

STATE ANNUAL ACTION PLAN

(SAAP -2015-16)



ATAL MISSION FOR REJUVENATION AND URBAN TRANSFORMATION (AMRUT)



Submitted by :



Local Self Government Department

Government of Kerala

CONTENTS

Check list - Consolidated State Annual Action Plan (SAAP) of the MISSION CITIES _____	7
minutes of THE MEETING - STATE High Powered Steering Committee _____	9
Abbreviations _____	13
Executive Summary _____	15
CHAPTER 1. PROJECT BACKGROUND _____	17
1.2. Objectives of AMRUT _____	17
1.2.1 Permissible Project Components	18
1.3. Planning Process in AMRUT _____	19
1.3.1 Service Level Improvement Plans (SLIPs).....	19
1.3.2. State Annual Action Plan (SAAP).....	20
1.4. Fund allocation _____	20
1.4.1. Projects funding pattern.....	20
1.4.2. Release of funds	21
1.5. Reforms Management & Support _____	22
1.6. Capacity Building _____	22
1.6.1. Individual capacity building	22
1.6.2. Institutional Capacity Building.....	23
1.7 Program Management Structure _____	23
1.8. Project Monitoring _____	23
CHAPTER 2. KERALA URBAN PROFILE _____	25
2.1. Introduction _____	25
2.2 Dynamics of Urbanisation in Kerala _____	26
2.3 Urbanisation Pattern _____	28
2.4. Profile of Statutory Urban Areas _____	30
2.5. Urban Agglomerations in Kerala _____	30
2.6. Issues in URBAN development _____	31
2.7 Urban Institutional Mapping _____	33
2.8 AMRUT in Kerala _____	34
2.8.1 Profile of Mission Cities.....	35
Chapter 3 STATE ANNUAL ACTION PLAN _____	45

3.1. PRINCIPLES OF PRIORITISATION	48
3. 2. IMPORTANCE OF O&M	49
3. 3. FINANCING OF PROJECTS	51
CHAPTER 4: PRINCIPLE OF PRIORTIZATION	53
Table 4.1 Water Supply Projects 2015-16	53
Table 4.2. Sewerage and Septage Management - (FY 2015-16)	54
CHAPTER -5 SAAP TABLES	55
Table 5.1: Breakup of Total MoUD Allocation in AMRUT	55
Table5.2: Abstract-Sector Wise Proposed Total Project Fund and Sharing Pattern	56
Table 5.3 : Abstract-Break-up of Total Fund Sharing Pattern	57
Table 5.4: Abstract-Use of Funds on Projects :On-going Projects and New	58
Table 5.5: Abstract –Plan for Achieving Service Level Benchmarks	59
Table 5.6: SAAP –Master Plan of all projects to achieve universal coverage during the current Mission period based on Table 2.1 (FYs 2015-16 to 2019-20)	60
Table 5.7.: Sector Wise Breakup of Consolidated Investments for all ULBs in the State	61
Table 5.8 A SAAP-ULB Wise Source of Funds for All Sectors	62
Table 5.9 B: SAAP-ULB Wise Source of Funds for All Sectors	63
Table 5.10 C: SAAP-ULB Wise Source of Funds for All Sectors	64
Table 5.11: Year -wise Share of Investments for All Sectors(UIB wise)	65
Table 5.12: SAAP— State level Plan for Achieving Service Level Benchmarks	66
Table 5.13 : SAAP- State Level Plan of Action for Physical and Financial Progress	67
Table 5.14: SAAP-City wise and Sector wise projects for the Mission period	76
CHAPTER 6 Reforms Implementation ROAD MAP	84
Table 6.1: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2015-2016	84
Chart 6.2: SAAP - Reforms Implementation Plan for AMRUT Cities FY-2015-2016	88
Table 6.3: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2016-2017	92
Table 6.4: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2017-2018	95
Table 6.5: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2018-2019	97

Chapter 7. ADMINISTRATIVE AND OTHER EXPENSES _____	98
Table 7.1. :SAAP - Broad Proposed Requirement for Administrative and Other Expenses ...	98
Chapter 8 CAPACITY BUILDING _____	100
Table 8.1: SAAP - ULB level Individual Capacity Development Plan (State level Plan)	100
Table 8.2: SAAP - ULB level Individual Capacity Development Plan (State level Plan)	101
Table 8.3: Fund Requirement for Individual Capacity Building at ULB level	102
Table 8. 4: Fund Requirement for Individual Capacity Building at ULB level	103
Table 8.5 : Total Fund Requirement for Capacity Building	104
8.1. Details of Institutional Capacity Building (FORM 8) _____	105

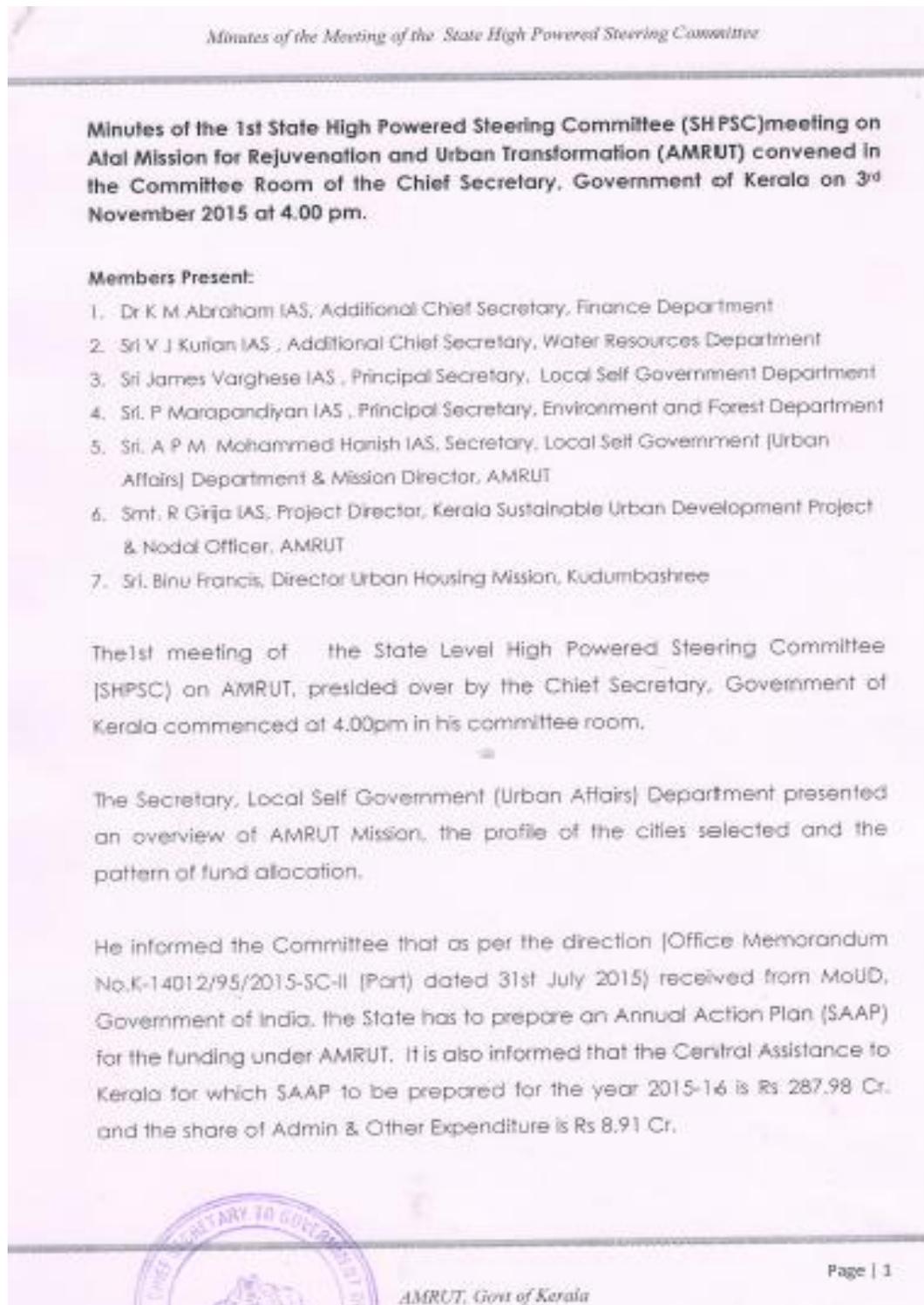
CHECK LIST - CONSOLIDATED STATE ANNUAL ACTION PLAN (SAAP) OF THE MISSION CITIES

S.NO.	POINTS OF CONSIDERATION	YES /NO	GIVE DETAILS
1.	Have all the Cities prepared SLIP as per the suggested approach?	Yes	All the Cities prepared SLIP as per the guidelines issued by MoUD.
2.	Has the SAAP prioritized proposed investments across cities?	Yes	In the SAAP, investment for project has been prioritised based on service level gaps in each sector
3.	Is the indicator wise summary of improvements proposed (both investments and management improvements) by State in place?	Yes	Summary of Indicator-wise improvement proposed in all five sectors for investment and Management.
4.	Have all the cities under Mission identified/done baseline assessments of service coverage indicators?	Yes	All 9 mission cities have done service level benchmarking in all five sectors to assess the service coverage.
5.	Are SAAPs addressing an approach towards meeting Service Level Benchmarks agreed by Ministry for each Sector?	Yes	The projects in the SAAP are prioritised based on the gaps identified through the service level bench marking agreed by ministry in each sector.
6.	Is the investment proposed commensurate to the level of improvement envisaged in the indicator?	Yes	Investments proposed in SAAP are commensurate with Service Level improvement strategies derived after benchmarking.
7.	Are State Share and ULB share in line with proposed Mission approach?	Yes	As per the mission guideline, the State share to be not less than 20% . In Kerala, the fund sharing pattern between State and ULB is 30: 20.
8.	Is there a need for additional resources and have state considered raising additional resources (State programs, aided projects, additional devolution to cities, 14th Finance Commission, external sources)?	Yes	Yes. State has allocated the 1 st instalment of funds under 14th Finance Commission to the ULBs. State will raise additional resources for AMRUT through devolution of fund to Municipalities and converging with other state and Centrally sponsored schemes.

9.	Does State Annual Action Plan verify that the cities have undertaken financial projections to identify revenue requirements for O&M and repayments?	Yes	The state has released the fund to the ULBs under 14 FC. However the possibility of meeting O&M cost through user charges, additional resource mobilization etc would be explored and finalised after the new Mayor & Councils assume office. O&M can be met from the Maintenance Fund (Non Road) distributed to ULBs every year and financial recovery will be addressed while preparing the DPR .
10.	Has the State Annual Action Plan considered the resource mobilization capacity of each ULB to ensure that ULB share can be mobilized?	Yes	ULB level resource mobilization potentials and possibilities were explored and the strategies would be finalised after the new Mayor & Councils assume office.
11.	Has the process of establishment of PDMC been initiated?	Yes	The SHPC has directed the Mission Director to initiate the process of inviting Expression of Interest (Eoi) for the selection of PDMC
12.	Has a roadmap been prepared to realize the resource potential of the ULB?	Yes	The resource mobilization capacity of each ULB has been analysed under CCBP (JnNURM). Various studies have been carried out to assess the possibilities to improve the resource mobilisation through improved tax collection systems, user charge etc.
13.	Is the implementation plan for projects and reforms in place (Timelines and yearly milestones)?	Yes	All departments concerning implementation of reforms have been informed and discussed to prepare the implementation plan. Refer table 5.1 to 5.3
14.	Has the prioritization of projects in ULBs been done in accordance with para 7.2 of the guidelines?	Yes	Prioritization of projects has been done accordance to AMRUT guideline. Priority is given to the cities with higher gaps in the service levels.


 Mission Director - AMRUT
 Government of Kerala
 A P M IAS
 Secretary to Government
 LSG (Urban Affairs) & Public Works Dept.
 Government of Kerala
 Thiruvananthapuram

MINUTES OF THE MEETING - STATE HIGH POWERED STEERING COMMITTEE



Minutes of the Meeting of the State High Powered Steering Committee

Further he informed that the Service Level Improvement Plans (SLIPs) have been prepared by all the 9 ULBs selected under AMRUT in line with guidelines issued by the MoUD, Government of India.

After detailed deliberations the following decisions were taken by the SHPSC:

1. Approval of SLIPs and recommendation for the approval of SAAP by MoUD

SLIPs of 9 ULBs were prepared and consolidated in to SAAP with an approximate project estimate of Rs 587.99 Cr. The SHPSC approved the SLIPs prepared for the 9 AMRUT cities and decided to recommend the SAAP 2015-16 for the approval of the MoU, Government of India. The Committee authorized the Mission Director to submit the SAAP to MoUD, Government of India on or before 5th November 2015.

2. Fund sharing pattern of AMRUT

Central Assistance for projects under AMRUT is 50% of the total project cost. The remaining 50% has to be met by the State and ULB. The committee decided the fund sharing pattern between the State and ULB as 30:20.

3. Strategy for Operations & Maintenance

The Committee deliberated on the need and importance of a systematic Operation & Maintenance (O&M) plan for the all round sustainability of the projects. So the Committee decided to incorporate O&M cost for a minimum of 5 years. As Government of India will not allot the O& M fund, the Committee recommended to meet the fund from the allocation to the Maintenance Fund (Non-Road) of the concerned ULBs.

4. Selection of Project Development and Management Consultants (PDMC)

For Planning, Design and Implementation of Projects under AMRUT, it is required to appoint Project Development and Management Consultants.



AMRUT, Govt of Kerala

Page | 2

Minutes of the Meeting of the State High Powered Steering Committee

(PDMC). The scope of PDMC includes Planning, Design, Supervision and Project Management.

The HPSC recommended to select PDMC through a transparent bidding process and call for Expression of Interest (Eoi) for empanelling the agencies. The Committee authorized the Mission Director to co-ordinate the process.

5. Execution of projects

The Committee authorized the Mission Director to convene State Level Technical Committee and to coordinate with the new Municipal Councils to apprise the projects proposed in the SAAP.

The meeting ended at 5.00 pm.



High Powered Steering Committee

[Signature]
Chairman

[Signature]
J. J. THOMSON
Chief Secretary

[Signature]

ABBREVIATIONS

AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ADB	Asian Development Bank
ATI	Administrative Training Institute
BFP	Business Cum Financial Plan
BRTS	Bus Rapid Transit System
CBO	Community Based Organisations
CA	Central Assistance
CCR	City Credit Ratings
CDP	City Development Plan
CFY	Current Financial Year
CPHEEO	Central Public Health and Environmental Engineering Organisation
CSP	City Sanitation Plan
CTP	Chief Town Planner
CWRDM	Centre For Water Resources Development And Management
DLP	Defects Liability Period
GIS	Geographic Information System
GoK	Government of Kerala
G Tech	Group of Technology Companies
EWS	Economically Weaker Section
IEC	Information, Education and Communication
IKM	Information Kerala Mission
IMG	Institute of Management In Governance
IRMA	Independent Review and Monitoring Agency
ITPI	Institute of Town Planners India
JICA	Japan International Cooperation Agency
JnNURM	Jawaharlal Nehru National Urban Renewal Mission
NRW	Non-Revenue Water
KILA	Kerala Institute of Local Administration
KMBR	Kerala Municipal Building Rules
KMRL	Kochi Metro Rail Ltd

KSRTC	Kerala State Road Transport Corporation
KSUDP	Kerala Sustainable Urban Development Project
KURDFC	Kerala Urban And Rural Development Finance Corporation Ltd)
KWA	Kerala Water Authority
LNG	Liquefied Natural Gas
LIG	Lower Income Group
LSGD	Local Self Government Department
MoUD	Ministry of Urban Development
NATPAC	National Transportation Planning and Research Centre
NEERI	National Environmental Engineering Research Institute
NMT	Non Motorised Transport
PMU	Project Management Unit
PPP	Public Private Partnership
PWD	Public Works Department
O&M	Operation and Maintenance
RTO	Regional Transport Office
RWA	Residents Welfare Association
SAAP	State Annual Action Plan
SLB	Service Level Benchmark
SLIP	Service Level Improvement Plan
SLNA	State Level Nodal Agency
SPV	Special Purpose Vehicle
TCP	Town and Country Planning Department
TMC	Thiruvananthapuram Municipal Corporation
TOD	Transit Oriented Development
URDPFI	Urban Rural Development Plans Formulation and Implementation
UIDSSMT	Urban Infrastructure Development Scheme for Small & Medium Towns
ULB	Urban Local Bodies
WC	Ward Committee

EXECUTIVE SUMMARY

Table 1: ULB wise requirement of fund on sector basis in SAAP 2015-16

S.N	Name of City	Water Supply	Sewerage & Septage Management	Drainage	Urban Transport	Green Spaces & Parks	TOTAL
1	Thiruvananthapuram	45	33.65	17.98	6.5	0.6	103.73
2	Kollam	26.87	31.42	2.2	3.69	1.5	65.68
3	Alappuzha	33.9	2.09	6.28	6.85	0.89	50.01
4	Kochi	7.98	33.78	24.56	9.21	0.38	75.91
5	Thrissur	38.72	11	15.22	5.18	0.91	71.03
6	Guruvayur	13.72	4.5	13.07	8.17	2.3	41.76
7	Palakkad	10	9.75	8.54	17.42	4.78	50.49
8	Kozhikode	17.87	45.60	6.81	0	0.85	71.13
9	Kannur	41.7	0	11.13	4.17	1.25	58.25
	TOTAL	235.76	171.19	105.79	61.19	13.46	587.99

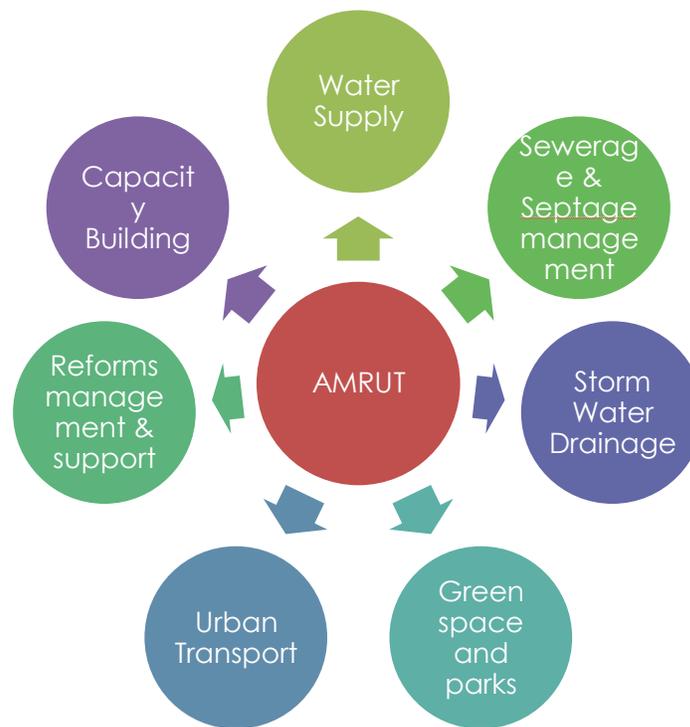
CHAPTER 1. PROJECT BACKGROUND

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is one of the new initiatives of Ministry of Urban Development launched in June 2015. Providing basic services to households and build amenities in cities which will improve the quality of life for all, especially the poor and the disadvantaged is a National priority. Project period of AMRUT is five years from financial year 2015-16 to 2019-20.

1.2. OBJECTIVES OF AMRUT

- Ensure that every household has access to a tap with assured supply of water and a sewerage connection;
- Increase the amenity value of cities by developing greenery and well maintained open spaces (e.g. parks);
- Reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling).

Mission components



1.2.1 Permissible Project Components

a. WATER SUPPLY

- Water supply systems including augmentation of existing water supply, water treatment plants and universal metering.
- Rehabilitation of old water supply systems, including treatment plants.
- Rejuvenation of water bodies specifically for drinking water supply and recharging of ground water.
- Special water supply arrangement for difficult areas, hill and coastal cities, including those having water quality problems (e.g. arsenic, fluoride)

b. SEWERAGE FACILITIES

- Decentralised, networked underground sewerage systems, including augmentation of existing sewerage systems and sewage treatment plants.
- Rehabilitation of old sewerage system and treatment plants.
- Recycling of water for beneficial purposes and reuse of wastewater

c. SEPTAGE MANAGEMENT

- Faecal Sludge Management- cleaning, transportation and treatment in a cost-effective manner.
- Mechanical and biological cleaning of sewers and septic tanks and recovery of operational cost in full.

d. STORM WATER DRAINAGE

- Construction and improvement of drains and storm water drains in order to reduce and eliminate flooding.

e. URBAN TRANSPORT

- Ferry vessels for inland waterways (excluding port/bay infrastructure) and buses.
- Footpaths/walkways, sidewalks, foot over-bridges and facilities for non-motorised transport (e.g. bicycles).
- Multi-level parking.
- Bus Rapid Transit System (BRTS).

f. GREEN SPACE AND PARKS

- Development of green space and parks with special provision for child-friendly components.

Inadmissible components

- ❖ Purchase of land
- ❖ Staff salaries
- ❖ Power,
- ❖ Telecom,
- ❖ Health & Education
- ❖ Wage employment

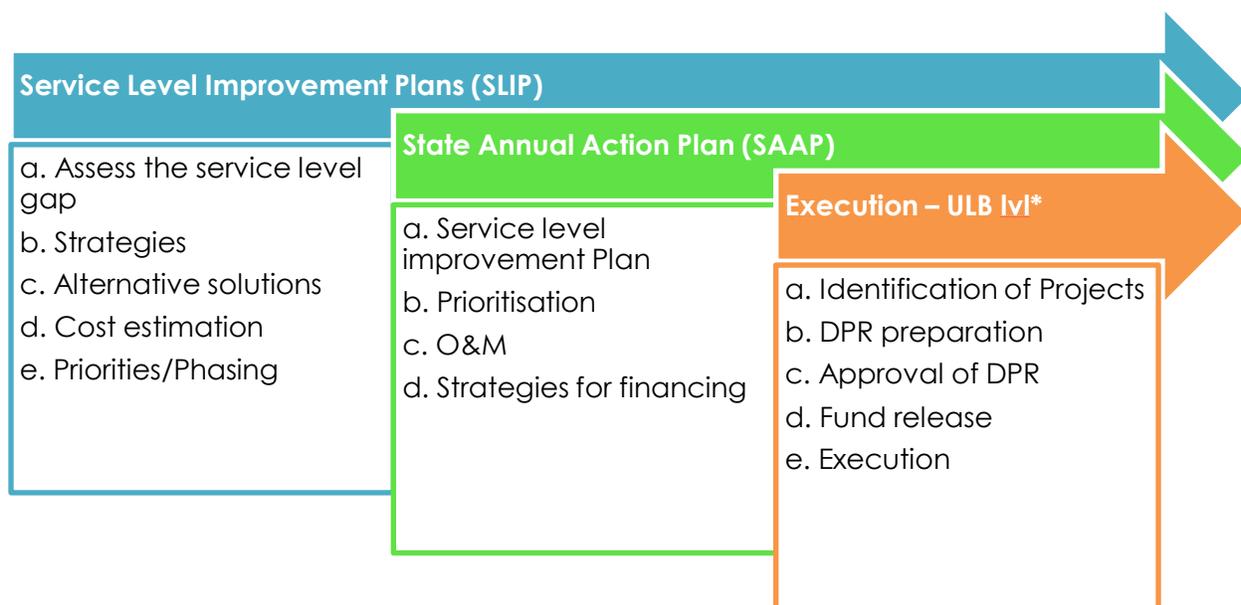
g. REFORMS MANAGEMENT & SUPPORT

- Support structures, activities and funding support for reform implementation.
- Independent Reform monitoring agencies

h. CAPACITY BUILDING

- Individual capacity building.
- Institutional capacity building.

1.3. PLANNING PROCESS IN AMRUT



1.3.1 Service Level Improvement Plans (SLIPs)

The primary purpose of AMRUT is to cover all households with water supply and sewerage (including septage). For this the Service Level Improvement Plan (SLIP), has to be prepared by each ULB following the strategic steps detailed out in the guidelines which are (1) Assess the service level gap,(2) Bridge the gap, (3)Examine alternatives, (4) Estimate the cost, (5) Prioritize, (6) Out-of-box thinking, (7) Conditionalities, (8) Resilience and (9) Financing and (10) Reforms.

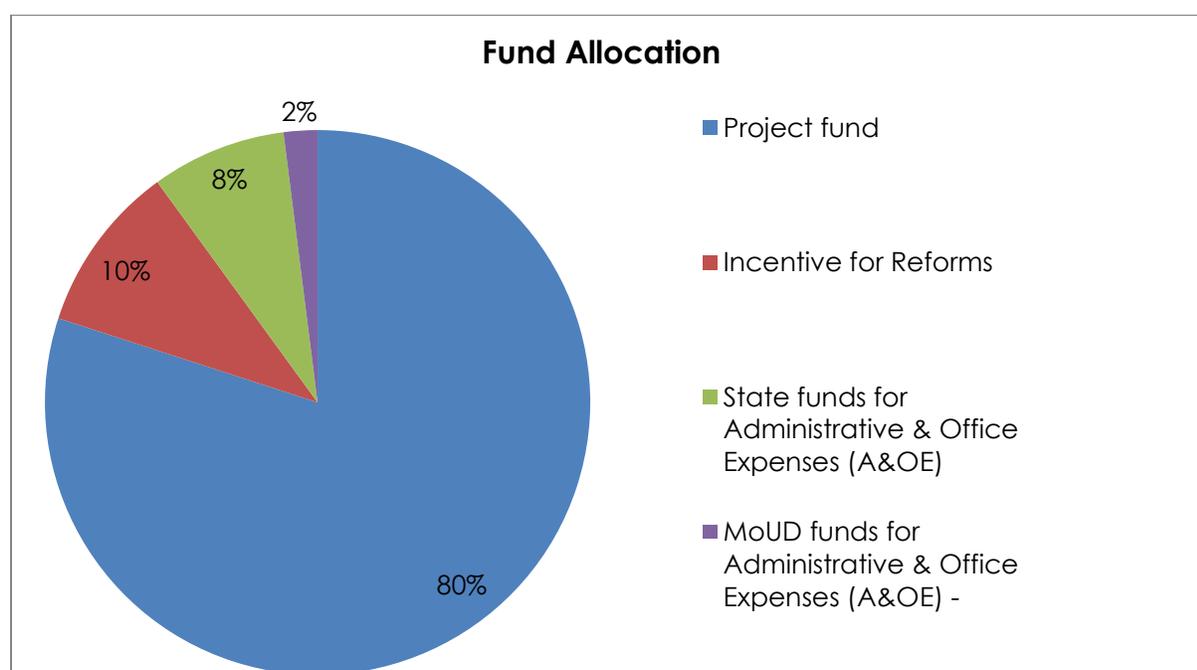
1.3.2. State Annual Action Plan (SAAP)

The basic building block for the SAAP will be the SLIPs prepared by the ULBs. At the State level, the SLIPs of all Mission cities will be aggregated into the SAAP. Therefore, the SAAP is basically a State level service improvement plan indicating the year-wise improvements in water-supply and sewerage connections to households.

Approval of SAAP:

The SAAP will be approved by the MoUD once a year according to the schedule given by the Apex Committee.

1.4. FUND ALLOCATION



1.4.1. Projects funding pattern

	Components	Funding Pattern
Urban Infrastructure	Water supply	<ul style="list-style-type: none"> One-third of the project cost as grant from Gol for cities with a population of above 10 lakh.
	Sewerage, Septage	

	Storm water Drain	<ul style="list-style-type: none"> ▪ One-half of the project cost as grant for cities/towns with population up to 10 lakh. ▪ Balance funding by State Governments /ULBs or through private investment.
	Urban Transport	
Component		Funding Pattern
Development of Public Space Green space, parks		One-half of the project cost by Gol and the total expenditure on these projects will not exceed 2.5% of the State Annual Action Plan (SAAP).
Capacity Building and Reforms support		Full (100%) by Gol, based on existing norms and unit costs set by the Apex Committee.
A&OE (PMU/PIU/DPR cost, etc.)		

1.4.2. Release of funds

- Each mission City will be given an advance of Rs. 25 lakh for preparation of LIP/individual capacity building which will come from the ULB's share of A&OE funds and will be adjusted in its share at the time of release of the first instalment
- Remaining funds will be released in three instalments of 20:40:40.
 - First instalment will be released immediately after approval of the SAAP by the Apex Committee.
 - Second and third instalment will be released on receipt of (i) Score Card, (ii) Utilization Certificates, and (iii) Project Funds Request.
 - Release of the second and third instalments will be subject to
 - Mobilizing the assured resources as given in the SAAP by the States/UTs, and (b) any other conditions imposed by the SHPSC and the Apex Committee.

1.5. REFORMS MANAGEMENT & SUPPORT

- Support structures, activities and funding support for reform implementation.
- Independent Reform monitoring agencies.

The Mission mandates a set of **11 Reforms** which have to be implemented by the States and Mission cities within a period of 4 years and they are :

1. E-Governance - Digital ULBs
2. Constitution and professionalization of municipal cadre
3. Augmenting double entry accounting
4. Urban Planning and City level Plans
5. Devolution of funds and functions
6. Review of Building bylaws
7. Set-up financial intermediary at state level
8. a. Municipal tax and fees improvement
.b. Improvement in levy and collection of user charges
9. Credit Rating
10. Energy and Water audit
11. Swach Bharat Mission

1.6. CAPACITY BUILDING

The realigned Capacity Building Plan consists of two strategic interventions - Individual Capacity Building and Institutional Capacity Building.

1.6.1. Individual capacity building

Individual Capacity Building aims to enhance the functional knowledge, improve the job related skills and change the attitude of municipal functionaries. The focus will be on the following four departments in ULBs -

- Finance & Revenue.
- Engineering and Public Health.
- Town Planning.
- Administration

The ULBs will plan to train all elected representatives and at least 30 functionaries from the four departments every year upto June 2018. The training will also include a site-visit to learn from best practices in India.

1.6.2. Institutional Capacity Building

Institutional Capacity Building under AMRUT aims to improve institutional outcomes such as accountability and transparency, service delivery, citizen empowerment, resource mobilization by bringing in external experts and professionals.

1.7 PROGRAM MANAGEMENT STRUCTURE

Institutional Mechanisms – at State and ULB level	
State High Powered Steering Committee	Chairman – Chief Secretary
State Level Technical Committee	Chairman – Principal Secretary
State Mission Director	Secretary, LSG(UA) Department
State Level Nodal Agency	Kerala Sustainable Urban Development Project (KSUDP)
State Level Nodal Officer	Project Director, KSUDP
State Mission Management Unit	Team of 6 experts
ULB level Implementation Committee	To be constituted
City Mission Management Unit	Team of 2 experts

1.8. PROJECT MONITORING

- All projects will be periodically monitored and reviewed by Apex Committee and is subjected to various audits by external and empanelled agencies, internal auditors as well as by C&AG and State AGs.
- National Performance Monitoring Cell for monitoring implementation of SLBs in urban basic services.
- State HPSC would undertake detailed scrutiny of the projects

- Real-time monitoring at the State and ULB level.
- Information and data will be shared with citizens in the public domain and third party monitoring agency
- Quarterly external monitoring by the Independent Review and Monitoring Agency (IRMA)
- District Level Review and Monitoring Committee

CHAPTER 2. KERALA URBAN PROFILE

2.1. INTRODUCTION

The unique human settlement pattern of Kerala necessitates adapting a different development approach comparing to the rest of the nation. The human settlement pattern of the State is characterised with dwellings made in individual plots, scattered all over the habitable area. Almost all other parts in India have nucleated built-up area in a settlement surrounded by rural hinterland. But Kerala shows an urban and rural settlement pattern manifested with an urban-rural continuum having a fairly uniform spread of dwelling units. In other words the population is distributed more or less evenly over the entire state. This unique pattern of human habitat has got many development issues.

Present urbanisation of Kerala is an urban spread rather than the result of the structural changes. Urbanisation is an index of transformation from traditional rural economies to modern industrial one. As defined by United Nations, Urbanisation is the movement of people from rural to urban areas with population growth equating to urban migration. But in Kerala neither the migration from rural areas nor industrialization figures as a predominant factor in urbanization. (reduce the content)

Urbanisation in the state of Kerala shows marked peculiarities. Generally, increase in urban population growth rate is the result of over concentration in the existing cities especially metropolitan cities. But in Kerala, the main reason for urban population growth is not by the concentration of population in to the existing urban areas, but the increase in the number of urban areas and also urbanisation of the peripheral areas of the existing major urban centres. Kerala is experiencing urban spread rather than concentration. Though Kerala is having high urban content in total, it does not have a single primate city but have 6 numbers of medium sized urban agglomerations which are found to be fairly well distributed when analyzed in the context of population distribution.

The focus of the local bodies in the state including in the urban areas was on building of the institutions and socio-political mobilization and sensitization of people to bring people participation in planning

- *Kerala is the third fastest urbanizing state in the Country. As per census 2011,*
- *48 % of the people are residing in urban area (census 2011).*
- *Population growth rate in the state is in a stabilizing mode the decadal rate of urbanization is 82 % (2001-11).*
- *Demographically the state enjoys a very advanced status with declining birth and death rates, low infant mortality and very high literacy and health delivery system*

process. The state has succeeded in establishing grass root level peoples organisations which played a significant role in developmental activities. But issues of urban local bodies in many fields demands more technical expertise rather than finding solutions through grass root level public discourse. In the course of strengthening of the local governments in the state, the development of capacities and expertise for holistic planning for urban development didn't gain required attention in the state.

2.2 DYNAMICS OF URBANISATION IN KERALA

Urbanisation Trend in Kerala

2011 census shows that Kerala has undergone the highest level of urbanization (47.71%) during 2001-11, with a percentage increase of 83.20 over the previous decade. Though the decadal population growth rate of Kerala is very less (as per 2011 it is only 4.86%) when compared with the National population growth rate (of 17.84%), its growth of urban population is phenomenal. During 2001-2011, Kerala experienced an urban population growth rate of 92.72%.

Shifting of workforce from agriculture sector to tertiary sector is the reason for high urbanization in Kerala. The dispersed settlement pattern, the like for homestead type development, comparatively developed infrastructure in urban and rural areas, geographical reasons, availability of sub-soil water etc set for the easy conversion of the agriculture land and thus facilitating the shift from primary to tertiary sector.

Table 2.1 Number of Statutory and Census Town in Kerala 2001 and 2011

Sl No.	District	2001 Census			2011 Census		
		Statutory towns	Census town	Total	Statutory towns	Census town	Total
1	Kasaragod	2	5	7	2	25	27
2	Kannur	7	38	45	7	60	67
3	Wayanad	1	0	1	1	0	1
4	Kozhikode	3	10	13	3	48	51
5	Malappuram	5	0	5	5	39	44
6	Palakkad	4	1	5	4	17	21
7	Thrissur	7	21	28	7	128	135
8	Ernakulam	9	16	25	9	47	56
9	Idukki	2	0	2	1	0	1
10	Kottayam	4	2	6	4	13	17
11	Alappuzha	5	6	11	5	33	38
12	Pathanamthitta	3	0	3	3	1	4

13	Kollam	3	0	3	3	24	27
14	Thiruvananthapuram	5	0	5	5	26	31
	Kerala	60	99	159	59	461	520

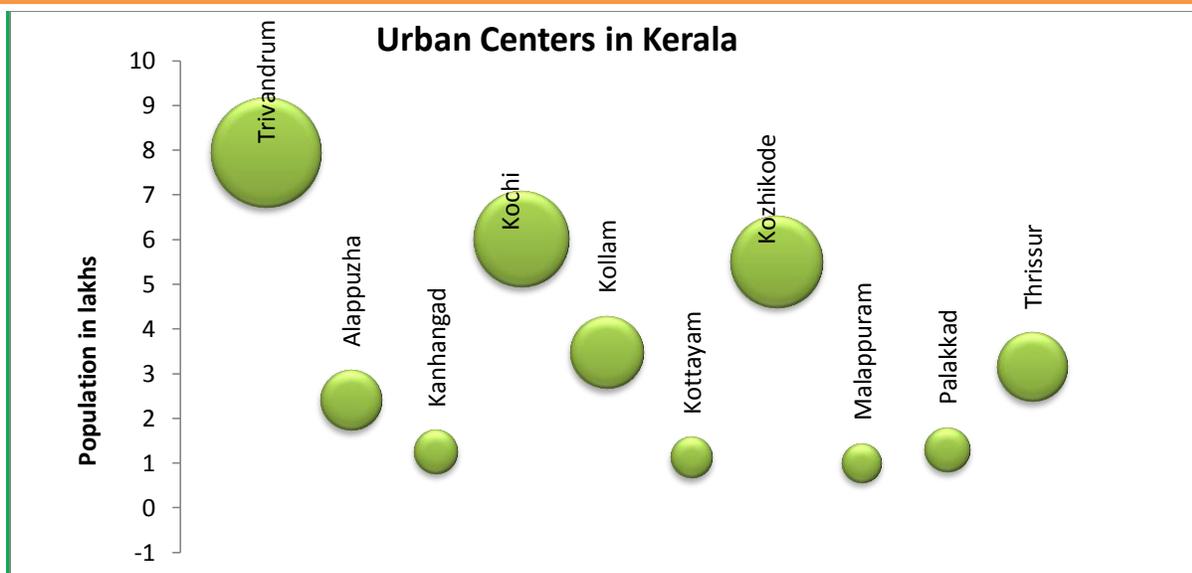
Source: Census 2001&2011

As per census 2011, among the districts in Kerala Thrissur, Ernakulam and Kannur have the highest number of census towns. However the percentage of Urban population is highest in Ernakulam district.

Table 2.2 *Percentage of Urban Population*

Rank	District	Population 2011			
		Rural	Urban	Total	% of Urban Population
1	Ernakulam	1047296	2232564	3279860	68.07
2	Thrissur	1020537	2089790	3110327	67.19
3	Kozhikode	1014765	2074778	3089543	67.15
4	Kannur	882745	1642892	2525637	65.05
5	Alappuzha	974916	1147027	2121943	54.06
6	Thiruvananthapuram	1528030	1779254	3307284	53.80
7	Kollam	1443363	1186340	2629703	45.11
8	Malappuram	2294473	1816483	4110956	44.19
9	Kasaragod	797424	505176	1302600	38.78
10	Kottayam	1413773	565611	1979384	28.58
11	Palakkad	2133699	677193	2810892	24.09
12	Pathanamthitta	1064076	131461	1195537	11.00
13	Idukki	1055428	52025	1107453	4.70
14	Wayanad	784981	31577	816558	3.87
	Kerala	17455506	15932171	33387677	47.72

Source: Census 2001&2011



In six out of the fourteen districts in the state the urban population has outnumbered the rural population which is an indicator of the future urbanization in the state. Ernakulam, Thrissur, Kozhikode, Kannur, Alappuzha and Thiruvananthapuram are having urban population more than 50%. Ernakulam is the most urbanized district of Kerala and Wayanad is the least urbanized district. Four out of the 14 districts of Kerala show low level of urbanisation (urban content less than 25%), another 4 districts show medium level of urbanization (urban content between 25% and 50%) and the remaining 6 districts show high level of urbanization. In other words 56 % of the Districts in Kerala belong to the low to medium level urbanisation category, whereas 42% falls under the high level of urbanisation category.

2.3 URBANISATION PATTERN

Table 2.3. Urban population Growth during last 50 Years

Year	Urban Kerala - Decennial Growth		Kerala Urban population share	India Urban Population share
	Absolute	%		
1961	728309	39.89	15.11	17.97
1971	912308	35.72	16.24	19.91
1981	1304826	37.64	18.78	23.34
1991	2909019	60.97	26.44	25.71
2001	586631	7.64	25.96	27.8
2011	7665246	93.72	47.72	31.1

Source: Census 1961-2011

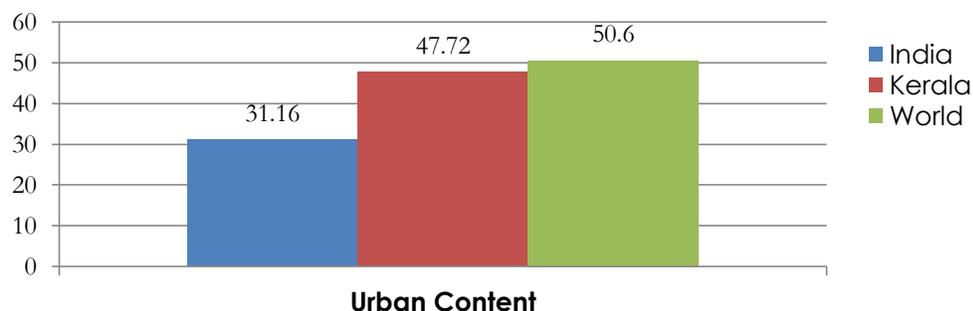
The variation of urban and rural content of Kerala from 1961 (refer table above) shows that urban content has reached 47.72 % in 2011 from a value of 15.11% in 1961. The present pattern of distribution of urban and rural content of Kerala resembles to that of the world population. Kerala was positioned in the 19th rank in the level of urbanisation among the States of India as per the 2001 census. 2011 census data shows that Kerala has improved its position to 9th rank.

From the above data, Kerala can be described as a low urbanisation state till 1991. In 1991, the urban population constituted 26.44 per cent of the total population of the state growing from 18.78 per cent in 1981. Till 1991, Kerala was below the national proportion of urban population. In 2001, there was a slight decline in percentage of urban population to 25.9 per cent. The 2011 Census data has shown that urban population has nearly doubled to 47.7 per cent. There was a massive increase in urban population of the state. Thus, most of urban growth in Kerala during 2001-2011 is due to census reclassification of rural villages as census towns and not due to growth of urban population in existing urban areas. There was a decline of one in statutory towns from 60 to 59 in the same period. But later in the same year state government constituted six more statutory towns and the total number reached at 65. During 2014-15, the State Constituted a delineation committee to analysis the urbanization pattern and they have proposed the promotion of Kannur as Cooperation and 27 more Panchayats to the status of Municipalities. Currently there are 93 statutory towns in the State.

Though Kerala has witnessed the largest urbanization process in the last decade (2001-2011), unlike other parts of the country rural urban migration do not figure a significant factor in such a transition. The major reason for such a transition is on the basis of their economic activities; the movement of people in many of the areas from primary sector to secondary sector especially service sector. The crisis in the agricultural sector coupled with the access to higher/professional education lead to shifting of livelihood activity from primary sector to service sector or to industries. However during the last decades, Kerala has become a lucrative job market for workers hailing from various parts of India, especially West Bengal, Assam, Bihar, Odisha, Uttar Pradesh, Jharkhand, Chattisgarh, Andhra Pradesh and other small states in the North East. The stock of migrant labourers in Kerala is assessed to be about 25 lakhs with an average of 2.35 lakhs new migrants arriving in the state every year. A major portion of the migrants are settled in cities, but the settlements of these workers in the informal sector do not figure in the census data.

When compared to the World and National scenario, where urban population growth rate is showing a decreasing tendency, Kerala shows an increasing tendency in the urban population growth rate.

Urban Content – A Comparison



2.4. PROFILE OF STATUTORY URBAN AREAS

The Kerala Municipalities Act does not prescribe any criteria for constitution of Municipalities. However Government as per G.O MS 108/67/HLD dt. 2nd March 1967 had laid down the following standards for the constitution of new Municipalities.

- The locality should predominantly be urban i.e. at least 3/4th of the adult population of the area should be engaged in pursuits other than agriculture.
- The population of the locality should not be less than 20,000 and the density of population should not be less than 4000 per 2.59 sq.km except in hilly areas.
- Per capita revenue resources of the locality should not be less than Rs.5.Lakhs

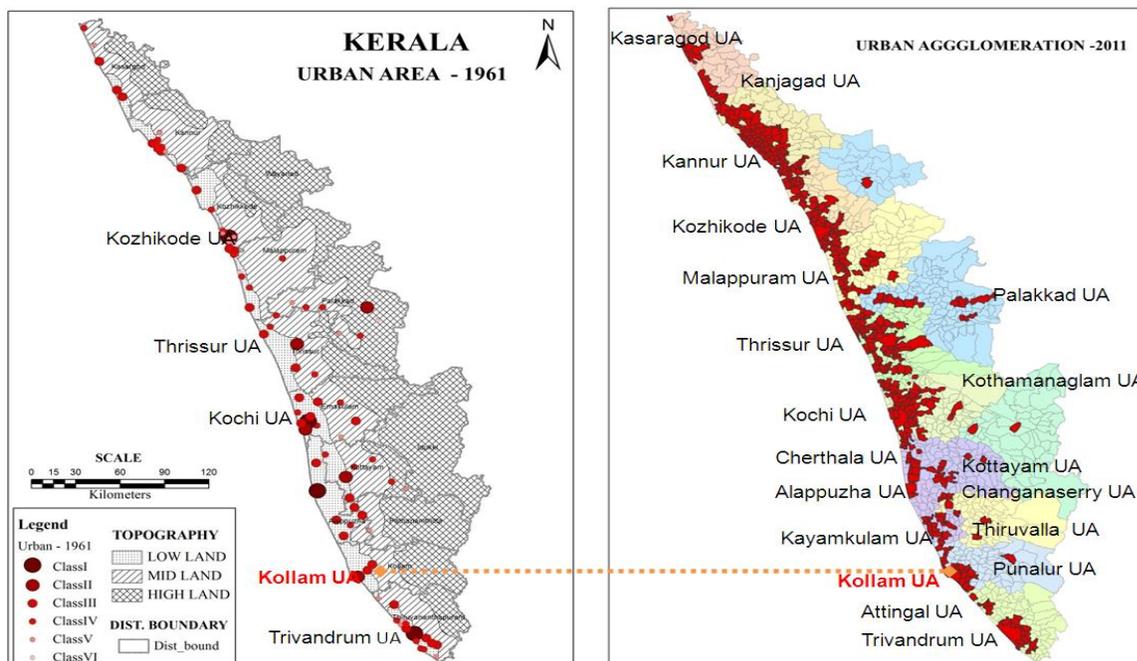
Table 3.4. Urban population Growth during last 50 Years

Sl.No	Towns	2001	2011	2015
1	Statutory Towns	60	65	93
2	Census Towns	99	455	427
3	Total	159	520	520

Source: Census 2001 & 2011.

2.5. URBAN AGGLOMERATIONS IN KERALA

Census of India introduced the concept of urban agglomerations in 1981. There were 9 urban agglomerations in Kerala during 1981, which increased to 19 as per census 2011. As per 2001 census, Cochin urban agglomeration was the only one million plus agglomeration in Kerala but now the state has 7 such million plus urban agglomerations There are 18 urban agglomerations with population one lakhs plus in Kerala. The urban areas in Kerala are comparatively smaller but fairly well distributed within the State.



2.6. ISSUES IN URBAN DEVELOPMENT

During the earlier mission, under CCBP, the state has done need assessment in major cities to find out the developmental issues. The priority sectors for interventions were identified from the need analysis survey and consultative processes. The assessment was through qualitative analysis. The data collection was based on perception study and through interaction with various stakeholders at the micro level. After a detailed city level need assessment study and the ward level analysis the sectoral issues were identified as follows.

SN	Sector	Description
1	Solid Waste Management	There is no routine planning for collection and transportation of waste. Vehicles collect waste from open secondary dump points as and when required.
2	Drinking water	More than 50% of the households are dependent on open wells and the existing public water supply system is insufficient and the system has to be augmented soon
3	Traffic management	Most of the urban roads are narrow with intense commercial activities and heavy traffic causing frequent traffic congestion. Most of the cities are having multi modal transport system including road transport, railways and water ways. Comprehensive mobility plans are required for the cities.

4	Sewage Treatment Facility	Septic tanks are very common across the state however the unscientifically constructed are causing environmental degradation. Need to carry out the detailed study on sewerage sector to identify the network issues and requirement of sewage pumping stations and sewage treatment plans
5	Land Management	Land use planning systems continues to be weak in the cities. Hence the reservation of land for development activities. Land acquisition procedures are complex and it is a tedious task. New land management strategies like land pooling, Transit oriented Development etc, may be tested in the state.
6	Environmental conservation	Measures to safeguard social and environmental interests are considered by planning for developmental projects
7	Governance	ULBs have public grievance redressal system, but there is no facility for online registration and disposal of complaints at present. Proper complaint redressal system has to be developed.
8	Local Economic development (Tourism)	Effective and planned effective and optimum utilization of tourism potentials.
9	Affordable Housing	Slums are not the manifestation of poverty in the state. It is very essential to facilitate the supply of affordable houses to all category of households from EWS, LIG and MIG. The basic services and housing facilities in the identified slums to be improved
10	Urban Poverty	Needs comprehensive planning for urban poverty alleviation and more external fund for urban poverty alleviation
11	Heritage	Need development schemes for areas with environmental and heritage importance

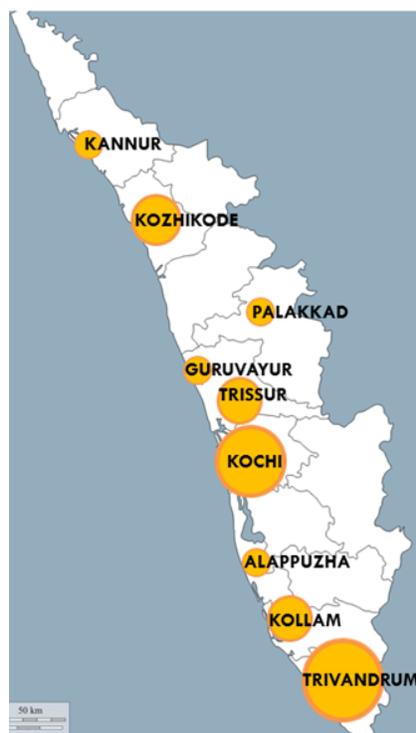
2.7 URBAN INSTITUTIONAL MAPPING

#	Thematic areas	Activity Partners identified
i	Urban Planning	Town and Country Planning Department, GoK
		Urban Development Authorities
		Kerala Sustainable Urban Development Programme (KSUDP)
		Institute of Town Planners India (ITPI) Kerala Chapter
		Department of Planning and Architecture, College of Engineering, Thiruvananthapuram
ii	Urban Infrastructure	Kerala Sustainable Urban Development Project(KSUDP)
		Water supply- Kerala Water Authority , Irrigation Department & Ground water board
		Sanitation – Suchitwa Mission
		Road & Transport – NATPAC, Trivandrum , PWD roads and bridges
		National Institute of Technology Kozhikode
		R&D - College of Engineering Thiruvananthapuram, CUSAT Ernakulam, Centre for environmental Studies, CWRDM
		Trainings- Administrative Staff College of India , Hyderabad
		Envis, Science and Technology Department
		Engineering wing – LSGD
		Centre for Environment and Development
		Kerala Institute for local administration (KILA)
		Institute for management in governance(IMG)
		iii
Kerala Institute for Local Administration (KILA)		
Information Kerala Mission (IKM)		
Accounts & Audit Department		
Gulati Institute of finance and Taxation		
Administrative Staff College of India, Hyderabad		

iv	Urban Governance	Kerala State Planning Board
		Department of Urban Affairs, GoK
		Kerala Sustainable Urban Development Programme (KSUDP)
		Kudumbashree, GoK
		Group of Technology Companies (GTech), Kerala
		Indian Institute of Information Technology & Management (IIITM-K) Kerala
		Social Welfare Department, GoK
		Institute for Management in Government (IMG)
		Kerala Institute for Local Administration (KILA)
		Institute for Land and Disaster Management
		State Resource Centre (SRC)Kerala

2.8 AMRUT IN KERALA

Nine cities have been identified from the state of Kerala for funding under AMRUT . The list includes 6 municipal Corporations and 3 Municipalities targeting a population of around 34.71 lakhs (22% of the total Urban population) for direct benefits.



S N	City Name	Population (persons)	Area (Sq.Km)	Density Persons/ sqkm
1	Trivandrum	957730	214.86	4457
2	Kollam	349033	57.31	6090
3	Alappuzha	176164	46.77	3767
4	Kochi	596473	94.88	6287
5	Trissur	315596	101.42	3112
6	Guruvayur	105012	29.66	3541
7	Palakkad	131019	26.6	4926
8	Kozhikode	608255	118.58	5129
9	Kannur	232486	78.35	2967
10	TOTAL	34,71,768	768.43	

2.8.1 Profile of Mission Cities

1	THIRUVANANTHAPURAM	
	Area : 214.86 Km	No of Wards: 100
	Total Population: 957730 (2011 census)	Population growth rate : 2.5 % decrease(decadal)
	Density: 4454 persons/sq.km	Sex Ratio: 1000:1064
	<p>Thiruvananthapuram, the capital of Kerala and is a beautiful seaside city built on seven hills. The city corporation is spread over 214.86 km² with 100 wards and a population of 9,57,730. Thiruvananthapuram city is the second largest city in the state while the Thiruvananthapuram Municipal Corporation (TMC) is the largest Urban Local Body by area and population. The average annual rainfall is around 1800 mm. The city is sandwiched between the Western Ghats and the Arabian Sea. Thiruvananthapuram and its famous beaches are one of the top tourist destinations in India.</p> <p>Status of Infrastructure and Services</p> <p>a. Water Supply System</p> <p>The water supply system for Thiruvananthapuram was designed in 1928 and commissioned in 1933. The source of supply is the Karamana river. The flow through the river is much in excess of the actual daily requirements during the whole of the year, except for a few days in summer when the flow is less than the city's daily water supply requirements. Hence, a 4.6m high overflow type dam was constructed in 1931 across the river at Aruvikkara, about 16kms away from the city to store water when in surplus. The project named Wellington water works, had a distribution capacity of 20 million litres.</p> <p>Presently 8 treatment plants having capacity of 304.5 mld and two reservoirs at Peppara and Aruvikkara are the main surface water source and capacity of these two dams are 92.63 Million cubic metre. There are 11 elevated reservoirs and 15 ground level reservoirs having capacity 92.63 million litres. JICA and JnNURM are the major projects in the city. The existing system covers only 83% of house holds. The per capita supply of water is 115 lpcd and NRW is 35%.</p> <p>b. Sewerage system</p> <p>In 1931, action was taken to start an "Investigation for a comprehensive Sewerage Scheme" on modern lines based on the principle of separate system, which would cater to the demand of Thiruvananthapuram City.</p> <p>The scheme area was divided into seven blocks viz. A, B, C, D, E, F and G, for the convenience of execution of Sewerage system. The first block 'A' was commissioned in 1945. Later, Block B was commissioned in 1965 and Block C in 1970. Block E and D were partially commissioned in 1990 and 1994 respectively. Sewage farming was adopted as the disposal method in the initial stages and later STP was commissioned. No</p>	

	<p>block is fully completed till now.</p> <p>Presently, the city is divided into 18 blocks namely A to R. Only 30% is covered by a piped sewerage system, which serves the core city area. The current sewerage area will supply 40 to 44 MLD sewage to 107 MLD STP at Muttathara. The existing coverage of latrines is 99.5%. Efficiency in collection is 90% and treatment is 41%.</p>	
2	KOLLAM	
	Area : 57.31	No of Wards: 50
	Total Population: 349033 (2011 census)	Population growth rate : -3.47% decrease(decadal)
	Density: 6090	Sex Ratio : 1000:1077
	PROFILE	
	<p>Kollam is one of the oldest settlement and is the fourth largest city in Kerala. As per the census 2011 the city population was 3.49 lakhs. The Thangassery and Neendakara ports triggered the development activities in the region, which lead to the growth of settlements around these ports and thus Kollam city developed as an important commercial centre in southern part of Kerala. During the colonial period was known as Quilon. It's a well known city for trade and industrial potential from ancient period itself. Kollam City is the District head quarters. The city is growing through the road network towards North, South and East along National Highways.</p>	
	Status of Infrastructure and Services	
	a. Water Supply	
	<p>The existing water supply system in Kollam was commissioned in 1960 and later augmented. First augmentation and Second augmentation were carried out in 1990, 1999 respectively. The major source of water for Kollam city is the Sasthamkotta Lake which is located 26 Kms away from the city. During normal rain fall conditions the lake contributes around 60mld water to the Treatment Plant at Sasthamkotta. But rated capacity cannot be increased from this level due to the depletion of water level noticed during the last years. Around 5mld water is sourced from tube wells to the city.</p> <p>Water is extracted from the lake and further it is treated in the WTP plants with a capacity of 22.5mld and 37.5mld (Quilon water supply Scheme). However now the plant under QWSS with capacity of 37.5mld alone is functioning. Old tank is defunct. The total quantity of water available to Kollam city is only 15mld treated water. The quantity required for the city is 82 mld as per CDP 2014. The KWA has proposed a project for 90 mld treatment capacity for the entire city and the newly merged Thrikkadavoor Panchayath for the projected period of 2045.</p>	
	b. Sewerage	

	<p>Sewerage and sanitation is one of the key areas concern for KMC. City lacks an organized sewerage system and treatment facility. There is no treatment capacity for sewerage collected through open drains. The key challenges are lack of an underground waste water drainage system and sewage treatment facility . Most of the households have individual toilets along with septic tank.</p> <p>An ongoing project of KSUDP with ADB aid being carried out is the sewerage network project in the old municipal area which covers only about 25 % of total City population. The Treatment plant is yet to start functioning. As per CDP 2014 gap analysis, the city requires 87mld capacity sewerage treatment plant by the end of 2041 and the immediate requirement city should required 66 mld STP and 305km branch sewers for the year 2012 demand. We have identified a gap for 50 mld STP for these city area and Gramapanchayath for the 2021 period.</p> <p>c. Storm Water drainage</p> <p>Storm water carrying capacity of the existing canals/drains is decreased due to heavy silt deposition, discharge of solid waste and growth of vegetation in the canals or drain. Construction of new roads and buildings has blocked many canals apart from the development of pucca surface drainage system. Rehabilitation of natural watercourse has been identified for the proper improvement of the overall drainage system in the city. About 25% of the road network is covered with storm water drainage.</p>
3	ALAPPUZHA
	Area : 46.77SqKm
	No of Wards: 52
	Total Population: (2011 census)
	Population growth rate : -1.61% decrease(decadal)
	Density: 3992
	Sex Ratio: 1000:1077
	CITY PROFILE
	<p>Alappuzha, also known as Alleppey, is the administrative headquarters of Alappuzha District which is also known as the Venice of the east. Alappuzha is the sixth largest city in Kerala with an urban population of 176,164. Alappuzha has a tropical humid climate. The South West Monsoon blesses the city from June to September and North east Monsoon from October to November. The remaining months are generally dry. The hottest period is being March to May. The average annual rain fall of the district is 3000mm.</p> <p>Status of Infrastructure and Services</p> <p>a. Water Supply</p> <p>Tube wells are the main source of water supply in the city. As the area is water logged and the ground water table is high, open wells in this area are highly</p>

polluted by salinity and are contaminated hence they cannot be considered as a prime source for water supply.

b. Sewage Management System

There is no Centralised Sewage System existing in the City. Public are using Septic Tank based Sewage treatment system and Leach Pits to treat their waste water. Most houses in Alappuzha are discharging their waste water in to septic tanks which must be water tight and require cleaning when the sludge reached about 50 % holding capacity.

c. Storm water drainage

The storm water drains are not continuous ,not based on any pre-determined plans. Master plan highlights the importance of natural canal networks in the storm water drainage system of the city .if the canal networks fails to ensure smooth flow, the surface drainage system in the town bound to fail. Stagnation caused by the accumulation of the solid waste along with growth of weeds aggravates the situation.

4 KOCHI

Area : 94.88 sqkm

No of Wards: 74

Total Population: 6,01,574
(2011 census)

Population growth rate : decrease(decadal)

Density: 6287 person/ sq km

Sex Ratio: 1000:1203

CITY PROFILE

Kochi “**The Queen of Arabian Sea**” situated on south west coast of India, spanning an area 94.88 sq.km. Kochi is the commercial and industrial capital of Kerala, well connected to other parts of the country by road, rail and air. Cochin port is one of the major ports in India located at the confluence of Vembanadu Lake and Arabian Sea. Kochi is one of the main tourist destinations in India. Kochi is the most densely populated city in the state.

The southern naval command, Vallarpadam container terminals and LNG Terminal provided further impetus to the growth of the city. The new facilities coming up in the region including Smart City, Cyber City and Kochi Metro Rail are the new feathers to the historically famous city.

Kochi is having a tropical humid climate. The South West Monsoon blesses the city from June to September and North east Monsoon from October to November. The remaining months are generally dry. The hottest period is being March to May. The average annual rain fall of the district is 3359 mm.

Status of Infrastructure and Services

a. Water Supply

As the area is water logged and the ground water table is high, open wells in this area are highly polluted by salinity and are contaminated hence they cannot be considered as a prime source for water supply.

The primary source of drinking water for the city is the Periyar River, which is located approximately 20km away and another source is Muvattupuzha River. Kerala Water Authority is dealing with the planning, designing, implementation, operation and maintenance of the water supply projects in the city.

b. Sewage Management System

The sewerage system in the city is at the infant stage. Sewerage service levels in Kochi have not kept pace with the growth of the city and fall below Service Level norms. Coverage of sewage network is only 4.5%.

c. Storm water drainage

Storm water drains are visibly clogged and rendered ineffective due to waste dumping and waste water flows. The drain and canal networks in Kochi inextricably linked to the Vembanad Lake and back water. The storm water drains are not continuous, not based on any pre-determined plans..if the canal networks fails to ensure smooth flow, the surface drainage system in the town bound to fail. Stagnation caused by the accumulation of the solid waste along with growth of weeds aggravates the situation.

5 THRISSUR

Area: 10142. Km	No of Wards: 55
Total Population: 315596 (2011 census)	Population growth rate : 3.7.(decadal)
Density: 101.42	Sex Ratio: 1000: 1187
CITY PROFILE	

Centrally located in Kerala, Thrissur is known as the “Cultural Capital of Kerala” and has been the scene of numerous events of historic and cultural importance. Thrissur is built around a hillock on which the famous Vadakkunathan Temple is situated. Thrissur is often referred to as ‘the Pooram City’ the architectural design of the city is also worth special mentioning. The city is built around the vast open space called ‘Thekkinkadu Maidanam’ surrounding the centrally located Vadakkumnatha Temple. Around the maidan lies the ‘Swaraj Round’, the inner ring road, with several radial roads starting from it . The raised centre and the slopes starting from there are surrounded by green, fertile wetlands used for cultivating paddy. The total population of the city accounts for 10.61% of the total population of the district.

Thrissur has a tropical humid climate. The South West Monsoon blesses the city from June to September and North east Monsoon from October to November. The remaining months are generally dry. The hottest period is being March to May. The average annual rain fall of the district is 3000mm. (infrastructure Status)

Status of Infrastructure and Services

a. Water Supply

Water Supply system is 60% covered in the city by ULB & KWA. Total 34MLD water is supplied for the city from Peechi Dam and Karuvannur River. Around 40% of population is using swasraya schemes, tube wells and wells etc.

b. Sewage Management System

No Centralised Sewage System exists in the City. Public are using Septic Tank based Sewage treatment system and Leach Pits to treat their waste water. Most houses in Thrissur are discharging their waste water into septic tanks which must be water tight and require cleaning when the sludge reached about 50 % holding capacity. A waste water treatment facility and septage treatment is in consideration for study and execution of the municipality.

c. Existing Storm water drainage

The city has around 350 Km of storm water drains which are not continuous. The rainwater in the city is cleared by the help of around 60 km of main natural drains which is connected to the koleland(farm land). This in turn leads to river Stagnation caused by the accumulation of the solid waste and along with growth of weeds it aggravates the situation.

6 GURUVAYOOR

Area : 29.66 Sq. Km

No of Wards: 43

*Total Population: 70012 (2011 census)

Population growth rate : 11% decrease(decadal)

Density: 3541

Sex Ratio: 1000:1158

CITY PROFILE

Guruvayoor also known as “Dwaraka of south” is one of the national pilgrim centres of international fame, situated about 30 km away from Thrissur Town, the headquarters of the Thrissur district of Kerala. The “Guruvayurappan temple” is the central and main attraction of the city of Guruvayur. Millions of devotees visit this shrine every year. Sabarimala devotees from other states as well as from north Kerala make it a point to visit Guruvayoor temple during their Sabarimala pilgrimage. The population of Guruvayoor Municipality as per 2011 census is 70012.

The town has a tropical humid climate with a hot summer and a fairly assured seasonal rainfall. The hot season from March to May is followed by the south west monsoon from June to September. The period from December to February is the north east monsoon season although the rains stop by the end of December and the rest of the period is generally dry. The average annual rainfall is 3155 mm and the average number of rainy days in a year is 119.

Status of Infrastructure and Services

a. Water Supply

There exists one water supply scheme namely Kunnankulam-Orumanayur scheme with head works at Thrithale under Kerala Water Authority. Total capacity of this scheme is 4 MLD. Number of water connections from this scheme in Guruvayoor Municipal area is 1600 numbers including 1000 domestic connections. The method adopted for filtration is rapid sand filtration. Most of the households have their own wells and some households have large ponds also. But the water available in the wells are contaminated except in some areas and so not portable.

b. Sewerage System

The treatment of sewerage is essential to avoid the degradation of environment in order to provide hygienic conditions for the population. The sewerage is estimated at the rate of 80% of the water supply in any area. The water supply requirement of the Guruvayoor town is 13 MLD and therefore wastewater quantity works out to be about 10.4 MLD.

c. Storm water drainage

Intermittent flooding of Guruvayur Municipality is a regular feature now a day. In monsoon low lying areas of Guruvayur Municipality especially the areas surrounding the temple, Mammiyur road from west nada, area between west nada and Muthuvattur, low lying areas of south western part of Guruvayur are liable to be flooding in rainy seasons. Besides most of the internal roads and northern parts of ring roads, Mammiyur road, Muthuvattur road, Thrissur road are most vulnerable to flooding. This occurs mainly because of the encroachment of Valiyathodu. The improvement of valiyathodu can remedy the flooding to a certain extent.

07	PALAKKAD	
	Area : 26.6 Sq. Km	No of Wards:52
	Total Population: 130767 (2011 census)	Population growth rate : 4.9 % decrease(decadal)
	Density: 4296 person/sq km	Sex Ratio: 1000: 1031

CITY PROFILE	
<p>Palakkad town, the headquarters of Palakkad district. The area of Palakkad Municipality is 26.6 sq.km. and having a population of 1.37 Lakhs. There are 52 wards in Palakkad Municipality. Within the town area paddy fields exist on either side of the two rivers that run along the boundary of the town. The town has a hot and light humid climate with a very hot season extending from March to June. Average annual rainfall is 2400 mm and is spread over two monsoons. The south west monsoon is intense between June and September. Less intense rains are received during October to December. Temperature ranges from 20° C to 43° C.</p>	
Status of Infrastructure and Services	
a. Water Supply	
88 lpcd water is supplied in the municipal area. 23.5 MLD of water is supplied in municipal area 3.5 MLD is NRW. Water supply is restricted to 2 to 3 hours in a day of municipal limits due to unbalanced supply of water and lack of infrastructure.	
b. Sewerage System	
Sewerage network is absent in Palakkad City. Storm water network coverage is 61 % and incidence of sewerage mixing in the drains is 60%. Per person open space available for Palakkad City is 3.43 sq.m. There are 5 public parks in the City out of which two are functioning well. The total road length in Palakkad City is 336 kms. There are 721 buses (Private and KSRTC) operating in Palakkad Town.	
08	KOZHIKODE
Area: 118.58Sq. Km	No of Wards: 75
Total Population: 608255 (2011 census)	Population growth rate : 7.2 % decrease(decadal)
Density: 5129 persons/sqkm	Sex Ratio: 1000:1098
CITY PROFILE	
<p>Kozhikode city is the most important urban service provider for all districts in north Kerala. Its high order of advancement in social services as well as trade and commerce, along with tremendous development potential to add impetus to the economic development of the entire northern region of the state (erstwhile Malabar district), make Kozhikode one of the priority cities in the State and has been enlisted as one of the best liveable cities in the country and the state. Many ambitious ventures like the monorail, IT & industrial parks, high end housing projects make the city a dream destination for high quality work and life, by various studies and surveys.</p>	

Status of Infrastructure and Services	
a. Water supply	
<p>Piped water supply was introduced in Kozhikode city in 1952 using Poonoorpuzha as a source. The coverage of water supply connections in the city is 44% and the per capita supply of water is 100lpcd. The extent of Non Revenue Water is 30% .The total length of water supply distribution pipe line laid in the city is 246km.Laying of distribution pipe line for a length of 673km is ongoing under the JICA project. The ongoing JICA project meets the city's water demand and storage requirement. Only an additional distribution network for a length of 550km is required to achieve universal coverage</p>	
b. Sewerage system	
<p>There is no sewage treatment system in Kozhikode city. KSUDP has prepared a sewerage master plan for the old corporation area .The area is divided into 5 zones based on topography, population, density etc as zone A, Zone B, zone C, zone D and zone E. The master plan envisages establishment of sewerage facilities to the whole Kozhikode city in different phases. At present KSUDP is implementing sewerage project in zone B which covers 11% of the HHs in the city.</p>	
09	KANNUR
Area :78.35. Km	No of Wards: 55
Total Population: 232486 (2011 census)	Population growth rate : 11% decrease(decadal)
Density: 2967	Sex Ratio: 1000:1098
City Profile	
<p>Kannur city is in the transition phase from a municipality to a Municipal Corporation (6th one in the state) by merging with the nearby Panchayaths in the urban agglomeration. It is a fast growing commercial area with good revenue potential. In 2015, Kannur Municipality has become Kannur Municipal Corporation by adding the nearby Pallikkunnu, Puzhathi, Elayavoor, Edakkad and Chelora Panchayats. There are 55 wards in Kannur Municipal Corporation. Being the district head quarters, there is lots of scope for development.</p>	
Status of Infrastructure and Services	
a. Water Supply	

90 lpcd of water is supplied to the corporation area. 30 MLD of water is the total supplied water and 30 % is NRW. Water supply is restricted to 6hours in a day for the corporation limits due to lack of infrastructure.

b. Sewerage system

Sewerage network is absent in Kannur City. Storm water network coverage is 15 % and incidence of sewerage mixing in the drains is 60%. Per person open space available for Kannur City is 0.64 sq.m. There are 5 public parks in the City. The total road length in Kannur City is 329.56 kms.

CHAPTER 3 STATE ANNUAL ACTION PLAN

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) provides project funds to ULBs through the States on the basis of proposals submitted in State Annual Action Plan (SAAP). SAAP is a State level service improvement plan which indicates the year-wise improvements in water-supply and sewerage connections to households. The basic building block for the SAAP are the SLIPs prepared by the 9 mission cities. At the State level, the SLIPs of all Mission cities have been aggregated into the SAAP.

The following information is provided in response to the questions given below as observed while preparing SAAP.

Has the State Government diagnosed service level gaps?

Yes. Service level gaps across five sectors in all the 9 ULBs were assessed using service level benchmarking. For Water supply, Sewerage and storm water drains the benchmarking was done based on the criteria laid out by CPHEEO. While for parks and open space the Urban and Regional Development Plans, Formulation and Implementation (URDPFI) guidelines and for Urban Transport, Comprehensive Mobility Planning guidelines issued by Gol were adopted for the benchmarking. The service level gaps were identified for all five sectors.

Kerala Water Authority, the agency for providing Water supply and Sewerage in the State has done the Service level benchmarking and Gap identification for the Sector. While the ULB level engineering department was supported by Town Planning Department, PWD (roads) and National Traffic Planning and Research Centre (NATPAC) in carried out the gap identification for Parks/ Open spaces , Storm water drainage and Urban Mobility respectively.

Has the State planned for and financed capital expenditure?

Yes. The State had planned for capital expenditure for all nine cities. The Government of India would be contributing 50% of the capital expenditure for the cities having population less than 10.00 lakhs. State along with ULB would be contributing a matching share (30:20) for capital expenditure. Moreover the State has released the 1st instalment under 14th FC to the ULBs to meet the plan expenditure. The ULBs are also exploring the possibilities to raise their own revenues through improving billing and collection systems, through public mobilization, private partnership etc.

Has the State moved towards achievement of universal coverage in water supply and sewerage/septage?

Yes. Kerala is situated in a region where rainy season is spread across six months. The State is also blessed with high fresh water table. Therefore more than 60% of the households are dependent on individual wells to meet the water requirement. But the State has long coastal line where the ground water is saline and the ground water is getting polluted. In this circumstances, it is critical to provide treated drinking water supply to the all the households in the state.

Kerala Water Authority (KWA) is the responsible agency for planning design and implementation of water supply projects in the state. The KWA is successful in facilitating supply of an average of 135-150 lpcd across the state through individual household network, community taps.

To achieve universal coverage in water supply, the state has been implementing various projects with the support of ADB, JICA, JnNURM and state Schemes. However the challenge is to reduce the percentage of Non Revenue Water (NRW) and to ensure the supply of required quantity of water at receivers end. Replacement of old deteriorated network, adoption of technological measures to detect leakage, Pressure mapping etc are the major components to be addressed to achieve the universal network in a phased manner.

Kerala was successful in achieving more than 90% of the coverage among the Households access to individual toilets. 70% of the household toilets are connected to septic tank while in the regions near the back waters and canals; the sewerage is directly discharged to the water bodies. However, Some parts of Thiruvananthapuram and Kochi are under sewerage net work..

Considering the availability of septic tanks and need of the state, the State Sanitation Policy is allowing various technological options like sewerage network with decentralized treatment systems, including septage management, eco-san (ecological sanitation) toilets etc. Govt has already taken a decision to establish Septage Treatment Plant in 14 Districts. Septage Treatment Plant in Kochi has been completed and land has been identified in 10 districts for the installation of Sewerage/Septage Treatment plant.

What is the expected level of the financial support from the Central Government and how well have State/ULB and other sources of finance been identified and accessed?

All the 9 ULBs selected for AMRUT mission are having population less than 10 lakhs. The AMRUT mission outlay offers an assistance of 50% of the total project cost. The State Govt along with ULB will be contributing an equal amount. As per the AMRUT guideline the state to contribute a minimum share of 20% of the total project cost and the remaining cost is to be met by the ULBs from their own revenues.

Under the AMRUT Scheme, the Central assistance for which SAAP has to be prepared is for Rs.287 Cr. The State Govt. has decided to share 30%. The remaining amount is to be shared by the ULB from the devolution of fund from the state, 14th Finance Commission Grants. The financial capacity of each ULB is being assessed and strategies for resource mobilization would be finalised in consultation with new councils. The State government is also exploring the possibilities of support from bi-lateral agencies, HUDCO and other funding agencies.

How fairly and equitably have the needs of the ULBs been given due consideration?

The SLIPs prepared based on the service level assessment have been integrated to identify the projects in SAAP. The projects proposals from the ULBs are aimed at ensuring universal coverage of water supply and sewerage connections to all households. The SLIPs from the nine cities consolidated and prioritized the projects based on following criteria.

- Extent of gaps in service levels
- Total population in the ULB
- Geographical area of the ULB

60% weightage has been given to the extent of gaps in service levels, 20% each to total population and the geographical extent in the ULB. Thus ensure that the ULBs with high service level gaps gets due consideration while allocating the fund.

Have adequate consultations with all stakeholders been done, including citizens, local MPs and other public representatives?

Yes. The service level gap analysis was presented in the consultative meetings to acquire the consensus of all stakeholders in prioritising the sectors and projects. The consultative meetings were attended by the citizens, local MPs, MLAs, Mayor/ Chairpersons, Council, Commissioners, Municipal Engineers, Public Health Engineers etc.

Moreover, the Ward Committees (WC) are integral part of decentralised Planning system in Kerala, WCs are very active in the state and it meets at least 3 times in an year. WCs platform for the citizens to participate in development process including, qualitative analysis of development requirement of a ward, identification of projects and its prioritization. Besides Kudumbashree networks are very active at grass root levels The Kudumbashree members have actively participated in WC and shared the suggestions of development prioritisation.

Urban 2020 is an initiative of the state government to identify the service level gaps and prepare projects to improve the physical infrastructure services. Series of consultative meetings were organised in all ULBs to prioritise the development requirements and identify the projects to meet the requirements.

THE FOLLOWING STEPS HAVE BEEN FOLLOWED FOR PREPARATION OF SAAP.

3.1. PRINCIPLES OF PRIORITISATION

The State has prioritized and recommended projects for selection under AMRUT as per the Mission Guidelines.

During SLIP preparation, the ULBs have identified the projects based on service level gap analysis, and through consultative process prioritized those projects so as to achieve universal coverage of water supply connections followed by sewerage connections, this being the national priority. The next priority was accorded to the other service levels in these sectors appropriate to the specific town.

In the SAAP, the ULBs with higher gaps in coverage of water supply and sewerage were given priority for funding in the first year. Potential smart city has also been given due consideration in fund allocation to achieve convergence despite their comparatively better coverage of water supply

Thiruvananthapuram and Kochi are the two largest ULBs in terms of total population (high influx of floating population) and geographical coverage. These cities also accommodate a higher share of urban poor in the state. However service level gaps in these cities are comparatively less compared to other cities. In these circumstances, the priority is also given to the total population and geographical coverage.

The prioritization of ULBs for funding has been discussed with the local MPs, MLAs, Mayors, Chairpersons and Commissioners of the ULBs.

Has consultation with local MPs/ MLAs, Mayors and Commissioners of the concerned ULBs been carried out prior to allocation of funding?

The criteria followed for the funding has been discussed with the Mayors, Chairpersons and Secretaries of the ULBs and informal consultations have been done with MLAs and MPs.

Has financially weaker ULBs given priority for financing? If yes, how?

The state is contributing 30% of the proposed cost of the project and apart from devolution of fund to the ULBs, 14th Finance Commission Grants are timely disbursed to the ULBs. Apart from plan fund, Maintenance fund (Road) and Maintenance Fund (Non Road) exclusively for the maintenance of assets has been transferred to the Local Bodies . Hence the financial capacity of ULB was not a criterion in prioritising the projects.

Has the ULB with a high proportion of urban poor received higher share? If yes, how?

Yes, Thiruvananthapuram and Kochi are having high proportion of urban poor and they have been given priority for fund allocation. The cities in Kerala exhibits homestead type settlements, which has own wells and individual toilets with septic tanks within the compound. Economically weaker sections are more dependent on beneficiaries of public water supply system and sewerage network. By aiming at the universal coverage ,certainly the priority has gone to cities with higher share of Urban poor.

Has the potential Smart cities been given preference?

While preparing SLIP, Kochi has been given priority to projects for reduction in NRW, sewerage network and water transport projects.

How many times projects are proposed in SAAP of the Central Assistance (CA) allocated to the State during 2015-16?

State has proposed projects amounting 3 times of the Central Assistance allocated for the financial year 2015-16.

Is the allocation to different ULBs within State consistent with the urban profile of the state? How?

As per the Census 2011, among the States in India, Kerala has exhibited one of the fastest urbanization rates during 2001-11. The state has around 93 statutory urban areas (6 Corporation and 87 Municipalities) and 427 census towns. However only 9 cities were selected under AMRUT, covering a population of around 34 lakh person, which is only around 20% of the total urban population in the State.

Yes. The State has made allocations to different ULBs within the State consistent with the urban profile of the State. Further, various financial options AMRUT, Smart Cities, Swatch Bharat Mission and external financial assistance are adopted to converge various schemes and financing options

3. 2. IMPORTANCE OF O&M

It has been observed that ULBs pay little attention to the operation and maintenance of infrastructure assets created after completion of projects. This tendency on the part of

implementing agencies leads to shear loss off national assets. Information, in words, has been indicated against each question regarding importance given to O&M.

Due attention has been given in the project to address this issue.

Has Projects being proposed in the SAAP includes O & M for at least five years?

Effective Operation & systematic Maintenance (O&M) of the infrastructure is essential for ensuring sustainability of any infrastructure created. In view of the importance of effective Operation & Maintenance (O&M) of the infrastructure created through the AMRUT for ensuring sustainability of the infrastructure created, it is proposed to extend O&M arrangements for 5 more years after the completion of the Defects Liability Period. This will ensure supply of good quality infrastructure by the agency and ensure its upkeep during the DLP and O&M period of 5 years also, saving huge money to the Govt. /ULB, increase of life of the asset, reduced wear and tear, reduced energy consumption etc.

Do the Projects proposed in the SAAP include O & M for at least five years?

Yes. For all projects, strategies for O&M have been planned in the SAAP for a period of 5 years period and this arrangement shall be an integral part of the agreement with contractor. This arrangement will incentivise the contracting agency to construct good quality infrastructure or supply good quality of equipment which will last for its design life with reduced maintenance or repairs.

How O&M expenditures are proposed to be funded by ULBs/ parastatal?

The expenditure towards O&M arrangements for 5 years after the DLP are proposed to be funded from the allocation to the Maintenance Fund (Non-Road) of the concerned ULBs
The possibility of collection of user charges, strengthen the billing and collection systems and other strategies for revenue improvement are being analysed in the State.

Is it by way of levy of user charges or other revenue streams? Please give details.

The State is assessing the possibility of collection of user charges, strengthen the billing and collection systems and other strategies for revenue improvement, to meet the O& M Cost.
Kerala Water Authority is responsible for providing water supply and sewerage network connects to the Households. To meet the cost of O&M, KWA is exploring possibilities like the expanding the connection /service network, strengthening billing and collection systems, energy conservation and efficiency improvement, reduction of NRW (Non-Revenue Water), reuse and recycling of waste water, Smart metering, SCADA etc.

Has O&M cost been excluded from project cost for the purpose of funding?

Yes. The O&M costs are not included in the project cost for the purpose of funding.

What kind of model has been proposed by States/ULBs to fund the O&M? Please discuss

State has proposed to meet the requirement from the Maintenance Fund (Non-Road) of the concerned ULBs. However recovery of O&M by ULBs through imposing user charges and other operation cost reduction measures are also being explored by the concerned departments.

3. 3. FINANCING OF PROJECTS

Financing is an important element of the SAAP. Each state has been given the maximum share which will be given by the Central Government.

Information in response to the questions regarding financing of the projects proposed under AMRUT is given below.

How the residual financing (over and above Central Government share) is shared between the States, ULBs?

As per the mission guidelines Gol is providing 50% assistance for the mission cities having population upto 10 lakh. All the 9 mission cities falls in this category. State govt. will contribute 30% matching share from its own resources, remaining share to be arranged by respective ULBs through their own resources.

Has any other sources identified by the State/ULB (e.g. PPP, market borrowing)? Please discuss.

State is assessing various options for mobilisation of finance, including PPP, market borrowing etc. Moreover state is also exploring the potential funding from Multilateral / bi lateral agencies, convergence with other schemes etc . Besides State is also analysing the scope of municipal bonds.

What is the State contribution to the SAAP? (it should not be less than 20 percent of the total project cost, Para 7.4 of AMRUT Guidelines)

State has agreed to contribute 30% share for the infrastructure projects.

Whether complete project cost is linked with revenue sources in SAAP? How?

It has been attempted but if there will be VGF, the same shall be arranged by the ULBs through their own resources or funding/loan through financial institutions.

Has projects been dovetailed with other sectoral and financial programme of the Centre and State Governments?

Yes, all possible dovetailing/convergence of ongoing/sanctioned projects under JnNURM, projects with assistance of ADB, JICA, KMRLetc have been given due consideration during preparation of the SLIPs of the ULBs.

Is state planning to create a Financial Intermediary, in order to pool funds from all sources and release funds to ULBs in time? Please provide details.

Yes, State has constituted KURDFC (Kerala Urban And Rural Development Finance Corporation Ltd) whose mandate is to provide funds for ULBs for VGF from various sources. The main activity of the Company is to provide loan assistance to various local bodies in the State of Kerala for their developmental activities.

Has States/UTs explored the possibility of using Public Private Partnerships (PPP), as a preferred execution model? Please discuss.

Private partnership in development projects are being encouraged in the State. The state government has already initiated "Partner Kerala Mission" aimed at encouraging private sector investment in urban infrastructure projects. Under AMRUT, the possibility of private partnership would be assessed and detailed out during DPR preparation. BOT, BOOT, Annuaityetc are the prevailing models of PPP in the state.

Are PPP options included appropriate Service Level Agreements (SLAs) which may lead to the People Public Private Partnership (PPPP) model? How?

PPP model and options would be assessed and finalised during DPR preparation. The objective of projects are not be only asset creation but also actual service delivery. Performance based output and payment to be attempted with the private contractor

CHAPTER 4: PRINCIPLE OF PRIORTIZATION

Table 4.1 Water Supply Projects 2015-16

Sl No	Name of the City	Service levels		SAAP	CFY (2015 -16)	
		Household Coverage of Water Supply Connection	Per Capita Quantum of Water Supplied in LPCD in %	Project Cost demanded by the Cities under AMRUT for Project Period	Project Cost demanded by the Cities under AMRUT for FY 2015-16	Priority No of the Projects
		%	%	Rs in Cr	Rs in Cr	
1	Thiruvananthapuram	83	99	365.00	0.00	1/18%
2	Kochi	85	138	221.00	1.00	2/13%
3	Kozhikode	44	100	150.00	0.00	3/12%
4	Thrissur	60	93	206.65	8.00	4/12%
5	Kollam	38	51	449.00	6.00	5/11%
6	Kannur	43	90	200.00	0.00	6/10%
7	Palakkad	62	88	90.70	0.00	7/9%
8	Alappuzha	61	50	162.00	0.00	8/8%
9	Guruvayur	9	36	94.50	0.00	9/7%
Total for Mission Period (FY 2015-19)				1938.85		
Total for Current Year (FY 2015-16)					15.00	

Table 4.2. Sewerage and Septage Management - (FY 2015-16)

Name of the City	Service Levels			SAAP	CFY-2015-16	
	Per capita quantum of water supplied in lpcd	Coverage of latrines (%)	Coverage of Sewerage Network services (%)	Project Cost demanded by the Cities under AMRUT for Project Period Rs in Cr	Project Cost demanded by the Cities under AMRUT for FY 2015-16 Rs in Cr	Priority No of the Projects
Thiruvananthapuram	99.00	99.50	37.00	617.00	3.00	1/18%
Kochi	138.00	95.00	3.00	935.00	0.00	2/13%
Kozhikode	100.00	97.00	0.00	536.00	0.00	3/12%
Thrissur	60.48	94.87	0.00	120.00	0.00	4/12%
Kollam	51.00	97.30	0.00	525.00	0.00	5/11%
Kannur	100.00	98.00	0.00	100.00	0.00	6/10%
Palakkad	88.00	95.00	0.00	243.60	0.00	7/9%
Alappuzha	50.00	99.20	0.00	10.00	0.00	8/8%
Guruvayur	38.00	99.00	0.00	31.00	0.00	9/7%
Total for Mission Period (FY 2015-19)				3117.60		
Total for Current Year (FY 2015-16)					3.00	

CHAPTER -5 SAAP TABLES

Table 5.1: Breakup of Total MoUD Allocation in AMRUT

Name of State –Kerala

SAAP FY- 2015-16

(Amount in Crore)

Total Central funds allocated to State	Allocation of Central funds for A&OE (@ 8% of Total given in column 1)	Allocation of funds for AMRUT (Central share)	Multiply col. 3 by x3) for AMRUT on col. 4 (project proposal to be three- times the annual allocation - CA)	Add equal (col. 4) State/ULB share	Total AMRUT annual size (cols.2+4+5)
1	2	3	4	5	6
104.90	8.91	95.99	287.98	287.98	584.87

Table 5.2: Abstract-Sector Wise Proposed Total Project Fund and Sharing Pattern

Name of State –Kerala

SAAP FY- 2015-16

(Amount in Crore)

Sl. No.	Sector	No of Projects	Centre	State	ULB	Convergence	Others	Total Amount
1	Water Supply	25	117.88	70.728	47.152	0	0	235.76
2	Sewerage & Septage Management	15	85.895	51.537	34.358	0	0	171.79
3	Drainage	15	52.895	31.737	21.158	0	0	105.79
4	Urban Transport	16	30.595	18.357	12.238	0	0	61.19
5	Green Spaces and Parks	17	6.73	4.038	2.692	0	0	13.46
	Grand Total	88	293.995	176.397	117.598	0	0	587.99

Table 5.3 : Abstract-Break-up of Total Fund Sharing Pattern

Name of State –Kerala

SAAP FY- 2015-16

(Amount in Crore)

Sl. No.	Sector	Centre	State			ULBs			Convergence	Others	Total
		Mission	14th FC	Others	Total	14th FC	Others	Total			
1	Water Supply	117.88		70.728	70.728		47.152	47.152			235.76
2	Sewerage & Septage Management	85.895		51.537	51.537		34.358	34.358			171.79
3	Drainage	52.895		31.737	31.737		21.158	21.158			105.79
4	Urban Transport	30.595		18.357	18.357		12.238	12.238			61.19
5	Green Spaces and Parks	6.73		4.038	4.038		2.692	2.692			13.46
	Grand Total	293.995	-	176.397	176.397	-	117.598	117.598			587.99
										A&O.E.	58.80
										Total SAAP Size	646.79

Table 5.4: Abstract-Use of Funds on Projects :On-going Projects and New

Name of State –Kerala

SAAP FY- 2015-16
(Amount in Crore)

Sector	Total Project Expenditure	Proposed Spending during current financial Year							Balance forwarded to next financial year						
		Centre		State			ULBs		Centre		State			ULB	
		Mission	14th FC	Others	Total	14th FC	Others	Total	Mission	14th FC	Others	Total	14th FC	Others	Total
Water Supply	235.76	7.5		4.5	4.5		3	3	110.38		66.23	66.23		44.15	44.15
Sewerage & Septage	171.79	1.5		0.9	0.9		0.6	0.6	84.40		50.63	50.63		33.76	33.76
Drainage	105.79	2.75		1.65	1.65		1.1	1.1	50.15		30.08	30.08		20.06	20.06
Urban Transport	61.19	2.75		1.65	1.65		1.1	1.1	27.85		16.70	16.70		11.14	11.14
Others	13.46	1.62		0.97	0.97		0.65	0.65	5.12		3.06	3.06		2.04	2.04
Grand Total	587.99	16.12		9.67	9.67		6.45	6.45	277.90		166.7	166.7		111.15	111.15

Note: Fund share from 14th FC, through convergence and incentives would be finalised sector wise-project – wise during the DPR preparation.

Table 5.5: Abstract –Plan for Achieving Service Level Benchmarks

Name of State –Kerala

Mission Period 2015-16 to 2019-20

(Amount in Crore)

Proposed Priority Projects	Total Project Cost	Indicator	Baseline	Annual Targets based on Master Plan (Increment from the Baseline Value)					
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020
				H1	H2				
Water Supply	1938.85	Household level coverage of direct water supply connections	63	63	65	66	68	75	100
		Per capita quantum of water supplied	97	97	97.01	101	105	110	142
		Quality of water supplied	92	92	92.01	93	94	95	100
Sewage and Septage Management	3117.60	Coverage of latrines (individual or community)	97.2	98	99	100			
		Coverage of sewerage network services	4.44	4.44	6.05	24.38	47.77	72.55	100
		Efficiency of Collection of Sewerage	6.78	6.78	7.28	26.72	43.22	75.45	100
		Efficiency in treatment	18.01	18.01	18.51	37.95	62.23	86.67	100
Drainage	1288.80	Coverage of storm water drainage network	31.66	31.66	38.2	38.33	50.43	64.28	74
Urban Transport	876.44	Service coverage of urban transport in the city	2.35	These indicators are meant for motorised transportation where as Mission emphasises on NMT and our proposals are mainly on improvement of parking systems, foot over bridges, footpaths and NMTs etc.					
		Availability of urban transport per 1000 population	2.62						
Green Spaces and Parks	162.95	Per Person availability Open space	7.2	7.2	7.8	8.3	8.9	9.4	10

Table 5.6: SAAP –Master Plan of all projects to achieve universal coverage during the current Mission period based on Table 2.1 (FYs 2015-16 to 2019-20)

Name of State-Kerala

(Amount in Crore)

Sl. No.	Name of ULB	Total number of projects to achieve universal coverage (Water supply & Sewerage)	Estimated Cost (₹ in Crore)	Number of years to achieve universal coverage
1	Thiruvananthapuram	18	982.00	5
2	Kollam	6	974.00	5
3	Alappuzha	2	172.00	5
4	Kochi	10	1156.00	5
5	Thrissur	18	326.65	5
6	Guruvayoor	8	125.5.00	5
7	Palakkad	13	334.30	5
8	Kozhikode	10	686.00	5
9	Kannur	5	300.00	5
	Grand Total	90	5056.45	

Table 5.7.: Sector Wise Breakup of Consolidated Investments for all ULBs in the State

Name of State –Kerala

FY- 2015-16

(Amount in Crore)

Name of City	Water Supply	Sewerage and Septage Management	Drainage	Urban Transport	Green Spaces and Parks	Reforms and Incentives	Total Amount
Thiruvananthapuram	365	617	132	89.37	7.9		1211.27
Kollam	449	525	36.8	45	25		1080.80
Alappuzha	162	10	30	6.82	4.25		213.07
Kochi	221	935	680	260	5.5		2101.50
Thrissur	206.65	120	100	34	6		466.65
Guruvayur	94.5	31	90	56.25	14.3		286.05
Palakkad	90.7	243.6	60	295	81		770.30
Kozhikode	150	536	80	60	10		836.00
Kannur	200	100	80	30	9		419.00
Total Project Investment	1398.85	1288.80	3117.60	1288.80	876.44	100.90	7485.54
						A.&O.E	748.55
						Grand Total	8234.09

Table 5.8 A SAAP-ULB Wise Source of Funds for All Sectors

Name of State –Kerala

Total Mission Period- 2015-16 to 2020-21

(Amount in Crore)

Name of the City	Centre	State			ULBs			Convergence	Others e.g. Incentive	Total
		14th FC	Others	Total	14th FC	Others	Total			
Thiruvananthapuram	605.64		363.38	363.38		242.25	242.25			1211.27
Kollam	540.40		324.24	324.24		216.16	216.16			1080.80
Alappuzha	106.54		63.92	63.92		42.61	42.61			213.07
Kochi	1050.75		630.45	630.45		420.30	420.30			2101.50
Thrissur	233.33		140.00	140.00		93.33	93.33			466.65
Guruvayur	143.03		85.82	85.82		57.21	57.21			286.05
Palakkad	385.15		231.09	231.09		154.06	154.06			770.30
Kozhikode	418.00		250.80	250.80		167.20	167.20			836.00
Kannur	209.50		125.70	125.70		83.80	83.80			419.00
Total	3692.32	-	2215.39	2215.39	-	1476.93	1476.93			7384.64

Note: Fund share from 14th FC, through convergence and incentives would be finalised sector wise-project – wise during the DPR preparation.

Table 5.9 B: SAAP-ULB Wise Source of Funds for All Sectors

Name of State –Kerala

Current SAAP Period- 2015-16

(Amount in Crore)

Name of the City	Centre	State			ULBs			Convergen c	Others e.g. Incentiv e	Total
		14th FC	Others	Total	14th FC	Others	Total			
Thiruvananthapuram	51.875		31.119	31.119		20.746	20.746			103.73
Kollam	32.84		19.704	19.704		13.136	13.136			65.68
Alappuzha	25.005		15.003	15.003		10.002	10.002			50.01
Kochi	37.955		22.773	22.773		15.182	15.182			75.91
Thrissur	35.515		21.309	21.309		14.206	14.206			71.03
Guruvayur	20.88		12.528	12.528		8.352	8.352			41.76
Palakkad	25.245		15.147	15.147		10.098	10.098			50.49
Kozhikode	35.565		21.34	21.339		14.226	14.226			71.13
Kannur	29.125		17.475	17.475		11.65	11.65			58.25
Total	293.995	-	176.397	176.397	-	117.598	117.598			587.99

Note: Fund share from 14th FC, through convergence and incentives would be finalised sector wise-project – wise during the DPR preparation.

Table 5.10 C: SAAP-ULB Wise Source of Funds for All Sectors

Name of State –Kerala

Financial Year 2015-16

(Amount in Crore)

Name of the City	Centre	State			ULBs			Convergence	Others e.g. Incentive	Total
		14th FC	Others	Total	14th FC	Others	Total			
Thiruvananthapuram	2.7		1.62	1.62		1.08	1.08			5.4
Kollam	3.6		2.16	2.16		1.44	1.44			7.2
Alappuzha	0.125		0.075	0.075		0.05	0.05			0.25
Kochi	2.69		1.614	1.614		1.076	1.076			5.38
Thrissur	4		2.4	2.4		1.6	1.6			8
Guruvayur	0		0	0		0	0			0
Palakkad	3		1.8	1.8		1.2	1.2			6
Kozhikode	0		0	0		0	0			0
Kannur	0		0	0		0	0			0
Total	16.11		9.65	9.65		6.44	6.44			32.23

Note: Fund share from 14th FC, through convergence and incentives would be finalised sector wise-project – wise during the DPR preparation.

Table 5.11: Year -wise Share of Investments for All Sectors(UIB wise)

Name of State –Kerala

Financial Year 2015-16

(Amount in Crore)

Name of the City	Total Project Expenditure	Proposed Spending during current financial Year							Balance forwarded to next financial year						
		Centre		State			ULBs		Centre		State			ULBs	
		Mission	14th FC	Others	Total	14th FC	Others	Total	Mission	14th FC	Others	Total	14th FC	Others	Total
Thiruvananthapuram	103.73	2.7		1.62	1.62		1.08	1.08	49.18		29.49	29.49		19.66	19.66
Kollam	65.68	3.6		2.16	2.16		1.44	1.44	29.25		17.55	17.55		11.70	11.70
Alappuzha	50.01	0.12		0.07	0.07		0.05	0.05	24.88		14.93	14.93		9.952	9.95
Kochi	75.91	2.69		1.61	1.61		1.08	1.07	35.26		21.16	21.16		14.11	14.11
Thrissur	71.03	4		2.4	2.4		1.6	1.6	31.52		18.91	18.91		12.61	12.61
Guruvayur	41.76	0		0	0		0	0	20.88		12.53	12.53		8.352	8.35
Palakkad	50.49	3		1.8	1.8		1.2	1.2	22.27		13.35	13.35		8.87	8.87
Kozhikode	71.13	0		0	0		0	0	35.57		21.34	21.34		14.23	14.23
Kannur	58.25	0		0	0		0	0	29.13		17.48	17.48		11.65	11.65
TOTAL	587.99	16.11		9.65	9.65		6.44	6.44	277.94		166.73	166.73		111.12	111.12

Note: Fund share from 14th FC, through convergence and incentives would be finalised sector wise-project –wise during the DPR preparation.

Table 5.12: SAAP-- State level Plan for Achieving Service Level Benchmarks

Name of State –Kerala

Current Mission Period- 2015-16

(Amount in Crore)

Proposed Priority Projects	Total Project Cost	Indicator	Baseline	Annual Targets based on Master Plan (Increment from the Baseline Value)					
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020
				H1	H2				
Water supply	1938.85	Household level coverage of direct water supply connections	63	63	65	66	68	75	100
		Per capita quantum of water supplied	97	97	97	101	105	110	142
		Quality of water supplied	92	92	92	93	94	95	100
Sewerage and septage management	3117.6	Coverage of latrines (individual or community)	97.2	98	99	100			
		Coverage of sewerage network services	4.44	4.44	6.05	24.38	47.77	72.55	100
		Efficiency of Collection of Sewerage	6.78	6.78	7.28	26.72	43.22	75.45	100
		Efficiency in treatment	18.01	18.01	18.51	37.95	62.23	86.67	100
Drainage	1288.8	Coverage of storm water drainage network	31.66	31.66	38.2	38.33	50.43	64.28	74
Urban transport	876.44	Service coverage of urban transport in the city	2.35	These indicators are meant for motorised transportation whereas Mission emphasises on NMT and our proposals are mainly on improvement of parking systems, foot over bridges, footpaths and NMTs etc.					
		Availability of urban transport per 1000 population	2.62						
Green space & open space	162.95	Per Person availability of open space	7.2	7.2	7.8	8.3	8.9	9.4	10

Table 5.13 : SAAP- State Level Plan of Action for Physical and Financial Progress

fb

Name of the City	Performance Indicator	Baseline (%)	Mission target (%)	For financial Year 2015-16			
				For Half Year 1		For Half Year 2	
				Physical Progress to be achieved	Funds to be Utilized	Physical Progress to be achieved (%)	Funds to be Utilized (Rs in Crores)
WATER SUPPLY							
Thiruvananthapuram	Household level coverage of direct water supply connections	83	100	0	0	0	0
	Per capita quantum of water supplied	99	135 lpcd	0	0		
	Quality of water supplied	95	100	0	0		
Kollam	Household level coverage of direct water supply connections	38	100	0	0	20	6
	Per capita quantum of water supplied	51	135 lpcd	0	0		
	Quality of water supplied	95	100	0	0		
Alappuzha	Household level coverage of direct water supply connections	61	100	0	0	0	0
	Per capita quantum of water supplied	50	135 lpcd	0	0		
	Quality of water supplied	66	100	0	0		

Kochi	Household level coverage of direct water supply connections	90	100	0	0	12.5	1
	Per capita quantum of water supplied	165	135 lpcd	0	0		
	Quality of water supplied	100	100	0	0		
Thrissur	Household level coverage of direct water supply connections	60.48	100	0	0	20	8
	Per capita quantum of water supplied	93	135 lpcd	0	0		
	Quality of water supplied	80	100	0	0		
Guruvayur	Household level coverage of direct water supply connections	85	100	0	0	0	0
	Per capita quantum of water supplied	138	135 lpcd	0	0		
	Quality of water supplied	90	100	0	0		
Palakkad	Household level coverage of direct water supply connections	62	100	0	0	0	0
	Per capita quantum of water supplied	88	135 lpcd	0	0		
	Quality of water supplied	100	100	0	0		
Kozhikode	Household level coverage of direct water supply connections	44	100	0	0	0	0
	Per capita quantum of water supplied	100	135 lpcd	0	0		

	Quality of water supplied	100	100	0	0		
Kannur	Household level coverage of direct water supply connections	43	100	0	0	0	0
	Per capita quantum of water supplied	90	135 lpcd	0	0		
	Quality of water supplied	100	100	0	0		

SEWERAGE AND SEPTAGE MANAGEMENT

Name of the City	Performance Indicator	Baseline (%)	Mission target (%)	For financial Year 2015-16			
				For Half Year 1		For Half Year 2	
				Physical Progress to be achieved	Funds to be Utilized	Physical Progress to be achieved (%)	Funds to be Utilized (Rs in Crores)
Thiruvananthapuram	Coverage of latrines (individual or community)	99.5	100%	0	0		
	Coverage of sewerage network services	37	100%	0	0	8.4	3.00
	Efficiency of Collection of Sewerage	58	100%	0	0		
	Efficiency in treatment	58	100%	0	0		
'Kollam	Coverage of latrines (individual or community)	97.3%	100%	0	0	0%	0.00

	Coverage of sewerage network services	0	100%	0	0	0%	0.00
	Efficiency of Collection of Sewerage	0	100%	0	0	0%	0.00
	Efficiency in treatment	0	100%	0	0	0%	0.00
Allapuzha	Coverage of latrines (individual or community)	99.23	100%	0	0	0%	0.00
	Coverage of sewerage network services	0	100%	0	0	0%	0.00
	Efficiency of Collection of Sewerage	0	100%	0	0	0%	0.00
	Efficiency in treatment	0	100%	0	0	0%	0.00
Kochi	Coverage of latrines (individual or community)	95%	100%	0	0	0%	0.00
	Coverage of sewerage network services	3%	100%	0	0	0%	0.00
	Efficiency of Collection of Sewerage	3%	100%	0	0	0%	0.00
	Efficiency in treatment	4.08%	100%	0	0	0%	0.00
Thrissur	Coverage of latrines (individual or community)	94.87	100%	0	0	0%	0.00
	Coverage of sewerage network services	0	100%	0	0	0%	0.00
	Efficiency of Collection of Sewerage	0	100%	0	0	0%	0.00
	Efficiency in treatment	0	100%	0	0	0%	0.00

Guruvayur	Coverage of latrines (individual or community)	99	100%	0	0	0%	0.00
	Coverage of sewerage network services	0	100%	0	0	0%	0.00
	Efficiency of Collection of Sewerage	0	100%	0	0	0%	0.00
	Efficiency in treatment	0	100%	0	0	0%	0.00
Palakkad	Coverage of latrines (individual or community)	95	100%	0	0	0%	0.00
	Coverage of sewerage network services	0	100%	0	0	0%	0.00
	Efficiency of Collection of Sewerage	0	100%	0	0	0%	0.00
	Efficiency in treatment	0	100%	0	0	0%	0.00
Kozhikode	Coverage of latrines (individual or community)	97	100%	0	0	0%	0.00
	Coverage of sewerage network services	0	100%	0	0	0%	0.00
	Efficiency of Collection of Sewerage	0	100%	0	0	0%	0.00
	Efficiency in treatment	0	100%	0	0	0%	0.00
Kannur	Coverage of latrines (individual or community)	98	100%	0	0	0%	0.00
	Coverage of sewerage network services	0	100%	0	0	0%	0.00

	Efficiency of Collection of Sewerage	0	100%	0	0	0%	0.00
	Efficiency in treatment	0	100%	0	0	0%	0.00
DRAINAGE SYSTEMS							
Name of the City	Performance Indicator	Baseline (%)	Mission target (%)	For financial Year 2015-16			
				For Half Year 1		For Half Year 2	
				Physical Progress to be achieved (%)	Funds to be Utilized In Cr.	Physical Progress to be achieved (%)	Funds to be Utilized (Rs in Crore)
Thiruvananthapuram	Coverage of storm water drainage network	60	100	0	0	11%	2.0
Kollam	Coverage of storm water drainage network	25	35	0	0	22%	0.5
Alappuzha	Coverage of storm water drainage network	10	90	0	0	0 %	0.00
Kochi	Coverage of storm water drainage network	43	90	0	0	8%	2.0
Thrissur	Coverage of storm water drainage network	6	90	0	0	0%	0.00
Guruvayur	Coverage of storm water drainage network	15	62	0	0	0%	0.00
Palakkad	Coverage of storm water drainage network	61	70	0	0	11%	1.0
Kozhikode	Coverage of storm water drainage network	50	50	0	0	0%	0.00

Kannur	Coverage of storm water drainage network	15	33	0	0	0%	0.00
URBAN MOBILITY							
Name of the City	Performance Indicator	Baseline (%)	Mission target (%)	For financial Year 2015-16			
				For Half Year 1		For Half Year 2	
				Physical Progress to be achieved	Funds to be Utilized	Physical Progress to be achieved (%)	Funds to be Utilized (Rs in Crore)
Thiruvananthapuram	Service coverage of urban transport in the city	1.10		0	0	1.38	0.09
	Availability of urban transport per 1000 population	0.61		0	0		
Kollam	Service coverage of urban transport in the city	1.76		0	0	10.84	0.40
	Availability of urban transport per 1000 population	2.06		0	0		
Alappuzha	Service coverage of urban transport in the city	2.21		0	0	0	0
	Availability of urban transport per 1000 population	1.26		0	0		
Kochi	Service coverage of urban transport in the city	1.83		0	0	21.71	2.00

	Availability of urban transport per 1000 population	0.42		0	0		
Thrissur	Service coverage of urban transport in the city	5.0		0	0	0	0
	Availability of urban transport per 1000 population	4		0	0		
Guruvayur	Service coverage of urban transport in the city	2.0		0	0	0	0
	Availability of urban transport per 1000 population	4		0	0		
Palakkad	Service coverage of urban transport in the city	3.26		0	0	17.22	3.00
	Availability of urban transport per 1000 population	5.26		0	0		
Kozhikode	Service coverage of urban transport in the city	1.0		0	0	0	0
	Availability of urban transport per 1000 population	2.0		0	0		
Kannur	Service coverage of urban transport in the city	3.0		0	0	0	0
	Availability of urban transport per 1000 population	4.0		0	0		

GREEN SPACE AND PARKS							
Name of the City	Performance Indicator	Baseline (%)	Mission target (%)	For financial Year 2015-16			
				For Half Year 1		For Half Year 2	
				Physical Progress to be achieved	Funds to be Utilized	Physical Progress to be achieved (%)	Funds to be Utilized (Rs in Crore)
Thiruvananthapuram	Per Person availability of open space	Per Person availability of open space	0.54	10	0	50 %	0.30
Kollam	Per Person availability of open space		5.19	10	0	20%	0.30
Alappuzha	Per Person availability of open space		3	10	0	28%	0.25
Kochi	Per Person availability of open space		10.9	10	0	100%	0.38
Thrissur	Per Person availability of open space		14.89	10	0	0%	0.00
Guruvayur	Per Person availability of open space		14.89	10	0	0%	0.00
Palakkad	Per Person availability of open space		3.43	10	0	41%	2.0
Kozhikode	Per Person availability of open space		12	10	0	0%	0.00
Kannur	Per Person availability of open space		0.64	10	0	0%	0.00

Table 5.14: SAAP-City wise and Sector wise projects for the Mission period

<u>WATER SUPPLY</u>				
S N	ULB	Project Name	Project Cost in Cr.	Total in Cr.
1	Thiruvananthapuram	Construction of new of Water Treatment Plant of 45mld with pulsator technology	45.00	
2	Kollam	1. Improvement of existing system, laying distribution network & installation of Chlorination arrangements	26.87	
		2 Rainwater harvesting		
		3. Improvement of water supply scheme to Kollam Corp.		
3.	Alappuzha	Augmentation and modernization of water supply distribution system in Alappuzha Municipality – Phase I	33.90	
4	Ernakulam	1. Rain Water Harvesting	7.98	
		2.Replacement of Damaged Service Line		
		3.Replacement of Faulty of Maters in the service connection & installing Bulk Meters at various location in the main distribution line		
5	Thrissur	1.Survey and Replacing of Faulty Meters	38.72	
		2.Providing Bulk Meters(700mm To 100mm)40 Nos In Transmission Mains		
		3.Laying of 700 mm DI K9 pipe at peechi from Dam to Treatment Plant(350 MTR)		

		<p>4. Rejuvenation Of Treatment Plant of 14.5 MLD at Peechi</p> <p>5. Construction of New OHSR of capacity 20ML at Ollur and Distribution Lines(varying Dia) for 20Km</p> <p>6. Augmentation of Treatment Plant At Ollukkara of 1.5MLD To 3 MLD including replacement of pumping main</p> <p>7. Laying 350 mm DI K9 pipe from Chempukkavu Reservoir To Koorkanchery Sump(1600MTR)</p> <p>8. Replacement of Ac Pipe To 200 mm DI and 160 mm PVC Pipes for around 42KM</p> <p>9. Renovation of OHT and Pump Houses at Koorkanchery,Nellikunu and Cherur</p>		
6	Palakkad	<p>1. Providing new DI pipe lines of 600 mm diameter and a length of 2.6 km from Malampuzha plant to Mattumantha OHSR pumping main</p> <p>2. Providing new DI pipe lines of 600 mm diameter and a length of 2 km from Puthurchantha junction to Vadakkanthara police quarters pumping main</p> <p>3. Providing new DI pipe lines of 450 mm diameter and a length of 4.65 km from Mattumantha OHSR to Kalmandapam pumping main.</p>	10	
7	Guruvayur	Distribution network for a length of 30 kms for improvement of coverage	13.72	
8	Kozhikode	Rehabilitation of existing old pipes, valves,and interconnections with existing lines(part)	17.87	
9	Kannur	Rehabilitation of existing old network, valves, house service	41.7	

		connection and inter-connections with existing lines including road reformation charges -part-15.7Cr		
		Construction of two nos service reservoirs in the project area including cost of land-6Cr.		
		Supply augmentation for JICA pattuvam project by laying transmission main to project area-Part-20Cr		
		TOTAL		235.76
<u>SEWERAGE AND SEPTAGE MANAGEMENT</u>				
Srl No	ULB	Project Name	Project Cost in Cr	
1	Thiruvananthapuram	Laying and extending the 900mm DI pumping main from Muttathara stilling chamber to collection well at STP and construction of a stilling chamber	33.65	
		Laying 700mm dia RCC NP3 Trunk main-II from Murinjapalam to Kannammoola and its branches		
		Rehabilitation of existing pump and machineries		
		Feasibility study for finding the route for pumping main extension from the stilling chamber at Muttathara to the STP by conducting Topographic survey and taking trial pits		
		Sewerage treatment plant (5 mld)		
		Sewerage network to block O with pump house at karaka mandapam		

2	Kollam	1. STP at Zone A1	31.42	
		2. Septage Treatment Plant		
3	Alappuzha	Decentralised Septage Management Systems	2.09	
4	Ernakulam	Implementation Of Decentralised Sewerage System	33.78	
5	Thrissur	1.Waste Water Treatment plant 2 nos	11	
		2. Septage plant		
6	Palakkad	De centralised septage and sewage treatment facilities	9.75	
7	Guruvayur	Making additional arrangements such as collection sump, pump set, piping arrangements etc for treatment of septage at the ongoing STP at chakkukumkandam	4.50	
8	Kozhikode	Construction of sewerage system in zone A	45.60	
9	Kannur	<i>None (Fund requirement is more than allocated, hence not included. Allocated fund included into Water Supply)</i>	0	
TOTAL				171.79
<u>Storm Water Drainage</u>				
SN	ULB	Project Details	Project Cost in Cr	TOTAL
1	Thiruvananthapuram	1.Cleaning and removing the silt and debris from the existing drain	17.98	
		2. Coverage of drainage network of 13.23 km		
2	Kollam	Storm Water Drain between Uliakovil - Ashtamudi	2.2	
3.	Alappuzha	Cleaning of natural drains.	6.28	
		Renovation and construction of drainage networks at municipal		

		road		
4.	Ernakulam	1.Rejuvenation Of Major Canals	24.56	
		2. Construction Of Area Drain		
5.	Thrissur	Construction of new drains	15.22	
6.	Palakkad	1. KalvakkulamThodudesilting and side wall (from stadium stand to Ramanandapuram)	8.54	
		2.Widening of ManappillikkavuThirunellayi stream and construction of bridge		
		3. Rejuvenation of drains around Sakunthala Jn. And construction of tertiary drains		
		4.Rejuvenation of drains around housing board colony,Maattumantha, Sekaripuram Jn. and connected roads		
7.	Guruvayur	Construction Of New Drains	13.07	
8.	Kozhikode	Construction of drain at Gurukkal Road-PM Kutty Road-Chakkittada-EK Canal-part	6.81	
9	Kannur	Construction/rejuvenation of drains-Part	11.13	
		TOTAL		105.79
<u>URBAN TRANSPORT</u>				
S N	ULB	Project Name	Project Cost in Cr	
1	Thiruvananthapuram	Pedestrian Walkway	6.50	

2	Kollam	1. Foot Over Bridge- 3 nos	3.69	
		2. Foot Path		
3.	Alappuzha	1. Construction of foot over bridges	6.85	
		2 Procurement of two motorized ferry vessel, Procurement of surveillance cameras, Passenger Information System.		
		3.Construction of pedestrian walkways		
4.	Ernakulam	Construction Of Foot Path And Bus Bays	9.21	
5.	Thrissur	Renovation of foot path	5.18	
6.	Palakkad	1.Providing pedestrian network and bicycle tracks on both sides of college road (100 ft road) and Fort area	17.42	
		2.Escalator to be provided at GB road to cross railway line		
		3. Mayins Girls high school to Mayins LP school foot over bridge		
		4.PMG higher secondary School to Victoria College elevated footpath		
		5.Mission High School to Municipal Junction elevated footpath		
		6. Victoria college to Anjuvilakku (sulthanpetta) pedestrian network		
7.	Guruvayur	Renovation of foot path with stainless steel pedestrian guard rail as part of temple circle development	8.17	
8.	Kozhikode	None (allocation included in Water Supply)	0	
9	Kannur	Procurement of AC low floor buses	4.17	
		TOTAL		61.19

GREEN SPACES & PARKS

SN	ULB	Project Name	Project Cost in Cr
1	Thiruvananthapuram	Developing one park	0.60
2	Kollam	Improvement of Parks-6 nos.	1.5
3.	Alappuzha	1.Development of of existing Picnic spot and its environs in the Civil Station Ward-	0.89
		2. Development of park in the Chathanadu Ward	
		3. Development of green cover and boundary wall at Valiamaram Ward	
4.	Ernakulam	Renovation Of St. John Park, Mattanchery	0.38
5.	Thrissur	Rejuvenation of Nehru Park, Division No.36,Thekkinkadu	0.91
6.	Palakkad	KottaMaidanam and Cheriya Kottamaidanam Rejuvenation	4.78
		Ramadevi Nagar Park	
		Eshwar Garden Park (ward 15)	
		Park Behind Victoria college (ward 15)	
		Kasim colony park	
		Aiswarya Nagar Park	
7.	Guruvayur	Development of park and playground at Bhagathsingh ground, ward No.8, Pala bazaar	2.30

		Development of park at sub centre Thozhiyoor,ward No. 42,Thozhiyoor		
8.	Kozhikode	Rejuvenation of Mananchira Park	0.85	
9	Kannur	Rejuvenation of SN Park	1.25	
		TOTAL		13.46
		GRAND TOTAL FOR ALL THE SECTORS		587.99

CHAPTER 6 REFORMS IMPLEMENTATION ROAD MAP

Table 6.1: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2015-2016

Name of State –Kerala

FY- 2015-16

Sl. No.	Type	Steps	Implementation Timeline	Target to be set by states in SAAP		Remarks (Present Status)
				Oct 2015 to Mar 2016	Apr to Sep 2016	
1	E-Governance	Digital ULBs				Partially accomplished and to be fully achieved in prescribed timeline.
		1. Creation of ULB website.	6 months	Achieved		
		2. Publication of e-newsletter, Digital India Initiatives.	6 months	Initiated		
		3. Support Digital India (ducting to be done on PPP mode or by the ULB itself).	6 months	Initiated		
2	Constitution and professionalization of municipal cadre	1. Policy for engagement of interns in ULBs and implementation.	12 months		Yes	Partially accomplished and to be fully achieved in prescribed timeline.
3	Augmenting Double entry accounting	1. Complete migration to double entry accounting system and obtaining an audit certificate to the effect from FY 2012-13 onwards.	12 months		Yes	Partially accomplished and to be fully achieved in prescribed timeline.

		2. Publication of annual financial statement on website	Every Year		Yes	
4	Urban Planning and City Development Plans	1. Improvement Plans (SLIP), State Annual Action Plans (SAAP).	6 months	Yes		SLIP and SAAP prepared
		2. Make action plan to progressively increase Green cover in cities to 15% in 5 years.	6 months	Yes		Initiated
		3. Develop at least one Children Park every year in the AMRUT cities.	Every Year		Yes	Proposal included in SLIP
		4. Establish a system for maintaining of parks, playground and recreational areas relying on People Public Private Partnership (PPPP) model.	12 months		Yes	To be fully achieved in prescribed timeline.
5	Devolution of funds and functions	1. Ensure transfer of 14th FC devolution to ULBs.	6 months	Yes		Accomplished
		2. Appointment of State Finance Commission (SFC) and making decisions.	12 months	Yes		Accomplished
		3. Transfer of all 18 function to ULBs.	12 months	Yes		Accomplished
6	Review of Building by-laws	1. Revision of building bye laws periodically.	12 months	Yes		Accomplished

		2. Create single window clearance for all approvals to give building permissions	12 months		Yes	To be fully achieved in prescribed timeline.
7a	Municipal tax and fees improvement	1. At least 90% coverage.	12 months		Yes	Partially accomplished
		2. At least 90% collection.			Yes	Partially accomplished
		3. Make a policy to, periodically revise property tax, levy charges and other fees.			Yes	To be achieved in prescribed timeline
		4. Post Demand Collection Book (DCB) of tax details on the website.			Yes	
		5. Achieve full potential of advertisement revenue by making a policy for destination specific potential having dynamic pricing module			Yes	
7b	Improvement in levy and collection of usercharges	1. Adopt a policy on user charges for individual and institutional assessments in which a differential rate is charged for water use and adequate safeguards are included to take care of the interests of the vulnerable.	12 months		Yes	To be accomplished within the prescribed timeline
		2. Make action plan to reduce water losses to less than 20% and publish on the website.			Yes	
		3. Separate accounts for user			Yes	

		charges.				
		4. At least 90% billing.			Yes	
		5. At least 90% collection			Yes	
8	Energy and Water audit	1. Energy (Street lights) and Water Audit (including non-revenue water or losses audit).	12 months		Yes	To be accomplished within the prescribed timeline
		2. Making STPs and WTPs energy efficient.			Yes	
		3. Optimize energy consumption in street lights by using energy efficient lights and increasing reliance on renewable energy.			Yes	

Chart 6.2: SAAP - Reforms Implementation Plan for AMRUT Cities FY-2015-2016

ACTIVITY	TIME LINE- in Months												Status/Remarks
	1	2	3	4	5	6	7	8	9	10	11	12	
1. E-GOVERNANCE													
Creation of ULB website.													Accomplished
Publication of e-newsletter, Digital India Initiatives.													Accomplished
Digital India-ducting	6 months												To be accomplished
2. CONSTITUTION AND PROFESSIONALIZATION OF MUNICIPAL CADRE													
Policy for engagement of interns in ULBs and implementation.	6 months												Partially Accomplished
3. AUGMENTING DOUBLE ENTRY ACCOUNTING													
Double entry accounting system and audit certificate													Accomplished
Publication of annual financial statement on website	Every year												Partially accomplished

Chart 6.2: SAAP - Reforms Implementation Plan for AMRUT Cities FY-2015-2016 (Continue...)

ACTIVITY	TIME LINE- in Months												Status/Remarks	
	1	2	3	4	5	6	7	8	9	10	11	12		
4. URBAN PLANNING AND CITY DEVELOPMENT PLANS														
Improvement Plans (SLIP), State Annual Action Plans (SAAP).														Accomplished
Action plan to increase Green cover in cities to 15% in 5 years.														Initiated
Children Park every year in the AMRUT cities.														Initiated
Park Maintenance-PPP model.														Initiated
5. DEVOLUTION OF FUNDS AND FUNCTIONS														
Ensure transfer of 14th FC devolution to ULBs.														Accomplished
Appointment of State Finance Commission (SFC) and making decisions.														Accomplished
Transfer of all 18 function to ulbs.														Accomplished
6. REVIEW OF BUILDING BY-LAWS														
Revision of building bye laws periodically.														Accomplished
Create single window clearance for all approvals to give building permissions														Accomplished

Chart 6.2: SAAP - Reforms Implementation Plan for AMRUT Cities FY-2015-2016 (Continue...)

ACTIVITY	TIME LINE- in Months												Status/Remarks
	1	2	3	4	5	6	7	8	9	10	11	12	
7. MUNICIPAL TAX AND FEES IMPROVEMENT													
At least 90% coverage.	12 months											Partially Accomplished	
At least 90% collection.	12 months											Partially Accomplished	
Make a policy to, periodically revise property tax, levy charges and other fees.	12 months											Partially Accomplished	
Post Demand Collection Book (DCB) of tax details on the website.	12 months											To be initiated	
Advertisement revenue -destination specific policy	12 months											Partially Accomplished	
8. IMPROVEMENT IN LEVY AND COLLECTION OF USER CHARGES													
Adopt a policy on user charges												Accomplished	
Reduce water losses	12 months											Initiated the process	
Separate accounts for user charges.												Accomplished	
At least 90% billing.												Accomplished	
At least 90% collection												Accomplished	

Chart 6.2: SAAP - Reforms Implementation Plan for AMRUT Cities FY-2015-2016 (Continue...)

ACTIVITY	TIME LINE- in Months												Status/Remarks
	1	2	3	4	5	6	7	8	9	10	11	12	
8. ENERGY AND WATER AUDIT													
Energy (Street lights) Audit	12 months												Partially Accomplished
Water Audit (including non-revenue water or losses audit).	12 months												Initiated the process
Making STPs and WTPs energy efficient.	12 months												To be initiated
Energy efficient street lights and increasing reliance on renewable energy.	12 months												Partially Accomplished

Table 6.3: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2016-2017

Name of State –Kerala

FY- 2016-17

Sl. No.	Type	Steps	Implementation Timeline	Target to be set by states in SAAP				Present Status/ Issue If Any
				Oct 2015 to Mar 2016	Apr to Sep 2016	Oct 2016 to Mar 2017	Apr to Sept 2017	
1	E-Governance	Coverage with E-MAAS (from the date of hosting the software) <ul style="list-style-type: none"> • Registration of Birth, Death and Marriage, • Water & Sewerage Charges, •Grievance Redressal, •Property Tax, •Advertisement tax, •Issuance of Licenses, •Building Permissions, •Mutations, •Payroll, •Pension and e-procurement 	24 months	Yes				Accomplished
2	Constitution and professionalization of municipal cadre	Establishment of municipal cadre. Cadre linked training.	24 months				Yes	To be accomplished in prescribed timeline.

3	Augmenting double entry accounting	Appointment of internal auditor.	24 months				Yes	To be accomplished in prescribed timeline.
4	Urban Planning and City Development Plans	Make a State Level policy for implementing the parameters given in the National Mission for Sustainable Habitat	24 months				Yes	To be accomplished in prescribed timeline.
5	Devolution of funds and functions	Implementation of SFC recommendations within timeline.	24 months				Yes	To be accomplished in prescribed timeline.
6	Review of Building by-laws	State to formulate a policy and action plan for having a solar roof top in all buildings having an area greater than 500 square meters and all public buildings	24 months				Yes	To be accomplished in prescribed timeline.
		State to formulate a policy and action plan for having Rainwater harvesting structures in all commercial, public buildings and new buildings on plots of 300 sq. meters and above	24 months					

7	Establish and operationalize financial intermediary- pool finance, access external funds, float municipal bonds	Establish and operationalize financial intermediary- pool finance, access external funds, float municipal bonds.	24 months				Yes	To be accomplished in prescribed timeline.
8	Credit Rating	Complete the credit ratings of the ULBs.	24 months				Yes	To be accomplished in prescribed timeline.
9	Energy and Water audit	Give incentives for green buildings (e.g. rebate in property tax or charges connected to building permission/development charges).	24 months				Yes	To be accomplished in prescribed timeline.

Table 6.4: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2017-2018

Name of State –Kerala

FY- 2017-18

Sl. No.	Type	Steps	Implementation Timeline	Target to be set by states in SAAP						Present Status/ Issue If Any
				Oct 2015 to Mar 2016	Apr to Sep 2016	Oct 2016 to Mar 2017	Apr to Sept 2017	Oct to March 2018	Apr to Sept 2018	
1	E-Governance	1. Personnel Staff management. 2. Project management	36 months	Yes						Accomplished
2	Urban Planning and City Development Plans	1. Establish Urban Development Authorities.	36 months						Yes	To be accomplished in prescribed timeline.
3	Swachh Bharat Mission	1. Elimination of open defecation. 2. Waste Collection (100%), 3. Transportation of Waste (100%). 4. Scientific Disposal (100%). 5. The State will prepare a Policy for Right-sizing	36 months						Yes	Partially achieved and to be accomplished in prescribed timeline.

		the number of municipal functionaries depending on, say, population of the ULB, generation of internal resources and expenditure on salaries.									
--	--	---	--	--	--	--	--	--	--	--	--

Table 6.5: SAAP - Reforms Type, Steps and Target for AMRUT Cities FY-2018-2019

Name of State –Kerala

FY- 2018-19

(Amount in Crore)

SI No	Type	Steps	Implementati on Timeline	Target to be set by states in SAAP								Present Status/ Issue If Any
				Oct 2015 to Mar 2016	Apr to Sep 2016	Oct 2016 to Mar 2017	Apr to Sept 2017	Oct to Mar , 2018	Apr to Sept, 2018	Oct to Mar, 2019	Apr to Sept, 2019	
1	Urban Planning and City Development Plans	Preparatio n of Master Plan using GIS	48 months								Yes	To be accomplishe d in prescribed timeline.

CHAPTER 7. ADMINISTRATIVE AND OTHER EXPENSES

Table 7.1. :SAAP - Broad Proposed Requirement for Administrative and Other Expenses

Name of State - KERALA

Period- 2015-16 to 2019-20

(Amount in Crore)

S. No.	Items proposed for A&OE	Total Requirement (in Cr)	Committed Expenditure from previous year (if any)	Proposed spending for Current Financial	Balance to Carry Forward			
					FY-2017	FY-2018	FY-2019	FY-2020
1	Preparation of SLIP, SAAP and DPR	10.39	0	2.08	2.08	2.08	2.08	2.07
2	PDMC	22.50	0	0.68	5.46	5.46	5.45	5.45
3	Procuring Third Party Independent Review and Monitoring Agency	2.25	0	0.09	0.55	0.55	0.54	0.54
4	Publications (e-Newsletter, guidelines, brochures etc.)	2.25	0	0.09	0.54	0.54	0.54	0.54
5	Capacity Building and Training							
	5.a) CCBP- (Training, Workshop & Seminars)	39.78	0	4.42	8.84	8.84	8.84	8.84

	5.b) Others							
6	Reform implementation	13.50	0	0.27	4.50	5.13	2.25	1.35
7	Others							
8	Establishment Cost of State MMU & City MMU	6.60	0	0.84	1.44	1.44	1.44	1.44
9	Supporting Cost includes local travel and Stationery	3.63	0	0.46	0.79	0.79	0.79	0.79
Total		100.90	0	8.91	24.20	24.83	21.93	21.02

CHAPTER 8 CAPACITY BUILDING

Table 8.1: SAAP - ULB level Individual Capacity Development Plan (State level Plan)

Name of State –Kerala

FY- 2015-16

Form 7.1.1 – Physical				(Amount in Crore)		
Sl. No.	Name of the Department/Position	Total no. of functionaries (officials/elected representatives) identified at start of Mission (2015)	Numbers trained during last FY (s)	No. to be trained during the CFY2015-16	Name(s) of Training Institute for training during the current CFY2015-16	Cumulative numbers trained after completion of CFY 2015-16
1	Elected Representatives	465	0	120	Training Entities empanelled by MoUD/ KILA/ IMG	120
2	Administration Department	321	0	90		90
3	Finance Department	300	0	90		90
4	Engineering and Public Health Department	263	0	90		90
5	Town Planning Department	620	0	120		120
	Total	1969	0	510		510

Table 8.2: SAAP - ULB level Individual Capacity Development Plan (State level Plan)

Name of State –Kerala

FY- 2015-16

Form 7.1.2 - Financial (Amount in Crore)

Sl. No.	Name of the Department/Position	Cumulative funds released upto current FY	Total expenditure upto current FY	Unspent funds available from earlier release	Funds required for the current FY to train the number given in Form 1
1	Elected Representatives	0	0	0	0.37
2	Administration Department	0	0	0	0.28
3	Finance Department	0	0	0	0.28
4	Engineering and Public Health Department	0	0	0	0.28
5	Town Planning Department	0	0	0	0.37
Total Amount					1.58

Table 8.3: Fund Requirement for Individual Capacity Building at ULB level

Name of State – Kerala

FY- 2015-16

Form 7.2.1 (Amount in Crore)

S N	Name of ULB	Total numbers to be trained in the current financial year, department wise						Name of the Training Institution (s) identified	No. of Training Programmes to be conducted (Elected representatives + Functionaries)	Fund Reqd. in current FY (₹ in Crore)
		Elected Reprs.	Finance Dept.	Engineering Dept.	Town Planning Dept.	Admin. Dept.	Total			
1	Trivandrum	30	2	25	25	30	112	KILA/IMG	4 (1+3)	0.26
2	Kollam	15	10	20	20	15	80	KILA/IMG	3 (1+2)	0.20
3	Alappuzha	12	6	9	9	12	48	KILA/IMG	2 (1+1)	0.12
4	Thrissur	18	9	8	8	18	61	KILA/IMG	3 (1+2)	0.16
5	Ernakulam	15	15	10	10	15	65	KILA/IMG	3 (1+2)	0.17
6	Kozhikode	12	30	9	9	12	72	KILA/IMG	3 (1+2)	0.19
7	Palakkad	18	18	9	9	18	72	KILA/IMG	3 (1+2)	0.19
8	Guruvayur	12	6	9	9	12	48	KILA/IMG	2 (1+1)	0.12
9	Kannur	18	9	8	8	18	61	KILA/IMG	3 (1+2)	0.16
	TOTAL	120	90	90	90	120	510			1.58

Table 8. 4: Fund Requirement for Individual Capacity Building at ULB level

Name of State –Kerala

FY- 2015-16

Form 7.2.2 - (Amount in Crore)

Sl.No.	State Level activities	Total expenditure upto current FY	Unspent funds available from earlier releases	Funds required for the current FY 2015-16
1	RPMC (SMMU)	4.98	7.27	1.30
2	UMC			NIL
3	Others (Trainings, workshops, Seminars, etc.) which are approved by NIUA			4.42
4	Institutional/ Reform			0.27
	Total			5.99

Table 8.5 : Total Fund Requirement for Capacity Building

Name of State – Kerala

FY- 2015-16

Form 7.2.3

(Amount in Crore)

Sl.No.	Fund requirement	Individual (Training & Workshop)	Institutional/ Reform	SMMU/RPMC/CMMU	Others	Total
1	Total release since start of Mission (2015)				12.25	12.25-
2	Total utilisation-Central Share				4.98	4.98
3	Balance available-Central Share				7.27	7.27
4	Amount required-Central Share	4.42	0.27	1.30	0.85	6.84
5	Total fund required for capacity building in current FY 2015-16	4.42	0.27	1.30	0.85	6.84

8.1. DETAILS OF INSTITUTIONAL CAPACITY BUILDING

(FORM 8)

a. Is the State willing to revise their town planning laws and rules to include land pooling?

State Town Planning Act is under preparation and the suggestions of including land pooling and other land management mechanism like ToD, Town Planning Schemes etc are being seriously considered by the government.

b. List of ULBs willing to have a credit rating done as the first step to issue bonds?

During the previous mission, the credit and performance rating has been for Kochi and the Thiruvananthapuram. Government is planning for credit and performance rating for all major Municipal corporations. The feasibility for raising the Municipal bond for funding infrastructure projects will be assessed in coordination with the new municipal council

c. Is the State willing to integrate all work done in GIS in order to make GIS useful for decision-making in ULBs?

Yes, Kerala State Government is willing to integrate all work done in GIS in order to make GIS useful for decision making in ULBs. The state has already initiated GIS mapping in planning and monitoring. Base maps are being prepared for all ULBs in the State. The master plans/development plans, slum free city plans etc are being prepared using GIS maps.

At ULB level, GIS based maps are also being prepared to monitor the property tax collection, ULB asset management and infrastructure management.

d. Is the State willing to take assistance for using land as a fiscal tool in ULBs ?

Yes, the State is willing to take assistance for using land as a fiscal tool in ULBs. The state is exploring the possibility of Impact fee, betterment charges, Area linked development charges, Building Penalisation scheme, introducing Vacant Land Tax (VLT), Transfer of Development Rights (TDR), Incentive FSI and Lay-out regularization scheme .

e. Does the State require assistance to professionalize the municipal cadre?

Yes, support from the Gol is required to professionalise the municipal cadre.

As part of JnNURM, Comprehensive Capacity Building Programme, Training need analysis was done for 14 ULBs and trainings were planned under Urban Planning, Urban Infrastructure, Municipal Finance and Governance.

f. Does the State require assistance to reduce non-revenue water in ULBs?

Yes, support is required, at present the non – revenue water is around 40%-30 in the proposed 9 mission cities. The Water Authority is aiming at universal coverage by reducing the percentage of Non-Revenue Water (NRW).

g. Does the State require assistance to improve property tax assessment and collections in ULBs?

Yes the State requires assistance in implementing technological solutions to improve the efficiency of property tax assessment and collection.

h. Does the State require assistance to establish a financial intermediary?

Yes, State has constituted KURDFC (Kerala Urban And Rural Development Finance Corporation Ltd) whose mandate is to provide funds for ULBs for VGF from various sources. The main activity of the Company is to provide loan assistance to various local bodies in the State of Kerala for their developmental activities. However more finance is required for the development need of ULBS.

i. Any other capacity assistance to implement the AMRUT Reform Agenda as set out in these Guidelines?

Yes, handholding support is required from Gol for developing tools for energy and water audit, to develop State level policy for reducing the use of private vehicles and promoting Non-Motorized transport , Credit rating and Municipal bonds etc,