 Commercial 2 Commercial 3	Heritage City Utility Service / Down Town	Commercial	Commercial			Commercial
			Industrial			Industrial	Industrial
Public	Public & Semi Public	Peradeniya Botanical Garden	State & Public	Institutional		Public Affair	Institutional Administrative Public and Semi-Public
	Open Space and Recreational			Leisure and Recreational		Open Area and Reservation	Recreational
Nature Reservation	Nature Conservation Forest Reservation	Nature Conservation Forest	Mahaweli Reservation and Green belt	Environment Conservation	Natural Conservation Open and Natural Conservation	Natural Conservation	Environmental Conservation
	Agricultural		Agricultural Conserved Paddy		Agricultural		Agriculture
Religious	Sacred Area	Sacred Area		Religious			Sacred Area
Others		Tourism Development					Disaster Prone Archaeological Conservation Concentrated Development Defence Airport-Related Activity Port-Related Activity Fishery-Related Activity

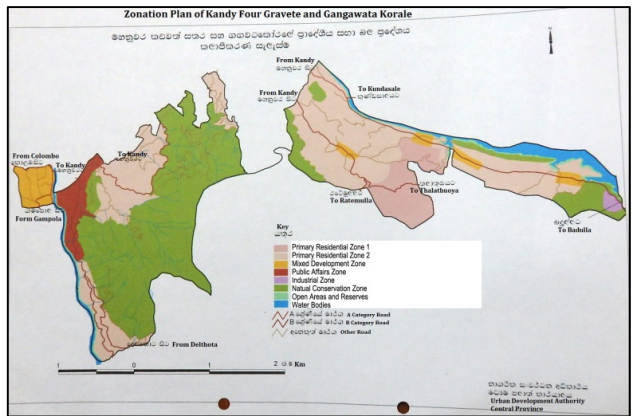
Note: \* General Zoning Categories are mentioned in the “Draft Preparation of a Development Plan Chapter Breakdown”  
Source: Draft Development Plans prepared by UDA central province



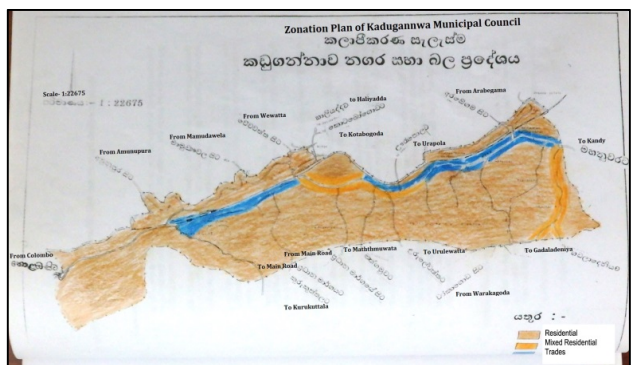
Wattegama UC Zoning Plan



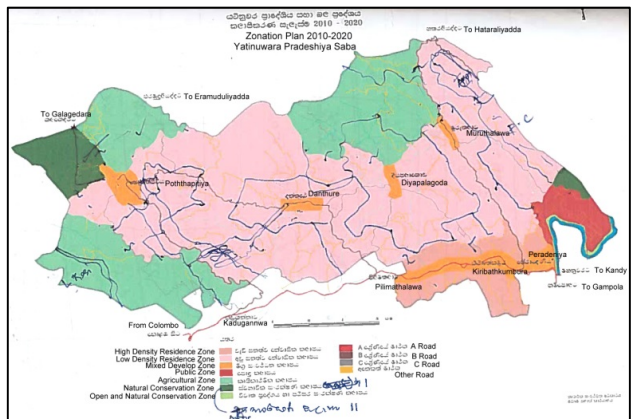
Kundasale PS Zoning Plan



Gangawata Korale PS Zoning Plan



Kadugannawa UC Zoning Plan



Yatinuwara PS Zoning Plan

Source: UDA Central Provincial Office

**Figure 3.4.2 Zoning Plans for Wattegama UC, Kundasale PS, Gangawata Korale PS, Kadugannawa UC, and Yatinuwara PS**

### 3.5 Development Needs of Province and LAs, and DS and DSDs

#### 3.5.1 Vision, and Mission of Central Provincial Council

The Central Province states its vision and mission on its website as follows:

**Table 3.5.1 Vision and Mission of Central Province**

Vision:	With the aim of providing a prosperous life to the dignified people of Central Province and to be the best Provincial Council of Sri Lanka
Mission:	Ensure sustainable, dignified and high level of living standards for the people of Central Province through efficient and effective utilisation of human and physical resources and using modern technology while paying special attention to the cultural, social, economic and environmental heritage of the province.

Source: <http://www.cp.gov.lk/en/>

#### 3.5.2 Vision, Values and Mission of Kandy District Secretariat

Vision, values and missions of Kandy District Secretariat area stated as follows:

**Table 3.5.2 Vision, Values, and Mission of Kandy District**

Vision:	To make the District Secretariat, Kandy, to be an excellent Administrative Establishment in Sri Lanka.
Values:	<ul style="list-style-type: none"> <li>• Polite and friendly service</li> <li>• Caring and respect for senior citizens</li> <li>• Priority to disabled citizens</li> <li>• Acting as a Group</li> <li>• An environmentally-friendly office background</li> <li>• Act as a centre of Knowledge Management</li> <li>• Maximum customer care</li> </ul>
Missions:	To convey the Kandy District towards sustainable development in accordance with the state policies, preserving the proud heritage inherent to the District.

Source: Kandy District, Annual Performance & Accounts Report 2015

#### 3.5.3 Development Needs of LAs and DSDs

The public administrative system at local level is a dual system; one is local authorities (LAs) including Municipal Councils (MCs), Urban Councils (UCs) and Pradeshiya Sabhas (PSs), and the other one is divisional secretariat divisions (DSDs) acting as local government agents. The GKUP Area comprises of 13 LAs and 10 DSDs.

**Table 3.5.3 LAs and DSDs in Greater Kandy Area**

13 LAs	10 DSDs
Kandy MC*	Gangawata Korale DSD
Gangawata Korale PS	
Pathahewahata PS	Pathahewahata DSD
Wattegama UC	Pathadumbara DSD
Pathadumbara PS	
Kadugannawa UC	Yatinuwara DSD
Yatinuwara PS	
Harispaththuwa PS	Harispaththuwa DSD
Udunuwara PS	Udunuwara DSD
Poojapitiya PS	Poojapitiya DSD
Thumpane PS	Thumpane DSD
Akurana PS	Akurana DSD
Kundasale PS	Kundasale DSD

Note: \* KMC encompasses a very small part of Harispaththuwa DSD and Pathadumbara DSD

Source: The JICA Team



Each LA and DSD has the vision and mission as summarised in the table below.

**Table 3.5.4 Vision and Mission of LAs and DSDs**

LAs/DSDs	Vision and Mission
Kandy MC	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• An attractive city that leads through good governance and enriching heritage</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>• To provide and manage all the public utility services, thoroughfares and other welfare activities; to ensure the welfare and good health of people living within the municipal limits and of those visiting; to provide physical, financial and human resources available to the council efficiently and effectively by virtue of the powers vested in it by the Municipal Council's Ordinance and other numerous Acts with much dedication and motivation</li> </ul>
Wattegama UC	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• Always dedicated to the public service</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>• Maintain and improve the work-related welfare activities of the urban community with the maximum possible use of the resources of the area, public health services and public roads</li> </ul>
Kadugannawa UC	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• To make a safe and trusted land of social, cultural and environmental domains</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>• To bring about an excellent standard of living by providing health care, roads and welfare facilities in a pleasant and environmentally-sensitive fashion; to maintain a decent public service by efficient and productive use of resources for social and economic development of the nation</li> </ul>
Akurana PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• To be the best Local Government Institution in the Central Province</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>• To achieve a high public acceptance through the staff who are motivated by the participation of the public representatives and the provincial councils act; to utilise the latest modern technology</li> </ul>
Akurana DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• To ensure productive, efficient and effective public service</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>• To improve the living standards of the people of this division and develop the division through productive service to the public – with their participation – by coordinating resources and proper planning</li> </ul>
Harispaththuwa PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• To become an Excellent Local Government Institution in the Central Province through Good Governance and Devoted Public Service</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>• To create opportunities to decide and fulfil the needs and requirements of the public for their prosperity, health, and welfare; to regulate health, sanitary service, public roads and public utility services through proper administration within the jurisdiction of Harispattuwa Pradeshiya Sabha.</li> </ul>
Harispaththuwa DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• To become the leading Divisional Secretariat Division in the country through good governance and sustainable development</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>• To provide services in accordance with the government policies, uplift the living standard of the people by means of an efficient, sustainable and well-planned development process consisting of proper coordination of resources and participation of the people</li> </ul>
Poojapitiya PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• To establish an excellent and outstanding rural state that successful public aspiration</li> </ul> <p><b>Mission</b></p>

LAs/DSDs	Vision and Mission
	<ul style="list-style-type: none"> <li>To contribute to provide a friendly service to the people from their birth to death and after death in order to achieve sustainability; to increase the people's welfare and help them succeed in attaining their goals using technology as a driving force</li> </ul>
Poojapitiya DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To bring forth a lawful society through excellent state service that builds consumer satisfaction and reliance</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To improve the lifestyles of those that live in the area through coordination of human and physical resources and designed management with an effective approach that complies with state policies and rules</li> </ul>
Thumpane PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To obtain a satisfactory and prosperous life for Thumpane people both physically and socially</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To provide facilities to improve succession and the welfare of the people who are living within the territory through improved public health, public utility services and public roads</li> </ul>
Thumpane DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To be an excellent service provider in the public sector through good governance</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To provide a service in line with the government policies, uplift the lifestyles of the society through a planned, efficient development process consisting of proper coordination of resources and participation of the people</li> </ul>
Gangawatta Korale PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>Kandy Kadawathsathara and Gangawatta Korale Pradeshiya Sabha will work for service of the people and good fortune to "Madarata" through good governance</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To respond to the timely needs of the people of Kandy Kadawathsathara and Gangawatta Korale, including the rapid urbanisation of urban areas; to preserve the traditional culture and help create a good, intelligent society.</li> </ul>
Gangawatta Korale DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To be an excellent divisional administrative unit in the Kandy District by providing an efficient and attractive humanitarian service</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To provide a service in line with the government policies, uplift the living standard of the people through an efficient, sustainable and planned development process with the participation of the people</li> </ul>
Pathadumbara PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>Regional governance from village to village and door to door</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To secure the future of the people so that they may attain all of their interests using available limited resources while preserving the ultimate identity and beauty of Dumbara valley</li> </ul>
Pathadumbara DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To be the pioneer institution to serve on policies and pathways for sustainable development</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To provide services to the people with all possible physical and human resources by integrating the general public and collecting revenue and raising living standards through community participation in sustainable development.</li> </ul>
Pathahewahata PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To be a prosperous 'Hewahata'</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To ensure the comfort of the people of the Pathahewaheta PS area through the protection, control and administration of public health, public utility services and public roads; to providing an efficient and transparent service</li> </ul>

LAs/DSDs	Vision and Mission
Pathahewahata DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To become the leading divisional secretariat of the island where a prosperous population lives in a graceful village</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To coordinate the provision of facilities and needed services according to the state policies and expectations of the people with the objective of generating a prosperous mass community</li> </ul>
Udunuwara PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>Excellence in Udunuwara through good governance</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To contribute towards creating a pleasing society by handling the existing resources productively and effectively in view of enhancing the economic and social status of the people through their own contribution, while safeguarding the cultural and artistic value of the historical Udunuwara region in the district of Kandy in central province</li> </ul>
Udunuwara DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>A well-controlled, prosperous Buddha</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To provide services in accordance with government policies, coordination of resources and efficient participation of the people through a sustainable and planned development process in order to upgrade the lives of the people in the area</li> </ul>
Kundasale PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>To forward with pride of Kundasale through community participation of both controllers and subordinates.</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To contribute towards improving the lifestyle of the people by providing efficient and effective services using the limited resources of the authority, with community participation and good governance and better management of the people living in the Kundasale local authority area</li> </ul>
Kundasale DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>Good governance</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To provide services according to the government policies, coordinate resources and uplift the living standards of the people through a sustainable and planned process of public participation</li> </ul>
Yatinuwara PS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>Yatinuwara will be prosperous by 2020</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>Our target is our territory and the people. Through productivity and dedication, their health protects the health of environmental rights and ensures systematic development and control of the earth, creating a prosperous city with great dignity</li> </ul>
Yatinuwara DS	<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>A new yoke of the winning land</li> </ul> <p><b>Mission</b></p> <ul style="list-style-type: none"> <li>To bring the regional vision to the forefront of converting the local resources to make a new way for enriching the country by supporting sustainable development for the underprivileged</li> </ul>

Source: Resource profiles, web sites, and interviews conducted by the JICA Study Team

Current issues and development needs recognised by each LA and DSD are shown in the table below. Similar issues and needs were identified and presented by both LAs and DSDs in the same locality.

**Table 3.5.5 Development Issues and Needs**

LAs/DSDs	Issues and Needs
Kandy MC	<p><b>Issues (Document)</b></p> <ul style="list-style-type: none"> <li>• Not enough parking spaces within the city limits</li> <li>• Unplanned construction creates traffic congestion (Louis Peiris Junction, Lakeside place, Dangolla Junction, End of the Lake Road, Good Shed area)</li> <li>• Pollution of the river flows Katugastota to Mahaweli River (Pinga Oya)</li> <li>• No proper disposal mechanism for medical waste of the Kandy Hospital</li> <li>• Sign boards in heritage area degrade the historical value of the city</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Development of bypass road to ease the traffic congestion</li> <li>• Improve and develop schools in areas outside the city to reduce traffic problems</li> <li>• Need strategies to mitigate water pollution of the Mahaweli River and programme to clean Kandy Lake</li> <li>• Proper management of Gohagoda dumping site (not enough space)</li> </ul>
Wattegama UC	<p><b>Issues (Document)</b></p> <ul style="list-style-type: none"> <li>• Lack of road rehabilitation between Madawala to Wattegama which hinders the development of the area</li> <li>• Not enough space at the existing solid waste disposal site</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Development of Katugastota-Matale Road (through Waththegam Road) as an alternative road to A009</li> <li>• Development of connection between the bus terminal and main market in Waththegama town by bridge (or move market to station area)</li> <li>• Proper management of drainage (closed waste dispose drainage)</li> </ul>
Kadugannawa UC	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Solid waste management (location identified: Kirinatiya)</li> <li>• Traffic congestion (Pilimathalawa)</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Expansion of the road</li> <li>• Conversion of market to shopping mall</li> <li>• Development of Pilimathalawa and surrounding areas (Danthure, Poththapitiya, Kadugannawa, Muruthalawa)</li> <li>• Town Plan for Kadugannawa is required to ease the traffic congestion on A2 road.</li> </ul>
Akurana PS	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Rapid population growth and urbanisation</li> <li>• Illegal construction along roads and river</li> <li>• No land for waste disposal</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Development of a biogas plant and composting project for waste management</li> </ul>
Akurana DSD	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Residents are not pro-development</li> <li>• Illegal and overloaded construction along the river and roads</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Need proper plan for Akurana town area</li> <li>• Need mitigation measures for landslide risk</li> </ul>
Harispaththuwa PS	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Gohagoda waste dumping site is the main problem (no land)</li> <li>• Water scarcity in some Grama Niladhari Divisions</li> <li>• No space for public events</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• ‘Physical plan’ covering the whole PS is required to manage the area properly</li> <li>• Development of export crop collection centre (avoid intermediate traders)</li> <li>• Development of alternative roads (Halloluwa-Barigama Road to Peradeniya)</li> </ul>
Harispaththuwa DSD	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Gohagoda waste dumping site is causing environmental damage</li> </ul> <p><b>Development Needs (Interview)</b></p>

LAs/DSDs	Issues and Needs
	<ul style="list-style-type: none"> <li>• Proper residential plan is required to accommodate growing population in Harispaththuwa.</li> </ul>
Poojapitiya DSD	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Waste management is a serious issue</li> <li>• Lack of land for waste disposal. Lack of resources, including vehicles, is also an issue.</li> </ul> <p><b>Development Needs (Document)</b></p> <ul style="list-style-type: none"> <li>• Need proper town plan for Poojapitiya</li> <li>• Need to provide support to self-employed in the area.</li> </ul>
Poojapitiya PS	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• No proper land for solid waste disposal</li> <li>• No appropriate plan to control and manage landslides</li> <li>• Lack of land and finance for project implementation</li> <li>• No plan or funds for rehabilitation of damaged roads</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Development of five town centres: Bokkawala, Poojapitiya, Ankumbura, Galinna, Ambathenna</li> <li>• Development of vehicle parking places</li> <li>• Construct a market place in the ‘Palipana’ land owned by the PS</li> <li>• Construction of export crop collection centres in rural areas</li> <li>• Conserve archaeologically significant places and develop as tourism sites (Buddha statue of Pahala Hingulwala Vijayarama Temple, Kirikosgahamula inscription, Dolapihilla Gallana Temple). Development of tourism industry in Kattappuwa.</li> </ul>
Thumpane DSD	<p><b>Issues (HP)</b></p> <ul style="list-style-type: none"> <li>• Drinking water</li> <li>• Solid waste management</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Development of Galagedara and surroundings (Arambekade, Madige)</li> <li>• Access road development to Kandy from Central Expressway</li> <li>• Promotion of cultural tourism around heritage site</li> <li>• Town development in relation to Galagedara interchange of Central Expressway</li> </ul>
Thumpane PS	<p><b>Issues (Document)</b></p> <ul style="list-style-type: none"> <li>• Lack of facilities for waste management</li> <li>• Some places are landslide-prone areas</li> <li>• Drying of natural water springs</li> <li>• Insect-borne disease (mosquito)</li> <li>• Cutting trees and deforestation</li> </ul> <p><b>Development Needs (Document)</b></p> <ul style="list-style-type: none"> <li>• Improvement of waste dumping and obtain required facilities and resources</li> <li>• Rural road developments</li> <li>• Development of alternative water supply source</li> <li>• Town developments in Arambekade, Madige are needed parallel to Galagedara</li> </ul>
Gangawata Korale DSD	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• High urbanisation and illegal settlements</li> </ul> <p><b>Development Needs (Document)</b></p> <ul style="list-style-type: none"> <li>• Need to develop the “Sathi Pola” at Peradeniya</li> <li>• Development of multi-storied buildings near the main streets and use ground floor for business purposes and other floors for housing purposes</li> <li>• Peradeniya shall be included in the GKUP area (i.e. University of Peradeniya, Royal Botanical Gardens, etc.)</li> </ul>
Gangawata Korale PS	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• No land available for garbage disposal</li> <li>• Traffic problems and no development of alternative routes</li> <li>• Landslide problems</li> <li>• Water supply issue in Haragama</li> <li>• Improper construction in Hantana (Hotels)</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Development of alternative road (Ampitiya – Pichchamalwaththa - Tennekumbura -</li> </ul>

LAs/DSDs	Issues and Needs
	<p>Gurudeniya)</p> <ul style="list-style-type: none"> <li>• Development of community facilities (town hall, library, daycare centre)</li> <li>• Landslide control (construction of walls)</li> <li>• Development of sanitary facilities and parking areas in Peradeniya town</li> <li>• Need a parking complex for Gangawata Korale PS</li> </ul>
Pathadumbara DSD	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Pollution and encroachment in stream (Balathota Ela)</li> <li>• Landslide hazard in Yatirawana</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Economic zone development</li> <li>• Freshwater fishery development</li> <li>• Promotion of brick, pots, and bras industries</li> </ul>
Pathadumbara PS	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Reclamation of the lands between the road and the Ela is harmful to the Polgolla Tank.</li> <li>• No available land and lack of labour force for waste management</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Formalising waste management mechanisms (separation, collection, composting, recycling and selling). Establish a non-degradable waste collection system.</li> <li>• Need road beautification projects and mechanism for rehabilitation of roads and drains</li> <li>• Develop tourist attraction site (Rassa Ella, Elkaduwa, Brookside, etc.)</li> </ul>
Pathahewahata DSD	<p><b>Issues (Document)</b></p> <ul style="list-style-type: none"> <li>• The city is not systematic</li> <li>• No sanitary facilities in the city</li> <li>• No community facilities</li> </ul> <p><b>Development Needs (Document)</b></p> <ul style="list-style-type: none"> <li>• Need to develop Thalathuoya town area</li> <li>• Need a feasible plan since the area was not given a priority by any organisation</li> </ul>
Pathahewahata PS	<p><b>Issues</b></p> <ul style="list-style-type: none"> <li>• Lack of labour force for waste management</li> </ul> <p><b>Development Needs (Documents)</b></p> <ul style="list-style-type: none"> <li>• Need to develop Kandy – Thalathuoya main road</li> <li>• Need to control landslides around the area</li> </ul>
Udunuwara DSD	<p><b>Issues</b></p> <ul style="list-style-type: none"> <li>• Waste disposal problems in ‘Kiriwaula’ dumping side</li> <li>• Land filling of lowland areas (paddy)</li> </ul> <p><b>Development Needs (Documents)</b></p> <ul style="list-style-type: none"> <li>• Development of town area with a proper plan (Geliyoa, Daulagala)</li> </ul>
Udunuwara PS	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Encroachment of stream reservations</li> <li>• Not enough available land (Kiriwawula) for waste management and lack of labour force and equipment (compactor, waste drying machine)</li> <li>• Wastewater discharge</li> </ul> <p><b>Development Needs (Documents)</b></p> <ul style="list-style-type: none"> <li>• Tourism plan or improvement programme for historical and tourist places (Gadaladeniya, Lankathilaka)</li> <li>• Development of bypass roads from Karamada temple to Geliyoa with side drains.</li> </ul>
Kundasale DSD	<p><b>Issues (Documents)</b></p> <ul style="list-style-type: none"> <li>• Lack of sanitation facilities</li> <li>• Lack of infrastructure facilities</li> </ul> <p><b>Development Needs (Documents)</b></p> <ul style="list-style-type: none"> <li>• Necessity of strategies to mitigate water pollution of the Mahaweli River.</li> <li>• Need measures for protecting water resources of Polgolla and Balagolla</li> </ul>
Kundasale PS	<p><b>Issues (Documents)</b></p> <ul style="list-style-type: none"> <li>• Lack of labourers for waste management</li> <li>• Long distance for waste collection and transportation (8km)</li> </ul> <p><b>Development Needs (Documents)</b></p>

LAs/DSDs	Issues and Needs
	<ul style="list-style-type: none"> <li>• Need waste management facilities (compost plant, leachate treatment plant, incinerators)</li> </ul>
Yatinuwara DSD	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Solid waste management (location identified: Kirinatiya)</li> <li>• Traffic congestion (Pilimathalawa)</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Development in Pilimathalawa, Danthure, Poththapitiya and Kadugannawa,</li> <li>• Identification of development opportunities in Muruthalawa</li> <li>• Research on the archaeological importance of the area</li> <li>• Tourism development at tourist attraction sites</li> </ul>
Yatinuwara PS	<p><b>Issues (Interview)</b></p> <ul style="list-style-type: none"> <li>• Solid waste management (dumping site is far)</li> <li>• Traffic congestion (Colombo-Kandy A1 road, Pilimathalawa)</li> <li>• Shortage of labour in management of waste and road maintenance</li> <li>• Deforestation problems and stream pollution issues.</li> <li>• Illegal construction</li> </ul> <p><b>Development Needs (Interview)</b></p> <ul style="list-style-type: none"> <li>• Expansion of A1 road is required</li> <li>• Promotion of handicraft around heritage site</li> <li>• Several collection centres should be developed for export crops</li> <li>• Clean canals, rivers and drains</li> <li>• Proper plan and equipment for garbage disposal</li> </ul>

Source: Resource profiles, web sites, and interviews conducted by the JICA Study Team

## CHAPTER 4 NATURAL AND SOCIO-ECONOMIC CONDITIONS

### 4.1 Natural Settings of Greater Kandy Area

#### 4.1.1 Locational Characteristics of Greater Kandy Area

The Greater Kandy Area is located at longitude 80°64'W and latitude 7°30'N and is situated at elevation around 500 metres above sea level. The area lies in the Tropical Rain Forest Zone, approximately 100 km inland from the economic capital of Sri Lanka, Colombo. Due to its higher elevation, the city has relatively cooler temperatures than the rest of the country with an average annual temperature of 24.5°C.

Kandy is endowed with an annual rainfall of approximately 2,000 mm. There are two rainy seasons. One takes place between the months of April-May and the other occurs from October-December.

Kandy has become the major transport hub being the intersection point of the major roads which can connect to all directions of the island. It is also the gateway to the central highlands of Sri Lanka.

Known as the last royal capital of Sri Lanka, the city also has one of the most sacred places of worship in the Buddhist world, The Temple of the Sacred Tooth Relic, which is a UNESCO heritage site. The heritage site along with the mountainous landscape attracts both domestic and overseas tourists.

#### 4.1.2 Natural Conditions of Greater Kandy Area

##### (1) Landscape of Greater Kandy Area

The Greater Kandy Area is located within mountain ranges such as the Knuckles Mountain Range stretching to Matale District located north of Kandy District and the Hanthana Mountain Range which lies at the south-east of the city.

In the eastern part of the Greater Kandy Area, there is Victoria Reservoir which has a surface area of approximately 23 km<sup>2</sup>. This reservoir is located in the upstream of Mahaweli River, which is the longest river in Sri Lanka. The Mahaweli River runs through the Greater Kandy Area, along the northern side of KMC.

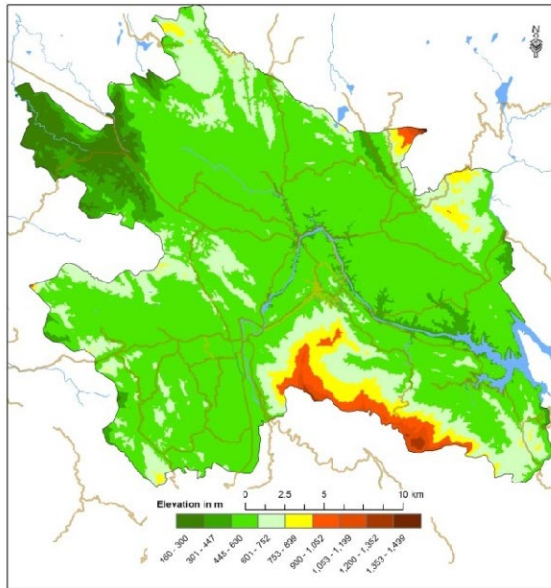
##### (2) Topography

###### Elevation

Looking at the general features of the terrain of the Project Area, the following elevation groups are observed:

- Higher Ridge area : Richmond Hill and north of Digana
- Middle Hilly area : Kandy township, Kadugannawa and Kundasale
- Lower Hilly area : Thumpane DSD





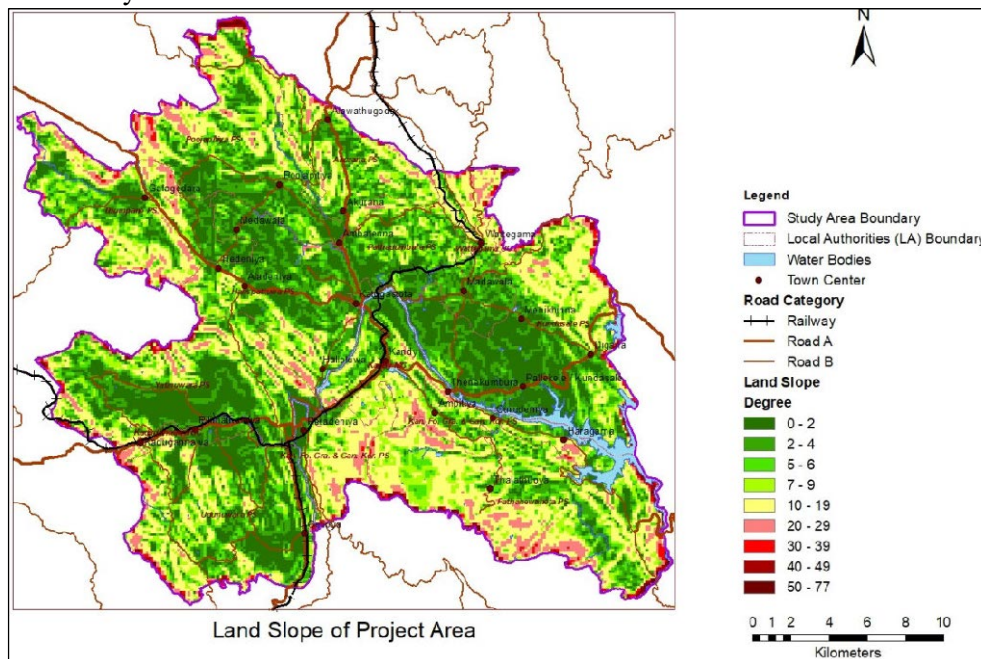
Source: The JICA Team

**Figure 4.1.1 Topographic Elevations**

**Slope Condition**

Looking at the degrees of slopes of the Project Area, the following features are observed:

- Gentle Slope Areas:
  - West Areas along A1 road including Peradeniya and Kadugannawa
  - Areas around Katugastota
  - Eastern areas around Kundasale, Digana, and Akurana
  - Areas around Poojapitiya
- Steep Slope Areas: Mainly found around the boundaries of Greater Kandy Area. Some steep slope areas are found southern part of KMC, along the river, and north of Peradeniya.



Source: The JICA Team

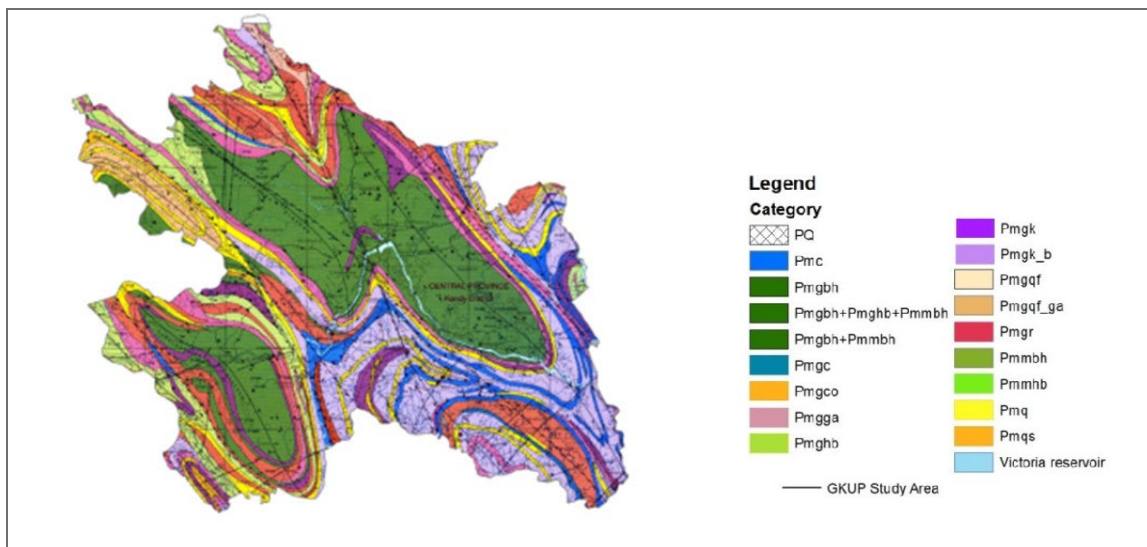
**Figure 4.1.2 Slope Degrees**

**(3) Geological Characteristics**

The ground of the project area consists of Precambrian bedrocks of the Highland Complex. Higher Ridge areas such as Richmond Hill and north of Digana are often formed by charnockitic gneiss and marble, while the Lower Hilly area is formed by quartzites. Middle Hilly areas such as Kandy MC, Kadugannawa and Kundasale are formed by biotite-hornblende gneiss of Wanni Complex.

The area has a holding structure with axis of northwest-southeast lineation that affects the landform in this area.

The bedrocks also had regulated the covering soils according to weathering condition. Charnockitic gneiss and marble often show a resistance to physical erosion and weathering so that those often compose the land at the higher elevations, at the same time, they tend to form steep slopes. Quartzite is very hard but fragile so that it often forms lowland due to its susceptibility to weathering.

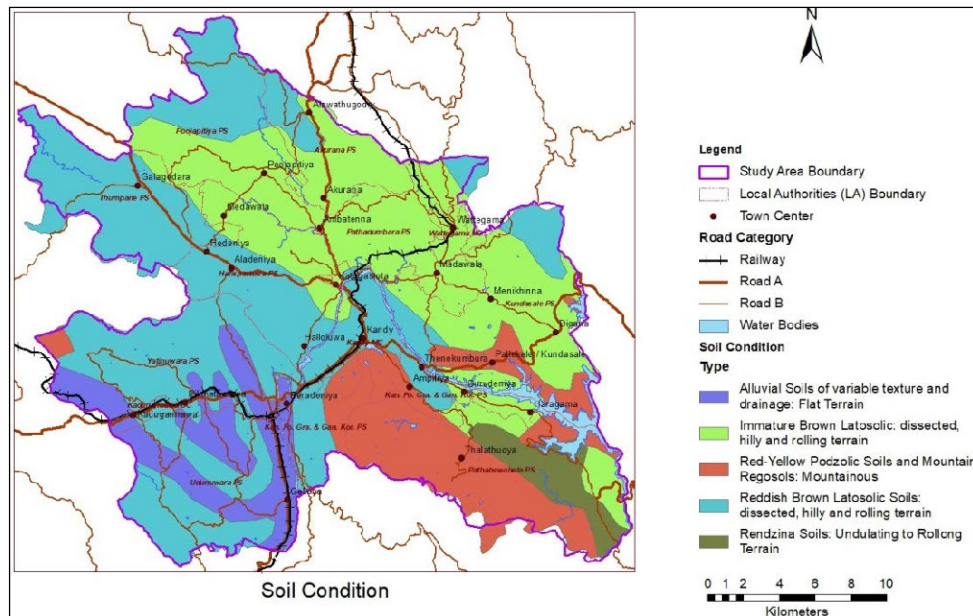


Source: Geological Survey and Mines Bureau

**Figure 4.1.3 Geological Settings**

**(4) Geology (Soil Condition), Hydrology**

Major soil condition is characterised as brown latosolic; on the other hand, podsollic soil is spread in the south-eastern area. Those soil conditions are relatively stable. Alluvial soil exists in the western area. It is said that alluvial soil forms soft ground and sandy conditions which are unstable and vulnerable to landslide risk.



Source: The JICA Team

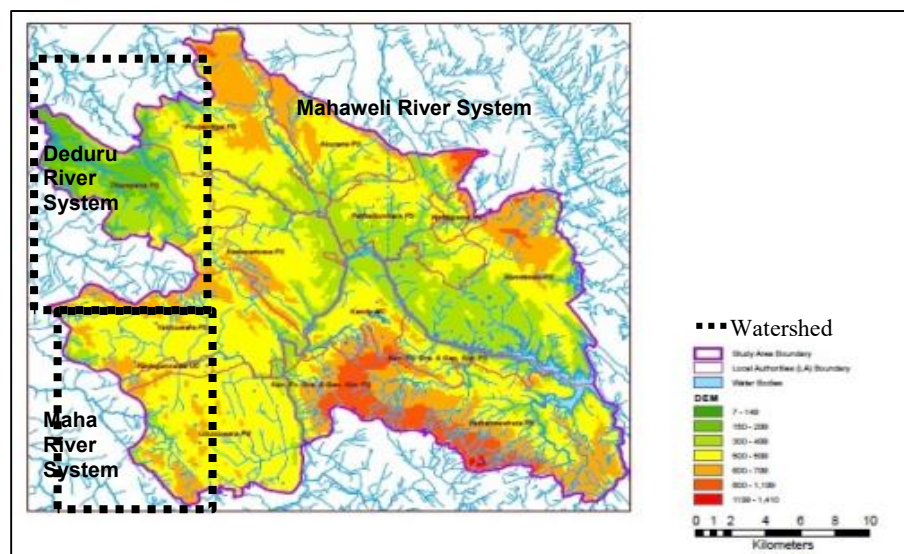
**Figure 4.1.4 Soil Condition**

The Mahaweli River, the longest river in Sri Lanka with a length of 335 km, benefits from a rich biodiversity and is a water supply in Kandy District.

**(5) River System**

Most of the project area is located in the southwest portions of the Mahaweli River System and watershed which is the largest river system in Sri Lanka. The Mainstream of Mahaweli River and its tributaries are eroded and form the topography of the Middle Hilly land and Higher Ridge area. The Lower Hilly area, which is less than 200 metres above sea level, is divided by Deduru River watershed. The south-western end of the project area belongs to Maha River System.

The project area is rich in water resources containing river networks formed of the Mahaweli River System, but occasionally suffers landslide disasters. This area has numerous unstable slopes due to erosion of the system.



Source: The JICA Team

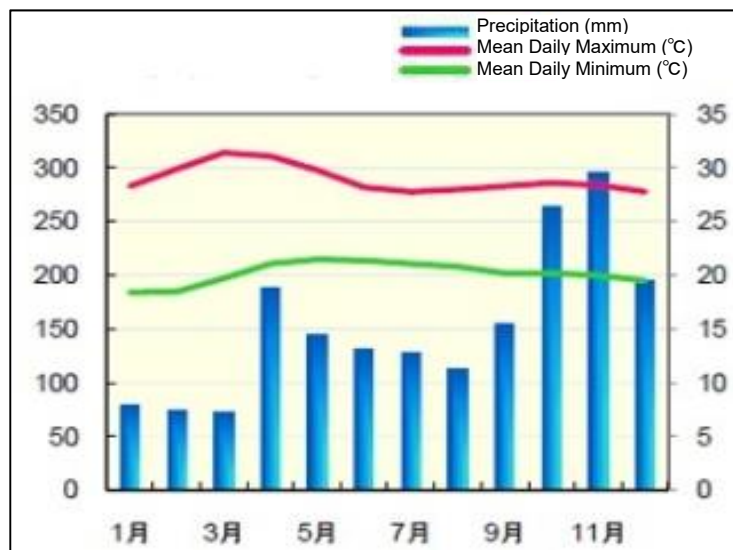
**Figure 4.1.5 River System**

(6) Climate

Grater Kandy is located in the centre of Sri Lanka. The dominant climate condition type in Sri Lanka is identified as “Tropical Monsoon”. The project area is categorised as tropical wet climate (Af) in Köppen climate classification. The climate can be categorised into 4 climate season as follows:

- i) First Inter monsoon seasons: March-April
- ii) Southwest Monsoon season: May-September
- iii) Second Inter monsoon season: October-November
- iv) Northeast Monsoon season: December-February

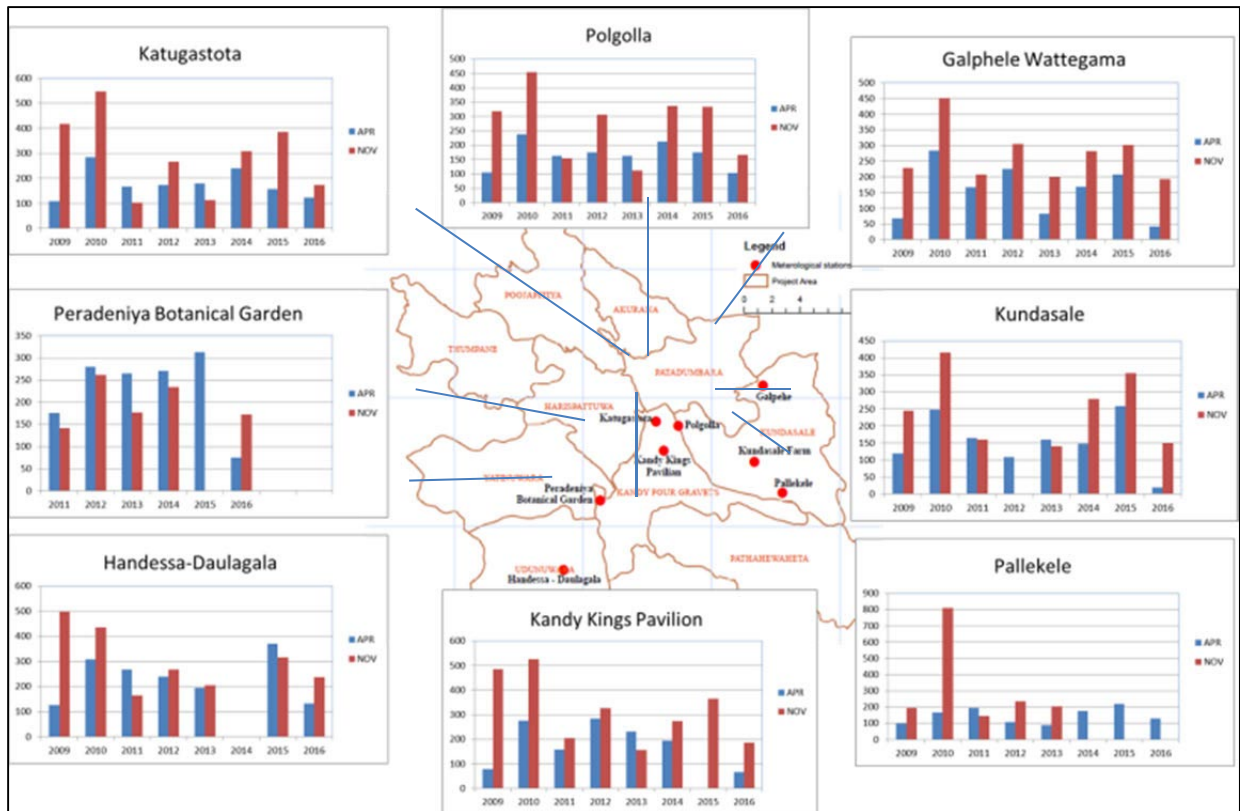
Temperature in Kandy is relatively low and annual rainfall accumulates less than 2,000 mm per year. The precipitation records of the last 30 years show the first rainy season, which produces more than 100 mm, is in April, and the most rain is in November.



Source: Department of Methodology

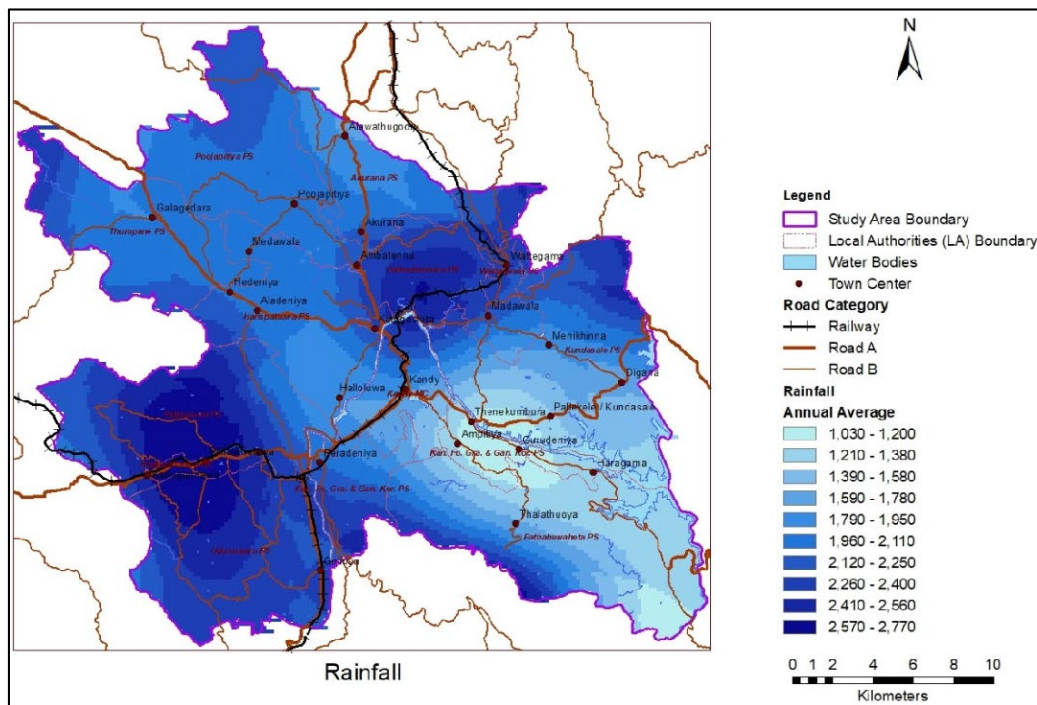
**Figure 4.1.6 Average Temperatures and Precipitation of Kandy**

Taking a look at the peak monthly precipitation using observations from the last 8 years, there appears to be a negative correlation between two peak months; April and November. In these peak months of precipitation, floods and landslides are occasionally induced.



Source: Department of Methodology

Figure 4.1.7 Monthly Rainfall during April and November



Source: The JICA Team

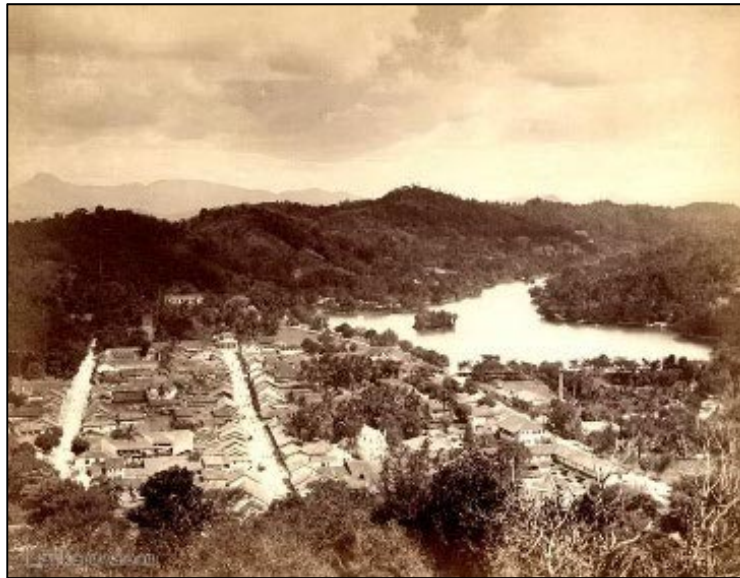
Figure 4.1.8 Rainfall Pattern in Kandy District

## 4.2 History

### 4.2.1 History of Kandy

The origin of the city of Kandy dates back to the beginning of the 14<sup>th</sup> century. In 1592, the city became the capital of the Sinhala Kingdom under the reign of King Rajasinghe I and remained as a capital until 1815. The king's palace was built in the wooded valley which functioned as a natural fortification. The king of the Kandy Kingdom also acted as the protector of the Buddhism as it had the tooth relic which was the sign of the ruler. The palace was built right adjacent to the Temple of the Tooth Relic (Dalada Maligawa). The first Temple of the Tooth Relic was built in 1603 to house the tooth relic of the Buddha which had been brought to Sri Lanka from India earlier in its history. Then, the temple was destroyed by the Portuguese in 1637 and rebuilt in 1697. Kandy Lake, which is next to the temple site, was completed in 1807 by the last Sinhala king. Additionally, beyond today's Heritage Area, several Buddhist temples were built in the Greater Kandy Area.

Despite the gradual invasion of the Western countries into Sri Lanka, such as the Dutch, Portuguese and the British, Kandy maintained its independence relatively later than other kingdoms in Sri Lanka. However, in 1815, Kandy finally surrendered to the British troops. After the colonisation, the king was deported and the town was redeveloped to accommodate the new commercial and administrative activities of the British ruler, but the Temple of the Tooth Relic remained and was still worshiped by the Sinhala people. Kandy first thrived as the trade centre of coffee, which was grown in the Greater Kandy Area. As coffee turned out to be weak to the insect pests, tea was introduced instead as the major product of the area and Kandy has thrived as a commercial centre of the tea trade since then.



Source: <http://lankapura.com/>

**Figure 4.2.1 View to the Temple of Tooth Relic in the late 19th Century**



Source: The JICA Team

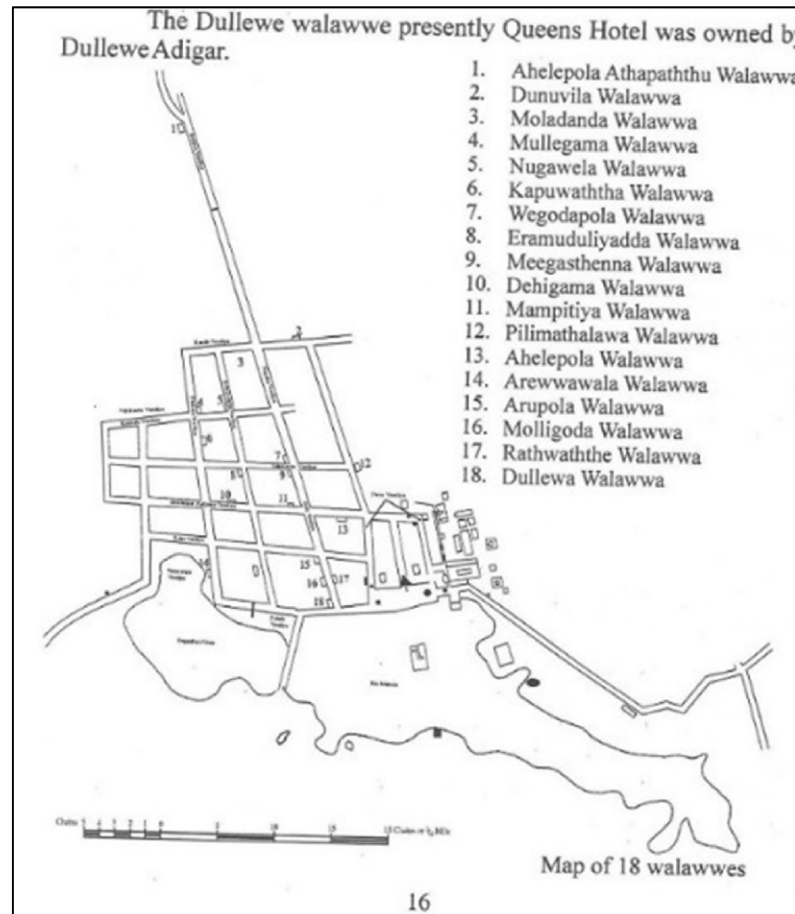
**Figure 4.2.2 Temple of the Tooth Relic**

During the British occupation, though the Temple of the Tooth Relic was preserved, most of the buildings that date back to the Kandyan period were demolished. However, the grid patterns which were laid out next to the Temple's premises was preserved and served as the basic structure of the commercial area. Within today's Heritage Area, the public zone was developed around the Bogambara Lake, which is in the western part of the area, based on several maps which show the condition during the British Period. These buildings include the Bogambara Prison, market, railway station, and private schools such as Trinity College. In 1947, Sri Lanka gained independence from Britain. In Kandy, no major development was observed to alter the basic structure of the town or the buildings. The small colonial shophouse buildings in the Grid City as well as public buildings built during the British period continue to be used to serve the people to this day. The Temple of the Tooth Relic was once attacked by terrorists in 1998 but it was restored quickly. The temple has continued to be the major place of worship for Sri Lankan people along with Buddhists around the world.

#### **4.2.2 Inscription as a UNESCO World Heritage Site**

After the independence, several ancient sites started to deteriorate due to lack of acknowledgement and support from the government. To protect and raise the awareness of these nationally important places, the country made an effort to register these sites as World Heritage Sites. Due to the national effort to protect the ancient sites such as Anuradhapura, Dambulla, Sigiriya and Kandy, the Cultural Triangle Project was initiated during the 1980s by incorporating the funds from UNESCO and the national government to research and restore the sites. Anuradhapura ("Sacred City of Anuradhapura", Sigiriya ("Ancient City of Sigiriya"), Polonnaruwa ("Ancient City of Polonnaruwa") and Kandy ("Sacred City of Kandy") were inscribed as UNESCO's World Heritage Sites in the 1980s. Galle Fort, which is located outside of this Cultural Triangle, was also nominated as a World Heritage site ("Old Town of Galle and its Fortifications") in 1988. These nominations in the 1980s are relatively early examples of the nomination, according to Prof. Nishimura of Tokyo University. Around that time, the idea of buffer zones, which are areas surrounding the core zone, was not introduced yet, and this has remained to be a contention between UNESCO and the Sri Lanka side until today. At present, even the core zone is not shown in the official map section on the website of the World Heritage Centre by UNESCO (<http://whc.unesco.org/en/list/>).

Today, most of the buildings from Kandyan Period – except for the Temple of the Tooth Relic – are said to have been demolished to make way for the development by the British within the boundary of the Heritage Area. However, the people in Kandy have identified the locations of eighteen Walawwa (manor house of Kandyan aristocrats) and gave recognition to them. Although most Walawwa are believed to have been demolished by now, some buildings, such as the Remand Prison and Queens Hotel, are believed to be evolved from the former Walawwas.



Source: World Heritage Advisory Committee, KMC, “The Growth of Queens Hotel from the Dullewa Walawwa”. (booklet<sup>1</sup> obtained at the meeting with the KMC in March, 2017)

**Figure 4.2.3 Location of 18 Walawwas in Grid City**

### 4.2.3 Kandyan Temples in the Suburbs

The buildings which were built during the Kandyan Period are found outside of the Heritage Area, and the people in Kandy and Sri Lanka recognise their significance and venerate them. They are listed as monuments by the Department of Archaeology (Antiquities Ordinance) and thus protected. They were built sometime between the 14th and 18th centuries. The most important ones are Gadaladeniya, Lankathilaka, Embekka (all were built in the 14th century), and Degaldoruwa (18th century). The first three temples are located closely together in Pilimathalawa and even attract some foreign tour groups. The temples collect 300 rupees per person for foreigners. The fees collected are used for the temple’s own purposes, such as to hold Perahera procession, and not for the conservation and rehabilitation works for the buildings. Although the buildings of the temples are not in perfect condition, the buildings have not fallen apart and were repaired with some maintenance work. For instance, the Lankathilaka temple was reroofed by the DOA. The murals, on the other hand, are deteriorated and sometimes removed from the walls of the temples, which seems to be problematic.

The landscape of the temples is also worth noticing. In particular, Lankathilaka is located in the mountains and is surrounded by rice paddies, both of which need to be protected from random development in the future to preserve the cultural landscape of Lankathilaka. As the older buildings along with their natural surrounding from the Kandyan Period are lost, the significance of these buildings in the suburbs is quite important.





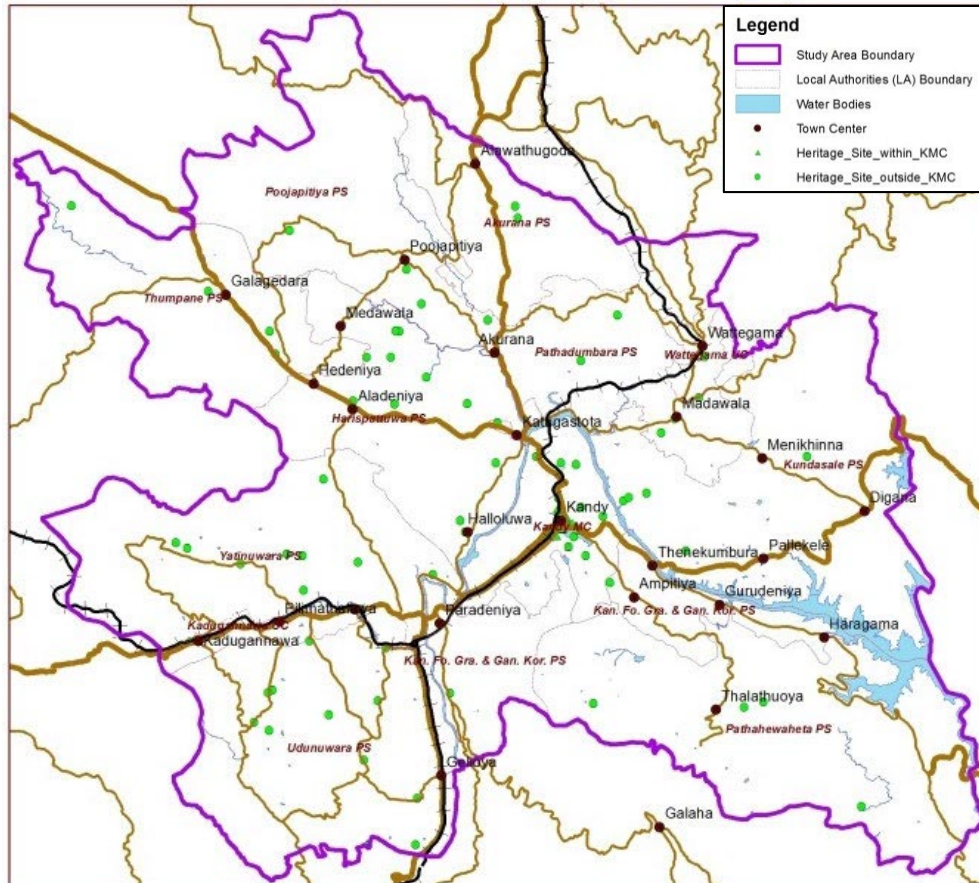
Source: The JICA Team

**Figure 4.2.4 Suburban Kandyan Temples**

#### 4.2.4 Heritages

The Department of Archaeology has registered historic heritage monuments and buildings according to the Antiquities Ordinance 1940. There are 112 registered buildings within KMC and 71 buildings outside KMC, as shown in Figure 4.2.5.

These buildings should be well maintained and also be considered for regional tourism resources.



Source: Department of Archaeology

**Figure 4.2.5 Location of Historical Heritages Designated by Department of Archaeology**

### 4.3 Urban Form

#### 4.3.1 Urbanisation and Urban Form

The urbanisation pattern of the Greater Kandy Area is characterised by the topography, which restricts urban growth. At the same time, the topography and historical assets create the original landscape of Kandy.

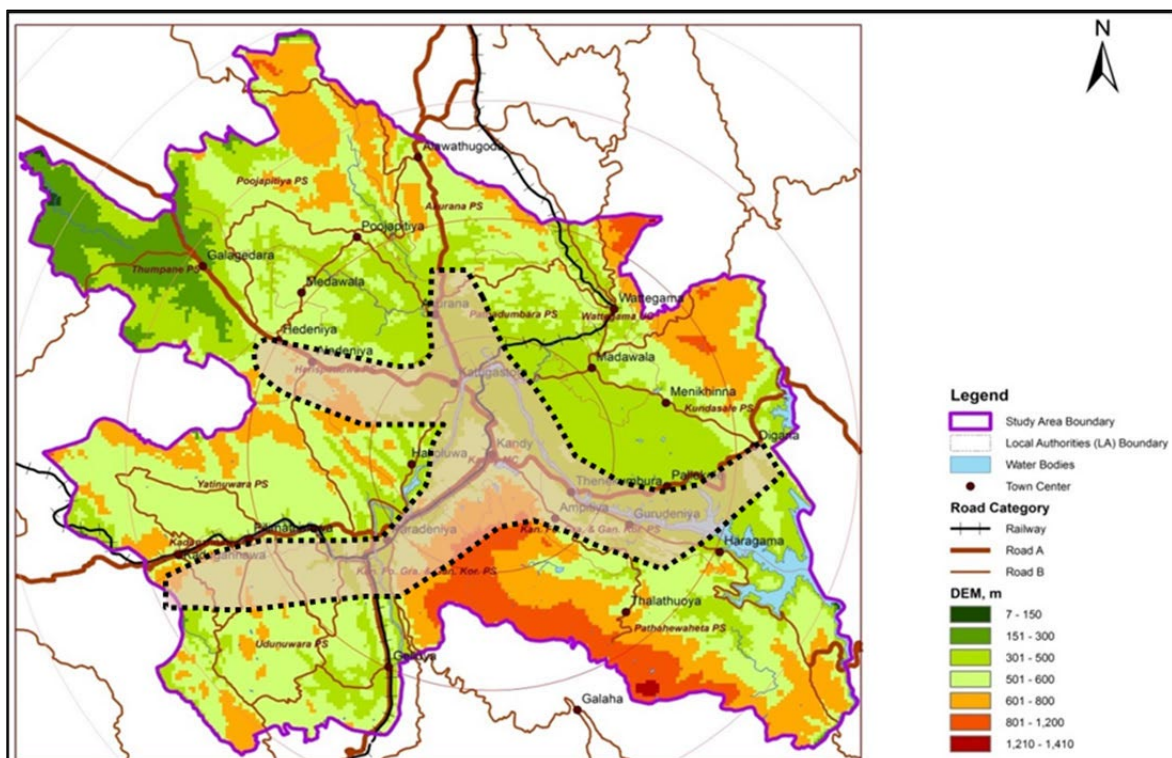
Most of the urbanised areas are concentrated in the central part of KMC, such as the Commercial Grid, Civic Hub, and Public Transit Zone. Historically, these areas have high density. Recently, urbanisation has been expanding towards the hilly areas surrounding the centre. Buildings such as houses and hotels are scattered on the hills.

At the same time, roadside developments are remarkable along the A1 Road and the bypass road (AB42) connecting to Peradeniya and A9 connecting to Katugastota. Along these roads, relatively large buildings such as car dealers are concentrated.

The sprawl pattern generally grew with a long and narrow shape along the main road together with around suburban city centres, namely the cluster cities. Urban sprawl and ribbon development along main road corridors are causing a range of urban issues.

Residences, which are called *home gardens*, are found in most part of the Greater Kandy Area. Recently, unplanned residential areas have been scattered in the home garden areas around the agriculture land and forest area without proper development control.

As the uncontrolled development extends in a long strip, there is an increase in the cost of various basic utilities which inhibits sustainable development. Furthermore, the development of ribbons causes lack of cohesion and a scattering of the community. The spreading of urban functions in the Greater Kandy Area has led to socio-economic issues. It also caused the loss in agricultural products by reducing the compactness of agricultural lands.

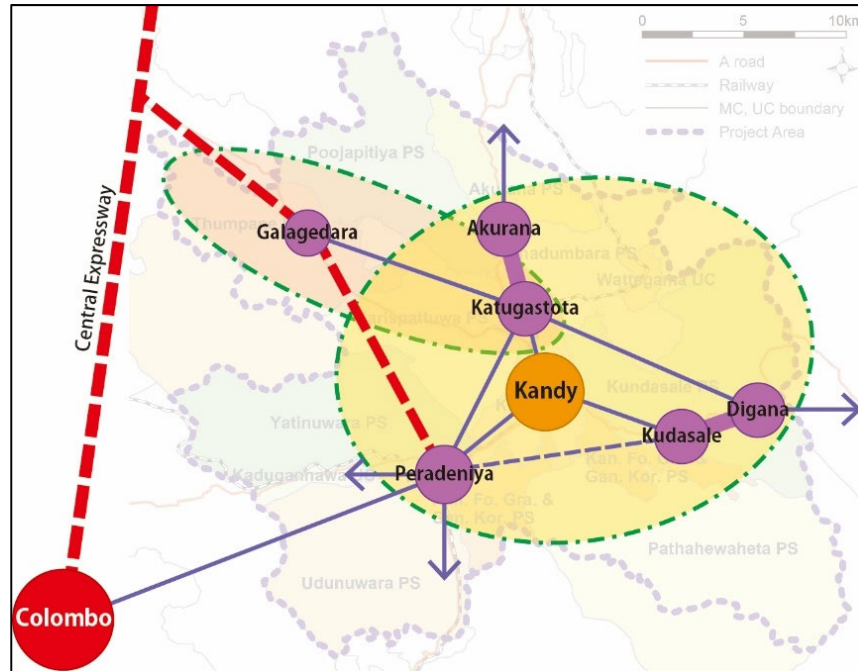


Source: The JICA Team

**Figure 4.3.1 Urban Sprawl and Ribbon Development Pattern in Study Area**

### 4.3.2 Cluster Cities and Urban Growth Trend

In the Greater Kandy Area, there are other major cities located in suburbs between 5 to 15 km from the centre of Kandy, and they are called “Cluster Cities”. The central area of Kandy and these cluster cities create the spatial characters, or urban form of the Greater Kandy Area. Figure 4.3.2 shows the locations of major cluster cities in the regional context.



Source: The JICA Team

**Figure 4.3.2 Cluster Cities in Greater Kandy Area**

These cluster cities have their own character. Below, the characteristics of cluster cities are described along with their urban growth trend.

Urban growth trend for the Greater Kandy Area is difficult to grasp physically as there are no historical data of urbanised areas. On the other hand, it is possible to understand the urban growth pattern in each cluster cities by using Google Earth which provides some historical satellite imageries. Satellite images of Kandy and major cluster cities in 2002 or 2003 and 2016, 2017, or 2018 are compared for urban growth analysis together with the spatial characteristics of the cities. On the other hand, population growth indicates urban expansion and a growth pattern, which is described in Chapter 4.4.

In general, urbanisation has been happening in almost all suburban areas, and scattered building constructions have been continuously happening. Some cluster cities are becoming service centres to provide mainly commercial activities and public services. However, these urbanisations have been naturally happening and resulted in an unorganised condition.

#### (1) Kandy

This is the major city in the Greater Kandy Area. As already described in the earlier chapters, urbanised area has been developed around the Grid City, and it is clearly shown in the satellite in 2002/2003. New buildings, such as houses and hotels, are newly built in the hilly area surrounding the centre and on the river side, and the density has become higher. On the other hand, the sanctuaries are kept as shown in greeneries.



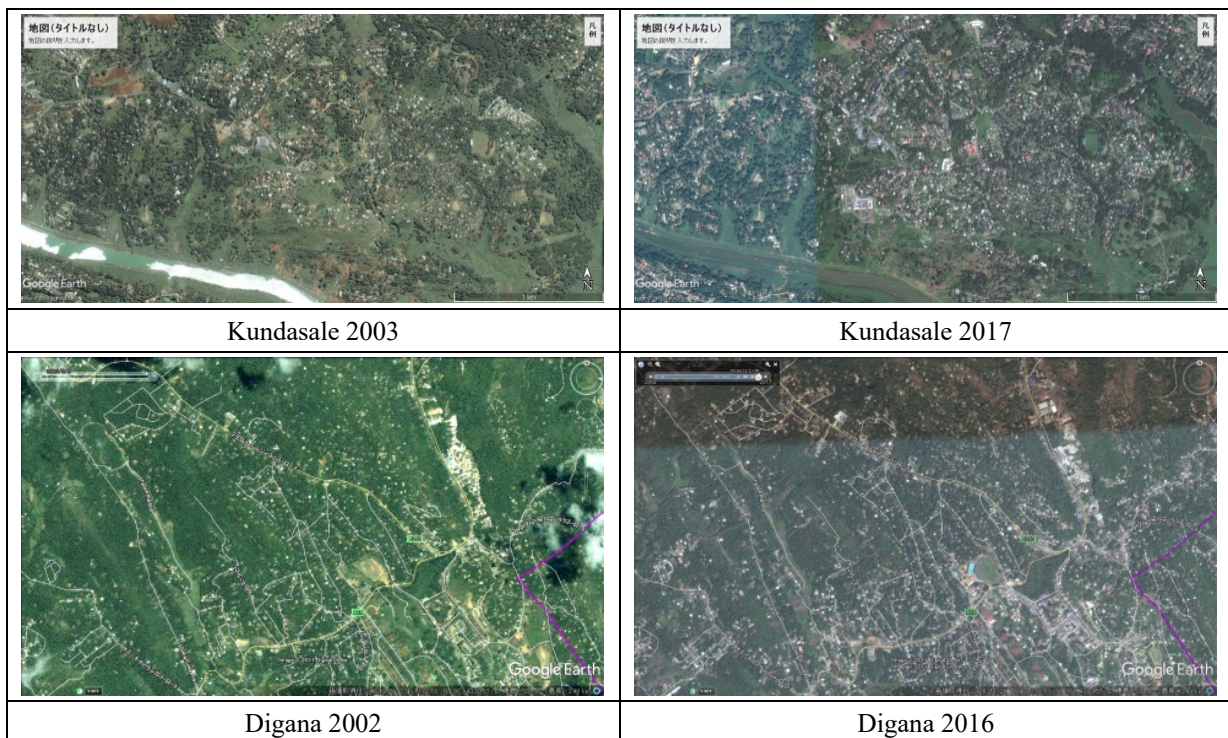
Source: The JICA Team, analysis done with Google Satellite Imageries

**Figure 4.3.3 Urban Growth Analysis of Kandy**

**(2) Kundasale - Digana**

**Kundasale:** Kundasale is located in the east of KMC, and some administrative buildings have been strategically built along the major road, A26 Road, according to the UDA’s concept. Recently, some residential buildings are increasing around the area, but no clear urban centre has been formulated yet. Along the major road, the industrial area is also located, and many workers come to this area for their works.

**Digana:** Digana is located 10 km east of KMC, which is a limit of urbanisation of the Greater Kandy Area. Scattered housings were already found in the satellite in 2002, and its density has become higher in 2016. It looks like filling the gaps between the low density housing constructions. Population growth is also remarkable in this area. However, there is still much greenery found in the satellite image. A new service centre was created along the road, but it is still a small service centre providing local commercial function in this area.



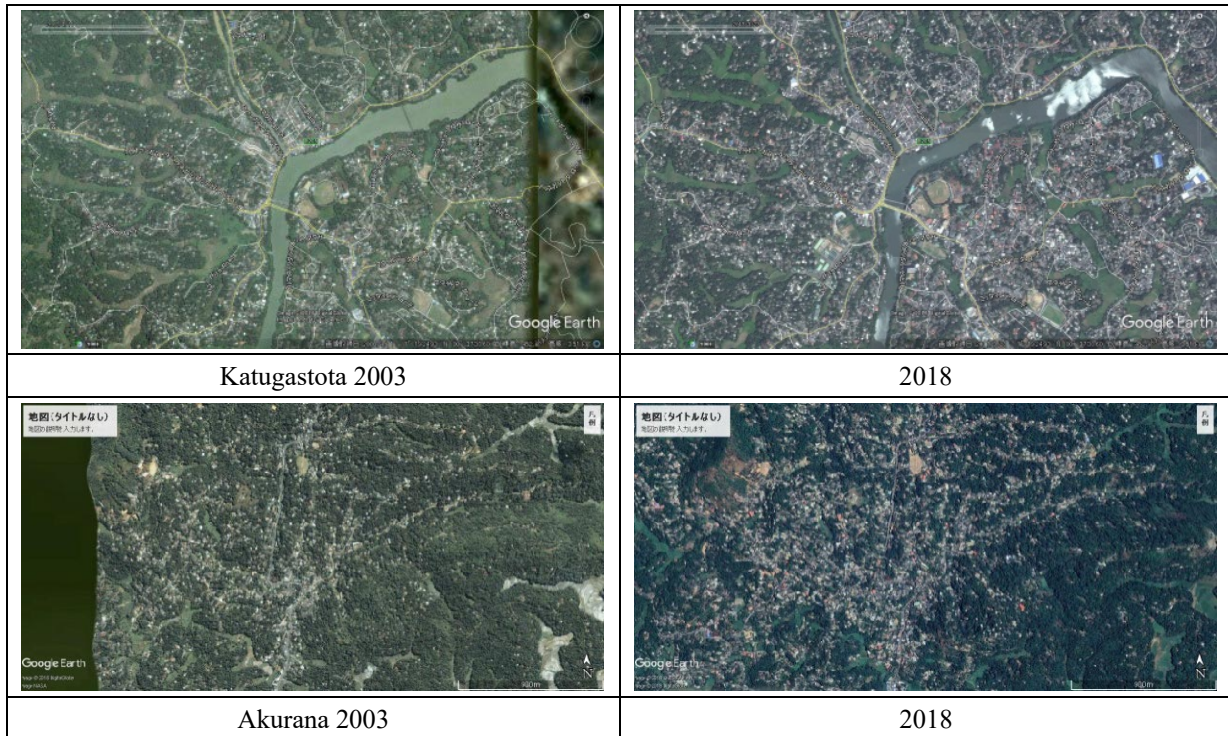
Source: The JICA Team, analysis done with Google Satellite Imageries

**Figure 4.3.4 Urban Growth Analysis of Kundasale and Digana**

(3) **Katugastota - Akurana**

**Katugastota:** Katugastota is the most developed cluster city in the Greater Kandy Area. In the north of KMC, the urbanisation is concentrated around the bridge crossing the Mahaweli River. After the bridge, there is the junction of A9, A10, B205, and B365 roads, where the centre of Katugastota can be found. Commercial buildings are concentrated around the junction and the national roads, and they compose ribbon-type development. In 2002, there were still green areas that remained on the back side areas of the national roads. However, buildings have remarkably increased by 2017. The two satellite images clearly show the increase of buildings. There are railway lines and a railway bridge located east of the road bridge. There is a station in the east part of Katugastota, which is 1 km away from the town centre near the road bridge. However, less urbanisation has occurred along the railway.

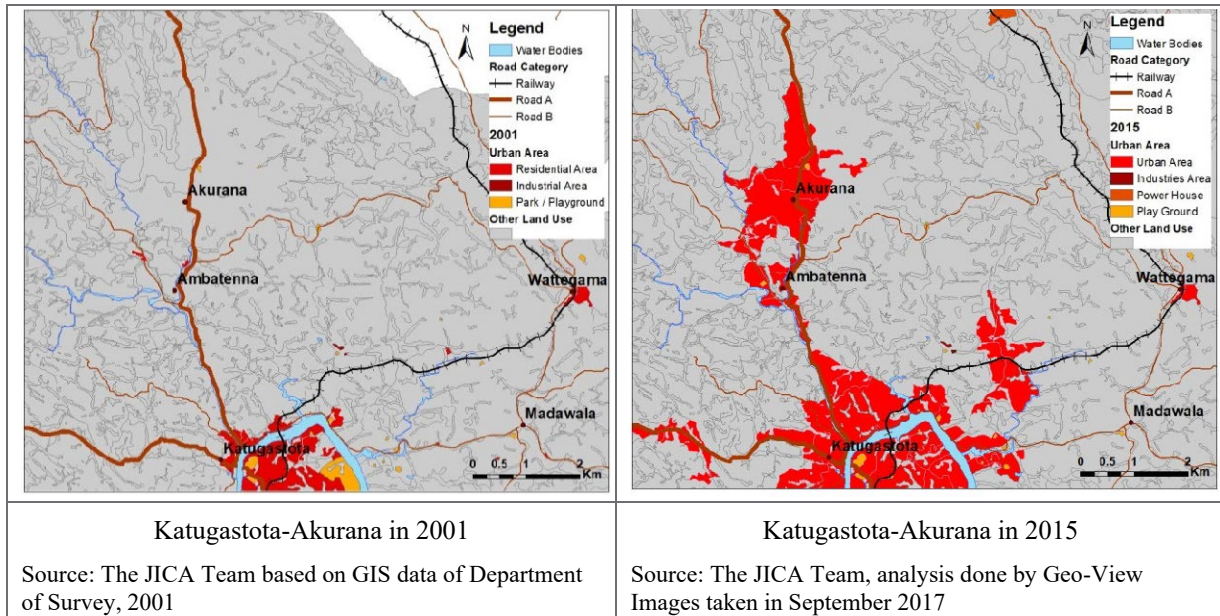
**Akurana:** Akurana is located 5 km north of Katugastota along A9. This is among the most densifying areas in the Greater Kandy Area. Along A9, there have been many retail buildings constructed, and they formed a ribbon-shaped urbanised area. In the past 15 years, many residential buildings have been constructed around Akurana. Due to the topographical condition where they have been constructed, these houses compose lines along local roads. Some areas between the local roads have remained green areas.



Source: The JICA Team, analysis done by Google Satellite Imageries

**Figure 4.3.5 Urban Growth Analysis of Katugastota and Akurana**

Figure 4.3.6 shows the urban growth pattern between Katugastota and Akurana areas in 2001 and 2015. The expansion of the urban area in Katugastota extended to about 2 km from the urban boundary in 2001. Road A9 connects Akurana and Katugastota and links the development of both areas including Ambatenna, a small town located in between. In particular, the urban growth around Akurana was remarkable. The growth of the town expanded along the transportation network of the main road and railway. Katugastota's radial transportation network pattern connected the surrounding areas and at the same time, played a role as a logistics centre besides Kandy.



**Figure 4.3.6 Urban Growth Pattern of Katugastota – Akurana**

**(4) Peradeniya**

Located in the west of KMC, Peradeniya is home to the University and the botanical garden located in the eastern bank of the Mahaweli River. To date, no private development can be seen in the area. On the other hand, the junction of A1 and A5 is located on the western bank of the river. Despite the presence of many retail shops, less development taken place around the junction. It is because of the topographical constraint that the junction is located between the river and cliffs. In the south of the junction, Peradeniya Junction Station and some commercial buildings exist. However, no clear urban centre has been composed. On the other hand, housing constructions have been active around the area. By using green areas, the satellite image shows the increase of buildings within the vicinity.



Source: The JICA Team, analysis done by Google Satellite Imageries

**Figure 4.3.7 Urban Growth Analysis of Peradeniya**

(5) Other Cities

Galagedara is located 13 km north-west of KMC, and it will be the gateway to Colombo when the expressway is constructed. The satellite images are available from 2010 in Google Earth. By comparing the two satellites of 2010 and 2018, no changes can be observed. The town is concentrated along B122, and still many non-developed lands can be found.



Source: The JICA Team, analysis done by Google Satellite Imageries

**Figure 4.3.8 Urban Growth Analysis of Galagedara**



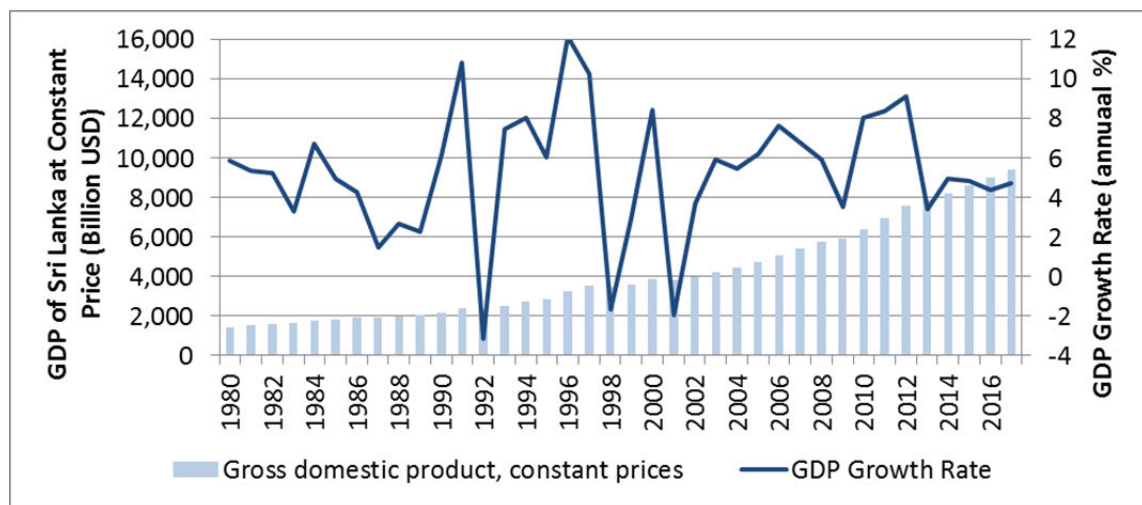
## 4.4 Socio-Economic Condition

### 4.4.1 Socio-Economic Condition of Sri Lanka

#### (1) Current Economic Situation of Sri Lanka

The long Sri Lankan Civil War, which started in the 1980's and lasted for approximately 25 years, is said to have slowed the national economic growth. The economy of Sri Lanka was also affected by the global financial crises in 1992 and 1998, showing minus growth in GDP annual growth rate. Despite these two financial crises, the GDP of Sri Lanka grew rapidly in the 1990's with a GDP annual growth rate of over 6% in the years that followed.

In 2001, Sri Lanka faced bankruptcy and the GDP growth showed minus growth again. However, since 2002, Sri Lanka has recovered its economy and has been showing constant growth. The end to the civil war in 2009 also helped spur the national economic growth.



Source: International Monetary Fund, World Economic Outlook October 2017

**Figure 4.4.1 GDP and GDP Annual Growth Rate (Constant Price) of Sri Lanka**

Sri Lanka has also been increasing its GDP per capita constantly. In 2016, the GDP per capita was provisionally estimated at US\$3,835, or 558,363 Rp according to Central Bank of Sri Lanka<sup>1</sup>, and the figure is expected to grow beyond US\$4,000 in 2018 according to IMF's estimate. Sri Lanka is projected to make a transition to an upper middle income country soon.

Looking at the regional economy, among the nine provinces in Sri Lanka, the Western Region has the highest GRDP (Gross Regional Domestic Product) with a share of over 40% of the national GDP. Three provinces, including Central Province where Greater Kandy is located, follows Western Province with over 10% share of the national GDP. Central Province has the fourth largest GRDP in Sri Lanka.

#### (2) GDP per Capita

##### 1) Sri Lanka and Other Countries

Sri Lanka's per capita GDP was US\$3,610 in 2013, slightly higher than that of Indonesia. Among the South Asian Association for Regional Cooperation (SAARC) countries, Sri Lanka is in the 2nd place following the Maldives (US\$5,309). During a two-year period, Sri

<sup>1</sup> Economic and Social Statistics of Sri Lanka 2017, Central Bank of Sri Lanka

Lanka's per capita GDP grew at a rate of 7.4% per annum, following Bangladesh and the Philippines.

**Table 4.4.1 Per Capita GDP Comparison with Selected Asian and SAARC Countries**

	2011 (US\$)	2012 (US\$)	2013 (US\$)	Growth Rate (%) 2011/2013
Sri Lanka	3,129	3,351	3,610	7.4%
Indonesia	3,690	3,740	3,459	-3.2%
Malaysia	10,252	10,656	10,809	2.7%
Philippines	2,380	2,611	2,792	8.3%
Thailand	5,597	5,978	6,294	6.0%
Afghanistan	723	790	786	5.3%
Bangladesh	825	850	999	10.0%
Bhutan	2,570	2,531	2,430	-2.8%
India	1,551	1,514	1,548	-0.1%
Maldives	5,323	5,296	5,309	-0.1%
Nepal	694	664	666	-2.2%
Pakistan	1,195	1,188	1,194	-0.4%

Note: Sri Lanka's 2011 figure is updated with the latest population figure.

Source: Sri Lanka Socio-Economic Data 2016, Central Bank of Sri Lanka, June 2016

## 2) Provincial GRDP Per Capita

In 2015, the national average GRDP (Gross Regional Domestic Product) per capita was Rs. 533,398. The Western Province registered the highest GRDP per capita at Rs. 771,117, followed by the North Western Province (Rs. 499,931), North Central Province (Rs. 462,743), Southern Province (Rs. 453,556), Uva Province (Rs. 446,138) and Central Province (Rs. 433,556). Central Province has shown the largest GRDP annual growth rate between 2012 and 2013 with over 20% growth rate. However, this growth rate has dropped greatly since then and was only at 7.1% between 2014 and 2015.

**Table 4.4.2 Per Capita GRDP of Provinces in Sri Lanka**

Province	Per Capita GRDP (Rs.)				Growth Rate (%)		
	2012 (a)	2013 (b)	2014 (a)(b)	2015 (b)	2013/2012	2014/2013	2015/2014
Western	552,992	617,917	734,094	771,117	11.7%	18.8%	5.8%
Central	300,380	368,632	408,924	433,556	22.7%	10.9%	7.1%
Southern	335,729	380,741	433,162	453,714	13.4%	13.8%	5.7%
Northern	261,117	290,347	321,289	357,120	11.2%	10.7%	12.1%
Eastern	306,471	344,701	379,741	415,331	12.5%	10.2%	10.9%
North Western	318,187	368,850	476,346	499,931	15.9%	29.1%	5.9%
North Central	298,382	342,085	417,225	462,743	14.6%	22.0%	12.1%
Uva	284,795	319,044	428,212	446,138	12.0%	34.2%	5.4%
Sabaragamuwa	241,467	269,685	360,876	392,913	11.7%	33.8%	9.9%
Sri Lanka	371,061	421,509	503,032	533,398	13.6%	19.3%	7.0%

Note: (a) revised, (b) provisional

Source (2012 & 2013): Sri Lanka Socio-Economic Data 2015, Central Bank of Sri Lanka, June 2015

Source (2014 & 2015): Sri Lanka Socio-Economic Data 2016, Central Bank of Sri Lanka, June 2016

## 3) National and Regional Population

Sri Lanka's population reached 14.8 million in 1981, 18.7 million in 2001 and 20.3 million in 2012, respectively. The total fertility rate (TFR) of Sri Lanka was estimated to have declined to below 2.00 in 2001, then gradually increased again to 2.40 by 2012. A

TFR of 2.1 children per woman is said to be the necessary rate to generate a stable population.

Although the future population will greatly depend on the future TFR, the national population is assumed to increase modestly to 21-23 million before it begins to decline again, according to the World Bank.

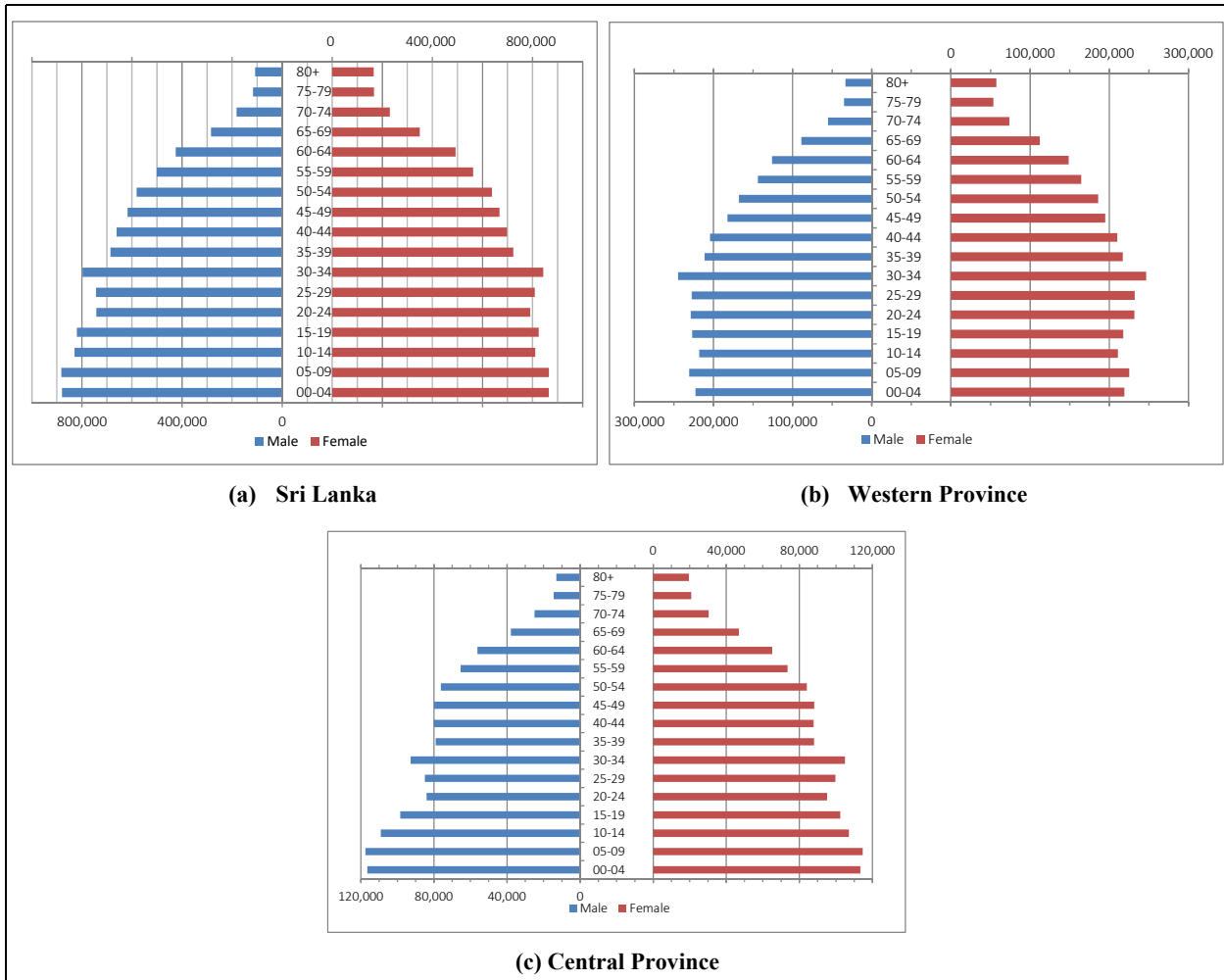
The most populated province in Sri Lanka is the Western Province with 5.85 million inhabitants in 2012, followed by the Central Province with 2.57 million. However, the population annual growth rate between 1981 and 2001 in the Central Province was 0.94%, and 0.54% between 2001 and 2012. These figures of the Central Province were lower than the national averages which were 1.19% and 0.73%, respectively. Therefore, the population of other provinces such as the Southern Province and the North Western Province, which have higher population growth rates than the Central Province, are set to overstride the population of the Central Province soon.

**Table 4.4.3 Past Population Trend of Sri Lanka and Provinces**

		1981	2001	2012
Western Province	Population	3,919,807	5,381,197	5,851,130
	Annual Population Growth Rate		1.60%	0.76%
Central Province	Population	2,009,248	2,423,966	2,571,557
	Annual Population Growth Rate		0.94%	0.54%
Southern Province	Population	1,882,661	2,278,271	2,477,285
	Annual Population Growth Rate		0.96%	0.76%
Northern Province	Population	1,109,404	1,040,963	1,061,315
	Annual Population Growth Rate		-0.32%	0.18%
Eastern Province	Population	975,251	1,419,602	1,555,510
	Annual Population Growth Rate		1.89%	0.83%
North Western Province	Population	1,704,334	2,169,892	2,380,861
	Annual Population Growth Rate		1.21%	0.85%
North Central Province	Population	849,492	1,104,677	1,266,663
	Annual Population Growth Rate		1.32%	1.25%
Uva Province	Population	914,522	1,177,358	1,266,463
	Annual Population Growth Rate		1.27%	0.67%
Sabaragamuwa Province	Population	1,482,031	1,801,331	1,928,655
	Annual Population Growth Rate		0.98%	0.62%
Sri Lanka	Population	14,846,750	18,797,257	20,359,439
	Annual Population Growth Rate		1.19%	0.73%

Source: Department of Census & Statistics, Census of Population and Housing 2001 and 2012

Figure 4.4.2 shows the population pyramid of Sri Lanka, Western Province and Central Province. Despite the increase in TFR, these three population pyramids no longer show the expansive population pyramids where the population is young and growing. One of the reasons may be due to the smaller number of population among the population age groups of 20-24 and 25-29 (the most suitable age groups for childbearing) compared to other age groups stated above and below.



Source: Department of Census and Statistics, Census of Population and Housing 2012

**Figure 4.4.2 Population Pyramid of Sri Lanka and Western and Central Provinces (2012)**

#### 4) Urban Population in Sri Lanka

There are three sectors of residence in Sri Lanka which are urban population, rural population and estate population. Urban population is defined as the population living in municipal councils and town councils. Estate population is defined as the population living in commercial lands that are in extent of twenty acres or above and where more than ten labourers are employed.

In 2012, the urban population in Sri Lanka was approximately 3.7 million, which is 18.2% of the total population. Of the total urban population, 1.8 million, which is approximately half of the national urban population, lived in the Colombo District, while only 0.17 million, which is approximately 4.6%, lived in the Kandy District.

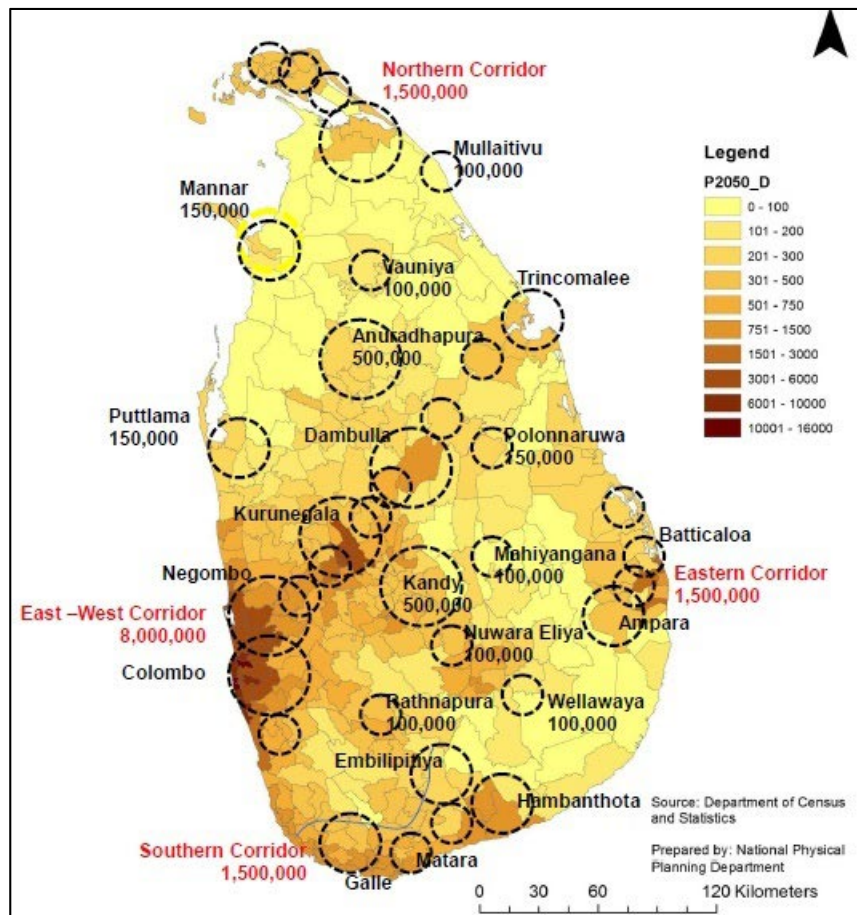
World Urbanisation Prospects: The 2014 Revision, which was prepared by Population Division of United Nations, estimated that the urban population in 2050 will be approximately 7 million, which will comprise 30% of the future population.

However, it is well recognised that the definitions and the categories of urban population need to be revised in the current context since the existence of urbanised areas do not fall within the Municipal or Town council areas.

The National Physical Planning Policy 2050, which is under preparation by the National Physical Planning Department, has also issued a statement regarding the future urban

population. In this document, it states the necessity of the share of urban population to increase to 70-80% in the next 30 years, which means the urban population of Sri Lanka will increase to approximately 15 million by 2050.

The figures below show the future population distribution pattern prepared by the National Physical Planning Policy 2050. Greater Kandy is assumed to accumulate 0.5 million urban population as an important metropolitan region, while the East-West Corridor (otherwise known as Cross Country Urban Corridor) is assumed to accumulate a population of 8 million.



Source: Draft National Physical Planning Policy 2050

**Figure 4.4.3 Population Distribution Pattern**

### (3) National Future Population Projections

#### 1) Future Population Projection by the United Nations

Table 4.4.4 shows the UN Population Division's population forecast for Sri Lanka for the years 2017, 2025, 2035 and 2050, respectively. The figures in the table are categorised into low variant, medium variant and high variant.

The medium variant projection is based on the assumption that the TFR in Sri Lanka will fall from approximately 2.11 children per women between 2010- 2015 to 2.03 by 2015-2020, and further to 1.83 in 2035-2040. The low variant projection assumes that the TFR will fall rapidly to 1.78 by 2015-2020 and further to 1.30 by 2035-2040. On the other hand, the high variant projection assumes that the TFR will gradually increase to 2.28 by 2015-2020, further to 2.41 by 2025-2030, then gradually fall to 2.33 by 2035-2040.

**Table 4.4.4 Future Population Forecast for Sri Lanka by UN**

		2001	2012	2017	2025	2035	2050
Low Variant	Population	18,797,257	20,359,439	20,850,351	20,931,583	20,332,529	18,464,671
	Annual Growth Rate	-	0.73%	0.48%	0.05%	-0.29%	-0.64%
Medium Variant	Population	18,797,257	20,359,439	20,905,335	21,417,175	21,545,860	20,835,659
	Annual Growth Rate	-	0.73%	0.53%	0.30%	0.17%	-0.22%
High Variant	Population	18,797,257	20,359,439	20,960,321	21,902,768	22,760,060	23,314,875
	Annual Growth Rate	-	0.73%	0.58%	0.55%	0.38%	0.16%

Source: Department of Economic and Social Affairs Population Division, 2015, World Population Prospects the 2015 Revision Key Finding and Advance Tables, United Nations

## 2) Other Future Population Projection for Sri Lanka

The Department of Demography in the University of Colombo has projected the future population of Sri Lanka in 2037. Table 4.4.5 shows the population forecasts for years 2017, 2022, 2027, 2032 and 2037. The figures in the table show the low variant, standard variant and high variant projections.

The standard variant projection is based on the assumption that the TFR in Sri Lanka will fall from 2.37 in 2012-2017 to 1.73 in 2032-2037. The low variant projection assumes that the TFR will fall from 2.14 in 2012-2017 to 1.56 by 2032-2037, while the high variant projection assumes that it will decrease from 2.56 in 2012-2017 to 2.14 in 2032-2037.

The projection of the University of Colombo assumes that the TFR has recovered since 2012 in all cases and will start decreasing in all cases from 2017. However, the difference in the assumptions is based on how much the TFR has recovered until 2017.

**Table 4.4.5 Future Population Forecast of Sri Lanka by Colombo University**

		2001	2012	2017	2022	2027	2032	2037
Low Variant	Population	18,797,257	20,359,439	21,147,196	21,732,738	22,107,618	22,270,548	22,232,449
	Annual Growth Rate	-	0.73%	0.76%	0.55%	0.34%	0.15%	-0.03%
Standard Variant	Population	18,797,257	20,359,439	21,378,817	22,159,542	22,701,533	23,010,438	23,110,550
	Annual Growth Rate	-	0.73%	0.98%	0.72%	0.48%	0.27%	0.09%
High Variant	Population	18,797,257	20,359,439	21,488,794	22,427,812	23,187,358	23,779,895	24,242,424
	Annual Growth Rate	-	0.73%	1.09%	0.86%	0.67%	0.51%	0.39%

Source: Prof. Lakshman Dissanayake, 2016, Medium-Term Population Projection for Sri Lanka: 2012 to 2037, United Nations Population Fund of Sri Lanka

## 3) Selected National Future Population Framework

Among the two population frameworks for Sri Lanka described above, the projection by the University of Colombo is selected as the future population framework at the national level. The major difference between the projection of UN and the University of Colombo is that the projection of University of Colombo takes into consideration the fact that the TFR of Sri Lanka has recovered since 2001 to 2.40 in 2012.

Based on the selected population framework, the population of Sri Lanka is projected to rise to 22.5 million in 2025 and 23.1 million in 2035.

### 4.4.2 Socio-Economic Condition of Greater Kandy Area

#### (1) Population

The population of the Greater Kandy Area increased gradually from 823,524 in 2001 to 896,606 in 2012, with an average growth rate of approximately 0.78% between 2001 and 2012. This is slightly higher than the other DSDs outside the Greater Kandy Area within Kandy District. The highest growth rate among the ten DSDs in the Greater Kandy was seen in Kundasale with 1.56% growth per annum, followed by Akurana (1.18%), Harispattuwa

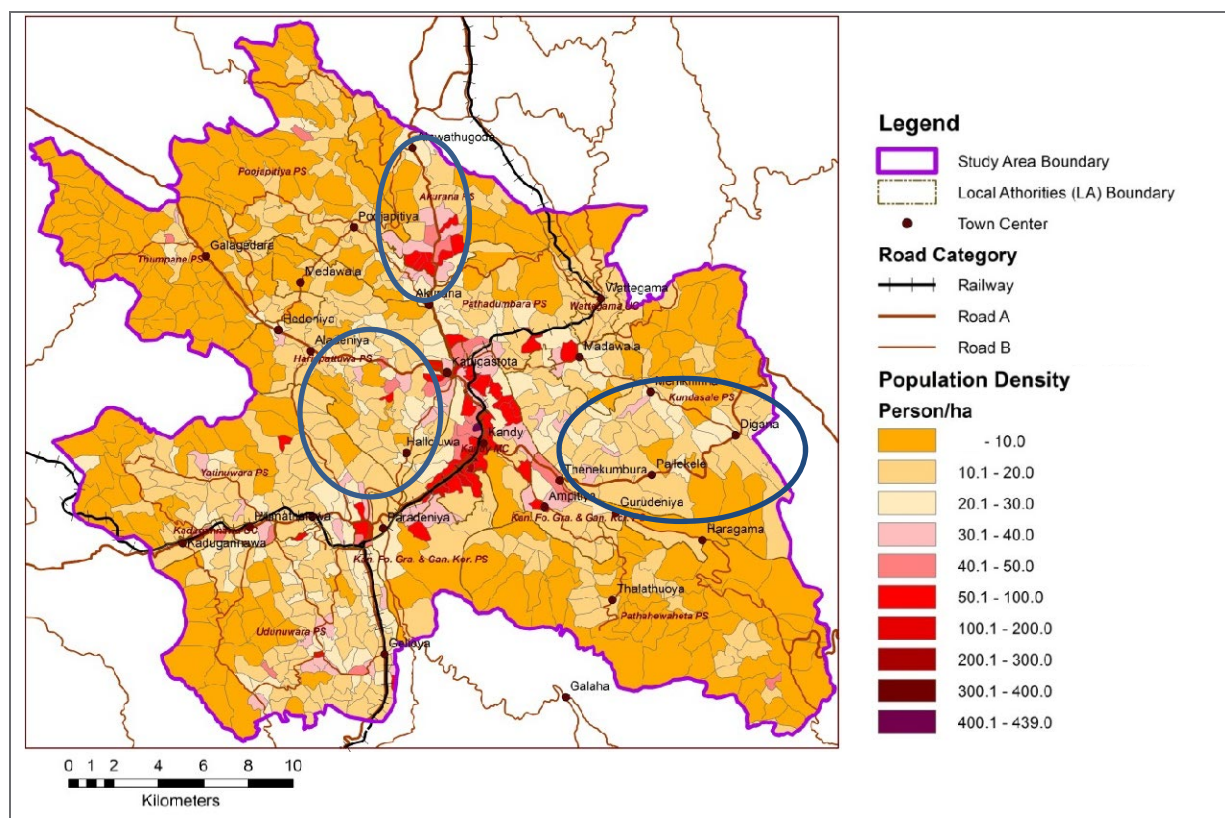
(1.02%) and Udunuwara (1.02%). On the other hand, Kandy Four Gravets & Gangawata Korale DS Division, which includes Kandy Municipal Council, was the only DSD where the population has decreased. Overall, this DSD is still the most populated and densely populated DSD out of the ten DSDs within the Greater Kandy Area.

**Table 4.4.6 Population by DSD in Greater Kandy Area (2001 & 2012)**

	Population			Average Annual Population Growth Rate	
	1981	2001	2012	1981-2001	2001-2012
Akurana	-	55,744	63,397	-	1.18%
Harispattuwa	-	78,880	88,177	-	1.02%
Kandy Four Gravets & Gangawata Korale	-	160,630	158,561	-	-0.12%
Kundasale	-	107,180	127,070	-	1.56%
Pathadumbara	-	80,558	88,725	-	0.88%
Pathahewaheta	-	53,843	58,188	-	0.71%
Poojapitiya	-	54,172	57,914	-	0.61%
Thumpane	-	35,447	37,642	-	0.55%
Udunuwara	-	99,235	110,905	-	1.02%
Yatinuwara	-	97,835	106,027	-	0.73%
<b>Greater Kandy</b>	-	<b>823,524</b>	<b>896,606</b>	-	<b>0.78%</b>
Outside Greater Kandy	-	455,504	478,776	-	0.45%
Kandy District	1,048,317	1,279,028	1,375,382	1.00%	0.66%

Source: Department of Census and Statistics, Census of Population and Housing 2001 and 2012

Looking closely at the GN level, population density increased especially along the roads connecting Kandy and Digana (A26), Peradeniya and Aladeniya (B537) and, Akurana and Alawatugoda (B377 and A9). (See Figure 4.4.4)

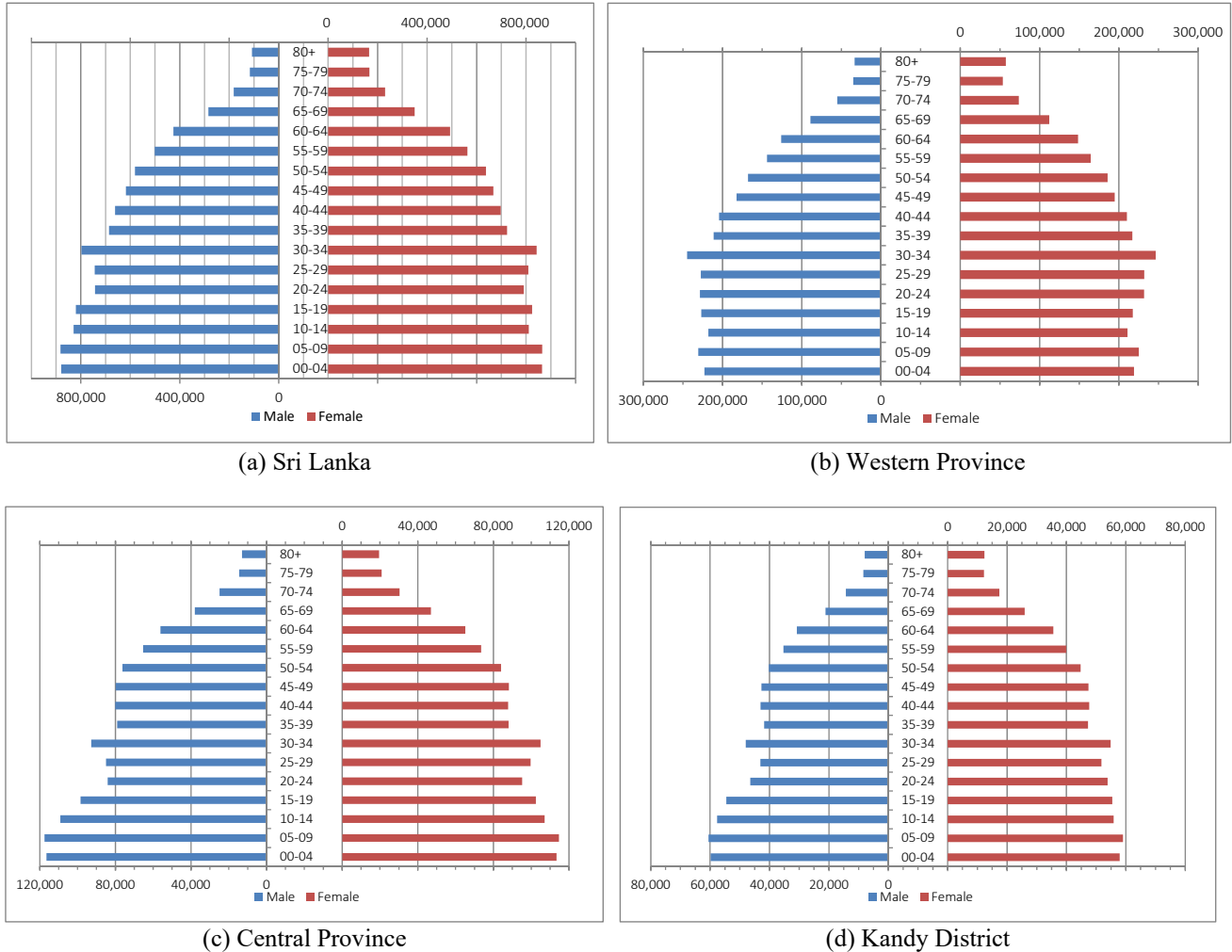


Source: Department of Census and Statistics, Census of Population and Housing 2001 and 2012

**Figure 4.4.4 Changes in Population Density of Greater Kandy Area (2001-2012)**

(2) Age Structure

A population pyramid shows the age and sex composition of the population in various age categories. Figure 4.4.5 shows the population pyramid of Sri Lanka, Western Province, Central Province and Kandy District. These four population pyramids no longer show expansive population pyramids where the population is young and growing.



Source: Department of Census and Statistics, Census of Population and Housing 2012

**Figure 4.4.5 Population Pyramid of Sri Lanka, Western Province, Central Province and Kandy District (2012)**

Some of the key features of the age structure are as follows:

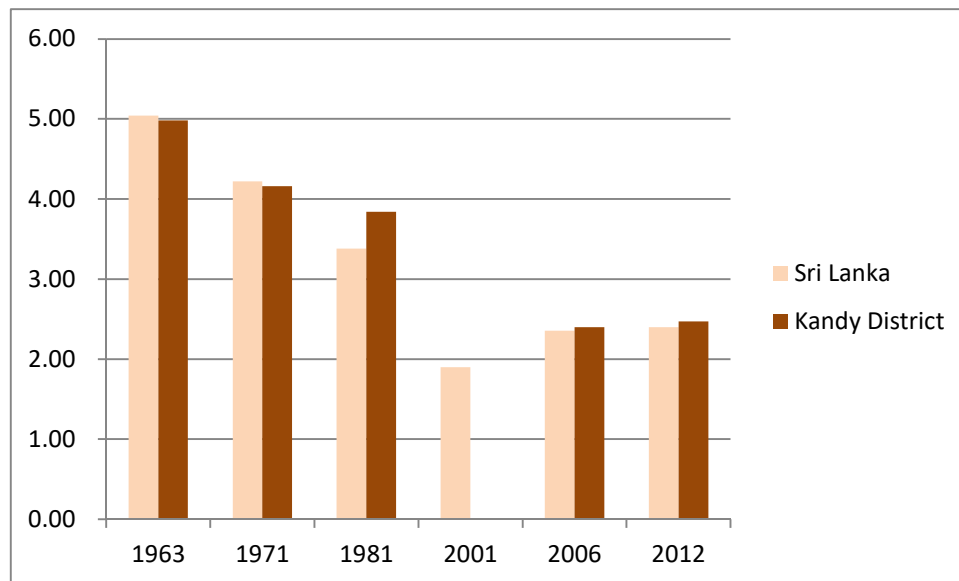
- The age structure of Kandy District is similar to Central Province and Sri Lanka as a whole. On the other hand, in Western Province, the age groups 20-24 and 25-29 have larger shares compared to other areas. Western Province is attracting the population in these age groups to migrate.
- The number of population in the age groups 20-24 and 25-29 are smaller compared to the age group 30-34 and 00-04, 05-09, 10-14 and 15-19. This phenomenon might be caused by young migrant workers migrating to overseas seeking job opportunities and students going to overseas universities.
- The number of population in the age groups 00-04 and 05-09 are slightly larger than that of 10-14. The number of children increased in the last decade including Western Province.



### (3) Fertility Rate

TFR shows the average number of children that would be born per woman if all women lived to the end of their childbearing years and bore children according to a given fertility rate at each age. In general, a TFR of 2.1 children is said to be the necessary rate for generating a stable population.

In Sri Lanka, TFR declined rapidly from above 5.0 in 1963 to below 2.0 in 2001 which is below the 2.1 borderline. However, in the last decade, TFR has increased and it has recovered to 2.40 for Sri Lanka as a whole and 2.47 for Kandy District as of 2012. (See Figure 4.4.6)



Source for 1963 and 1971: Committee for International Coordination of National Research in Demography, The Population of Sri Lanka

Source for 1981, 2001 and 2012: Department of Census and Statistics, Census of Population and Housing

Source for 2006: Department of Census and Statistics, Demographic and Health Survey 2006-2007

**Figure 4.4.6 Shift in the TFR for Sri Lanka and Kandy District**

### (4) Ethnic Groups

The dominant ethnic group in the Greater Kandy Area is Sinhalese with approximately 75% of its population, followed by Moors. The Greater Kandy Area has a larger share of Moors with approximately 18% of its population, which is twice the share compared with the national level where Tamils have a larger share than Moors. Especially in Akurana DSD, over 65% of its population is Moors. Other DSDs with relatively large share of Moors are Udunuwara DSD (25%), Pathadumbara DSD (22.5%) and Pathahewaheta DSD (22.5%).

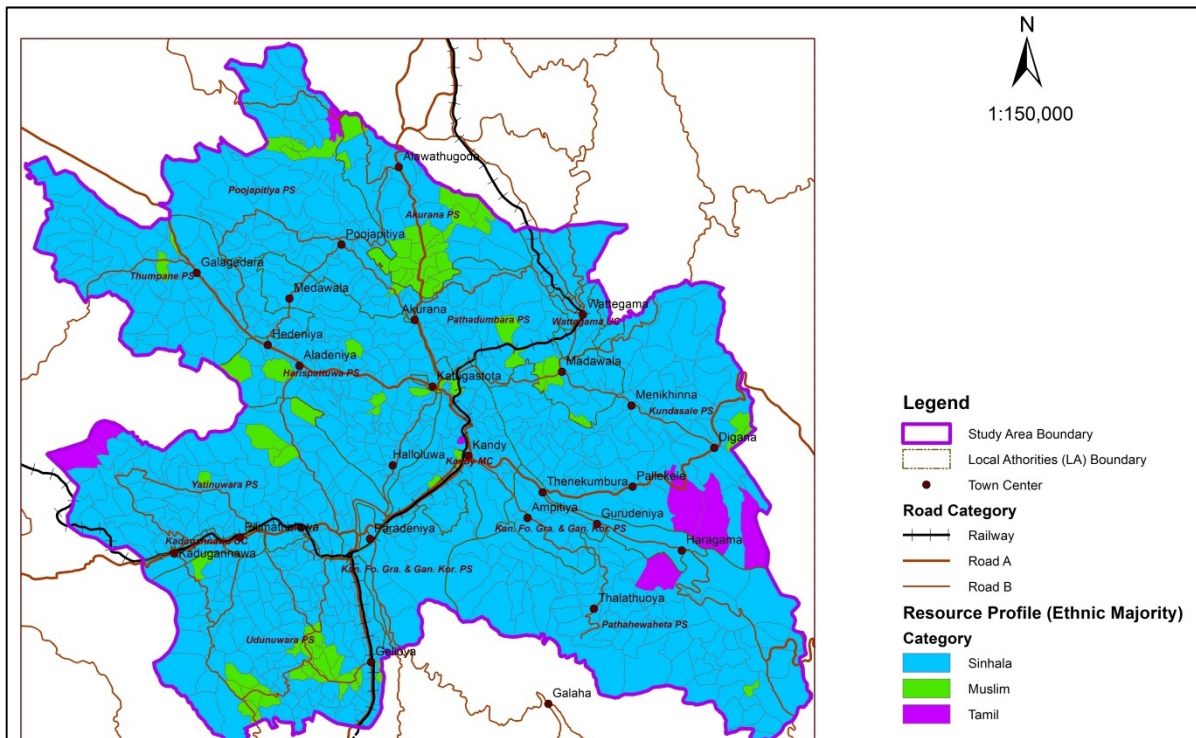
Although Tamils do not constitute majority of the total population at the national level, Kundasale DSD and Gangawata Korale DSD have relatively larger shares of Tamils in the Greater Kandy Area, with approximately 12% of their population.

**Table 4.4.7 Share of Ethnic Group by DSD in Greater Kandy Area**

DSD	Sinhalese	Tamils	Moors	Others	Total
Thumpane	92.19%	0.86%	6.71%	0.24%	100.00%
Poojapitiya	80.43%	2.83%	16.35%	0.38%	100.00%
Akurana	29.34%	5.45%	65.17%	0.04%	100.00%
Pathadumbara	74.33%	2.90%	22.47%	0.29%	100.00%
Kundasale	81.68%	11.83%	6.21%	0.27%	100.00%
Gangawata Korale	74.88%	11.66%	12.31%	1.15%	100.00%
Harispattuwa	85.89%	1.90%	11.92%	0.30%	100.00%
Yatinuwara	89.34%	2.15%	8.36%	0.15%	100.00%
Udunuwara	72.74%	2.13%	24.93%	0.20%	100.00%
Pathahewaheta	74.33%	2.90%	22.47%	0.29%	100.00%
Greater Kandy	75.80%	5.41%	18.39%	0.40%	100.00%
Kandy District*	77.22%	7.87%	14.45%	0.45%	100.00%
Sri Lanka*	74.90%	15.27%	9.30%	0.53%	100.00%

Source: Resource Profiles of 10 DSDs collected in April 2017 by JICA Team  
Source\*: Department of Census and Statistics, Census of Population and Housing 2012

Looking at the ethnic groups at the GN level, the dominant ethnic group of each GN can be seen clearly. (See Figure 4.4.7)



Source: Resource Profiles of 10 DSDs collected in April 2017 by the JICA Team

**Figure 4.4.7 Major Ethnic Group by GN in Greater Kandy**

### (5) Religion

The largest religious group in the Greater Kandy Area is Buddhist (76.0%), followed by Islam (17.2%), Hindu (4.9%) and Christian (1.8%). The shares of Buddhist and Islam in the Greater Kandy Area are higher than that of Sri Lanka as a whole. (See Table 4.4.8)

In the 10 DSDs of the Greater Kandy Area, Akurana DSD is the only DSD which has Islam as the dominant religious group, with almost two thirds of its population being Islam.

Udunuwara and Pathadumbara DSDs also have relatively high shares of Islam populations which is over 20% of their population. On the other hand, Pathahewaheta, Thumpane and Kundasale DSDs have smaller shares of Islam population compared with other DSDs.

**Table 4.4.8 Share of Religious Group by DSD in Greater Kandy Area**

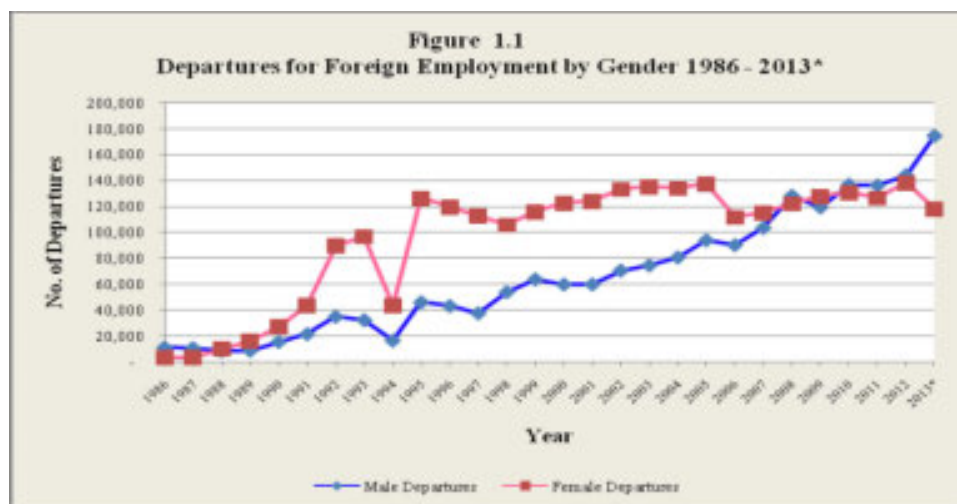
	Buddhist	Hindu	Islam	Christian	Others
Thumpane	92.1%	0.5%	6.9%	0.5%	0.0%
Poojapitiya	80.2%	2.7%	16.7%	0.5%	0.0%
Akurana	29.3%	4.6%	65.9%	0.0%	0.3%
Pathadumbara	73.8%	2.6%	22.6%	1.0%	0.0%
Kundasale	80.6%	10.2%	6.2%	2.9%	0.1%
Gangawata Korale	72.5%	10.1%	12.6%	4.7%	0.0%
Harispattuwa	85.4%	1.6%	11.9%	1.0%	0.0%
Yatinuwara	87.9%	1.4%	9.9%	0.8%	0.0%
Udunuwara	72.9%	2.0%	24.5%	0.5%	0.0%
Pathahewaheta	90.2%	5.3%	2.8%	1.7%	0.0%
Greater Kandy	76.0%	4.9%	17.2%	1.8%	0.1%
Kandy District*	73.4%	9.7%	14.3%	2.6%	0.0%
Sri Lanka*	70.1%	12.6%	9.7%	7.6%	0.0%

Source: Resource Profiles of 10 DSDs collected in April 2017 by JICA Team

Source\*: Department of Census and Statistics, Census of Population and Housing 2012

## (6) Migration Trend

The number of Sri Lankans migrating for foreign employment continues to increase. However, the number of female workers departing from the country has stayed at the same level in the past years while that of males is still increasing (See Figure 4.4.8).



Source: Sri Lanka Bureau of Foreign Employment, Different Perspectives of Departure Details

**Figure 4.4.8 Departures for Foreign Employment by Gender 1986 -2013**

Inter-regional migration is also active in Sri Lanka. According to the Census of Population and Housing 2012, approximately 32% of the migrants changed their district due to marriage followed by 20% for employment. Colombo, Gampaha and Batticaloa are the districts which have high percentages of employment-related migration. On the other hand, only 5.4% of the migrants were education-related. Batticaloa, Kandy and Colombo are the three districts with high percentages of in-migrants for this purpose.

Net migration indicates the difference between in- and out-migration. Kandy District has had more out-migrants than in-migrants in the past decades (See Table 4.4.9).

**Table 4.4.9 Net Migration Rates by District 1981, 2012**

District	1981	2012	District	1981	2012
Colombo	28.4	67.1	Mullaitivu	318.8	143.9
Gampaha	74.0	190.2	Batticaloa	-4.8	-44.3
Kalutara	-32.4	566.6	Ampara	101.0	40.0
<b>Kandy</b>	<b>-138.4</b>	<b>-95.4</b>	Trincomalee	141.1	65.8
Matale	-41.6	-48.8	Kurunegala	-18.6	-20.6
Nuwara Eliya	-37.1	-144.2	Puttalam	67.6	52.2
Galle	-111.7	-102.5	Anuradhapura	160.8	54.7
Matara	-161.2	-198.7	Polonnaruwa	371.6	142.5
Hambantota	-4.6	-50.0	Badulla	-49.6	-109.2
Jaffna	-53.4	24.0	Monaragala	221.9	58.2
Mannar	150.9	-36.1	Ratnapura	14.6	-44.2
Vavuniya	263.5	-697.7	Kegalle	-121.6	-100.1

Note: Net migration rate = Number of net migrants per 1000 of usual residence population.

Source: Department of Census and Statistics, Census of Population and Housing 2012 Key Findings

### 4.4.3 Regional Economic Conditions

#### (1) Central Province

##### 1) GRDP

Table 4.4.10 illustrates GRDP from 2011 to 2015. The Central Province's GRDP was approximately 1,152 billion Rs. – which accounted for 10.3% of the national GDP – at current prices in 2015, according to the Central Bank of Sri Lanka. The Central Province's GRDP is in the fourth place following the Western Province at 41.2%, North Western Province at 10.9% and Southern Province at 10.4%.

In sector-wise figures, the Central Province shows Agriculture with 10.8%, Industry with 21.8% and Services with 60.2%. Compared with the national total GDP, the Central Province shows higher shares in agriculture and service. However, the share of agriculture is less than the average only in the Western Province. Service sector of the Central Province shows the second highest share (11.0% with approximately 700 billion Rs.) following the Western Province (41.4% with approximately 2,600 billion Rs.).

Growth rate between 2011 and 2015 was 24.8% for the Central Province, which is the fifth growth rate of all the provinces. Particularly, the service sector recorded a higher rate at 18.6% compared to other sectors.

**Table 4.4.10 Provincial Gross Regional Domestic Product**

Provincial GDP by Economic Sectors (at Current Market Prices) (Rs. Billion)

		Western	Central	Southern	Northern	Eastern	North Western	North Central	Uva	Sabara-gamuwa	All island
2011	Agriculture	92.2	114.0	111.9	58.4	61.1	110.3	70.2	84.8	88.8	791.8
	Industry	966.7	179.1	213.0	47.3	109.0	194.3	74.0	67.3	106.0	1,956.7
	Services	1,835.5	351.3	393.9	136.8	209.1	350.6	161.7	145.2	210.8	3,794.9
	<b>Total</b>	<b>2,894.4</b>	<b>644.3</b>	<b>718.8</b>	<b>242.5</b>	<b>379.2</b>	<b>655.2</b>	<b>306.0</b>	<b>297.3</b>	<b>405.6</b>	<b>6,543.3</b>
2012(a)	Agriculture	93.2	118.0	114.2	59.9	85.5	111.8	74.0	94.6	82.4	833.5
	Industry	1,135.6	224.0	287.9	49.5	150.3	230.9	98.0	80.4	131.6	2,388.2
	Services	2,015.1	433.6	432.2	168.5	242.6	417.4	207.2	187.0	253.3	4,356.8
	<b>Total</b>	<b>3,243.9</b>	<b>775.6</b>	<b>834.3</b>	<b>277.8</b>	<b>478.4</b>	<b>760.1</b>	<b>379.2</b>	<b>362.0</b>	<b>467.2</b>	<b>7,578.6</b>
2013(a)	Agriculture	87.4	95.3	120.3	47.9	68.1	113.5	60.5	70.0	72.4	735.4
	Industry	1,420.9	234.1	229.4	61.3	166.2	301.5	104.0	124.5	124.5	2,797.3
	Services	2,265.3	606.2	552.3	193.1	273.1	559.8	291.8	271.0	271.0	5,406.5
	<b>Total</b>	<b>4,049.3</b>	<b>1,004.0</b>	<b>967.9</b>	<b>324.3</b>	<b>544.4</b>	<b>1,046.0</b>	<b>489.6</b>	<b>499.5</b>	<b>499.5</b>	<b>9,592.1</b>
2014(a)(b)	Agriculture	88.8	117.8	158.5	47.6	78.1	124.3	72.5	79.9	66.5	833.9
	Industry	1,473.1	233.7	254.7	65.2	192.6	342.2	112.3	140.2	172.0	2,986.2
	Services	2,502.0	652.0	609.6	212.3	293.4	610.8	320.3	299.5	424.5	5,924.4
	<b>Total</b>	<b>4,357.6</b>	<b>1,075.9</b>	<b>1,096.8</b>	<b>348.6</b>	<b>604.9</b>	<b>1,155.1</b>	<b>541.6</b>	<b>557.1</b>	<b>710.9</b>	<b>10,448.5</b>
2015(b)	Agriculture	80.0	124.4	153.4	58.7	81.4	153.9	84.1	95.6	70.2	901.6
	Industry	1,596.9	251.7	277.5	67.4	212.7	333.4	133.6	124.7	192.1	3,190.0
	Services	2,605.5	694.2	646.3	236.9	328.9	649.5	346.2	325.0	463.3	6,295.9
	<b>Total</b>	<b>4,610.5</b>	<b>1,152.4</b>	<b>1,159.7</b>	<b>390.7</b>	<b>670.8</b>	<b>1,223.8</b>	<b>607.1</b>	<b>587.1</b>	<b>781.1</b>	<b>11,183.2</b>

Note: (a) Revised, (b) Provisional, (c) These figures exclude the adjustment for taxes and subsidies on products.

Source :Central Bank of Sri Lanka, Based on GDP estimates compiled by the Department of Census and Statistics.

**Provincial Share to National Total**

		Western	Central	Southern	Northern	Eastern	North Western	North Central	Uva	Sabara-gamuwa	All island
2011	Agriculture	11.6%	14.4%	14.1%	7.4%	7.7%	13.9%	8.9%	10.7%	11.2%	100.0%
	Industry	49.4%	9.2%	10.9%	2.4%	5.6%	9.9%	3.8%	3.4%	5.4%	100.0%
	Services	48.4%	9.3%	10.4%	3.6%	5.5%	9.2%	4.3%	3.8%	5.6%	100.0%
	<b>Total</b>	<b>44.2%</b>	<b>9.8%</b>	<b>11.0%</b>	<b>3.7%</b>	<b>5.8%</b>	<b>10.0%</b>	<b>4.7%</b>	<b>4.5%</b>	<b>6.2%</b>	<b>100.0%</b>
2012(a)	Agriculture	11.2%	14.2%	13.7%	7.2%	10.3%	13.4%	8.9%	11.3%	9.9%	100.0%
	Industry	47.5%	9.4%	12.1%	2.1%	6.3%	9.7%	4.1%	3.4%	5.5%	100.0%
	Services	46.3%	10.0%	9.9%	3.9%	5.6%	9.6%	4.8%	4.3%	5.8%	100.0%
	<b>Total</b>	<b>42.8%</b>	<b>10.2%</b>	<b>11.0%</b>	<b>3.7%</b>	<b>6.3%</b>	<b>10.0%</b>	<b>5.0%</b>	<b>4.8%</b>	<b>6.2%</b>	<b>100.0%</b>
2013(a)	Agriculture	11.9%	13.0%	16.4%	6.5%	9.3%	15.4%	8.2%	9.5%	9.9%	100.0%
	Industry	50.8%	8.4%	8.2%	2.2%	5.9%	10.8%	3.7%	4.5%	4.5%	100.0%
	Services	41.9%	11.2%	10.2%	3.6%	5.1%	10.4%	5.4%	5.0%	5.0%	100.0%
	<b>Total</b>	<b>42.2%</b>	<b>10.5%</b>	<b>10.1%</b>	<b>3.4%</b>	<b>5.7%</b>	<b>10.9%</b>	<b>5.1%</b>	<b>5.2%</b>	<b>5.2%</b>	<b>100.0%</b>
2014(a)(b)	Agriculture	10.7%	14.1%	19.0%	5.7%	9.4%	14.9%	8.7%	9.6%	8.0%	100.0%
	Industry	49.3%	7.8%	8.5%	2.2%	6.5%	11.5%	3.8%	4.7%	5.8%	100.0%
	Services	42.2%	11.0%	10.3%	3.6%	5.0%	10.3%	5.4%	5.1%	7.2%	100.0%
	<b>Total</b>	<b>41.7%</b>	<b>10.3%</b>	<b>10.5%</b>	<b>3.3%</b>	<b>5.8%</b>	<b>11.1%</b>	<b>5.2%</b>	<b>5.3%</b>	<b>6.8%</b>	<b>100.0%</b>
2015(b)	Agriculture	8.9%	13.8%	17.0%	6.5%	9.0%	17.1%	9.3%	10.6%	7.8%	100.0%
	Industry	50.1%	7.9%	8.7%	2.1%	6.7%	10.5%	4.2%	3.9%	6.0%	100.0%
	Services	41.4%	11.0%	10.3%	3.8%	5.2%	10.3%	5.5%	5.2%	7.4%	100.0%
	<b>Total</b>	<b>41.2%</b>	<b>10.3%</b>	<b>10.4%</b>	<b>3.5%</b>	<b>6.0%</b>	<b>10.9%</b>	<b>5.4%</b>	<b>5.2%</b>	<b>7.0%</b>	<b>100.0%</b>

**Growth Rate**

		Western	Central	Southern	Northern	Eastern	North Western	North Central	Uva	Sabara-gamuwa	All island
2011/2012	Agriculture	1.1%	3.5%	2.1%	2.5%	40.0%	1.3%	5.4%	11.5%	-7.2%	5.3%
	Industry	17.5%	25.1%	35.2%	4.6%	37.9%	18.9%	32.5%	19.4%	24.1%	22.1%
	Services	9.8%	23.4%	9.7%	23.1%	16.0%	19.1%	28.1%	28.8%	20.2%	14.8%
	<b>Total</b>	<b>12.1%</b>	<b>20.4%</b>	<b>16.1%</b>	<b>14.6%</b>	<b>26.2%</b>	<b>16.0%</b>	<b>23.9%</b>	<b>21.7%</b>	<b>15.2%</b>	<b>15.8%</b>
2012/2013	Agriculture	-6.2%	-19.2%	5.3%	-20.0%	-20.4%	1.6%	-18.3%	-26.0%	-12.1%	-11.8%
	Industry	25.1%	4.5%	-20.3%	23.9%	10.5%	30.5%	6.1%	54.9%	-5.4%	17.1%
	Services	12.4%	39.8%	27.8%	14.6%	12.6%	34.1%	40.9%	44.9%	7.0%	24.1%
	<b>Total</b>	<b>24.8%</b>	<b>29.4%</b>	<b>16.0%</b>	<b>16.7%</b>	<b>13.8%</b>	<b>37.6%</b>	<b>29.1%</b>	<b>38.0%</b>	<b>6.9%</b>	<b>26.6%</b>
2013/2014	Agriculture	1.6%	23.6%	31.8%	-0.7%	14.8%	9.5%	19.9%	14.0%	-8.3%	13.4%
	Industry	3.7%	-0.2%	11.1%	6.5%	15.9%	13.5%	8.0%	12.6%	38.2%	6.8%
	Services	10.4%	7.5%	10.4%	10.0%	7.4%	9.1%	9.7%	10.5%	56.7%	9.6%
	<b>Total</b>	<b>7.6%</b>	<b>7.2%</b>	<b>13.3%</b>	<b>7.5%</b>	<b>11.1%</b>	<b>10.4%</b>	<b>10.6%</b>	<b>11.5%</b>	<b>42.3%</b>	<b>8.9%</b>
2014/2015	Agriculture	-9.9%	5.7%	-3.3%	23.3%	4.2%	23.8%	16.0%	19.8%	5.6%	8.1%
	Industry	8.4%	7.7%	8.9%	3.2%	10.4%	-2.6%	19.0%	-11.1%	11.7%	6.8%
	Services	4.1%	6.5%	6.0%	11.6%	12.1%	6.3%	8.1%	8.5%	9.1%	6.3%
	<b>Total</b>	<b>5.8%</b>	<b>7.1%</b>	<b>5.7%</b>	<b>12.1%</b>	<b>10.9%</b>	<b>5.9%</b>	<b>12.1%</b>	<b>5.4%</b>	<b>9.9%</b>	<b>7.0%</b>
2011/2015	Agriculture	-3.5%	2.2%	8.2%	0.1%	7.5%	8.7%	4.6%	3.0%	-5.7%	3.3%
	Industry	13.4%	8.9%	6.8%	9.3%	18.2%	14.5%	15.9%	16.7%	16.0%	13.0%
	Services	9.2%	18.6%	13.2%	14.7%	12.0%	16.7%	21.0%	22.3%	21.8%	13.5%
	<b>Total</b>	<b>12.3%</b>	<b>15.6%</b>	<b>12.7%</b>	<b>12.7%</b>	<b>15.3%</b>	<b>16.9%</b>	<b>18.7%</b>	<b>18.5%</b>	<b>17.8%</b>	<b>14.3%</b>

Source: Sri Lanka Socio-Economic Data 2016, Central Bank of Sri Lanka, June 2016

**2) Estimated GRDP of Kandy District**

GRDP data is available only for provincial level by the Central Bank of Sri Lanka and GRDP of Kandy District is not available. As such, GRDP for Kandy District was estimated by allocating proportionally based on the number of employment by industry group at each district as shown in Table 4.4.11, on the assumption that Sri Lanka's economy still relies on labour-intensive production.

As a result of the estimation, GRDP of Kandy District is estimated at 598,033 million Rp. in 2014, 638,791 million Rp. in 2015 and 681,127 million Rp. in 2016. Based on the estimation, Kandy contributes 5.7-5.8% of GDP to the country.

Services sector contributes more than 70% of GDP in Kandy district since Kandy is the major tourist destination as well as the major transportation hub in Sri Lanka. The growth rate of the industry sector is the highest in year 3, although this sector occupies only 24.5% in 2016 which is slightly higher than average.

**Table 4.4.11 Estimation of GDP by District – 2014-2016**

	Central Province		Kandy		Matale		Nuwara Eliya	
	Mil Rp	Percent	Mil Rp	Percent	Mil Rp	Percent	Mil Rp	Percent
<b>2014</b>								
Agriculture	117,727	11.6%	39,152	6.5%	20,504	12.7%	58,071	22.7%
Industry	240,849	23.7%	135,143	22.6%	38,881	24.1%	66,825	26.1%
Services	656,272	64.7%	423,738	70.9%	101,665	63.1%	130,869	51.2%
Total	1,014,848	100.0%	598,033	100.0%	161,050	100.0%	255,765	100.0%
Statistical discrepancy	73,977	-	-	-	-	-	-	-
GDP, at Current Market Prices	1,088,825	-	-	-	-	-	-	-
<b>GRDP to GDP</b>	<b>10.5%</b>	-	5.8%	-	1.6%	-	2.5%	-
<b>2015</b>								
Agriculture	125,544	12.4%	35,358	5.5%	23,261	11.1%	66,925	29.3%
Industry	246,585	24.3%	145,961	22.8%	53,263	25.4%	47,361	20.7%
Services	704,954	69.5%	457,472	71.6%	133,130	63.5%	114,352	50.0%
Total	1,077,083	100.0%	638,791	100.0%	209,654	100.0%	228,638	100.0%
Statistical discrepancy	83,868	-	-	-	-	-	-	-
GDP, at Current Market Prices	1,160,951	-	-	-	-	-	-	-
<b>GRDP to GDP</b>	<b>10.6%</b>	-	5.8%	-	1.9%	-	2.1%	-
<b>2016</b>								
Agriculture	130,894	11.4%	31,203	4.6%	27,026	11.9%	72,665	30.2%
Industry	265,382	23.1%	166,797	24.5%	55,047	24.2%	43,538	18.1%
Services	752,827	65.5%	483,127	70.9%	145,298	63.9%	124,402	51.7%
Total	1,149,103	100.0%	681,127	100.0%	227,371	100.0%	240,605	100.0%
Statistical discrepancy	105,831	-	-	-	-	-	-	-
GDP, at Current Market Prices	1,254,934	-	-	-	-	-	-	-
<b>GRDP / GDP</b>	<b>10.5%</b>	-	5.7%	-	1.9%	-	2.0%	-

Source: GDP in Central Province by Provincial Gross Domestic Product, Central Bank of Sri Lanka and GDP in 3 districts by the JICA team

#### 4.4.4 Economic Conditions of Greater Kandy Area

##### (1) Employment Structure

###### 1) Economically Active Population

Economically active population (EAP) is the population which is employed or seeking employment. In Sri Lanka, the population of over 15 years old who are employed or seeking employment is counted as EAP. The share of EAP usually becomes lower in areas where there are many students above the age of 15 years old and also where fewer women work after getting married.

Out of the population over 15 years old in the Greater Kandy Area, 47.4% are economically active, whereas 51.6% are economically active in the whole of Sri Lanka. Akurana DSD has

the lowest share of EAP in the Greater Kandy Area with only 41.2%. Thumpane DSD has the highest share of EAP in the Greater Kandy Area with 52.4%.

**Table 4.4.12 Percentage of EAP Over 15 Years Old (2012)**

	Population Over 15 Years Old	Economically Active Population	Inactive Population	Percentage of EAP
Thumpane	28,500	14,934	13,566	52.4%
Pujapitiya	42,816	20,251	22,565	47.3%
Akurana	43,295	17,847	25,448	41.2%
Pathadumbara	65,997	29,916	36,081	45.3%
Kundasale	96,832	48,080	48,752	49.7%
Gangawata Korale	123,526	55,762	67,764	45.1%
Harispattuwa	66,538	34,254	32,284	51.5%
Yatinuwara	80,624	38,828	41,796	48.2%
Udunuwara	82,583	37,869	44,714	45.9%
Pathahewaheta	43,593	21,954	21,639	50.4%
<b>Greater Kandy</b>	<b>674,304</b>	<b>319,695</b>	<b>354,609</b>	<b>47.4%</b>
Sri Lanka	15,227,773	7,857,370	7,370,403	51.6%

Source: Department of Census and Statistics, Census of Population and Housing 2012

Although the data is from the previous census, Table 4.4.13 shows the share of EAP by sector in each DSD. The Greater Kandy Area has a high share of employed population engaged in the service sector with 66.7% of employed population working in this sector. Out of the 10 DSDs, Kandy Four Gravets & Gangawata Korale DSD especially has an extremely high share with 84.0% engaged in the service sector, followed by Akurana DSD with 69.6%.

On the other hand, employed population engaged in the agriculture sector is only 10.2% in the Greater Kandy Area while outside the Greater Kandy Area has over 40% of employed population engaged in this sector. Pathahewaheta DSD is the only DSD in the Greater Kandy Area which has over 30% of employed population working in the agriculture sector. Other DSDs have less than 20% of population engaged in this sector.

The industry sector includes mining, manufacturing, utility facilities and construction. Harispattuwa DSD has the highest share of people engaged in the industry sector due to the higher share of people working for construction. Kundasale DSD has the next highest share of people engaged in this sector, with over 20% of employed population working for manufacturing. Kandy district's employed population in 2015 was at 22.7% in Agriculture, 23.4% in Industry, and 53.9% in Service<sup>2</sup>. It can be said that Kandy District as a whole grew in the industrial sector.

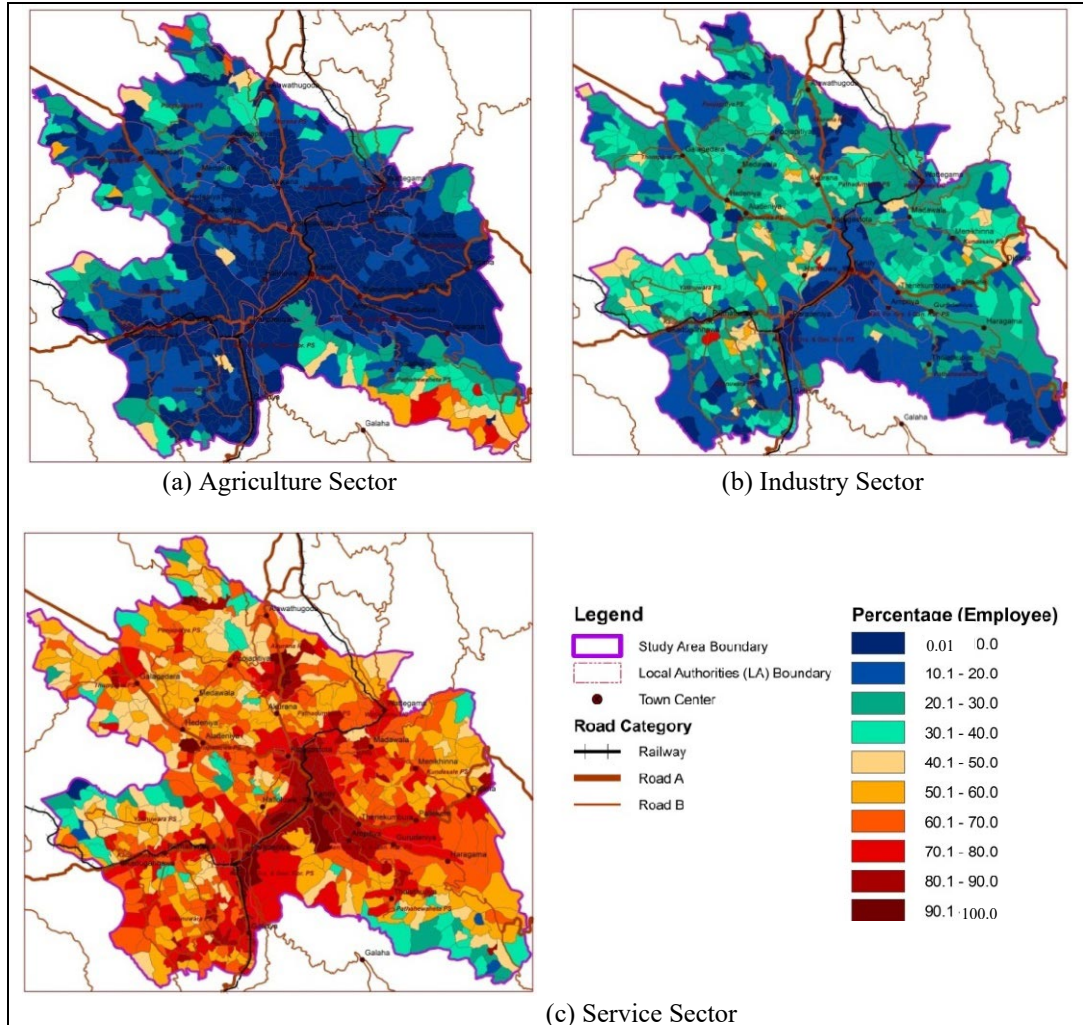
**Table 4.4.13 Share of Employed Population 10 Years Old and Over by Sector in Each DSD (2001)**

2001	Agriculture	Industry	Service
Thumpane	16.1%	26.8%	57.0%
Poojapitiya	18.2%	25.9%	55.9%
Akurana	12.1%	18.3%	69.6%
Pathadumbara	6.1%	25.1%	68.8%
Kundasale	6.7%	28.7%	64.6%
Gangawata Korale	3.2%	12.9%	84.0%
Harispattuwa	8.1%	29.2%	62.7%
Yatinuwara	13.6%	20.8%	65.6%
Udunuwara	9.2%	24.0%	66.8%
Pathahewaheta	32.0%	14.9%	53.1%

<sup>2</sup> "Labour force Survey Annual Report 2015, Table 4.2, p.16, Department of Census and Statistics

Greater Kandy	10.3%	21.9%	67.8%
Outside Greater Kandy	40.1%	16.2%	56.2%
Kandy District	21.9%	19.7%	58.4%
Sri Lanka	28.7%	22.4%	48.9%

Source: Department of Census and Statistics, Census of Population and Housing 2001



Source: Department of Census and Statistics, Census of Population and Housing 2001

**Figure 4.4.9 Distribution of Employed Population 10 Years Old and Over by Sector (2001)**

## 2) Employment by Sector for District

Within the Central Province, as seen in the table below, Kandy District dominates the largest services sector employment both in the absolute number and ratio to the total employment, with more than 70% of the employment engaged in the services sector and less than 10% in agriculture. Nuwara Eliya is dominant in the agricultural sector with more than around 30% share of employment. This figure has been increasing for the past few years as Nuwara Eliya's large tea plantations require more labour force for cultivation, while employment in the industry sector is decreasing.



**Table 4.4.14 Employment by Major Industry Group by Districts- Both Sexes**

Year	Sector	Kandy	Matale	Nuwara Eliya
2014	Agriculture	110,975	58,117	164,603
	Industry	128,349	36,926	63,466
	Services	243,715	58,473	75,270
	<b>Total</b>	<b>483,039</b>	<b>153,516</b>	<b>303,339</b>
2015	Agriculture	109,292	71,902	206,868
	Industry	112,781	41,155	36,595
	Services	259,301	75,460	64,816
	<b>Total</b>	<b>481,374</b>	<b>188,517</b>	<b>308,279</b>
2016	Agriculture	87,436	75,730	203,616
	Industry	135,575	44,743	35,388
	Services	268,626	80,788	69,169
	<b>Total</b>	<b>491,636</b>	<b>201,261</b>	<b>308,173</b>
Year	Sector	Kandy	Matale	Nuwara Eliya
2014	Agriculture	23.0%	37.9%	54.3%
	Industry	26.6%	24.1%	20.9%
	Services	50.5%	38.1%	24.8%
	<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
2015	Agriculture	22.7%	38.1%	67.1%
	Industry	23.4%	21.8%	11.9%
	Services	53.9%	40.0%	21.0%
	<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
2016	Agriculture	17.8%	37.6%	66.1%
	Industry	27.6%	22.2%	11.5%
	Services	54.6%	40.1%	22.4%
	<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Sri Lanka Labor Force Survey Annual Report, Department of Census and Statistics

### 3) Unemployment Rate

Although the unemployment rate in the Greater Kandy Area has decreased from 10.2% in 2001 to 7.3% in 2012, it is still higher than the national average at 6.6%. Within the 10 DSDs in the Greater Kandy Area, Akurana DSD has the highest unemployment rate, followed by Pathahewaheta and Udunuwara with 11.6%, 9.6% and 9.1%, respectively. (See Table 4.4.15)

**Table 4.4.15 Unemployment Rate by DSD in Greater Kandy Area (2001 & 2012)**

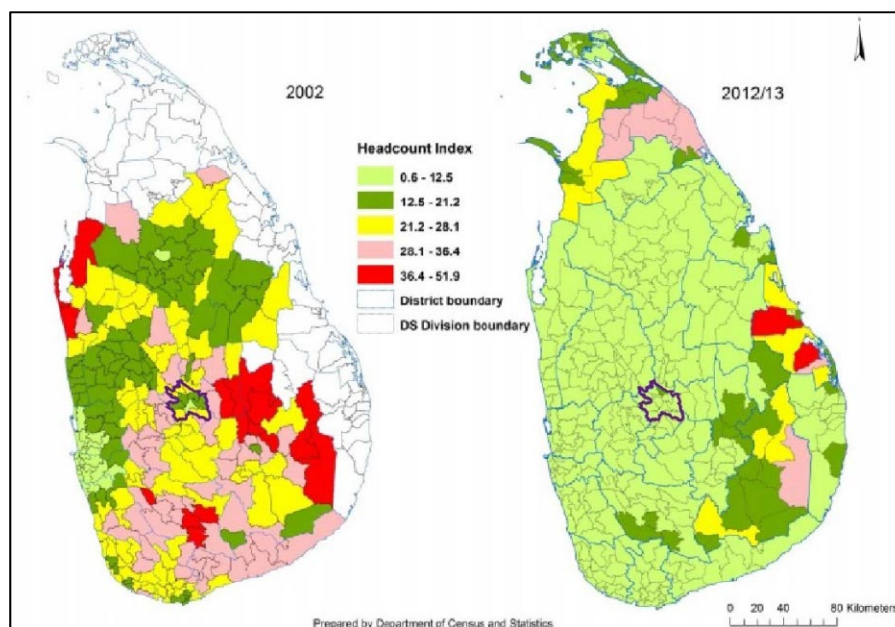
	2001				2012			
	Economically Active Population	Employed Population	Unemployed Population	Unemployment Rate	Economically Active Population	Employed Population	Unemployed Population	Unemployment Rate
Thumpane	12,721	11,236	1,485	11.7%	14,934	14,135	799	5.4%
Pujapitiya	21,105	18,805	2,300	10.9%	20,251	18,808	1,443	7.1%
Akurana	15,213	13,262	1,951	<b>12.8%</b>	17,847	15,775	2,072	<b>11.6%</b>
Pathadumbara	25,914	22,909	3,005	11.6%	29,916	27,876	2,040	6.8%
Kundasale	37,861	34,407	3,454	9.1%	48,080	45,152	2,928	6.1%
Gangawata Korale	56,235	51,751	4,484	8.0%	55,762	52,492	3,270	5.9%
Harispattuwa	27,002	24,032	2,970	11.0%	34,254	31,840	2,414	7.0%
Yatinuwara	35,074	31,042	4,032	11.5%	38,828	36,117	2,711	7.0%
Udunuwara	30,964	28,215	2,749	8.9%	37,869	34,418	3,451	9.1%
Pathahewaheta	19,055	16,940	2,115	<b>11.1%</b>	21,954	19,846	2,108	<b>9.6%</b>
<b>Greater Kandy</b>	<b>281,144</b>	<b>252,599</b>	<b>28,545</b>	<b>10.2%</b>	<b>319,695</b>	<b>296,459</b>	<b>23,236</b>	<b>7.3%</b>
Sri Lanka	6,593,162	5,941,574	651,588	9.9%	7,857,370	7,335,432	521,938	6.6%

Note: Economically active population for 2001 includes age 10 and above while for 2012 includes age 15 and above  
Source: Department of Census and Statistics, Census of Population and Housing 2001 and 2012

## (2) Poverty and Income Level

### 1) Poverty Status

The poverty situation in Sri Lanka has improved dramatically between 2002 and 2012 in most central, western and southern areas of the country (See Figure 4.4.10). However, in the Greater Kandy Area, Akurana DSD is the only DSD which still has relatively higher poverty ratio, with approximately 16.8% of its population living on less than US\$1.50 per day.



Source: Department of Census and Statistics, 2015, The Spatial Distribution of Poverty in Sri Lanka

**Figure 4.4.10 Distribution of Poverty Headcount Index by DS Division (2002 and 2012/13)**

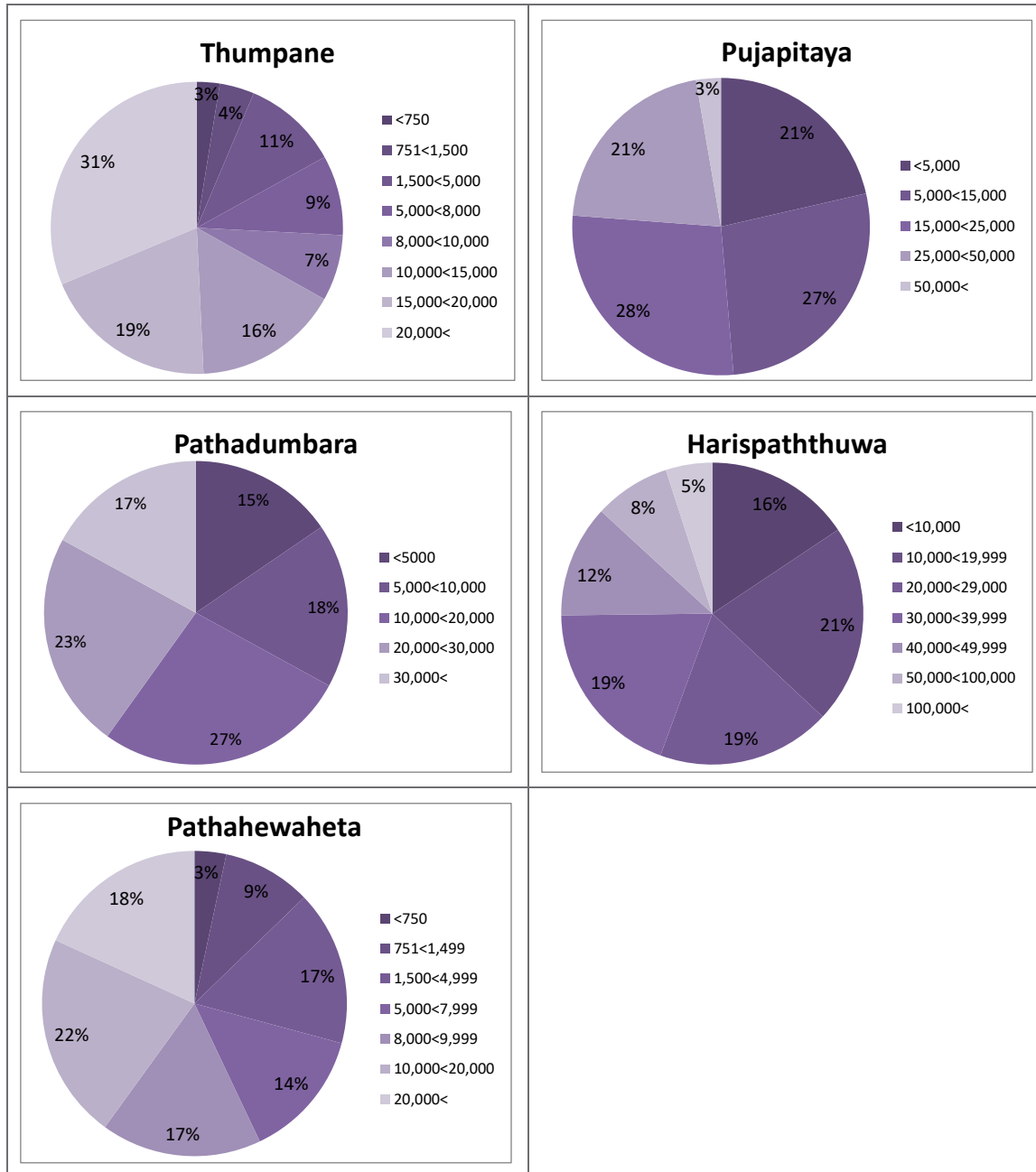
**Table 4.4.16 Estimated Headcount Index and Number of Poor People by DSD (2012/2013)**

	DSD	Estimated headcount index (%)	No. of poor people
GK Area	Gangawata Korale	4.17	6,118
	Harispattuwa	5.13	4,421
	Thumpane	5.34	1,953
	Yatinuwara	5.53	5,731
	Kundasale	5.99	7,279
	Pathadumbara	6.37	5,534
	Udunuwara	6.90	7,394
	Poojapitiya	7.44	4,183
	Pathahewaheta	7.78	4,406
	Akurana	16.80	10,451
Outside GK Area	Pasbage Korale	7.81	4,605
	Ganga Ihala Korale	7.90	4,286
	Udawalatha	7.98	7,223
	Doluwa	8.47	4,158
	Udadumbara	8.61	1,878
	Minipe	8.76	4,428
	Medadumbara	9.28	5,555
	Panwila	10.40	2,702
	Delthota	11.03	3,281

Source: The Spatial Distribution of Poverty in Sri Lanka, Department of Census and Statistic, Poverty Global Practice, World Bank Group, Aug. 2015

## 2) Income Levels

Figure 4.4.11 shows the income levels of five DSDs of the ten DSDs, which had the income data in their resource profiles. Within the five DSDs which had this data, Pathahewaheta DSD has the highest population with an income of less than 5,000 Rp. per month, followed by Pujapitiya DSD. On the other hand, Harispaththuwa DSD has the largest share of population with the highest income level among the five DSDs.



Source: Resource Profiles of each DSD collected in April 2017 by JICA Team

**Figure 4.4.11 Income Levels by DSD in Greater Kandy Area**

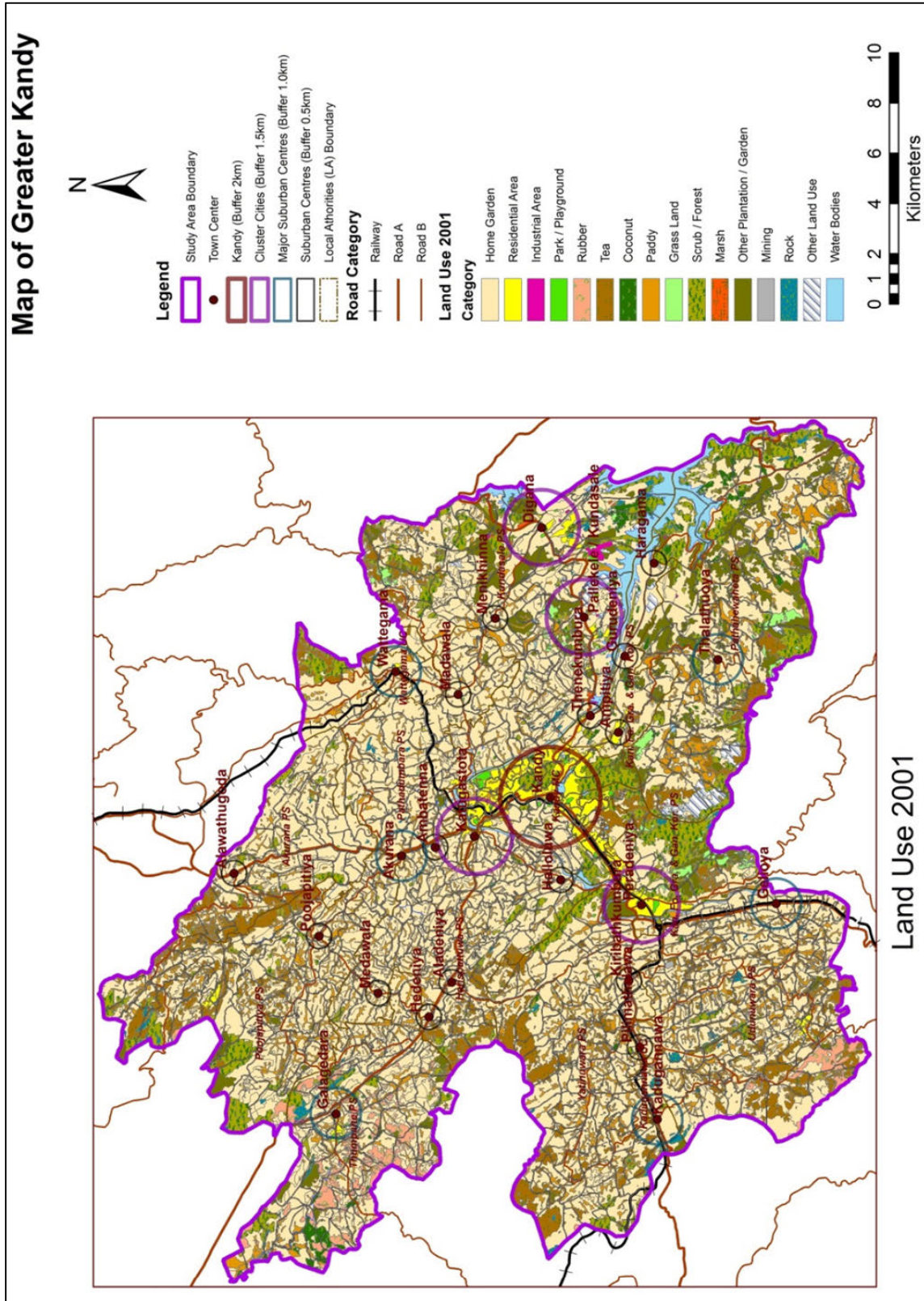
## 4.5 Existing Land Use

### 4.5.1 Land Use Pattern

The land use data of the study area is based on the survey conducted by the Department of Survey in 2001 and data from Land Use Policy Planning Department 2016 (corrected by JICA Team by using Geo-View Images in September 2017). Generally, the study area is approximately 60,000 hectares. It is the main commercial and administration area of the Central Province of Sri Lanka.

#### (1) General Land Use in 2001 and 2016

- Figure 4.5.1 shows the land use distribution and Table 4.5.1 shows the land use coverage percentage in year 2001. Figure 4.5.2 shows the land use distribution and Table 4.5.2 shows the land use coverage percentage in year 2016.
- The study area is mainly covered by home gardens (60.11%, 2001; 57.44%, 2016). The home garden area is decreasing approximately 1635.26 ha within 15 years.
- Home gardens are identified as an integral part of the landscape and culture for centuries and remain today as one of the major and oldest forms of land use in the country.
- Home gardens include houses that are scattered around the agriculture land and forest area. It is not a well-planned residential layout.
- In reference to the guidelines of the Department of Survey, the category of residential refers to the settlement area which is planned and urbanised.
- The centre of the study area (Kandy Municipal Council area) and the area along the Road A (Peradeniya and Katugastota) and railway have high density housing which were categorised as residential. The planned residential area in the city centre – including commercial, institutional, public utilities, cultural, religious and other community facilities – are concentrated in the Kandy City area.
- The south and north parts of the study area are steep mountain areas while the western part of the study area is in a valley. A small number of residential areas can be found in those areas.
- Low density residential area is scattered in the mountain area.
- In 2001, the shares of main land uses are as follows: paddy (9.83%), scrub/forest (8.32%), tea (7.32%), other plantation/garden (4.84%) and residential area (2.51%).
- After 15 years, the main land uses remained in the same categories as per 2001 figures, but land uses have increased as follows: paddy (9.85%), scrub/forest (8.38%), tea (7.79%), other plantation/garden (6.46%) and residential (2.66%).
- Decreasing land use percentage within a 15-year period was observed in land uses for rubber plantation and park / playground.

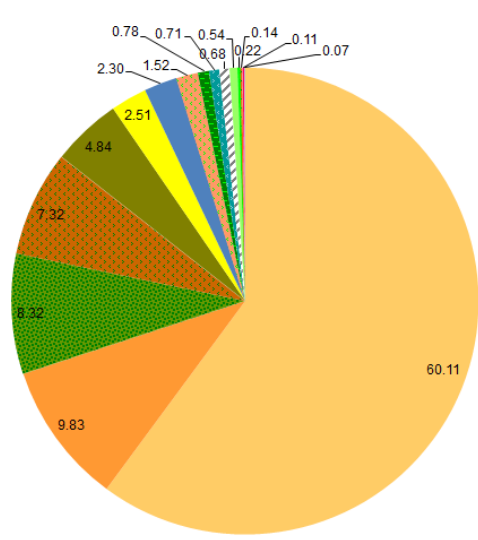


Source: The JICA Team based on GIS data of Department of Survey, 2001

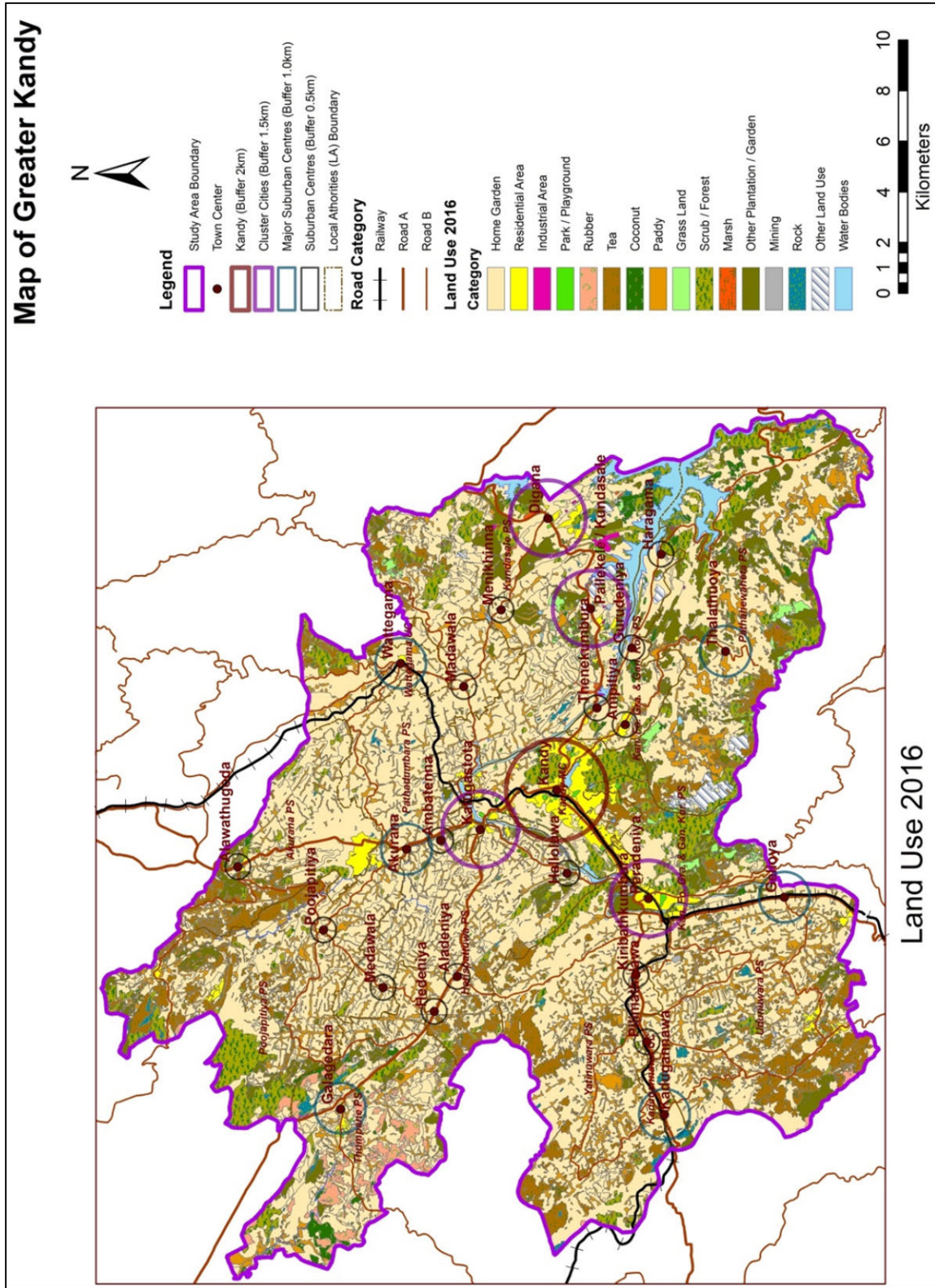
**Figure 4.5.1 Land Use Distribution 2001**

**Table 4.5.1 Land Use in Greater Kandy Area 2001**

Land Use Category	Total	
	Area (ha)	Area (%)
Home Garden	35,991.28	60.11
Paddy	5,887.58	9.83
• Paddy		
• Abandoned Paddy		
Scrub / Forest	4,984.22	8.32
• Dense Forest		
• Open Forest		
• Scrub Lands		
Tea	4,384.44	7.32
• Tea		
• Abandoned Tea		
Other Plantation / Garden	2,895.00	4.84
• Banana		
• Cashew		
• Cinnamon		
• Pepper		
• Forest Plantation		
• Botanical Garden		
• Agricultural Farm		
• Mixed Crops		
• Seasonal Crops		
• Sparsely Used Crop Lands		
• Live Stock Farm		
• Aquatic Farm		
Residential Area	1,504.58	2.51
• Cemetery		
• Police Training School		
• Prison		
• Provincial Council Complex		
• Urban Area		
• SIBA (Sri Lanka International Buddhist Academy)		
Water Bodies	1,375.50	2.30
• Irrigation Canals		
• Lake		
• Major Reservoir		
• Minor Reservoir		
• Natural Ponds		
• River		
• Stream		
Rubber	908.51	1.52
• Rubber		
• Abandoned Rubber		
Coconut	466.94	0.78
Rock	424.62	0.71
• Rare		
Other Land Use	405.52	0.68
• Barren Lands		
• Security Zones		
• Unutilised Lands		
• Distorted Surface		
Grass Land	324.51	0.54
Park / Playground	131.93	0.22
Marsh	83.15	0.14
Industrial Area	62.88	0.11
• Industrial Sites		
• Industrial Parks		
Mining	41.33	0.07
• Gravel Pit		
• Clay Pit		
• Quarry		
<b>Total</b>	<b>59,871.99</b>	<b>100.00</b>



Source: The JICA Team based on GIS data of Department of Survey, 2001

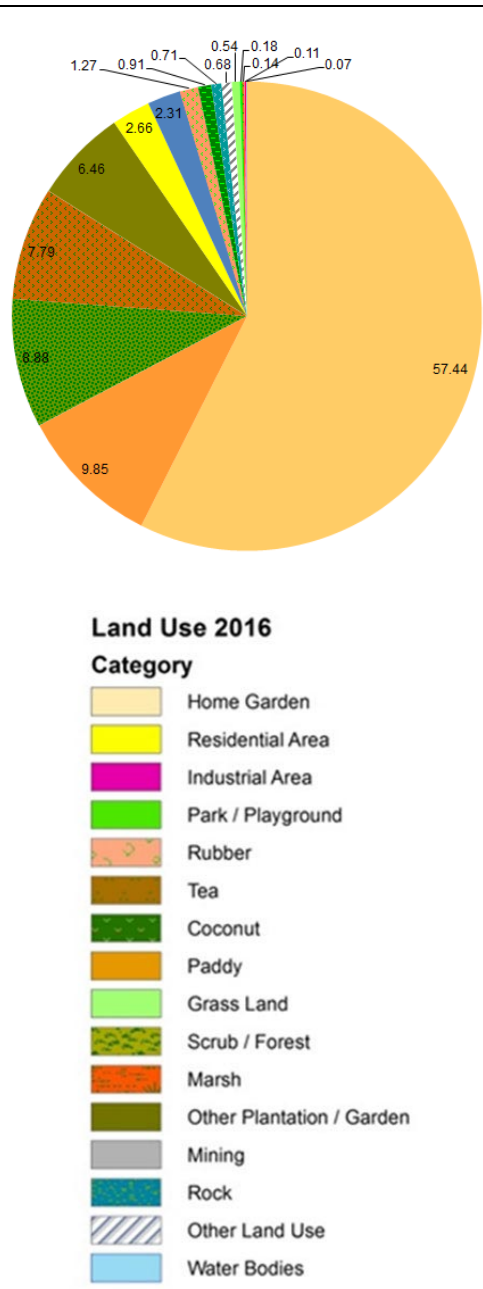


Source: The JICA Team based on Land Use Policy Planning Department 2016 (corrected by referring to Geo-View Images in September 2017)

**Figure 4.5.2 Land Use Distribution 2016**

**Table 4.5.2 Land Use in Greater Kandy Area 2016**

Land Use Category	Total	
	Area (ha)	Area (%)
Home Garden	34356.02	57.44
Paddy	5891.96	9.85
• Paddy		
• Abandoned Paddy		
Scrub / Forest	5313.65	8.88
• Dense Forest		
• Open Forest		
• Scrub Lands		
Tea	4658.65	7.79
• Tea		
• Abandoned Tea		
Other Plantation / Garden	3866.60	6.46
• Pepper		
• Forest Plantation		
• Botanical Garden		
• Agricultural Farm		
• Mixed Crops		
• Seasonal Crops		
• Sparsely Used Crop Lands		
• Live Stock Farm		
• Aquatic Farm		
Residential Area	1588.14	2.66
• Cemetery		
• Cultural & Religious		
• Educational		
• Garbage Dumping Area		
• Hotel		
• Institutional		
• Prison		
• University		
• Urban Area		
• Utility		
Water Bodies	1378.81	2.31
• Irrigation Canals		
• Lake		
• Major Reservoir		
• Minor Reservoir		
• Natural Ponds		
• River		
• Stream		
• Water Area		
Rubber	761.13	1.27
• Rubber		
• Abandoned Rubber		
Coconut	543.98	0.91
Rock	424.55	0.71
• Rare		
Other Land Use	406.54	0.68
• Barren Lands		
• Security Zones		
• Unutilised Lands		
• Distorted Surface		
Grass Land	323.56	0.54
Park / Playground	110.54	0.18
Marsh	84.41	0.14
Industrial Area	62.88	0.11
• Industrial Sites		
• Industrial Parks		
Mining	41.62	0.07
• Gravel Pit		
• Clay Pit		
• Quarry		
<b>Total</b>	<b>59813.02</b>	<b>100.00</b>

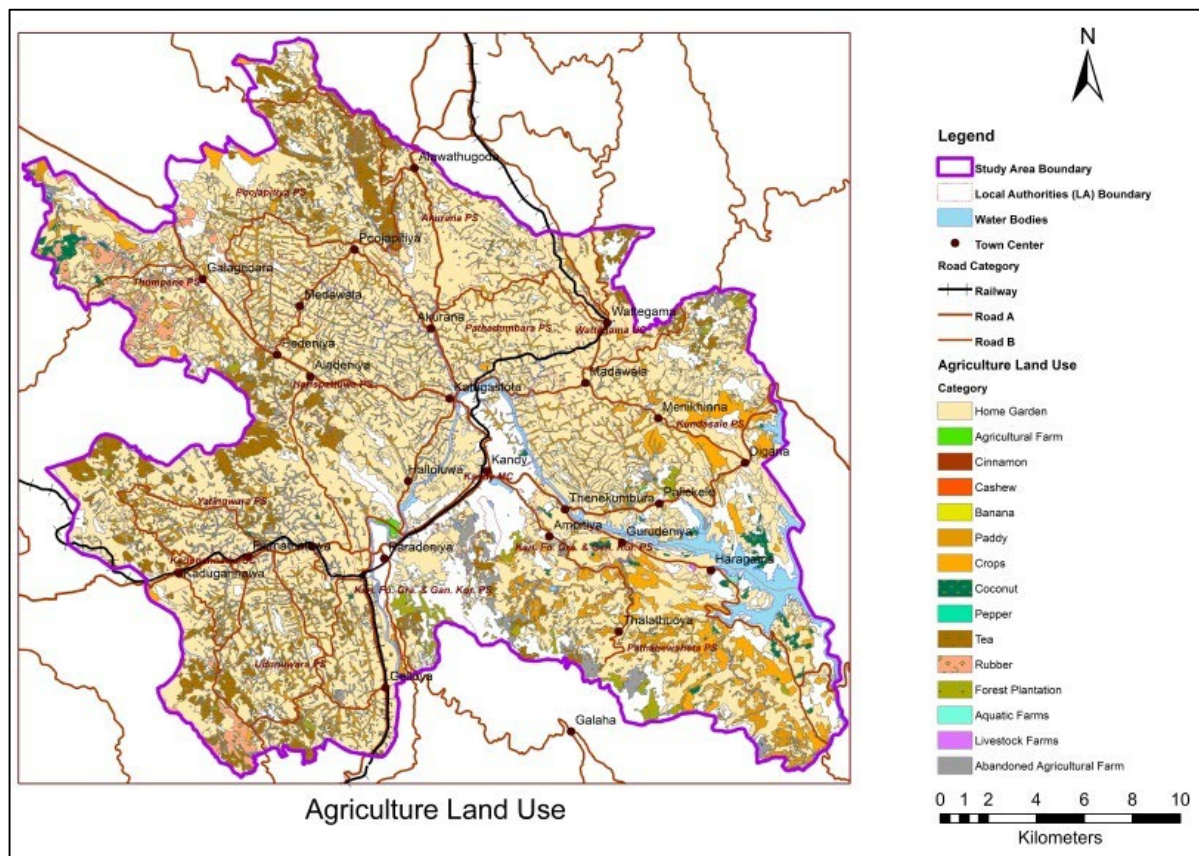


Source: The JICA Team based on Land Use Policy Planning Department 2016 (corrected by using Geo-View, Sept 2017)



## (2) Agriculture Use

- Agriculture is one of the main economy sectors in the study area. Figure 4.5.3 shows the distribution of agriculture land use and Table 4.5.3 shows the agriculture land use percentage in 2001.
- Mixed use of agriculture and other small-scale plantations can be widely found in the study area.
- Among the agricultural land, tea, paddy and rubber are produced to support local agricultural land. Tea (3,912 ha, 27.0%) and paddy (3,910 ha, 27.0%) are the dominant products of the area, followed by crops (2,196 ha, 15.2%). Small size land use for paddy is distributed within the home garden land.
- Somehow, there is a wide area covered by abandoned agriculture farms (2,467 ha, 17.0%), especially in the southern part of the study area (southern part of Gangawata Korale PS and western part of Pathahewaheta PS).
- Generally, the centre of the study area has the least agriculture land while the northern part (Poojapitiya-Alawathugoda), western part (Hedeniya), eastern part (Menikhinna), and southern part (Thalathuoya) have wide agriculture lands for paddy and rubber.



Source: The JICA Team based on GIS data of Department of Survey, 2001

**Figure 4.5.3 Distribution of Agriculture Land Use**

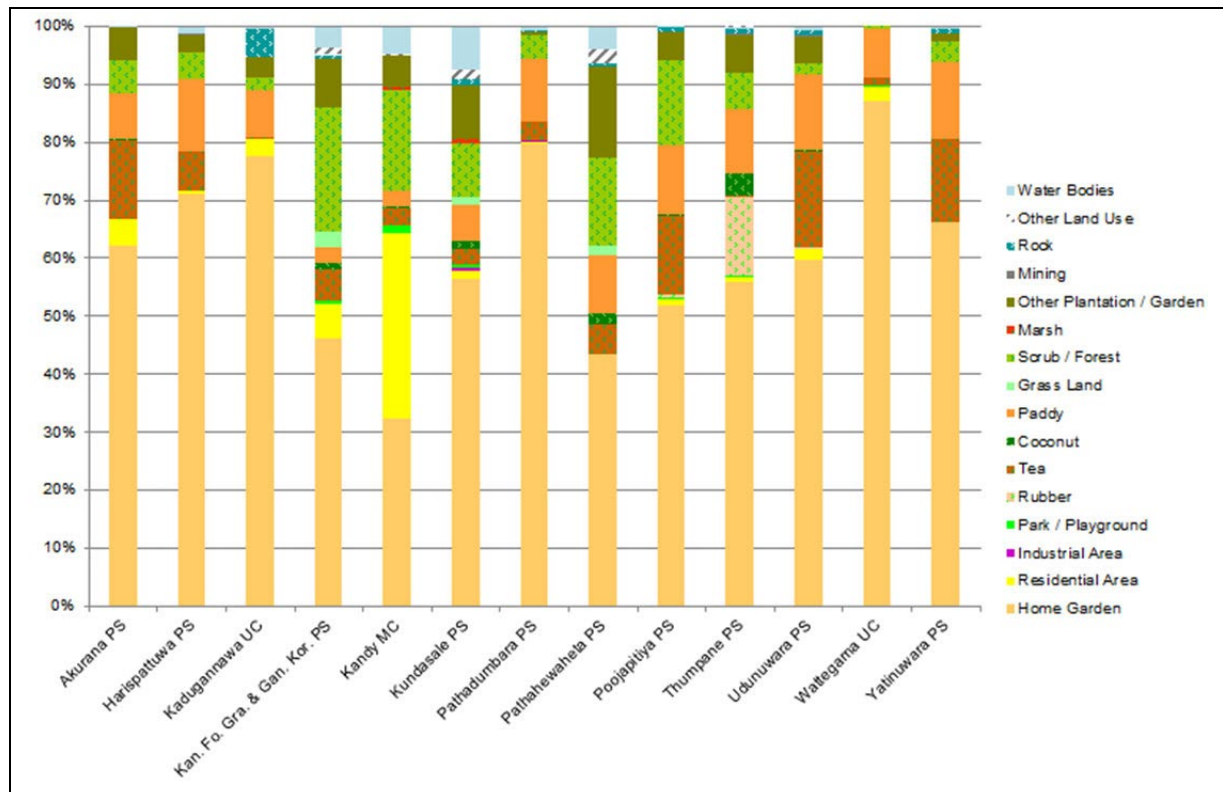
**Table 4.5.3 Agriculture Land Use Percentage**

Agricultural Land Use	Area (ha)	(%)
Forest Plantation	560.4	3.9%
Cashew	0.5	0.0%
Aquatic Farms	11.8	0.1%
Coconut	466.9	3.2%
Pepper	5.0	0.0%
Banana	1.2	0.0%
Crops	2,196.3	15.2%
Livestock Farms	9.3	0.1%
Cinnamon	0.6	0.0%
Paddy	3,910.4	27.0%
Abandoned Agricultural Farm	2,466.6	17.0%
Agricultural Farm	45.8	0.3%
Tea	3,911.6	27.0%
Rubber	891.9	6.2%
<b>Total</b>	<b>14,478.6</b>	<b>100.0%</b>

Source: The JICA Team based on GIS data of Department of Survey, 2001

#### 4.5.2 Land Use Characteristics by Local Authorities

- The characteristics of each Local Authority differ from the coverage of home garden and type of land use category. Figure 4.5.4 shows the comparison chart for 13 Local Authorities (LA) in 2001 and Source: The JICA Team based on Land Use Policy Planning Department 2016 (corrected by using Geo-View Images, Sept 2017)
- Figure 4.5.5 shows the data for 2016. Data for both years are shown in Table 4.5.4 and Table 4.5.5.
- As the second largest city in Sri Lanka, the centre of the study area (Kandy Municipal Council) is relatively urbanised compared to other areas as it functions as the centre of the business district area in the Central Province of Sri Lanka (Refer to map from Figure 4.5.1 and Figure 4.5.2).
- From the land use category and definition of home garden, it can be assumed that in the area with the lesser percentage of home gardens, the area is more urbanised and well-planned with proper planning on the land use.
- Wattegama has the least variety of land use categories as it is mostly covered by home gardens, followed by residential areas which are concentrated near Wattegama station. Wattegama station was being used as an important hub to gather tea estate production from the surrounding area during the British colonisation period.
- Each Local Authority has its development plan and some have implemented land use control. Unfortunately, the plans of the Local Authorities are not compatible with each other.
- By comparing the data for both years, it can be observed that the land use of home garden has shown relative changes in some LAs. Examples of which include Akurana PS (-3.41 sq.km), Thumpane PS (-2.14 sq.km) and Udunuwara PS (-4.21 sq.km).
- Meanwhile, the decreasing of home garden indicated the increasing residential land use in some LAs.



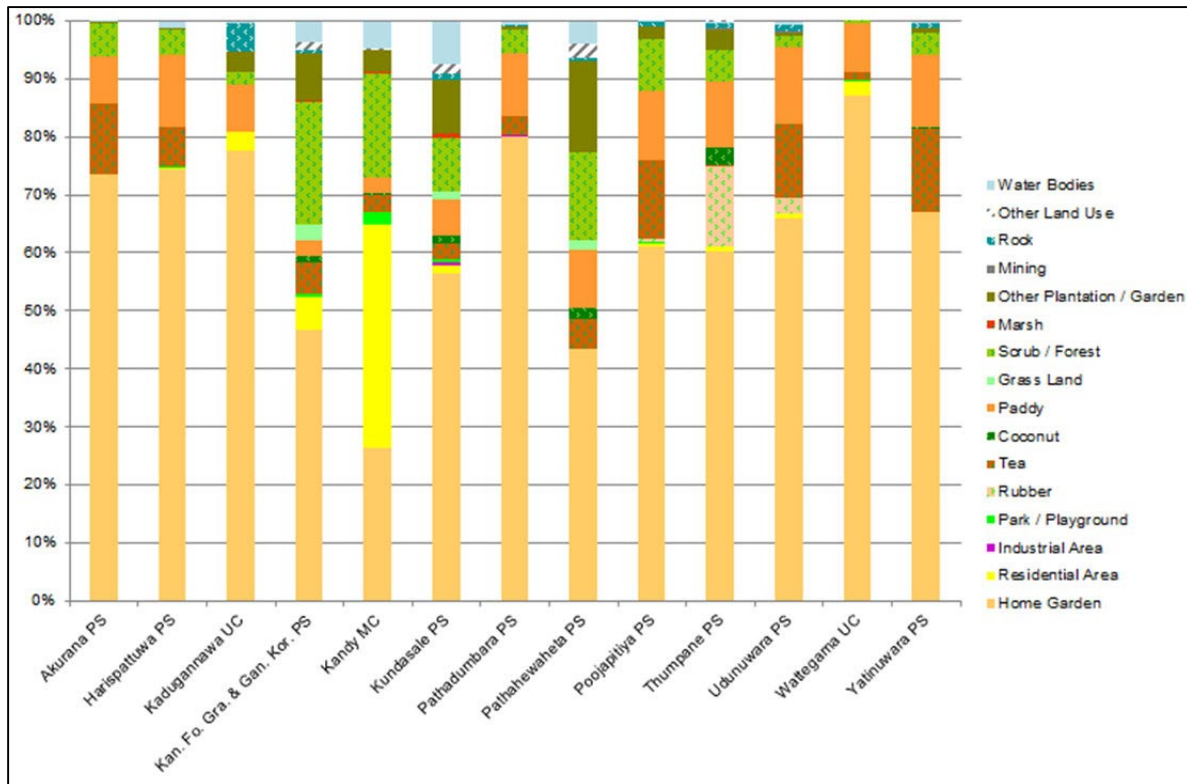
Source: The JICA Team based on GIS data of Department of Survey, 2001

**Figure 4.5.4 Land Use by LA in 2001**

Table 4.5.4 Land Use by LA in 2001

Land Use by LA 2016	Akurana PS		Harispattuwa PS		Kadugannawa UC		Kan. Fo. Gra. & Gan. Kor. PS		Kandy MC		Kundasale PS		Pathadumbara PS		Pathahevaheta PS		Poojapitiya PS		Thumpane PS		Uduuwara PS		Wattegama UC		Yatinuwara PS		Total		
	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	Area (km <sup>2</sup> )	Area (%)	
Home Garden	22.3	73.4	37.2	74.4	3.8	77.5	15.3	46.5	7.1	26.3	45.6	56.4	34.5	79.8	36.1	43.2	36.0	61.0	30.1	60.2	44.3	65.9	4.2	87.1	43.4	66.9	359.9	60.1	
Residential Area	0.0	0.0	0.1	0.3	0.2	3.2	1.9	5.9	10.4	38.4	1.0	1.3	0.1	0.3	0.0	0.1	0.4	0.6	0.3	0.7	0.4	0.7	0.1	2.2	0.0	0.0	15.0	2.5	
Industrial Area	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	
Park / Playground	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.5	0.6	2.1	0.4	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	1.3	0.2	
Rubber	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	6.8	13.6	1.8	2.6	0.0	0.0	0.0	0.1	9.1	1.5	
Tea	3.7	12.1	3.4	6.8	0.0	0.1	1.8	5.4	0.8	3.1	2.1	2.6	1.4	3.3	4.4	5.3	7.9	13.4	0.2	0.4	8.7	12.9	0.1	1.5	9.4	14.4	43.8	7.3	
Coconut	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2	0.0	0.2	1.2	1.5	0.0	0.0	1.4	1.7	0.0	0.0	1.5	3.0	0.0	0.1	0.0	0.0	0.1	0.1	4.7	0.8	
Paddy	2.5	8.2	6.2	12.3	0.4	8.0	0.8	2.6	0.8	2.8	5.1	6.3	4.7	10.8	8.4	10.0	7.0	11.9	5.6	11.2	8.9	13.3	0.4	8.5	8.1	12.5	58.9	9.8	
Grass Land	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.7	0.0	0.0	0.9	1.1	0.0	0.1	1.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.5	
Serub / Forest	1.7	5.7	2.2	4.5	0.1	2.2	7.0	21.3	4.8	17.8	7.6	9.4	1.7	3.9	12.8	15.4	5.4	9.1	2.8	5.5	1.3	1.9	0.0	0.4	2.4	3.8	49.8	8.3	
Marsh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.7	0.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.1	
Other Plantation / Garden	0.0	0.1	0.1	0.2	0.2	3.4	2.8	8.3	1.1	4.0	7.5	9.3	0.3	0.7	13.0	15.6	1.3	2.3	1.8	3.6	0.4	0.6	0.0	0.0	0.0	0.5	0.8	29.0	4.8
Mining	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.4	0.1	
Rock	0.0	0.1	0.0	0.1	0.2	5.0	0.2	0.6	0.0	0.0	0.7	0.9	0.2	0.4	0.4	0.5	0.4	0.8	0.6	1.2	0.8	1.1	0.0	0.0	0.6	0.9	4.2	0.7	
Other Land Use	0.0	0.0	0.1	0.1	0.0	0.0	0.4	1.3	0.1	0.2	1.4	1.8	0.0	0.0	2.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.7	
Water Bodies	0.0	0.1	0.6	1.2	0.0	0.5	1.2	3.7	1.3	4.8	6.1	7.5	0.2	0.6	3.3	4.0	0.1	0.2	0.1	0.3	0.4	0.6	0.0	0.0	0.3	0.5	13.8	2.3	
<b>Total</b>	<b>30.3</b>	<b>100.0</b>	<b>50.0</b>	<b>100.0</b>	<b>4.9</b>	<b>100.0</b>	<b>33.0</b>	<b>100.0</b>	<b>27.0</b>	<b>100.0</b>	<b>80.9</b>	<b>100.0</b>	<b>43.3</b>	<b>100.0</b>	<b>83.4</b>	<b>100.0</b>	<b>59.1</b>	<b>100.0</b>	<b>49.9</b>	<b>100.0</b>	<b>67.3</b>	<b>100.0</b>	<b>4.8</b>	<b>100.0</b>	<b>64.9</b>	<b>100.0</b>	<b>598.7</b>	<b>100.0</b>	

Source: The JICA Team based on the Land use GIS data prepared by Department of Survey, 2001



Source: The JICA Team based on Land Use Policy Planning Department 2016 (corrected by using Geo-View Images, Sept 2017)

**Figure 4.5.5 Land Use by LA in 2016**

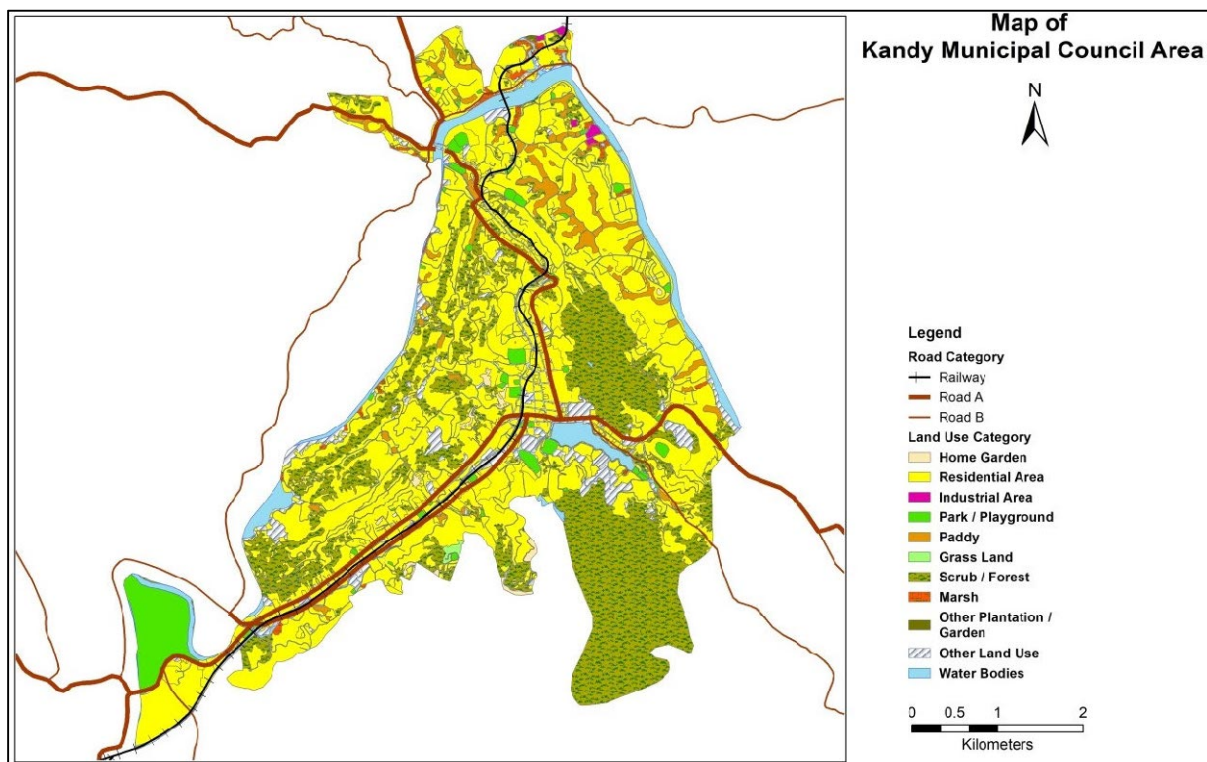
Table 4.5.5 Land Use by LA in 2016

Land Use by LA 2016	Akurana PS		Harispattuwa PS		Kadugannawa UC		Kan. Fo. Gra. & Gan. Kor. PS		Kandy MC		Kundasale PS		Pathadumba ra PS		Pathahewahe ta PS		Poojapitiya PS		Thumpane PS		Udunuwara PS		Wattegama UC		Yatinuwara PS		Total	
	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)	Area (km2)	Area (%)
Home Garden	18.8	62.1	35.5	70.9	3.8	77.4	15.2	46.1	8.7	32.2	45.6	56.4	34.5	79.8	36.1	43.2	30.2	51.7	27.9	55.9	40.1	59.7	4.2	87.1	42.8	66.0	343.6	57.4
Residential Area	1.4	4.5	0.3	0.5	0.2	3.2	1.9	5.9	8.7	32.0	1.0	1.3	0.1	0.3	0.0	0.1	0.7	1.2	0.3	0.7	1.1	1.7	0.1	2.2	0.0	0.0	15.9	2.7
Industrial Area	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1
Park / Playground	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.5	0.3	1.2	0.4	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.0	1.1	0.2
Rubber	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	6.8	13.6	0.3	0.4	0.0	0.0	0.0	0.0	7.6	1.3
Tea	4.1	13.4	3.4	6.8	0.0	0.1	1.8	5.4	0.8	3.1	2.1	2.6	1.4	3.3	4.4	5.3	7.8	13.4	0.2	0.4	11.1	16.6	0.1	1.5	9.3	14.4	46.6	7.8
Coconut	0.1	0.4	0.0	0.1	0.0	0.0	0.4	1.2	0.1	0.2	1.2	1.5	0.0	0.0	1.4	1.7	0.2	0.3	1.9	3.7	0.1	0.2	0.0	0.0	0.1	0.1	5.4	0.9
Paddy	2.4	7.9	6.2	12.3	0.4	8.0	0.8	2.6	0.8	2.8	5.1	6.3	4.7	10.8	8.4	10.0	7.0	12.0	5.6	11.2	8.7	12.9	0.4	8.5	8.5	13.1	58.9	9.9
Grass Land	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.8	0.0	0.0	0.9	1.1	0.0	0.1	1.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.5
Scrub / Forest	1.7	5.6	2.3	4.5	0.1	2.2	7.1	21.4	4.7	17.4	7.6	9.4	1.7	3.9	12.8	15.4	8.5	14.5	3.1	6.2	1.2	1.8	0.0	0.4	2.4	3.7	53.1	8.9
Marsh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.3	0.7	0.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.1
Other Plantation / Garden	1.7	5.6	1.6	3.2	0.2	3.6	2.8	8.5	1.5	5.7	7.5	9.3	0.3	0.7	13.0	15.6	2.9	5.0	3.3	6.5	3.1	4.6	0.0	0.0	0.8	1.2	38.7	6.5
Mining	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.4	0.1
Rock	0.0	0.1	0.0	0.1	0.2	5.0	0.2	0.6	0.0	0.0	0.7	0.9	0.2	0.4	0.4	0.5	0.4	0.8	0.6	1.2	0.8	1.1	0.0	0.0	0.6	0.9	4.2	0.7
Other Land Use	0.0	0.0	0.1	0.1	0.0	0.0	0.4	1.3	0.1	0.2	1.4	1.8	0.0	0.0	2.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	4.1	0.7
Water Bodies	0.0	0.1	0.6	1.2	0.0	0.5	1.2	3.7	1.3	4.8	6.1	7.5	0.2	0.6	3.3	4.0	0.1	0.2	0.1	0.3	0.4	0.5	0.0	0.0	0.3	0.4	13.8	2.3
<b>Total</b>	<b>30.3</b>	<b>100.0</b>	<b>50.0</b>	<b>100.0</b>	<b>4.9</b>	<b>100.0</b>	<b>33.0</b>	<b>100.0</b>	<b>27.0</b>	<b>100.0</b>	<b>80.9</b>	<b>100.0</b>	<b>43.3</b>	<b>100.0</b>	<b>83.4</b>	<b>100.0</b>	<b>58.5</b>	<b>100.0</b>	<b>49.9</b>	<b>100.0</b>	<b>67.2</b>	<b>100.0</b>	<b>4.8</b>	<b>100.0</b>	<b>64.9</b>	<b>100.0</b>	<b>598.1</b>	<b>100.0</b>

Source: The JICA Team based on Land Use Policy Planning Department 2016 (corrected by using Geo-View Images, Sept 2017)

### 4.5.3 Land Use in Kandy Municipal Council (KMC) Area

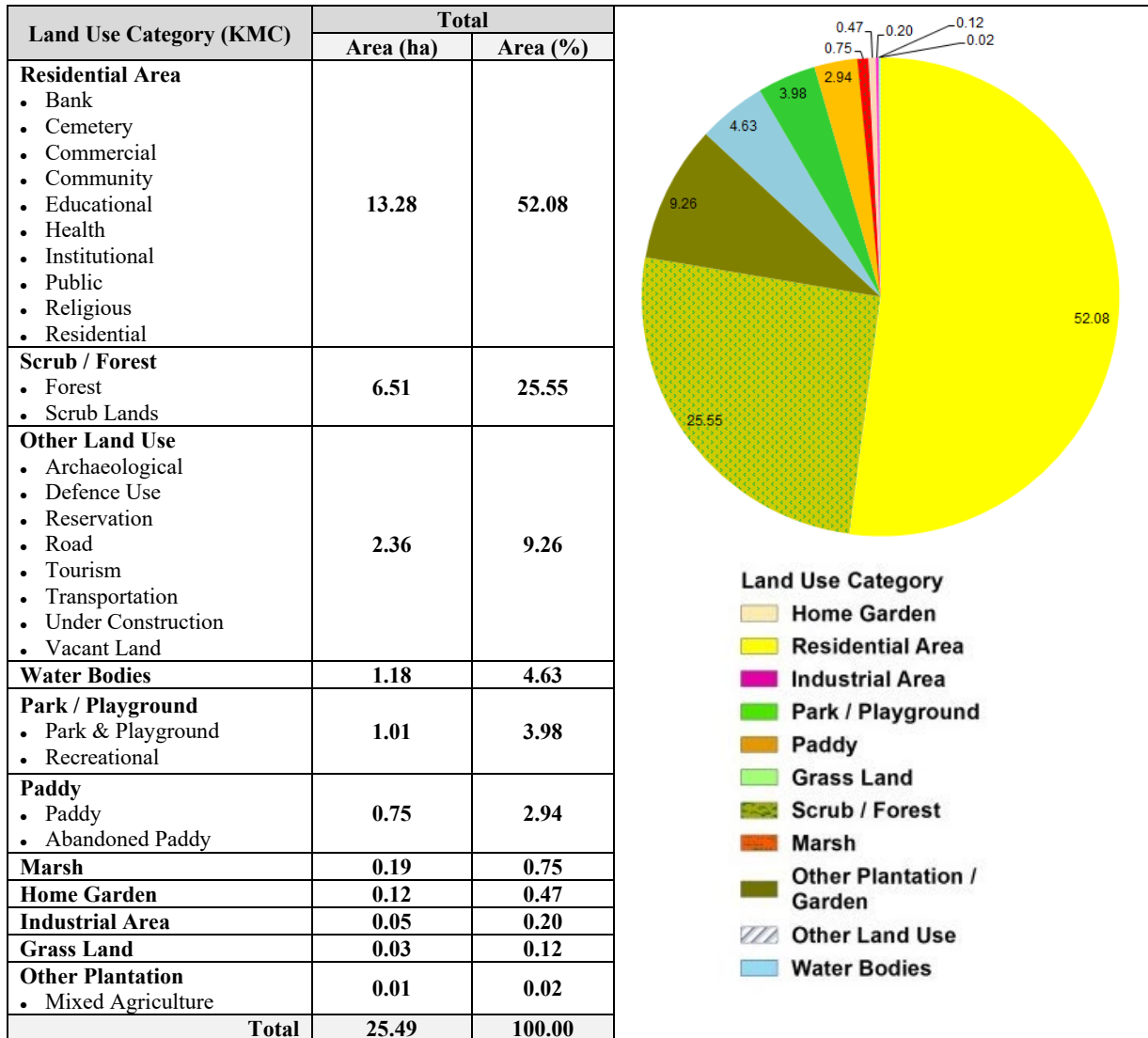
- Source: The JICA Team based on data from Urban Development Authorities, 2016
- Figure 4.5.6 and Table 4.5.6 show the land use in Kandy Municipal Council Area.
- As shown in the land use map of the Greater Kandy Area, most of the planned residential are concentrated in Kandy Municipal Council area. The land uses included in the residential area are community and commercial facilities such as bank, shops, education and health institute, public service agency, cultural and religious facilities, etc. More than half of the KMC area is covered by residential facilities (13.28 sq.km / 52.08%).
- The second highest land use is scrub / forest which is referred to as conserved areas situated at the southern and northern part of Kandy Lake (6.51 sq.km / 25.55%).
- The third highest land uses include archaeology site, defence use, reservation, road, tourism, transportation, etc. (2.36 sq.km / 9.26%). Tourism sector is one of the significant economy resources for the city.
- Tourism spots in Kandy are mainly cultural and religious attractions and natural settlement around Kandy Lake.
- Paddy is the main agriculture produce in KMC which covered 0.75 sq.km / 2.94% of the area.



Source: The JICA Team based on data from Urban Development Authorities, 2016

**Figure 4.5.6 Land Use in KMC**

**Table 4.5.6 Land Use in KMC**



Source: The JICA Team based on data from Urban Development Authorities, 2016

#### 4.5.4 Potential Land for Development

UDA has the authority to acquire or expropriate land for urban development purposes as long as the development will benefit the public interest. UDA's development projects often results in conversion of agricultural land to urban use. Furthermore, agencies like the Mahaweli Authority have extensive land which could be considered for development.

##### (1) Agricultural land and development

Generally, there are two types of agricultural lands, namely private land and state land.

- 1) Private Land: Private land is non-government owned land. For private land, there is no control or restriction on agricultural land use conversion. As long as the owner gets approval from the relevant authorities such as the Department of Agrarian Services, CEA and UDA etc., the land can be converted to other uses.
- 2) State Land: The Department of Agriculture owns the state land. The authority would incorporate the development projects from surrounding areas and develop the agriculture land to suit the needs for development. The land is protected and there is a prohibition against converting it to purposes other than agriculture use.

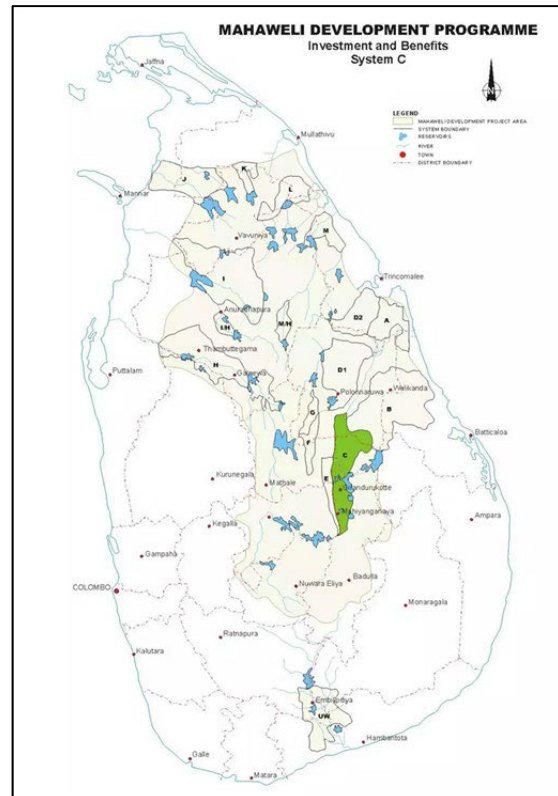


The marginal lands and non-productive agriculture lands could be utilised for non-agricultural development. Although the State Land owned by the Department of Agriculture is strictly protected from being converted to other development purpose, the Department of Agriculture is aggressively and positively supporting the development of its surroundings.

## (2) Mahaweli Authority

The regional boundaries of the Mahaweli Authority project fall within the basins of the Mahaweli River and the Maduru Oya. The project area spreads over 13 administrative districts and covers about 39% of the land area of the entire country and 55% of the dry zone area. The suitable area for irrigation extends to approximately 1.5 million acres, of which 900,000 acres would be watered by the proposed irrigation systems (of these, 246,000 acres are at present partially irrigated).

There remains 600,000 acres of land, of which 54,000 acres are presently cultivated but not served by the irrigation systems. It is envisaged that the balance of 546,000 acres will remain under the forests of the new land to be developed for irrigation, which is 654,000 acres (900,000 – 246,000 acres) – 360,000 acres area in the basins of the Mahaweli Ganga and Maduru Oya, and 294,000 acres are in the north central part.



Source: <http://mahaweli.gov.lk/en/maps.html>

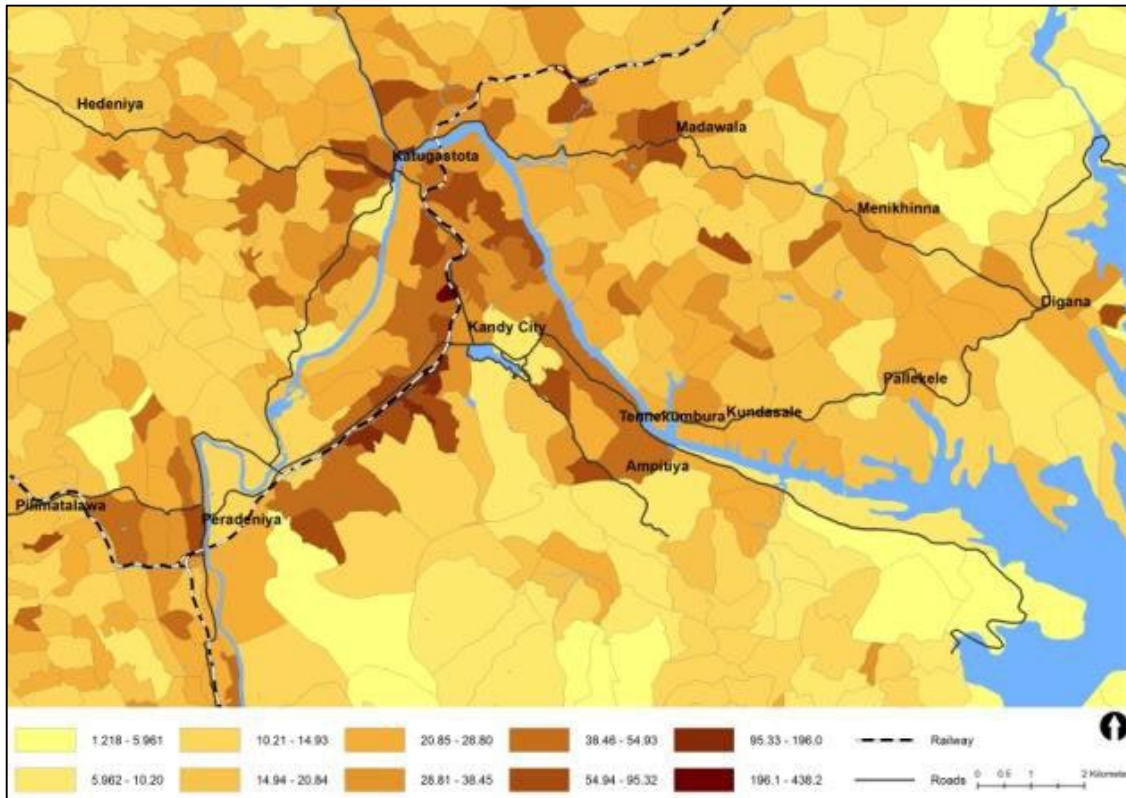
**Figure 4.5.7 Mahaweli Development Programme**

## CHAPTER 5 PRESENT CONDITIONS OF THE CITY CENTRE

### 5.1 General Urban Conditions

#### 5.1.1 Population Distribution

Owing to its historical importance, the central Kandy area has remained the centre of population and commercial growth (see Figure 5.1.1). Over recent years, the growth has been concentrated along the two main roads traversing valleys: Peradeniya Road and Katugastota Road. Even with the expansion of the Kandy region, central Kandy still remains the centre for the three locations in its immediate periphery, namely, Peradeniya, Katugastota, and Madawala.

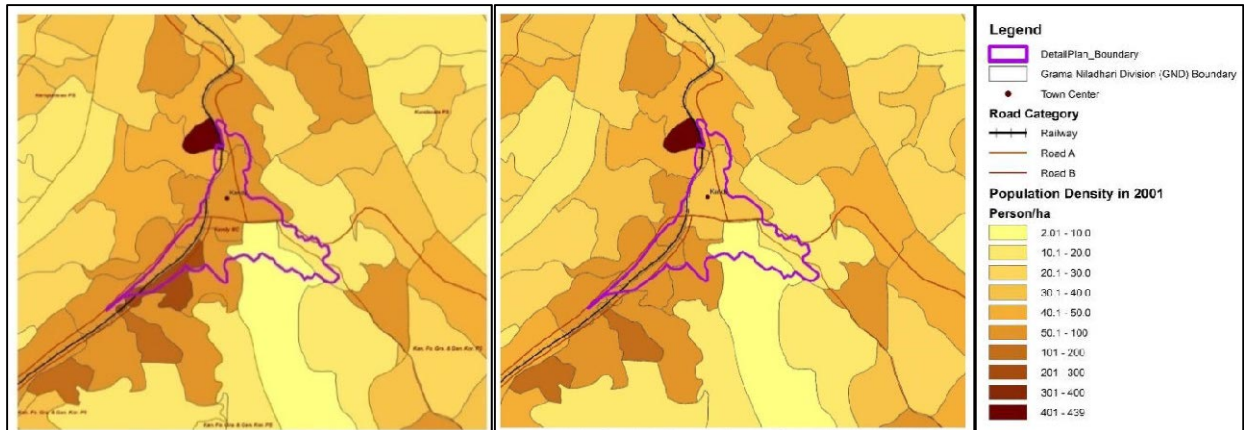


Source: Kandy City Region Strategic Development Project 2030

**Figure 5.1.1 Distribution Pattern of Kandy's Population in 2012**

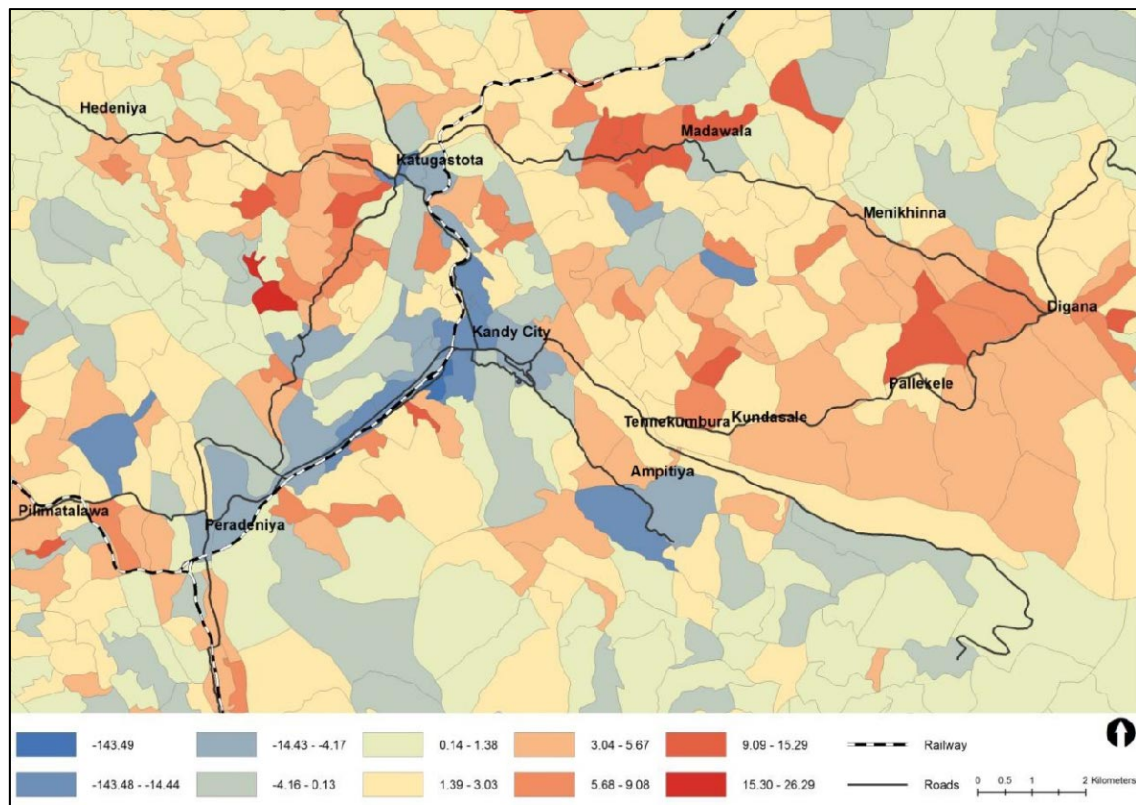
#### (1) Demographics

Despite the high concentration of built-up areas in central Kandy, its population density is low because of the transition from being a traditional residential area to primarily a commercial area caused by the increased demand for commercial and tourist services. While the regional population grew at a moderate rate of 1.2% between the census years 2002 and 2012, the Heritage Area had a negative population growth rate as shown in Figure 5.1.2 and Figure 5.1.3.



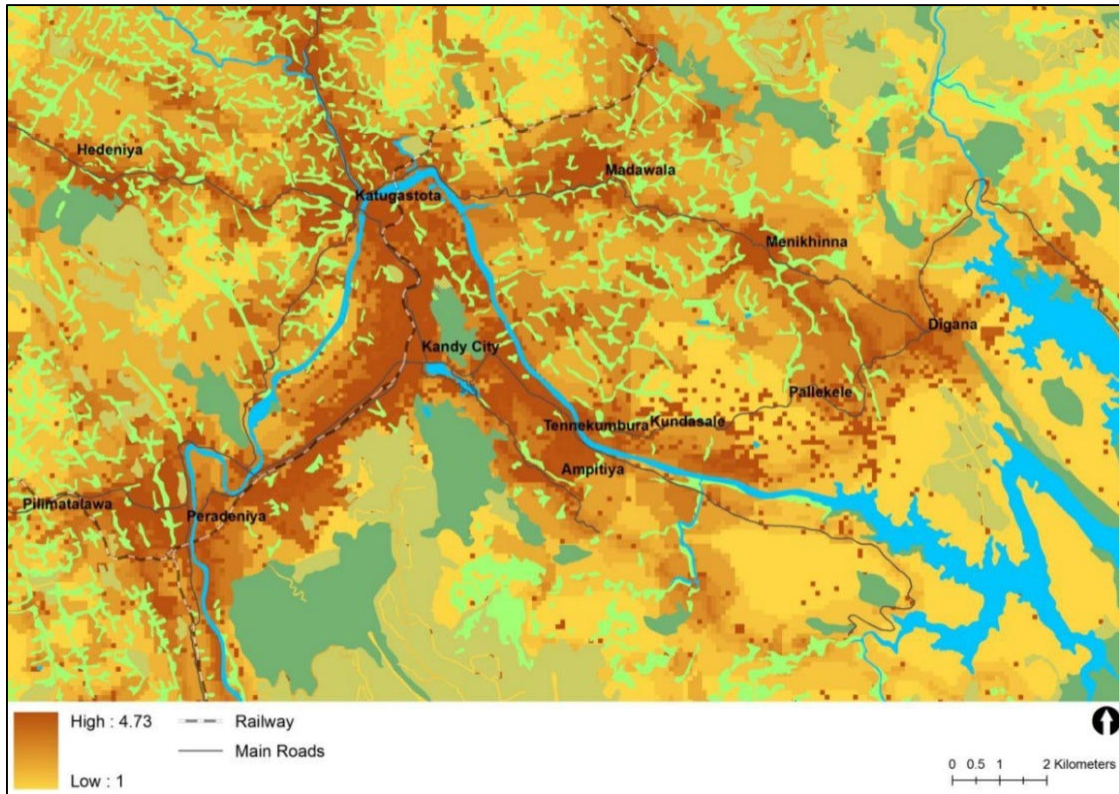
Source: The JICA Team

**Figure 5.1.2 Heritage Area's Population Density in 2001 and 2012**



Source: Kandy City Region Strategic Development Project 2030

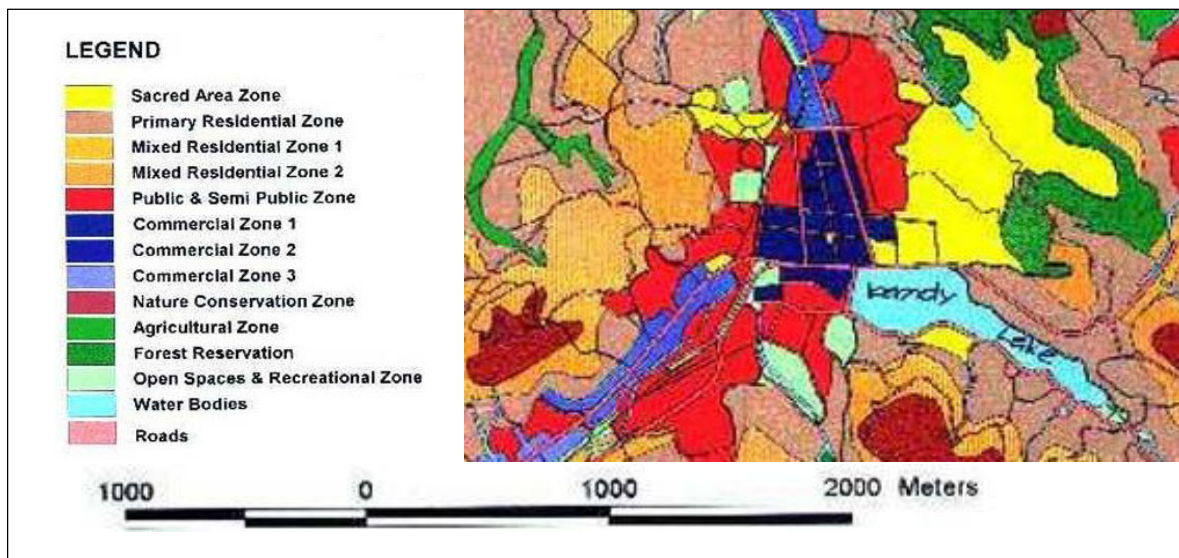
**Figure 5.1.3 Heritage Area's Changes in Population Density Between 2002-2012**



Source: Kandy City Region Strategic Development Project 2030

**Figure 5.1.4 Distribution Pattern of the Development Pressure in the Region**

KMC is the dominant centre of the region that serves for all urban services. Kandy City Region Strategic Development Project 2030 analyses the level of pressure imposed by development trends. It is an evaluation of the present trends of development imposed upon a location due to its (1) high accessibility from major roads, minor roads, and local roads; (2) increasing urbanisation due to high connectivity; (3) population density and population growth; and (4) land use changes. Figure 5.1.5 shows that the Heritage Area has high levels of pressure imposed by the above-mentioned development trends.



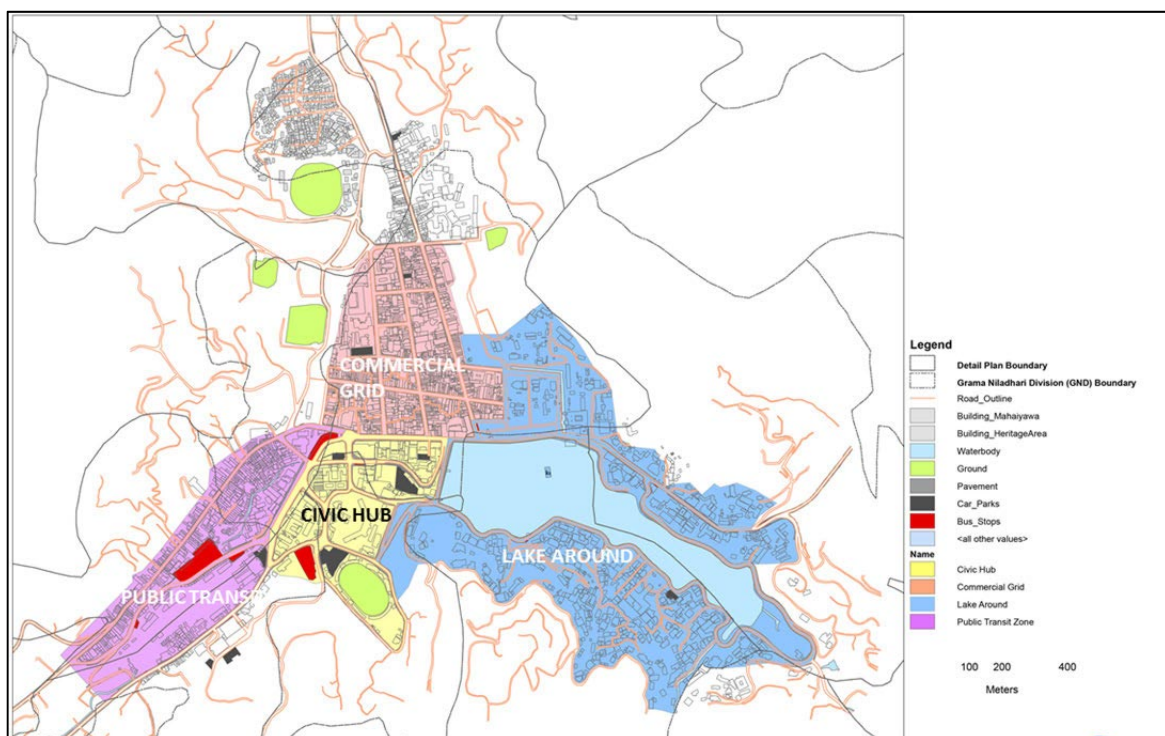
Source: Kandy City Region Strategic Development Project 2030

**Figure 5.1.5 Zoning Plan 2012-2016**

## (2) Delegation of Zones at the Heritage Area

For the detailed study, the Heritage Area is divided into four areas as shown in Figure 5.1.6.

1. **Commercial Grid Zone**– This is the central historic core of Kandy City which is home to most of the commercial activities and services. It is closest to the religious zone and the site of Kandy’s heritage buildings of religious, archaeological, and architectural importance from different eras in history. It extends from D S Senanayake Veediya (at some places Dewa Veediya) in the east, and Sri Dalada Veediya in the south. The grid of important streets extends up to Wadugodapitiya Veediya in the west and up to Trinity College in the north.
2. **Public Transit Zone** – In this division, the major public transit modes (the railways and buses) can be found along with multiple bus terminals. This forms the ingress and egress zone of the population that engages in business, administrative, and medical services from the peripheral nodes of the Kandy Region. It mainly lies between the Peradeniya Road and William Gopallawa Mawatha, up to the Sambodhi Mawatha.
3. **Civic Hub Zone** - This particular division accommodates mainly the civic and administration buildings with a central municipal market, the erstwhile Bogambara Prison, and a few open spaces like Bogambara Ground and Torrington Park.
4. **Lake Around Zone** – This is the area around Kandy Lake with the Knuckles Mountain Range, on the north and the Hanthana Mountain Range, on the south. It consists of the all-important Dalada Maligawa (the Temple of Tooth Relic) which adds to the scenic beauty of the predominantly natural landscape of the zone. This area is also characterised by sporadic residential areas, with a few and upcoming hospitality sector buildings on the hill slopes overlooking a lake.



Source: The JICA Team

Figure 5.1.6 Base Zone Map

## 5.2 Built-up Situation

Most of the Kandy Heritage Area has well built-up buildings, e.g., robust public buildings, high-end hotels, and colonial buildings with commercial establishments. However, due to severe regulations on identified heritage buildings, such buildings especially the smaller ones are degrading because of the lack of maintenance, huge cost of upkeep, and notion of lower returns on such preserved buildings. In addition, within the identified Heritage Area are settlements situated in environmentally sensitive areas, such as catchment of water bodies, affecting the ecosystem and endangering the lives of those living in such sensitive areas. One such settlement (see Figure 5.2.1) along the Meda Ela (central canal) is right in the heart of the city from the Lamagaraya Road towards the South running underground between Peradeniya Road and William Gopallawa Mawatha.

Furthermore, due to non-stringent monitoring of new constructions around the Bogambara Lake, a lot of buildings have sprouted on ecologically fragile slopes of the mountain range, hence structurally unsafe (see Figure 5.2.2). The afore-cited patterns caused by the growing demand for commercial and residential spaces have compromised not only the ecological balance of the slopes, but also formed a visual blight around the Lake.

Therefore, future development of the area should follow appropriate guidelines pertaining to geographical as well as archaeological issues, and these should be embedded in the overall development plan.



Source: The JICA Team

**Figure 5.2.1 The Built-Up Conditions on the Mountain Slopes Around the Lake**



Source: The JICA Team

**Figure 5.2.2 Informal Settlements Along the Canal of between Peradeniya Road and William Gopallawa Mawatha**

### **5.3 Infrastructure**

The status of infrastructure in the GKUP region has been explained in the previous Chapter. The following sub-sections explain briefly the important points related to the detailed Heritage Area. However, due to paucity of area specific data, the overall status of KMC area has been discussed under the following heads:

#### **5.3.1 Water Supply**

Water supply has high coverage in the heritage area with a standard of 150 litres of water per day per capita. It also takes into account the assumptions that a student attending school in this area has a requirement of 10 litres per day, while a tourist or a visitor will have a requirement of 6 litres per day per capita.

#### **5.3.2 Sewage**

Most of the residential, commercial, administrative, and town centre in the Heritage Area utilise septic tanks or pit latrines. The septic tanks tend to mix black and grey water diminishing the biological digestion process. Inadequate size of plots of lands contributes to inappropriate and non-standard septic tanks in most cases, thereby threatening the quality of ground- and surface water.

#### **5.3.3 Solid Waste Disposal System**

The coverage of collection of municipal solid waste (MSW) from households, commercial establishments (such as markets, shops, restaurants and hotels), institutions (excluding hospitals, medical centres and clinics) is comparatively higher for Kandy MC, compared to other areas in the region. According to NSWMSC's unpublished data (2013), the total generation of MSW was approximately 130 MT/day and the total collection of MSW was approximately 102 MT/day.

The collection of solid waste varies depending on the intensity of need for collection in the area. For example, in the commercial area the collection schedule is daily; while in residential areas, it is once or twice a week. However the lack of solid waste management is evident since industrial and hazardous wastes (from factories, hospitals, and medical centres) are sometimes mixed with household waste.

#### **5.3.4 Drainage System**

Not all roads within the Heritage Area have proper drainage system. The situation is worsened by the construction of unauthorised buildings on top of the drains, resulting to difficulties in maintenance. During rainy days, the drains overflow. Also, a number of small-scale hotels discharge wastewater directly into drains and the contaminated water emits bad odour.

## 5.4 Transportation

As per the Space Syntax analysis in the Kandy City Region Strategic Development Plan 2030, the streets of the Kandy Historic City area are the most integrated and have the highest attraction for businesses and people, which also has an adverse side to it. Owing to this primacy, most of the streets in the area have reached their carrying capacities and congestion can be seen at all times. This is further densified by the influx of approximately 1,000 school vans entering the city on school days carrying over 16,000 passengers from 6:30 A.M. to 8:00 A.M. and from 1:30 P.M. to 3:00 P.M. According to the Kandy Transport Study in 2011 by SCDP, an average of 325,000 people enter Kandy City (Municipal Council limits) during the twelve-hour day time of a weekday, of which around 100,000 passengers are transported by 45,000 vehicles towards the city centre.

About 64% of 350,000 persons use public transport to travel into the city for various reasons. The KMC Development Plan 2030 categorised the purposes of the passengers coming into the Kandy city area into five: (1) Passengers who travels into the city to obtain services related to education (17%), health and services from various other organisations, (2) religious and tourism activities, (3) passengers who travel into the city for commercial purposes, (4) travelling to other destinations through the Kandy city centre as it is used as the national transportation point, and (5) passengers who come for employment (25%).

The railway share is only 2% amongst the public transportation while buses transport majority of the population. Privately operated buses and Sri Lanka Transport Board buses make around 5,000 trips carrying approximately 200,000 passengers daily.



## 5.5 Social Infrastructure

The social infrastructure, both tangible (assets that accommodate social services) and intangible (the social networks and sense of identity) forms, is crucial to creating sustainable communities.

### 5.5.1 Health

As shown in Figure 5.5.1, a number of private and public medical facilities are concentrated in the Heritage Area. As mentioned before, these services attract a high influx of people on a daily basis at the city centre. Moreover, many private medical facilities are scattered all along the length of Peradeniya Road with multiple egress and ingress points. Therefore, the issue on location of medical facilities is related with transportation management and crowd dispersal as well.

### 5.5.2 Education

A similar trend of scattered education facilities akin to health facilities exists in the heritage area, especially in the Commercial Grid zone, thereby causing conflict with the neighbouring land uses, and leading to transportation issues. See Table 5.5.1, Table 5.5.2, and Figure 5.5.1.

**Table 5.5.1 Details of Public Schools Located in KMC**

No.	School	No. of Students	No. of Teachers	Student Teacher Ratio (%)
01	Rasinghdev School	150	21	07
02	Hemamali Girls School	2,332	102	23
03	Viharamahadevi Girls School	2,479	126	20
04	Kappatipola School	50	14	04
05	Pushpananda Girls School	2,528	114	22
06	Sarasavi Uyana Maha vidyalaya	2,724	102	27
07	Rasikala Asthetic School	223	23	10
08	Al Hamra School	295	21	14
09	Swarnamali Girls School	3,595	147	25
10	Darmawickrema Girls School	981	53	19
11	Darmashoka Maha Vidyalaya	55	16	04
12	Mawilmada Maha Vidyalaya	133	28	05
13	Shree Vimalabuddi	43	14	03
14	Gothami Balika Vidyalaya	1,029	58	18
15	Al Hilal Collage	107	14	08
16	Senkedagala Weerodara Vidyalaya	248	22	11
17	St. Anthony's Girls school	3,757	176	20
18	Berewest College	986	63	15
19	Lumbini Royal College	554	38	15
20	Hindu Senro Kandy College	273	21	13
21	Presidents College New Primary School	343	18	20
22	Thakshila College	101	15	08
23	Kingswood College	3,815	106	24
24	Mahanama College	1,509	85	18
25	Maddumabandara College	48	12	02
26	Darmaraja College	4,684	207	23
27	Shree Rahula College	2,390	144	17
28	Kalegamal Tamil College	218	23	10
29	St. Anthony's College	2,652	156	17
30	D.S.Senanayaka College	1,386	85	16
31	High School	5,917	210	28
32	Vidyarthi College	3,381	115	29

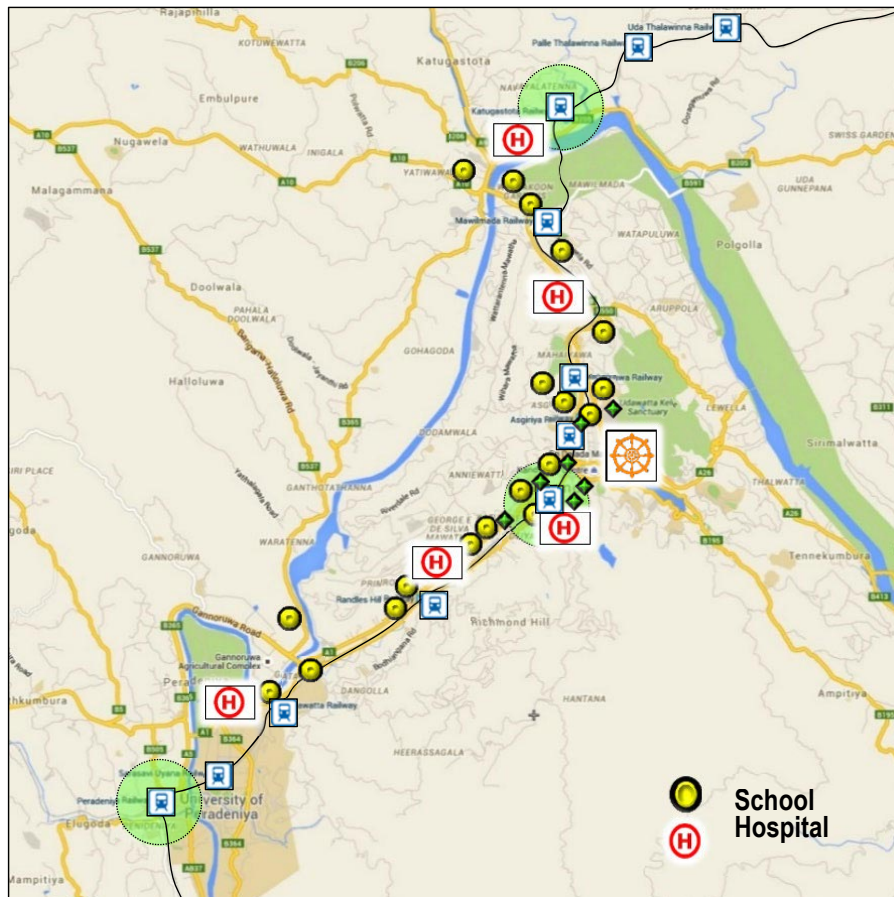
No.	School	No. of Students	No. of Teachers	Student Teacher Ratio (%)
33	Seethadevi Girls School	2,488	105	24
34	Vivekananda Tamil School	352	21	17
35	Wariyapola Shree Sumangala	2,654	117	23
36	Badurdeen Mohamed Girls School	1,658	123	13
37	Zahira Boys School	532	48	11
38	Shree Shivashakthi College	86	8	11
39	Mahamaya Girls School	4,623	198	23
40	Siddi lebbe Muslim School	152	28	05
	Total	65,063	3,168	20.57

Source: KMC Development Plan 2016-2030 Vol 1 (Situation Report)

**Table 5.5.2 Details of Private Schools Located in KMC**

No.	School	No. of Students	No of Teachers	Management Staff
1	Gateway International School	1005	111	42
2	Colombo International School	622	97	37
3	Vision International School	665	35	03
4	American College	600	30	17
5	Green Hill International School	422	31	04
6	Al Imran School	420	29	09
7	Kandy Grammar School	335	21	10
8	Spring Field School	334	49	65
9	Al Hithma School	182	16	05
10	Kandy Royal School	130	10	05
11	Minco International School	58	06	01
	Total	4715	129	197

Source: KMC Development Plan 2016-2030 Vol 1 (Situation Report)



Source: UDA

**Figure 5.5.1** Location Map of Existing Schools and Hospitals

### 5.5.3 Religious Places and Buildings

Kandy City has a mixed population of Buddhists, Hindus, Muslims, and Catholics. Consequently, this is reflected in the religious buildings established in the Heritage Area. Other prominent religious places are Asgiriya Vihare and Malwathu Maha Viharaya (Buddhism), Pillaiyar Kovil in Katukale (Hinduism), Meera Makam Mosque (Islam), and St. Sylvester's Church (Christianity).

As Dalada Maligawa is both at the centre of the city and at the centre of Kandy's World Heritage status, it has a huge influence over the development decisions of the surrounding areas. Therefore, the future strategies have to be sensitive and coherent with the religious sentiments of the populace, amongst other important factors.

**Table 5.5.3 Religious Places and Buildings in the KMC Area**

Religion	Religious Places
Buddhist	<ul style="list-style-type: none"> <li>• Temple of the Sacred Tooth Relic (Dalada Maligawa)</li> <li>• Ulpangeya</li> <li>• Sri Dalada Maligawa Retirement Hall</li> <li>• Kandy Buddhist Centre</li> <li>• The Dewala surrounding the Dalada Maligawa, Auditorium, Queen’s Bath</li> <li>• Asgiriya Rajamaha Viharaya and Malwatu Rajamaha Viharaya</li> <li>• Suduhumpola Rajamaha Viharaya</li> <li>• Gatabe Temple</li> <li>• Nagavimana Viharaya</li> </ul>
Catholic	<ul style="list-style-type: none"> <li>• St Sebastian’s Church</li> <li>• Christ Church</li> <li>• Girls’ High School</li> <li>• St. Paul’s Church</li> </ul>
Hindu	<ul style="list-style-type: none"> <li>• Pillaiyar Kovil</li> </ul>
Muslim	<ul style="list-style-type: none"> <li>• Meera Makam Mosque</li> <li>• Merks Mosque</li> <li>• Katukelle Jumma Mosque</li> <li>• Cartu Mosque</li> </ul>

Source: KMC Development Plan 2016-2030 Vol 1 (Situation Report)

#### **5.5.4 Leisure Facilities**

Public libraries - There are a few libraries in Kandy’s Heritage Area serving as centre of social congregation, amongst them the prominent being the D.S. Senanayake Memorial Public Library, which in its current form started in 1962 and its outstanding building stands opposite the Torrington bus stop. Its membership is estimated to be close to 80,000 members. Other libraries include E.L. Senanayaka Children’s Library, and the British Council Library (both on E L Senanayake Veediya).

Halls and Congregation Spaces – The Kandyan Art Association near Dalada Malegawa, a 177- year old building, functions as a showcase of local traditional arts, dance, and handicraft, especially for domestic and international tourists. Other halls which are used by the population for trade fairs and handicraft exhibitions are YMBA Hall and Hindu Cultural Centre.

Amongst the modern buildings, Kandy City Centre provides formal and informal congregation facilities and hosts book fairs and handicraft exhibitions amongst a number of events. Similarly, the open spaces primarily exist in the form of playgrounds maintained by the KMC, as shown in Table 5.5.4. Torrington Park and Central Market support a number of shops and draws a huge crowd of locals and tourists alike. A similar linear congregation of shoppers is seen along the Dalada Veediya and Colombo Street. Central Post Office also draws a great number of people with its central location and added facilities for the holding of events.

An understanding of the usage of the leisure facilities not only explains the catchment area of these social infrastructures but also explains the adequacy or inadequacy for the local population. Therefore, the number of users of these facilities will be ascertained in the next stages. Also, from an urban design point of view the spatial understanding of open spaces can suggest ways for their integration and strengthening of the pedestrian network.

**Table 5.5.4 Playgrounds Belonging to the Municipal Council**

No	Name of Playground	Location	Suitable Sports	Size of Playground	
				Length of Track(m)	Land Area (ha)
1	Mapanawatura	Mapanawathura, Kandy	Football, Cricket, Rugby	200	1.2
2	Wattaratanna	Wattaratanna, Kandy	Football, Cricket, Rugby.	100	0.5
3	Cosmi Park	Wattaratanna Mawatha, Kandy	Football, Cricket, Rugby.	200	01
4	Nawayalatanna	Nawayalatanna, Kandy	Football, Cricket, Hockey, Rugby.	100	01
5	Tittewela	Tittewela, Kandy	Football, Cricket, Rugby & Athletics	150	01
6	Mawilmada	Mawilmada, Kandy	Football, Cricket, Rugby & Athletics	200	01
7	Watapaluwa H.S	65, Jaya Mawatha, Watapaluwa, Kandy.	Football, Cricket, Rugby & Netball	400	3.5
8	Watapula Gama	Banabas road, Watapaluwa, Kandy	Football, Cricket, Rugby	150	01
9	Aruppala	Aruppala, Kandy	Football, Cricket, Rugby	200	02
10	Lewella	Lewella, Kandy	Football, Cricket, Volleyball	150	1.5
11	Deyyannewela	William Gopallawa Mw, Deyyannewela, Kandy	Football, Cricket, Rugby & Athletics	200	1.75
12	Weiwelpitiya	Katugatota Road, Kandy.	Football, Cricket, Rugby, Hockey & Athletics	200	1.75
13	Watapaluwa, Old Gantota Road	Old Gantota Road, Watapaluwa, Kandy.		150	1.25
14	Gomes,	Darmashoka Mawatha, Kandy.	Football, Cricket, Rugby	100	01
15	Low Nagastanna	Nagastanna road, Kandy.	Football, Cricket,	100	01
16	Dangolla	Dangolla, Kandy.	Football, Cricket, Volleyball	200	2.75
17	Dodamwela	Kudarawatta Mawatha, Dodamwela, Kandy	Football, Cricket, Volleyball	150	0.75
18	Boowelikanda	Anagarika Darmapala Mawatha, Kandy	Football, Cricket, Rugby & Athletics	200	01
19	Ampitiya	Ampitiya Road, Kandy	Football, Cricket, Volleyball, Netball, Hockey, Athletics & Rugby.	300	2.5
20	Malwatta	Keerti Shree Rajasinghe Mawatha, Kandy	Football, Cricket, Cricket & Leather Ball	100	01
21	Gatabe	Peradeniya Road, Kandy	Football, Rugby, Volleyball, Netball, Hockey & Athletics	300	2.5
22	Katukele	Peradeniya Road, Kandy	Football, Cricket & Athletics	200	01
23	Aniwatta	Aniwatta, Kandy	Football, Cricket	150	01
24	Asgiriya	Sumangala Mawatha, Asgiriya, Kandy.	Football & Cricket	50	0.1

Source: KMC Development Plan 2016-2030 Vol 1 (Situation Report)

## 5.6 Public Space and Facilities

### 5.6.1 Public Space

The open spaces are the lungs of a city which provide a sort of buffer area to high concentration of activities. Kandy has its own share of public open spaces, well distributed but utilised below their potential. The following gardens are located within the Municipal Council Limits as per KMC Development Plan 2016-2030:

1. E.L Senanayaka Children's Park
2. Gatabe Children's Park
3. Wales Park
4. George E. De Silva Park
5. Lake Round Park
6. Railway Station Park
7. Udawatte Kele Sanctuary
8. Wakara Watta
9. Peradeniya Botanical Gardens
10. Kandy Lake

Important amongst them for their value or use at the Heritage Area are the Torrington Park, Bogambara Grounds, Bogambara Prison premises, Wales Park, EL Senanayake Children's Park (along the lake), and the small park in front of the Clock Tower. At present, their full potential is not being realised. These small but strategically located spaces have the potential to cater to open space demand as well as serve as tourism places.

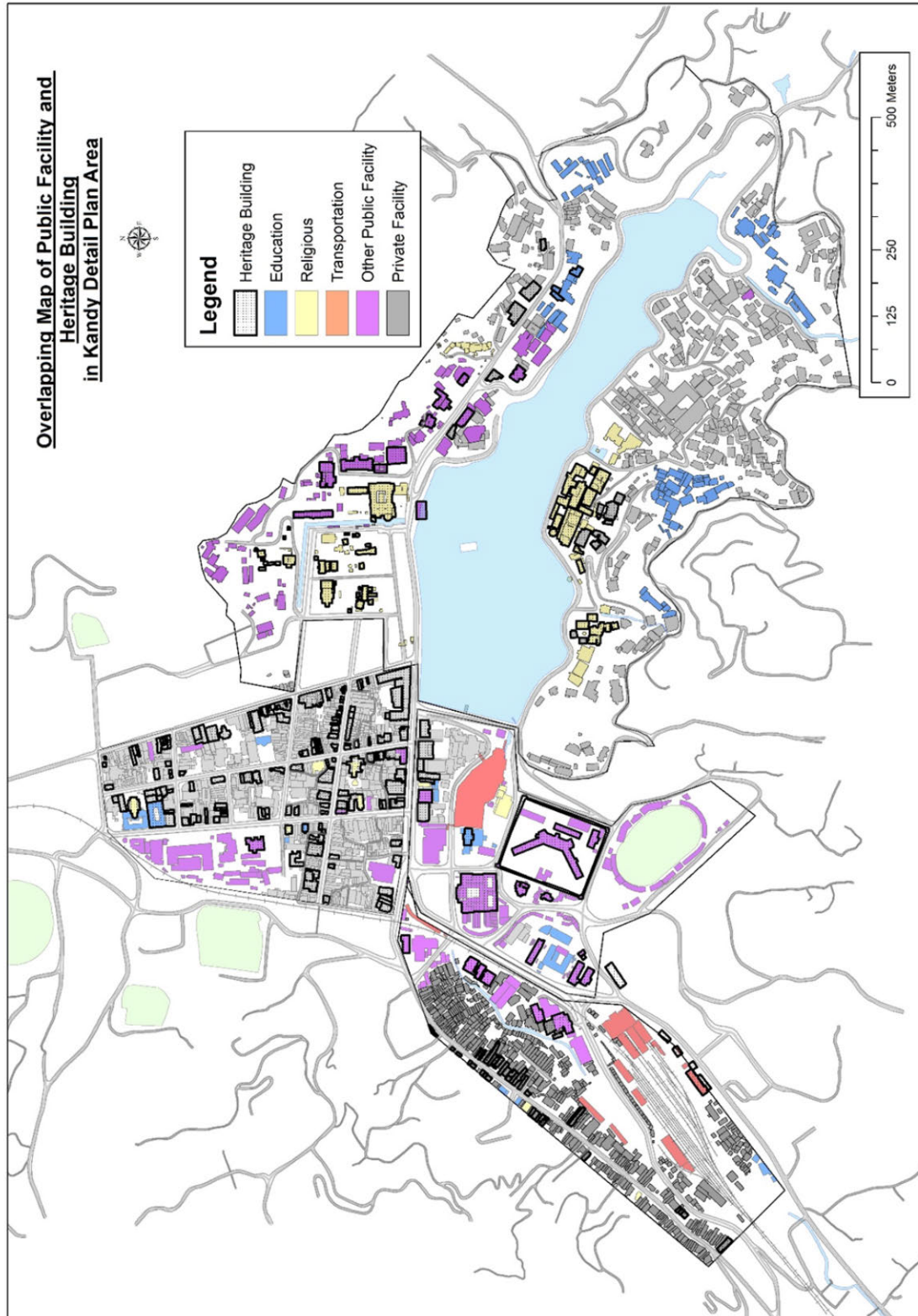
The potential can be tapped through the integration of these public spaces to each other as well as to other built spaces of frequent visits. Figure 6.1.9 shows the pedestrian infrastructure from the railway station and bus terminal stops to the Tooth Relic Temple. At various places, this flow is interrupted by wide roads and inaccessible pedestrian paths. The commercial grid exhibits a high percentage of pedestrian infrastructure, but still pedestrian movements are hindered by the commercial activities taking place in the zone, such as the loading and unloading of commercial goods, on street parking, and pick-up or drop-off of tourists at hotels.

### 5.6.2 Public Facilities

In each zone, there are many public facilities, especially in the Civic Hub. Some of public facilities are designated as heritage buildings (see Figure 5.6.1). Large-scale public facilities, excluding religious facilities, are as follows:

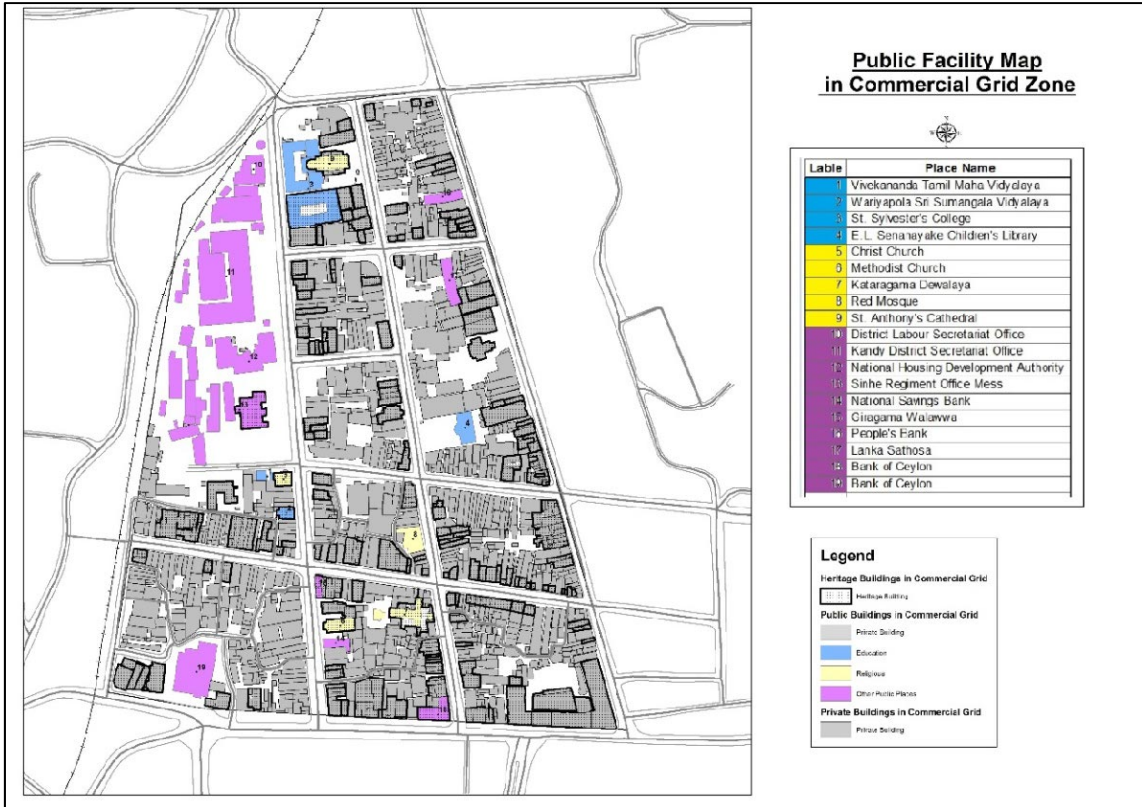
- Commercial Grid Zone (see Figure 5.6.2): Kandy District Secretariat Office, Sinha Regiment Office
- Civic Hub Zone (see Figure 5.6.3): Bogambara Prison\*, Bogambara Stadium, Police Barrack\*, Central Market\*, Torrington Shopping Complex
- Public Transit Zone (see Figure 5.6.4): Kandy Police, Municipal Public Shopping Complex, RDA Executive Engineer Office\*, Post Office\*, Kandy Railway Station, Goodshed Bus Terminal
- Lake Around Zone (see Figure 5.6.5): Most of the public facilities are related to the Temple of the Tooth Relic, religious and cultural properties as well as schools.

It is significant to relocate public facilities which are not necessarily be located in the city centre, or to reform urban functions which are open to public, and to renovate heritage buildings for preservation and utilisation.



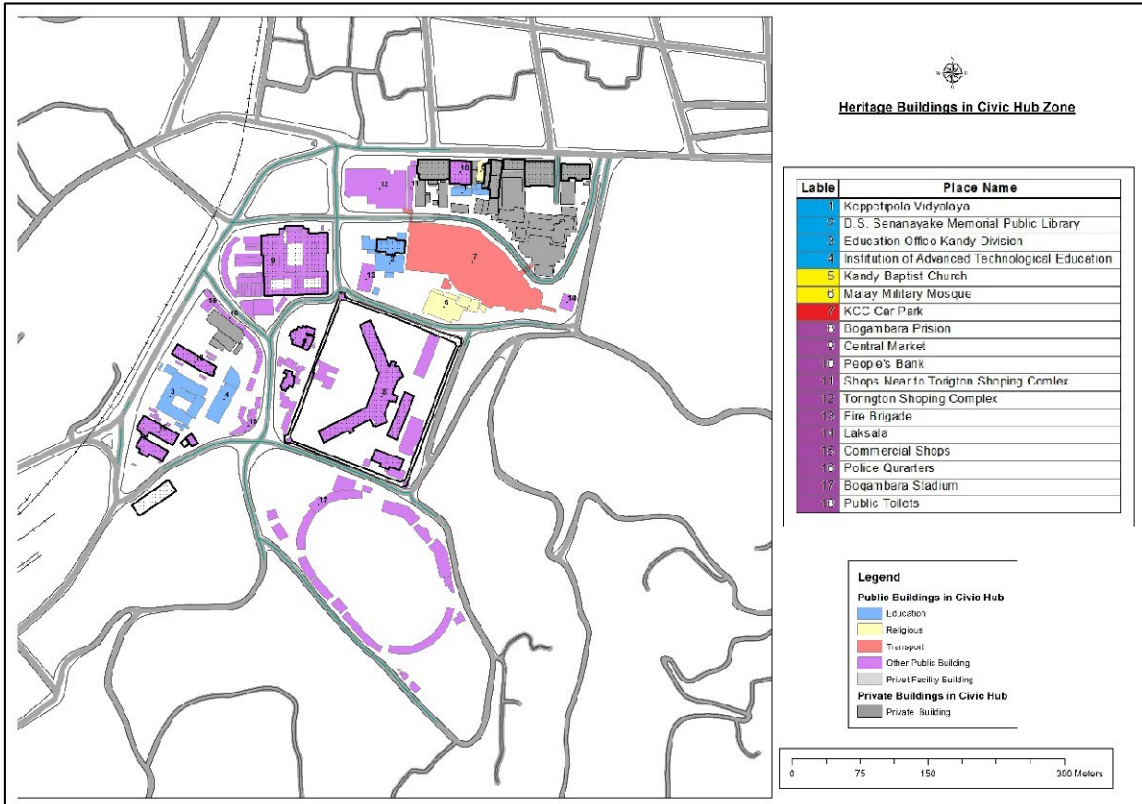
Source: The JICA Team

**Figure 5.6.1 Location Map of Public Facilities with Overlay of Designated Heritage Buildings**



Source: The JICA Team

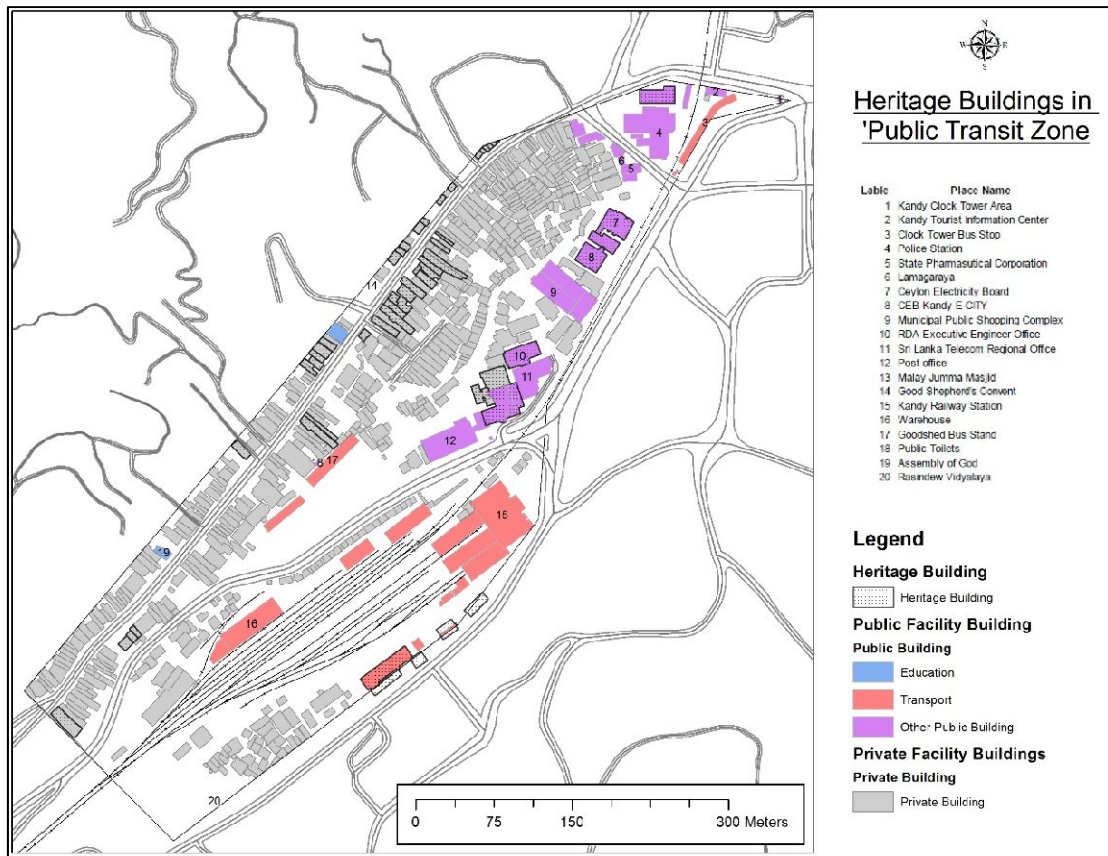
**Figure 5.6.2 Location Map of Public Facilities in the Commercial Grid Zone**



Source: The JICA Team

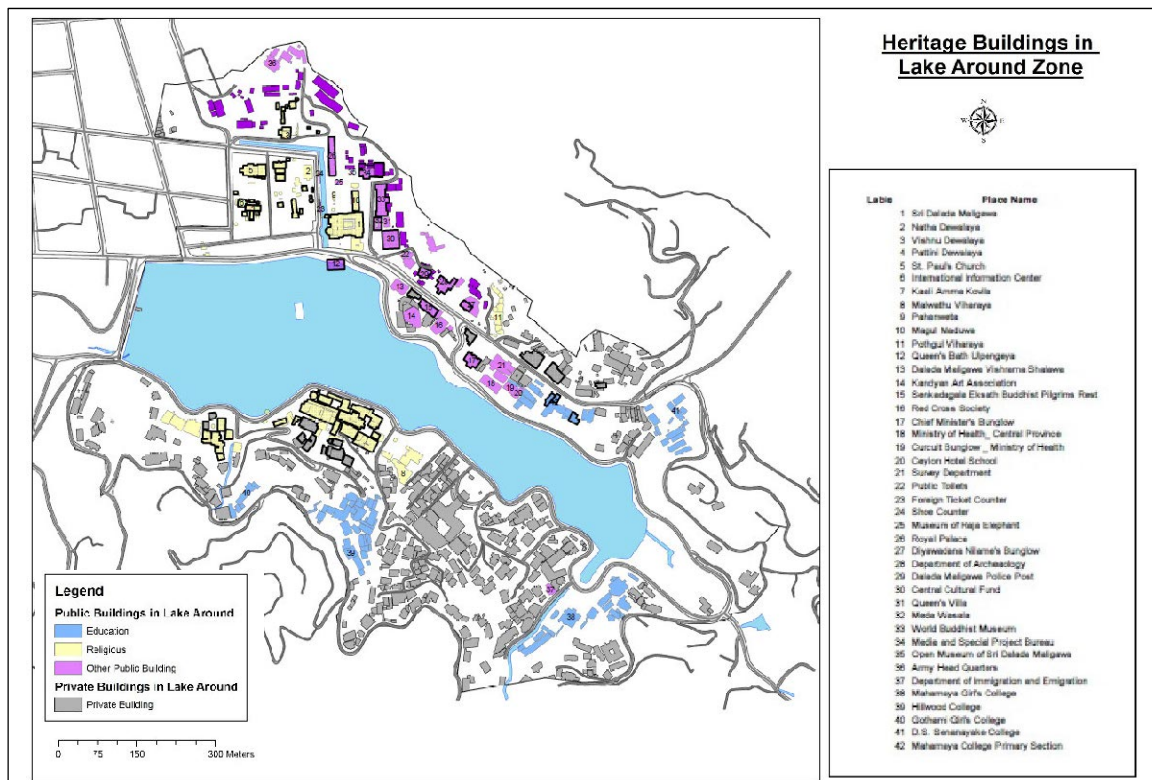
**Figure 5.6.3 Location Map of Public Facilities in Civic Hub Zone**





Source: The JICA Team

**Figure 5.6.4 Location Map of Public Facilities in the Public Transit Zone**



Source: The JICA Team

**Figure 5.6.5 Location Map of Public Facilities in Lake Around Zone**